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NI 43-101 Technical Report

El Limón Guajes Mine Plan and Media Luna Preliminary Economic Assessment

Guerrero State, Mexico

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MORELOS PROPERTY
FORM 43-101F1 TECHNICAL REPORT

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1 SUMMARY

1.1 EXECUTIVE SUMMARY – EL LIMÓN GUAJES MINE AND MEDIA LUNA PROJECT INTRODUCTION

Torex Gold Resources Inc. ("Torex") wholly-owns the Morelos Property (the "Morelos Property" or the "Property"), a group of seven mineral claims which hosts three deposits, El Limón, Guajes and Media Luna, each of which has a resource estimate prepared in accordance with National Instrument 43-101 ("NI 43-101").

Torex is currently constructing the El Limón Guajes Mine ("ELG Mine") which will see the two deposits, El Limón and Guajes, being placed into production with first pour planned for late 2015. While focused on the construction of ELG Mine, Torex is carrying out additional work on the Media Luna deposit. This document is a compilation of the ELG Mine Plan and additional study/work completed on the Media Luna resource. The bulk of this technical report (the "Report") provides a life of mine plan, including construction (to a feasibility study level of detail) for the ELG Mine. Section 24 of this report presents the results of a Preliminary Economic Assessment (PEA) for exploitation of the Media Luna resource using the ELG Mine infrastructure, and is referred to as the Media Luna Project (the "ML Project").

The Morelos Property is a 29,000 ha mineral claim in the Mexican State of Guerrero, approximately 200 kilometers southwest of Mexico City. The property is located in the Guerrero Gold Belt and the entire 29,000 ha mineral claim is considered to have significant exploration potential.

1.2 ELG MINE PLAN

The ELG Mine is currently under construction (commenced November 2013) and is expected to be producing gold by the end of the 4th quarter 2015. The mine will operate two independent open pits to extract ore from the skarn hosted gold-silver Guajes and El Limón deposits. The pits will feed a centrally located cyanide leach / carbon in pulp process plant ("CIP"), with dry stack tailings deposited just to the west of the plant. The process plant being constructed has a throughput rate of 14,000 tonnes per day ("t/d"). The plan contemplates a one year ramp up period as both the process plant and mine reach full production, followed by 9 years of full production with the current reserves being depleted in 2025. The production, in doré bars, for the life of mine is expected to average 360,000 ounces per year of gold, and 216,000 ounces per year of silver.

1.3 EXECUTIVE SUMMARY – ELG MINE KEY METRICS

Table 1-1 summarizes the key metrics from the ELG Mine plan. Unless noted otherwise, the currency used in the Technical Report is United States Dollars ("USD").

Table 1-1: Projected Financial Metrics for the ELG Mine

After tax IRR	15.7%
Payback	5.0 years
ELG Mine NPV at a 5% discount rate	$605M
ELG Mine Construction CAPEX (The total spent prior to commercial production, at the end of Q1/2016, before net revenue prior to declaring commercial production)	$800M
Sustaining CAPEX (Starts at the beginning of Q2/2016 once commercial production has been declared)	$98M
Average OPEX, with Ag credits (After the declaration of commercial production including the 2.5% royalty payable to the government)	$530 / oz
Average OPEX without the Ag credits (After the declaration of commercial production - including the 2.5% royalty payable to the government)	$542 / oz
AISC per oz Au	$637 / oz
AISC per oz AuEQ	$631 / oz
Mining cost per tonne (After the declaration of commercial production)	$2.13
Mining cost per tonne to the mill (After the declaration of commercial production)	$14.27
Milling cost per tonne (After the declaration of commercial production)	$16.04
G&A per tonne (After the declaration of commercial production - including land lease payments)	$4.13
Contingency remaining to be spent (as of June 30, 2015) **% of remaining capital estimated**	$40.5 (35% of remaining capital)
Metal Prices used - $ / oz	Au $1,200/oz Ag $20.00/oz
Exchange Rate	1US$ = 15 Mexican Pesos Capital Estimated (DE) for ELG construction used 13:1

Table 1-2: Projected Operational Metrics for the ELG Mine

Construction start	Q4 / 2013
First production	Q4 / 2015
Production in 2015	10 koz Au / 5 koz Ag
Production in 2016	275 koz Au / 242 koz Ag
Average Production 2017- 2025	369 koz Au / 214 koz Ag
Mine life	10 years
Reserve tonnes	47,950,000
Average reserve grade Au	2.69 g/t
Average reserve grade Ag	4.36 g/t
Reserve contained ounces Au	4,148,000
Reserve contained ounces Ag	6,716,000
Cut-off grade Au (insitu Au grade) (Weighted average of ore types)	0.65 g/t
Total ore tonnes mined (Includes tonnes prior to commercial production)	47,560,000
Total waste tonnes mined (Includes tonnes prior to commercial production)	274,389,000
Average strip ratio (Including tonnes mined prior to commercial production)	5.8:1
El Limón overall pit wall angle	50 degrees high wall
Guajes overall pit wall angle	50 degrees high wall 30 degrees low wall
Average mill throughput	14,000 t/d at 90% availability
Average mill Au recovery	87.1%
Average mill Ag recovery	32.5%
Average bond work index	17.5
Grind specification	80% passing 60 microns

1.4 EXECUTIVE SUMMARY – DISCUSSION OF KEY PROCESSING DECISIONS

Following is an extract from the 43-101 Technical Report Feasibility Study (the “2012 Feasibility Study”) issued 1 October 2012 of the key decisions made during the 2012 feasibility study of the ELG Mine. For clarity the references in the extract to “Project” have been replaced with “ELG Mine”. Construction has not deviated from these decisions. The extract from the 2012 Feasibility Study is presented here to give the reader an understanding of these decisions.

As a general statement, this feasibility study describes the ‘how’ of the processes that Torex has chosen to transform the ELG Mine ore into doré bars that are then refined with the resultant gold and silver sold to customers. The selection of those ‘processes’ has a major impact on the financial metrics that were summarized in Table 1-2. This next section of the executive summary seeks to provide some context as to ‘why’ some of the key processes were chosen. A high level review of the design process to set the context for the discussion of ‘critical issues’ is presented as follows. It is those critical issues that directed the major decisions with respect to the key process steps.

In general, designers of processes that transform one thing into another, such as ore to doré bars, need to accomplish the following:

1. *Get the ‘right’ pieces;*
2. *Get the pieces sized properly;*

3. *Get the pieces into the right arrangement; and,*
4. *Provide access for maintenance.*

Once the above four objectives have been satisfied, attention can be turned to:

1. *Optimizing the physical appearance of the operations facilities; and*
2. *Minimizing the cost.*

The strategic up-front decisions tend to be the ones around deciding on which are the 'right' pieces and to a lesser extent getting the pieces sized properly. For an ore transformation process like at the ELG Mine, this requires three sets of decisions:

1. *The most appropriate processes to transform the ore from one state to another, until the final state of the marketable product;*
2. *The most appropriate processes to transport ore / intermediate product from one transformational process to the next; and*
3. *The most appropriate processes to store / transport supplies, such that they are available when and where needed by the product transfer or transformation processes.*

The choice as to 'most appropriate' is always a balancing act between technical, commercial, and social considerations (social includes protection of the environment). In balancing these decisions there are always critical issues that could cause failure if not dealt with properly. Critical issues can generally be defined as:

- *'How to': refers to issues that are known to need sorting out, but have not been sorted out yet; and*
- *'What if'; refers to issues that are not known will occur but if they occur we need to be prepared.*

Getting these critical issues sorted out leads to the selection of the transformation and transfer processes in the context of technical, commercial, and social considerations. Invariably numerous studies are required to sort out these issues. Some of them are one shot trade off studies that indicate a best path forward. Other studies establish baselines and require continual monitoring to ensure that the design decisions are implemented and performing as expected. This feasibility study references many of both types of studies.

The following section describes the key critical issues that needed to be addressed in the design and the design decisions as 'right pieces / process steps' that resulted from the analysis.

Key 'How to' Critical Issues

1. *How to convert the ore to a saleable product?*

   Decision – Fine grind > Cyanide leach > Carbon in pulp (CIP) > Electrowinning > Refining to doré bar

   Context – Metallurgical studies indicated that the ore is non-refractory and hence suitable for leaching. It is a sulphide ore and was not expected to be amenable to heap leach techniques. This was tested and as expected the recoveries were very *low and non-viable. The gold is very fine grained and requires a grind of 80% passing 60 microns to achieve 87.4% recovery through the Cyanide leach/CIP process. Only 7% of the gold can be recovered through gravity separation, not enough to warrant the cost of installing such a circuit. CIP was chosen over carbon in leach (CIL) because it eliminates the requirement of back-mixing and provides for an increase in gold absorption. A bulk sulphide flotation study was also conducted. The gold recoveries from that study were materially less than could be obtained through whole ore leach extraction.*

2. *How to mine some of the ores with higher strip ratios, open pit or underground?*

   Decision – Mine everything open pit.

   Context – An underground mine was designed for El Limón. It had some social advantages in that it might not have been necessary to move the villages and there would have been far less waste rock displaced. There were also some commercial advantages in speed to production since the big pre-strip was not required. However, there were also very significant commercial disadvantages in that significantly less gold could be recovered. Recovering significantly less gold would not have been prudent stewardship of the resource.

3. *How to protect the river and reservoir from a potential tailings spill in a seismically active area?*

   Decision – Pressure filtered tailings that are dry stacked and compacted. The tailings will be sloped away from the river to collect rainwater on the plant side of the tailings. The face of the tailings will be armored with waste rock on the river side to minimize erosion. Retention ponds will be installed to capture any minimal erosion before it gets to the river.

   Context – This solution provides social advantages. There is no tailings dam that could breach. Tailings water is filtered out and recycled prior to being deposited in the tailings dry stack area. The tailings are piled and hence use less land. The tailings are compacted to reduce the susceptibility to liquefaction from seismic events. Finally, the design of the tailings stack allows for progressive reclamation making it easier to reclaim at the end of mine life. On the commercial front, while the filters are expensive to purchase and operate, the commercial impact is not as much as might be expected. The terrain is mountainous land and the areas available for tailings disposal are steep. This means that a conventional hydraulic tailings disposal area would have required a fairly large dam for relatively small tailings impoundment. The cost of these dams would have been significant and would have increased the risk to the waterways. On the technical front, the option to use filtered dry stack tailings adds a level of complexity to the process that would not have existed otherwise. This decision was ultimately made taking into account the objective of reducing potential social issues.

4. *How to get the ore from the El Limón pit without increasing the operator's safety risk due to the long loaded downhill haul?*

   Decision – 1,000 tonne / hour Rope Conveyor.

Context – This is one of those 'most appropriate' product transfer steps from one transformational process (crushing) to another (grinding). From the commercial perspective the tradeoff between conventional truck haul and the rope conveyor indicates that from the financial metrics, both are equivalent. The rope conveyor (RopeCon) has higher up front capital costs and much lower operating costs because the RopeCon is designed to generate electricity and avoid the burning of diesel fuel. On the technical side, the RopeCon technology seems 'new' but has been around for ten years and has been successful where constructed. Using this system should have positive social results because it improves safety, reduces greenhouse gases, generates clean energy, and creates less traffic noise and air emissions than utilizing other available methods.

5. *How to access the top of the El Limón pit high wall without the road building exercise jeopardizing the village of La Fundición, and wasting ore at surface on the northern nose of the El Limón deposit?*

   Decision – Build the EL Limón and Guajes access road up the back side, or south side of the El Limón ridge.

   Context – The village of La Fundición is going to be relocated, but before that can be accomplished an access road on the eastern side of the ridge would pass above the village if the production schedule is to be attained. The decision to use the RopeCon means that this access road will not be a haul road and can be made a bit steeper and narrower. This brings the south side of the ridge into play and allows the road construction to start earlier. It also allows easier access to the El Limón Sur deposit which is only lightly drilled and contains approximately 50% of the inferred ounces in the recent resource estimate.

6. *How to provide access to the ELG Mine site for large equipment that will not fit through the small villages that line the current access road?*

   Decision – Build a new 42 km road from the village of Nuevo Balsas, past the plant site and out to highway 95. This will give direct highway access to the Port of Acapulco, and the state capital of Chilpancingo.

   Context – There is an existing paved road from Iguala to Nuevo Balsas, near the ELG Mine site. However this road is narrow, particularly when it passes through villages along the way. The SAG shell or 100 tonne truck boxes would be very difficult to fit through these villages. The big equipment is not the only concern. Over the life of the mine there will be a significant number of vehicles traveling to and from the site increasing the level of traffic. Many of these villages are far enough away from the ELG Mine site to receive little in the way of economic benefit, but without a new access road they will have the traffic from the mine driving over their doorsteps. The new road (east service road) will not be in the vicinity of the existing road but will be routed away from the villages that are along the way. Spur roads will be provided to give these villagers access to the road. Cyanide will be hauled along this roadway, so wherever possible the road has been routed away from water bodies. Where is it not possible to avoid crossing a river, the crossing has been made perpendicular to the river and significant guardrails will be installed. (A 'what if' critical issue.)

7. *How to supply the ELG Mine with water?*

   Decision – Draw from an underground aquifer that is 18 km from the plant site.

   Context – The area is well watered with approximately a meter of rain per year. The river and reservoir are also close by. However, until recently, the water in the river and reservoir has been reserved for hydroelectric power generation. The water may not be reserved any longer, but it is unclear that the mine can use it, so a decision was made to go with the sure thing from the aquifer. The required permits to use the water have been obtained and the pipeline will be in the right of way for the new east service road.

8. *How to advance the ELG Mine schedule by sizing the mill prior to having all of the resource data and mine production profile?*

   Decision – The capacity of the mill was established at 14,000 tonnes per day.

   Context – From a commercial perspective, this is a decision between pulling production forward versus over capitalizing the mill for too short of a mine life. From a social perspective a mine life of ten years was considered to be the minimum acceptable to get support from the communities. From a technical perspective – what rate of mill feed could the mine deliver? Senior mine designers reviewed the available data and estimated that 14,000 tonnes per day would be a stretch, but a reasonable target. Exploration success has verified their assumptions, and the schedule has been advanced by performing mine design and mill design concurrently.

   These are the major 'how to' critical issues that needed to be resolved before feasibility level design could proceed. Through that design process, countless other critical issues of a smaller scale were resolved.

   There were also a myriad of 'what if' critical issues that needed to be considered. These are issues that we don't know are there, but if they are, we need to be prepared with a plan to deal with them. These types of critical issues almost always involve some sort of study that is reported on in the feasibility study. Many of the studies require on-going monitoring through construction and operations phases.

Key 'What If' Critical Issues

1. *What if there are ruins of archaeological significance inside the footprint of the ELG Mine?*

   Action – The area has been surveyed and mapped by archaeologists from INAH, the federal department with responsibility for protecting archaeological heritage.

   Conclusion – There are no significant artifacts that cannot be displaced. The artifacts deemed significant were recovered from the site by the archaeologists. If INAH permits it, we will build a small display for the artifacts.

2. *What if there are endangered species that live and nest inside the footprint of the ELG Mine?*

Action – Flora and Fauna survey undertaken on the ELG Mine area to understand the impact.

Conclusion – minimum impact identified, reforestation program an option to compensate or the mine disturbance.

3. *What if unacceptable levels of Arsenic leach from the tailings or waste rock?*

   Action – Characterization studies of the tailings and waste rock were completed and the results are inconclusive as to whether arsenic will leach at levels above background levels.

   Conclusion – A pump and treat mitigation process has been designed, but will not be installed. The drainage from the waste rock will be captured and tested through the mine life. If dissolved arsenic is trending toward becoming an issue then a specific study and mitigation plan to address the conditions observed would be designed and constructed. If necessary, the pump and treat mitigation solution could be installed at an estimated cost of USD $24 million. Alternatively in-pond treatment is also under consideration. A conceptual in-pond water treatment plan for Pond 5 has been studied. This would be further developed and extended to other ponds if required.

4. *What if the waste rock or tailings generates acid rock drainage (ARD)?*

   Action – Characterization studies of the waste rock and tailings have been done, which suggest that only a portion of the waste rock is considered 'potentially ARD'. The ARD risk is expected to be low given the neutralizing effect of the limestone host rock.

   Conclusion – No requirement to design in a mitigation process. The drainage from the waste rock and tailings will be monitored through the mine life to determine whether a mitigation process will be required sometime in the future.

5. *What if the acceptable emission standards in Mexico are lowered in the future?*

   Conclusion – The level of emissions from the processes has been designed to International Finance Corporation (IFC) Standards, or to match the level that currently exists in the natural environment.

   This concludes the examination of the key critical issues that impacted, or could have impacted, the selection of key process transformation or transfer steps. The designs that have resulted from this examination are robust, and are expected to deliver reliable operational performance over the life of the asset.

1.5 EXECUTIVE SUMMARY - MEDIA LUNA PEA

1.5.1 Summary

Section 24 of this technical report has been prepared to disclose relevant information about the Media Luna Project. This information is based on inferred mineral resource estimates, conceptual mining planning and a Preliminary Economic Assessment (PEA). It is important to understand that the PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results set forth in the PEA will be realized. Mineral resources that are not mineral reserves do not demonstrate economic viability.

A portion of the Media Luna PEA incorporates a modification to the ELG LOM plan in that during the production years of 2020 to 2025 higher grade ore is preferential fed to the ELG processing plant from ELG Mine and lower grade material is stockpiled. The potential impact of the Media Luna PEA on the ELG reserves is expected to be limited, the reserves are still current and valid in light of the key assumptions and parameters used in the Media Luna PEA. The ELG mining schedule developed for the PEA in terms of pit design, pit sequencing and annual ore and waste mining quantities is identical to the base case ELG LOM plan that supports the mineral reserve estimates. There are differences in ore feed to the processing plant. In the base case LOM mine plan, ELG ore is processed at a nominal rate of 5Mt/a, whereas in the PEA plan, the ELG feed to the processing plant would be reduced to 2.5 Mt/a when the underground mine is operational. The 2.5 Mt/a of ELG plant feed is comprised of higher grade ore mined each year from the open pits. The remaining lower grade ore mined each year would be stockpiled until the pits are depleted and then re-handled from stockpile to the processing plant at 2.5 Mt/a. Future studies will investigate more fully ELG ore selectivity into grade categories, and impact on cut-off grade and run-of-mine ("ROM") quantities due to re-handle costs on low grade ore sent to stockpile.

1.5.2 Key Data

Table 1-3 presents key Combined ML-ELG Project data, including a summary of the size, production, operating costs, metal prices, and financial indicators. The Media Luna Project (ML Project) is supplemental to the El Limón Guajes Mine (ELG Mine). Economics for ML Project were evaluated under a joint ML-ELG conceptual plan, and then netted out against the ELG life of mine plan to show specifics regarding ML Project's potential incremental benefits. Table 1-3 shows the combined ML-ELG information, and Table 1-4 shows the incremental benefit of the ML Project.

Table 1-3: ML-ELG Key Conceptual Project Data

Mining	
El Limón Guajes (ELG)	
Ore (ktonnes) (not including stockpile)	47,560
Gold Grade (g/t)	2.70
Silver Grade (g/t)	4.38
Waste (ktonnes)	274,389
Total Tonnes Mined (ktonnes)	321.948
Media Luna (ML)	
Mineralized Material (ktonnes)	30,964
Copper Grade (%)	1.03%
Gold Grade (g/t)	2.563
Silver Grade (g/t)	27.435
Total Tonnes Mined (ktonnes)	30,964
Process Plant	
Ore Milled (ktonnes)	78,914
Bullion Production	
Gold Production (kozs)	4,334
Gold Recovery - %	64.7%
Silver Production (kozs)	4,087
Silver Recovery - %	12.0%
Copper Concentrate Production	
Copper Concentrate (ktonnes)	1,190
Copper Production (klbs)	629,764
Copper Recovery %	90.0%
Gold Production (kozs)	1,531
Gold Recovery - %	60.0%
Silver Production (kozs)	22,395
Silver Recovery - %	82.0%
Metal Prices	
Copper ($/lb)	$3.00
Gold ($/oz)	$1,200
Silver ($/oz)	$20

ML-ELG Economic Indicators Before Taxes	
Revenues ($000)	$9,248,357
Initial Capital – ELG ($000)	$800
Initial Capital – ML ($000), Including mine pre-development prior to production	$481,807
Sustaining Capital – ELG ($000)	$99,613
Sustaining Capital – ML ($000) Including mine development	$109,051
Mining Cost - ELG ($/tonne mined)	$2.19
Mining Cost - ML ($/tonne mined)	$27.41
Mining Cost ($/tonne milled)	$19.32
Concentrator Operating Cost ($/tonne milled)	$17.81
General Administration Cost ($/tonne milled)	$4.81
Treatment & Refining Charges ($/tonne milled)	$4.33
Total Operating Cost ($/tonne milled)	$46.27
Average Cash Cost per oz Au Eq	$555
Average AISC per oz Au Eq	$634
NPV @ 0% ($M)	$3,408
NPV @ 5% ($M)	$1,842
NPV @ 10% ($M)	$1,255
IRR %	22.2%
Payback - years	6.3
ML-ELG Economic Indicators After Taxes	
NPV @ 0% ($M)	$2,438
NPV @ 5% ($M)	$1,252
NPV @ 8% ($M)	$805
IRR %	18.3%
Payback – years	6.9

Table 1-4: ML Project Incremental Financial Data

ML Economic Indicators After Taxes	
NPV @ 0% (US$M)	$ 1,402
NPV @ 5% (US$M)	$ 729
NPV @ 8% (US$M)	$ 488
IRR %	24.6%
Payback - years	3.7

1.5.3 Executive Summary – Discussion of Key Decisions

The concept that had the most impact on the design and outcomes of the ML Project was the decision to process the Media Luna mineralized material through the processing plant built for the ELG Mine versus building of a stand-alone processing plant. This is not an intuitive decision but there are a number of technical and social considerations that made it the most favorable commercial outcome. These include:

Tailings Disposal:

The current estimated Media Luna inferred mineral resource is 51M tonnes (at 2.0 g/t Au Eq. cut-off grade), but with only 31% of the magnetic anomaly explored it would be prudent to allow for additional tailings capacity to accommodate potential future expansion of the mineral resource and extension of the mine life over the longer term. The design considers that concentrate would take 5% of the mass and tailings for backfill would take 25%. In this scenario a potentially large amount of tailings would need to be placed on surface in a rugged topography. Depositing the tailings into the ELG open pits appears to be the most favourable solution from a technical, social, and commercial perspective.

Processing Synergies:

If a material handling system is to be built to carry this large amount of tailings across the river for disposal then it can just as easily carry the known and potential resource over the life of the ML Project. If we must build infrastructure to bring the resource to the north side of the river, the question then becomes – Can we leverage the ELG processing assets to process the Media Luna resource as well? The answer turns out to be yes, since both materials would require a similar grind size for optimal recoveries. The two material types could be batched through the existing grinding circuit, build a flotation circuit for the Media Luna resources, take the tails from the ML flotation circuit and put it along with ELG ore through the existing leach circuit and then through the existing tailings filtration circuit. The estimated higher grades of the Media Luna resources would result in the capital intensity of the processing plant improving significantly.

The question then becomes – Does it make economic sense to displace and stockpile some of the ELG ores in favor of ML mineralized material? The answer to the question yes and the answer hinges on turning the grade variability of the ELG skarn deposit into an advantage. The average grade of the ELG deposit to be mined (2015 to 2025) is 2.70 g/t Au. By mining 14,000 t/d and stockpiling the lowest grade 7,000 t, the average grade of what is stockpiled would be 1.4 g/t Au allowing ELG ore grades delivered to the process plant to average over 4 g/t Au during the years the two mines would operate together. The early years of Media Luna could exceed 5.0 g/t Au Eq. which, versus 1.4 g/t Au for the lower grade ELG ore, provides for an excellent economic differential that could allow the Media Luna deposit to be brought into production much sooner than if a stand-alone project was to be designed, permitted, and constructed.

Infrastructure Synergies:

If we are to process the resource, and dispose of the tailings, north of the river, can we also utilize all of the road, power, administration, housing, security, etc. infrastructure and build minimally above ground at Medial Luna? If this could be done then we could in effect have almost zero environmental impact south of the river. The answer to this is yes and the conceptual design considers the use of existing roads, power, administration, housing, security, and current infrastructure north of the river to minimize the environmental impact south of the river. This would involve driving a tunnel under the Balsas River from the north that would intersect the resource in the south.

Material Handling Across the River:

With workers and materials moving through the 'under the river' tunnel, the question shifts to – How to move the Media Luna resource north to the processing plant and the 25% of tailings that are required for backfill south to the underground mine? This problem has an element of complexity to it because the resource is in one mountain and between it and the processing plant is a river and another mountain. The potential solutions would be some combination of 'over', 'on', or 'under'. We could go over the river and / or the mountain. We could go on the river with a boat and on the mountain with a road. We could go under the mountain or under the river with a tunnel.

After examining many options, the concept chosen for the PEA was the use of a RopeCon to go over the river and under the mountains. This solution would allow the construction of one material handling system to handle both the resource and the filtered tailings for backfill. The conveyor belt would originate in the upper zone of Media Luna and be suspended from the roof of its tunnel until it exits the north side of the Media Luna Mountain. It would be suspended above the river as a conventional RopeCon (similar to the one being built for the ELG Mine) until it reaches the El Limón Mountain. It would then enter a tunnel through the El Limón Mountain that would break out in close proximity to the Processing plant. The belt would be 6.7 km in length with a 345 meter vertical drop over its length. This vertical drop would greatly reduce the power requirement for the transport of resource downhill and tailings uphill. The tunnel through the El Limón Mountain could provide optionality for early mining of the high grade at the bottom of the El Limón pit as well as any potential resources that may be discovered under the pit. The tunnel could also provide ready access to the El Limón Sur deposit for the improving ore handling from this deposit, reducing the complexity of accessing this ore zone.

The unique characteristics of the RopeCon allow filtered tails to be returned to the upper mining area on the return side of the belt. When the conveyor operates with tailings the power generated by the downhill movement of mineralized material would significantly offset the power requirement to lift the tailings. This optimization of material handling allows for efficient use of equipment which is already required and overall reduction in plant operating costs. The capital cost of this option is offset by not having to build a new processing plant and associated infrastructure.

While using the return side of the belt is not common, it is far from being innovative. It is just a conveyor belt with the unique characteristic of being able to return with the 'load side' facing up. In the ELG Mine, conveyors are used to transport the filtered tailings to the disposal site. This design takes advantage of a different conveyor to create an elegant solution to a technical, social, and commercial challenge of moving tailings 6.7 km with a 345m vertical lift. (Pumping the tailings would have seen very significant pressures and then required filtration at the paste plant end. This design takes advantage of the tailings filters that are already in place for the ELG Mine.)

Mining and Ramp-Up Schedule:

The mining methods would be conventional, with a 66/34 split of long hole open stope and cut & fill methods. The large area of the deposit allows for the planned 7,000 t/d of production to be extracted from two mining areas (upper & lower) that are connected but largely independent of each other. The two mining areas allow for higher mining rates as well as flexibility during operation.

The production ramp up schedule recognizes that the processing plant is operating at capacity with ELG ore. This negates the need to get early cash flow from Media Luna resources and allows the delay of the processing and transport CAPEX until the lower cost underground development is nearing completion. At a high level the plan would be to spend four years developing the underground infrastructure and only build the transport and processing infrastructure during the last two years. This would allow for a better match between cash generation from ELG and the consumption of cash to build Media Luna. With the underground infrastructure well advanced, cash flow from Media Luna would be expected to ramp up quickly since the mine would start producing at 7,000 t/d rather than needing to ramp up over a period of years, while the processing investment is underutilized.

Following is the summary of various sections of the Technical Report with the exception of section 24. Section 24 contains the PEA on the ML Project. For brevity of this report the executive summary provides the summary for the PEA.

1.6 SCOPE

This report was prepared for Torex by the following Authors:

- M3 Engineering & Technology Corporation ("M3")

- Amec Foster Wheeler E&C Services Inc. Mining & Metals Division (Amec Foster Wheeler M&M)
- Amec Foster Wheeler Environment & Infrastructure a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler)
- SRK Consulting (Canada) Inc. ("SRK Canada")
- SRK Consulting (U.S.) Inc. ("SRK U.S.")
- Golder Associates Inc. ("Golder")
- AMC Mining Consultants (Canada) Ltd. ("AMC")

These Authors were commissioned by Torex to jointly provide a technical report for the Morelos Property that contains a feasibility study level Life of Mine Plan for the ELG Mine and a PEA report for the exploitation of the Media Luna resource using the ELG infrastructure.

1.7 PROPERTY

The El Limón Guajes Mine and Media Luna Deposit are located in Guerrero State, Mexico, approximately 200 km south–southwest of Mexico City, 60 km southwest of Iguala and 35 km northwest of Mezcala. The closest village, Nuevo Balsas, is a small agricultural-based community with a population of approximately 1,700. Access to the ELG Mine is via two routes; from the north by narrow, paved highway from Iguala and from the east by the newly constructed East Service Road which connects the ELG Mine to Highway I-95. The Media Luna deposit is accessed via a gravel road from the town of Mezcala or by boat from Nuevo Balsas and then via a gravel road.

Both the ELG Mine and Media Luna deposit are located near established power and road infrastructure at Mezcala and near centers of supply for materials and workers at Chilpancingo, Iguala and Cuernavaca. The nearest port is Acapulco, Mexico.

1.8 OWNERSHIP

The area (Reducción Morelos Norte claim block) is wholly owned by Torex through its Mexican subsidiary, Minera Media Luna, S.A. de C.V. ("MML"). Through an agreement dated 6 August 2009, Gleichen Resources Ltd. ("Gleichen") acquired 78.8% of the property from Teck Resources Ltd. ("Teck") via the acquisition of 100% of Oroteck Mexico S.A. de C.V. ("Oroteck") from Teck's subsidiaries Teck Metals Ltd. and Teck Exploration Ltd. for a purchase price of $150 M and a 4.9% stake in Gleichen. Oroteck was the holding entity for Teck's 78.8% interest in the joint venture company MML in Mexico. The remaining 21.2% interest in MML was purchased from Goldcorp Inc. ("Goldcorp") by Gleichen on 24 February 2010. On 4 May 2010, Gleichen changed its corporate name to Torex Gold Resources Inc.

MML is the registered holder of a 100% interest in the Morelos Property in the State of Guerrero, Mexico. MML and Torex are used interchangeably.

1.9 MINERAL TENURE

The Property consists of seven mineral concessions, covering a total area of approximately 29,000 ha. All concessions were granted for a duration of 50 years. All licenses are held in the name of MML.

1.10 SURFACE RIGHTS AND LAND USE

Torex has surface rights to all land required for the complete construction and operation of the ELG Mine. In addition to these long-term lease agreements, Torex has an access agreement in place to facilitate exploration at Media Luna.

1.11 HISTORY & EXPLORATION

Initial work in the Morelos Property area commenced in 1998 through MML. Under the joint venture, work completed included data review, regional geological mapping and reconnaissance, rock chip collection and silt sampling. A trenching program and a limited ground magnetic survey were completed at Media Luna in 2000–2001. Between 2002 and 2004, induced polarization and time-domain electromagnetic (TEM) geophysical surveys were undertaken over portions of the Media Luna and Naranjo areas. Drilling consisted of two core holes (496.8 m) in 1997 and 21 reverse circulation (RC) holes completed between 2000 and 2004 for 10,870.60 m.

Since the Property was acquired by Torex in 2009, work completed has included reconnaissance mapping, 1:5,000 scale geological mapping, systematic road-cut channel sampling, soil and stream sediment sampling, RC and core drilling, an airborne ZTEM and magnetic geophysical survey, and Mineral Resource estimation.

Torex completed a feasibility study in 2012, received all required permits by November 2013, and has commenced construction of the ELG Mine. In September of 2013, Torex completed a Technical Report on the Media Luna deposit which disclosed the initial Mineral Resource estimate for this deposit.

Targeting work conducted during 2013–2014 generated a number of exploration targets and prospect areas that are actively being investigated. The targeted styles of mineralization include porphyry copper-gold systems and gold-bearing skarns similar to Media Luna and El Limón Guajes respectively.

In the Amec Foster Wheeler M&M QPs' opinion, the exploration programs completed to date are appropriate to the style of the deposits and prospects within the Propety. Prospects are at an earlier stage of exploration than El Limón, Guajes and Media Luna and the lithologies, structural and alteration controls on mineralization are currently insufficiently understood to support estimation of Mineral Resources. The prospects retain exploration potential and represent upside potential for the Property.

1.12 GEOLOGY AND MINERALIZATION

The Morelos Property is situated within the Mesozoic carbonate-rich Morelos Platform, which has, in the deposit's area, been intruded by Paleocene granodiorite stocks. Sedimentary rocks within the Morelos Platform include basal crystalline limestone and dolomite of the Morelos Formation, silty limestone and sandstone of the Cuautla Formation and upper platformal to flysch-like successions of intercalated sandstones, siltstones and lesser shales of the Mezcala Formation. Skarn-hosted gold mineralization is developed along the contacts of the intrusive rocks and the enclosing carbonate-rich sedimentary rocks.

The skarn zone at the El Limón deposit occurs at the stratigraphic level of the Cuautla Formation where marble is in contact with hornfelsed sedimentary rocks of the Mezcala Formation. Significant gold mineralization at El Limón is generally associated with the skarn, preferentially occurring in pyroxene-rich exoskarn but also hosted in garnet-rich endoskarn.

The El Limón Sur zone occurs approximately 1 km south of the main El Limón skarn deposit and appears to be an oxidized remnant of skarn emplaced at the contact between the intrusive and the host rocks represented by the marble and hornfels.

The Guajes skarn zone is developed in the same lithologies on the opposite side of the same intrusive present at El Limón. Marble (Morelos Formation) forms the footwall and a hornfels (Mezcala Formation) forms the hanging wall. At the Guajes deposits the intrusion underlies the sedimentary rocks and the contact dips at about 30° to the west, sub-parallel to bedding.

At ELG Mine, gold occurs most often with early sulphide mineralization but also with late carbonate, quartz, and adularia. Native gold most commonly occurs in close association with bismuth and bismuth tellurides but also occurs with chalcopyrite and as inclusions in arsenopyrite. The dominant sulphides are pyrrhotite and pyrite with lesser but locally abundant amounts of chalcopyrite and arsenopyrite occurring in veinlets and open-space fillings.

The Media Luna deposit is situated south of the ELG Mine. Mineralization is developed in structurally complex sequence of Morelos Formation (marble and limestone) and Mezcala Formation (shale and sandstone) intruded by the El Limón granodiorite stock.

At Media Luna, there is a clear association of gold, copper and silver with retrograde amphibole, phlogopite, chlorite, calcite ± quartz ± epidote alteration of exoskarn. This mineral assemblage can occur as pervasive replacement of skarn minerals, sometimes preserving garnet and pyroxene outlines, or as veinlets with black chlorite or amphibole halos cutting across massive skarn bands. Sulfidation of skarn assemblages is closely related to retrograde alteration and is extensively developed at Media Luna. Mineralization is primarily associated with sulfidized exoskarn and with zones of massive magnetite-sulfide. Mineralization does occur within endoskarn but is much less significant.

Mineralization identified within the Property to date is typical of intrusion-related gold and gold–copper skarn deposits. Such skarn-hosted deposits typically form in orogenic belts at convergent plate margins and are related to intrusions associated with the development of oceanic island arcs or back arcs.

In the opinion of the Amec Foster Wheeler M&M QPs, knowledge of the deposit setting, lithologies and structural and alteration controls on mineralization in the Media Luna deposit is sufficient to support Mineral Resource estimation.

1.13 DRILLING

Drilling completed during the Teck ownership, between 2000 and 2008, referred to as legacy drilling, comprised 619 drill holes (98,774.1 m), including 558 core holes (88,821.0 m) and 61 RC holes (9,953.1 m). From 2009 to 17 August, 2015, Torex has completed 1,200 core holes (292,076.6 m) and 110 RC holes (8,791.5 m). Drilling is ongoing.

Most Teck and Torex drill holes were started using HQ sized core (63.5 mm core diameter) and reduced to NQ sized core (47.6 mm) at depth if necessary. Drill logs recorded lithologies, skarn type, fracture frequency and orientation, oxidation, sulfide mineralization type and intensity and alteration type and intensity. For geotechnical purposes rock quality designations (RQD) and recovery percentages were also recorded. All core is photographed.

Drill hole collars were initially surveyed using differential GPS, and have now been resurveyed using a Total Station instrument. All Torex drill collars are surveyed with the Total Station instrument.

Teck used a number of downhole survey instruments, including Sperry Sun, Reflex, Tropari, and acid tube. Torex used a Reflex instrument in areas with insignificant magnetite or pyrrhotite mineralization on 50 m down the hole increments. In areas of high magnetite or pyrrhotite, only an acid etch was used to record dip orientation on 50 m increments.

Core recovery is recorded. Torex noted that drill core recoveries typically averaged 93.7% after the first 50 m. Recovery data were not available for all core holes, most notably in older Teck drill holes.

Drill holes are designed to intersect the mineralization in as perpendicular a manner as possible; reported mineralized intercepts are typically longer than the true thickness of the mineralization. Drill holes that orthogonally intersect the mineralized skarn will tend to show true widths. Drill holes that obliquely intersect the mineralized skarn will show mineralized lengths that are slightly longer than true widths. A majority of the drill holes at the ELG Mine and ML Project have been drilled obliquely to the skarn mineralization.

In the opinion of the Amec Foster Wheeler M&M QPs, the quantity and quality of the logging, geotechnical, collar and down-hole survey data collected in the exploration and infill drill programs at El Limón Guajes and at Media Luna are sufficient to support Mineral Resource estimation for gold–silver mineralization at El Limón Guajes, and copper, gold and silver mineralization at Media Luna.

1.14 SAMPLING AND ANALYSIS

Sample preparation and analytical laboratories used during Teck's exploration programs on the Property include ALS Chemex, Laboratorio Geologico Minero (Lacme), and Global Discovery Laboratory (GDL).

Sample preparation and analytical laboratories used by Torex include SGS Nuevo Balsas, SGS Toronto, SGS Vancouver, Acme Vancouver, Acme Guadalajara and TSL Laboratories.

Sample preparation and analytical methods have varied slightly by drill program. The procedures are in line with industry-standard methods at the time the work was completed.

The QA/QC program for the first two Teck drill campaigns (2000 and 2001) relied on the internal quality control of ALS Chemex. Upon Amec Foster Wheeler M&M's recommendation, Teck submitted approximately 10% of the pulps assayed by ALS to Acme in Vancouver, Canada for check assays. These were restricted to intervals in mineralized zones.

Starting in 2002, an external QA/QC program was initiated by Teck personnel. This program consisted of inserting two standards and four blanks in the project sample stream with each drill hole submittal. In 2003, the program changed to include 5% blanks, 5% field duplicates, and 10% certified reference materials (CRMs).

Torex's QA/QC protocol includes the submission of blind certified reference materials (CRMs), blanks and check assays. Blind duplicate samples are not included, but Torex evaluates the results of internal SGS laboratory duplicates.

The QA/QC program results do not indicate any problems with the analytical programs, therefore in the opinion of the Amec Foster Wheeler M&M QPs, the analyses from the core drilling are suitable for inclusion in Mineral Resource estimation.

1.15 DATA VERIFICATION

Data verification has been undertaken in support of compilation of technical reports in the period 2005 to 2014. Work completed included database review, QA/QC checks and independent analytical verification of the presence of gold mineralization.

The data verification programs undertaken on the data collected from the Morelos Property adequately support the geological interpretations, the analytical and database quality, and therefore, in the opinion of the Amec Foster Wheeler M&M QPs, supports the use of the data in Mineral Resource estimation.

1.16 MINERAL RESOURCE ESTIMATE

The El Limón Mineral Resource estimate and lithology model was prepared in 2012 by Edward J. C. Orbock III, RM SME. The Guajes and Media Luna Mineral Resource estimate and lithology models were prepared by Mark Hertel, RM SME. The Guajes model and a portion of the El Limón model, El Limón Sur, were updated in 2014 by Mark

Hertel. The Media Luna model was updated by Mark Hertel in 2015. The updated Guajes and El Limón Sur models used a deterministic approach to complete the geologic model. El Limón Sur included an infill drilling program.

Specific gravity values are based on wax immersion measurements performed on drill core. Density was assigned to the block model by rock types.

A combination of deterministic (wireframe) and probabilistic approaches were used to model the deposits. Exploratory data analysis indicated that both hard and soft contacts occur between lithologies, and these contact types were honored during estimation. Database assays were composited into 3.5 m lengths for the deposits amenable to open pit mining; 2.5 m composites were used at Media Luna.

Depending on the deposit, grade capping or a combination of grade capping and outlier restriction was employed. Variography analysis was performed to obtain down-the-hole and directional correlograms for selected indicators and estimation domains.

Grade estimation was performed using ordinary kriging, with the minimum and maximum number of composites used, and the maximum from any one drill hole defined.

Validation of the models and resulting estimates was performed, and included nearest-neighbor checks, visual inspection on screen, swath plots, and Hermitian correction plots.

For the Mineral Resources considered potentially amenable to open pit mining methods, Mineral Resources were classified as Inferred when a block was located within 60 m of the nearest composite, as Indicated when a block was located within 28 m of the nearest composite and one additional composite from another drill hole was within 40 m, and as Measured when a block was located within 15 m of the nearest composite and two composites from two additional drill holes were within 22 m.

At Media Luna, the classification of Inferred was based on a drill spacing of 100 m grid whereby two drill holes had to be within 110 m, blocks had to be within the 3D-modeled skarn zone, and the block gold equivalent grade had to be 2.0 g/t gold equivalent (AuEq) or higher.

Mineral Resources considered potentially amenable to open pit mining methods were constrained within a Lerchs–Grossmann conceptual pit shell that incorporated considerations of metal pricing, mining, process costs, general and administrative operating costs, metallurgical recoveries and pit slope angles. A reporting cut-off grade of 0.5 g/t Au was selected for estimate reporting purposes.

Mineral Resources considered potentially amenable to underground mining methods were estimated assuming operating costs for a combination of cut-and-fill (C&F) and transverse longhole open stoping (LHOS) methods, metal pricing, process costs, general and administrative operating costs, and metallurgical recoveries. A reporting cut-off grade of 2 g/t AuEq was selected for estimate reporting purposes.

1.16.1 Mineral Resource Statement

Mr. Orbock is the QP for the Mineral Resource estimate at El Limón (excluding El Limón Sur) and Mr. Hertel is the QP for the Mineral Resource estimates at El Limón Sur, Guajes and Media Luna and both QPs are independent of Torex. Mineral Resources are reported as undiluted.

Mineral Resources are reported inclusive of Mineral Reserves. Amec Foster Wheeler M&M cautions that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Mineral Resources are reported using the definitions in the May 2014 Canadian Institute of Mining Metallurgy and Petroleum Definition Standards.

Mineral Resources for El Limón and Guajes, which are potentially amenable to open pit mining methods, are summarized in Table 1-5.

Mineral Resources for Media Luna, which are potentially amenable to underground mining methods, are summarized in Table 1-6.

Table 1-5: Mineral Resource Statement, El Limón and Guajes

	Tonnes (Mt)	Au Grade (g/t)	Ag Grade (g/t)	Contained Au (Moz)	Contained Ag (Moz)
El Limón (including El Limón Sur)					
Measured	6.29	3.24	4.05	0.66	0.82
Indicated	26.85	2.98	6.07	2.58	5.24
Subtotal Measured and Indicated	33.13	3.03	5.69	3.23	6.06
Inferred	6.84	2.26	4.94	0.50	1.09
	Tonnes (Mt)	**Au Grade (g/t)**	**Ag Grade (g/t)**	**Contained Au (Moz)**	**Contained Ag (Moz)**
Guajes					
Measured	3.81	3.30	3.93	0.40	0.48
Indicated	13.39	2.64	3.32	1.13	1.43
Subtotal Measured and Indicated	17.19	2.78	3.45	1.54	1.91
Inferred	0.85	1.28	2.37	0.04	0.07
	Tonnes (Mt)	**Au Grade (g/t)**	**Ag Grade (g/t)**	**Contained Au (Moz)**	**Contained Ag (Moz)**
Total El Limón and Guajes					
Measured	10.09	3.27	4.01	1.06	1.30
Indicated	40.24	2.87	5.15	3.71	6.67
Total Measured and Indicated	50.33	2.95	4.92	4.77	7.96
Inferred	7.69	2.15	4.64	0.53	1.15

Notes to accompany El Limón and Guajes Mineral Resource Table

1. The qualified person for the Guajes estimate is Mark Hertel, RM SME, an Amec Foster Wheeler M&M employee. The estimate has an effective date of December 16, 2014.
2. The qualified person for the El Limón estimate (excepting El Limón Sur) is Edward J. C. Orbock III, RM SME, an Amec Foster Wheeler M&M employee. The estimate has an effective date of June 18, 2012.
3. The El Limón Sur area within El Limón estimate has an effective date of August 6, 2014.
4. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources are reported above a 0.5 g/t Au cut-off grade.
6. Mineral Resources are reported as undiluted; grades are contained grades.
7. Mineral Resources are reported within a conceptual open pit shell that used the following assumptions. A long-term gold price of US$1,495/oz, and a silver price of US$24.00/oz. The metal prices used for the Mineral Resources estimates are based on Amec Foster Wheeler M&M`s internal guidelines which are based on long-term consensus prices. The assumed open pit mining costs are US$2.32/t mill feed and US$2.27/t for waste, and processing costs at US$15.27/t. General and administrative costs were estimated at US$3.10/t processed. Metallurgical recoveries average 87% for gold and 32% for silver. Assumed pit slopes range from 33º to 49º. A pre-mining topography was used in the resource estimate; pre-stripping and mining operations have commenced and some ore has been stockpiled.
8. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade, and contained metal content.

Table 1-6: Media Luna Deposit Inferred, Mineral Resource Estimate at a 2.0 g/t Au Eq. Cut-off Grade

Deposit	Resource Category	Tonnes (Mt)	Gold Eq. Grade g/t	Contained Gold Eq. (Moz)	Gold Grade (g/t)	Contained Gold (Moz)	Silver Grade g/t	Contained Silver (Moz)	Copper Grade %	Contained Copper (Mlb)
Media Luna	Inferred	51.5	4.48	7.42	2.40	3.98	26.59	44.02	0.99	1,128.50

Notes to accompany Media Luna Mineral Resource Table

1. The qualified person for the estimate is Mark Hertel, RM SME, an Amec Foster Wheeler employee. The estimate has an effective date of June 23, 2015.
2. Au Equivalent (AuEq) = Au (g/t) + Cu % *(79.37/47.26) + Ag (g/t) * (0.74/47.26)
3. Mineral Resources are reported using a 2 g/t Au Eq. grade
4. Mineral Resources are reported as undiluted; grades are contained grades. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources are reported using a long-term gold price of US$1470/oz, silver price of US$23.00/oz, and copper price of US$3.60/lb. The metal prices used for the Mineral Resources estimates are based on Amec Foster Wheeler`s internal guidelines which are based on long-term consensus prices. The assumed mining method is underground, costs per tonne of mineralized material, including mining, milling, and general and administrative used were US$50 per tonne to US$60 per tonne. Metallurgical recoveries average 88% for gold and 70% for silver and 92% for copper.
6. Inferred blocks are located within 110 m of two drill holes, which approximates a 100 m x 100 m drill hole grid spacing.
7. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade, and contained metal content.

Risk factors that could potentially affect the Mineral Resource estimates include the assumptions used to generate the conceptual data for consideration of reasonable prospects of eventual economic extraction including long-term commodity price assumptions, long-term exchange rate assumptions, assumed mining methods, changes in local interpretations of mineralization geometry and continuity of mineralization zones, geotechnical and hydrogeological assumptions, metallurgical testwork and mining and metallurgical recovery assumptions, operating and capital cost assumptions. Estimates of insitu bulk density are presently based on samples taken from core drilling. Determination of density based on larger-scale excavations or production may reveal densities that are different than those currently estimated for the deposit. Additional risks may arise from delays or other issues in reaching required agreements with local communities, maintenance of the social license to operate, and changes in assumptions regarding current and future permitting requirements.

1.17 MINERAL RESERVES

ELG Mine proven and probable mineral reserves are summarized in Table 1-7.

Table 1-7: Mineral Reserve Statement, El Limón Guajes Mine – effective date 31 December 2014

Reserve Category	Tonnes (millions)	Au Grade (g/t)	Ag Grade (g/t)	Contained Au (millions oz)	Contained Ag (millions oz)
El Limón (including El Limón Sur)					
Proven	6.3	2.95	3.62	0.60	0.73
Probable	24.5	2.69	5.31	2.12	4.19
Sub-total Proven and Probable	30.8	2.75	4.97	2.72	4.92
Guajes					
Proven	3.9	3.03	3.69	0.38	0.46
Probable	12.8	2.49	3.17	1.03	1.31
Sub-total Proven and Probable	16.7	2.62	3.29	1.41	1.77
Mine stockpiles					
Proven	0.4	1.40	1.97	0.02	0.02
Total El Limón and Guajes					
Proven	10.6	2.92	3.59	0.99	1.22
Probable	37.4	2.63	4.57	3.15	5.49
Total Proven and Probable	47.9	2.69	4.36	4.15	6.72

Notes to accompany Mineral Reserve Table:

1. Mineral reserves are reported based on open pit mining within designed pits above in situ cut-off grades that vary from 0.59 g/t Au to 1.11 g/t Au depending on ore type, and average approximately 0.65 g/t Au. Mineral reserves incorporate estimates of dilution and mining losses. The cutoff grades and pit designs are considered appropriate for metal prices of $1250/oz gold and $20/oz silver.
2. Mineral reserves are founded on, and included within, El Limón and Guajes mineral resource estimates with effective dates of 16 Dec 2014 for the Guajes deposit, 18 Jun 2012 for the El Limón deposit, and 6 Aug 2014 for the El Limón Sur deposit.
3. Mineral reserves were developed in accordance with CIM (2014) guidelines.
4. Rounding may result in apparent summation differences between tonnes, grade, and contained metal content.
5. The qualified person for the mineral reserve estimate is Brian Connolly, P.Eng., an SRK Consulting (Canada) Inc. employee.

Contained gold in the proven and probable mineral reserves is approximately 13% less than the contained gold in the measured and indicated mineral resources. The lower contained gold estimates are attributed to higher cut-off grades and mining losses incorporated in mineral reserve estimates, and to ultimate pit designs than are smaller than the conceptual pit shell utilized to report mineral resources.

The proven and probable mineral reserves have decreased by 0.8 Mt and contained gold has increased by 0.06 Moz compared to the previous mineral reserve estimate dated August 28, 2012 that was included in the 2012 feasibility study. Principal reasons for the reserve change include updates to the Guajes and El Limón Sur resource models and an increase in cut-off grade.

The process plant is not yet operating so reconciliations of reserve depletion versus actual plant feed and gold production are not possible. Analyses of reported mining to date, based on blast-hole sampling and assaying, shows that reported grades are lower than mine plan predictions for the areas mined. In order to increase the confidence in the results from the blast-hole samples, MML is currently testing a number of different blast-hole sampling techniques and is comparing the results to those obtained from twinned diamond drill holes.

1.18 MINING

The ELG Mine is being developed with standard open pit mining methods. Key characteristics of these deposits from an open pit mining perspective include very steep and irregular terrain, proximity to the village of La Fundición located downhill from the El Limón deposit, relatively competent bedrock, and poorly defined ore-waste contacts.

Mine construction began at the end of October 2013. The life-of-mine (LOM) plan in this report presents planned development after December 31, 2014. Mining of the Guajes deposit and a portion of the El Limón deposit (North Nose area) are currently under way. Mining of the main El Limón deposit will commence during the second half of 2015 once the village of La Fundición is moved, which is expected in September 2015. Currently approximately 1 million tonnes of ore is on stockpile.

The LOM plan incorporates conveying of crushed El Limón ore to the process plant. Torex selected a suspended rope conveyor rather than truck haulage of El Limón ore for safety and environmental reasons.

The ELG pit slopes are anticipated to be comprised primarily of competent rock. Most pit slopes were designed with a maximum interramp slope angle of 55 degrees with the exception of the NW Guajes pit and a small area within the El Limón pit which were recommended to have 38 degree and 47 degree interramp slope angles, respectively, due to lower quality rock masses associated with major fault structures. The NN pit was designed using a 47 degree maximum interramp slope angle due to the shallow depth of the pit and resulting weathered rock mass.

Groundwater inflow to the proposed pits is predicted based on developed 3-D numerical groundwater model. Maximum passive groundwater inflow rates would be very small due to the low hydraulic conductivity of surrounding country rock and are predicted to be approximately 210 m^3/d, 100 m^3/d, and 21 m^3/d for Guajes, El Limón, and El Limón Sur pits, respectively. These very small quantities of groundwater inflows to the proposed pits could be managed by in-pit dewatering system (no active dewatering would be required).

Pit optimization for the LOM plan is based on long term metal prices of $1,250/oz gold and $20/oz silver, with value only applied to Measured and Indicated mineral resources. To guide pit design, pit optimization analyses were conducted separately for the Guajes, El Limón, and El Limón Sur deposits. Subsequent to the pit optimization analyses the long term gold price forecast was reduced to $1,200/oz due to market conditions. The 4% reduction in gold price is not believed to materially impact on pit optimization findings, since the pit shells selected to guide ultimate pit designs were each generated with revenue factors equivalent to using gold prices lower than $1,200/oz.

The ELG haul roads are in general designed to a width of 25 m, to support two-way uninterrupted haulage by 90-tonne class mining trucks, with 8.5% maximum gradients to facilitate braking on the predominantly downhill loaded hauling profiles. Roads utilized for pit access only are designed 18 m in width with 10.5% maximum gradients, which is considered adequate for single lane equipment traffic. Because of the steep terrain, construction of pit access and haul roads is challenging.

The ELG deposit will be mined utilizing a series of phase pits with 7 m bench heights and catch benches at either 14 m or 21 m intervals, depending on geotechnical parameters. Mining of the high Guajes and El Limón ridges is planned as dozer phase pits, to avoid extremely difficult truck haul road construction to high elevations on the ridges. Drilled and blasted rock will be dozed downhill for subsequent rehandle during mining of lower elevation truck-loader phase pits. Guajes dozer mining is now complete and truck-loader mining is in progress. The truck-loader phase pits are designed with 25 m wide pit haulage ramps, at 10% gradients for uphill loaded hauls and at 8% gradients for downhill loaded hauls. Two small phase pits, i.e. Phase NN and El Limón Sur pit, have been designed with narrower ramps for haulage by 36-tonne class articulated haulage trucks.

Waste rock dumps will be developed by end dumping from platforms located at the dump crest elevation. The Guajes west dump development starts at 625 m elevation with subsequent 25 m dump lifts stepped back to facilitate future dump re-sloping. The Guajes north dump extension is designed to cover the final west and south faces of the filtered tailings stockpile and facilitate closure at the end of the mine life. The El Limón dump will be developed by end dumping from a series of dumping platforms selected based on waste disposal quantities and future dump re-sloping requirements. A buttress dump will be developed by end dumping waste rock at the toe of the El Limón dump to serve as a barrier for rock runout from the El Limón dumps above during mine operation and to facilitate re-sloping of the main El Limón dumps at closure. The El Limón Sur dumps are located in the gullies to the east and west of the El Limón Sur pit. Guajes in-pit dumping includes backfilling of the completed Phase GE pit and partial backfilling of the completed Phase GW pit with waste from adjacent phase pits.

Mining quantities in the LOM plan are defined as material below the YE2014 (i.e., 2014 year-end) surveyed topography to ultimate pit limits and include road construction excavation quantities (within pit limits only) and quantities within the phase pit designs presented in Section 16.8. The YE2014 surveyed topography reflects road and pit development completed in 2013 and 2014.

ROM ore quantities within the designed pits as of December 31, 2014 total 47.6 Mt at grades of 2.70 g/t Au and 4.38 g/t Ag with a strip ratio averaging 5.8:1. ROM ore quantities are founded only on Measured and Indicated mineral resources. In addition, ROM stockpiles at YE2014 total 0.4 Mt at grades of 1.40 g/t Au and 1.97 g/t Ag. The ROM stockpiles contain ore mined from Guajes pit and Phase NN road in 2014.

ROM ore quantity estimates include 15% dilution at a grade of 0.13 g/t Au and 1.6 g/t Ag, based on an ore-waste contact dilution thickness of 1 m and an analysis of the grade of waste in contact with ore. The ROM ore quantities also incorporate 5% mining loss of in situ quantity estimates.

ROM ore quantities are based on marginal economic in situ cut-off grades that vary by ore type due to variable process recoveries and average approximately 0.65 g/t Au. Cut-off grade derivation is based on a long term gold price of $1250/oz and late 2014 unit cost estimates sourced from previous project studies and mine plan analyses. The 2015 ELG Mine processing and G&A cost estimates presented in this report are higher than the 2014 unit cost estimates utilized for cut-off grade derivation, and subsequent to cut-off grade estimation the long term gold price forecast was reduced to $1,200/oz due to market conditions. It is estimated that if the higher cost estimates and lower gold price forecast had been incorporated in cut-off estimation the cut-off grades would have increased by about 0.1 g/t Au, and ROM tonnage and contained gold ounces would have been reduced by 2.7% and 0.6%, respectively. It is concluded that the ELG Mine ROM quantity and gold content is relatively insensitive to cut-off grade.

The LOM production schedule is based on process plant capacity of 14,000 tpd (i.e., 5040 kt/a) and a gradual ramp-up in plant feed rate from scheduled plant startup in November 2015. For the purposes of this report, MML designated March 2016 as the start of commercial production based on certain criteria including the average plant feed rate. The mining activities prior to the March 1, 2016 are considered as pre-production mining and mining activities thereafter as mine operation. Processing at 100% plant capacity (i.e.14,000 tpd) is expected to begin in the fourth quarter of 2016, utilizing ore from both the Guajes and El Limón pits, and remain at this rate for about 8.5 years before declining.

Principal LOM production schedule constraints include El Limón access road and La Fundición village relocation, to allow El Limón development to commence. The El Limón access road is now complete and it is expected that El Limón pit and haul road development will commence during the second half of 2015, once the village move is complete (expected in September 2015). This is later than forecast in the LOM plan but, based on MML's mining performance to date in Guajes, it is not expected to have a significant impact on feeding the process plant with El Limón ore via the El Limón crusher and rope conveyor starting in 2016 Q2.

Truck-loader pit mining has generally been scheduled at a maximum sinking rate of two benches per quarter, which is believed to be achievable considering the drill-blast-load-haul sequence. The LOM pit production peaks at 39 million tonnes of ore and waste in 2021.

Mining is planned utilizing the owner's workforce generally on a continuous 24 hour/day basis, 356 days/year, with 3 production crews working 12 hour shifts on a 20 day on – 10 day off rotation. Activities planned to be performed by contractors include the mining of the smaller Phase NN and El Limón Sur pits that require small scale mining equipment, access and haul road construction support to owner crews, blasting services by an explosives vendor, and production equipment maintenance until the end of 2017 by equipment suppliers under maintenance and repair contracts. The mine workforce (excluding contractors) is expected to peak at 345 personnel in 2018 when owner crews are scheduled to assume equipment maintenance duties.

Mine operating parameters include an estimated 10 operating hours per 12 hour shift (based on time deductions for meal breaks, safety and crew lineup meetings, shift change and equipment start-up checks), operating efficiency of 83% (i.e., a 50 min hour), which allows for operating delays during the shift, equipment mechanical availability estimates ranging from 85% for the hydraulic shovels and trucks, to 80% for the drills and loaders, and use of availability ranging from 95-97% for the hydraulic shovels and trucks, 80-90% for loaders, and 70-90% for drills.

Mine equipment acquired in 2013 and 2014 includes 29 major production units and 23 support equipment units. The only major equipment additions planned during the remaining pre-production period (i.e., to February 2016) are a reverse circulation drill for grade control purposes and a dewatering pump. Equipment additions are required in 2016 and 2017 for El Limón mining and increased Guajes mining. Total equipment additions and replacements planned during mine operation (i.e., after February 2016) include 42 major production units and 21 support units.

1.19 METALLURGICAL TESTS

Metallurgical testing were conducted by International Metallurgical and Environmental Inc., Kelowna, British Columbia, Canada and G&T Metallurgical Services Ltd., (G&T), Kamloops, British Columbia, Canada for Teck Cominco Corporation and METCON Research, Inc., Tucson, Arizona conducted tests for Torex.

Preliminary scoping grinding, cyanide leaching, flotation and gravity concentration tests were carried out by International Metallurgical and Environmental Inc. in March 2002 to determine the metallurgical response of the ore.

Development and process design test work conducted by G&T Metallurgical established the procedure for the exploitation of gold and silver from the Morelos mineralized rock types. The procedure includes: grinding to 80% passing 60 microns, pre-aeration with air, and leaching with 800 mg/L cyanide concentration at pH 11. After leaching, carbon would be used to adsorb gold in the CIP circuit followed by cyanide destruction by the SO_2 /Air process. The leach residues will be thickened and filtered to recover process water for reuse and the filtered tails will be dry stacked.

METCON Research Inc., conducted metallurgical tests using the above procedure to validate and increase the knowledge of gold recoveries with a focus on developing grade versus recovery curves for the mineralized rock types identified. The results of the test work indicate that there are no deleterious elements present in sufficient quantity that would have a significant impact on processing the ore.

The metallurgical tests indicate that the ore will respond to direct agitated cyanide leaching technology to extract gold.

1.20 METAL RECOVERIES

The grade versus recoveries study gave an overall gold recovery of 87.35% and a silver recovery of 32.5%.

1.21 REAGENT REQUIREMENTS

The reagent scheme and the reagent consumption rates for the full scale plant operation have been estimated from the metallurgical test results. The following reagents will be used:

- Sodium Cyanide (NaCN)
- Quick Lime (CaO)
- Sodium Hydroxide (Caustic Soda, NaOH)
- Hydrochloric Acid
- Activated Carbon
- Sodium Metabisulfite
- Copper Sulfate
- Flocculant
- Antiscalent
- Carbon

See Section 13 for specific quantities and holding requirements.

1.22 POWER

Electrical power supply for the mine and infrastructure is provided by 2 supply points. Power for the plant and mine will be via a short connecting line from the CFE 115 kV transmission line located at the north boundary of the ELG Mine area. Power at 13.2 kV for the water well field and camp will be supplied from the CFE substation in Mezcala. At the time of this report, power connections had been made.

1.23 WATER

Water supply for the Mine, Mill and Camp is from a well field located near the village of Atzcala approximately 18 km east of the mine site. Torex has been granted a water concession from the Mexican national water commission (“CONAGUA”) for taking up to 5 million cubic meters of water per year. Current water requirements for the mine are estimated at 1.9 million cubic meters per year (200 m^3/hr) assuring access for expansion at the current site or within the concessions. The well field has been developed with the connection planned to be completed in September 2015.

1.24 FACILITIES & PROCESSING EQUIPMENT

The process plant designed for the ELG Mine is a standard cyanide leach, carbon in pulp mill. The following is a summarized listing of the process steps. See Section 17 for a detailed description of the process.

- Size reduction of the ore by a gyratory crusher, wet semi-autogenous grinding mill (SAG), and ball milling to liberate gold and silver minerals. Grinding will occur with cyanide present in the mills.
- Thickening of ground slurry to recycle water to the grinding circuit.
- Recovery of precious metals contained in the recycle water by carbon columns (CIC).
- Cyanide leaching of the slurry in agitated leach tanks.
- Adsorption of precious metals onto activated carbon by carbon-in-pulp (CIP) technology.
- Removal of the loaded carbon from the CIP and CIC circuits and further treatment by acid washing, stripping with hot caustic-cyanide solution, and thermal reactivation of stripped carbon.
- Recovery of precious metal by electrowinning.
- Mixing electrowon sludge with fluxes and melting the mixture to produce a gold-silver doré bar which is the final product of the ore processing facility.

- Thickening of CIP tailings to recycle water to the process.
- Detoxification of residual cyanide in the tails stream using the INCO™ process.
- Filtering of detoxified tailings to recover water to recycle to the process.
- Disposal of the filtered detoxified tailings to a dry stack tailings pad.

1.25 ENVIRONMENTAL AND SOCIAL PERMITTING AND STUDIES

All National, State and Municipal permits/authorizations required for the exploration and development of the ELG have been received from the various levels of Mexican government. Section 20 (Table 20-1) presents the approvals and dates of permits have been granted. Once construction is complete, Torex will apply for and receive an "Operating License". Permits for the surface exploration are also in place for exploring of the Media Luna deposit.

Permission to drill water wells was granted by the CONAGUA and the wells have been completed. At the time of this report, there are no known environmental or social risks that have a material likelihood of impacting the ability to extract the identified resource. See Section 20 of this report.

A full ESIA compliant to IFC Performance Standards was finalized in September 2014, the results of which are consistent with the findings from the Mexican Impact Assessment (MIA) which was granted authorization on May 15, 2013 by means of the Environmental Impact Resolution No. S.G.P.A./DGIRA/DG.-03171. The resolution encompasses construction, operation and closure phases.

Environmental and Social Permitting Studies for the ELG Mine plan are presented in section 20 of this report.

Section 20 also includes a summary of completed and ongoing efforts related to affected communities, compensation and resettlement, environmental and social mitigation measures for the various phases of the ELG Mine, and the environmental design basis that will be used for monitoring compliance.

Key points based on Golder's assessment are as follows:

- A full ESIA compliant to the Equator Principles (EP), the International Finance Corporation (IFC) Performance Standards (PS) and World Bank Group General and mining specific Environmental, Health, and Safety Guidelines (EHS Guidelines) was finalized in September 2014 and the results are consistent with the findings from the Mexican Impact Assessment.
- No social or environmental issues have been identified that will impact construction and operation of the ELG utilizing the current design.
- Additional studies are underway to evaluate the incremental impacts associated with the modification of the ELG to accommodate ML as described in section 24.20.
- The potential impacts on groundwater and surface water have been identified and control plans have been established.
- Additional studies such as water quality of receiving water and modeling will be conducted to evaluate the effects of waste rock and water control structures for El Limón Sur. The waste rock characteristics are generally similar to the other waste rock disposal areas for ELG and water management ponds. A higher apparent degree of in-situ oxidation of the El Limón Sur waste rock has been identified, the effect of which (if any) is being assessed. There is no specific anticipated aquatic or human health risks to Presa Caracol associated with the El Limón Sur component. These features will be managed using the environmental management and monitoring procedures developed for ELG.
- MML has a high functioning Community Relations Team (CRT) that is actively engaged with local stakeholders; all work is of an open and transparent nature. The CRT team will continue to engage and communicate the local stakeholders on the proposed modifications to ELG.

- A Resettlement Action Plan (RAP) was developed and is being followed during the relocation of the villages of Real del Limón and La Fundición. Relocation of the La Fundición is underway as of the writing of this report.

ELG is in compliance with the Mexican law and IFC Performance Standards on cultural heritage resources identified in the ELG area and resources found have been mitigated by INAH-Guerrero.

1.25.1 Environmental Models

A three dimensional geological block model was performed to estimate the concentrations of arsenic, calcium, iron, magnesium and sulfur, (the environmental variables) that have the potential to leach into the environment. The model utilized data from March 15, 2012 that was sourced from the El Limón and Guajes areas.

The commercial mine planning software, MineSight® was used. This modeling built upon the 7m x 7m x 7m block model of lithology and gold domains that are described in Section 14.

Table 1-8 summarizes the environmental grade estimates for blocks with Au grade above and below 0.5 g/t and that are within the Mineral Resource LG cone.

Table 1-8: Summary of Environmental Variables (inside the Pit Containing Mineral Resources)

Au Cutoff (g/t)	Tonnes (Mt)	Arsenic (ppm)	Calcium (%)	Iron (%)	Magnesium (%)	Sulphur (%)
>=0.5	64.8	1,341	5.57	5.42	0.401	1.61
<0.5	168.4	347	3.60	1.91	0.488	0.541

Notes to accompany table of Estimates:
1. Estimates are reported as undiluted; grades are contained grades
2. Estimates are reported within a conceptual gold and silver economic open pit shell

The concentrations of dissolved arsenic will be monitored and if the concentrations are trending towards pre-selected triggers then the contingency plan will be enacted and mitigation plan to address the conditions observed would be designed and constructed (Section 18).

1.26 WASTE DISPOSAL

Tailings will be filtered, placed and compacted in the tailings dry stack (TDS) south west of the process plant and northwest of the Guajes open pit. The mountainous terrain was a significant consideration in the selection of dry stack storage. In addition, the use of filtered tailings improves water recycling, is conducive for progressive closure, and does not require a dam to hold back a tailings pond. Tailings dry stacks have been used at many other mining projects for similar benefits.

The Waste Rock Dumps (WRDs) are being developed by a combination of end dumping from platforms located at the dump crest elevation, or when possible bottom-up dump construction. Such WRD construction (end dumping from high elevations on steep terrain) has parallels at many other mining operations located in mountainous regions. Final slopes will be graded to 2H:1V for closure.

1.27 OPERATING COST ESTIMATE

The operating and maintenance costs for the ELG Mine are summarized in Table 1-9 by areas of the operation. Cost centers include mine operations, process plant operations, and the general and administration area. Operating costs were determined annually for the life of the mine. Actual Labor rates and contractual supply rates as available are used as basis for the cost summary. No escalation was included within this study. The life of mine operating unit cost per total ore tonne is $33.45. Table 1-9 shows details for a typical year of operations.

Table 1-9: Typical Year (Year 4 – 2018) Operating Costs by Area for ELG Mine

	Ore Processed Tonnes	5,040,000
	Mined Tonnes	34,538,000
	Annual Cost - ($M)	**$/tonne ore Processed**
Mining Operations		
Drill	$11.4	$2.26
Blast	$16.9	$3.36
Load	$8.6	$1.71
Haul	$20.4	$4.06
Roads & Dumps	$6.3	$1.24
Support	$2.4	$0.48
Contract Mining	$0	$0.00
Grade Control	$1.2	$0.23
Mine General	$2.8	$0.55
Subtotal Mining	**$70.0**	**$13.89**
	Annual Cost - ($M)	**$/tonne ore Processed**
Processing Operations		
Crushing and Ore Storage	$3.2	$0.64
Grinding	$28.7	$5.71
Leaching	$22.6	$4.50
Carbon Handling & Refinery	$1.3	$0.25
Filtered Tailings	$22.4	$4.45
Ancillaries	$2.5	$0.45
Subtotal Processing	**$80.7**	**$16.02**
Supporting Facilities		
Laboratory	$1.2	$0.25
General and Administrative	$19.0	$3.76
Subtotal Supporting Facilities	**$20.2**	**$4.02**
Total Mine Site Operating Cost	**$170.9**	**$33.93**

1.28 CAPITAL COST ESTIMATE

Capital cost for the ELG Mine is based on actual monies spent up to and including December 2014, and an estimate to complete costing referred to as the Definitive Estimate (DE). The DE was completed by M3 in January of 2015.

The key results of the capital cost estimates (for mine and process facilities) are as follows:

Table 1-10: Capital Direct, Indirect and Total Costs ($M)

Case	Direct Costs	Indirect Costs	Total Costs
Definitive Estimate	$392.4	$407.6	$800.0
Sustaining Capital	$83.0	$15.3	$98.3

1.29 ECONOMIC ANALYSIS

The economic analysis indicates that the ELG Mine has an Internal Rate of Return (IRR) of 15.7% with a payback period of 5.0 years after taxes. Table 1-11 compares the base case financial indicators with the financial indicators for other cases when the metal sales price, the amount of capital expenditures, the operating cost, and ore grade are varied from the base case.

Table 1-11: Sensitivity Analysis ($ in thousands) – After Taxes

	NPV @ 0%	NPV @ 5%	NPV @ 8%	IRR%	Payback (yrs)
Base Case	$1,036,508	$605,013	$412,907	15.7%	5.0
Gold Price $1,400	$1,486,966	$950,223	$711,469	21.0%	4.0
Gold Price $1,300	$1,261,737	$777,618	$562,188	18.4%	4.5
Gold Price $1,100	$811,279	$432,407	$263,627	12.9%	5.7
Gold Price $1,000	$586,050	$259,752	$114,271	9.8%	6.5
Iniital Capital +15%	$948,908	$509,694	$314,215	13.1%	5.6
Iniital Capital +10%	$978,108	$541,467	$347,112	13.9%	5.4
Iniital Capital +5%	$1,007,308	$573,240	$380,010	14.8%	5.2
Iniital Capital - 5%	$1,065,708	$636,785	$445,805	16.8%	4.8
Iniital Capital - 10%	$1,094,908	$668,558	$478,702	17.9%	4.6
Iniital Capital -15%	$1,124,108	$700,331	$511,600	19.1%	4.4
Operating Cost +15%	$880,180	$483,900	$307,570	13.7%	5.6
Operating Cost +10%	$932,289	$524,271	$342,682	14.4%	5.4
Operating Cost +5%	$984,398	$564,642	$377,795	15.1%	5.2
Operating Cost - 5%	$1,088,617	$645,383	$448,020	16.4%	4.9
Operating Cost - 10%	$1,140,726	$685,754	$483,133	17.0%	4.7
Operating Cost -15%	$1,192,835	$726,125	$518,245	17.7%	4.6
Ore Grade +15%	$1,445,118	$917,939	$683,413	20.5%	4.1
Ore Grade +10%	$1,308,915	$813,630	$593,244	19.0%	4.4
Ore Grade +5%	$1,172,711	$709,321	$503,076	17.4%	4.7
Ore Grade - 5%	$900,304	$500,704	$322,739	14.0%	5.4
Ore Grade - 10%	$764,101	$396,395	$232,571	12.3%	5.9
Ore Grade -15%	$627,897	$292,076	$142,387	10.4%	6.4

1.30 ELG PROJECT SCHEDULE

The main points of the schedule are as follows:

- Financing is in place to complete the construction of the ELG Mine.
- Permit approvals were received in October 2013. Plant construction started in November 2013.
- Mining of Guajes pit commenced November 2013, as of June 30, 1.0 million tonnes at an estimated grade of 1.96 gpt Au and 3.54 gpt Ag on stockpile.
- El Limón South Access Road completed December 2014.
- Village of La Fundición relocation is underway and will be completed in September 2015.
- Village of Real de Limón to be relocated fourth quarter of 2015.
- Pre-stripping of the El Limón pit commenced July 2015.
- Detailed engineering was substantially completed Jan 2015 (95%).
- The east service road completed May 2015.
- Delivery of water from Azcala well field pipeline targeted for September 2015.
- Process commissioning to commence October, process plant start-up November 2015 with a 1 year ramp up period.

1.31 CONCLUSIONS

1.31.1 M3 Conclusions

The results of the financial model, which is presented in Section 22 of this report, shows that under current market conditions and following the assumptions and considerations noted in the body of the study, the ELG Mine is economically feasible. The main parameters are as follows:

Table 1-12: Base Case Financial Model Results ($M) – After Taxes

Parameter	Value
Undiscounted Cash Flow 0%	$1,036
Net Present Value @ 5%	$605
Net Present Value @ 8%	$413
IRR %	15.7%
Payback (yrs)	5.0

1.31.2 Conclusions by Amec Foster Wheeler M&M

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization in the El Limón and Guajes areas is sufficient to support estimation of Mineral Resources and Mineral Reserves. The geological knowledge of the area is also considered sufficiently acceptable to reliably inform mine planning for open pit operations. The geological understanding of the mineralization settings, lithologies, and structural and alteration controls on mineralization in the Media Luna area can support declaration of Inferred Mineral Resources. A conceptual underground mining scenario supports the estimate. Prospects are at an earlier stage of exploration than El Limón, Guajes and Media Luna and the lithologies, structural and alteration controls on mineralization are currently insufficiently understood to support estimation of Mineral Resources. The prospects retain exploration potential and represent upside potential for the Property. The interpretation of the deposits and prospects as being part of the class of intrusion-related gold and gold–copper skarn deposits is appropriate. The exploration programs completed to date are appropriate to the style of the deposits and prospects within the Property.

The quantity and quality of the logging, geotechnical, collar and down-hole survey data collected in the exploration and infill drill programs at El Limón Guajes and at Media Luna are sufficient to support Mineral Resource estimation for gold–silver mineralization at El Limón Guajes, and copper, gold and silver mineralization at Media Luna. Sample preparation and analytical methods have varied slightly by drill program. The procedures are in line with industry-standard methods at the time the work was completed. The QA/QC program results do not indicate any problems with the analytical programs. The data verification programs undertaken on the data collected from the Morelos Property adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

Mineral Resources were estimated assuming open pit mining methods for the El Limón and Guajes deposits, and assuming underground mining methods for the Media Luna deposit. Risk factors that could potentially affect the Mineral Resources estimates include the assumptions used to generate the conceptual data for consideration of reasonable prospects of eventual economic extraction including long-term commodity price assumptions, long-term exchange rate assumptions, assumed mining methods, changes in local interpretations of mineralization geometry and continuity of mineralization zones, geotechnical and hydrogeological assumptions, metallurgical testwork and mining and metallurgical recovery assumptions, operating and capital cost assumptions. Estimates of insitu bulk density are presently based on samples taken from core drilling. Determination of density based on larger-scale excavations or production may reveal densities that are different than those currently estimated for the deposit.

1.31.3 Conclusions by Amec Foster Wheeler

Based on the designs of the waste management and site water management system, there are no flaws or unresolvable issues anticipated.

1.31.4 Conclusions by SRK

Open pit mining of the Morelos deposit is considered appropriate and the ultimate pits designed contain sufficient ore to support a 14,000 tpd processing facility. ELG Mine development is on track to provide the process plant with startup feed by late 2015, and full plant feed by late 2016. Risks to mine plan production and cost estimates include the potential for underground voids in the El Limón pit that could slow mining rates, the risk that blast flyrock could interrupt El Limón ore transport, the possible need for additional grade control infill drilling and assaying, and the risk that plant feed head grades may be lower than mine plan predictions.

1.31.5 Conclusions by Golder

Based on the existing environmental and social data collected, during the baseline data programs and as reported in the Environmental and Social Impact Assessment (ESIA), and Golder's understanding of the ELG Mine components (mine, waste dumps, tailings facility, and ancillary operations), it is our opinion no severe environmental or social consequences are anticipated. There will be measurable effects, both beneficial and adverse. Strategies and management plans have been developed and will be implemented to avoid, minimize, mitigate or offset adverse effects to the extent feasible to comply with applicable Mexican and international laws, regulations and guidelines related to environmental and social management, including monitoring. The management plans translates the findings and recommendations of the impact assessment into measures for management and monitoring of impacts of the proposed ELG Mine activities.

1.32 RECOMMENDATIONS

1.32.1 M3 Recommendations

Based on the economic analysis, M3 believes that the ELG Mine is viable and should continue through construction completion, start-up and operation.

1.32.2 Amec Foster Wheeler M&M Recommendations

Amec Foster Wheeler M&M has made a number of recommendations for additional work which include:

- Torex should drill additional step-out holes around DPV-07, TMP-1296, TMP-1315 to confirm continuity and increase the confidence of the deep, high-grade gold intercepts at these depths. Assuming a total drilling cost, including assays, of $200/m, Amec Foster Wheeler M&M has estimated that approximately 6,000 m of drilling, in 12 drill holes, may be required. Estimated cost: $1.2 M.
- The recommended drill program for the ML Project is to support potential conversion of Inferred Mineral Resources to higher confidence categories such that more detailed engineering studies can be conducted, and was developed assuming a 30 m drill spacing would be required to support an Indicated classification and a 15 m spacing to support a Measured classification. The program comprises 140,000 m of core drilling at an estimated $115/m for NQ core and $150/m drilling costs for HQ core, and $85/m for sampling, assaying, and labor costs. Depending on whether NQ or HQ core is drilled, the program costs are estimated to range from approximately $16.1 M for an all NQ-program to $21 M for an all-HQ program.

1.32.3 Amec Foster Wheeler Recommendations

The following works are recommended.

- Continued laboratory testing of waste rock and tailings humidity cells collecting longer term data.
- Construction of larger test pads to further assess expected waste rock drainage quality at the field scale.
- Development of a site water quality model supported by the field and laboratory data.
- Development of trigger concentrations based on site monitoring data that will action additional work as required (e.g. further studies/modelling effort, or refinement of site specific water treatment design requirements.

1.32.4 SRK Recommendations

SRK has made a number of recommendations for additional work in the following areas.

1.32.4.1 Pit Geotechnical

- Benches cut particularly in the Guajes pit highwall should be mapped and evaluated with particular attention to the identification and characterization of any persistent La Amarilla parallel structures.
- The potential for significantly large voids in the El Limón northeast pit wall should be further evaluated based on an analysis of the existing resource drill hole database and mapping of new excavations. Depending on results additional drilling and cavity surveying may be required to further identify and delineate potential large voids. Geophysical methods including DC resistivity, ground penetrating radar and reverse seismic profiling may also be necessary prior to and/or during operation.

1.32.4.2 Mine Planning and Grade Control

- An alternative deeper El Limón pit design should be evaluated once the extent of the mineral resources at depth are better defined by exploration drilling and mineral resource modelling.
- SRK concurs with MML's initiatives to develop a site specific ELG Mine grade control procedure, including comparisons of reported mining by bench based on the grade control block model versus resource block model estimates, and current field investigations of blasthole sampling and assaying. It is recommended that complete reconciliations of actual plant feed and gold production versus mine plan predictions commence on an ongoing basis once the process plant is operational in late 2015.
- It is recommended that the ELG life of mine plan be updated annually to reflect current unit cost estimates and long term gold price forecast, mining progress and reconciliation findings, resource model refinements and pit design revisions, and other mine planning issues and opportunities that arise.
- Mine plan updates should incorporate updates to cut-off grade estimates. It is noted that, based on the final unit cost estimates and long term gold price forecast in this study, a marginal economic cut-off grade increase of approximately 0.1 g/t Au in is warranted. The option of utilizing a higher plant feed cut-off grade early in the mine life and stockpiling lower grade ore for later processing should also be considered.

1.32.5 Golder Recommendations

Golder has made a number of recommendations for additional work that include:

- Additional environmental studies to evaluate the incremental impacts associated with the modification of the ELG Mine to accommodate ML material as described in section 24.20.
- Additional studies to evaluate the potential impacts on groundwater and surface water from incremental activities associated with ELG Mine.

- Additional studies are recommended to evaluate the effects of waste rock and water control structures for El Limón Sur.

2 INTRODUCTION

The following Authors were commissioned in 2015 by Torex Gold Resources, Inc. ("Torex") to provide a Mine Plan at a feasibility level on the El Limón Guajes Mine and a Preliminary Economic Assessment on the Media Luna Project for the 14,000 MTPD processing case:

- M3 Engineering & Technology Corporation ("M3")
- Amec Foster Wheeler E&C Services Inc. Mining and Metals Division (Amec Foster Wheeler M&M)
- Amec Foster Wheeler Environment & Infrastructure a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler)
- SRK Consulting (Canada) Inc. ("SRK Canada")
- SRK Consulting (U.S.) Inc. ("SRK U.S.")
- Golder Associates Inc. ("Golder")
- AMC Mining Consultants (Canada) Ltd. ("AMC")

Torex's contact information is as follows:

Torex Gold Resources, Inc.
130 King St. West, Suite 740
Toronto, ON
Canada M5X 2A2
Tel: (647) 260 1500
Fax: (416) 304 4000

This report has been prepared in accordance with the guidelines provided in National Instrument 43-101, Standards of Disclosure for Mineral Projects ("NI 43-101") dated 24 June 2011 (became effective 30 June 2011). The effective date of this report is 17 August 2015. The issue date of this report is 03 September, 2015. The Qualified Persons responsible for this report are:

- Daniel H. Neff, P.E., Principal Author of El Limón Guajes Mine Plan
  M3 Engineering & Technology Corporation
- Robert Davidson, P.E., Principal Author of Media Luna Preliminary Economic Assessment
  M3 Engineering & Technology Corporation
- Thomas L. Drielick, P.E., Principal Metallurgist
  M3 Engineering & Technology Corporation
- Brian Connolly, P. Eng., Principal Mining Engineer
  SRK Consulting (Canada) Inc.
- Edward J.C. Orbock III, SME Registered Member, Manager of Geology
  Amec Foster Wheeler E&C Services Inc. Mining and Metals Division
- Mark Hertel, SME Registered Member, Principal Geologist
  Amec Foster Wheeler E&C Services Inc. Mining and Metals Division
- Benny Susi, P.E., Principal and Practice Leader
  Golder Associates, Inc.
- Michael Levy, P.E., P.G., Principal Geotechnical Engineer
  SRK Consulting (U.S.) Inc.

- Prabhat Habbu, M. Tech, P.Eng., Associate Geotechnical Engineer
  Amec Foster Wheeler Americas Limited
- Vladimir Ugorets, Ph.D., MMSAQP, Principal Hydrogeologist
  SRK Consulting (U.S.) Inc.
- James Joseph Monaghan, P. Eng. Principal Mining Engineer
  AMC Mining Consultants (Canada) Ltd.

Site visits and areas of responsibility are summarized in Table 2-1 for the QPs.

Table 2-1: Dates of Site Visits and Areas of Responsibility

QP Name	Site Visit Date	Area of Responsibility
Daniel H. Neff	02 to 04 April 2012 24 to 27 February 2015	Sections 1, 2, 3, 4, 5, 18.1-18.6, 18.9, 21.1, 21.2, 21.4.1, 21.4.3, 21.4.4, 22, 25.1, 26.1, and 27.
Robert Davidson	18 November 2014	Sections 24.1, 24.2, 24.3, 24.4, 24.5, 24.18, 24.21, 24.22, 24.24, and those portions of interpretations and conclusions, recommendations, and references that pertain to these sections.
Thomas L. Drielick	No site visit	Sections 13, 17, 19, 24.13, 24.17, 24.19 and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections. No site visit is required as Thomas is signed for only the metallurgical portion of the report.
Brian Connolly	05 to 06 May 2010 17 to 19 November 2014	Sections 15, 16.1, 16.7-16.15, 21.3, 21.4.2, 24.16.2, 24.21.1.4, 24.21.2.2, and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.
Edward J.C. Orbock III	01 to 03 September 2009 01 to 03 March 2011	Sections 6, 7, 8, 9, 10, 11, 12, 14.1, 14.2, 14.3.1, 14.4.1, 14.5.1, 14.6.1, 14.6.2, 14.7.1, 14.8.1, 14.9.1, 14.10.1, 14.11.1, 14.12.1, 14.13-14.15, 23, 24.6-24.12 and those portions of the interpretations and conclusions, recommendations, and references that pertain to these sections.
Mark Hertel	01 to 03 March 2011: Guajes 07 to 10 April 2013: Media Luna 08 to 10 September 2014: El Limón Sur	Sections 7.4.3, 7.6.2, 14.3.2, 14.3.3, 14.4.2, 14.4.3, 14.5.2, 14.5.3, 14.5.4, 14.6.3, 14.6.4, 14.7.2, 14.7.3, 14.7.4, 14.7.5, 14.8.2, 14.8.3, 14.8.4, 14.9.2, 14.9.3, 14.9.4, 14.10.2, 14.10.3, 14.10.4, 14.11.2, 14.12.2, and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.
Benny Susi	07 to 09 August 2012	Sections 20 and 24.20 and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.
Michael Levy	05 to 07 August 2015	Sections 16.2, 16.3, and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.
Prabhat Habbu	04 May to 06 May 2015	Sections 16.4, 16.6, 18.7, 18.8, 24.1.15.2, 24.18.14, 24.18.15, and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.
Vladimir Ugorets	No site visit	Section 16.5 and those portions of the references that pertain to that section.
James Joseph Monaghan	18 November 2014	Sections pertaining to underground mining in 24.1, 24.15, 24.16.1, 24.16.3, 24.16.4, 24.21 and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.

2.1 PURPOSE AND BASIS OF REPORT

This NI 43-101 Technical Report documents the results of a life of mine plan for the El Limón Guajes Mine (completed to a feasibility level of detail) and presents the finding of a Preliminary Economic Assessment for the Media Luna Project in Section 24. The information presented, opinions, conclusions, and estimates made are based on the following information:

- Information provided by Torex and their contractors;
- Assumptions, conditions, and qualifications as set forth in the report; and
- Data, reports, and opinions from third-party entities and previous property owners.

2.2 TERMS AND DEFINITIONS

Important terms used in this report are presented in Table 2-2. These are not all of the terms presented in the Technical Report, but include major terms that may not have been defined elsewhere.

Table 2-2: Terms and Definitions

Full Name	Abbreviation
Acid Base Accounting	ABA
Acid Rock Drainage	ARD
Amec Foster Wheeler Americas Limited	Amec Foster Wheeler
Amec Foster Wheeler E&C Services Inc. Mining and Metals Division	Amec Foster Wheeler M&M
Area of Direct Influence	ADI
Area of Indirect Influence	AII
Canadian Council of Ministers of the Environment	CCME
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
Carbon in Column	CIC
Carbon in Pulp	CIP
Carbon Monoxide	CO
Catch per Unit Effort	CPUE
centimeter	cm
Central Water Pond	CWP
Certified Reference Material	CRM
Combined Media Luna- El Limón Guajes Project	Combined ML-ELG Project
Communications and Transportation Secretariat	SCT
Community Relations Team	CRT
Convention on International Trade in Endangered Species of Wild Flora and Fauna	CITES
Copper	Cu
cubic meter	m^3
Cutoff Grade	CoG
Cut and Fill Stoping	C&F
degrees	°
degrees Celsius	°C
Economically Active Population	EAP
El Limón Guajes Mine	ELG Mine
El Limón Guajes Tailings Dry Stack	ELGTDS
Energy Secretariat	NUCL
Environmental and Social Impact Assessment	ESIA
Environmental and Social Management System	ESMS
Environmental Impact Study	EIS
Environmental Management Plan	EMP
Environmental, Health and Safety (Guidelines)	EHS (Guidelines)

Full Name	Abbreviation
Equator Principles	EP
Estudio Técnico Justificativo (Technical Justification Study)	ETJ
Feasibility Study	FS
Federal Electricity Commission	CFE
Global Discovery Laboratory	GDL
Global Positioning System	GPS
Gold	Au
Golder Associates Inc.	Golder
grams per dry metric tonne	gms/dmt
grams per tonne	g/t
Greenhouse Gases	GHG
Gross Domestic Product	GDP
Guajes Pit Tailings Dry Stack	GPTDS
Hazard Quotient	HQ
Health Secretariat	SSA
hectare	ha
Human Development Index	HDI
Informed Consultation and Participation	ICP
Instituto Nacional de Estadística y Geografía	INEGI
International Finance Corporation	IFC
International Finance Institution	IFI
Iron	Fe
kilogram	kg
kilometer	km
kilotonnes	kt
Labor Secretariat	STPS
Labor Party	PT
Licencia Ambiental Unica	LAU
Local Study Area	LSA
Long Hole Open Stoping	LHOS
M3 Engineering and Technology Corp.	M3
Maintenence and Repair Contract	MARC
Manifestación de Impacto Ambiental (or Environmental Impact Statement)	MIA
Mean Sea Level	MSL
Media Luna Project	ML Project
Metal Leaching	ML
Meter	m
metric tonnes per day	MTPD or t/d
metric tonnes per year (or per annum)	MTPY or t/a
Mexican National Water Commission (Comisión Nacional de Agua)	CONAGUA
Minera Media Luna S.A. de C.V.	MML
Minera Nukay	Nukay
Miranda Mining Development Corporation	MMC
National Action Party	PAN
Preliminary Economic Assessment	PEA
National Council for Evaluation of Social Development Policy	CONEVAL
National Environment Institute and the Federal Attorney Generalship of Environmental Protection	PROFEPA
National Institute of Anthropology and History (Instituto Nacional de Antropología e Historia)	INAH
National Institute of Statistics and Geography	INEGI
National Instrument	NI
National Population Council	CONAPO
National Water Commission	CNA
Neutralization Potential Ratio	NPR
Normas Oficiales Mexicanas	NOMS
North American Free Trade	NAFTA

Full Name	Abbreviation
ordinary kriging	OK
Particulate Matter	PM
parts per billion	ppb
parts per million	ppm
Party of Democratic Revolution	PRD
Performance Standard	PS
Potentially Acid Generating	PAG
Potentially Acid Generating	PAG
Pre-Feasibility study	PFS
Preliminary Economic Assessment	PEA
Procuraduría Federal de Protección de Ambiente	PROFEPA
Programa para la Prevención de Accidentes (Program to prevent risk)	PPA
Purchasing Power Parity	PPP
Qualified Person	QP
Quality Assurance and Quality Control	QA/QC
Red Mexicana de Afectadas y Afectados por la Minería	REMA
Region of Importance for Conservation of Birds	AICAS
Regional Study Area	RSA
Resettlement Action Plan	RAP
Resolución de Impacto Ambiental	RIA
Reverse Circulation	RC
Rock Quality Designations	RQD
Secretaría de Medio Ambiente y Recursos Naturales (Secretariat of the Environment)	SEMARNAT
Secretaría de Medio Ambiente, Recursos Naturales y Pesca, SEMARNAP (Secretary of Environment and Natural Resources)	SEMARNAP
Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food	SAGARPA
Secretariat of the Environment, Natural Resources and Fishing	ECOL
Secretary of the Environment, Natural Resources and Fisheries	SEMARNAT
Silver	Ag
Simpson's Diversity Index	SDI
Simpson's Evenness Index	SEI
Square meter	m^2
SRK Consulting	SRK
Stakeholder Engagement Plan	SEP
Standard Proctor Maximum Dry Density	SPMDD
Substances of Potential Concern	SOPCs
Tailings Dry Stack Facility	TDSF
Teck Resources Limited	Teck
Torex Gold Resources Inc.	Torex
Total Dissolved Solids	TDS
Total Suspended Particulate	TSP
Total Suspended Solids	TSS
Toxicity Reference Value	TRV
Universal Transverse Mercator	UTM
Waste Rock Dump	WRD
Waste Rock Storage Facilities	WRSF
Zinc	Zn
Zone of Influence	ZOI

The names Torex and MML are used interchangeably in this study, since Torex holds 100% ownership of MML.

2.3 UNITS

This report uses metric measurements. The currency used in the report is U.S. dollars. The local currency of Mexico is the Mexican peso.

2.4 EFFECTIVE DATES

The effective date of the Technical Report is 17 August 2015. There were no material changes to the information on the property between the effective date and the signature and issue date of the report.

There are a number of effective dates for information in the Technical Report:

- Date of last supply of exploration drill hole information is 17 August 2015. The exploration program is ongoing.
- The drill hole database assay close-off date for El Limón is 6 April 2012.
- The drill hole database assay close-off date for Guajes is 6 April 2012.
- The drill hole database assay close-off date for El Limón Sur area is 3 May 2014.
- The drill hole database assay close-off date for Media Luna is 2 June 2015.
- Effective date of the Guajes Mineral Resource estimate is 16 December 2014.
- Effective date of the El Limón Mineral Resource estimate (except El Limón Sur) is 18 June 2012.
- Effective date of El Limón Sur Mineral Resource estimate is 6 August 2014.
- Effective date of the Media Luna Mineral Resource estimate is 23 June 2015.
- Effective date of Mineral Reserve estimate is 31 December 2014.
- Date of land tenure legal opinion is 4 June 2015.
- Date of surface rights legal opinion is 9 July 2015.
- Date of issue for this report is 3 September 2015.
- Effective date of the mine plan for Guajes, El Limón, North Nose, and El Limón Sur is 1 January 2015.
- The Definitive Capital Cost Estimate for the El Limón Guajes Mine is effective as of January 2015.
- Operating costs and the financial model are effective as of the second quarter of 2015.
- The progress of the ELG Mine construction is effective as of 30 June 2015.
- The capital cost estimate for the Media Luna Project is effective 30 June 2015.

3 RELIANCE ON OTHER EXPERTS

The Qualified Persons (QPs) have relied upon and disclaim responsibility for information derived from the following reports pertaining to mineral tenure and royalties, and surface and water rights.

3.1 MINERAL TENURE AND ROYALTIES

The QPs of this report relied upon contributions from other consultants as well as Torex. The QPs have reviewed the work of the other contributors and finds this work has been performed to normal and acceptable industry and professional standards. The authors are not aware of any reason why the information provided by these contributors cannot be relied upon. An independent verification of mineral tenure and royalties was not performed. The QPs have not verified the legality of any underlying agreement(s) that may exist concerning the license or other agreement(s) between third parties. Likewise, Torex has provided data for and verified claim (mineral) ownership. The following document was referred to with respect to mineral ownership rights:

- Sánchez-Mejorada, Velasco y Ribé Abogados, 2015a. Mining rights title report and opinion on the concessions held by Minera Media Luna, S.A. de C.V.: unpublished legal opinion letter prepared by Sánchez-Mejorada, Velasco y Ribé Abogados for Torex Gold Resources Ltd., 4 June 2015.

This information is used in Sections 4.3, 4.5, 14 and 15.

3.2 SURFACE AND WATER RIGHTS

The QPs of this report relied upon contributions from other consultants as well as Torex. The QPs have reviewed the work of the other contributors and finds this work has been performed to normal and acceptable industry and professional standards. The authors are not aware of any reason why the information provided by these contributors cannot be relied upon. An independent verification of surface and water rights was not performed. The QPs have not verified the legality of any underlying agreement(s) that may exist concerning the agreement(s) between third parties. Likewise, Torex has provided data for and verified surface and water rights. The following documents were referred to with respect to current surface and water rights:

- Sánchez-Mejorada, Velasco y Ribé Abogados, 2015b. Surface rights report and opinion on the land expected to be used by Minera Media Luna, S.A. de C.V.: unpublished legal opinion letter prepared by Sánchez-Mejorada, Velasco y Ribé Abogados for Torex Gold Resources Ltd., 9 July 2015.

This information is used in Sections 4.4, 14 and 15.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 KEY POINTS

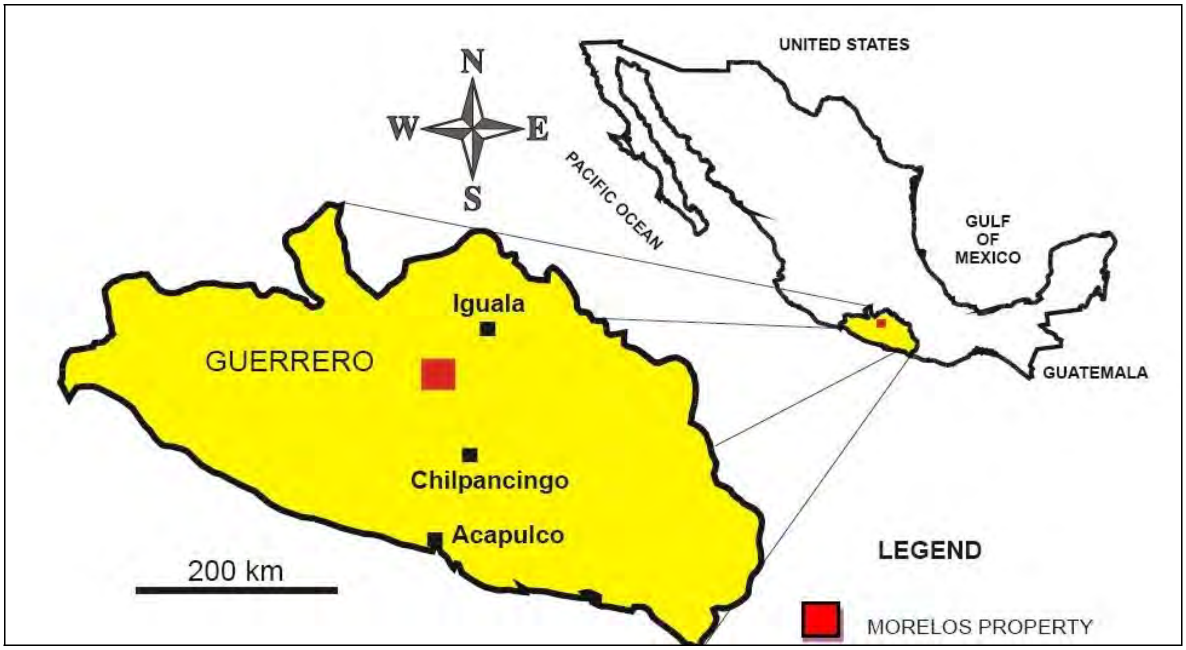
The key items of this section include the following:

- Torex, through its ownership of MML, holds 100% title to seven concessions covering approximately 29,000 hectares.
- Guajes and El Limón deposits and Media Luna resource are located in the Reducción Morelos Norte Concession.
- The Reducción Morelos Norte Concession is located approximately 200 km southwest of Mexico City within Guerrero State, Mexico.
- There is a 2.5% royalty payable to the Mexican government on minerals produced and sold from the Reducción Morelos Norte Concession.
- Of the 1,946 hectares that are required for the mining and processing operations, 1,831 hectares are held by Torex under Temporary Occupation Agreements, 26 hectares are held by Torex under a Preparatory Temporary Occupation Agreement and the remainder is held by Torex under a Preparatory Temporary Use and Enjoyment Assignment Agreement.

4.2 LOCATION

The ELG Mine and Media Luna Project are located in Guerrero State, Mexico, approximately 200 km south-southwest of Mexico City. The location of the property in relation to the state of Guerrero, as well as its location within Mexico, can be seen in Figure 4-1.

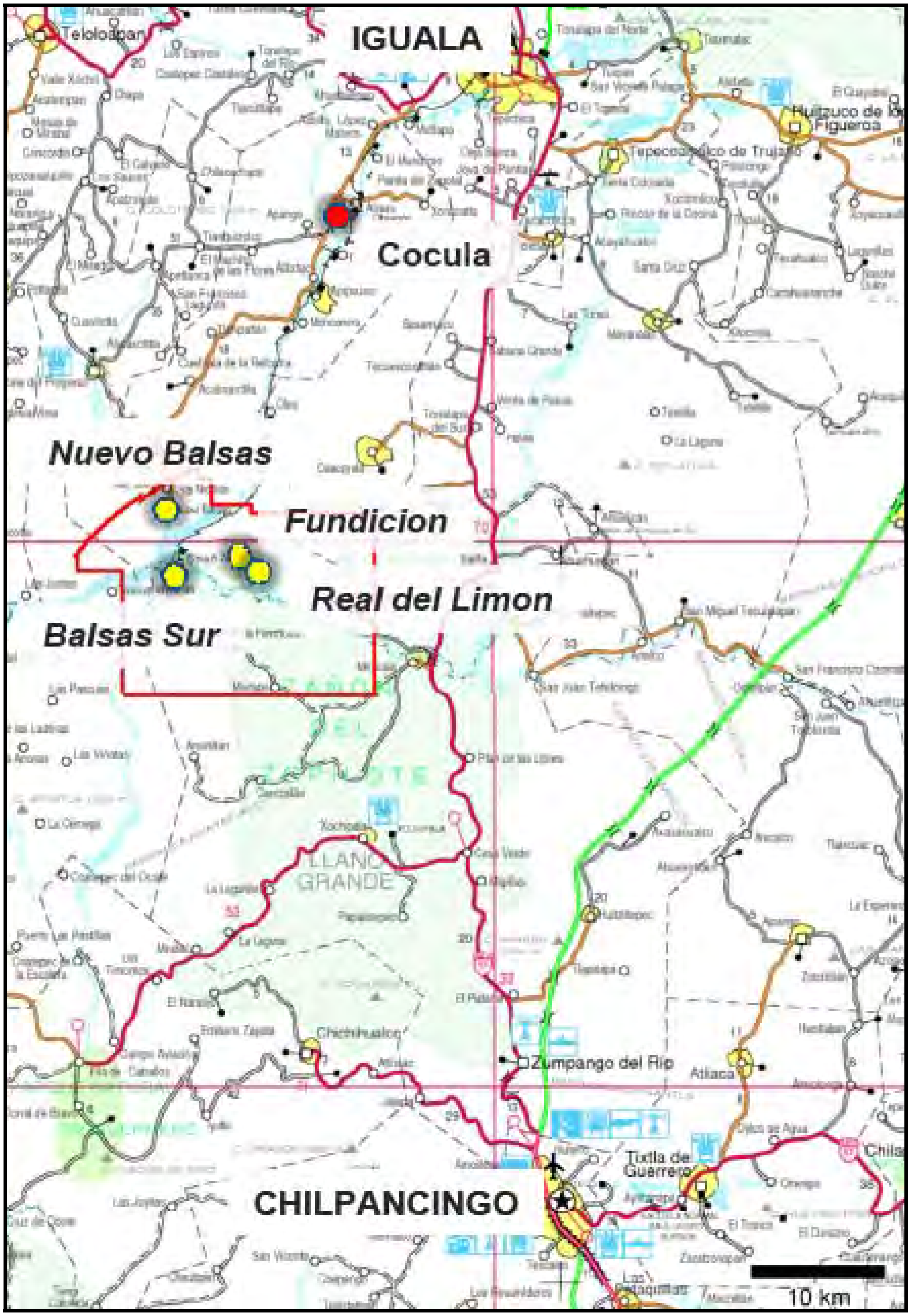
The approximate geographic center of the ELG Mine area is 18.0075 N, 99.7443 W. The approximate geographic center of the Media Luna resource is 17.9597 N, 99.7322 W.



Note: Figure dated July 2008, Figure courtesy of Torex.

Figure 4-1: Site Location Map

Figure 4-2 shows local communities near and within the Property. The red 'box' identifies the 29,000 ha of the property area.



Note: Figure courtesy Torex, 2008. Map: North is to the top of the map.

Figure 4-2: Local Communities and Infrastructure

4.3 HISTORY OF THE OWNERSHIP OF MINING CONCESSION

The following is a chronological description of the formation of the concessions and their ownership.

- In 1983 the Morelos Mineral Reserve was created. It encompassed 47,600 ha, including the area of the El Limón and Guajes deposits.
- In 1995 the Morelos Mineral Reserve was divided into the two concessions named Reducción Morelos Sur and Reducción Morelos Norte. The latter contained the area of the El Limón and Guajes deposits.
- In 1998, through a bidding process, the Reducción Morelos Norte concession was awarded to a joint venture between Miranda Mining Development Corporation ("MMC") and Teck Corporation, through the JV entity named Minera Media Luna, S.A. de C.V. ("MML").
  - As a result of the bidding process, the Reducción Morelos Norte claim block is subject to a royalty of 2.5% to the Servicio Geológico Mexicano.
- On September 14, 1999 the concessions titled El Anono, El Cristo, San Francisco, and El Palmar were obtained by MML in a transfer of mining assets agreement with Minera Babeque, S.A. de C.V. ("Babeque"). This agreement transferred the mining concession titles from Babeque to MML for a consideration of $5M pesos.
  - Royalty payment of 2.5% net smelter return is payable to Minas de San Luis, S.A. de C.V. on the El Cristo, San Francisco, El Anono and El Palmar concessions.
- On May 8, 2003 the concession titled Apaxtla 2 was obtained by MML in a transfer of mining assets agreement with Compañía Minera Nukay, S.A. de C.V.
  - Royalty payment of 1.5% net smelter return is payable to Minas de San Luis, S.A. de C.V. (formerly Minera Nafta, S.A. de C.V.) on the Apaxtla 2 concession.
- On April 28, 2004 the concession titled La Fe was obtained by MML in a transfer of mining assets agreement with Minera Teck, S.A. de C.V.
- MML was held 60% by Teck Resources Limited ("Teck"), and 40% by MMC.
- In 2003, Wheaton River Minerals acquired MMC, and was in turn, in 2005, acquired by Goldcorp.
- By 2009, the Property was held 78.8% by Teck, and 21.2% by Goldcorp.
- On November 16, 2009 Gleichen (previous name of Torex) acquired Teck's 78.8% share of the property via an agreement dated 6 August 2009. This purchase was completed by Torex's purchase of 100% of Oroteck, S.A. de C.V. from Teck's subsidiaries Teck Metals Ltd. and Teck Exploration Ltd., for a purchase price of US$150M and a 4.9% stake in Torex. Oroteck, S.A. de C.V. was the holding entity for Teck's 78.8% interest in MML in Mexico. Upon purchase of Oroteck, S.A. de C.V. by Torex, the company's name was changed to TGRXM S.A. de C.V. ("TGRXM"). TGRXM is a wholly-owned subsidiary of Torex.
- On 24 February 2010, Torex, through TGRXM, completed the acquisition of all of the shares of MML, held by Desarrollos Mineros San Luis, S.A. de C.V. ("DMSL"), a wholly-owned subsidiary of Goldcorp. This holding represented the remaining 21.2% of the issued and outstanding shares of MML. The acquisition was completed through the exercise of a right of first refusal held by TGRXM to acquire 7.2033% Series A shares and 14.0% Series G shares in the capital of MML. As a result of the acquisition, Torex now holds 100% of the issued and outstanding shares of MML, through its wholly-owned subsidiary TGRXM. MML is the registered holder of a 100% interest in the Property in the State of Guerrero, Mexico.

4.4 SURFACE OWNERSHIP

The vast majority of the land in the Reducción Morelos Norte concession is owned by Ejidos. Land owned by an Ejido is collectively administered and is held by its members as either common land, which is jointly owned by the members, or as parcels which are held by individual members.

Of the 1,946 ha of land required for the El Limón and Guajes mining and processing operations and held under Temporary Occupation Agreements, 1,229 ha is owned by the Balsas River Ejido and 602 ha is owned by the Real del Limón Ejido. The only private property within the ELG Mine area is to the south of the Real del Limón Ejido; it has a surface area of 115 ha.

Torex has secured surface rights to land for the direct development of the Property through the signing of long-term lease agreements with the Balsas River and Real del Limón Ejidos and with the members of such Ejidos and in respect of the private property, through the signing of a Preparatory Temporary Occupation Agreement and a Preparatory Temporary Use and Enjoyment Assignment Agreement. These agreements cover approximately 1,946 hectares of land. Torex utilized and maintains the services of Grupo GAP to obtain these land agreements as well as to complete land title searches. The following paragraphs provided by Torex describe these agreements.

Torex signed long-term common land lease agreements with the Balsas River and Real del Limón Ejidos along with agreements for individually 'owned' land parcels. Long-term land lease agreements have been executed for a total of approximately 1,831 hectares of land, including two common land lease agreements, one human settlement area agreement and 140 individually owned parcel agreements.

Torex has also signed a Preparatory Temporary Occupation Agreement with co-owners of 26 ha of the private land and a Preparatory Temporary Use and Enjoyment Assignment Agreement with co-owners of 89 ha of the private land. In each case, the agreement provides for the determination of the terms and conditions of the respective definitive agreement which each co-owner is obligated to sign once estate judicial proceedings of certain deceased co-owners are finalized authorizing the heirs to execute the definitive agreement.

The terms of all of the lease agreements are believed to be comparable to long-term lease agreements signed by other operating mining companies in the area. The lease agreements are for 30 years with annual payments of 23,000 pesos per hectare during the first two years, and for the subsequent 13 years, the equivalent, in pesos, of 2.5 troy ounces of gold per hectare, calculated at the annual average gold price published by the London Bullion Market Association. Starting in year 16, and every 5 years thereafter, the amount of the annual payments will be renegotiated.

The terms of the Preparatory Temporary Occupation Agreement and related definitive temporary occupation agreement for the private land is for 30 years (as of December 2012) with annual payments of 23,000 pesos per hectare during the first year, and for the remaining years, the equivalent, in pesos, of 2.5 troy ounces of gold per hectare, calculated at the annual average gold price published by the London Bullion Market Association.

The terms of the of Preparatory Temporary Use and Enjoyment Assignment Agreement and related definitive temporary occupation agreement for the private land is for 15 years (as of December 2012) , renewable for an additional 15 years at Torex's election, with annual payments of 13,000 pesos per hectare during the first year, and for the remaining years, annually adjusted for inflation.

As part of the agreement with the Real del Limón Ejido a general agreement on a resettlement of both the La Fundición and El Limón villages was negotiated. Resettlement is currently underway.

The land required for the eastern service road is owned by four Ejidos, which are Valerio Trujano, Atzcala, Real del Limón and Balsas River. Construction on the road is complete except for 3km section adjacent to the village of Real del Limón which will be completed when the village is relocated. The full completion of the road is expected in February, 2016.

The negotiations for the long term lease of the land required for the water well field and the permanent camp have been completed with the Atzcala Ejido.

There is a pending case against the Balsas River Ejido involving approximately 642 hectares of the area covered in the Balsas River land access agreement. Although there was a recent court decision in favor of the Balsas River

Ejido that indicates that the Balsas River Ejido has legal title and possession of the land, the case has been appealed by a third party. There is also a pending case against the Real del Limón Ejido by an ejido member claiming ownership of a parcel. If the appeal or case, as the case may be, is ruled against the respective ejido, Torex would have to secure surface rights from the third party. In such circumstances, Torex could negotiate with the third party to acquire the land or a temporary occupation or expropriation process could be undertaken to obtain legal title to the land. Torex does not expect the results of either scenario to have a material adverse effect on development of the Property.

In addition to agreements for the development of the Property, Torex also has an agreement with the Ejido Puente Sur Balsas to enable exploration activities for the ML Project. This agreement was signed July 5, 2012 and is in effect for 3 years for the individual parcels and 5 years for common use land. Figure 4-3 shows the full property area including Ejido locations.

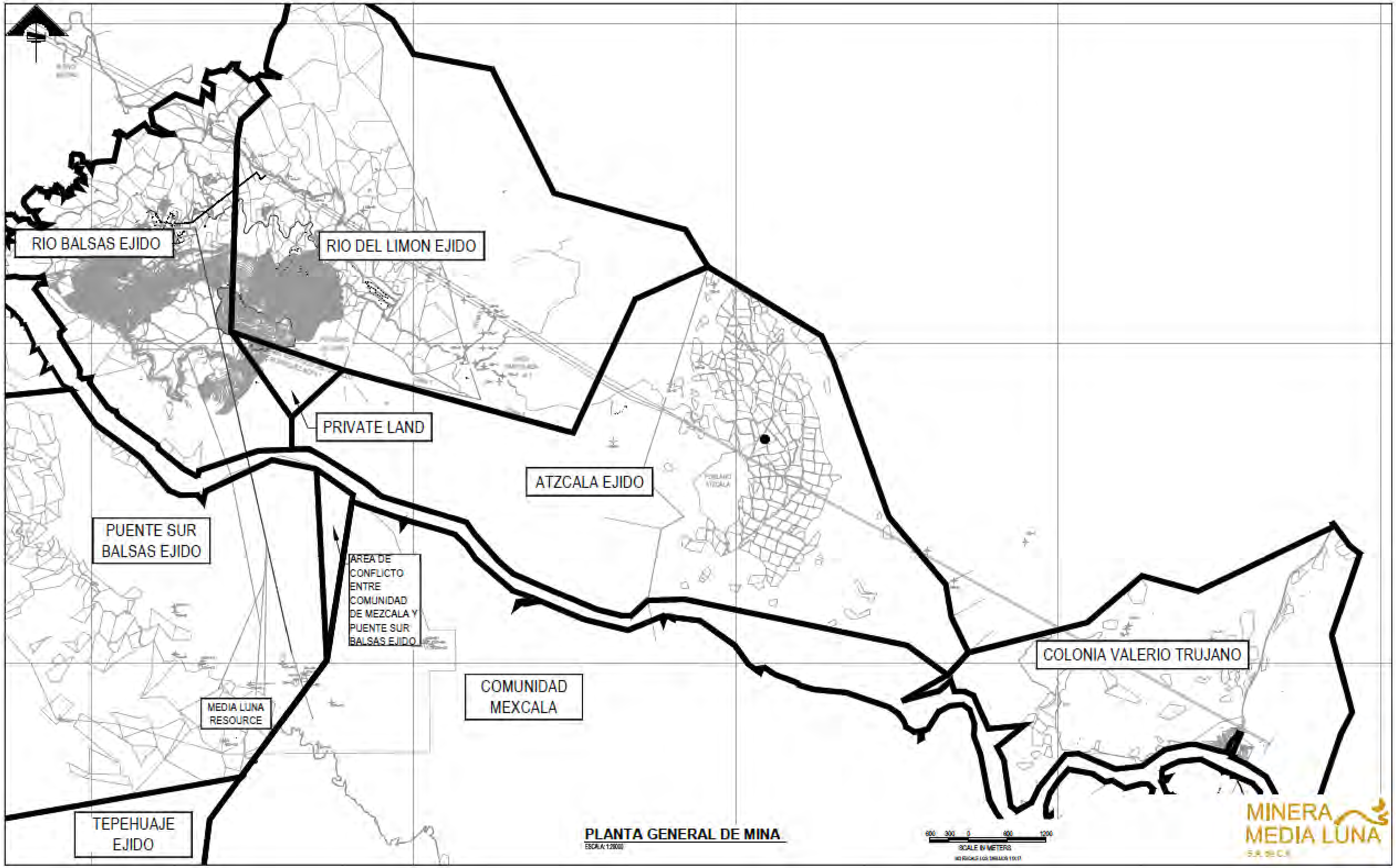


Figure 4-3: Property General Area Layout Showing Current Ownership

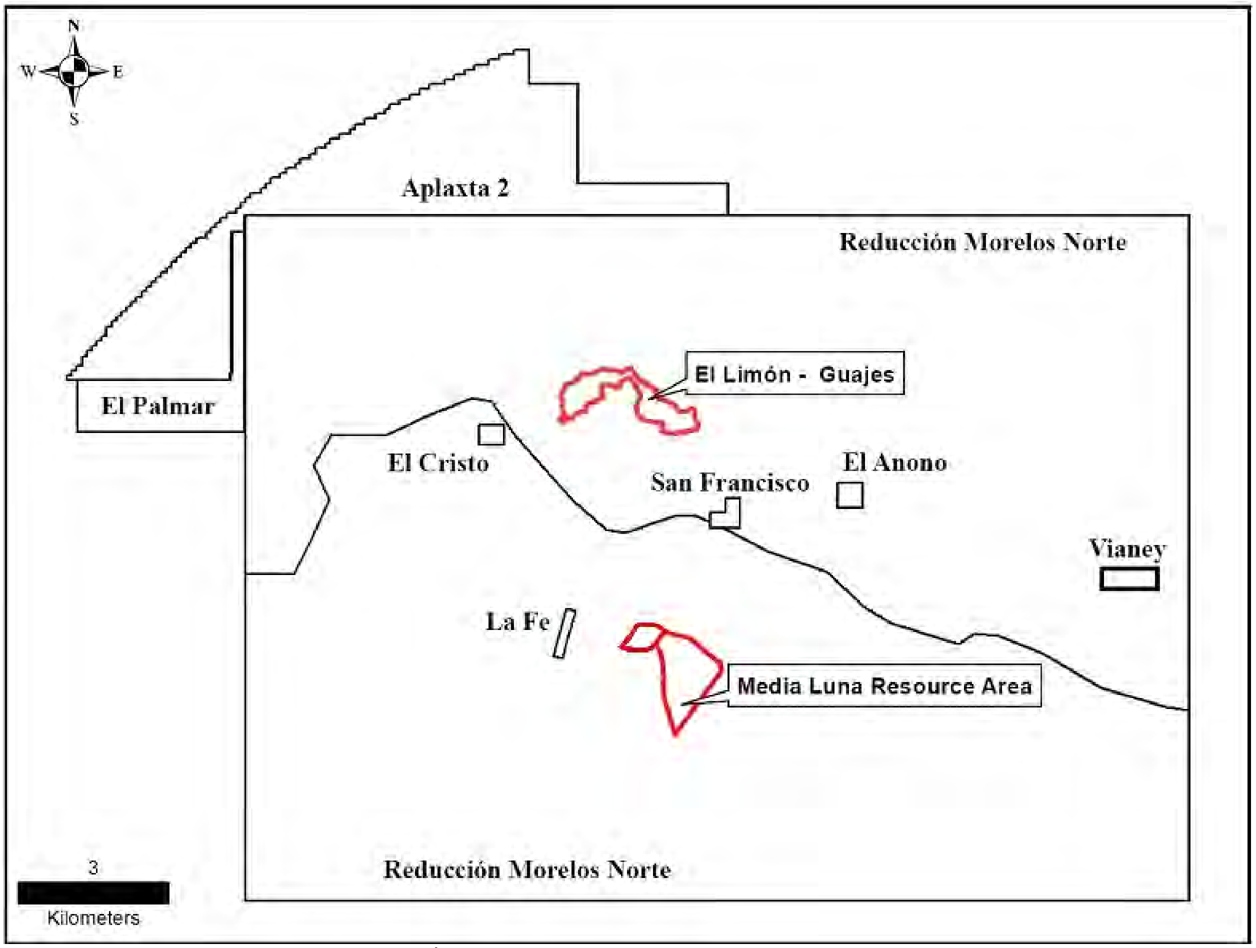
4.5 CURRENT TENURE

4.5.1 Mining Title

MML holds seven mineral concessions, covering a total area of approximately 29,000 ha (Table 4-1 and Figure 4-4), with the El Limón and Guajes deposits contained in the Reducción Morelos Norte concession. All concessions were granted for a duration of 50 years. Torex controls 100% of MML. A small tenement, Vianey, is held by a third-party, and excised from the Property area as illustrated in Figure 4-4.

Table 4-1: Mineral Tenure Summary

Type of Tenure	Issuance Date	Expiration Date	Duration	Area (ha)
Mining Concession No. 188793 (La Fe)	November 30, 1990	November 28, 2040	50 years	20
Mining Concession No. 214331 (El Cristo)	September 6, 2001	September 5, 2051	50 years	20
Mining Concession No. 214332 (El Palmar)	September 6, 2001	September 5, 2051	50 years	429.5
Mining Concession No. 214333 (El Anono)	September 6, 2001	September 5, 2051	50 years	25
Mining Concession No. 214334 (San Francisco)	September 6, 2001	September 5, 2051	50 years	27
Mining Concession No. 217558 (Apaxtla 2)	July 31, 2002	July 30, 2052	50 years	2,263.2
Mining Concession No. 224522 (Reducción Morelos Norte)	May 17, 2005	May 16, 2055	50 years	26,261.5
Total Hectares				**29,046.2**



Note: red outlines show the location of the El Limón – Guajes and Media Luna deposits and are the approximate dimensions, dark black outline is a small tenement named Vianey that is held by third parties, and is not part of the Property.

Figure 4-4: Tenure Map

4.5.2 Duty Payments

Duty payments for 2015 were made for all mining concessions as seen in Table 4-2.

Table 4-2: 2015 Duty Summary

Mining Concession	Years since Grant made	Amount Paid (Pesos)
La Fe	25	2,805
El Cristo	14	2,805
El Palmar	14	60,233
El Anono	14	3,506
San Francisco	14	3,787
Apaxtla 2	13	317,363
Reducción Morelos Norte	10	3,682,651

As per Mexican requirements for grant of tenure, the concessions comprising the mine have been surveyed on the ground by a licensed surveyor.

4.6 ENVIRONMENTAL AND SOCIAL RISKS

At the time of this report there are no known environmental or social risks that have a material likelihood of impacting the ability to carry out the mine as envisaged in this report. Additional discussion on this is outlined in Section 20 of this report.

4.7 PERMITTING CURRENT AND FUTURE

4.7.1 Exploration

During 2011, permits for exploration work were granted under the General Law for Ecological Equilibrium and the Protection of the Environment and the General Law of Sustainable Forestry Development. Environmental impact assessments and change of land uses applications were submitted and accepted by the Mexican regulatory authorities.

4.7.2 Permitting Required for ELG Mine Development

All permits to enable the construction of the ELG Mine are in place. Once the mine is in operation, a final operating license will be applied for and received. The following is a listing of permits that are in hand:

- MIA (Environmental Impact Manifest). Includes a comprehensive review of the significant and potential environmental and social impacts associated with all phases of the mine, and describes the measures for avoiding/mitigating these environmental impacts.
    - Status – Construction and Operation.
- ER (Environmental Risk Assessment). The Environmental Risk Assessment ("ER") is complementary study to the MIA that specifically addresses risks identified in the MIA.
    - Status – Construction and Operation.
- ETJ (Technical Justification Study). The ETJ is complementary to the MIA and is a formal application to the Mexican regulatory authority for change of the land use from forestry to mining.
    - Status – Construction and Operation.
- Explosives Permit required from Secretaría de la Defensa Nacional (SEDENA)
    - Status – ELG Mine is currently operating with a contract for the supply and placement of explosives by a contractor. SEIJO, the contractor, holds a valid Explosives Permit. Once construction of the explosives magazines is completed, MML will apply for this permit.
- Título de Concesión de Agua (Water Concession). Is a concession granted by Comisión Nacional del Agua (CONAGUA) the Mexican water authority for the extraction of water from a regional aquifer.
    - Water concession granted by CONAGUA to MML on July 16, 2012.
- Permit to Undertake Activities in Archaeological Areas: The mine is located within a registered archaeological zone under the jurisdiction of the INAH.
    - Status - A field review was completed by INAH on the ELG Mine area which identified areas of Archeological importance. As a result of this review and associated dictum, an agreement was signed, with this agency, to undertake archaeological rescue activities. Rescue activities have been completed.

Once construction is complete, the following permit will be applied for:

- PPA (Accident Prevention Program). The PPA is a detailed plan developed from the results of the ER that addresses the contingency and emergency plans for all identified risks. This plan is required to be in place and approved once the mine has entered production.
    - Status - in preparation to be submitted once construction has been completed

Additional discussion on Permitting is available in Section 20 of this report.

4.7.3 Permitting Required for Future ML Resource Development

The permits required to develop the ML Resource, are similar to permits that were required for the ELG Mine. Permitting will be completed in two stages 1) for underground exploration of the mine and then if successful permitting of a full underground mine with associated modifications to the ELG infrastructure.

It must be noted that with the current mine plan for ML, the impact on the environment would be substantially less than the ELG. This is due to three main reasons:

1. The use of the ELG Mine infrastructure for processing of the Media Luna mineralized material and the disposal of Media Luna Tailings within the permitted ELG Tailings dry stacks followed by inpit disposal.

2. Accessing the mine via underground tunnels and use of the RopeCon system to span the Balsas River which greatly reduces surface disturbance.

3. The use of Underground Mining methods with tailings and waste rock being placed back into the mine as fill.

With these reasons in mind, the permitting for the ML Project would be expected to be less complex then experienced for the ELG Mine. It should also be noted that certain work required for the ML MIA is currently underway.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 KEY POINTS

The key items of this section are the following:

- Good existing access to the ELG Mine and ML Project area
- Located in relatively well serviced region of Guerrero State
- Close proximity to other existing Mining Operation
- Close proximity to major transportation routes (highway and port facilities)
- ELG Mine and ML Project are located near centers for supply of material and workers
- Electrical power available at Mine
- Water supply secured for ELG Mine

5.2 EXISTING ACCESS, INFRASTRUCTURE AND LOCAL RESOURCES

Access to the Morelos Property is good, with the property being within a 4.5 hour drive of Mexico City. Current access to the ELG Mine is via two routes. The first route is from the west from village of Nuevo Balsas via 5 km of single-lane gravel road. A second access route has been established from the east, and is to be fully open at the end of 2015, this route is referred to as the East Service Road (ESR). This provides the mine with a 2 lane gravel road from the mine to the Mexican highway I-95 which runs from Mexico City to the port of Acapulco. This new road will be the route that materials and supplies will travel during operation of the ELG Mine. Access to Media Luna Project is currently from highway 95 along a 23 km gravel road from the village of Mezcala or by a 15 minute boat ride from the village of Nuevo Balsa along El Caracol Reservoir and Balsas River.

The nearest port to the mine is at Acapulco which is approximately 200 km south of the mine via the ESR and highway I-95. Development of the ESR also provides access to other communities notable Mezcala (45 km) which is the location of Goldcorp's Los Filos Mine, one of the largest gold mines in Mexico. Other large communities near the Property include Iguala with a population of ~140,000 and Chilpancingo, the state capital of Guerrero, with a population of ~240,000. Iguala is 60 km north of the ELG Mine via existing roads and Chilpancingo is ~100 km south of the ELG Mine via the new road and highway I-95. Both of these communities have well established services and will provide access to a large work force.

Power is available for the mine with connection to the existing high power transmission lines having been completed, it is expected that power will start being fed to the mine in 2015. CFE, the Mexican power authority, has confirmed there is sufficient power available to meet the needs of the ELG Mine and an agreement is in place between MML and CFE. There is also sufficient capacity to add the Media Luna Project loads.

Process water for the ELG Mine has been secured, with CONAGUA, the Mexican Water Authority, granting a water concession to MML for drawing of up to 5 million cubic meters of water per year from an aquifer located 18 km east of the proposed plant site. Three wells have been developed and testing has confirmed the water availability. It is expected that process water for the Media Luna Project would be supplied from these wells if required.

Current site communications consist of internet running by microwave from Iguala. Phone service is through the current internet connection. There is no reliable cellular service on site and currently no plans for placing an antenna at site.

5.3 CLIMATE

The property is located in a sub-tropical zone that receives about 780 mm of precipitation annually. The months with the most rainfall are June through September. Very little precipitation occurs between November and April. However, the property area can be affected by tropical storms and hurricanes which can result in short-term high precipitation events. These events can produce severe erosion, flash flooding, debris flows and poor road conditions.

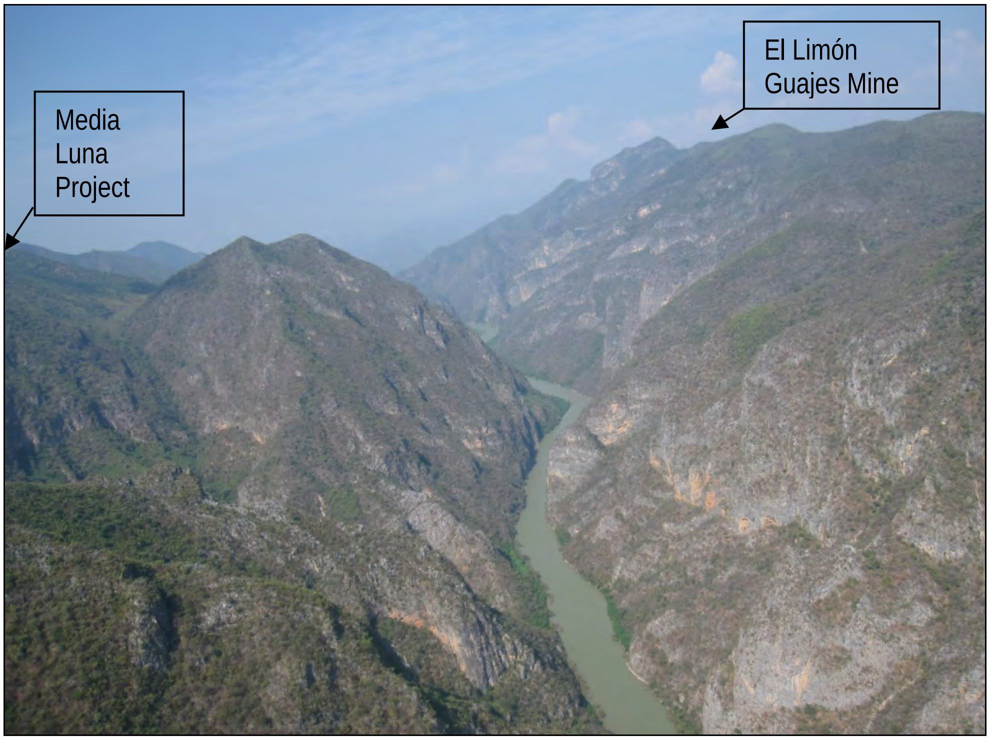
The average annual temperature is 23–29ºC. The most predominant wind direction appears to be from the north-northeast (NNE), followed by winds from the southwest (SW), the west-southwest (WSW) and the northeast (NE). Operations at the ELG Mine are planned to occur on a year-round basis.

5.4 PHYSICAL GEOGRAPHY & TERRAIN

The region is characterized by large limestone mountains divided by wide valleys (Figure 5-1 and Figure 5-2).The slopes of the hills vary from flattened (5%–10%) to very steep slopes (50%). Within the ELG Mine area, relief ranges from 470 meters above mean sea level (which is the average elevation of the El Caracol Reservoir) to top of the El Limón ridge at 1,540 m msl.

Note: Figure courtesy of M3 Engineering, 2015. Photograph looks southeast. (Mine Infrastructure in foreground and Guajes pit behind.)

Figure 5-1: ELG Mine Physiography



Photograph courtesy Torex, 2013. Photograph looks west. The Balsas River is approximately 90 m wide in the foreground of the photograph and provides an approximate scale. The Guajes and El Limón deposits are situated on the ridge top to the upper right hand side background of the photograph. The Media Luna deposit is located just off the image to the left hand side.

Figure 5-2: Media Luna Topographic Setting

5.5 LAND TENURE

Torex has gained sufficient land tenure, via long-term lease agreement, for the construction and operation of the mining plant to exploit the two deposits (El Limón and Guajes). The land covered by the agreements contains sites for mining operation, process plant, tailings storage area as well as mine waste disposal areas. (See Section 4.5 for additional detail on the ELG Mine land tenure.)

6 HISTORY

6.1 KEY POINTS

The key points of this section include the following:

- Initial work completed by Teck from 1998 to 2008; comprised initial regional exploration programs; identified El Limón and Guajes deposits in 1999 and completed about 100,000 m of drilling.
- Torex acquired 100% of the Morelos Property in 2010, focusing their work in two areas – North of the Balsas River and South of the Balsas River.
- North of the Balsas River:
  - Torex added over 100,000 m of drilling and completed a feasibility study on the El Limón and Guajes mine in 2012.
  - Construction and mining operations commenced on the ELG Mine in 2013. In 2014 Torex completed a resource update on the Guajes and El Limón Sur deposits.
- South of the Balsas River:
  - Work in this area resulted in the discovery of the Media Luna deposit in 2012. Torex has completed over 180,000 m of core drilling. The initial Media Luna resource estimate was completed in 2013.
  - Additional drilling was undertaken on the Media Luna deposit during 2014–2015, and the resource estimate was updated in 2015. This updated resource estimate was used to support the preliminary economic assessment that is included in Section 24 of this Report.

6.2 PRE-TOREX WORK PROGRAMS

In 1995, the former Morelos Mineral Reserve, created in 1983, was divided into a northern and southern portion, and these portions allocated to mining companies through lottery. A joint venture vehicle between Miranda Mining Development Corporation (MMC) and Teck Resources (Teck), called Minera Media Luna SA de CV (MML) submitted the winning bid for the Morelos Norte license in mid-1998.

A summary of the work completed during the Teck/MML ownership is included in Table 6-1.

Torex acquired the 70% of the Morelos Property from Teck in 2009 and the remaining 30% from Goldcorp in 2010.

Table 6-1: Property History, MML – Teck (1995 to 2008)

Year	Work Completed	Comment
1998	Data review, regional geological mapping, rock chip collection and silt sampling	
1999	Regional-scale reconnaissance, consisting of geochemical sampling and mapping	El Limón and Media Luna oxide mineralization discovered
2000	Trenching and RC drilling program, totaling 1,888 m	Skarn-hosted gold mineralization outlined at El Limón and Guajes East
2001	11,088 m of drilling; induced polarization (IP) survey; road building, geological mapping at more detailed scales, and additional rock chip sampling	
2002	4,265 m of core drilling Initial mineral resource estimate 20 line kilometers of IP survey; time-domain electromagnetic (TEM) geophysical surveys; mineralization characterization studies to support metallurgical test work.	El Limón North Oxide and Guajes East; blind Guajes West skarn identified. Estimates completed for El Limón, Guajes
2003	3,781 m of core drilling	Focused on El Limón and Guajes West areas; El Limón Sur oxide zone discovered
2004	10,111 m of core drilling; Metallurgical testwork; updated mineral resource estimate.	Work focused on the Guajes West skarn, the El Limón Sur oxide zone north of the river, and the Azcala, La Amarilla and El Naranjo prospects south of the river.
2006	22,580 m of drilling Detailed mapping and rock and soil sampling	Work focused on the El Limón East, Los Mangos, and La Amarilla areas El Querenque and Azcala areas
2007	33,603 m of drilling Updated mineral resource estimate	Work completed at El Limón East, Los Mangos, and La Amarilla
2008	10,544 m of drilling Commencement of pre-feasibility studies	Work focused on Guajes and Guajes West zones, Los Mangos and El Querenque This work evaluated the merits of mining the El Limón, Guajes East and Guajes West deposits either by open pit methods only, or by a combination of underground and open pit methods. The work also looked at processing options with a focus on processing the mineralization through a conventional gold cyanidation plant. The work was terminated before completion.

6.3 TOREX WORK PROGRAMS ON THE MORELOS PROPERTY

Torex has focused work programs in two distinct geographic areas, as the mineral tenure holding is bisected by the Balsas River. Work in the area north of the Balsas River has concentrated on the El Limón and Guajes deposits, whereas exploration activity south of the Balsas River has primarily concentrated on the Media Luna deposit.

6.3.1 Torex Work Programs Completed North of the Balsas River

During the first year of work in 2009, the presence and tenor of gold mineralization in the El Limón and Guajes area was assessed, and the available exploration data reviewed in sufficient detail to support Torex's first time resource estimate. This estimate covered the El Limón, Guajes East and Guajes West deposits and considered mining them via open pit.

An alternative resource estimate for the El Limón deposit assuming underground mining methods was completed in 2010.

Torex completed a feasibility study in 2012. This study assumed conventional open pit mining of the El Limón and Guajes deposits, feeding a centrally-located, conventional cyanide leach–carbon-in-pulp process plant at the rate of 14,000 t/d to produce doré bars. A dry-stack tailings facility was planned just to the west of the plant. Production assumed a two-year ramp up period and 8.5 years of full production, for a total 10.5 years of mine life. Construction commenced in 2013, and first production is expected in late 2015.

In mid-2013, an airborne ZTEM and magnetic survey was conducted that covered the entire mineral tenure area, and covered both north and south of the Balsas River.

During 2014, infill drilling work was undertaken in the El Limón Sur area adjacent to the planned El Limón pit and supported an update to the estimated Mineral Resources for this sub-area, as detailed in Section 14 of this Report.

6.3.2 Torex Work Programs Completed South of Balsas River

To the south of the Balsas River in the period 2010–2013, Torex completed reconnaissance mapping, 1:5,000 scale geological mapping, systematic road-cut channel sampling and core drilling on various targets. Drilling in this area, completed between 1997 and 13 September 2013 consists of a total of 307 drill holes (154,906.7 m), including 283 core holes (150,423.7 m) and 21 reverse circulation (RC) drill holes (4,483 m). This work covered a number of target areas, but with the discovery of Media Luna in 2012, the bulk of geological work south of the Balsas River has focused on the Media Luna deposit.

A first time mineral resource estimate for the Media Luna deposit was completed in 2013. Additional drilling since that date has been incorporated into an updated Media Luna estimate, as presented in Section 14 of this Report.

During 2014, target generation work was undertaken, and 10 new target areas were defined that are considered drill prospects. Initial wide-spaced reconnaissance drilling was completed in some of the new targets in 2014.

In late 2014, a PEA-level study commenced for the Media Luna deposit, and metallurgical testing to confirm flow sheet design was initiated. Results of this work are included in Section 24 of this Report.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 KEY POINTS

The key points of this section include the following:

- Skarn-style mineralization has developed in limestone and dolomite of the Morelos Formation, limestone and sandstone of the Cuautla Formation, and intercalated sediments of the Mezcala Formation where these rocks have been intruded by Paleocene granodiorite stocks. Skarn-hosted mineralization has developed along the contacts of the intrusive rocks and the enclosing carbonate-rich sedimentary rocks.
- Three major deposits have been delineated to date: El Limón, Guajes, and Media Luna. Gold and silver mineralization at El Limón and Guajes extends over 1,700 m along strike with widths ranging from 60 m to 500 m. Copper, gold and silver mineralization at Media Luna covers at least an area of 1.4 km x 1.2 km, with widths ranging from 4 m to greater than 70 m in thickness.
- Targeting work conducted during 2013–2014 generated a number of exploration targets and prospect areas that are actively being investigated. The targeted styles of mineralization include porphyry copper-gold systems and gold-bearing skarns similar to Media Luna and El Limón Guajes.

7.2 REGIONAL GEOLOGY

The Guerrero platform is occupied by a thick sequence of Mesozoic carbonate rocks successively comprising the Morelos, Cuautla and Mezcala Formations and has been intruded by a number of early Tertiary-age granitoid bodies. The carbonate sequence is underlain by Precambrian and Paleozoic basement rocks. The Cretaceous sedimentary rocks and granitoid intrusions are unconformably overlain by a sequence of intermediate volcanic rocks and alluvial sedimentary rocks (red sandstones and conglomerates) which partially cover the region

The Mesozoic succession was folded into broad north–south-trending paired anticlines and synclines as a result of east-vergent compression during the Laramide Orogeny (80–45 Ma). The mineral tenure holdings area lies at the transition between belts of overthrust rocks to the west and more broadly-folded rocks to the east.

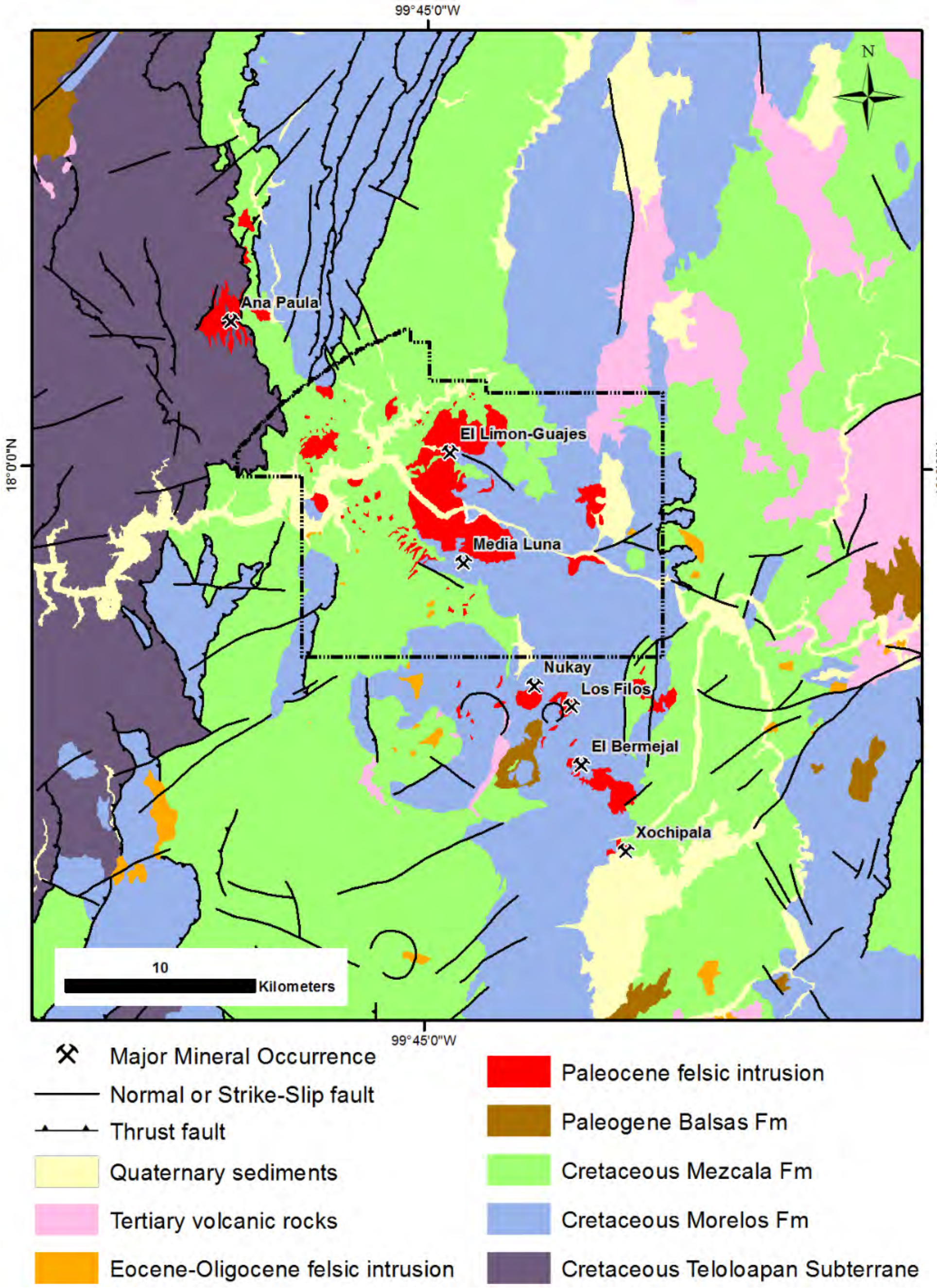
Regional structures include sets of northeast- and northwest-striking faults and fractures which cut both the carbonate sequence and the intrusive rocks. The distribution of intrusive bodies in northwest-trending belts is thought to reflect the control on their emplacement by northwest trending faults (de la Garza et. al. 1996).

Regional mineralization styles comprise skarn-hosted and epithermal precious metal deposits and volcanogenic massive sulfide deposits. In Guerrero, these occur as two adjacent arcuate belts, with the gold belt lying to the east and on the concave margin of the massive sulfide belt. Both belts are approximately 30 km wide and over 100 km long, from northwest to southeast.

7.3 PROJECT GEOLOGY

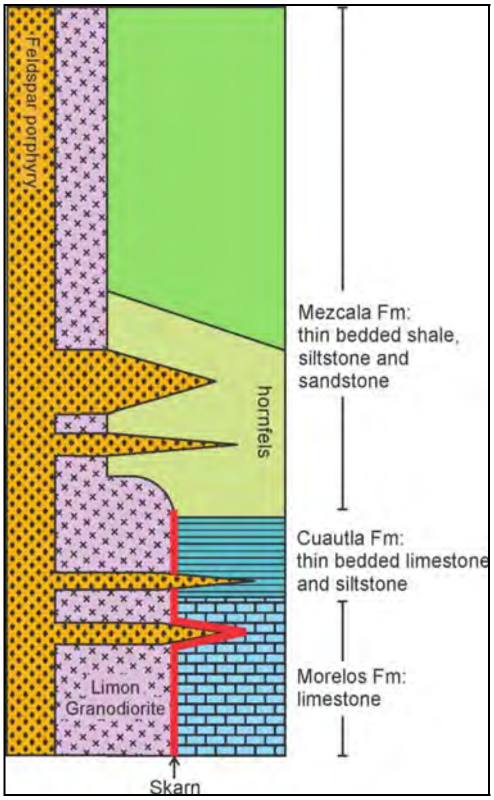
The area under mineral tenure is characterized by a structurally-complex sequence of Morelos Formation (marble and limestone), Cuatutla Formation (limestones and sandstones) and Mezcala Formation (shale and sandstone) intruded by the El Limón granodiorite stock and later felsic dikes and sills (Figure 7-2).

The Morelos Formation comprises fossiliferous medium- to thickly-bedded finely-crystalline limestones and dolomites. The lower contact is not exposed within the mineral tenure area, but from available PEMEX drill data, the Morelos Formation has a thickness of at least 1,570 m near the community of Mezcala (Teck Resources, 2008). The formation is widely distributed in the central and eastern parts of the mineral tenure, and is found altered to marble outboard of skarn zones, in addition to hosting small jasperoid occurrences.



Note: Figure courtesy Torex and Western Mining Services, 2015.

Figure 7-1: Regional Geology of the Nukay District



Note: Figure courtesy: Torex, 2013.

Figure 7-2: Schematic Stratigraphic Section

The Cuautla Formation transitionally overlies the Morelos Formation. It comprises a succession of thin- to medium-bedded silty limestones and sandstones with argillaceous partings and minor shale intercalations. The thickness of the Cuautla Formation is variable but averages 20 m. At El Limón, the skarn body is developed at the stratigraphic position of the Cuautla Formation, although a complete lack of silty limestone exposures suggests that the Cuautla Formation is absent in most of the drill area. Some small exposures of thin-bedded silty limestones that could represent the Cuautla Formation are present at the El Limón North Oxide Zone and also near the Guajes area.

The Mezcala Formation transitionally overlies the Cuautla Formation and consists of a platform to flysch-like succession of intercalated sandstones, siltstones, and lesser shales which have been extensively altered to hornfels near intrusive contacts at the El Naranjo and El Limón areas in the west part of the mineral tenure area. In contrast to the Morelos and Cuautla Formations, the Mezcala Formation sedimentary rocks are commonly strongly deformed into tight folds. Differential folding between units implies that formational contacts have served as dislocation surfaces. Dykes and sills crosscut hornfels-altered Mezcala Formation adjacent to contacts with Paleocene intrusive rocks. The Mezcala Formation has been removed by erosion in most of the eastern part of the mineral tenure area.

An intrusive stock complex, oriented northwest–southeast, intrudes the carbonate sedimentary rocks (refer to Figure 7-1). The dominant intrusive composition is granodiorite, although some quartz monzonites, tonalites, and diorites have been identified, in addition to minor, late andesitic dykes.

Geochemical data indicate that the intrusive rocks are sub-alkaline with alkali-calcic to calc-alkalic characters, and are strongly reduced. Uranium–Pb dating of zircons from intrusive rocks return age dates of approximately 66 Ma.

Skarn-hosted gold mineralization is developed along the contacts of the intrusive rocks and the enclosing carbonate-rich sedimentary rocks.

In the northeast corner of the Morelos Property, there is post-mineral cover comprising felsic volcanic rocks, which are probably coeval with the last Tertiary igneous events.

7.4 DEPOSIT DESCRIPTIONS

7.4.1 El Limón

Gold mineralization at El Limón occurs in association with a skarn body that was developed along a 2 km- long corridor following the northeast contact of the El Limón granodiorite stock. The skarn zone occurs at the stratigraphic level of the Cuautla Formation where marble is in contact with hornfelsed sedimentary rocks of the Mezcala Formation. Skarn alteration and mineralization at El Limón are fairly typical of calcic gold-skarn systems. Zones of coarse, massive, garnet-dominant skarn appear within and along the stock margin, with fine-grained pyroxene-dominant skarn more common at greater distances from the contact with the stock. Significant gold mineralization at El Limón is dominantly associated with the skarn, preferentially occurring in pyroxene-rich exoskarn but also hosted in garnet-rich endoskarn that has been affected by retrograde alteration.

Dykes and sills are found to crosscut the hornfels and marble, most of them spatially associated with the skarn formation.

The main El Limón intrusion consists of an approximately peanut-shaped stock of granodiorite composition, which is approximately 6 km long by 2.5 km wide and has a general elongation of N45W. Usually, the skarn is developed along the contacts with this stock, although the important bodies are controlled by major northwest and northeast structures coincident with the Cuautla Formation position and the intrusive contacts. The contact of the intrusion at El Limón, although irregular, is generally quite steep and almost perpendicular to bedding.

7.4.1.1 El Limón Main

The skarn zone at El Limón is cut by the La Flaca Fault, a steeply dipping northeast-trending fault. Skarn north of the La Flaca Fault is exposed on surface, trends north–northwest for about 700 m and dips 40º to 70º to the southwest. Typically gold mineralization occurs within the main skarn body that developed at the marble–hornfels boundary. There are also a few irregular mineralized lenses of skarn developed in the hanging wall hornfels. Fractures with development of skarn over a few centimeters are common in the hanging wall hornfels. Skarn south of the La Flaca fault extends southeast for about 800 m. The strike of the skarn is generally north northeast and dips gently-to-moderately northwest, and is primarily demarcated by drilling. Near the fault, the skarn is developed at the contact of the marble and hornfels but to the south a granodiorite sill has intruded along the contact and mineralization occurs at the contact of the granodiorite and overlying hornfels.

7.4.1.2 El Limón Sur Oxide

The El Limón Sur Zone occurs approximately 1 km south of the main El Limón skarn deposit and crops out on a steep ridge extending down the mountain towards the Balsas River. The El Limón Sur area is underlain by a similar stratigraphic succession as the southeastern portion of the El Limón deposit. In general, marbleized and hornfelsed sedimentary rocks are in contact with the El Limón granodiorite intrusive. Post-mineralization felsic dikes and sills are also common. Pyroxene-garnet skarn occurs along the contact between hornfels or marble and granodiorite. There are two main areas of near-surface gold mineralization at El Limón Sur that are separated by a zone of mostly barren granodiorite. The northernmost mineralized area is characterized by retrograde-altered exoskarn. The exoskarn contains sulfides and local argillic alteration. The southern mineralized area is smaller in extent and consists of dominantly endoskarn along with hydrothermal breccias. The hydrothermal breccias are developed within skarn and often display thin laminations and size-graded layering. The mineralized zones are strongly oxidized in the near-surface.

7.4.1.3 El Limón Norte (North Nose)

The skarn at El Limón Norte outcrops and is characterized by high oxidation along a northwest-trending ridgeline for about 500 m. Mineralization occurs in skarn that developed along the contact between the Mezcala and Morelos Formations (at the stratigraphic level of the Cuautla Formation) near the main El Limón granodiorite intrusion. Numerous sills and dikes of granodiorite and other felsic porphyry intrusions were also emplaced along this contact. Weathering and oxidation has affected the rock and destroyed most of the primary minerals and textures associated with mineralization. However, isolated zones of less weathered rock are present and permit identification of original skarn minerals which minerals consist of garnet and pyroxene. Garnet tends to forms along specific layers in the sedimentary rocks and as cross-cutting veins in both sedimentary and intrusive rock while pyroxene is the dominant mineral elsewhere. Various iron oxide minerals are abundant and there are local concentrations of copper oxides and copper sulfate minerals.

7.4.2 Guajes

7.4.2.1 Guajes East

The Guajes East skarn zone is developed in the same lithologies on the opposite side of the same intrusion that is present at El Limón. Drilling indicates the skarn development at Guajes East is 300 m wide, up to 90 m thick, and is continuous along at least 600 m of the northwest edge of the intrusion.

At Guajes East the intrusion underlies the sedimentary rocks and dips about 30° to the west, sub-parallel to bedding. There are also a number of shallow-dipping intrusive sills at Guajes that crosscut the skarn and although they are occasionally mineralized at or near their contacts, for the most part, the sills are non-mineralized.

7.4.2.2 Guajes West

The Guajes West area is located along the northwest contact of the El Limón granodioritic stock. Surface geology is represented by the hornfels–intrusive contact with some local patchy and structure-controlled skarn occurrences. The skarn formed at the contact between hornfels and marble; however, in addition to proximity to the granodioritic stock there are numerous associated porphyritic dikes and sills.

A block of granodiorite that has been strongly altered to kaolinite, sericite, pyrite and carbonate with some brecciated and silicified portions, forms the hanging wall of the Amarilla fault, which can be traced along a distance of more than 2.5 km from the Balsas River to the Guajes West area. The fault, which strikes N30-40E and dips from 40º to 60º to the northwest, occurs 20 m to 50 m above the mineralization. Mineralization at Guajes West does not crop out and was discovered based on the El Limón geological model.

7.4.3 Media Luna

The Media Luna deposit is located on the south side of the Balsas River, 4.5 km from the village of Mazapa.

The surface geology of the Media Luna area is dominated by Morelos Formation limestone which is intruded by numerous feldspar porphyry dikes and sills.

Systematic drilling has identified a copper–gold–silver-mineralized skarn with approximate dimensions of 1.4 km x 1.2 km and ranging from 4 m to greater than 70 m in thickness. Skarn alteration and associated mineralization is open on the southeast, southwest, west and northwest margins of the area.

7.5 SKARN TYPES

Hydrothermal alteration is dominated by prograde and retrograde skarn formation. Prograde skarn alteration can also be described as exoskarn and endoskarn where it is developed in sedimentary wall rocks and intrusive rocks respectively. Pre- and post-skarn alteration is also documented but these are volumetrically less significant.

7.5.1 Endoskarn

Endoskarns in the El Limón and Guajes deposits are dominated by diopsidic pyroxene with lesser amounts of younger crosscutting andraditic garnets. If gold is present in the unit, it is associated with retrograde alteration of garnet–pyroxene skarn.

Endoskarn is best developed at Media Luna in the main granodiorite and in feldspar porphyry dikes and sills near the granodiorite contact. Endoskarn alteration closest to the contact with exoskarn-altered rocks is typically massive garnet–pyroxene. Igneous texture is rarely preserved. Massive skarn quickly grades to garnet–pyroxene veins and veinlets with garnet cores and pyroxene halos in zones of tan to white intrusion with pervasive pyroxene ± wollastonite and altered plagioclase. Igneous textures are preserved in these zones. Endoskarn alteration farthest from the intrusive contact consists of veinlets of tan to white pyroxene/wollastonite. These veinlets occur individually or as dense anastomosing masses.

7.5.2 Exoskarn

Excluding relatively fine-grained hornfelsed rocks, the exoskarns in the El Limón and Guajes deposits are dominated by what appears to be intermediate 'grossularite–andradite' garnets, with late, coarse-grained, iron-rich garnets (i.e. more nearly pure end-member andradites). Iron-rich pyroxenes (salite to hedenbergite) are associated with these garnets. Gold mineralization is predominantly part of the earliest retrograde event.

Overprinting this latest 'peak' prograde metasomatism are early, retrograde, probably Fe-rich amphiboles (black in color) and slightly later black, fine-grained chlorite that are very closely associated with the gold-bearing sulfides pyrrhotite and arsenopyrite. Retrograde calcite and what appear to be hypogene iron oxides are additionally associated with this earliest retrograde event. The retrograde alteration appears to be the closing chapter of the peak prograde metasomatic event, and is thus closely related in space and time to the exoskarn.

At Media Luna, exoskarn is best developed in marble (Morelos Formation) at the contact with the main granodiorite and along the edges of feldspar porphyry dikes near that contact. Exoskarn typically consists of massive coarse- to fine-grained pyroxene and garnet. The contact between exoskarn and marble is typically sharp.

7.5.3 Retrograde Alteration

At Media Luna, there is a clear association of gold, copper and other metals with phlogopite, amphibole, chlorite, calcite ± quartz ± epidote alteration of skarn (amphibole–calcite alteration) and other mafic minerals and sulfidation of skarn, mafic minerals and magnetite. This mineral assemblage can occur as pervasive replacement of skarn minerals sometimes preserving garnet grain outlines or as veinlets with black chlorite or amphibole halos cutting across massive skarn bands.

Amphibole–calcite alteration and sulfidation of skarn and magnetite is lower temperature and is therefore retrograde compared to the prograde, higher-temperature skarn alteration.

7.5.4 Pre-Skarn Alteration

The intrusions locally exhibit evidence of potassic alteration. Potassic alteration consists of fine biotite replacing mafic minerals in ground mass and/or recrystallization of igneous biotite. Also present at Media Luna is the development of potassium feldspar in groundmass and replacing other feldspars.

7.5.5 Post-Skarn Alteration

Argillic alteration occurs locally within porphyry dikes and sills and the main granodiorite and is characterized by alteration of feldspars and mafic minerals to clays and fine micas. In addition, late quartz–carbonate–adularia veins and veinlets are occasionally observed in association with fine silica and pyrite.

7.5.6 Oxide

This refers to a portion of the El Limón mineralized zone that is dominated by iron oxides such as hematite and goethite. Some iron-rich oxides may be a product of supergene weathering of Fe-rich garnets and pyroxenes, locally giving massive surficial oxides. However, other iron-rich oxides appear to be a true hypogene retrograde 'event'. Evidence for this is seen in outcrop where there appears to be a zonation from relatively 'fresh' garnet skarn outcrops to 'engimatic' oxide zones, to a still more peripheral 'sanding' of peripheral calcareous sedimentary rocks (i.e. the presumably somewhat acidic leaching of carbonate components in sandy units has left a relatively un-cemented and thus 'sandy' rock).

A type of strongly-oxidized skarn (calcite ± clay ± oxide-altered) occurs locally in drill core. This rock type consistently returns very high gold grades, and is recognizable even in surface outcrops.

7.6 MINERALIZATION

7.6.1 El Limón and Guajes

Gold and silver mineralization at El Limón and Guajes extends over 1,700 m along strike with widths ranging from 60 to 500 m. Mineralization at El Limón has been intercepted to a depth of 470 m from surface and intercepted at Guajes to a depth of 300 m from surface.

The dominant sulphides are pyrrhotite and pyrite with lesser but locally abundant amounts of chalcopyrite and arsenopyrite occurring in veinlets and open-space fillings. Petrographic studies indicate that pyrrhotite commonly has been partially replaced by a mixture of pyrite-marcasite, although the earliest pyrite is replaced by pyrrhotite. Chalcopyrite is associated with pyrrhotite and usually is present as very fine grains. Very minor amounts of tennantite have been noted in a few thin section samples. Fluorite is rarely observed.

Minor amounts of sphalerite and molybdenite are also present. Sphalerite tends to occur with, or as inclusions in, chalcopyrite. Molybdenite, although spatially closely associated with sulphides, usually is free in gangue and occurs as small laths and bent lamellae in the 20–50 µm size range. Coarse-grained stibnite along surface cavities has been found along some holes drilled in the east portion of the El Limón skarn.

Gold and silver occurs most often with early sulphide mineralization but also with late carbonate, quartz, and adularia. Native gold most commonly occurs in close association with bismuth and bismuth tellurides but also occurs with chalcopyrite and as inclusions in arsenopyrite. The gold associated with bismuth tellurides is extremely fine-grained, in the range of a few micrometers to some tens of micrometers.

7.6.2 Media Luna

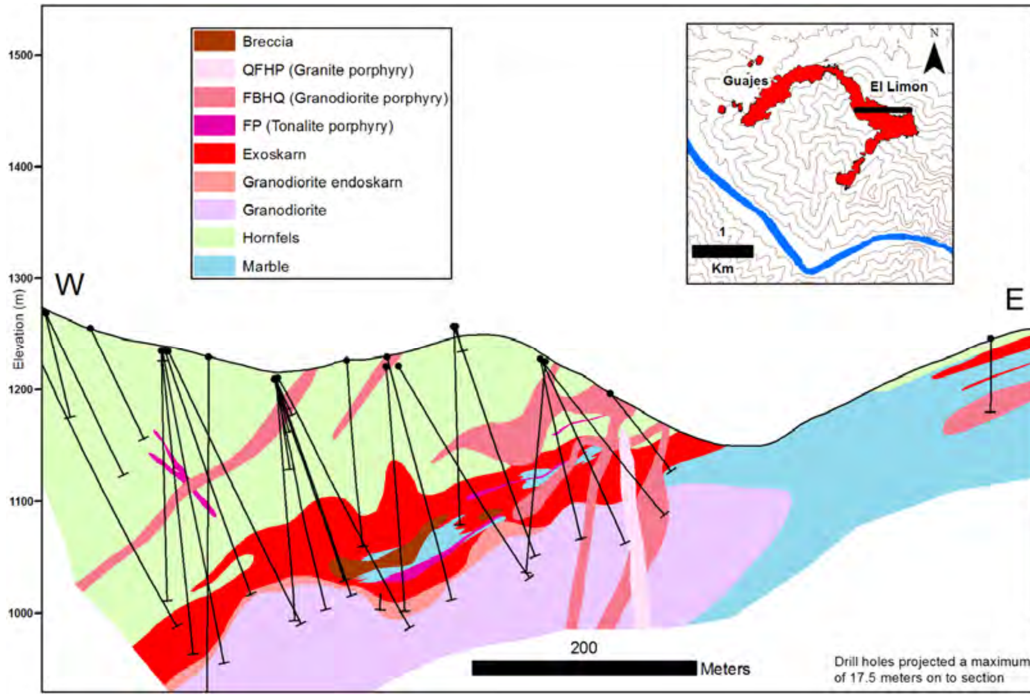
Gold–copper–silver mineralization at Media Luna is associated with skarn alteration (pyroxene–garnet–magnetite) and later sulfides, which developed at the contact of granodiorite with marble. There is a clear association of gold, copper and silver with retrograde amphibole, phlogopite, chlorite, calcite ± quartz ± epidote alteration of exoskarn. This mineral assemblage can occur as pervasive replacement of skarn minerals, sometimes preserving garnet and pyroxene outlines, or as veinlets with black chlorite or amphibole halos cutting across massive skarn bands. Sulfidation of skarn assemblages is closely related to retrograde alteration and is extensively developed at Media Luna. Mineralization is primarily associated with sulfidized exoskarn and with zones of massive magnetite–sulfide. Mineralization does occur within endoskarn but is much less significant.

7.7 GEOLOGICAL SECTIONS

Example geological cross-sections for the deposits are included as follows:

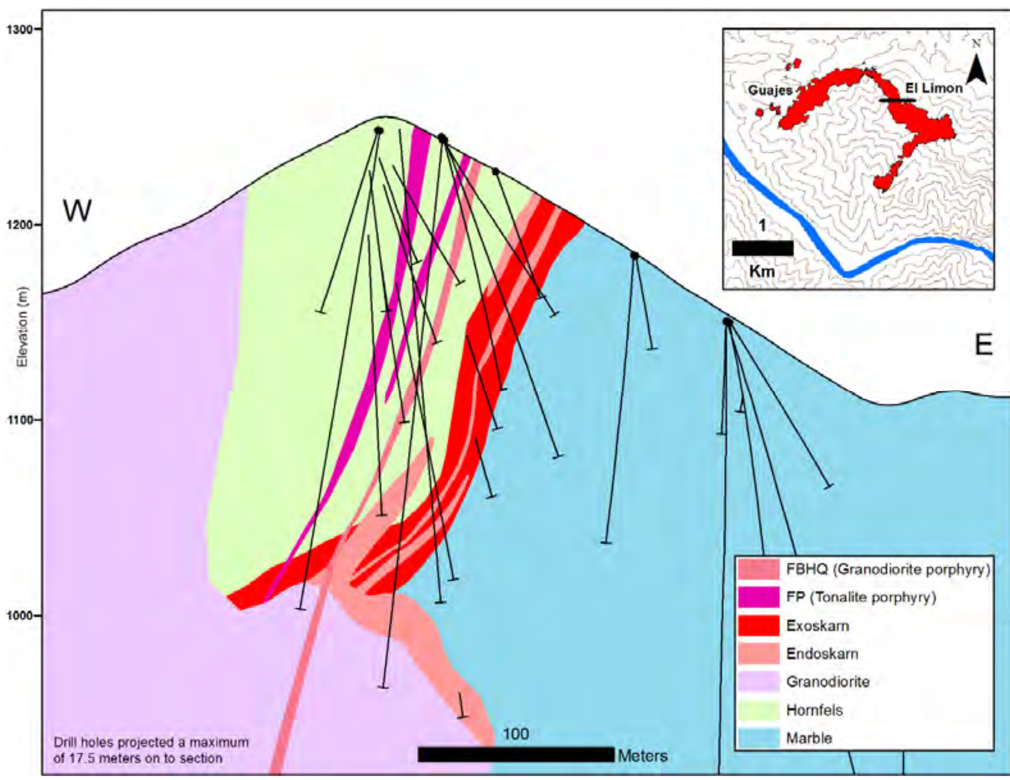
- El Limón: Figure 7-3 to Figure 7-5
- Guajes: Figure 7-6 to Figure 7-7
- Media Luna: Figure 7-8 and Figure 7-9.

The sections show typical drill orientations, simplified geology and examples of mineralization thicknesses and grades encountered in drill holes.



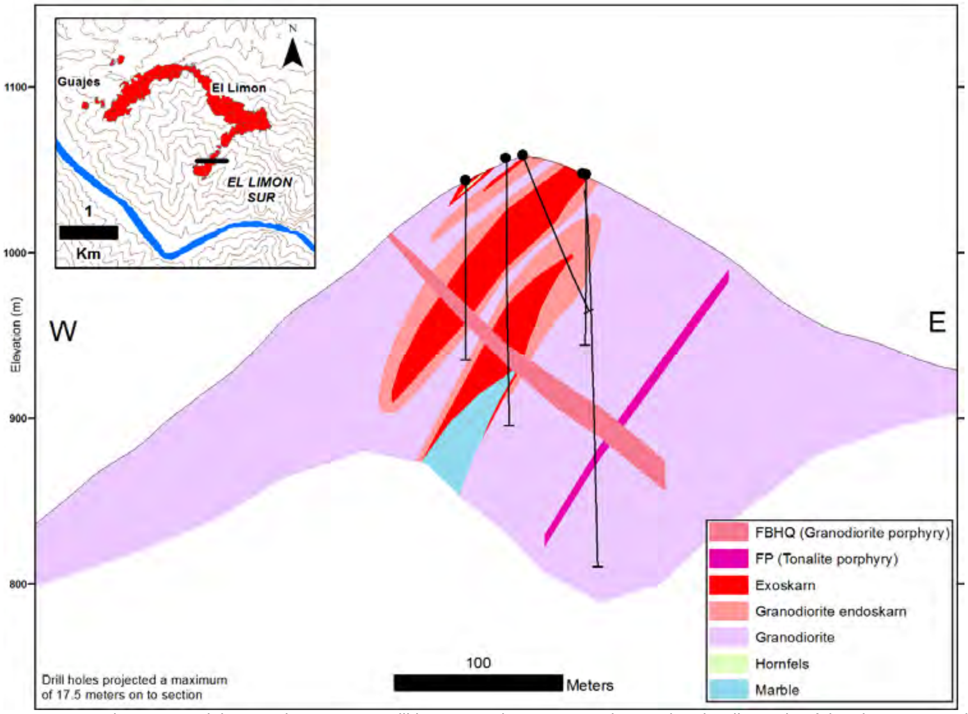
Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. Section location is indicated in inset map.

Figure 7-3: Example Cross Section, El Limón



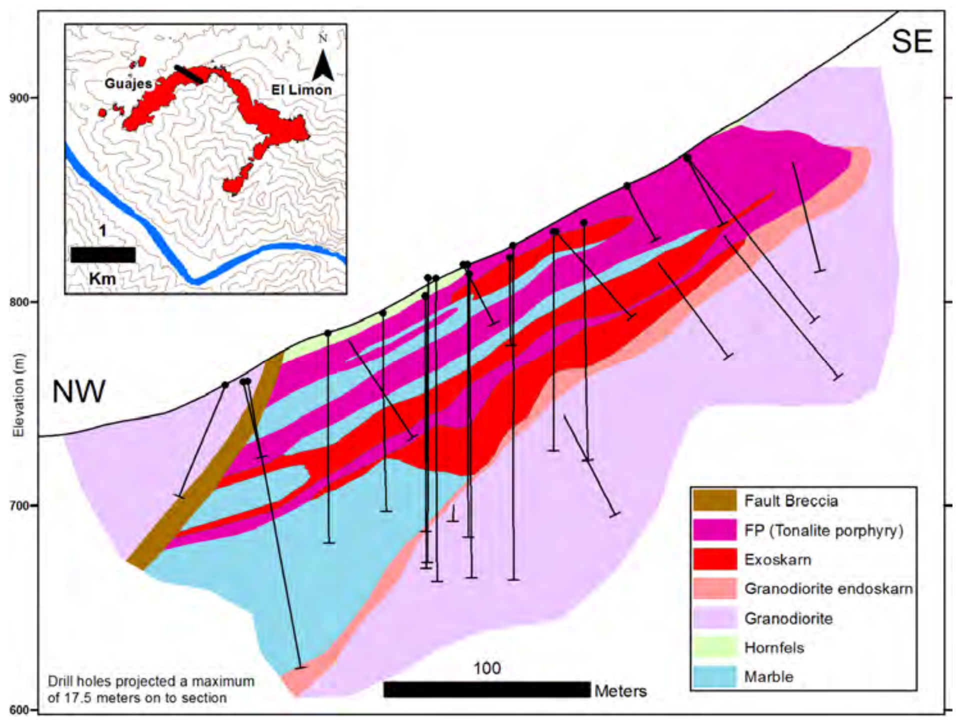
Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. Section location is indicated in inset map.

Figure 7-4: Example Cross Section, El Limón East



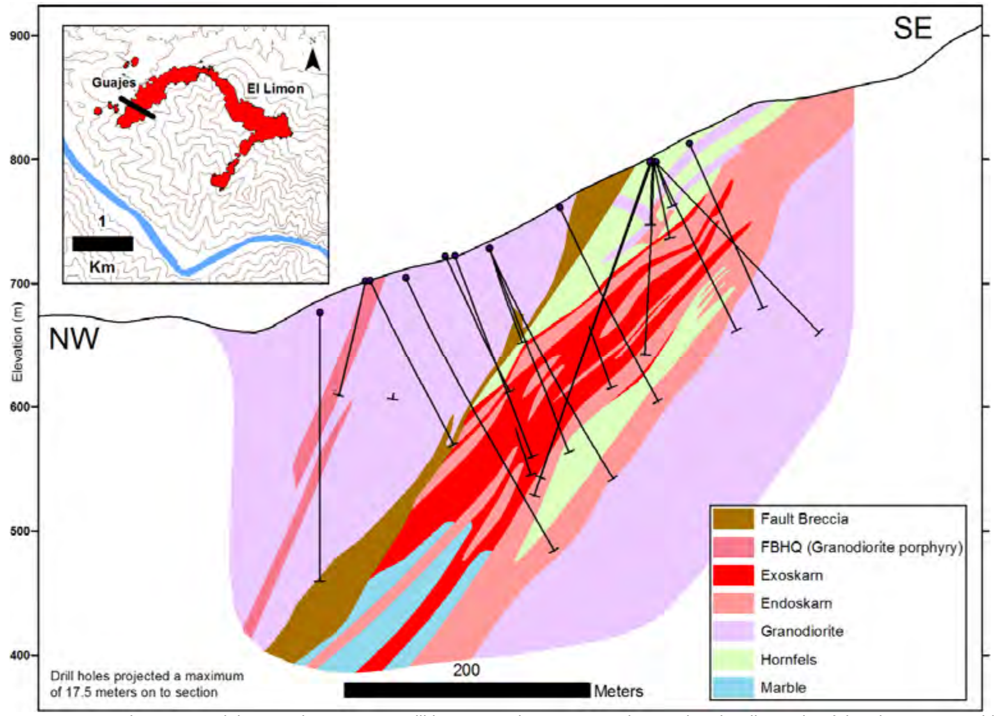
Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. Section location is indicated in inset map.

Figure 7-5: Example Cross Section, El Limón Sur



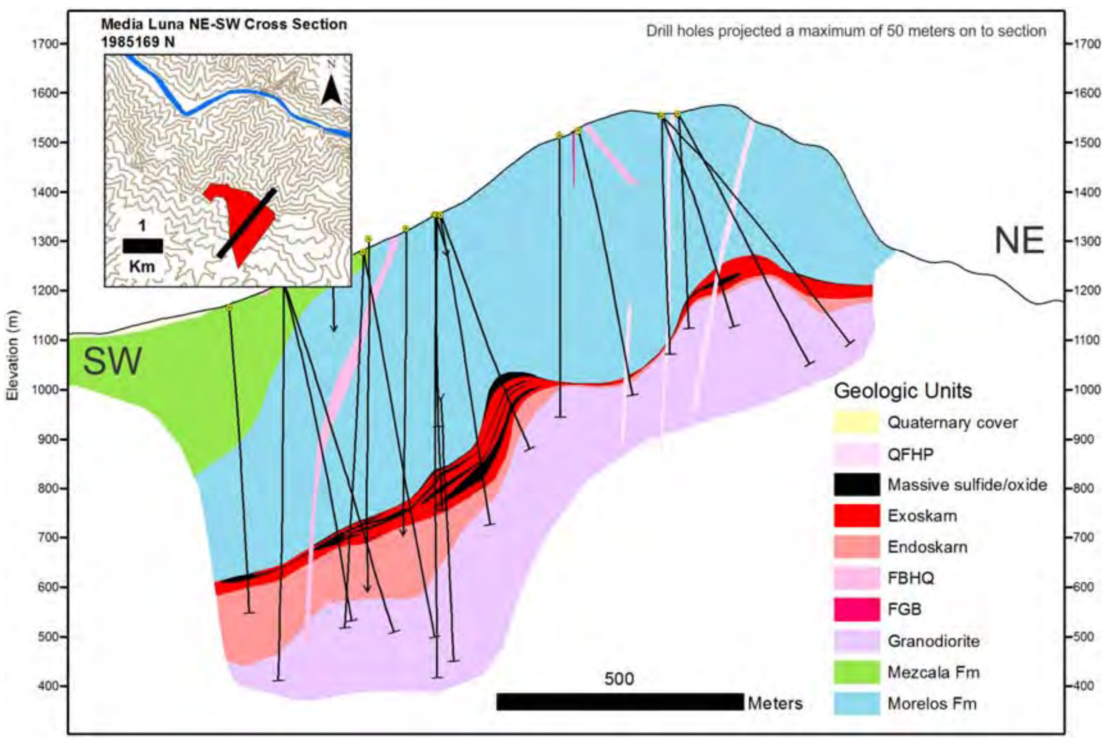
Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. Section location is indicated in inset map.

Figure 7-6: Example Cross Section, Guajes East



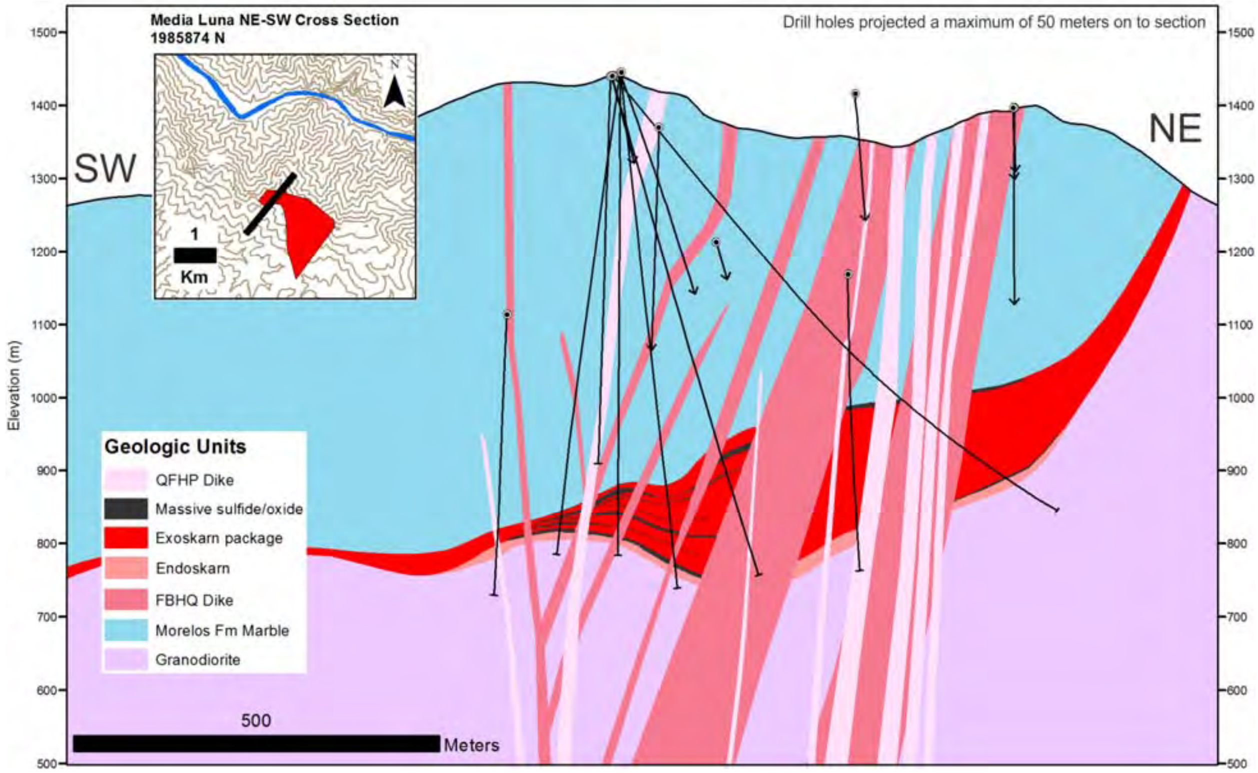
Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. Section location is indicated in inset map.

Figure 7-7: Example Cross Section, Guajes West



Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. QFHP = Quartz-Feldspar-Hornblende Porphyry; FBHQ = Feldspar-Biotite-Hornblende-Quartz Porphyry; FGB = Fine-Grained Biotite Porphyry.

Figure 7-8: Media Luna Cross-Section 1985169 N (looking NW)

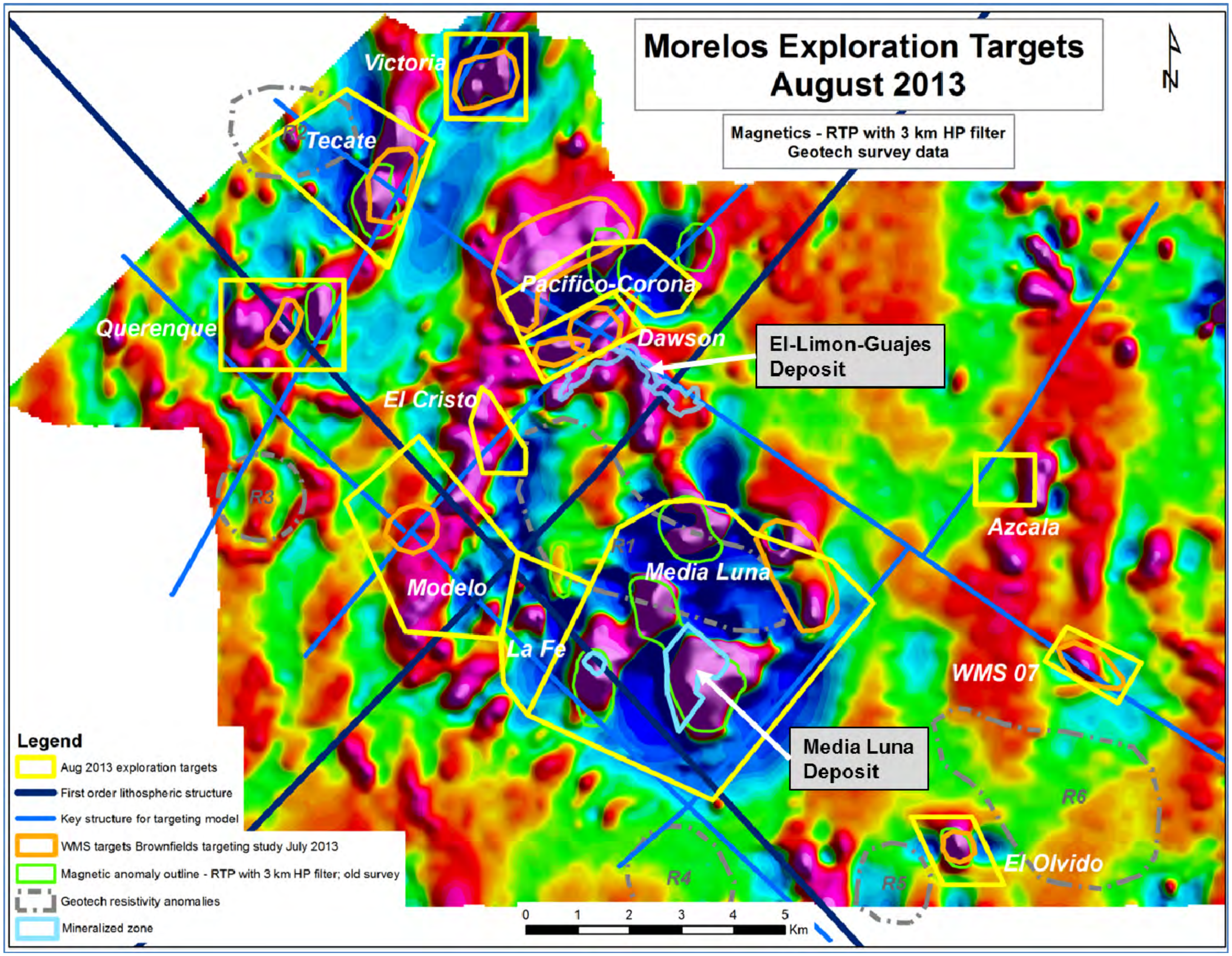


Note: Figure courtesy Torex and Western Mining Services, 2015. Drill intercepts that are not orthogonal to the dip angle of the skarn report wider mineralization intercepts than the actual mineralization true thickness. QFHP = Quartz-Feldspar-Hornblende Porphyry; FBHQ = Feldspar-Biotite-Hornblende-Quartz Porphyry; FGB = Fine-Grained Biotite Porphyry.

Figure 7-9: Media Luna Cross-Section

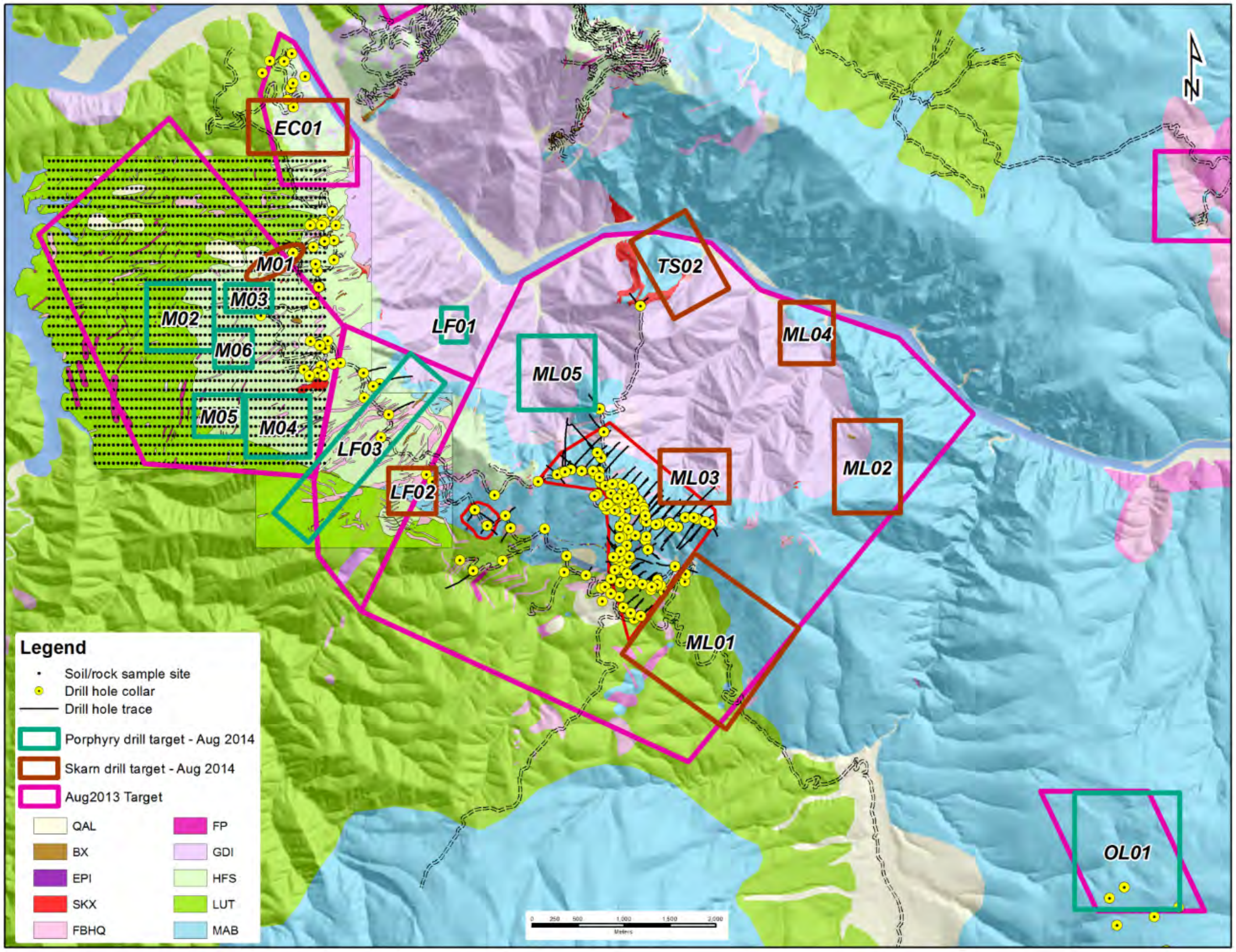
7.8 PROSPECTS/EXPLORATION TARGETS

Targeting work conducted during 2013-2014 generated several exploration targets and prospect areas that are actively being investigated. District-scale targets were defined in 2013 based on new structural and geophysical studies (Figure 7-10). Specific target areas subject to strategic focus during 2014 are shown in Figure 7-11.



Note: Figure courtesy Torex and Western Mining Services, 2015.

Figure 7-10: Prospect Location Plan



Note: Figure courtesy Torex and Western Mining Services, 2015.

Figure 7-11: Detailed Exploration Targets Within 2014 Focus Area South of the Balsas River

7.8.1 2013 District–Scale Exploration Targets

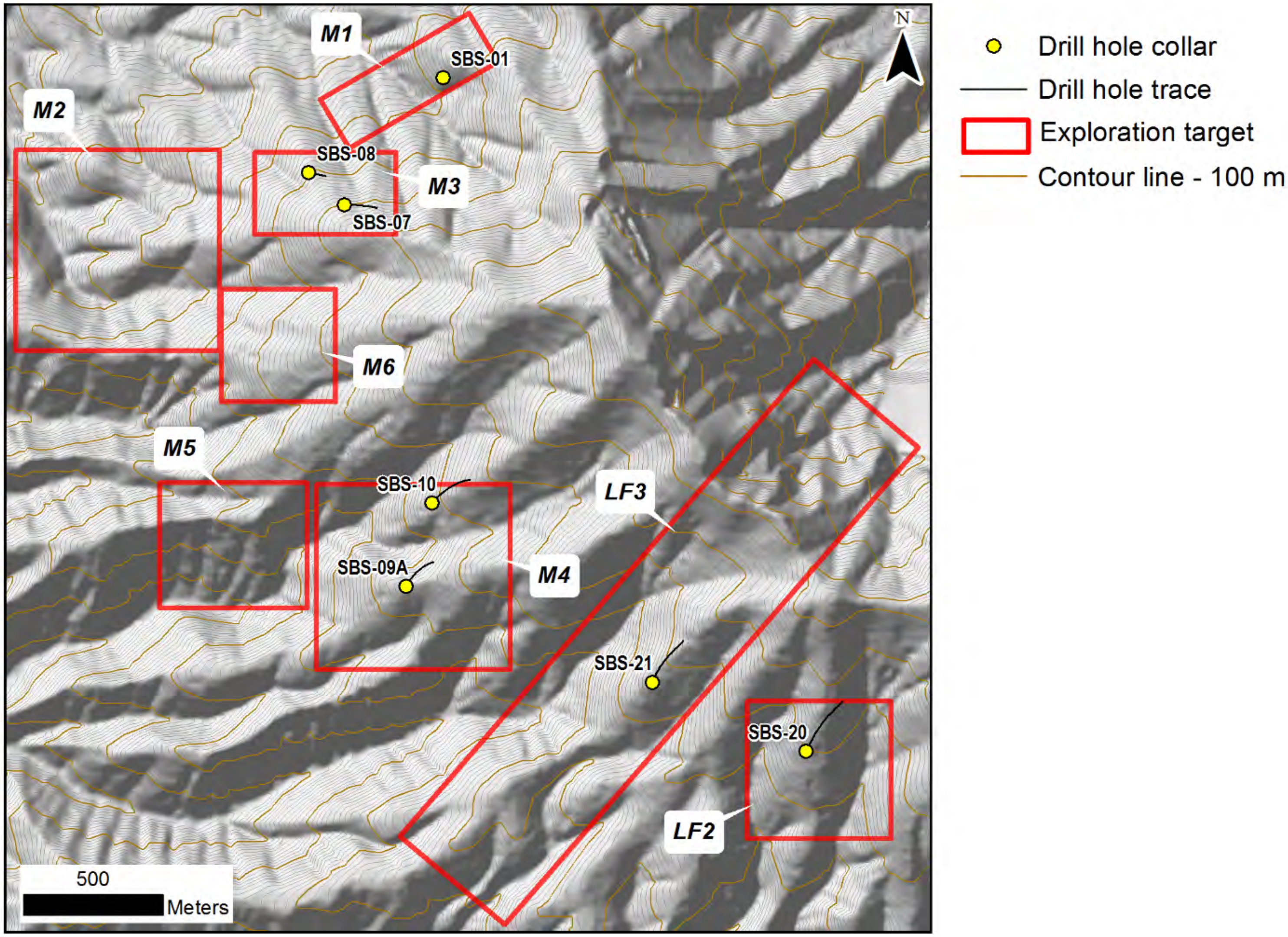
The major district-scale exploration targets defined in 2013 include:

- Media Luna Area: This target area covers the Media Luna resource and adjacent strong magnetic anomalies, including the Northwest Media Luna, Todos Santos and Media Luna West prospects.
- La Fe: The target comprises a complex package of hornfelsed Mezcala Formation cut by numerous sills and dikes of variable composition. There are historic workings with gold mineralization in steeply dipping structural zones adjacent to argillic-altered dikes and sills. There is a moderate magnetic anomaly in the northeastern portion of the target. Four wide-spaced reconnaissance drill holes have been completed in the area by Torex. The drilling intersected local skarn alteration with zones of pyrrhotite and chalcopyrite but with low gold values.
- Modelo: The target is defined on the basis of regional structural interpretation combined with geophysical signatures from the 2013 airborne ZTEM-magnetic survey.
- El Cristo: Drilling results to date are disappointing but a significant portion of the target area has not been adequately tested.
- Querenque: Previous work by Teck indicates the area comprises hornfelsed Mezcala Formation with minor skarn and granodiorite intrusive similar to El Limón. Teck drilled three holes that returned minor gold values. No work has been undertaken by Torex in this area to date.
- Tecate: Defined by the presence of a strong magnetic high in an area mapped as Mezcala Formation sediments. No work has been carried out by Torex and there appears to be no previous work on the target.
- Victoria: Defined by a magnetic signature similar to Media Luna that occurs along a major regional-scale northeast-trending structural zone. No work has been carried out by Torex and there appears to be no previous work on the target.
- Pacifico-Corona: Located 1.5 km north of El Limón and defined by the presence of strong magnetic anomalies near intrusion-limestone contacts. One Torex drill hole on the east side of the target intersected a complex intrusive-hornfels package and significant low-level gold and trace element anomalism. Two additional diamond drill holes were completed in early 2014 with negative results.
- Dawson: Possible deep target indicated by structural analysis and geophysics. No work has been done due to target being located within current infrastructure and mining areas at El Limón Guajes.
- Azcala: An area of silicified limestone and hydrothermal breccia with elevated gold grades in rock chip samples. Teck drilled three holes with minor gold intersections at shallow depth. No work has been conducted by Torex.
- WMS-07: The target is a strong magnetic anomaly associated with an interpreted significant regional structure. No work has been conducted by Torex.
- El Olvido: Defined by the presence of an intense magnetic high in area mapped as Morelos Formation limestone near the southern property boundary. Historical sampling detected moderately anomalous As and Sb but no gold. A few shallow drill holes were completed by Luismin in the southern part of area. No work has been carried out on the target by Torex.

7.8.2 2014 Exploration Target Areas

A group of 17 drill targets were defined in mid-August, 2014 within district-scale target areas on the south side of the Balsas River. The drill targets were defined utilizing detailed geological mapping and rock-chip sampling, grid-based soil geophysics and detailed geophysical modeling from the property-wide ZTEM-magnetic survey conducted in 2013. The targeted styles of mineralization include porphyry copper-gold systems and gold-bearing skarns similar to Media Luna and El Limón Guajes.

Seven initial diamond drill holes were completed in late 2014 within five of the exploration targets (Figure 7-12). All of the holes intersected skarn alteration with locally weak mineralization near the contact between granodiorite and overlying sediments.



Note: Figure courtesy Torex, 2015

Figure 7-12: 2014 Drill Holes Completed in Detailed Targets within Modelo and La Fe District-Scale Target Areas

7.9 COMMENTS ON SECTION 7

In the opinion of the Amec Foster Wheeler M&M QPs, knowledge of the deposit setting, lithologies and structural and alteration controls on mineralization in the Guajes, El Limón, and Media Luna deposits is sufficient to support Mineral Resource estimation.

The remaining prospects are at an earlier stage of exploration and the lithologies, structural and alteration controls on mineralization are currently insufficiently understood to support estimation of Mineral Resources. The prospects retain exploration potential and represent upside potential.

8 DEPOSIT TYPES

8.1 KEY POINTS

The key point of this section is:

- The deposits and occurrences are considered to be examples of gold- and gold–copper-type skarns.

8.2 FEATURES OF SKARN-STYLE DEPOSITS

Mineralization identified within the mineral tenure holdings to date is typical of intrusion-related gold and gold–copper skarn deposits. Such skarn-hosted deposits typically form in orogenic belts at convergent plate margins and are related to intrusions associated with the development of oceanic island arcs or back arcs (Ray, 1998; Meinart, 1992; Meinart et al, 2003).

Skarns develop in sedimentary carbonate rocks, calcareous clastic rocks, volcaniclastic rocks or (rarely) volcanic flows in close spatial association with high to intermediate-level stocks, sills and dykes of gabbro, diorite, quartz diorite, or granodiorite composition.

Skarns are classified according to the rock type in which they develop. Endoskarn is skarn developed in intrusions and exoskarn is skarn hosted by sedimentary, volcanic and metamorphic rocks. Metal deposits hosted by skarns are classified into various types based on metal content (Einaudi and Burt, 1982; Meinart, 1992).

Skarn-hosted base and precious metal mineralization frequently displays strong stratigraphic and structural controls. Deposits can form in exoskarn along sill–dike intersections, sill–fault contacts, bedding–fault intersections, fold axes and permeable faults or tension zones. Deposits range from irregular lenses and veins to tabular or stratiform bodies with lengths ranging up to many hundreds of meters. Mineral and metal zoning is common in the skarn envelope. When present, gold often occurs as micrometer-sized inclusions in sulfides or at sulfide grain boundaries.

8.3 COMMENTS ON SECTION 8

The deposits and occurrences in the area held under mineral tenure are considered to be examples of Au- and Au–Cu-type skarns. Most are hosted in exoskarn. Gold and copper concentrations are found primarily within exoskarn developed in Morelos Formation marble along the contact with El Limón granodiorite. Zones of coarse, massive, garnet-dominant skarn appear within and along the stock margin, with fine-grained pyroxene-dominant skarn zoned away from the contact with the stock. Common sulfides include pyrrhotite, pyrite, chalcopyrite, arsenopyrite and minor sphalerite, molybdenite, galena and bismuth minerals.

In the opinion of the Amec Foster Wheeler M&M QPs, a skarn deposit type is an appropriate model for exploration and for support of the geological models used in Mineral Resource estimation.

9 EXPLORATION

9.1 KEY POINTS

The key points of this section are:

- The property has been exposed to a wide variety of exploration techniques that include reconnaissance mapping,
- 1:5,000 scale geological mapping, systematic road-cut channel sampling, soil and stream sediment sampling, and an airborne ZTEM and magnetic geophysical survey.
- Additional exploration has a likelihood of generating further exploration successes particularly down-dip of known zones and along strike from the known deposits. There is also potential for discovery of additional mineralization outside of the known deposits as there are a number of geophysical targets that warrant follow-up investigation, both north and south of Balsas River.

9.2 GRIDS AND SURVEYS

Prior to 2012, the coordinate system used for all data collection and surveying was the Universal Transverse Mercator (UTM) system NAD 27 Zone 14N. In 2012, Torex converted all survey data to WGS 84 Zone 14 N. The WGS grid has subsequently been used for all exploration and drill survey data collection.

9.3 GEOLOGICAL MAPPING

Regional and detailed geological mapping was completed by Teck personnel. Amec Foster Wheeler M&M has no information on the map scales.

Detailed mapping at a scale of 1:5,000 has been completed by Torex personnel at the Naranjo and Media Luna targets. Additional detailed mapping was completed by third-party consultants to Torex at the south end of Naranjo, Modelo, La Fe, Guajes South, and Pacífico, Media Luna, Media Luna West and Todos Santos targets, and in the southeast part of the Limón deposit. This mapping has been incorporated into the district map initially prepared by Teck.

9.4 GEOCHEMICAL SAMPLING

Between 1999 and 2008, Teck personnel collected 10,747 rock chip samples, 111 whole-rock geochemistry samples, 185 stream sediment samples, and 2,022 soil samples. The sampling programs identified Au, As, and Ag anomalies that could be tested using drill methods.

During early exploration on the Project, trenches were cut into the side of hills using a bulldozer to expose lithologies, alteration, and mineralization. Trench sample results were used to confirm the presence of mineralization in areas with geochemical anomalies.

Torex carried out channel sampling programs in the Media Luna and El Cristo areas in 2011, to help define possible drill targets. Channel samples were collected along existing roads after cleaning with a bulldozer. A total of 1,020 samples were collected for assay and represent a total length of 1,651 m.

A grid-based soil survey was conducted over the Modelo target in 2014 consisting of 3,147 samples collected along lines spaced 100 m apart and at stations 50 m apart. In addition, 68 stream sediment samples were collected over a large area south of the Balsas River.

9.5 GEOPHYSICS

Teck acquired a reduced-to-pole airborne magnetic image early in the Property history. The image showed that large magnetic intrusions lay under carbonate sequences in the Property area. The El Limón skarn complex was located at a northwest-trending break between intrusions. Data from the 200 m line-spacing aeromagnetic survey flown by Teck was reprocessed to create a 3-D magnetic susceptibility model for the Property area. This model was re-evaluated to locate drill targets in the Media Luna, Todos Santos, Pacífico, Corona, and Limón South/Fortuna areas.

During 2002, a 20 line-km IP survey was completed. The survey identified a number of magnetic highs for follow-up drill testing.

During mid-2013, Geotech Ltd. carried out a helicopter-borne geophysical survey for Torex covering the entire Morelos concession. The survey consisted of helicopter-borne AFMAG Z-axis Tipper electromagnetic (ZTEM) system and aero magnetics sensor using a cesium magnetometer. A total of 1,620 line kilometers of geophysical data were acquired during the survey. The survey was flown in an east to west (N 90° E azimuth) direction, with a flight line spacing of 200 m. Tie lines were flown perpendicular to the traverse lines at a line spacing of 2,000 m. The helicopter was maintained at a mean altitude of 249 m above the ground with a nominal survey speed of 80 km/hour for the survey block. This allowed for a nominal EM bird terrain clearance of 179 m and a magnetic sensor clearance of 194 m.

Results from the magnetic survey reveal notably different shapes for the main magnetic anomalies in the Media Luna Area. Of particular note is an expansion of the main Media Luna anomaly to the northeast and the appearance of a connection between the Media Luna West anomaly and the NW extension of Media Luna. The Todos Santos anomaly also has a slightly different shape. The cause of the differences between the new magnetic and the previous (year 2000) magnetic data is not known. The changes in the shapes may result from surveying using a different line direction, lower magnetic sensor height and better line control using a helicopter. The ZTEM data highlights resistivity contrast within the local rock packages and is being used to define rock contacts and vertical structures that may have been conduits for mineralizing fluids. Both the ZTEM and magnetic data have been used to create 3D inversion models that support detailed targeting within prospective areas.

9.6 OTHER STUDIES

Teck completed age dating, petrography, mineralogical studies, and Quick Bird imagery.

Igneous petrology and mineralogical and age-dating studies of hydrothermal alteration and mineralization at Media Luna are on-going.

9.7 EXPLORATION POTENTIAL

Exploration potential remaining in the Property area is discussed in Section 7.8.

9.8 COMMENTS ON SECTION 9

In the Amec Foster Wheeler M&M QPs' opinion, the exploration programs completed to date are appropriate to the style of the deposits and prospects within the mineral tenure holdings. Additional exploration has a likelihood of generating further exploration successes particularly down-dip of known zones and along strike from the known deposit. There are a significant number of prospects and occurrences remaining to be drill tested and fully evaluated.

A revision and re-prioritization of targets is underway, utilizing new geological and geochemical information from drilling and the recently-collected geophysical data.

10 DRILLING

10.1 KEY POINTS

The key points of this section include:

- Of the drill 'meters' that contributed to the resource estimate used in the 2012 feasibility study on Guajes and El Limón, 96% were from diamond drill holes, 3% were from RC holes, and 1% was from channel samples. The Media Luna estimate is exclusively based on core holes.
- Industry standard techniques were used throughout drilling, channel sampling, and core handling processes.
- All drill rigs operating on the property since 2002 have been diamond drill rigs. The rigs selected for the current drill program are sized to be able to pull HQ core.

10.2 INTRODUCTION

Drilling completed during the Teck ownership, between 2000 and 2008, referred to as legacy drilling, comprised 619 drill holes (98,774.1 m), including 558 core holes (88,821.0 m) and 61 RC holes (9,953.1 m). Legacy drilling is summarized in Table 10-1.

From 2009 to 17 August, 2015, Torex has completed 1,200 core holes (292,076.6 m) and 110 RC holes (8,791.5m). A drill summary table for the Torex drilling is included as Table 10-2. Drilling is ongoing.

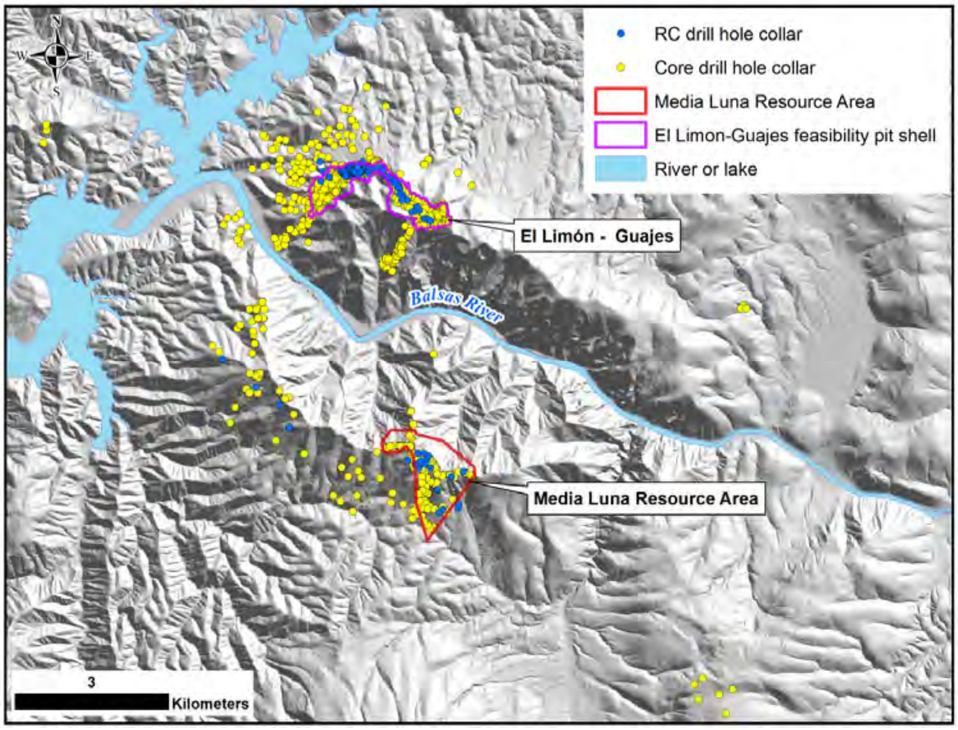
Figure 10-1 shows a regional drill collar location plan. Figure 10-2 is an inset plan, showing drill collar and channel sample locations for the El Limón and Guajes areas current as at 17 August 2015. Figure 10-3 is a drill collar plan for the Media Luna deposit drilling, also current as of 17 August 2015.

Table 10-1: Drill Summary Table, Legacy Drilling

Year	No. of Core Holes	Total Core Lengths (m)	No. of RC Holes	Total RC Lengths (m)	Total No. of Holes, All Drilling by Program	Total All Core and RC Lengths by Program (m)
Unknown	13	970.4	0	0.0	13	970.4
2000	0	0.0	17	2,027.7	17	2,027.7
2001	7	1,647.4	44	7,925.5	51	9,572.9
2002	53	7,716.3	0	0.0	53	7,716.3
2003	28	3,782.1	0	0.0	28	3,782.1
2004	53	8,031.0	0	0.0	53	8,031.0
2006	133	22,740.3	0	0.0	133	22,740.3
2007	200	33,389.1	0	0.0	200	33,389.1
2008	71	10,544.5	0	0.0	71	10,544.5
Total	*558*	*88,821.0*	*61*	*9,953.1*	*619*	*98,774.1*

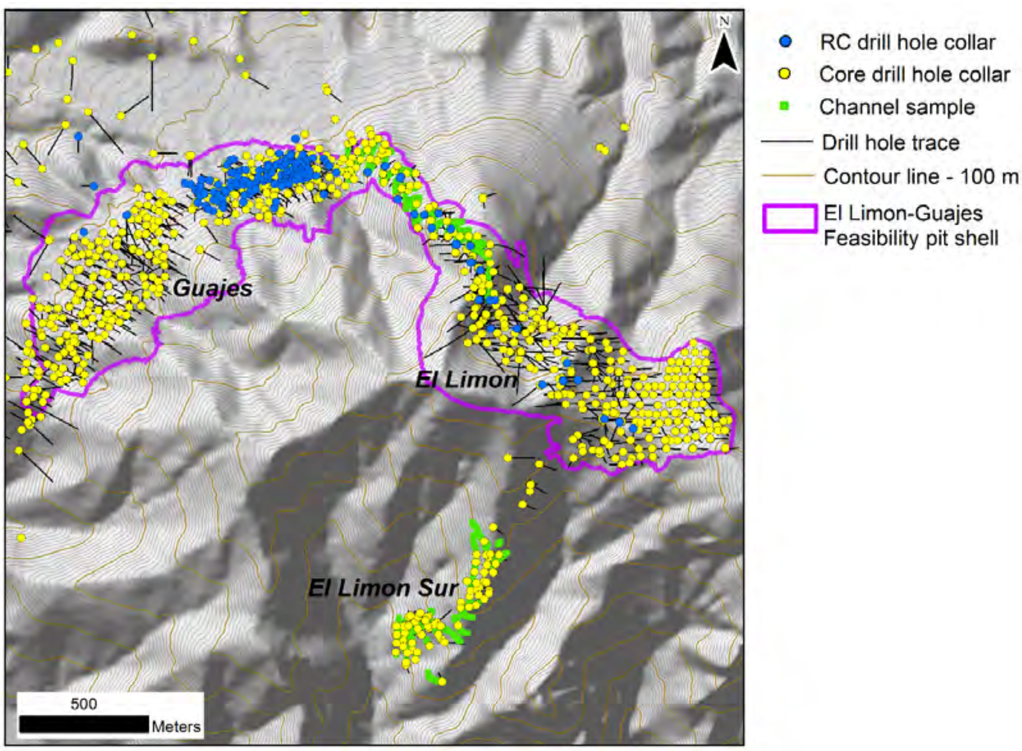
Table 10-2: Drill Summary Table, Torex Drilling

Year	No. of Core Holes	Total Core Lengths (m)	No. of RC Holes	Total RC Lengths (m)	No. of Channels	Total Channel Lengths (m)	Total Number, All Data	Total All Lengths (m)
2010	139	30,960.3	0	0.0	0	0.0	139	30,960.3
2011	382	60,613.5	0	0.0	42	4,160.0	424	64,773.5
2012	242	82,816.7	0	0.0	0	0.0	242	82,816.7
2013	152	87,505.6	1	240.0	0	0.0	153	87,745.6
2014	52	11,228.7	109	8,551.5	0	0.0	161	19,780.2
17 August 2015	233	18,951.8	0	0.0	0	0.0	233	18,951.8
Total	*1,200*	*292,076.6*	*110*	*8,791.5*	*42*	*4,160.0*	*1,352*	*305,028.1*



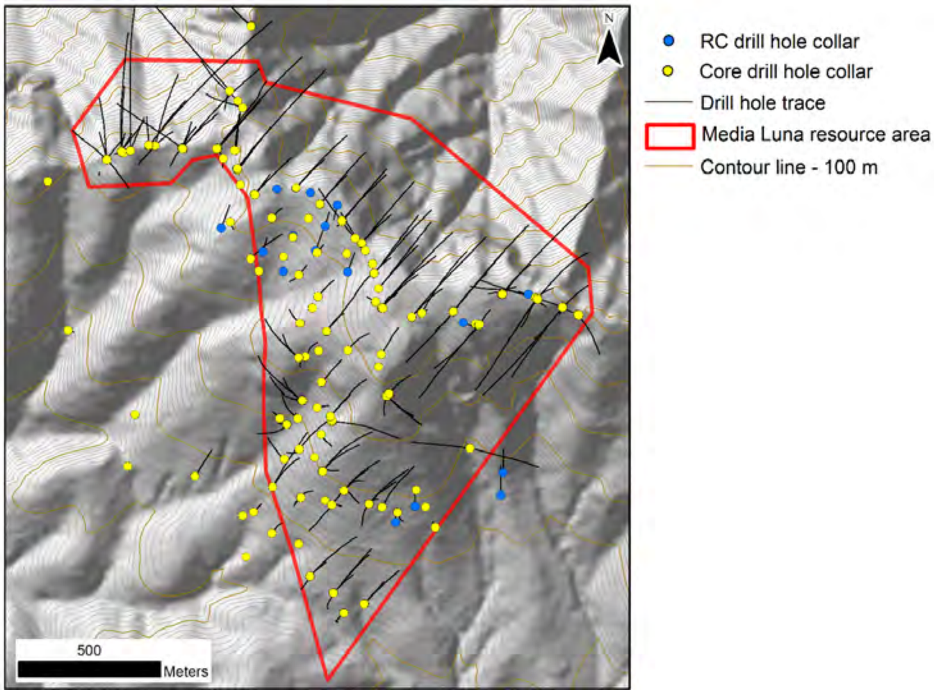
Note: Figure courtesy Torex, 2015. Drill collar locations are current to 11 April 2015. Drilling is ongoing.

Figure 10-1: Drill Hole Location Plan, Morelos



Note: Figure courtesy Torex, 2015. Drill collar locations are current to 17 August 2015. Drilling is ongoing.

Figure 10-2: Drill Hole and Channel Sample Location Plan, El Limón and Guajes



Note: Figure courtesy Torex, 2015. Drill collar locations are current to 17 August 2015. Drilling is ongoing.

Figure 10-3: Drill Hole Location Plan, Media Luna Area

10.3 DRILL METHODS

10.3.1 Drill Contractors and Rig Types

Amec Foster Wheeler M&M has no information as to the names of the drill contractors used in the Teck drill programs or the drill rig types.

Drilling under Torex was undertaken by a number of contractors (Table 10-3).

Table 10-3: Drilling Contractors and Drill Rig Types

Drilling Contractor	Year	Rig Type	Number of Drill Rigs
Major Drilling	2010–2011	LF-70	8
Energold Drilling	2010–2011	Christensen C-14	2
Boart Longyear,	2011–2012	R38	2
G4 Drilling México S.A. de C.V	2011–2013	HTM -2500	4
Canz Drilling Sapi De C.V	2013	Cortech 1800	1
Integración y Evaluación De Proyectos Mineros	2012–2013	Christensen C-14	2
Landdrill International México, S.A. De C.V	2012–2013	ZUNET – A5	3
Landdrill International México, S.A. De C.V	2012–2013	HTM -2500	2
Moles Drilling De R. L. de C.V	2013	Cortech 1800	2
Moles Drilling De R. L. de C.V	2014–2015	Cortech 1800	4

10.3.2 RC Drilling

During Teck drill programs, some RC drilling was performed as pre-collars for core tails.

All RC drilling during both Teck and Torex drilling was performed dry unless water injection became necessary to stabilize the hole.

Sample recoveries were not recorded for RC holes.

10.3.3 Core Drilling

Diamond drilling typically recovered HQ size core (63.5 mm) from surface, and was only reduced to NQ size core (47.6 mm) when drilling conditions warranted, in order to drill hole deeper.

When breakage of the core was required to fill the box during both Torex and Teck programs, edged tools and accurate measure of pieces to complete the channels was the common practice to minimize core destruction. The end of every run was marked with a wooden block and the final depth of the run.

Core was transferred to wooden core boxes, marked with “up” and “down” signs on the edges of the boxes using indelible pen. The drill hole number, box number and starting depth for the box was written before its use, whilst end depth were recorded upon completion. All information was marked with indelible pen on the front side of the box and also on the cover.

Transport of core boxes to the core shed was done by personnel from the company that was managing the drill program, or the drilling supervisor. Core handling logs were completed that included details for all persons involved in any step during the logging and sampling procedures.

10.3.4 Channel Samples

Channel samples were collected by Teck personnel using chip channeling of horizontal sections of trenches and road-cuts. These legacy data are not used in Mineral Resource estimation.

Torex collected 1,997 surface channel samples using rock saws at El Limón Sur and El Limón Norte Oxide with the objective of further constraining the geological model as well as for assessing mineralization at surface.

Delineation of the channel sampling lines was dictated by the availability of outcrop along each road cut line, and in the absence of outcrop, the most proximal outcrop to the line was sampled, irrespective of lithology. A total of 1,179 samples were taken at El Limón Norte Oxide and 818 samples were collected at El Limón Sur.

Sample locations were recorded using a handheld GPS Garmin GPSMAP 60CSx.

10.4 GEOLOGICAL LOGGING

Logging of RC drill cuttings and core utilized standard logging procedures implemented by Teck. Initial logging utilized paper forms, with data hand-entered into a database from the form. From 2006, logging was completed using hand-held computers.

Logs recorded lithologies, skarn type, fracture frequency and orientation, oxidation, sulphide mineralization type and intensity, and alteration type and intensity.

A total of 1,255 holes have been relogged by Torex during 2013–2014, and the updated information used to generate a new model for the Guajes area.

Teck photographed drill core. All drill cores and RC chips generated by Torex are photographed. From 2013, a purpose-built and equipped photographic laboratory has been used to photograph drill core. Two boxes are photographed at a time and each photograph is labeled by drill hole number and interval. All boxes of uncut core are photographed. All cut and samples core is photographed after sampling is complete. Core is wet when photographed.

For geotechnical purposes rock quality designations (RQD) and recovery percentages were also recorded. Intervals for measuring recovery generally do not correspond to assay intervals. No hydrogeological data were collected from exploration core drill holes.

10.5 RECOVERY

Recovery is measured using total core recovery (TCR) which is the ratio of core recovered (solid and non-intact) to the length of the core run.

RQD is also measured, and is the ratio of solid core pieces longer than 100 mm to length of core run. It is determined by measuring the core recovery percentage of core chunks that are greater than 100 mm in length.

If the core is broken by handling or by the drilling process (i.e., the fracture surfaces are fresh irregular breaks rather than natural joint surfaces), the fresh broken pieces are fitted together and counted as one piece, provided that they form the requisite length of 10 cm.

Drill core recoveries typically averaged 93.7% after the first 50 m. Statistical analysis of these core recoveries by Torex indicated that no bias was apparent using samples with recoveries that were less than 100%. For some fault intervals recovery may locally decrease to 50%. Even when the recovery is good, the RQD is generally poor within fault zone areas.

Recovery data were not available for all core holes, most notably in older Teck drill holes.

10.6 COLLAR SURVEYS

Drill hole collars were initially surveyed using differential GPS. All subsequent drill holes have been surveyed using the Total Station instrument, and locations of older holes picked up using Total Station methods such that all drill collar data are now sourced from the Total Station.

10.7 DOWNHOLE SURVEYS

Several different down hole survey techniques and devices were used during the Teck drilling programs to measure down hole azimuth and dip, including Sperry Sun, Tropari, and Reflex instruments, and acid tube measurements. During the 2006 Teck program readings of azimuth and dip were collected at 50 m intervals down-hole. Teck noted that some difficulties were encountered with the Reflex instrument in areas where there is significant magnetite or pyrrhotite (Teck Resources, 2008).

Torex has used a Reflex instrument in areas with insignificant magnetite or pyrrhotite mineralization on 50 m down the hole increments. In areas of high magnetite or pyrrhotite, only an acid etch was used to record dip orientation on 50 m increments.

Amec Foster Wheeler M&M reviewed azimuth deviations from Reflex instrument measurements in low magnetic intensity areas and is of the opinion that down hole azimuth deviations are relatively minor and do not pose an issue with regards to confidence in intercept location.

10.8 SAMPLE LENGTH/TRUE THICKNESS

Drill holes are designed to intersect the mineralization in as perpendicular a manner as possible; reported mineralized intercepts are typically longer than the true thickness of the mineralization. Drill holes that orthogonally intersect the mineralized skarn will tend to show true widths. Drill holes that obliquely intersect the mineralized skarn will show mineralized lengths that are slightly longer than true widths. A majority of the drill holes have been drilled obliquely to the skarn mineralization.

A series of cross-sections and plan maps for El Limón, Guajes, and Media Luna are included in Section 7. These maps include drill hole traces and an interpretation of major geologic contacts. These figures show that drill orientations are generally appropriate for the mineralization style and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the deposit area.

10.9 ON-GOING DRILL PROGRAM

During the first quarter of 2015, infill drilling work was undertaken in the El Limón East area, inside of the planned El Limón pit. RC drilling to provide support for mine planning was completed in a selected area of the planned Guajes pit. Core drilling is currently focused on the eastern part of Guajes pit with four drill rigs operational. Drilling is on-going at Media Luna.

Data generated from the 109 hole RC program at Guajes was compared to the resource model discussed in Section 14, within the 2015 pit shell design. Amec Foster Wheeler notes that the RC data were not collected using Torex's exploration standards and protocols. From visual inspection Amec Foster Wheeler found the infill drilling supports the Mineral Reserve pit design, and is of the opinion that the infill program would not significantly changed the design. Amec Foster Wheeler is of the opinion that the RC drilling can be used to create a mid-range forecast model in areas of uncertainty to predict what will be available in the pit within the next three or four months of mining. To improve the mid-range model, RC drilling, assaying, and geologic modelling should be brought up to exploration standards. This infill drilling model just completed, while giving more confidence to previous resource estimation, could be improved by detailed logging of the RC drill cuttings and modifying the geologic model before grade estimation. Amec Foster Wheeler also believes that a study should be completed to verify that there is not a bias between RC and core assay results.

Amec Foster Wheeler has reviewed the core drill results available for drill holes completed since the cutoff date for the resource model and has found no reason to change the global assumptions used for the resource estimate based on that available data.

10.10 SUMMARY OF DRILL INTERCEPTS

Example drill intercepts for El Limón and Guajes are summarized in Table 10-4, and are illustrative of nature of the mineralization at El Limón and Guajes. The example drill holes contain oxide and sulphide intersections and areas of higher-grade in lower-grade intervals.

A selection of example drill intercepts for Media Luna are included as Table 10-5 and illustrate the typical range of grades and thicknesses encountered within the deposit.

Selected example drill intercepts for the most recent exploration drill programs are included as Table 10-6. The example drill holes include samples of higher and lower grade intercepts, different thickness ranges, and contain areas of higher-grade in lower-grade intervals.

Table 10-4: Example Drill Hole Intercept Summary – El Limón and Guajes

Deposit	Drill Hole ID	Easting	Northing	Elevation	Azimuth (°)	Dip (°)		Depth of Top of Composite (m)	Depth of Base of Composite (m)	Composite Length (m)	Au (g/t)	Ag (g/t)	Rock Code
El Limón	DLIM-281	422465.98	1990402.57	1220.089	125	-85		30.5	56.0	25.5	1.28	10.6	Exoskarn
								83.2	152.3	69.1	5.57	7.2	Exoskarn
							including	111.0	118.0	7.0	17.87	17.8	Exoskarn
								199.5	209.0	9.5	4.10	6.8	Exoskarn
	TMP-1396	422952.062	1990180.11	1267.7964	0	-90		0.0	31.9	31.9	3.05	13.9	Exoskarn
							including	13.7	16.4	2.7	5.32	10.6	Exoskarn
								44.6	48.0	3.3	0.98	4.5	Endoskarn
Guajes East	T10-106C	421264.14	1991027.85	811.789	0	-90		4.5	6.6	2.1	1.22	4.0	Endoskarn
								53.1	91.0	37.9	4.87	21.1	Breccia
							including	55.2	61.0	5.8	20.71	6.5	Exoskarn
								119.0	122.0	3.0	0.83	1.0	Endoskarn
	DLIM-520	421484.39	1991056.43	866.5	326	-58		8.8	10.0	1.2	1.38	2.6	Endoskarn
								58.0	96.7	38.7	3.56	17.1	Exoskarn
							including	77.8	79.2	1.4	19.33	133.7	Exoskarn
Guajes West	TMP-1196	420644.6	1990512.05	755.81	313	-85		74.9	153.4	78.5	6.05	3.7	Exoskarn
							including	92.4	99.0	6.6	16.25	7.8	Endoskarn
							including	120.7	124.4	3.7	25.21	6.5	Endoskarn
	DLIM-483	420565	1990418.33	761.554	132	-65		84.0	107.0	23.0	1.72	0.8	Endoskarn

Note: Depth is calculated as at the base of the composite and represents the “to” depth; to obtain the composite depth from the top of the composite interval, the composite length is subtracted from the base of composite depth. The easting, northing and elevation are reported at the collar location

Table 10-5: Example Drill Composite Intercepts, Media Luna

Drill Hole ID	Easting	Northing	Elevation	Azimuth (º)	Dip (º)	Depth of Top of Composite (m)	Depth of Base of Composite (m)	Composite Length (m)	Au Equivalent (g/t)	Au (g/t)	Cu (%)	Ag (g/t)	Rock Code
CZML-03	422875.07	1985180.92	1540.30	40	-48	274.88	379.93	105.05	2.57	2.00	0.26	8.83	Endoskarn
CZML-16	422600.45	1985478.79	1532.89	40	-52	334.9	344.29	9.39	3.46	0.79	1.01	62.06	Exoskarn
ML-35	422610.46	1984569.52	1277.73	0	-90	537.65	591.36	53.71	12.97	11.86	0.5	19.04	Exoskarn
ML-46M	422725.96	1984668.53	1353.93	0	-90	599.8	606.87	7.07	3.6	0.46	1.32	61.61	Exoskarn
NEZML-10	423243.22	1984999.65	1563.50	220	-58	621.5	639.16	17.66	2.21	1.35	0.51	4.23	Endoskarn
WZML-07	422567.76	1984654.95	1281.05	0	-90	479.24	538.77	59.53	18.4	16.34	0.97	31.28	Exoskarn
WZML-47	422839.18	1984028.96	1137.21	0	-90	777	794.81	17.81	3.7	3.07	0.37	2.54	Marble/Limestone

Note: Au Equivalent = Au (g/t) + Cu % *(74.74/48.07) + Ag (g/t) * (0.85/48.07). All intervals are required to be >2 g/t AuEq in value and > 2.5 m in length to be considered as a composite interval in resource modeling. Depth is calculated as at the base of the composite and represents the "to" depth; to obtain the composite depth from the top of the composite interval, the composite length is subtracted from the base of composite depth. The easting, northing and elevation are reported at the collar location

.

Table 10-6: Example Drill Intercepts, Current Exploration Program

Drill-Hole	Target Area	Easting (UTM-E m)	Northing (UTM-N	Elevation (m)	Azimuth (°)	Dip (°)	Total Length (m)	Intersection			Core Length	Au	Ag	Cu	AuEq	Lithology
									From (m)	To (m)	(m)	g/t	g/t	%	g/t	
NWZML-03	Exploration - NWML	422200.59	1985615.3	1460.63	0	-90	809.65		516.80	521.65	4.85	1.34	27.39	0.01	1.85	Skarn
									549.64	565.67	16.03	2.71	19.69	0.07	3.16	Skarn
								including	560.26	564.84	4.58	3.62	24.21	0.05	4.12	Skarn
									573.27	577.88	4.61	2.21	4.74	0.04	2.36	Skarn
									659.40	672.00	12.60	0.36	8.53	0.35	1.06	Skarn
NWZML-04	Exploration - NWML	422198.57	1985617.9	1460.97	40	-58	755.5		395.68	399.40	3.72	3.13	49.26	0.16	4.25	Breccia
									454.90	458.73	3.83	0.08	15.88	0.80	1.61	Skarn
									524.73	528.53	3.80	5.38	37.62	0.26	6.45	Skarn
									552.48	555.50	3.02	2.16	22.29	0.27	2.97	Skarn
									559.65	565.50	5.85	1.63	17.30	0.14	2.16	Skarn
									583.34	588.03	4.69	0.57	19.15	0.36	1.47	Skarn
NWZML-05	Exploration - NWML	422080.56	1985626.8	1443.52	40	-73	715.75		308.83	314.50	5.67	0.08	25.42	0.31	1.00	Skarn
									544.26	562.50	18.24	7.45	16.46	0.42	8.39	Skarn
								including	551.72	562.50	10.78	12.40	13.90	0.20	12.96	Skarn
									566.50	571.60	5.10	0.14	4.07	0.31	0.70	Skarn
									578.41	580.20	1.79	0.61	9.04	0.59	1.68	Skarn
									586.18	596.54	10.36	0.27	15.36	0.24	0.91	Skarn
NWZML-06	Exploration - NWML	422081	1985627.3	1443.54	40	-50	862.62		407.27	412.65	5.38	0.47	13.71	0.04	0.78	Skarn
									536.63	540.24	3.61	0.20	68.58	1.76	4.15	Skarn
									590.51	597.74	7.23	0.96	12.71	0.20	1.49	Skarn
									732.18	736.72	4.54	0.08	24.71	0.47	1.25	Skarn
									758.45	762.47	4.02	0.27	17.12	0.39	1.18	Skarn
									770.95	781.61	10.66	3.98	46.57	1.05	6.43	Skarn
								including	776.48	779.65	3.17	4.43	101.79	2.64	10.34	Skarn

Drill-Hole	Target Area	Easting (UTM-E m)	Northing (UTM-N	Elevation (m)	Azimuth (°)	Dip (°)	Total Length (m)	Intersection			Core Length	Au	Ag	Cu	AuEq	Lithology
									From (m)	To (m)	(m)	g/t	g/t	%	g/t	
NWZML-07	Exploration - NWML	421932.72	1985577.1	1431.73	310	-73	693.2		630.89	634.00	3.11	0.98	16.55	0.69	2.35	Skarn
NWZML-08	Exploration - NWML	421931.37	1985577.5	1431.72	130	-80	713.5		235.77	239.13	3.36	0.32	102.73	0.19	2.44	Skarn
									620.81	628.00	7.19	0.71	1.48	0.02	0.77	Porphyry Dike
									660.09	666.70	6.61	0.25	15.25	0.34	1.05	Skarn
MLW-03A	Media Luna West	421033.25	1985192.1	1192.73	220	-75	926.65		799.57	814.42	14.85	4.06	4.56	0.17	4.40	Skarn
								including	799.57	803.20	3.63	7.11	6.56	0.11	7.40	Skarn
								and	808.62	812.69	4.07	7.74	6.46	0.27	8.28	Skarn
									869.00	870.21	1.21	0.92	85.78	2.73	6.68	Skarn

Notes: True thickness of the mineralized zone is unknown and is reported as drill hole length. The gold equivalent grade, including copper and silver values, is based on 100% metal recoveries. The gold grade equivalent calculation used is as follows: AuEq (g/t) = Au g/t + (Cu grade x ((Cu price per lb/Au price per oz) x 0.06857 lbs per oz x 10,000 g per %)) + (Ag grade x (Ag price per oz/Au price per oz)). The metal prices used were: gold, $1,495/oz; copper, $3.39/lb; and silver, $26.45/oz.

10.11 COMMENTS ON SECTION 10

In the opinion of the Amec Foster Wheeler M&M QPs, the quantity and quality of the logging, geotechnical, collar and down-hole survey data collected in the Torex exploration and infill drill programs are sufficient to support Mineral Resource estimation as follows:

- Core logging meets industry standards for exploration on gold–silver, and gold–silver–copper deposits.
- Collar surveys have been performed using industry-standard instrumentation.
- Down-hole surveys were performed using industry-standard instrumentation, with the following notes:
  - The down hole surveying methods used prior to 2006 have been superseded, and no longer reflect industry leading practices.
  - Tropari is a magnetic method and is unreliable in magnetic rocks, which are common in skarn deposits and the acid tube method does not provide azimuth information.
  - A non-magnetic survey tool such as a gyro or the Maxibor tool should be used for down hole surveys in future drill programs. Deep mineralized intercepts from existing drill programs should be used to support classification of Inferred Mineral Resources only, since there is significant uncertainty as to their location.
  - Down hole survey vector analysis indicate that core drill holes with a total depth greater than 200 m, show an average drift of less than the dimensions of a mine block. Amec Foster Wheeler M&M is of the opinion that the missing downhole surveys do not degrade the level of confidence in the location of mineralization, for the purposes of Mineral Resource estimation. However, all deep drill holes in the future should be appropriately surveyed.
- Drilling practices, logging, collar surveys and down-hole surveys for legacy and Torex drill programs have been reviewed (refer to Section 10 and Section 12).
- Recovery data from core drill programs are acceptable.
- Drill holes are designed to intersect the mineralization in as perpendicular a manner as possible; reported mineralized intercepts are typically longer than the true thickness of the mineralization. Drill holes that orthogonally intersect the mineralized skarn will tend to show true widths. Drill holes that obliquely intersect the mineralized skarn will show mineralized lengths that are slightly longer than true widths. A majority of the drill holes have been drilled obliquely to the skarn mineralization.
- Drill orientations are generally appropriate for the mineralization style and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the deposit areas.
- Drill orientations are shown in the example cross-sections in Section 7 and can be considered to appropriately test the mineralization.

No significant factors were identified with the data collection from the drill programs that could affect Mineral Resource estimation.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 KEY POINTS

- Sampling methods are acceptable, meet industry-standard practice and are adequate for Mineral Resource estimation.
- Sample security has relied upon the fact that the samples were always attended or locked in the on-site sample preparation facility.

11.2 SAMPLING METHODS

11.2.1 Geochemical Sampling

Grab samples were collected by Teck personnel from an area of outcrop or float. Rock chip samples were taken from areas of outcrop. Samples typically weighed about 2 kg. Locations were recorded with a hand-held GPS.

Soil samples were taken by Teck personnel on approximately 100 m to 200 m sample spacing. Locations were recorded with a hand-held GPS. Samples were collected from the "B" soil horizon, and sieved to -80 mesh. Approximately 500 g of material was collected at each site.

Channel samples were collected by Teck personnel chip channeling horizontal sections of trench and road-cut. Trenches and road-cuts were sampled at nominal 2 m intervals, though some intervals were modified to account for geological contacts. The average weight of the trench samples was 3 kg.

During the Torex channel sampling, vertical cuts of 0.2 to 0.3 m were spaced 3 to 5 cm along a 2 m horizontal sample length along road cuts. Rock material in-between the vertical cuts was then chipped out.

During 2014 soil samples were collected by Torex personnel in selected areas south of the Balsas River. Samples were sieved in the field to pass a 5 mm screen. Two soil samples, approximately 80 to 100 g in size, were collected at each site (with the same sample number). Samplers were provided with sample numbers for grid locations by the survey manager, and recorded the sample number, and, using a GPS unit, the UTM coordinates.

Stream sediment samples at a district-scale were collected by Torex personnel through 2014–2015. The samples were coarse sieved to -2 mm (10 mesh Tyler) in the field. The samples were dried at Acme laboratory at 60°C, and sieved to -180 µm (0.18 mm, -80 mesh Tyler), and the entire minus fraction, or a split of 110 g, was sent to the Vancouver laboratory for analysis.

11.2.1.1 RC Sampling

Reverse circulation drill cuttings were systematically sampled at 1.5 m intervals. RC drilling was done dry except when water was added to cross fault zones. RC samples were collected in buckets from the cyclone and split (approximately 20%) using a 3-tier Jones splitter. The average weight of the RC samples was 7 kg.

There is no information available to Amec Foster Wheeler M&M as to whether Teck program samples were collected by the drill crew, or by Teck personnel.

During the Torex programs, samples were collected by Torex (MML) personnel.

11.2.1.2 Core Sampling

Legacy

Core boxes were transported from the drill site to the logging facility, where the core was logged and the assay intervals determined by a geologist. Assay intervals were selected after logging.

Core was sawn in half; one half was sent to sample preparation, after being sampled at irregular intervals honouring geological contacts.

The other half of the core was retained in the core box as an archive or for additional studies. Four bar-code sample tags were used. One tab was left in the tag book as reference, one tab was stapled to the box to mark the sample interval, one tab was placed with the coarse reject material and one tab was included with the pulp material. In addition to the paper tag marking, the interval in the core box was also marked with a metal tag inscribed with the hole number, interval, and sample number.

Torex

Torex drill supervisors or drilling contractors were present at the drill site daily to ensure the core was sequentially placed in each box and that the boxes were properly marked and labeled. Boxes were covered with a wooden cover at the site and core was transported each day by truck and by motorized dinghy to the core shack in Nuevos Balsas to await logging. A chain of custody was recorded for each box before entering the core shack.

Prior to logging, the core was cleaned and marked with a double line (red and blue) to assist with maintaining a correct core orientation as the core was handled. Each box was then individually photographed. A geologist was assigned to log a drill hole using an IPAQ hand held computer and software for core logging and sample descriptions. RQD and core recovery measurements were taken and any other required non-destructive testing was completed. The geologist marked up the assay intervals, inserted the appropriate sample tags for each interval in the core trays and recorded this sample information. Core was typically marked up in 1.5 to 3 m intervals adjusted for mineralization/waste contacts or major geological breaks where appropriate. Where core recovery is poor and insufficient material is available to prepare a sample, two or three meters of core can be combined to make a composite sample.

The geologist ensured that sample tags were in place and sample numbers and footages were properly recorded. The geologist aligned core by matching broken ends so that core has same relative orientation and drew a line down the axis of the aligned core to ensure each piece was split along the same axis. Core will normally be split in two equal halves.

All drill log and sample data were maintained under the supervision of the project supervisor.

For the Media Luna drill programs, all geochemical samples to be assayed were double bagged after splitting and placed in grain bags (approximately eight to 10 samples per grain bag) which were then sealed by a nylon zip-tie and stored on site in a secure location until they were shipped.

The remaining half-split was returned to the core box and stored at the core shack facilities onsite. All samples to be assayed were then transported on a daily basis by Torex employees to the preparation laboratory that is operated by SGS, which is located a few blocks away from the Core Shack. All samples were under Torex's control during transport and until samples were collected in the preparation laboratory. A complete chain of custody was recorded for each sample before entering the laboratory.

11.3 DENSITY DETERMINATIONS

During the 2004 and 2006 Teck programs, density measurements were obtained from a range of rock types and lithologies including skarns, hornfels, marble and intrusive rocks. A mechanical balance was used to weigh the samples in the air and then in water. Teck personnel performed these weight measurements on site using an Ohaus Triple Beam balance. All selected samples were collected one day before measuring, stored overnight in a bucket full of water and measured the next day. The bulk density was calculated by dividing the weight in the air by the difference of weight in the air and weight in the water.

Specific gravity (SG) values were updated for the 2012 Morelos resource model, using results from 1,426 wax coating SG tests. Previous SG determinations that were based on water immersion method were not used in the 2012 modeling due to the potential for a high bias of the mean value for some lithology types when compared to wax immersion results. Specific gravity domains are categorized and listed in Table 11-1 and reflect averages that are subdivided by lithology type, and by mineralized or unmineralized character (~0.5 g/t Au threshold).

Table 11-1: Mean Specific Gravity Assigned to El Limón and Guajes Block Models by Lithology Type

		Averages for All Campaigns (outliers removed)	
Lithology Type	**Lithology Code**	**# samples**	**SG**
ExoSkarn	31 - Mineralized	112	3.168
ExoSkarn	31 - Unmineralized	106	3.132
EndoSkarn	32 - Mineralized	95	3.125
EndoSkarn	32 - Unmineralized	94	3.169
Breccia	34 - Mineralized	66	2.484
Breccia	34 - Unmineralized	54	2.642
Intrusives	36 - Mineralized	52	2.629
Intrusives	36 - Unmineralized	255	2.603
Hornfels	37 - Mineralized	72	2.869
Hornfels	37 - Unmineralized	160	2.849
Alluvium	38 - Mineralized	0	2.479 (assigned)
Alluvium	38 - Unmineralized	4	2.479
Marble/Limestone	39 - Mineralized	38	2.866
Marble/Limestone	39 - Unmineralized	88	2.675
Dyke	40 - Mineralized	4	2.830
Dyke	40 - Unmineralized	16	2.743
Massive Sulfide Oxide	41 - Mineralized	48	3.327
Massive Sulfide Oxide	41 - Unmineralized	44	3.691
Fault Gouge	42 - Mineralized	28	2.572
Fault Gouge	42 - Unmineralized	37	2.544

Fifty-three SG measurements were rejected as outliers (low and high) prior to calculating averages. Lithology types were updated to reflect relogging efforts recorded in the 6 April 2012 database, as well as lithology updates made by Amec Foster Wheeler M&M to the 3.5 m composites (refer to Section 14).

For the 2014 El Limón Sur model, SG values were assigned by rock type from 137 wax immersion density determinations. Values are as shown in Table 11-2.

Table 11-2: El Limón Sur Update Model Specific Gravity Assigned by Lithology Type

Rock Type	Number of Samples	Unmineralized SG (g/cm^3)	Number of Samples	Mineralized SG (g/cm^3)
Exoskarn	22	3.40	23	3.35
Endoskarn	15	3.03	23	3.11
Breccia	4	2.30	12	2.28
Hornfels	18	2.99	1	2.93
Marble/Limestone	28	2.73	3	2.78
Massive Sulfides Oxides	NS		2	4.35
Granodiorite	16	2.63	3	2.65
Feldspar Porphyry	15	2.66	1	2.59
Feldspar Biotite Hornblende Quartz Porphyry	15	2.70	NS	
Quartz Feldspar Hornblende Porphyry	1	2.78	NS	
Mafic Dykes	1	2.40	NS	
Fine Grain Biotite	2	2.71	NS	

Note: NS = no sample

A total of 244 Media Luna drill intervals were selected for density determination based on rock type and assay values and six-inch pieces of core were sent to ALS Global (ALS) in Tucson, Arizona for density determination by the wax immersion method (ALS code OA-GRA08a). A set of 12 core samples from the same (adjacent) intervals were sent to SGS in Tucson to check the ALS results and density was determined using the wax immersion method (ASTM method C 914-79).

Table 11-3 summarizes the average results by rock type. A preliminary comparison of the ALS and SGS results show that the ALS results are biased high by an average of approximately 0.1 g/cm^3 across all rock types when compared to SGS Laboratories (SGS) values. This bias equals about a 3.0% bias when comparing the difference to an average value of about 2.9 g/cm^3. When comparing the results by rock type, there is a very consistent bias of between 0.08 to 0.21 g/cm^3, with the only rock types not showing a significant bias being two of the porphyry types (rock codes 62 and 63).

In Amec Foster Wheeler M&M's opinion, the ALS density determinations are adequate for use in the Media Luna Mineral Resource estimate. Additional work is required to determine the source of the bias between the results produced by ALS and SGS.

Table 11-3: Density, Media Luna

Rock Type	Rock Code	Number of Determinations	Mean Density Value (g/cm^3)
Exoskarn	31	29	3.303
Endoskarn	32	30	3.005
Undifferentiated Intrusive	36	30	2.670
Marble Limestone	39	31	2.818 *
Massive Sulfide Oxide	41	30	3.998
Granodiorite	60	30	2.662
Quartz–feldspar–hornblende porphyry	63	30	2.657
Breccia	34	7	2.808
Hornfels	37	2	3.007
Feldspar Porphyry	61	20	2.580
Feldspar–biotite–hornblende–quartz porphyry	62	3	2.553
Mafic Dykes	65	2	2.763

11.4 ANALYTICAL AND TEST LABORATORIES

Sample preparation and analytical laboratories used during Teck's exploration programs include ALS Chemex, Laboratorio Geologico Minero (Lacme), and Global Discovery Laboratory (GDL).

ALS Chemex (now ALS) was responsible for sample preparation during 2000–2001 through its non-accredited sample preparation facility in Guadalajara, Mexico. Samples were dispatched to the Vancouver laboratory facility, which, at the time the work was performed, was ISO-9000 accredited for analysis. ALS Chemex was independent of Teck.

Lacme prepared samples during 2002–2004 at its sample preparation facility in Guadalajara, Mexico. Lacme is a subsidiary of Acme Laboratories Limited (Acme). At the time of sample preparation Lacme was independent of Teck. The preparation facility was not accredited.

In 2006, a sample preparation laboratory was set up on site at Morelos, under the supervision of Teck personnel. This preparation facility was not registered, and was operated by a contractor, independent of Teck.

Sample analysis from 2002 to 2008 was performed at Teck's in-house laboratory, Global Discovery Laboratory (GDL), in Vancouver, Canada. GDL (no longer in operation) was not accredited, but routinely participated in and received certification of proficiency in the CANMET administered Proficiency Testing Program for Mineral Analysis Laboratories. The GDL laboratory was an in-house laboratory as was not independent of Teck. The sample preparation laboratories used by Teck are not accredited.

Check assays on GDL original gold assays were performed by ALS, Assayers Canada and Acme Laboratories (Acme), now part of Bureau Veritas, all of Vancouver, Canada. Assayers Canada (now part of SGS) was not accredited during the time period that the check assays were performed. Acme Vancouver is an ISO-17025 accredited laboratory. All laboratories were independent of Torex.

In 2005, Acme Vancouver performed check assays of approximately 10% of the samples from the 2000–2001 Teck drilling campaigns that were assayed originally by ALS Chemex.

During the 2011–2012 El Limón Guajes drill campaigns, drill samples were sent to the SGS laboratory in Nuevo Balsas, Guerrero, Mexico, where the samples were dried, crushed and pulverized.

The Nuevo Balsas laboratory is owned by Torex, and operated by SGS under a service agreement, and is not accredited. SGS Nuevo Balsas has performed both sample preparation and analytical functions.

Prepared sample pulps were then sent to the SGS laboratories in Durango, Mexico; Toronto, Canada; and Vancouver, Canada for analysis. The SGS laboratories in Durango and Toronto are ISO-17025 accredited and are independent of Torex.

Samples for the El Limón Sur program were prepared and assayed by the SGS Nuevo Balsas laboratory.

Sample preparation at Media Luna was completed by SGS Nuevo Balsas between 2012 and 2013. Drill samples for the first 11 drill holes completed at Media Luna were assayed by Acme Vancouver. From July, 2012 to April 2014, drill samples were sent to SGS Nuevo Balsas for analysis for Au, and either SGS Toronto or SGS Vancouver for Cu, Ag, and the 36-element exploration suite. Acme Vancouver was retained as the check assay laboratory.

For the 2014 and 2015 drilling campaigns, all samples were prepared by Acme in their Guadalajara laboratory, prior to being analyzed by Acme Vancouver. The Guadalajara laboratory holds ISO-17025 accreditations.

For the 2014 Modelo–La Fe and 2015 Media Luna drilling campaigns, sample preparation was performed by Acme Guadalajara. Drill samples were then sent to Acme Vancouver and TSL Laboratories (TSL) in Saskatchewan were used as the check assay laboratory. TSL holds ISO/IEC 17025:2005 accreditations.

11.5 SAMPLE PREPARATION AND ANALYSIS

11.5.1 Legacy Programs

Drill and trench samples from the 2000 and 2001 Morelos drill campaigns were prepared by ALS Chemex. Samples were crushed to 60% passing 10 mesh prior to splitting a 300 g sub-sample which was pulverized to 95% passing 150 mesh.

The pulverized pulp sample was analyzed by ALS Chemex for gold using a one assay tonne (1 AT; approximately 30 g of sample) fire assay with an atomic absorption finish. Samples returning assays greater than 10 g/t Au were assayed again using a 1 AT fire assay with a gravimetric finish. Silver, arsenic, copper, and 31 additional elements were determined by aqua regia digestion followed by inductively coupled plasma–atomic emission spectroscopy (ICP-AES).

Drill and trench samples from the 2002 through 2004 programs were sent to the Lacme sample preparation facility. Samples were dried and crushed to 70% passing 10 mesh prior to splitting a 300 g sub-sample which is pulverized to 95% passing 150 mesh.

The pulverized pulp samples were sent to GDL for assay. GDL assayed all samples by a wet chemical method using an aqua regia digestion, MIBK extraction and atomic adsorption finish. Samples returning greater than 200 ppb Au were re-assayed using a 1 AT fire assay with an atomic absorption finish. Gold assays greater than 10 g/t Au by fire assay were assayed again by 1 AT fire assay but with a gravimetric finish. Additional elements were determined ICP-AES.

Once assay data were reviewed by Teck personnel, any intervals that returned less than 200 ppb Au but that fell within the mineralized skarn or oxide interval envelope were fire assayed by 1 AT fire assay with an atomic absorption finish.

At the beginning of the 2006 program, a preparation laboratory was established in Nuevo Balsas. This preparation laboratory was ran by an independent contractor, and was used for the 2006–2008 campaigns. Samples were dried and crushed to 85% passing 10 mesh prior to splitting a 300 g sub-sample. The sub-sample was pulverized to 95% passing 150 mesh before shipment to GDL where the analytical methodology was the same as that described for the 2002–2004 programs.

11.5.2 Torex Programs

Torex drill samples for the 2010–2012 El Limón and Guajes program were prepared by SGS in Nuevo Balsas, Mexico. Samples were dried and crushed to 75% passing 2 mm prior to splitting a 500g sub-sample. The sub-sample was then pulverized to 85% passing 75 µm. Samples were then dispatched to the SGS laboratory in Durango, Mexico, and assayed for gold by 30 g fire assay atomic absorption (AA). Samples reporting over 10 g/t Au by fire assay AA were reassayed by 30 g gravimetric fire assay. Silver, As, Ca, Fe, Mg, S, and 26 other elements were determined by aqua regia ICP-AES. Samples reporting over 10 g/t Ag were reassayed by a three-acid digestion followed by AA finish. In rare cases, samples reporting over 300 g/t Ag by the three-acid method were reassayed by 30 g gravimetric fire assay.

Samples for El Limón Sur were assayed by SGS in Nuevo Balsas. The same assay methodology as noted above for El Limón and Guajes was used.

In the case of Media Luna samples, sample preparation from 2012–2013 was also undertaken by SGS in Nuevo Balsas, and samples were dried and crushed to 75% passing 2 mm, prior to splitting a 600 g sub-sample. The sub-sample was then pulverized to 90% passing 75 µm.

A 200 g split of the pulverized material was then dispatched to SGS, where Au was assayed by conventional 30 g fire assay with AA finish (SGS code FAA313). Samples returning greater than 3.0 g/t Au by this method were re-assayed by fire assay with gravimetric finish (SGS code FAG303).

Starting in March 2013, copper and silver were assayed by aqua regia digestion atomic absorption (SGS code AAS10D) at the SGS Durango laboratory, but these assays were not used for Mineral Resource estimation purposes.

Another 200 g split was dispatched to either SGS Toronto or SGS Vancouver, and copper, silver and 36 additional elements were determined by aqua regia digestion ICP or mass spectrometry (SGS codes ICP14B and IMS14B). Samples returning greater than 10 ppm silver were re-assayed by three-acid digestion AA (SGS code AAS21E) and high-grade silver samples were re-assayed by fire assay gravimetric finish (FAG313). Samples returning greater than 10,000 ppm (or 1%) copper were re-assayed by sodium peroxide fusion (SGS code ICP90Q). The remaining 200 g pulp was returned to site for archiving.

For the 2014 Modelo–La Fe and 2015 Media Luna drilling programs, sample preparation was undertaken by Acme Guadalajara. Samples were dried and crushed to 75% passing 2 mm, prior to splitting a 600 g sub-sample. The sub-sample was then pulverized to 90% passing 75 µm.

A 200 g split of the pulverized material was then dispatched to Acme Vancouver, where Au was assayed by conventional 30 g fire assay with an AA finish (Acme code FA430). Samples returning greater than 10.0 g/t Au by this method were re-assayed by fire assay with gravimetric finish (Acme code FA530). Copper, silver and 43 other elements were determined by multi-acid digestion ICP or mass spectrometry (Acme code MA200). Samples returning greater than 50 ppm silver were re-assayed by fire assay with gravimetric finish (Acme code FA530). Samples returning greater than 10,000 ppm (or 1%) copper were re-assayed by the aqua regia ore grade method (Acme code AR400). Aqua regia ore grade ICP analysis (Acme code AQ370) was used to determine overlimit values for other elements. The remaining 200 g pulp was returned to site for archiving.

11.6 QUALITY ASSURANCE AND QUALITY CONTROL PROGRAMS

11.6.1 Legacy Programs

The QA/QC program for the 2000–2001 drill Teck campaigns relied on ALS Chemex's internal quality controls.

Starting in 2002, an external QA/QC program was initiated by Teck personnel. This program consisted of inserting two standards and four blanks in the sample stream with each drill hole submittal. In 2003, the program changed to include 5% blanks, 5% field duplicates, and 10% certified reference materials (CRMs).

Because of the good results from the 2003 program, the number of insertions in the 2004 QA/QC program was reduced to 2% blanks, 2% field duplicates and 5% CRMs.

The 2006–2008 QA/QC programs consisted of the insertion of 5% CRMs, 5% blanks and 5% field (core) duplicates. The preparation laboratory inserted 5% coarse crush duplicates and laboratory replicates were used as pulp duplicates.

11.6.1.1 Certified Reference Materials

From 2002 to 2004, two certified reference materials (CRMs) sourced from WCM Minerals of Burnaby, British Columbia, Canada were inserted into submissions at the site. The insertion rate was approximately 5% and the position the CRM was inserted into the sample stream was randomized.

Two different CRMs were prepared in 2006 from matrix-matched material taken from the property and processed as CRMs by CDN Resource Laboratory.

11.6.1.2 Blanks

Blank samples from 2002 to 2004 were generated from RC reject samples of barren marble from early exploration drill holes at Morelos. During this period, 47 (or 10%) of the 462 gold assays of blank samples reported values greater than the detection limit (10 ppb Au). Teck reassayed select blank samples and found that there was sporadic gold in the Media Luna marble unit, so it was discontinued as a source of blank material.

For the initial portion of the 2006 program, blank material was sourced from RC cuttings that were considered to be unmineralized. During this period, 13 (or 11.2%) of the 118 blanks inserted returned values greater than detection, suggesting that some of this material contained very low but detectable levels of gold and was unsuitable as a blank.

For drill programs post-June 2006, blank material was sourced from a barren limestone outcrop located between Iguala and Morelos. This blank material showed good performance.

11.6.1.3 Check Assays

Teck submitted 139 intervals from mineralized zones selected from drill holes completed in 2000–2001, together with QA/QC samples, to Acme in Vancouver, Canada for check assays. The Acme gold check assays indicate that the original ALS Chemex gold assays are acceptably accurate.

Teck check assays on 2002 to 2004 GDL original gold assays by ALS Chemex, Assayers, and Acme, all of Vancouver, Canada, show a minor low bias in the GDL assays of between 2% and 8%.

11.6.2 Torex Programs

Torex utilizes a program of CRMs, blanks and duplicates to control assay quality for its drilling campaigns.

Through October 2012, Torex considered Media Luna an early-stage project and the QA/QC protocol was designed for a 2% insertion rate of control samples. Beginning in October 2012, the project was raised to the resource estimation stage and as a result, the insertion rate was raised to 5%. The 2014 Media Luna QA/QC program consisted of the insertion of approximately 6% CRMs, 6% blanks and 5% check assays. Blind duplicates are not part of the current protocol.

11.6.2.1 Certified Reference Materials

Torex used nine different CRMs to monitor gold assay accuracy during the El Limón and Guajes drill programs, and the early Media Luna drilling. All CRMs were sourced from CDN Resource Laboratories (CDN) in Langley, British Columbia, Canada. The CRMs cover the expected gold grade range, from 0.3 to 5.3 g/t Au. CRMs are inserted at a rate of one per 20 samples.

For the drilling performed between 2013 and 2015 at Media Luna, Torex used four CRMs from CDN that were certified for gold, copper, and silver, and two CRMs from Ore Research & Exploration (ORE) that were certified for gold and silver. The CRMs cover the following grade ranges:

- Au from 0.3 to 7.1 g/t
- Ag from 0.3 to 295 ppm
- Cu from 0.01 to 0.8 %.

CRMs are inserted at a rate of one per 20 samples.

11.6.2.2 Blanks

Blanks are inserted at a rate of one in 20 samples. Torex used a blank sourced from CDN up until February 2013. It is certified blank for Au, Pt and Pd. Commencing in February 2013, Torex has used a coarse blank sample sourced from a marble quarry near to the Morelos site that has very low gold, copper and silver values. Blank samples have been used for all of Torex's El Limón, Guajes and Media Luna programs.

11.6.2.3 Duplicates

Quarter core, coarse, and pulp duplicate samples have been regularly submitted in the Torex programs at El Limón, Guajes and Media Luna.

11.6.2.4 Check Assays

A total of 300 assay intervals had been submitted for gold check assay, and 1,027 assay intervals had been submitted for silver check assay at Acme Vancouver, at the time of the El Limón and Guajes databases were closed for estimation purposes. No significant bias was observed in the original SGS gold and silver assays.

Check assay programs completed at Media Luna have included a set of 1,501 early drill hole samples that were assayed at SGS after having been assayed initially at Acme. Additional sets of check assay samples were sent to Acme for drilling from December, 2012 through February, 2013 (552 samples) and May, 2013 through July, 2013 (1,166 samples).

The check assays from the early set of drill hole samples and the drilling from December, 2012 through February, 2013 were completed on coarse reject samples, whereas the check assays from the drilling from May, 2013 through July, 2013 were completed on pulps.

For the 2015 drilling campaign, 66 check assay samples were sent to TSL during March 2015.

11.6.3 Media Luna Silver Re-Assays

A QC review of the Media Luna silver data in mid-2013 identified a low bias for silver based on check assays at Acme.

To investigate the potential low bias, a suite of 141 sample pulps were submitted to TSL for repeat Ag analyses. Silver values greater than 10 ppm, determined by three-acid digest with an AA reading by SGS (method AAS21E) were compared against TSL Ag values, determined by a "total" three-acid digest.

The TSL and Acme Ag assays were higher than SGS Ag values. The majority of these samples would be included in ore zones due to the positive correlation with gold and copper, and high magnetite or sulphides.

SGS agreed to re-assay 2,771 samples with previously reported values over 10 ppm. SGS agreed that the AAS21E method resulted in a low bias. SGS suggested that the cause of the low bias for method AAS21E was high viscosity, since 2 g of material was used for the dissolution and this may have affected the uptake rate on the AAS.

SGS proposed that the Ag assay method be converted to AAS10D for future analyses. The main difference with the AAS21E method is that 0.5 g is digested with HCl and HNO_3 acids (with HF excluded) for the AAS10D method; the final volume of 50 mL and AAS finish are the same for the two methods.

Samples with original AAS21E Ag assays that fell between 10 to 100 g/t Ag have re-assayed AAS10D Ag values that are 10% higher on average. The re-assays were lower than the original Ag assay for approximately 20% of the samples, but were higher than the original assays for the remaining 80% of samples. The samples with greater than 100 g/t Ag were generally not found to have a bias between the AAS21E and AAS10D Ag values. The exception was a small group of 13 samples that also required re-pulverizing. These samples had a low bias of 7% on average (up to -20% bias) which again may be related to oxidation of sulphides.

11.7 DATABASES

11.7.1 El Limón and Guajes

Entry of information into databases utilized a variety of techniques and procedures to check the integrity of the data entered.

During the 2000 to 2005 period, geological data were entered into spreadsheets in a single pass by Teck personnel. From 2006 through 2009, all geological data were entered electronically directly into the system without a paper log step.

Assays were received electronically from the laboratories and imported directly into the database.

Drill hole collar and down hole survey data were manually entered into the database.

Paper records were kept for all assay and QA/QC data, geological logging and bulk density information, downhole and collar coordinate surveys. All paper records were filed by drill hole for quick location and retrieval of any information desired. Assays, downhole surveys, and collar surveys were stored in the same file as the geological logging information. In addition, sample preparation and laboratory assay protocols from the laboratories were monitored and kept on file.

From 2010 to 2012, Torex has maintained the exploration data in a series of Microsoft Excel spreadsheets, and these data were periodically loaded into a Microsoft Access database. During Amec Foster Wheeler M&M's audit work in 2011, a high incidence of data-entry errors was observed in the collar location and assay records. In 2012, Torex systematically corrected the collar and assay data and implemented a new system of data entry to ensure that these errors are no longer introduced.

From mid-2013 to 2014, Torex geologists reviewed and re-logged geological data from El Limón and Guajes drill core; the lithological re-logging data have been now included the database and replace the earlier information.

11.7.2 Media Luna

Drill hole data for the Media Luna Project is logged in the field and entered into an IPAQ and exported in *.txt* format and Excel spreadsheets by Torex. Drill hole logs are manually reviewed for discrepancies and inconsistencies in the sample interval column and the rock code column. Once the drill logs are cleared they are imported to Microsoft Access and transferred to the master database, where additional data validation checks are undertaken.

Assays were received electronically from the laboratories and imported directly into the database.

Drill hole collar data were manually entered into the database. Down-hole survey data were loaded into the database from digital files produced by the survey equipment.

Additional core information such as geotechnical, magnetic susceptibility, mineralization and alteration types and mineralogy, and core recovery is also stored in the database.

Access permission for entering and editing data into the database is restricted to the Database Administrator. The database is hosted on the Torex server located in Nuevo Balsas and which is routinely backed up every day for protection from data loss due to potential drive failures or other technical issues.

11.8 SAMPLE SECURITY

Sample security is not generally practiced at Morelos during the drilling programs, due to the remote nature of the site. Sample security relied upon the fact that the samples were always attended or locked at the sample dispatch facility. Sample collection and transportation have always been undertaken by company or laboratory personnel using company vehicles.

Prior to 2002, drill and trench samples were picked up at site by ALS Chemex, prepared to a pulp in Guadalajara, Mexico, and sent by ALS Chemex via air to the ALS Chemex analytical laboratory in Vancouver, Canada. Starting in 2002, samples were delivered by Teck personnel to the Lacme sample preparation laboratory in Guadalajara, Mexico, prepared to a pulp by Lacme, and then shipped by Lacme to the GDL analytical laboratory in Vancouver, Canada.

Torex continued with the Teck sample security procedures, bringing the core boxes from the drill rig to the core logging facility once per day. Core is logged, sample intervals are marked by the geologist, and then the core is cut and bagged. The sample dispatch facility is always attended or locked.

From 2011 through mid-2014 sampled and bagged core was delivered by Torex staff to the SGS sample preparation facility in Nuevo Balsas.

The protocol changed in mid-2014 and from then to date, samples are picked up at site by Acme Guadalajara staff, for sample preparation, and then sent by Acme via air to their analytical laboratory in Vancouver.

For both the Teck and the Torex programs, chain of custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory.

11.9 SAMPLE STORAGE

Coarse rejects and pulps from the 2003 through mid-2014 drill programs are stored at a secured warehouse in Nuevo Balsas.

Coarse and rejects from the 2014 and 2015 drilling programs are stored at a new warehouse in the San Miguel Exploration Camp (Media Luna). Coarse rejects in plastic bags are stored in cardboard boxes on steel racks in a separate locked building. The coarse reject boxes are labeled and stored by sample number.

Drill core from the 2003 through 2014 drilling programs is stored in wooden core boxes on steel racks in a building in Nuevo Balsas.

In 2014, a new core shack was built in the San Miguel Exploration Camp (Media Luna) and this facility currently stores drill core from the 2014-2015 drilling campaigns.

The core boxes in both the San Miguel and Nuevo Balsas core shacks are racked in numerical sequence by drill hole number and depth.

11.10 COMMENTS ON SECTION 11

In the opinion of the Amec Foster Wheeler M&M QPs, the sampling methods are acceptable, meet industry-standard practice and are adequate for Mineral Resource estimation, based on the following:

- Drill sampling has been adequately spaced to first define, then infill, gold–silver anomalies to produce prospect-scale and deposit-scale drill data at El Limón and Guajes.
- Drill sampling has been adequately spaced to first define, then infill, gold-copper-silver anomalies to produce prospect-scale and deposit-scale drill data at Media Luna.
- Since inception of the Torex drill campaigns, data have been collected following industry-standard sampling protocols (see Section 12 for discussion of third-party reviews).
- Sample collection and handling of core was undertaken in accordance with industry standard practices, with procedures to limit potential sample losses and sampling biases.
- Sample intervals in core, typically comprising 1 m to 3 m intervals, are considered to be adequately representative of the true thicknesses of mineralization. Amec Foster Wheeler M&M notes that intervals of over 3 m, seen in some earlier sampling, are somewhat long for the type of deposit.
- Sample preparation for samples that support Mineral Resource estimation at El Limón and Guajes has followed a similar procedure since Torex commenced drilling in 2010. The preparation procedure is in line with industry-standard methods for gold–silver deposits.
- Sample preparation for samples that support Mineral Resource estimation at Media Luna has followed a similar procedure since Torex commenced drilling in 2012. The preparation procedure is in line with industry-standard methods for polymetallic deposits.
- Exploration and infill core programs were analyzed by independent laboratories using industry-standard methods for gold, copper and silver analysis.
- Specific gravity determination procedures are consistent with industry-standard procedures. While there are sufficient acceptable specific gravity determinations to support the specific gravity values utilized in tonnage interpolations, additional determinations are recommended.
- Typically, drill programs included insertion of blank and standard samples. The QA/QC program results (see Section 12) do not indicate any problems with the analytical programs, therefore the analyses from the core drilling are suitable for inclusion in Mineral Resource estimation.
- Data that were collected were subject to validation, using in-built program triggers that automatically checked data on upload to the database.
- Verification is performed on all digitally-collected data on upload to the main database and includes checks on recovery, surveys, collar co-ordinates, lithology data and assay data. The checks are appropriate and consistent with industry standards.
- Sample security has relied upon the fact that the samples were always attended or locked in the on-site sample preparation facility. Chain-of-custody procedures consist of filling out sample submittal forms that

are sent to the laboratory with sample shipments to make certain that all samples are received by the laboratory;

- Current sample storage procedures and storage areas are consistent with industry standards.

12 DATA VERIFICATION

12.1 KEY POINTS

The key point of this Section is:

- The data verification programs undertaken on the data collected adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

12.2 AMEC FOSTER WHEELER M&M 2005

During an audit to support mineral resource estimation in 2005, Amec Foster Wheeler M&M performed the following:

- Reviewed core sampling and logging procedures and trench and road-cut sampling procedures. The practices employed by Teck were found to conform to industry-standard practices.
- Compared logged lithologies, collar and down-hole surveys and assays in the digital database against original source documents. In Amec Foster Wheeler M&M's opinion, the digital database at the time was representative of the available exploration data and was sufficiently free from error to support mineral resource estimation.
- Reviewed logging and sampling practices in selected drill core and visually inspected mineralized intervals in the core. In general, Amec Foster Wheeler M&M found logging practices to meet industry standards, and that drill logs were well collected and representative of the core inspected. Observed mineralized intervals were marked by competent rock with high core recovery except for areas of mineralized fault zones.
- Reviewed gold analytical accuracy data from the quality control programs (check, blank, pulp, quarter core duplicates). Check assays on GDL original gold assays by ALS Chemex, Assayers, and Acme show a minor low bias in the GDL assays of between 2% and 8%. Assays of blank samples reported occasional values outside acceptable limits. The precision of GDL gold assays on pulp duplicates was marginal, but acceptable for a gold skarn deposit with coarse gold. Calculated precision for the drill programs was approximately 30% at the 90% confidence limit.
- Reviewed sampling precision data for quarter core duplicates. Amec Foster Wheeler M&M considered the quarter-core duplicates at Morelos to have poor sampling precision. This is not altogether unexpected in a gold skarn deposit with relatively high gold grades.
- Reviewed core versus RC twin data.

Recommendations were provided to Teck personnel and some changes to the QA/QC programs were introduced. It was also recommended that when twin drilling of RC holes had been completed, that the RC data be removed from consideration in resource estimates.

12.3 TECK, 2008

Teck used built-in checks in the acQuire® database to monitor analytical results and identify any CRM or blank failures. Where failures were noted, the laboratory was requested to re-analyze the samples and to pay more attention to cleaning the pulverizers between samples.

At the beginning of the 2006 program, the sample preparation protocol was changed in order to reduce the sampling error. The percentage passing 10 mesh at the crushing stage was increased from 70% to 85%. Although Teck considered that the sampling error could be further reduced by crushing finer or by pulverizing a larger sample, practical considerations prevented this.

12.4 AMEC FOSTER WHEELER M&M 2009

Amec Foster Wheeler M&M reviewed the assay data from drill programs completed between 2006 and 2008. All samples were assayed for gold by the Teck-owned GDL laboratory. The laboratory standard reference materials were internal laboratory reference materials that have not been assayed by any other laboratories (no round robin or certification). Amec Foster Wheeler M&M calculated the uncertainty of the certified values of each of the CDN CRMs used. Amec Foster Wheeler M&M concluded that the GDL assays are very unlikely to have a bias exceeding 5% and the assays are therefore acceptably accurate for use in mineral resource estimation.

Torex provided Amec Foster Wheeler M&M with a Microsoft Access database containing all available drilling information. Amec Foster Wheeler M&M's review included:

- Review of assay data in the database against original assay certificates.
- Checks on data transfer errors when uploading survey and logging data to the database by comparing selected data against the original drill logs.
- Review of logging and sampling practices in selected drill holes, and visual inspection of mineralized intervals.

In Amec Foster Wheeler M&M's opinion, the digital database was found to be representative of the available exploration data and was sufficiently free from significant error to support resource estimation.

Amec Foster Wheeler M&M found logging practices met industry standards, and that drill logs were well collected and generally representative of the core inspected. Observed mineralized intervals were marked by competent rock with high core recovery.

Amec Foster Wheeler M&M selected seven quarter-core sample intervals from half core and collected three chip samples from mineralized outcrop (one from Los Guajes and two from El Limón) to confirm the presence of gold mineralization. The Amec Foster Wheeler M&M values confirm the presence of gold mineralization, and confirm that high gold grades can be expected.

12.5 AMEC FOSTER WHEELER M&M 2012

Amec Foster Wheeler M&M reviewed the available QA/QC data in support of an updated resource estimate for El Limón and Guajes and noted:

- Of 2,749 CRMs assayed by SGS from 2010 to March 2012 and evaluated, no significant bias in the SGS gold assays was observed.
- Out of a total of 2,982 blanks assayed for gold, only 25 (0.8%) reported values greater than 10 times the lower detection limit of 0.005 g/t.
- Poor precision levels for quarter core and pulp duplicates were observed, and are most likely the result of coarse gold in the samples and the inadequacy of the sample preparation scheme to generate a homogeneous sub-sample for assay. The poor precision of the pulp duplicates indicates a large gold particle size is likely present in many samples, and that more reproducible results would require a larger fire assay mass, achieved either by screen fire assay or by multiple fire assay charges.

12.6 AMEC FOSTER WHEELER M&M 2013

Amec Foster Wheeler M&M performed data verification checks of the Mineral Resource database every month from October 2012 through August 2013 in support of the initial Media Luna mineral resource estimate. Torex provided Amec Foster Wheeler M&M with database extracts in Microsoft Access format.

Each month Amec Foster Wheeler M&M randomly selected approximately 10% of the new drill holes for audit and compared the collar surveys, down-hole surveys, lithology logs and assay data against the original source documents.

A total of 30 drill holes were audited and the data-entry error rate was found to be below the acceptable threshold of 1.0%. It was concluded that the database was acceptable to support Mineral Resource estimation.

Amec Foster Wheeler M&M also reviewed the assay QA/QC results from Torex's drill programs in October 2012 and March, May and August 2013, with the following findings:

- Gold, copper and silver assays are acceptably accurate for purposes of Mineral Resource estimation, based upon blind CRM and check assay results.
- The precision of the gold, copper and silver assays is acceptable for purposes of Mineral Resource estimation, based upon internal laboratory duplicate results.
- There is no significant carryover contamination in the gold, copper and silver assays, based upon blind blank results.

12.7 AMEC FOSTER WHEELER M&M 2014

In May 2014 Amec Foster Wheeler M&M performed an audit of the Limón Sur information added to the database from the drilling completed by Torex in 2014. The audit consisted of checking the database records against the original documentation for the collar surveys, downhole surveys, lithology logs, and assays for approximately 10% of the drill holes completed by Torex in 2014. The purpose of the audit was to ensure that the drilling information was accurately entered into the database and that the data are acceptably accurate to support resource estimation.

A total of four drill holes were randomly selected from the 41 drill holes that had been completed at the time. The original records were requested from Torex for these drill holes for the collar, survey, and the lithology audit and from SGS for the assay audit.

No errors were found as a result of the audit and the database was determined to be acceptably free from error and acceptably accurate for the purposes of resource estimation.

12.8 COMMENTS ON SECTION 12

In the opinion of the Amec Foster Wheeler M&M QPs:

- The El Limón, Guajes and Media Luna mineral resource databases accurately represent the original source data.
- Gold, silver and, in the case of Media Luna, copper assays are acceptably accurate for purposes of Mineral Resource estimation, based upon blind CRM and check assay results.
- The precision of the gold, silver and copper assays is acceptable for purposes of Mineral Resource estimation, based upon internal laboratory duplicate results.

- There is no significant carryover contamination in the gold, silver and copper assays, based upon blind blank results.

The data verification programs undertaken on the data collected adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation. Sample data collected appropriately reflected deposit dimensions, true widths of mineralization, and the style of the deposits. Drill data were typically verified prior to Mineral Resource estimation by running a software program check. Database verification indicates that an appropriately clean database has been developed, with few errors.

13 MINERAL PROCESSING AND METALLURGICAL TESTING - EL LIMÓN GUAJES MINE

The Key Points of this section are as follows:

- The tests were completed by independent commercial laboratories.
- The ore is not refractory.
- No deleterious elements are present that will significantly impact recoveries.
- Cyanide leaching followed by carbon in pulp absorption is the optimal recovery process.
- Estimated recovery for the process is 87.35% for Au and 32.5% for Ag.
- Recovery is increased with finer grind. The recoveries noted are at 80% passing 60 microns.
- Bond work index weighted average is 17.17 kWh/t with the highest being 25.8 kWh/t for Hornfels ore type, which represents 19.3% of the ore. The lowest is 8.6 kWh/t for Marble ore type, which represents 1.5% of the ore.
- Grade vs. recovery curves have been established for 6 ore types.

The weighted average work indices for the rock types are shown in Table 13-1.

Table 13-1: Bond Ball Mill Work Index Weighted Average

Rock Type	Model Code #	kt	Percentage	Work Index Values	
				kWh/tonne	kWhr/tonne
Skarn	31	22,199	46.30%	15.70	14.24
Retrograde skarn	32	10,494	21.89%	13.00	11.79
Oxide	33	189	0.39%	13.40	12.15
Breccia	34	1,113	2.32%	18.60	16.87
Intrusive	36	3,102	6.47%	18.20	16.51
Hornfels	37	9,243	19.28%	25.80	23.40
Overburden	38	2	0.00%	13.40	12.15
Marble	39	726	1.51%	8.60	7.80
Massive Sulphides	41	30	0.06%	16.10	14.60
Gouge/Fault Material	42	710	1.48%	15.70	14.24
Granodiorite	60	140	0.29%	15.70	14.23
Total/Average		**47,950**	**100%**	**17.17**	**15.57**

Metallurgical test programs have been completed by independent commercial metallurgical laboratories. Drill core from exploration drilling was sampled and used for metallurgical testing. The selection of drill core has been made with the usual standard of care so that the samples submitted for testing represent all the mineralized rock types within the mineralized area.

The results of the test work indicate that there are not any deleterious elements present in sufficient quantity that would have a significant impact on processing the ore. The test results indicate that gold associated with sulfides and very fine sized gold particles associated with silica gangue particles are considered to be the primary cause of lower gold extraction rates in some of the ore.

The results of the test work indicate that the ore will respond to direct agitated cyanide leaching technology to extract gold. The test results provide the criteria to be used to design the process facility including crushing, grinding, leaching and carbon in pulp, and slurry thickening and filtration process circuits. Overall gold recovery is predicted to be 87.35%.

13.1 GENERAL

Sample preparation and characterization, grinding studies, gravity concentration tests, flotation tests, leach tests, slurry settling tests, and tailing treatment tests were completed to determine the metallurgical response of the ore. Samples of ore for metallurgical testing were collected by both Teck Cominco Corporation and Torex. Drill core from exploration drilling was sampled and used for metallurgical testing. Each drill hole has been identified by number and location within the mineralized area. The selection of drill core has been made with the usual standard of care so that the samples submitted for testing represent all the mineralized rock types within the mineralized area. Drill core samples used in recent testing have been taken from drill core stored as whole or split core in core boxes. The dry climate in the storage area and the drill core being stored in larger sized pieces are considered to be mitigating factors preventing significant oxidation or weathering while in storage.

The metallurgical test programs have been completed by independent commercial metallurgical laboratories. Recent work has been validating and increasing the knowledge of gold recoveries with a focus on developing grade versa recovery curves for the ore types identified. The results of the test work indicate that there are not any deleterious elements present in sufficient quantity that would have a significant impact on processing the ore. The test results indicate that gold associated with sulfides and very fine sized gold particles associated with silica gangue particles are considered to be the primary cause of lower gold extraction rates in some of the ore.

The test work indicates that the ore will respond to direct agitated cyanide leaching technology to extract gold. The results of these test programs are available in the following reports:

1. International Metallurgical and Environmental Inc., Kelowna, British Columbia, Canada, March 22, 2002, Morelos North Project, Preliminary Metallurgical Report, Scoping Laboratory Cyanide Leach, Flotation & Gravity Test Work Results.
2. G&T Metallurgical Services Ltd., (G&T), Kamloops, British Columbia, Canada, November 13, 2003, Los Morelos Ore Hardness and Cyanidation Test Results – KM1405.
3. G&T Metallurgical Services Ltd., (G&T), Kamloops, British Columbia, Canada, November 29, 2006, Process Design Testwork, Teck Cominco, Morelos Gold Project, Guerrero Mexico, KM1803.
4. G&T Metallurgical Services Ltd., (G&T), Kamloops, British Columbia, Canada, May 18, 2007, Assessment Of Metallurgical Variability, Teck Cominco Morelos Gold Project, Guerrero Mexico, KM1826.
5. Dorr-Oliver Eimco, Salt lake City, Utah, December, 2006, Report On Testing for Teck Cominco Ltd. Los Morelos, Sedimentation and Rheology Tests On Tailings: Oxide and Pro Grade Ore.
6. Outokumpu Technology, work performed at G&T, Kamloops, British Columbia, Canada, October 16-18, 2006, Test Report TH-0388, Teck Cominco Limited Morelos Gold Project, Thickening of Oxide Tailings and Prograde Composite Tailings (60% El Limón and 40% Guajes).
7. JKTech Pty Ltd, Brisbane, Queensland, Australia, June 2006, SMC and Bond.
8. Test Report on Drill Core from Morelos Gold Project, JKTech Job No. 06221.
9. SMC PTY Ltd, Chapel Hill, Queensland, Australia, October, 2006, Initial Sizing of the Morelos Grinding Circuit.
10. Pocock Industrial Inc. Salt Lake City, Utah, June-July 2011, Flocculant Screening, Gravity Sedimentation, Pulp Rheology, and Pressure Filtration Study for Morelos Property.

11. METCON Research, Inc., Tucson, Arizona, August, 2011 Morelos Property, Metallurgical Study on Composite Samples.
12. METCON Research, Inc., Tucson, Arizona, December, 2011 Morelos Property, Additional Cyanidation and Detoxification Study on Composite samples.

The metallurgical test results were used to develop process design criteria and the flow sheet for processing the ore.

13.2 METALLURGICAL TESTING

Preliminary scoping test work was carried out by International Metallurgical and Environmental Inc. in March 2002. Preliminary grinding, cyanide leaching, flotation and gravity concentration tests were carried out on seven composite samples of ore identified as: Mostly Oxide, Hornfels, Mixed Hornfels, Hornfels and Pyroxene Prograde, Mixed Prograde, High Sulphide Prograde with Intrusive, and Mixed Prograde.

Grinding: Comparative Bond's Work Index tests were carried out on each composite sample. The work index ranged from a low of 10.7 kWh/t for the relatively soft oxide composite to over 25 kWhr/t for the more competent composite samples.

Gravity: Single stage Knelson gravity concentration tests were carried out on each of the composite samples after grinding to 80% passing 74 microns. The tests showed an average of about 7% of the gold was recovered to a 0.5% by weight cleaner concentrate. The highest gold recovery (14.4%) achieved through gravity concentration testing was from the high sulphide prograde (RLIM-18A) composite sample. The inclusion of a gravity concentration stage in the flowsheet was not indicated.

Flotation: A scoping bulk sulphide flotation test was carried out on the high sulphide prograde (RLIM-18A) composite sample. The test results indicated a gold recovery of 90% to a 10% by weight concentrate containing 41 g/t gold. The test products were leached in sodium cyanide for gold extraction. The rougher concentrate leach resulted in a gold extraction of 86.2% for a combined gold extraction of 77.6% (compared to 83.5% whole ore leach extraction). The flotation tailing leach extracted 55.8% of the gold in the tailing but only represents 5.6% of the gold in the flotation feed.

Cyanidation: Each composite sample was subjected to two whole ore cyanide leach tests at different grind sizes. Gold extraction ranged from the mid-60% to mid-80% range (average 76%) for samples ground to approximately 80% passing 150 microns. For samples ground to approximately 80% passing 75 microns, the gold extraction ranged from the high 70% to low 90% range (average 86%). These results indicate that finer grinding benefits the gold extraction. The best result was from the oxide ore composite sample which gave 95% gold extraction at a moderate (80% passing 90 microns) grind.

Development test work was carried out in two phases by G&T Metallurgical Services in 2003 (KM1405) and 2004 (KM1557). Phase 1 was carried out on 11 composite samples of ore from El Limón and Guajes and Phase 2 was carried out on 6 composite samples of ore from Guajes West.

Composite Samples: A summary of the composite samples prepared and the head assays of each are presented in the Table 13-2.

Table 13-2: Development Testwork Composite Samples

	Interval Length (m)	Grade g/t Au
El Limón	0	
Hornfels	44.4	2.42
Oxide (fault)	83.5	3.21
Oxide (surface)	61.0	8.41
Prograde Garnet (North)	31.9	1.09
Prograde Garnet (South)	27.3	3.04
Prograde Pyroxene (North)	44.9	5.70
Prograde Pyroxene (South)	43.8	3.36
Retrograde	39.0	6.11
Guajes East	860.1	
Massive Sulphide	16.9	0.82
Prograde	38.2	4.99
Retrograde	38.8	9.79
Guajes West	383.1	
Prograde Pyroxene	178.3	4.47
Prograde Garnet	90.3	2.15
Retrograde	24.7	7.92
Intrusive	44.6	1.22
Breccia	38.0	2.48
Breccia with Copper	7.2	39.70

Grinding: Bond ball mill work index testing was carried out on several of the composite samples. The results of this work are presented in Table 13-3.

Table 13-3: Bond Ball Mill Work Indices

Composite Sample	Work Index kWh/tonne
El Limón	
Hornfels	22.8
Oxide Fault	15.0 *
Oxide Surface	13.4
Prograde Garnet North	16.9
Prograde Garnet South	17.2
Prograde Pyroxene North	16.0
Prograde Pyroxene South	16.0
Retrograde	13.0
Guajes East	
Massive Sulphide	16.1
Prograde	14.9
Retrograde	12.6 *
Guajes West	
Prograde Pyroxene	15.4
Prograde Garnet	15.4
* Estimate only – stability not attained	

Cyanidation: Bottle roll cyanidation leach tests were completed on each of the composite samples at two different grind size distributions, approximately 80% passing 75 microns and 80% passing 50 microns. The primary findings from this series of leach tests are:

- Gold extraction improves with finer grinding
- Oxide, intrusive and hornfels leach quickly to mid-90% range of gold extraction
- Gold extraction from prograde skarn was indicated to be in the high 80% to low 90% range
- Garnetiferous and pyroxenitic prograde skarns were indicated to perform similarly
- Gold extraction from retrograde skarn was indicated to be somewhat lower and variable
- Gold extraction from breccia ore was indicated to be poor
- Silver extraction for all composite samples of ore was indicated to be in the range of 30 to 40%. The results from this work are presented in Table 13-4.

Table 13-4: Gold Extraction Results

	Coarse Grind		Fine Grind	
Composite Sample	Grind (microns)	Au Ext (%)	Grind (microns)	Au Ext (%)
El Limón				
Hornfels	73	84.6	49	87.9
Oxide (fault)	69	90.8	38	94.2
Oxide (surface)	76	91.9	45	94.3
Prograde Garnet (North)	73	92.0	51	93.2
Prograde Garnet (South)	62	87.8	52	91.2
Prograde Pyroxene (North)	65	90.8	46	93.1
Prograde Pyroxene (South)	67	89.4	52	87.5
Retrograde	61	85.0	25	89.0
Guajes East				
Massive Sulphide	60	33.2	40	35.6
Prograde	71	88.1	51	88.7
Retrograde	55	87.5	50	92.4
Guajes West				
Prograde Pyroxene	75	89.7	50	92.1
Prograde Garnet	75	77.8	50	79.6
Retrograde	75	79.8	50	83.2
Intrusive	75	87.4	50	93.3
Breccia	75	49.2	50	53.1
Breccia with Copper	75	85.7		

Gold extraction from the Guajes West breccia and Guajes East massive sulphide composite samples was lower than from the other composite samples, so a number of additional tests were carried out to diagnose the problem and/or develop a flowsheet that would recover more of the gold.

- Diagnostic leach tests using sequential leaching with cyanide, acetic acid and aqua regia did not shed much light on why the gold did not leach.
- Leach tests on samples ground to 80% passing 30 microns showed that the recovery continued to improve with finer grinding.
- Leach tests were performed with elevated cyanide concentration with little improvement.
- Carbon-in-leach tests were performed with little improvement.
- Flotation test were performed with little improvement.
- Gravity concentration on the leach residue was unsuccessful.

It can be concluded from these test results that the gold in these ore composite samples is extremely fine in size (probably sub-micron) and can only be extracted by ultra-fine grinding. Ultrafine grinding, although beneficial, does not appear to be economical to treat these relatively minor proportions of ore.

Process design test work was carried out by G&T Metallurgical Services in 2006 using composite samples prepared from the 2003 drilling. Drill core from the 2006 in-fill drill program was not available when the program was initiated.

Composite Samples: A summary of the composite samples prepared and the head assays of each are presented in the Table 13-5.

Table 13-5: Composite Sample Head Assays

	g/t Au	g/t Ag	% Cu	% Fe	% S
El Limón Prograde	4.20	12	0.15	9.80	2.95
El Limón Oxide	5.43	6	0.15	12.30	0.43
El Limón Hornfels	2.40	2	0.06	2.22	0.93
Guajes Prograde	4.89	4	0.15	10.30	1.92

Cyanidation – The majority of the work carried out in this phase of work comprised bottle roll cyanidation tests. A total of 60 tests were carried out to test the following parameters; grind, cyanide concentration, pH and aeration technique. Based on the testing, a standard test procedure was established that included grinding to 80% passing 65 microns, pre-aeration with air, and leaching with 800 mg/L cyanide concentration at pH 11.

Bulk Leach, CIP & Cyanide Destruction – Four large scale (10 kg) leach tests were carried out on two composite samples. After leaching, carbon was added to simulate the CIP circuit followed by cyanide destruction by the SO_2 /Air process. The leach residues were used for thickening tests, solution aging tests, and ARD kinetic tests.

The data presented in Table 13-6 compares the results of the standard 0.5 kg leach tests with the 10 kg leach tests.

Carbon loading tests were completed on both oxide and prograde composite samples to produce the information required for CIP modeling. The carbon concentration used in these tests was 0.5 g/L and the test results indicated that high carbon loadings of 4,500 g/t gold plus 1,350 g/t silver were possible.

Preliminary SO_2 –Air cyanide destruction tests using sodium metabisulphite reduced the CN_{WAD} concentration to less than 1 mg/L.

Table 13-6: Leach Test Results

		Prograde Skarn		Oxide	
		0.5 kg tests	10 kg tests	0.5 kg tests	10 kg tests
Head	Au (g/t)	4.25	4.36	3.30	4.87
Residue	Au (g/t)	0.41	0.36	0.32	0.32
Extraction	Au (%)	90.5	91.7	90.5	93.5
CN Cons.	Kg/t	2.2	2.6	1.1	1.8

Gold Deportment Studies – Gold deportment studies were done on three composite samples; the El Limón prograde skarn composite sample from this series and the Guajes West prograde garnet and breccia composite samples from the previous series. The gold deportment studies included large scale gravity concentration tests followed by mineralogical studies on the gravity products. A diagnostic leach procedure was done on each of the two Guajes West composite samples.

The purpose of the gravity concentration tests was to produce concentrates for mineralogical studies but doing this work provided the opportunity to re-evaluate gravity concentration as a recovery option. Gravity concentration involved two stages; rougher concentration employing a Knelson concentrator and cleaning using a 'Superpanner'. Gold recovery to the rougher concentrate ranged from 6 to 19% while recovery to the cleaner concentrate ranged from 2 to 12%. Gravity results were poorest for the breccia composite sample in which only 2% of the gold was recovered to a 60 g/t concentrate. These tests confirmed the previous finding that the gravity concentrate process would not be appropriate for Morelos ore.

Mineralogical studies were carried out on each product; gravity (pan) conc., cleaner (pan) tail and rougher (Knelson) tail, from each gravity test.

The breccia composite sample had the least recovery of material to the pan stage and the highest proportions of gold–bismuth telluride and gold–pyrite binaries. Poor cyanide leaching of these binaries could explain the lower gold extraction from the Guajes West breccia and higher gold extraction from the El Limón prograde.

Diagnostic leaches were carried out on the Guajes West breccia and retrograde composite samples. The gold extractions in each stage of the diagnostic leach procedure are presented in Table 13-7.

Table 13-7: Gold Extraction Results

Stage	Solvent	Breccia	Retrograde
1	Cyanide	45	65
2	Acetic Acid/CN	7	17
3	Aqua Regia	3	17
	Total	55	99

The 3 stage leach indicates the association of the gold; stage 1 extracts free gold, stage 2 extracts gold associated with labile sulphides, stage 3 extracts gold associated with sulphides and the remaining gold is assumed locked in silicates. The test results indicate that a significant portion of the gold in the breccia composite sample may be finely locked in silicate minerals. From the retrograde sample, there was significant extraction of gold in the first and second stages, indicating that a portion of the gold is associated with sulphides. The nearly complete extraction after the 3rd stage indicates little gold in silicates.

Variability test work was carried out by G&T Metallurgical Services in 2007 using coarse rejects from the 2006 in-fill drilling program. The variability program was focused mainly on the breccia and retrograde ore types which were not tested in the process design test work.

Samples: Individual drill core intervals were used for most of this program rather than composite samples. Samples included the ore types: retrograde, breccia, and prograde. Also tested were samples representing different ranges of copper and arsenic concentrations. The majority of the intervals used in the copper and arsenic composites included visible stringers of either massive copper sulphides or massive arsenopyrite. These samples represented extremes of copper and arsenic concentrations and are not representative of any substantial portion of the ore.

Cyanidation: A single bottle roll cyanidation test was carried out on each of 57 samples. Each sample was ground to the nominal standard grind of 80% passing 60 microns and leached at pH 11 for 48 hours with 800 mg/L CN.

Retrograde Test Results – Leach extractions and residue grades were extremely variable from the retrograde tests. Gold extraction ranged from 16% to 95% and averaged 79%. Residues ranged from 0.12 g/t gold to 3.66 g/t gold and averaged 0.97 g/t gold. There are no apparent correlations between leach extraction and either geology or chemistry. The average gold extraction in these tests (79%) is somewhat lower than those found during the development test work (84%).

Breccia Test Results – Leach extractions and residue grades were extremely variable from the breccia tests. Gold extraction ranged from 17% to 93% and averaged 69%. Residue grades ranged from 0.31 g/t gold to 5.29 g/t gold and averaged 1.48 g/t gold. No apparent correlations were found between leach extraction and either geology or chemistry. The average extraction in these tests (69%) is higher than those found during the development test work phase (49%) and appears to be due in large part to the difference in head grade (2.44 g/t gold vs. 4.7 g/t gold).

Prograde Test Results – Leaching was fairly consistent with all the prograde samples. Gold extractions ranged from 87.4 to 97.1% and averaged 93.6%. Residues ranged from 0.08 to 0.74 g/t gold and averaged 0.27 g/t gold. These results compare favorably with the average of the standard tests in the previous series which indicated 90.4% gold extraction and a 0.41 g/t gold residue grade from the same head grade.

Copper & Arsenic Sample Test Results – Extraction of gold from high copper materials does not appear to be problematic as long as there is sufficient cyanide in the leach. The three copper samples containing 4%, 1.5% and 0.3% Cu gave gold extractions of 91%, 84% and 82% respectively. The high copper sample consumed 8 kg/t cyanide and put 1,238 mg/L copper into solution. Extraction of gold from the arsenic bearing samples was 53%, 71% and 63% respectively from samples containing 2.5%, 0.5% and 0.1% As. The test results indicate that there may be a weak correlation between residue grade and arsenic concentration.

In addition to the Bond's work index testing done on ore composite samples, a series of core intervals were sent to JKTech in Brisbane for grinding tests. An SMC test and a Bond ball mill work index test were done on each of 12 samples. The standard JKTech drop-weight test provides core specific parameters for use in the JKSimMet Mineral Processing Simulator software. These parameters are combined with equipment details to predict SAG/AG mill performance. The SMC (SAG Mill Comminution) test was developed to provide a cost effective means of obtaining these same parameters from drill core. The results of the SMC tests on the twelve samples from the Mine are presented in Table 13-8.

Table 13-8: SMC Test Results

Sample Designation	SG	Dwi	A	b	BM Wi (kWh/t)
El Limón – Prograde Pyroxene	3.17	9.5	66.4	0.50	17.1
El Limón – Prograde Pyroxene	3.11	10.5	60.5	0.49	20.4
El Limón – Prograde Garnet	3.48	9.6	63.5	0.57	14.6
El Limón – Prograde Garnet	3.38	9.3	69.7	0.52	16.2
El Limón – Marble	2.72	2.2	73.4	1.70	8.6
El Limón - Hornfels	2.98	7.3	70.6	0.58	28.8
El Limón - Intrusive	2.69	8.6	92.2	0.34	18.2
El Limón – Low Grade Skarn	3.42	9.6	61.4	0.58	16.4
Guajes West – Prograde Pyroxene	3.31	12.3	72.3	0.37	14.5
Guajes West – Prograde Garnet	3.56	5.6	61.7	1.03	15.5
Guajes West - Breccia	2.57	6.0	61.6	0.69	18.6
Guajes West – Low Grade Skarn	3.47	6.5	58.9	0.90	15.0

The majority of DWi values in the SMC database lie in the range of 2 to 12; soft samples being at the low end of the scale and hard samples at the high end. The DWi results for the Morelos samples ranged from 2.2 to 12.3 and average 8.1. This places them in the 80th to 90th percentile of hardest samples in the SMC Testing data base. The work index values were similarly high.

Three sets of thickening tests were carried out; one by G&T Metallurgical Services and two by vendors (Outotec & GL&V). The tests done by the vendors were carried out on 10 kg samples prepared by G&T. The results of the tests by the two vendors gave similar results.

13.3 METALLURGICAL STUDIES ON COMPOSITE SAMPLES

METCON Research Inc. of Tucson, Arizona, was contracted to conduct metallurgical studies on composite samples representing the ore types of the Mine in March 2011 to ascertain the recovery of gold and silver via cyanidation leaching verses grade. Conventional cyanidation leaching, followed by Carbon-In-Pulp (CIP) gold recovery and cyanide detoxification with SO_2 was conducted on the composite samples from the Mine. Cyanidation leaching test conditions were the same as those used in the previous developmental tests which are listed below:

- Pulp pH = 10.5 to 11.0, using CaO
- Grind size of 80 percent passing 60 microns
- 48 hours leaching time at 45% solids, sampled at 2, 4, 8, and 24 hours
- Sodium cyanide concentration at 800 mg/L

At the end of leaching, 5.5 grams (3 g/L) of activated carbon was added to the pulp and agitated for maximum gold and silver adsorption at the same test conditions as cyanidation leaching. The cyanide destruction in the residue pulps was conducted simulating the Air/SO_2 process. 10 grams of SO_2 supplied from sodium metabisulphite was added for each gram of cyanide ion in the slurry and agitated vigorously for two hours at pH maintained between 9 and 10 with lime. Less than 2 ppm of cyanide was detected after 2 hours of detoxification in an agitated tank.

The metallurgical test results are summarized in Table 13-9 showing the head grade assays, gold and silver extractions, and reagent consumptions.

Table 13-9: METCON Test Results

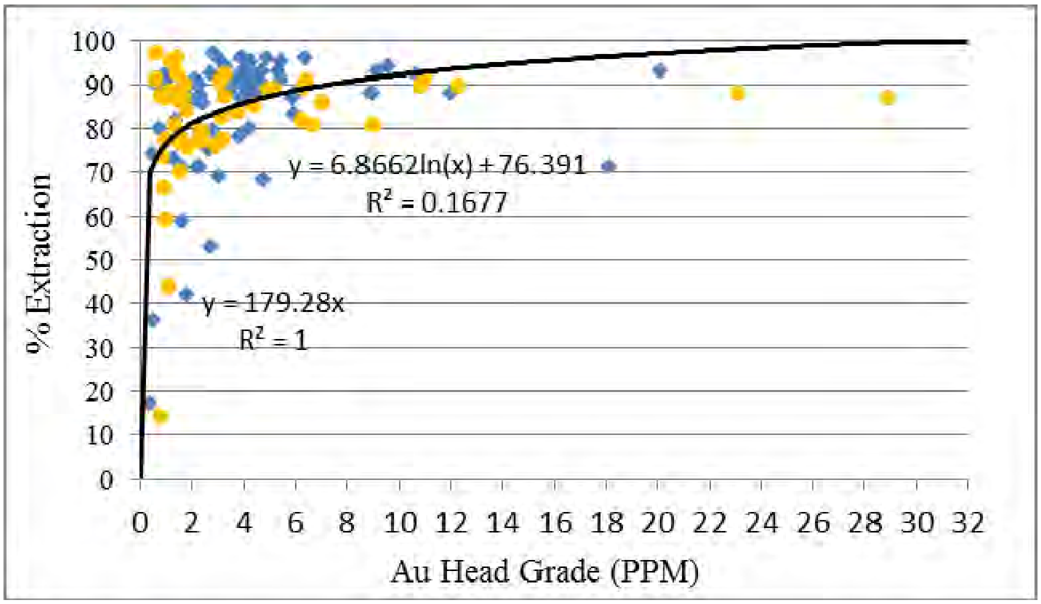
Source	Material Description	Head Grade		%Extraction		Consumptions	
		Au g/t	Ag g/t	Au	Ag	NaCN Kg/t	CaO Kg/t
El Limón	Prograde Skarn	0.881	4.5	73.29	14.98	1.331	0.689
	Prograde Skarn	1.577	4.3	70.11	10.04	1.850	1.629
	Prograde Skarn	3.568	14.2	69.29	0.90	3.417	1.325
	Prograde Skarn	23.107	5.3	88.24	40.16	0.608	1.090
Guajes East	Prograde Skarn	1.019	3.9	87.10	15.22	0.275	0.019
	Prograde Skarn	1.749	3.0	90.04	13.51	0.251	0.230
	Prograde Skarn	3.237	11.8	91.12	31.10	2.434	0.244
	Prograde Skarn	10.788	4.4	89.63	34.81	0.313	0.112
Guajes West	Prograde Skarn	1.199	2.5	94.98	11.80	1.451	0.754
	Prograde Skarn	1.175	2.9	88.49	11.46	1.063	0.906
	Prograde Skarn	3.042	3.7	90.82	19.26	1.886	2.051
	Prograde Skarn	4.958	3.4	89.01	28.73	0.777	0.817
El Limón	Porphyry + Endoskarn	0.818	0.6	87.39	52.82	0.158	0.417
	Porphyry + Endoskarn	1.688	0.9	86.85	45.69	0.092	0.254
	Porphyry + Endoskarn	3.228	0.9	87.43	57.89	0.186	0.302
	Porphyry + Endoskarn	6.219	1.7	81.96	53.40	0.399	0.381
Guajes East	Porphyry + Endoskarn	0.966	1.2	59.33	23.04	1.047	0.578
	Porphyry + Endoskarn	1.474	3.0	86.54	33.19	1.501	1.242
	Porphyry + Endoskarn	3.749	4.5	83.77	20.80	0.683	0.000
	Porphyry + Endoskarn	8.994	5.8	80.55	37.92	2.067	0.785
Guajes West	Porphyry + Endoskarn	0.902	3.2	66.26	28.37	0.901	0.268
	Porphyry + Endoskarn	.628	1.1	96.92	54.78	0.183	0.254
	Porphyry + Endoskarn	2.854	3.2	75.74	40.31	0.683	0.575
	Porphyry + Endoskarn	6.450	4.2	90.61	32.93	0.810	0.451
El Limón	Oxides	0.977	7.2	77.39	68.15	0.641	4.13
	Oxides	1.621	3.6	77.35	24.35	0.457	10.46
	Oxides	0.013	0.0				
	Oxides	6.709	3.6	80.63	41.99	0.662	4.98
Guajes East	Oxides	1.375	4.2	80.79	50.71	0.71	3.19
	Oxides	1.880	8.8	75.37	73.40	0.91	3.74
	Oxides	28.922	4.1	87.18	56.75	0.47	2.68
El Limón	Retrograde Skarn	1.106	5.4	43.83	14.60	1.52	2.80
	Retrograde Skarn	2.381	4.3	79.07	13.74	0.69	1.93
	Retrograde Skarn	1.797	2.4	83.89	21.26	0.67	2.00
Guajes West	Retrograde Skarn	1.665	4.1	76.93	44.75	1.59	2.42
	Retrograde Skarn	2.317	4.6	76.89	41.18	1.92	3.63
	Retrograde Skarn	4.387	2.5	85.04	28.64	0.82	1.91
	Retrograde Skarn	23.665	22.3	31.76	7.85	3.59	3.27
Guajes East	Retrograde Skarn	3.122	3.6	82.54	26.49	0.78	1.86
	Retrograde Skarn	3.211	6.9	77.38	43.23	0.96	3.60
	Retrograde Skarn	25.182	58.5	55.45	11.67	3.93	4.84
Guajes West	Hornfels	0.644	2.3	91.15	52.49	1.019	1.30
	Hornfels	1.462	2.1	92.55	18.92	0.145	0.10
	Hornfels	1.461	1.2	96.01	31.27	0.173	0.32
	Hornfels	12.296	10.7	89.46	43.20	0.792	0
Guajes West	Breccia	0.809	1.2	14.14	15.53	0.848	1.16
	Breccia	1.554	2.0	76.79	21.24	0.731	1.07
	Breccia	29.660	50.0	58.63	1.99	3.861	2.87

The data developed from the metallurgical study indicated that gold and silver are amenable to cyanidation leaching and recoverable by conventional CIP process.

13.4 LEACHING RECOVERY EVALUATION

Bottle roll cyanidation test results were used to evaluate the relationship between ore grade and the percent gold extraction. A mathematical equation to describe that relationship could then be developed and used to predict the percent gold extraction for a specified ore grade. The test results from both the previous test programs and the recent test program conducted by METCON Research Inc. were compiled in a single database to analyze the data.

A graphical presentation of ore grade versus percent gold extraction results for all the tests in the database is shown in Figure 13-1. The data points identified by a lighter color are results from the METCON Research program. The data points identified by a darker color are results from older test programs. Two trend lines have been drawn on the graph to describe the data. The first trend line describes data for ore grades from 0 ppm to 0.39 ppm. The second trend line describes data for ore grades greater than 0.39 ppm. The equations that describe the trend lines are also shown in the figure. Of main interest is the second trend line, for ore grades greater than 0.39 ppm. The ore grade versus percent gold extraction data has a correlation coefficient value (r) of 0.41 which represents a moderate correlation between the gold grade and the percent gold extraction and the equation describing the data has coefficient of determination (r^2) of 0.1677 which means that 17% of the data points are closest to the trend line described by the equation.



Note: Figure courtesy of M3.

Figure 13-1: Au Head Assay Grade vs. Indicated Extraction Overall

Information from the Morelos Production Schedule 22 Version 3.0 was used to develop the Ore Type Distribution schedule presented in Table 13-10.

Table 13-10: Ore Type Distribution

Ore Types	Total Mt	Percent of mineral body
Prograde Skarn and Gouge	22.91	47.8%
Retrograde and Massive Sulfides	10.52	21.9%
Oxide, Marble and Overburden	0.92	1.9%
Breccia	1.11	2.3%
Hornfels and Vein Material	9.24	19.3%
Intrusive and Granodiorite	3.10	6.8%
Total	**47.95**	**100.0%**

Ore grade versus percent gold extraction graphs were developed for the six ore types identified. Extraction equations predicting recoveries at given ore grades were also developed. Average gold grades for each ore type were used in the extraction equations to calculate the percent gold extraction. Table 13-11 shows the predicted percent gold extraction for all the ore types with an overall weighted average percent gold extraction of 87.35%. It should be noted that the value of the weighted average gold extraction would change whenever the ore type distribution and grade change.

Table 13-11: Weighted Average Extraction at Mine Plan Gold Grades

Ore Type	Average Au grade ppm	Extraction Equation	Extraction %
Prograde Skarn and Gouge	3.12	y= 2.2771*ln(x) + 87.057	89.62
Retrograde and Massive Sulfides	3.16	y= 5.4671*ln(x) + 77.314	83.60
Oxide, Marble and Overburden	1.94	y= 3.1185*ln(x) + 82.235	84.30
Breccia	3.65	y= 15.453*ln(x) + 48.282	68.29
Hornfels and Vein Material	1.43	y= 90	90.00
Intrusive and Granodiorite	1.63	y= 1.3912*ln(x) + 82.376	83.09
Total	**2.69**	**Weighted Average on Contained Gold =**	**87.35***

*For the financial model, recoveries are calculated for each period using the equations, and recovered gold accumulated to estimate an average LOM recovery. This method, which reflects variations in head grades over the mine life, gives marginally different LOM overall recoveries versus applying the recovery formulas to LOM average head grades as shown in Table 13-11. In addition, the financial model imposes reduction in recoveries during startup in the overall recovery estimates.

Analysis of the test results did not indicate a correlation between percent silver extraction and ore silver grade, ore gold grade, or percent gold extraction. Since no other silver extraction indicators have been identified at this time, it is recommended that the numeric average of the percent silver extraction for each ore type be used to predict percent silver extraction. The numeric average of the percent silver extraction by ore type is presented in Table 13-12.

Table 13-12: Percent Silver Extraction by Ore Type

Ore Type	Ag Extraction
Overall	32.5%
Prograde Skarn and Gouge	33.7%
Retrograde and Massive Sulfides	27.5%
Oxide, Marble and Overburden	47.4%
Breccia	21.5%
Hornfels and Vein Material	32.2%
Intrusive and Granodiorite	39.6%

As stated previously, the estimated percent gold extraction is variable and dependent on the particular ore type and the ore type distribution being processed. To assist in production planning, the estimated plant performance during production start-up was determined based on similar experience.

Initially as production starts, metals will be extracted from the material (recovered) but the extracted metals may not report as production as the in-process inventory, mostly associated with in-process carbon loading, will be established. The established inventory will stay in the plant process until final termination of the Mine. Also, it is expected that there will be some reduction in plant metallurgical performance as the cyanide level in process solutions is adjusted to reach optimum leach conditions and to confirm control of the tailing disposal cyanide concentration. It is estimated that reported production during the plant start-up period should be predicted not based on ultimate metallurgical extraction but on an adjusted metallurgical extraction that could be reported to production.

It is recommended that the metal production be predicted using the ultimate extraction rate multiplied by a start-up extraction factor for the first three months of production. The factors to be applied are as follows:

Month	**1**	**2**	**3**	**4**
Percent of Ultimate Gold Extraction	50	80	100	100
Percent of Ultimate Silver Extraction	20	70	95	100

13.5 SOLID-LIQUID SEPARATION TESTS

Solids-Liquid separation (SLS) tests were conducted on three (3) CIP materials for the Mine. The purpose for conducting the test work was to generate data for each of the samples as a basis to design and size SLS equipment.

The samples were prepared by METCON Research in Tucson Arizona, and delivered to Pocock Industrial for testing in slurry form. The three CIP materials used for the SLS tests were:

- CIP 1-3 material = Prograde Skarn detoxified tailings
- CIP 4-6 material = Porphyry plus Endoskarn detoxified tailings
- CIP 7-9 material = Oxides/Hornfels/Breccia detoxified tailings

All SLS testing was conducted by Pocock Industrial at the laboratory facility located in Salt Lake City, Utah during June and July of 2011 at pH levels in the range of 10.0 to 11.0. Decanted process water from the appropriate individual material and pH adjusted tap water was used to make any required dilutions during SLS testing. Complete test data sheets, figures, and correlations referenced in this report are located in the report provided by the testing agency. A brief summary of some of the equipment sizing criteria and recommendations gleaned from the testing program follows:

- Results of particle size analysis on the tested samples indicated that 80% of the particles (P80) were passing 73 microns for the CIP 1-3 material, 82 microns for the CIP 4-6 material, and 78 microns for the CIP 7-9 material. With size fractions passing 37 microns (400 mesh) of 50.92% for the CIP 1-3 material, 52.06% for the CIP 4-6 material, and 54.67% for the CIP 7-9 material. SLS characteristics and flocculant dose requirements for the samples were seen to be significantly worse with increasing size fraction passing 37 microns (or this behavior for SLS could also be related to sub-micron size fractions, or clay content, which could be more significant if compared on a percentage basis).
- The flocculant product selected from screening tests for best performance was Hychem AF 303, a medium to high molecular weight 7% charge density anionic polyacrylamide. Overflow clarity was seen to be very poor at pH levels of less than 10.8 to 11.0, but was very good at or above this range (adjusted with lime addition). The minimum flocculant dose anticipated varied by individual sample, but was in the overall range of 10 – 30 g/MT at pH 11.0, and should be delivered at a maximum solution concentration of 0.1 to 0.2 grams per liter (g/l) for best performance.
- Two types of thickening tests were performed in this report, static tests for conventional type thickener design, and dynamic tests for high rate type thickener design.

- Results of static (Conventional) thickening tests indicated optimal feed solids concentration in the maximum range of 15% - 22% for the CIP 1-3 material, 14% - 18% for the CIP 4-6 material, and 10% - 15% for the CIP 7-9 material. For conventional thickener sizing, minimum recommended unit area design basis is 0.125 m^2/MTPD with flocculant for the CIP 1-3 material (or 0.28 – 0.32 m^2/MTPD with no flocculant), 0.14 – 0.18 m^2/MTPD with flocculant for the CIP 4-6 material (or 0.94 – 0.98 m^2/MTPD with no flocculant), and 0.16 – 0.20 m^2/MTPD with flocculant for the CIP 7-9 material (or 3.5 – 4.5 m^2/MTPD with no flocculant) at pH 11.0.
- Results of dynamic (High-Rate) thickening tests indicated optimal feed solids concentration in the overall maximum range of 15% - 22% for the CIP 1-3 material, 14% - 18% for the CIP 4-6 material, and 13% - 17% for the CIP 7-9 material. Thickening tests conducted on the CIP samples indicated a hydraulic net feed loading rate design basis in the maximum range of 4.5 – 5.5 $m^3/m^2\cdot hr$ for the CIP 1-3 material, 4.0 – 5.0 $m^3/m^2\cdot hr$ for the CIP 4-6 material, and 3.0 – 4.0 $m^3/m^2\cdot hr$ for the CIP 7-9 material. A pH range of 10.8 – 11.0 gave the best overflow clarity and minimum flocculant dose requirement therefore operation at pH 10.8 - 11.0 should be considered for this material.
- For this application, given the settling rates achieved and the optimal feed dilution requirements a High-Rate type thickener is recommended. Thickener rake mechanisms should be heavy-duty, sufficient to handle the high anticipated thickened density and weight of the compacted material.
- Recommended maximum design thickener underflow density for a standard conventional or high rate type thickener is in the range of 68% - 72% for the CIP 1-3 material, 57% - 61% for the CIP 4-6 material, and 52% - 56% for the CIP 7-9 material at pH 10.8 - 11.0 based on rheology data.

Based on the results of the thickening tests conducted on the Morelos detoxified tailing materials, the following recommended thickener design parameters are presented in Table 13-13.

Table 13-13: Summary of Recommended Thickening Design Parameters

Sample Material	Flocculant Type	Feed pH (units)	Max Feed Solids Conc. (%)	Minimum Flocculant Dose (g/MT)(1)	Max Underflow Solids Concentration (%)(2)	Recommended Thickener Design Basis Range(3)	Thickener Type
CIP 1-3 (No Floc)	No Floc	11.0	17%	---	68% - 72%	0.28 – 0.32 (m/MTPD) Conventional	Standard Conventional
CIP 1-3 (with Floc)	Hychem AF 303	11.0	15% - 22%	10 – 15	68% - 72%	0.125 (m^2/MTPD) Conventional	Standard Conventional
				15		4.5 – 5.5 (4) (m^3/m^2 hr) High Rate	Standard High Rate
CIP 4-6 (No Floc)	No Floc	11.0	17%	---	57% - 61%	0.94 – 0.98 (m /MTPD) Conventional	Standard Conventional
CIP 4-6 (with Floc)	Hychem AF 303	11.0	14% - 18%	25 – 30	57% - 61%	0.14 – 0.18 (m^2/MTPD) Conventional	Standard Conventional
				15 – 20		4.0 – 5.0 (4) (m^3/m^2 hr) High Rate	Standard High Rate
CIP 7-9 (No Floc)	No Floc	11.0	17%	---	52% - 56%	3.5 – 4.5 (m /MTPD) Conventional	Standard Conventional
CIP 7-9 (with Floc)	Hychem AF 303	11.0	10% - 15%	30	52% - 56%	0.16 – 0.20 (m^2/MTPD) Conventional	Standard Conventional
			13% - 17%	30 – 35		3.0 – 4.0 (4) (m^3/m^2 hr) High Rate	Standard High Rate

Pulp viscosity data were collected on thickened CIP materials using two different types of viscometer equipment, a FANN (Model 35A) viscometer and a Haake (Model 550), to accurately define the maximum yield stress associated with the un-sheared settled solids bed for torque specification and pumping considerations.

- The Haake viscosity data on the CIP materials showed that the totally un-sheared yield stress from the vane instrument were significantly higher than the sheared or mildly sheared yield stress. This result indicates that actual maximum underflow density could be somewhat lower than that predicted from the fully sheared rheology profile depending on the extent of shear imparted by the rake mechanism. Specialized equipment and engineering are generally required if achieving underflow densities higher than the recommended ranges shown in the test results are desired for the material.
- Pressure filtration tests were conducted on each of the CIP materials at two different solids concentrations (about 10% apart) to determine the impact of fluctuations in feed solids on filter sizing. Filtration test results indicated no significant change in filter sizing between 64% and 74% for the CIP 1-3 material, no significant change in filter sizing between 57% and 65% for the CIP 4-6 material. However, the CIP 7-9 material did indicate a significant increase in filter sizing between 50% and 60% feed solids. Hence, the CIP 7-9 sample was very sensitive to feed solids for filter sizing requirements (effectively doubling the filter size in this range).

For optimal tonnage throughput, the recommended chamber thickness for the CIP1-3 and CIP 4-6 materials was 60 mm. Filter sizing data based on a tonnage of 14,000 MTPD indicates that a minimum of two (2) filters having a total of 336 chambers would be required to process this tonnage for the CIP 1-3 and 4-6 materials. However, on a similar comparison for the CIP 7-9 material, significantly more filter area was required (797 total chambers or 5 similar filter presses at 60% solids, and 1,620 chambers required or 10 filter presses at 50% feed solids). Hence, the CIP 7-9 material is again a limiting factor in SLS equipment sizing, and sample blending should possibly be considered for this material.

A summary of filter sizing parameters for horizontal recess plate type filter presses based on the test data obtained for material tested is presented in Table 13-14.

Table 13-14: Horizontal Recess Plate Filter Press Sizing

Material	Design Tonnage (MTPD)	Dry Bulk Cake Density, (kg/m³)	Sizing Basis(1) (m³/MT) dry solids	Recess Plate Depth (mm)	Chamber Spec. (Len./Vol./Area) (mm/m³/m²)	Filter Feed Solids (%)	Filter Cake Moist. (%)	Filter Cycle Time (min)	Pressure Filter Chambers Required/ Number of Presses Required (Frame #)
CIP 1-3	14,000	2109.0	0.593	30	2500/0.269/9.60	74.7%	9.3%	13.1	336 / 2 (P19)
		2050.3	0.610			63.7%	9.6%	12.7	336 / 2 (P19)
CIP 4-6	14,000	1733.2	0.721	30	2500/0.269/9.60	65.3%	14.9%	10.7	336 / 2 (P19)
		1758.4	0.711			57.3%	13.7%	10.9	336 / 2 (P19)
CIP 7-9	14,000	1765.3	0.708	30	2500/0.269/9.60	59.7%	21.7%	25.0	767 / 5 (P19)
		1855.3	0.674	30		50.4%	20.8%	55.4	1,620 / 10 (P19)

14 MINERAL RESOURCE ESTIMATES

14.1 KEY POINTS

The key point of this section is:

- The QPs are of the opinion that the Mineral Resources for the Property, which have been estimated using reverse circulation drill data, core drill data and channel sampling data, have been performed to industry practices, and conform to the definitions used in CIM (2014).

14.2 INTRODUCTION

This section presents the Mineral Resource estimates for the El Limón, Guajes and Media Luna deposits.

The El Limón and Guajes mineral resource estimates were prepared in 2012 using three-dimensional (3D) models in the commercial mine planning software MineSight with reference to the then–current Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards (2011) and the 2003 CIM Best Practice Guidelines for preparing Mineral Resources and Mineral Reserves.

Detailed descriptions of the 2012 modelling and estimation process were presented in the report entitled:

- Neff, D.H., Drielick, T.L., Orbock, E.J.C., Hertel, M., Connolly, B., Susi, B., Levy, M., Habbu, P. and Ugorets, V., 2012: Morelos Gold Project, 43-101 Technical Report Feasibility Study, Guerrero, Mexico: technical report prepared by M3 Engineering and Technology Corporation, Amec Foster Wheeler E&C Services Inc., SRK Consulting Inc. and Golder Associates Inc. for Torex, effective date 4 September 2012.

Information from that report has been summarized into this Report.

The El Limón mineral resource estimate and lithology model was prepared in 2012 by Edward J. C. Orbock III, RM SME, Principal Geologist (Amec Foster Wheeler M&M, Reno).

The Guajes and Media Luna mineral resource estimate and lithology models were prepared by Mark Hertel, RM SME, Principal Geologist, (Amec Foster Wheeler M&M, Phoenix).

The Guajes model was updated in 2014, a portion of the El Limón model, El Limón Sur was also up-dated in 2014. The Media Luna model was updated in 2015. The updated Guajes and El Limón Sur models used a deterministic approach to complete the geologic model. El Limón Sur included the results of an infill drilling program.

Definitions that were assigned using the 2011 CIM Definition Standards were subsequently reviewed using the 2014 edition of the CIM Definition standards.

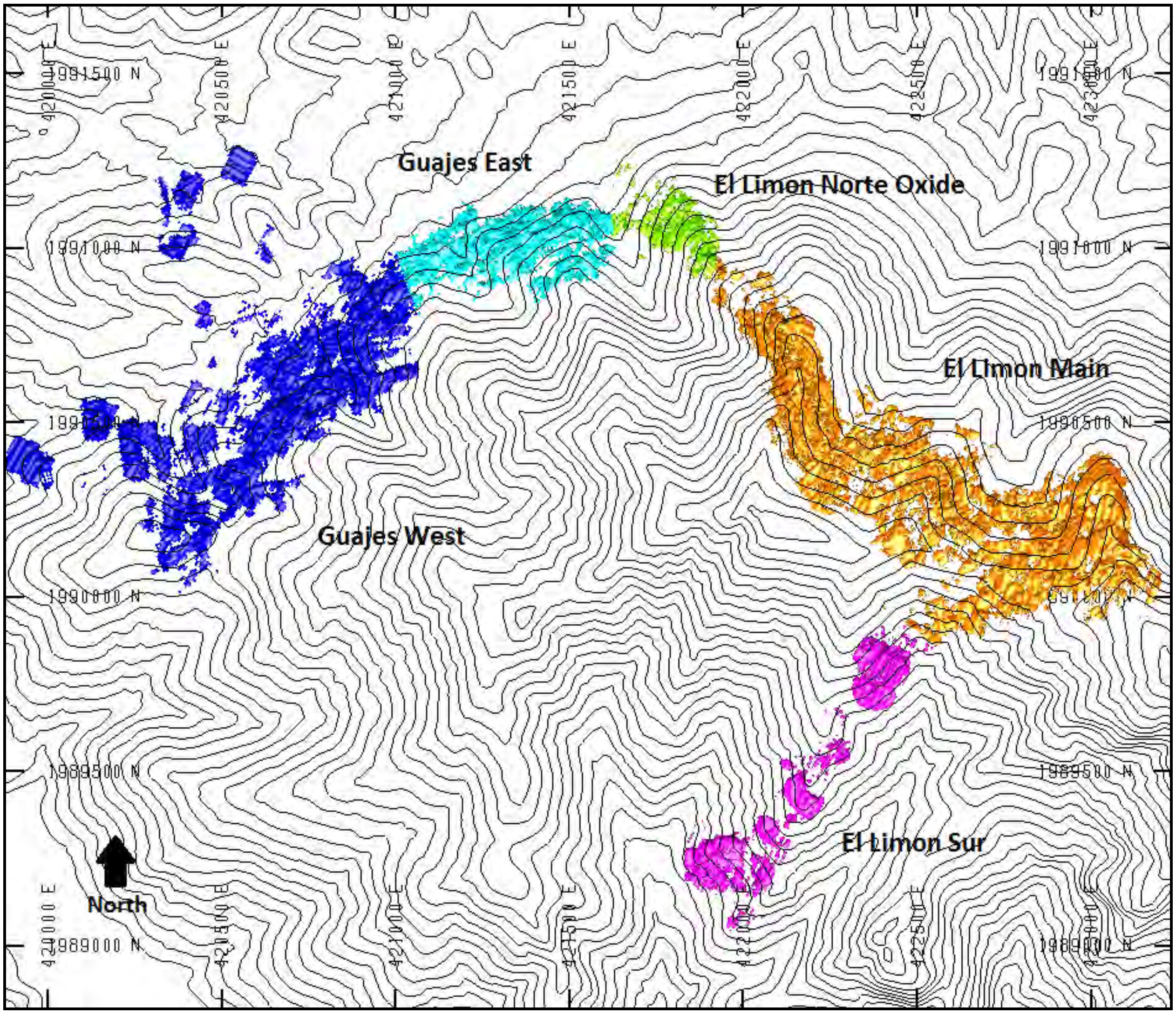
14.3 DATABASE

14.3.1 El Limón and Guajes

Torex provided Amec Foster Wheeler M&M with Microsoft Excel spreadsheets containing all drilling information for El Limón and Guajes. Amec Foster Wheeler M&M imported the collar downhole survey, lithological, and assay data into MineSight mining software version v7.0-4 (build 52681-304) and used validation routines within the software to check for survey errors, overlapping intervals, missing intervals, skipped intervals, and values outside of range. The initial database showed a high error rate and the database was reconstructed. Amec Foster Wheeler M&M's re-audit on the re-built database shows a very low incident of errors and is acceptable to support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

The database contains 132,697 gold assay samples totaling 187,403.0 m and 132,527 silver assay samples totaling 187,164.1 m. The sampling was completed by means of reverse circulation, diamond core drilling, and channel samples during the period from 1997 through 2012.

Two sub-set resource databases were created from this larger database, one for the two Guajes deposits, East and West, and the second for the El Limón deposits, North, El Limón, and South as shown in Figure 14-1.



Note: Figure prepared by Amec Foster Wheeler M&M, 2012.

Figure 14-1: Plan View showing the El Limón and Guajes Deposits

14.3.2 El Limón Sur

Within the El Limón Sur area 75 drill holes (6,772.8 m) support the mineral resource estimate.

14.3.3 Media Luna

Torex provided Amec Foster Wheeler M&M with an Access database containing all drilling information on the Media Luna Project. Amec Foster Wheeler M&M imported the collar, downhole survey, lithological, core recovery, and assay data into MineSight. MineSight validation routines checked for survey errors, overlapping intervals, missing intervals, skipped intervals, and values outside of range.

Amec Foster Wheeler M&M's audit of the database shows a very low incident of errors and is sufficient to support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

Within the Media Luna Project 223 drill holes (129,080 m) support the Mineral Resource estimate.

14.4 DENSITY ASSIGNMENT

14.4.1 El Limón and Guajes

Specific gravity (SG) values were updated for the 2012 resource model, using results from 1,426 wax coating SG tests. Previous SG determinations were based on water immersion method and were not used in the 2012 modeling due to the potential for a high bias of the mean value for some lithology types when compared to wax immersion results. Specific gravity domains are categorized and listed in Table 11-1 in Section 11, and reflect averages that are subdivided by lithology type, and by mineralized or unmineralized character (~0.5 g/t Au threshold). Fifty-three SG measurements were rejected as outliers (low and high) prior to calculating averages. Lithology types were updated to reflect relogging efforts recorded in the April 6th 2012 database, as well as lithology updates made by Amec Foster Wheeler M&M to the 3.5 m composites.

Amec Foster Wheeler M&M assigned SG values to each block based on the block rock type and Au block grade a 0.5 Au g/t cut-off differentiated between mineralized and unmineralized blocks.

14.4.2 El Limón Sur

Specific gravity (SG) was assigned by rock type from 137 wax immersion density determinations (refer to Table 11-2).

14.4.3 Media Luna

Density values for the Media Luna Resource block model were calculated from 244 wax immersion density determinations. Approximately 30 samples were selected from each rock type found within the skarn zone. The samples were selected evenly throughout the range of sorted Au assay values. Mean density values, sorted by decile, gold, copper, silver, and iron, were plotted for each of the rock types. The plots were examined for trends in density values for each of the grades. Density was assigned to the block model by rock types (refer to Table 11-3).

14.5 GEOLOGICAL MODELS

14.5.1 El Limón

Amec Foster Wheeler M&M modeled the complicated and complex geologic environment of the El Limón deposit using a combination of deterministic (wire-frame) and probabilistic approach. The lithology model consists of 11 rock types grouped into four lithology domains.

Traditional lithology domain shells were drawn manually around lithology types that comprised of the skarn group lithologies. El Limón and El Limón Sur were modeled on 43 east–west oriented cross sections and 39 north–south oriented long sections spaced 35 m apart. Sections were rectified on 88 mid-benches at 7 m spacing. El Limón Norte was modeled on 34 cross sections along an azimuth of N30ºE and 19 long sections along an azimuth of N120ºE spaced 35 m apart. Sections were rectified on 95 mid-benches at 7 m spacing.

Within the skarn domain a probabilistic indictor approach was taken to assign lithology type codes to individual blocks using only the lithology types from within the skarn domain. Lithology types external to the skarn domain were modeled using a probabilistic indicator using only lithology types from outside of the skarn domain. Only one lithology type was assigned to each block.

For the skarn domain and outside of skarn domain, lithology types were assigned to a block using a probabilistic method. Amec Foster Wheeler M&M constructed lithology indicator variograms using Sage2001 software. The nugget was first modeled using a single-structure, down-the-hole correlogram, and directional correlograms were modeled using a two-structure spherical (Sph) or exponential (Exp) models to fit experimental correlograms.

Using the total number of nearest neighbor (NN) lithology blocks out to 40 m from the nearest composite, the indictor threshold value for each lithology can be located in the respective indicator cumulative frequency table. The threshold value is determined when the total number of indicator blocks matches or closely matches the total number of NN blocks.

Un-estimated lithology blocks (generally on the edge of the model) were assigned to the intrusive lithology (model code 36) by default. Visual inspection of cross sections and plans show good agreement of block lithology assignments when compared to nearby drill holes.

Overburden lithology shapes were modeled on cross sections from logged drill hole intercepts and linked into a solid. Blocks were tagged from the overburden solid and coded as overburden.

Four structural domains were established at El Limón to aid variography. El Limón north of the La Flaca Fault was sub-divided into two structural zones, Szone1 and Szone3. Drill hole logging in Szone1 shows that the hornfels skarn contact is shallow dipping (similar to Szone2) whereas surface mapping and drill hole logging in Szone3 indicates that the hornfels skarn contact is steeply dipping, suggesting a possible high-angle rotational fault between Szone1 and Szone3. Szone3 and Szone2 are separated by a high-angle rotational scissor-type La Flaca fault. The La Flaca fault strikes approximately N40ºE with the skarn mineralization to the north (Szone3) showing a preferred strike orientation of N50ºW and dipping -60º to -70ºSW. Skarn mineralization south of La Flaca Fault (Szone2) appears to have been down dropped by approximately 100 m and has a preferred strike orientation N30ºE and dipping -18ºNW. El Limón Sur was assigned to Szone4, which has the same mineralized orientation as Szone2.

Amec Foster Wheeler M&M constructed mineralized indicator variograms using Sage2001 software. The nugget was first modeled using a single-structure, down-the-hole correlogram, and directional correlograms were modeled using both two-structure spherical (Sph) and exponential (Exp) models to fit experimental correlograms.

Amec Foster Wheeler M&M used probability-assigned constrained kriging (PACK) to estimate the probability that a block would be interpolated with mineralized or non-mineralized gold composites.

14.5.2 El Limón Sur

For the 2014 Limón Sur model update, Torex provided 24 geology section interpretations. From these data, Amec Foster Wheeler M&M completed a deterministic geologic model for Limón Sur. Amec Foster Wheeler M&M is of the opinion that the deterministic modeling approach to geology results in a more focused, clearer picture of the geology at El Limón Sur.

Within the El Limón Sur project 75 drill holes (6,772.8 m) support the Mineral Resource estimate. Assays were composited into 3.5 m lengths for estimation into 7.0 m^3 blocks. MineSight was used to produce a three-dimensional block model. SG values were assigned by rock type from 137 wax immersion density determinations.

Gold and silver grades, within the Limón Sur resource model, were estimated using geologic solids, upper and lower grade domains, and lithologic codes. Geologic solids were modeled from section interpretations and used to assign lithologic codes to the block model. Ordinary kriging was used to interpolate grade.

14.5.3 Guajes

For the 2014 Guajes model update Torex provided 44 geology section interpretations and 12 geology level interpretations. From these data Amec Foster Wheeler M&M completed a deterministic geologic model for Guajes. Amec Foster Wheeler M&M is of the opinion that the deterministic modeling approach to geology results in a more focused, clearer picture of the geology at Guajes.

From the Torex interpretations three methods were used to assign rock codes to the three dimensional geology block model, modeled wire frame solids, projection of section geology to section volume, and assigning codes to levels from level interpretations.

Wireframe solids were constructed for the rock types granodiorite, breccia, exoskarn and endoskarn together as a package, as well as for feldspar porphyry, feldspar–biotite–hornblende–quartz porphyry, mafic dykes, massive sulfide oxides, and alluvium.

Section volume projection was used for exoskarn within the skarn package, marble/limestone, and hornfels. Cross section polygon shapes were used to project rock codes plus or minus 17.5 m to fill section volumes.

Level assignment was used to assign rock codes by level to blocks on the level, all rock types were assigned to the level for the twelve levels received from Torex.

Due to the complex geology, Amec Foster Wheeler M&M is of the opinion that the level assignment is the preferred method, followed by wireframe solids and finally section volume projection. Assignment of the rock codes to the geology model honored this preference.

14.5.4 Media Luna

Torex provided Amec Foster Wheeler M&M with 22 geologic sections that were spaced generally at 100 m intervals through the Media Luna skarn zone, four oblique sections, and three level plans. The sectional interpretations were completed by Torex and WMS geologists.

Amec Foster Wheeler M&M used the sections to model three contact surfaces: limestone-exoskarn, exo-endoskarn, and endoskarn-granodiorite. Amec Foster Wheeler M&M also solid modeled vertical dykes and set up the 3D block model to align with the geologic sections. Dyke solids were tied into the surface geology. Dykes cross-cut the skarn zone and are not mineralized. Dykes were projected downward to pierce the skarn zone when encountered by drilling above the skarn zone.

The volume between the each of the surfaces was split into five sub-surfaces. The block model was coded by the sub-surfaces to create 10 skarn zone positions that were subsequently back-loaded to the drill holes.

Geology codes from the Torex and WMS logging of core on site were then interpolated matching on skarn zone position, such that skarn zone position blocks could only be assigned grade with composites of a matching zone position. This forced the geology to follow the fabric of the skarn zone as it undulates, pinches, and swells.

14.6 COMPOSITES AND EXPLORATORY DATA ANALYSIS

14.6.1 El Limón

The El Limón resource model was constructed from 564 core holes, 33 RC holes and 41 channel samples. GPS field survey location of channel samples were converted to mimic drill holes with collar and down hole surveys. Collar survey, down-hole survey, assays and lithology files were imported into MineSight. Amec Foster Wheeler M&M composited database assays into 3.5 m lengths. Composites with lithology logged as undefined were back-tagged from the lithology interpolated mine block they intersected.

Composites were exported to an Excel file and an "MIN" field was added and set to a default value of "0" to indicate that the composite is below Au cutoff grade. Mineralized intercepts were tagged with "1" by hand if the following criteria were observed:

- Minimum length of two 3.5 m composites, which matches the bench height of the block model
- Mean Au interval grades equaled to or were greater than 0.5 g/t.

The 0.5 g/t Au was selected as the expected cutoff grade for mineral resources. The values of the "MIN" field were then imported into a field in the composite file to be used in indicator kriging to identify mineralized and non-mineralized mine blocks.

Exploratory data analysis (EDA) was conducted using composites to determine the appropriate estimation parameters based on mineralization and lithology types. Descriptive statistics such as boxplots, histograms, and cumulative probability plots were completed for gold composites tagged as "MIN" (mineralized) and unmineralized gold composites.

To determine whether composites should be used across lithological boundaries during gold estimation, Amec Foster Wheeler M&M constructed contact plots for all the different combinations of lithological boundaries. Results from the El Limón contact profiles showed that both hard and soft contacts exist. To implement the handling of composites used across lithological boundaries, Amec Foster Wheeler M&M grouped the lithology units into two domains based on similar mean grades and contact profiles. As a result, the following lithology domains were created:

- Skarn group domain was created by grouping the skarn, retro-skarn, oxide, breccias, vein, massive sulphide, and fault gouge lithologies
- Intrusive group was created with only the intrusive lithology
- Sedimentary group was created by combining hornfels and marble lithologies
- Overburden or Quaternary alluvium was not interpolated for gold or silver grades

14.6.2 El Limón Sur

A standard 3.5 m length was used for all assay composites. Composites back-tagged from the lithology interpolated mine block they intersected.

Descriptive statistics were completed on the gold composites by rock code within the skarn envelope and outside of the skarn envelope. Descriptive statistic runs include box plots, histograms, and cumulative frequency plots.

Results are summarized in Table 14-1.

Table 14-1: El Limón Sur

El Limón Sur 3.5 Meter Au (g/t) Composites By Rock Type, Estimation Domain								
Rock Type		**Rock Code**	**#**	**Mean**	**Minimum**	**Maximum**	**Standard Dev.**	**CV**
Skarn Package Mineralized	Exoskarn	31	98	3.359	0.025	28.35	4.68	1.39
	Endoskarn	32	66	1.891	0.006	17.51	2.77	1.47
	Breccia	34	66	4.653	0.205	45.57	6.65	1.43
Skarn Package Un-Mineralized	Exoskarn	31	137	0.485	0.005	9.04	1.03	2.12
	Endoskarn	32	329	0.263	0.003	4.05	0.56	2.14
	Breccia	34	81	0.469	0.003	6.26	0.88	1.88
Outside Skarn Package	Hornfels	37	132	0.053	0.003	0.36	0.06	1.06
	Marble\Limestone	39	37	0.026	0.003	0.14	0.03	1.12
	Granodiorite	60	807	0.077	0.003	1.66	0.17	2.21
	Feldspar Porphyry	61	54	0.028	0.003	0.18	0.03	1.18
	Fld-Bio-Hrn-Qtz Porphyry	62	28	0.035	0.005	0.21	0.06	1.74
El Limón Sur 3.5m Au g/t Composites, Rock Type, Outlier Restriction								
Rock Type		**Rock Code**	**Outlier**	**# Res.**	**Mean**	**Maximum**	**Standard Dev.**	**CV**
Skarn Package Un-Mineralized	Exoskarn	31	5	2	0.366	4.23	0.59	1.62
	Endoskarn	32	2.5	5	0.194	2.41	0.31	1.57
	Breccia	34	4.0	4	0.297	1.15	0.32	1.07
Outside Skarn Package	Granodiorite	60	1	7	0.065	0.96	0.11	1.75

Note: CV = Coefficient of Variation (Standard Deviation \ Mean)

Three geology composite domains were created. The domains were selected on similar mean grade and sample distributions of rock coded composites. The skarn package domain includes exoskarn, endoskarn, and breccia. The sedimentary domain includes hornfels, marble/limestone. The intrusive domain includes feldspar porphyry, feldspar–biotite–hornblende–quartz porphyry, and granodiorite.

EDA was then performed on the resulting three geology domains. From this work Amec Foster Wheeler M&M selected an Au indicator value of 1.0 g/t cut-off for exoskarn, 0.7 g/t for exoskarn, and 1.0 g/t for breccia. For Ag, the indicator value selected was 5 g/t for exoskarn, endoskarn and breccia. The indicators were selected from cumulative probability plots and visual examination of cross-sections.

Kriging the indicator to form block probabilities resulted in the development of a mineralized skarn package domain and an un-mineralized skarn package domain. The indicator and subsequent grade estimation were determined by respecting high coefficients of variation (CVs) of the composites by rock code and domain.

Amec Foster Wheeler M&M used the four domains, skarn package mineralized, skarn package un-mineralized, sedimentary, and intrusive for grade estimation domaining for both Au and Ag.

Amec Foster Wheeler M&M constructed contact profiles to analyze the grade behavior at the lithological boundaries. From the contact plots and visual examination it was determined that hard boundaries would be used between the four estimation domains.

14.6.3 Guajes

A standard 3.5 m length was used for all assay composites. Composites back-tagged from the lithology interpolated mine block they intersected.

Descriptive statistics were completed on the gold composites by rock code within the skarn envelope and outside of the skarn envelope. Descriptive statistic runs include box plots, histograms, and cumulative frequency plots.

Three geology composite domains were created. The domains were selected on similar mean grade and sample distributions of rock coded composites. The skarn package domain includes exoskarn, endoskarn, and breccia. The sedimentary and granodiorite domain includes hornfels, alluvium, marble/limestone, massive sulfide oxide, and granodiorite. The intrusive domain includes feldspar porphyry, feldspar–biotite–hornblende–quartz porphyry, and mafic dykes.

EDA was then performed on the resulting three geology domains. From this work Amec Foster Wheeler M&M selected an indicator value of 0.3 g/t Au cut-off. The indicator was selected from cumulative probability plots.

Kriging the indicator to form block probabilities resulted in the development of a mineralized skarn package domain and an un-mineralized skarn package domain. The indicator and subsequent grade estimation were determined by respecting high coefficients of variation (CV; where the CV = standard deviation/mean) of the composites by rock code and domain (Table 14-2).

Table 14-2: Guajes Composites

Guajes 3.5 Meter Au (g/t) Composites By Rock Type									
Rock Type		**Rock Code**	**#**	**Mean**	**Minimum**	**Maximum**	**Variance**	**Standard Dev.**	**CV**
All			21,437	0.422	0.001	149.13	6.82	2.61	6.19
Skarns	Exoskarn	31	3,620	1.385	0.001	92.37	16.10	4.01	2.90
	Endoskarn	32	5,629	0.427	0.001	149.13	9.47	3.08	7.21
	Breccia	34	1,096	0.467	0.003	140.87	20.25	4.50	9.64
	Exo\Endo\Brec	31,32,34	10,349	0.769	0.001	149.13	13.83	3.72	4.84
Sedimentary and Granodiorite	Hornfels	37	3,088	0.125	0.002	7.16	0.09	0.30	2.39
	Alluvium	38	3	0.171	0.003	0.45	0.06	0.25	1.44
	Marble\Limestone	39	867	0.084	0.001	2.99	0.07	0.27	3.17
	Massive Sulphides Oxides	41	7	0.310	0.032	1.28	0.20	0.44	1.43
	Granodiorite	60	6,067	0.094	0.001	8.85	0.05	0.21	2.26
Intrusives	Feldspar Porphyry	61	837	0.063	0.001	0.96	0.01	0.12	1.88
	Fld-Bio-Hrn-Qtz Porphyry	62	146	0.049	0.001	0.66	0.01	0.10	2.04
	Mafic Dykes	65	70	0.015	0.003	0.34	0.00	0.04	2.98
Guajes 3.5 Meter Composites By Rock Type, Estimation Domains									
Rock Type		**Rock Code**	**#**	**Mean**	**Minimum**	**Maximum**	**Variance**	**Standard Dev.**	**CV**
Skarns	Skarn Package Min.	31, 32, 34	2,489	2.868	0.001	149.13	50.75	7.12	2.48
	Skarn Package Un Min	31, 32, 34	7,860	0.104	0.001	27.22	0.31	0.56	5.34
Sedimentary and Granodiorite	Sedimentary and Granodiorite	37, 38, 39, 41, 60	10,035	0.103	0.001	8.85	0.06	0.25	2.40
Intrusives	Intrusives	61, 62, 65	1,053	0.058	0.001	0.96	0.01	0.11	1.97
Estimation Domains, Outlier Restriction									
Rock Type		**Rock Code**	**Outlier**	**# Res.**	**Mean**	**Maximum**	**Variance**	**Standard Dev.**	**CV***
Skarns	Skarn Package Min.	31, 32, 34	40	14	2.505	37.66	20.37	4.51	1.80
	Skarn Package Un Min	31, 32, 34	3.5	17	0.085	3.37	0.06	0.24	2.78
Sedimentary and Granodiorite	Sedimentary and Granodiorite	37, 38, 39, 41, 60	3.5	4	0.100	3.47	0.04	0.21	2.10
Intrusives	Intrusives	61, 62, 65	None	0.000	0.058	0.96	0.01	0.11	1.97

Note: CV = Coefficient of Variation (Standard Deviation \ Mean)

Amec Foster Wheeler M&M used the four domains, skarn package mineralized, skarn package un-mineralized, sedimentary and granodiorite, and intrusive, for grade estimation domaining.

Amec Foster Wheeler M&M constructed contact profiles to analyze the grade behavior at the lithological boundaries. From the contact plots and visual examination it was determined that hard boundaries would be used between the four estimation domains.

14.6.4 Media Luna

Amec Foster Wheeler M&M composited the assays into 2.5 m lengths. Each 2.5 m length was composited for gold, copper and silver. Composites were assigned rock codes from the assays. The core was logged on site by Torex and WMS geologists. The coding was found through use of the data, to be very consistent.

The down-hole composite received the majority rock code for the 2.5 m length. The skarn position was back-loaded to the composite from the 2.5 m cubic blocks, composites with a skarn position value range of one to 10 are skarn zone composites; only these composites were used for grade estimation.

Amec Foster Wheeler M&M down-hole composited the assays into 2.5 m lengths and reviewed probability plots to select domains for gold, silver and copper mineralization. From examination of the gold probability plot and confirmation of the pick by reviewing composite cross sections an upper domain was determined to exist at 0.5 g/t Au and above. Review of the copper probability plot indicated an upper population at 0.15% Cu. Completing the same process on silver revealed an upper grade population at 3 g/t Ag.

Amec Foster Wheeler M&M created an indicator for gold, copper and silver in the composite file, all composites below the selected threshold values received a zero and values above received a one.

14.7 GRADE CAPPING/OUTLIER RESTRICTIONS

14.7.1 El Limón and Guajes Capping Studies

Amec Foster Wheeler M&M performed a series of capping studies on the 3.5 m composites. Results indicate that gold is concentrated in the upper decile. Overall the gold content in the 10th decile represents approximately 50% of the total metal content, while the 9th decile contains approximately 17%. Since the 10th decile contains more than twice the metal content of the 9th decile, there is a strong indication that metal reduction is warranted. Amec Foster Wheeler M&M performed a metal at risk analysis using Amec Foster Wheeler M&M's in-house Fortran programs *riskhi2a.exe* and *gtcomp.exe* to determine that approximately 4% to 6% of the gold metal is at risk.

14.7.2 El Limón

El Limón capping/outlier restrictions for gold were based on Szones, inside or outside of skarn domain, lithology groupings, mineralized or un-mineralized, and kriging passes. Capping/outlier restriction removed approximately 4.2% of the expected gold metal from Szones 1, 2, and 4, and 4% of the expected gold metal from Szone 3.

Silver composites were capped to 40 g/t for all lithology types except for the mineralized skarn group where the composites were capped at 80 g/t Ag.

14.7.3 El Limón Sur

Gold capping/outlier restriction at Limón Sur was based on the four estimation domains. Gold and Silver composite grades were outlier restricted, Au and Ag composite values for restriction were selected by rock type. Composite rock and block codes were matched for grade estimation.

Capping/outlier restriction removed approximately 3.0% of the expected gold metal.

14.7.4 Guajes

Gold capping/outlier restriction at Guajes was based on the four estimation domains. Gold composite grades were outlier restricted at 40 g/t inside the skarn mineralized domain and 3.5 g/t in the other three domains. Capping/outlier restriction removed approximately 3.0% of the expected gold metal.

Silver composites were capped at 40 g/t Ag for all lithology outside of the skarn package domain and capped at 80 g/t Ag for all lithologies inside the skarn package domain.

14.7.5 Media Luna

Amec Foster Wheeler M&M selected potential outlier restriction values from lognormal probability plots and then verified the value by finding the outlier and looking at its surrounding composites in 3D space. Outlier restriction allows the use of the full composite value within a given distance and then restricts the value for the composite outside of this distance.

Amec Foster Wheeler M&M calculated outlier values by rock type and upper and lower grade domains for gold, silver, and copper. Skarn blocks were estimated using outlier restriction and without so that metal reduction due to outlier restriction could be calculated. In the gold upper grade domain it was noted that a small number of composites have a great effect on the mean grade in the exoskarn rock type.

Amec Foster Wheeler M&M estimated gold, silver, and copper grades with, and without, outlier restriction. Gold-equivalent (AuEq) grade was calculated only on the restricted estimation grades (refer to Section 14.8.3 for a discussion on the gold equivalency used).

Metal reduction for silver and copper appear reasonable at 2% and 3% respectively.

The gold reduction is more significant at 22%. However, if the few gold outliers above 30 g/t Au are allowed to influence estimation unrestricted, with the 100 m grid drilling, too much metal is estimated. Amec Foster Wheeler M&M came to this conclusion from visual inspection of the outliers and their surrounding composites. Amec Foster Wheeler M&M is of the opinion that outlier restriction is the best method for metal reduction at this time at Media Luna.

As the drill spacing at Media Luna is reduced with infill drilling, Amec Foster Wheeler M&M expects to see the gold metal produced by the restricted and unrestricted estimates converge. With the drill spacing currently available, it is not completely clear how the two numbers will converge: will they meet halfway or one come up or down to meet the other? As the deposit is drilled to the spacing required for support of classification of Indicated and potentially Measured Mineral Resources, this will become clearer.

14.8 VARIOGRAPHY

14.8.1 El Limón

Amec Foster Wheeler M&M constructed gold variograms using Sage2001 software. The nugget was first modeled using a single-structure, down-the-hole correlogram, and directional correlograms were modeled using two-structure spherical or exponential models to fit experimental correlograms. Amec Foster Wheeler M&M noted that nuggets for some gold domains were elevated. Amec Foster Wheeler M&M conducted three passes; with pass one having a larger search range (y = 150 m, x = 150 m, and z = 35 m) than the second pass and second pass (y = 75 m, x = 75 m, and z = 35 m) having larger search range than the third pass (y = 50 m, x = 50 m, and z = 35 m).

14.8.2 Limón Sur

Amec Foster Wheeler M&M used Sage2001 software to construct down-the-hole and directional correlograms for the selected indicators and estimation domains.

14.8.3 Guajes

Amec Foster Wheeler M&M used Sage2001 software to construct down-the-hole and directional correlograms for the selected indicators and estimation domains.

14.8.4 Media Luna

Amec Foster Wheeler M&M constructed variograms using Sage2001 software for down-the-hole and directional correlograms for gold, copper and silver indicators.

Amec Foster Wheeler M&M used OK of the indicators to interpolate block probabilities for all of the blocks within the skarn zone. Block probabilities were used to define upper and lower domain codes for gold, silver, and copper. The domain codes were back loaded to the composites, every composite in the skarn zone is coded for upper and lower gold, silver, and copper domains.

Amec Foster Wheeler M&M constructed variograms for the upper and lower domains for gold, silver, and copper and decided to use the indicator rotations and ranges along with the nugget and sill from the down hole domain composites for grade estimation. The ranges and rotations from the indicators appeared more robust and more like what had been observed in working with the data in 3D.

14.9 ESTIMATION/INTERPOLATION METHODS

14.9.1 El Limón

Gold grades in the skarn intrusive and sedimentary group domains were estimated using a three-pass estimation method by ordinary kriging (OK). Pass 1 used a larger search distance then Pass 2 and required a minimum of one composite, a maximum of 20 composites and a maximum of three composites per hole. A minimum of one drill hole is required to interpolate gold grades into a block. Pass 2 used a larger search distance than Pass 1 and required a minimum of four composites, a maximum of 20 composites, and a maximum of three composites per any one drill hole. Pass 3 used smaller search radii than that of Pass 2 or Pass 1 and required a minimum of six composites, a maximum of 12 composites, and a maximum of three composites per any one drill hole. A minimum of two drill holes is required to interpolate gold grades into a block.

Silver grades were interpolated along with the gold grades in the same gold interpolation runs. Silver grade interpolation runs honored all of the gold parameters except for capping and outlier restriction.

14.9.2 El Limón Sur

Gold and silver grades, within the Limón Sur resource model, were estimated using geologic solids, upper and lower grade domains, and lithologic codes. Geologic solids were modeled from section interpretations and used to assign lithologic codes to the block model. OK was used to interpolate grade. A three-pass estimation plan was used that employed a more restrictive local estimate with each pass, permitting a more local estimate if composites were locally available. Amec Foster Wheeler M&M used a maximum of 16 composites, minimum of two, and a maximum of four from any single drill hole for the first pass. For the second and third pass maximum of 16 composites, minimum of five, and a maximum of four from any single drill hole. Gold and silver grades were estimated for each block. Silver grades were estimated independent of the gold grades.

14.9.3 Guajes

Amec Foster Wheeler M&M developed an estimation plan using the three geological domains, the skarn envelope, the high grade domain within the skarn envelope defined from kriging the high-grade Au indicator, and outside of the skarn envelope.

A three pass estimation plan was used that employed a more restrictive local estimate with each pass, permitting a more local estimate if composites were locally available. Grade estimation was completed using OK. For gold and silver block grade estimation, Amec Foster Wheeler M&M used a maximum of 20 composites, minimum of two, and a maximum of three from any single drill hole for the first pass. For the second pass a maximum of 20 composites, minimum of four, and a maximum of three from any single drill hole. The third and final pass used a maximum of 12 composites, minimum of six, and a maximum of three from any single drill hole. Gold and silver grades were estimated for each block. Composites were selected for grade estimation from each of the nine combined skarn envelope/geological domains, matching with envelope/geological domain coded blocks.

14.9.4 Media Luna

Amec Foster Wheeler M&M interpolated block probabilities using grade indicators and selected block probabilities by matching block probabilities to blocks interpolated by NN of the indicators. Validation was done for the probabilities selected by comparing the number of blocks in the NN estimate to the selected block probability.

Amec Foster Wheeler M&M developed an estimation plan for grade estimation using grade domains, skarn position, and rock codes. A two pass estimation plan was used that employed matching by grade domain and rock type followed by a more restrictive pass that matched block and composites by grade domain, skarn position and rock type. The second pass overwriting the block estimation of the first pass, if the composites were available, with a more local estimate conforming to the fabric of the skarn zone.

For gold, silver and copper block grade estimation, Amec Foster Wheeler M&M used a maximum of 12 composites, minimum of two, and a maximum of three from any single drill hole. Gold, silver, and copper grades were estimated for each block in the skarn zone. Grade estimation was completed using OK.

14.10 BLOCK MODEL VALIDATION

14.10.1 El Limón

Validation performed for the El Limón model included nearest-neighbor checks by comparing the means of the kriged model with means from the NN model, visual inspection of cross-sections on-screen, construction of swath plots, and evaluation of change-of-support using the discrete Gaussian or Hermitian polynomial change of support (Herco) method (Journel and Huijbregts, 1978). The following conclusions were reached:

- Kriged gold grades at El Limón are globally unbiased
- Cross sections viewed on screen by lithologies that compared blocks to drill holes and matched reasonably well
- Swath plots indicated that the estimation appears to be locally unbiased
- The block size or standard mining unit (SMU) tested was 7 x 7 x 7 m and 14 x 14 x 7 m, with the larger SMU blocks generally showing better results. For skarn lithology group in Szones 1, 2, and 4, at a cut-off grade of 0.5 g/t Au, the Herco grade is approximately 0.1% higher than the kriged estimate. At a 1 g/t cut-off grade, the Herco grade is approximately 1.1% higher than the kriged estimate. The grade-tonnage curves

match very well and indicate that the kriged model should produce the expected tonnes and grade at 0.5 g/t Au.

14.10.2 El Limón Sur

Detailed visual inspection was completed by Amec Foster Wheeler M&M on the El Limón Sur model. The model was checked for proper coding of drill hole intervals and block model cells, in both section and plan. Coding was found to be properly done. Grade interpolation was checked relative to drill hole composites and found to be reasonable.

Amec Foster Wheeler M&M checked the block model estimates for global bias by checking the mean nearest-neighbor estimate for gold grade against model OK grade estimates. Mean grades were found to match very well with relative percent difference of gold grades between kriged and NN blocks for all domains at -5.4%. The skarn domains shows a relative percent difference of gold grades of 0.6%. Silver mean grades show a relative percent difference of -7.9% between the kriged and NN blocks for all domains and for the skarn domain 4.8%. Herco plots on the gold model were also produced and show reasonable results.

14.10.3 Guajes

Detailed visual inspection was completed by Amec Foster Wheeler M&M on the Guajes model. The model was checked for proper coding of drill hole intervals and block model cells, in both section and plan. Coding was found to be properly done. Grade interpolation was checked relative to drill hole composites and found to be reasonable.

Amec Foster Wheeler M&M checked the block model estimates for global bias by checking the mean nearest-neighbor estimate for gold grade against model OK grade estimates.

Mean grades were found to match very well with relative percent difference of gold grades between kriged and NN blocks for all domains at -0.26%. The mineralized skarn domain shows a relative percent difference of gold grades of 3.28%. Silver mean grades show a relative percent difference within skarn domains of -1.71% between the kriged and NN blocks for all domains. Herco plots on the gold model were also produced and show reasonable results.

14.10.4 Media Luna

Amec Foster Wheeler M&M validated the model construction using the following methods: a NN block model to check for global and local bias, visual inspection, swath plots, and Herco plots.

The following were noted:

- The NN model used the same block size of 2.5 m x 2.5 m x 2.5 m as the OK model. NN grade interpolation also honored the outlier grade restrictions as applied to the OK gold model.
- The completed gold, copper and silver block estimations were reviewed in section and plan and found to be reasonable when compared to the composites.
- The gold model was checked for global bias by comparing the means of the kriged model with means from the NN model. The models were within 5%, which is considered very good for Inferred-classified material.
- Swath plots were reviewed by domain and it was determined that grades from kriged blocks compared well with NN blocks, matching peaks and valleys and compared well to composite grades where there is increasing number of composites.
- The Herco grade–tonnage curves matched reasonably well for an Inferred Mineral Resource.

14.11 CLASSIFICATION OF MINERAL RESOURCES

14.11.1 El Limón and Guajes

14.11.1.1 Inferred Drill Hole Grid Spacing

Mineral resources were classified as Inferred when a block was located within 60 m of the nearest composite. Drill hole spacing for declaration of Inferred Mineral Resources would broadly correspond to a 60 m x 60 m grid.

14.11.1.2 Indicated Drill Hole Grid Spacing

Amec Foster Wheeler M&M considers that Indicated Mineral Resources should be known within ±15% with 90% confidence on an annual basis (production year).

Mineral resources were classified as Indicated when a block was located within 28 m of the nearest composite and one additional composite from another drill hole was within 40 m. Drill hole spacing for Indicated Resources would broadly correspond to a 36 m x 36 m grid.

14.11.1.3 Measured Drill Hole Grid Spacing

Amec Foster Wheeler M&M considers that Measured Mineral Resources should be known within ±15% with 90% confidence on a quarterly basis (production quarter).

Mineral Resources are classified as Measured when a block was located within 15 m of the nearest composite and two composites from two additional drill holes were within 22 m. Drill hole spacing for Measured Resources would broadly correspond to a 20 m x 20 m grid.

14.11.2 Media Luna

Amec Foster Wheeler M&M reviewed the geological continuity as interpreted in section and plan, as well as in the field. This provided a sense for the continuity of the geology and grade as they pertain to the mineralized zones that ultimately will be of economic importance. From review of the Media Luna core and three dimensional modeling of the skarn package Amec Foster Wheeler M&M concluded that favorable host rock geology shows continuity across drill holes. Amec Foster Wheeler M&M found the new drilling supports the 100m drill spacing for Inferred resources, existing mineralized zones gained new support from newly completed holes as they were added to the data set.

Amec Foster Wheeler M&M required the following for a block to be classified as an Inferred Mineral Resource:

- Drill spacing of 100 m grid
- Two drill holes within 110 m
- Block must be within 3D modeled skarn zone
- Block gold equivalent grade of 2.0 g/t AuEq or higher

14.12 ASSESSMENT OF REASONABLE PROSPECTS FOR EVENTUAL ECONOMIC EXTRACTION

14.12.1 El Limón and Guajes

To assess reasonable prospects of economic extraction the Morelos Mineral Resource was confined within a Lerchs–Grossmann optimization, key parameters of which were the geological and grade continuity of mineralization, mining costs, processing costs, metallurgical recoveries, general and administrative costs, a gold price of $1,495/oz and a silver price of $24/oz. These estimates were considered applicable at the time of the 2012 estimate. No additional dilution or mining losses were considered within the pit shell.

Mineral Resources are reported using the pre-mining topography. Pre-stripping and mining operations have commenced, and some ore has been stockpiled.

Torex has been working on items relating to environmental, permitting, legal, title, taxation, and socio-economic, items and in Amec Foster Wheeler M&M's opinion have not identified any issues that would materially affect the Mineral Resources.

14.12.1.1 Mining Costs

Mining costs for mill feed material are estimated at $2.32/t and waste mining is estimated at $2.27/t. These costs were developed by SRK in January 2015, using first principles, and worked from the ground up. Note that these initial costs have been updated and modified during the mine planning discussed in Sections 15 and 16. Amec Foster Wheeler M&M is of the opinion that the mining costs developed by SRK are appropriate for the purpose of reasonable prospects for economic extraction and suitable for supporting Mineral Resource declaration.

14.12.1.2 Pit Slope Angle Analysis

Pit slope angles were developed by SRK for the El Limón and Guajes open pits. Slope designed was based on oriented core drilling and laboratory strength testing of a total of 11 geotechnical core holes drilled to intersect final pit walls. A geotechnical model was developed using the field and laboratory test data which served as the basis for slope stability modeling. Results of the geotechnical evaluation indicate that the rock mass at El Limón and in the Guajes highwall (south wall) are quite competent with relatively high intact rock strengths and widely spaced joints. The Guajes north wall (La Amarilla Fault hanging wall) is generally highly altered and significantly weaker than the remaining rock mass. Slopes in this area have been designed at lower angles to account for the weaker rock mass strength. Overall slope angles of approximately 50º are recommended for the majority of El Limón and the Guajes highwall. The La Amarilla hanging wall zone at Guajes is recommended to have a maximum interramp angle of 38º.

14.12.1.3 Processing, General and Administrative Costs

Preliminary estimate for process and general & administrative costs was provided to Torex for the purposes of defining economic resources. The costs provided to Torex by M3 were $15.27/t for mineral processing and $3.10/t for general and administrative (G&A) costs (mill feed only). These cost estimates are based on preliminary and ongoing design work for conventional CIL/CIP milling and preliminary general administration commonly in use.

G&A costs do not include land ownership. Amec Foster Wheeler M&M is of the opinion that these costs are suitable for the purpose of reasonable expectation for economic extraction for developing a Mineral Resource pit shell.

14.12.1.4 Conclusion

Amec Foster Wheeler M&M considers that the mineralization that displays geological and grade continuity, and which falls within an economic pit shell constructed using the parameters listed in Table 14-3 is likely to show reasonable prospects of eventual economic extraction.

Table 14-3: Parameters Used to Establish Open Pit Mineral Resource Cut-off Grade

Item	Unit	Amount
Gold price	$/oz	1,495
Silver price	$/oz	24
Average Au process recovery	%	87.4
Average Ag process recovery	%	32.0
Ore mining cost	$/t	2.32
Waste mining cost	$/t	2.27
Processing cost	$/t	15.27
G&A cost	$/t	3.10
Cut-off grade	g/t Au	0.50

Classification of mineralization within the conceptual pit that satisfies these requirements is dependent on lithology type due to the variable metallurgical recoveries by lithology type. Expected metal recoveries used in developing the Mineral Resource pit shell are listed in Section 13 of this Report.

14.12.2 Media Luna

Processing costs from four recent technical reports on four similar projects, each in the feasibility stage, were reviewed when estimating processing costs for Media Luna. Based on these benchmarks, the Media Luna processing cost was estimated to be US$23/t assuming a 7,000 t/d processing rate.

Mineral Resources are reported using a long-term gold price of US$1470/oz, silver price of US$23.00, and copper price of US$3.60/lb. The metal prices used for the Mineral Resources estimates are based on Amec Foster Wheeler M&M`s internal guidelines which are based on long-term consensus prices for resources.

The assumed mining method is from underground; depending on mineralization thicknesses, a combination of cut-and-fill and long hole open stoping, a very selective mining method that can cater to varying ore widths. Total mining, milling and G&A cost range from US$50 to US$60 per tonne milled. Mining recovery is assumed to be between 80% to 90%. Minimum mining width of 2.5 m assumed for the resource.

Based on preliminary metallurgical testwork results, the metallurgical recoveries are estimated as gold 88%, silver 70%, and copper 92%.

The above parameters were used to calculate an appropriate cut off for underground mining resources of 2.0 g/t AuEq.

14.12.2.1 Gold Equivalency Calculation

Amec Foster Wheeler M&M calculated gold equivalent grade for blocks with an estimated gold grade. Table 14-4 shows how the gold equivalent grade was calculated.

Table 14-4: Gold Equivalent Grade

Metal Price	Au US$/oz	Ag US$/oz	Cu US$/lb
	1,470	23.00	3.60
Metal Price	Au US$/g	Ag US$/g	Cu US$/%
	47.26	0.74	79.37
Factors	1	0.0156	1.68
Gold equivalent grade = Au (g/t) + Cu % *(79.37/47.26) + Ag (g/t) * (0.74/47.26)			
Grades have not been adjusted for metallurgical or refining cost and recoveries			

The gold, silver, and copper prices were Amec Foster Wheeler M&M's view of long-term consensus metal prices current as at April 2015.

14.13 MINERAL RESOURCE STATEMENT

Mr. Orbock is the QP for the Mineral Resource estimate at El Limón and Mr. Hertel is the QP for the Mineral Resource estimates at Guajes and Media Luna. Mineral Resources are reported as undiluted. Mineral Resources are reported inclusive of Mineral Reserves. Amec Foster Wheeler M&M cautions that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Mineral Resources for El Limón and Guajes, which are potentially amenable to open pit mining methods, are summarized in Table 14-5. Mineral Resources are reported using a cut-off of 0.5 g/t Au for the material amenable to open pit mining.

Table 14-5: Mineral Resource Statement, El Limón and Guajes

	Tonnes (Mt)	Au Grade (g/t)	Ag Grade (g/t)	Contained Au (Moz)	Contained Ag (Moz)
El Limón (including El Limón Sur)					
Measured	6.29	3.24	4.05	0.66	0.82
Indicated	26.85	2.98	6.07	2.58	5.24
Subtotal Measured and Indicated	*33.13*	*3.03*	*5.69*	*3.23*	*6.06*
Inferred	6.84	2.26	4.94	0.50	1.09
	Tonnes (Mt)	**Au Grade (g/t)**	**Ag Grade (g/t)**	**Contained Au (Moz)**	**Contained Ag (Moz)**
Guajes					
Measured	3.81	3.30	3.93	0.40	0.48
Indicated	13.39	2.64	3.32	1.13	1.43
Subtotal Measured and Indicated	*17.19*	*2.78*	*3.45*	*1.54*	*1.91*
Inferred	0.85	1.28	2.37	0.04	0.07
	Tonnes (Mt)	**Au Grade (g/t)**	**Ag Grade (g/t)**	**Contained Au (Moz)**	**Contained Ag (Moz)**
Total El Limón and Guajes					
Measured	10.09	3.27	4.01	1.06	1.30
Indicated	40.24	2.87	5.15	3.71	6.67
Total Measured and Indicated	*50.33*	*2.95*	*4.92*	*4.77*	*7.96*
Inferred	7.69	2.15	4.64	0.53	1.15

Notes to accompany El Limón and Guajes Mineral Resource Table

1. The qualified person for the Guajes estimate is Mark Hertel, RM SME, an Amec Foster Wheeler M&M employee. The estimate has an effective date of December 16, 2014.
2. The qualified person for the El Limón estimate (excepting El Limón Sur) is Edward J. C. Orbock III, RM SME, an Amec Foster Wheeler M&M employee. The estimate has an effective date of June 18, 2012.
3. The El Limón Sur area within El Limón estimate has an effective date of August 6, 2014
4. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources are reported above a 0.5 g/t Au cut-off grade.
6. Mineral Resources are reported as undiluted; grades are contained grades
7. Mineral Resources are reported within a conceptual open pit shell that used the following assumptions. A long-term gold price of US$1,495/oz, and a silver price of US$24.00/oz. The metal prices used for the Mineral Resources estimates are based on Amec Foster Wheeler M&M`s internal guidelines which are based on long-term consensus prices. The assumed open pit mining costs are US$2.32/t mill feed and US$2.27/t for waste, and processing costs at US$15.27/t. General and administrative costs were estimated at US$3.10/t processed. Metallurgical recoveries average 87% for gold and 32% for silver. Assumed pit slopes range from 33º to 49º. A pre-mining topography was used in the resource estimate; pre-stripping and mining operations have commenced and some ore has been stockpiled.
8. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade, and contained metal content.

Mineral Resources for Media Luna, which are potentially amenable to underground mining methods, are summarized in Table 14-6. Mineral Resources are reported using a cut-off of 2 g/t AuEq for the material amenable to underground mining. The sensitivity of the estimate to changes in the selected AuEq cutoff grade are shown in Table 14-6, with the 2 g/t AuEq base case highlighted.

Table 14-6: Mineral Resource Statement, Media Luna (base case is highlighted)

Cutoff AuEq (g/t)	Tonnes (Mt)	AuEq Grade (g/t)	Au Grade (g/t)	Ag Grade (g/t)	Cu Grade (%)	Contained AuEq (Moz)	Contained Au (Moz)	Contained Ag (Moz)	Contained Cu (M lb)
1.0	79.3	3.42	1.74	21.28	0.80	8.72	4.45	54.26	1,405.03
1.5	63.9	3.94	2.07	24.01	0.90	8.11	4.25	49.33	1,269.15
2.00	51.5	**4.48**	**2.40**	**26.59**	**0.99**	7.42	3.98	44.02	1,128.50
2.5	41.4	5.02	2.75	28.81	1.09	6.69	3.66	38.35	996.74
3.0	33.9	5.53	3.06	31.18	1.18	6.02	3.34	33.96	884.44
3.5	27.6	6.05	3.40	33.37	1.27	5.37	3.02	29.65	776.49

Notes to accompany Media Luna Mineral Resource Table

1. The qualified person for the estimate is Mark Hertel, RM SME, an Amec Foster Wheeler employee. The estimate has an effective date of June 23, 2015.
2. Au Equivalent (AuEq) = Au (g/t) + Cu % *(79.37/47.26) + Ag (g/t) * (0.74/47.26)
3. Mineral Resources are reported using a 2 g/t Au Eq. grade
4. Mineral Resources are reported as undiluted; grades are contained grades. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
5. Mineral Resources are reported using a long-term gold price of US$1470/oz, silver price of US$23.00/oz, and copper price of US$3.60/lb. The metal prices used for the Mineral Resources estimates are based on Amec Foster Wheeler`s internal guidelines which are based on long-term consensus prices. The assumed mining method is underground, costs per tonne of mineralized material, including mining, milling, and general and administrative used were US$50 per tonne to US$60 per tonne. Metallurgical recoveries average 88% for gold and 70% for silver and 92% for copper.
6. Inferred blocks are located within 110 m of two drill holes, which approximates a 100 m x 100 m drill hole grid spacing
7. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade, and contained metal content.

14.14 FACTORS THAT MAY AFFECT THE MINERAL RESOURCE ESTIMATE

Risk factors that could potentially affect the Mineral Resource estimates include:

- Assumptions used to generate the conceptual data for consideration of reasonable prospects of eventual economic extraction including:
    - Long-term commodity price assumptions
    - Long-term exchange rate assumptions
    - Assumed mining methods and mining recoveries
    - Changes in local interpretations of mineralization geometry and continuity of mineralization zones
    - Geotechnical and hydrogeological assumptions
    - Operating and capital cost assumptions
    - Metal recovery assumptions.
- Metallurgical testwork, metallurgical recovery and process plant performance assumptions
- Estimates of insitu bulk density are presently based on samples taken from core drilling. Determination of density based on larger-scale excavations or production may reveal densities that are different than those currently estimated for the deposit.
- Delays or other issues in reaching required agreements with local communities
- Changes in assumptions to current and future permitting requirements
- Maintenance of the social license to operate

14.15 COMMENTS ON SECTION 14

The QPs are of the opinion that the Mineral Resources, which have been estimated using reverse circulation drill data, core drill data and channel sampling data, have been performed to industry practices, and conform to the definitions used in CIM (2014).

15 MINERAL RESERVE ESTIMATES

15.1 KEY POINTS

- ELG Mineral reserves are estimated as of December 31, 2014 and include year-end stockpiles of ore mined in 2014.
- Mineral reserves incorporate dilution and mining loss and are based on cut-off grades that vary by ore type and average approximately 0.65 g/t Au.
- The contained gold in proven and probable mineral reserves is 13% less than the contained gold in measured and indicated mineral resources.
- The contained gold in proven and probable mineral reserves has increased by 1.4% versus 2012 mineral reserve estimates, principally because of the addition of the El Limón Sur pit.
- Definitive reconciliations to actual production will not be possible until 2016 when the plant is operating. Reported ore mining grades to date do not correlate well with predictions, which is under investigation.

15.2 MINERAL RESERVE ESTIMATE

CIM definitions have been followed in reporting mineral reserves. A mineral reserve is defined as follows:

*"A Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mine*d."

El Limón and Guajes (ELG) mine mineral reserves are founded on, and are part of the mineral resources presented in Section 14 of this report. The reserves are reported based on open pit mining within the feasibility-level designed pits presented in Section 16.9. Overall pit slopes range from 30º to 50º.

The reserves include 15% dilution and 5% mining losses, and are reported above in situ cut-off grades that range between 0.59 g/t Au and 1.11 g/t Au for the various ore types and average approximately 0.65 g/t Au. The cut-off grades were derived based on a long term gold price of $1250/oz Au and 2014 Q4 unit operating cost estimates that include mining at US$2.32/t for ore and US$2.27/t for waste, processing at US$15.27/t processed, and general and administrative at US$3.10/t processed. Silver is not incorporated in cut-off grade estimation since its contribution to revenue is relatively minor compared to gold. Further details on dilution, mining loss, and cut-off grade estimation are presented in Section 16.9 of this study.

Process recoveries are variable by ore type and head grade and are estimated to average 87.1% for gold and 32.5% for silver as presented in Section 22 of this report.

ELG Mine proven and probable mineral reserve estimates as of December 31, 2014 are summarized in Table 15-1 ELG preproduction mining has been underway since late 2013 and mineral reserve estimates include 0.4 Mt of ore that was mined and stockpiled in 2014. The remaining mineral reserves are located within designed pits at an average waste-to-ore strip ratio of 5.8:1.

Project base case financial analysis presented in Section 22 shows that the ELG life-of-mine plan founded on the mineral reserve estimates in Table 15-1 provides positive cash flows throughout the mine's operating life, confirming that the mineral reserves are economically mineable and that economic extraction can be justified.

It is noted that the financial analysis is based on a gold price forecast that is $50/oz lower than that used for cut-off grade determination, and the 2015 processing and G&A unit cost estimates in the financial model are higher than the late 2014 unit estimates utilized for cut-off grade determination. It is estimated that utilizing base case financial model metal price and unit cost forecasts for cut-off grade determination would increase cut-off grades by about 0.1 g/t Au. A mineral reserve sensitivity analysis showed that a 0.1 g/t Au increase in cut-off grade reduces total tonnages and contained gold by 2.7% and 0.6%, respectively, which is not considered material since it is believed to be within the accuracy of the reserve estimates.

The independent qualified person as defined by Canadian Securities Administrators National Instrument 43-101 for mineral reserve estimates is Brian Connolly, P.Eng., Principal Mining Engineer, SRK Consulting (Canada) Inc. The author is not aware of mining, metallurgical, infrastructure, permitting, or other factors that materially affect the mineral reserve estimates.

Table 15-1: Mineral Reserve Statement, El Limón Guajes Mine – Effective 31 December 2014

Reserve Category	Tonnes (millions)	Au Grade (g/t)	Ag Grade (g/t)	Contained Au (millions oz)	Contained Ag (millions oz)
El Limón (including El Limón Sur)					
Proven	6.3	2.95	3.62	0.60	0.73
Probable	24.5	2.69	5.31	2.12	4.19
Sub-total Proven and Probable	30.8	2.75	4.97	2.72	4.92
Guajes					
Proven	3.9	3.03	3.69	0.38	0.46
Probable	12.8	2.49	3.17	1.03	1.31
Sub-total Proven and Probable	16.7	2.62	3.29	1.41	1.77
Mine stockpiles					
Proven	0.4	1.40	1.97	0.02	0.02
Total El Limón and Guajes					
Proven	10.6	2.92	3.59	0.99	1.22
Probable	37.4	2.63	4.57	3.15	5.49
Total Proven and Probable	47.9	2.69	4.36	4.15	6.72

Notes to accompany Mineral Reserve Table:
1 Mineral reserves are reported based on open pit mining within designed pits above in situ cut-off grades that vary from 0.59 g/t Au to 1.11 g/t Au depending on ore type, and average approximately 0.65 g/t Au. Mineral reserves incorporate estimates of dilution and mining losses. The cutoff grades and pit designs are considered appropriate for metal prices of $1250/oz gold and $20/oz silver.
2 Mineral reserves are founded on, and included within, El Limón and Guajes mineral resource estimates with effective dates of 16 Dec 2014 for the Guajes deposit, 18 Jun 2012 for the El Limón deposit, and 6 Aug 2014 for the El Limón Sur deposit.
3 Mineral reserves were developed in accordance with CIM (2014) guidelines
4 Rounding may result in apparent summation differences between tonnes, grade, and contained metal content
5 The qualified person for the mineral reserve estimate is Brian Connolly, P.Eng., an SRK Consulting (Canada) Inc. employee.

15.3 COMPARISON TO MINERAL RESOURCE ESTIMATE

The mineral reserve estimates shown in Table 15-1 were reconciled with ELG Mineral resource estimates presented in Section 14. Contained gold in the proven and probable mineral reserves is approximately 13% less than contained gold in the measured and indicated mineral resources. Approximately 0.7% of the difference in contained gold is attributed to the higher cut-off grades utilized to define reserves and approximately 4.1% is due to incorporation of mining losses and dilution in reserve estimates. The remaining 8.2% is gold contained principally in indicated mineral resources that are located outside the ultimate pit designs. The ultimate pits are smaller than the conceptual pit shell utilized to report mineral resources.

15.4 COMPARISON TO PREVIOUS MINERAL RESERVE ESTIMATE

The ELG proven and probable mineral reserves in Table 15-1 were reconciled to the previous mineral reserve estimate dated August 28, 2012 that was included in the report "Morelos Gold Project 43-101 Technical Report

Feasibility Study, Guerrero, Mexico" issued 01 October 2012. At that time the ELG Mine was referred to as the Morelos Gold project. The two total mineral reserve estimates and a breakdown of the 0.8 Mt reduction in reserve tonnage and 0.06 Moz increase in contained gold from 2012 to year-end 2014 are summarized in Table 15-2.

Major changes since 2012 that affect reserves include: an increase in cut-off grade due to higher 2014 unit operating cost estimates; changes to Guajes pit designs and contained quantities resulting from revisions to the Guajes resource model; inclusion of El Limón Sur pit based on a revised El Limón Sur resource model; and changes to El Limón Phase NN pit associated with advancing the pit in the mine plan. Other changes since 2012 include reinterpreted topography based on late 2012 aerial mapping, actual mining in 2013 and 2014, and minor changes to estimates of ore losses within pits and roads to be mined by bulldozer.

Table 15-2: Reconciliation to Previous ELG Mineral Reserve Estimate

	Ore	Au	Ag	Contained metal		*Waste*	*% change to*		
	(Mt)	(g/t)	(g/t)	(Moz Au)	(Moz Ag)	*(Mt)*	*Ore*	*Cont'd Au*	*Waste*
Previous Mineral Reserve estimate, Aug 28, 2012	48.8	2.61	4.35	4.09	6.81	*272.4*			
ELG Mineral Reserves, including ore stockpiles, Dec 31, 2014	47.9	2.69	4.36	4.15	6.72	*274.4*			
Change to reserves since 2012	**-0.8**	**-2.19**	**3.69**	**0.06**	**-0.10**	***2.0***	***-1.7%***	***1.4%***	***0.7%***
Reasons for change to reserves:									
Cut-off grade increase	-0.6	0.57	2.53	-0.01	-0.05	*0.6*	*-1.3%*	*-0.3%*	*0.2%*
Guajes resource model and associated pit design revisions	-1.6	1.13	3.32	-0.06	-0.17	*2.2*	*-3.4%*	*-1.5%*	*0.8%*
El Sur resource model and associated pit addition	1.7	2.98	4.18	0.16	0.23	*13.5*	*3.4%*	*3.9%*	*5.0%*
El Limon pit design changes (principally Phase NN)	-0.2	2.42	na	-0.01	-0.06	*-0.5*	*-0.4%*	*-0.3%*	*-0.2%*
Other changes*	-0.1	2.43	na	-0.02	-0.04	*-13.8*	*-0.1%*	*-0.5%*	*-5.1%*

** Topography revisions based on late 2012 aerial mapping, 2013/2014 actual mining, dozer pit/road ore loss revisions*

15.5 COMPARISON TO REPORTED MINING

The process plant is not yet operating so reconciliations of reserve depletion versus actual plant feed and gold production are not possible. Definitive reconciliations, which are expected to require comparisons over at least three month time horizons, should be possible in 2016 when the process plant is operating and substantial quantities of ore are scheduled to be mined.

Total ELG ore reported mined to mid-2015 was compared with predicted quantities based the resource model, mine plan dilution/loss and cut-off grade parameters, and mining progress from pit surveys. Ore tonnages are similar but reported grades, which are based on blasthole sampling and assaying, are lower than mine plan predicted grades for the areas mined. In order to increase the confidence in the results from the blast-hole sampling, MML is currently testing a number of different blast-hole sampling techniques and is comparing the results to those obtained from twinned diamond drill holes. Deeper in-fill diamond drilling from the current Guajes operating bench is also planned to help refine the resource block model.

16 MINING METHODS

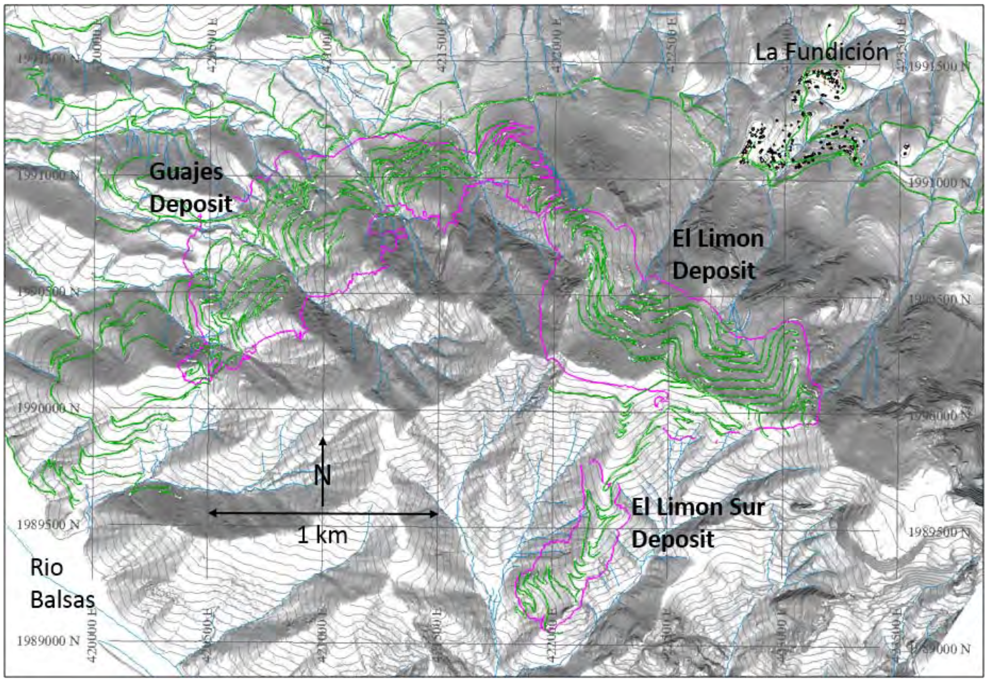
The key points of this section are:

- The El Limón and Guajes deposits are being mined by open pit mining methods. Mine construction began at the end of October 2013. The life-of-mine (LOM) plan in this report presents planned El Limón Guajes (ELG) mine development after December 31, 2014.
- The ELG pit slopes are anticipated to be comprised primarily of competent rock. Weaker rock has however been observed in close proximity to the known major faults and near surface topography.
- Groundwater inflow to the proposed pits is predicted to be low based on groundwater modelling. Pit dewatering requirements are principally related to surface runoff during storm events.
- Pit optimization analyses to guide pit design were conducted separately for the Guajes, El Limón, and El Limón Sur deposits, with value only applied to Measured and Indicated mineral resources.
- The ELG deposit will be mined utilizing a series of phase pits with 7 m bench heights and catchbenches at either 14 m or 21 m intervals, depending on geotechnical parameters.
- Run-of-mine (ROM) ore quantities within the designed pits as of December 31, 2014 are estimated to total 47.6 Mt at grades of 2.70 g/t Au and 4.38 g/t Ag with a strip ratio averaging 5.8:1.
- The LOM production schedule is based on process plant capacity of 14,000 tpd (i.e., 5040 kt/a) and a gradual 12 month ramp-up in plant feed rate from scheduled plant startup in November 2015.
- The principal LOM production schedule constraints include La Fundición village relocation and El Limón access road completion by mid-2015, to allow El Limón pit and haul road development to commence. As of mid-2015 Guajes and NN pit mining is ahead of schedule, and El Limón mining is forecast to commence in the second half of the year.
- Mining is planned utilizing the owner's workforce generally on a continuous 24 hour/day basis, 356 days/year, with 3 production crews working 12 hour shifts on a 20 day on – 10 day off rotation. Some contractor services are planned, notably maintenance for the first four years of the mine life, and mining of two of the smaller phase pits.
- Most equipment required for preproduction mining was acquired in 2013 and 2014 and is onsite. Additional equipment acquisitions are planned in 2016 and 2017 for El Limón mining and increased Guajes mining.

16.1 INTRODUCTION

It is planned that the El Limón and Guajes (ELG) deposit will be mined by open pit mining methods. Preliminary trade-off studies indicate that underground mining of the deposits is not as economically attractive as open pit mining.

Key characteristics of the ELG deposit from an open pit mining perspective include very steep and irregular terrain as illustrated in Figure 16-1, relatively competent bedrock, and poorly defined ore-waste contacts.



Map: Showing 25 m contours, exploration roads, and outlines of the mining areas. Figure courtesy of SRK Canada, May 2015.

Figure 16-1: Morelos Deposit Terrain

The village of La Fundición is located in close proximity and downhill from the El Limón deposit as illustrated in Figure 16-1, and the village must be relocated to allow El Limón open pit mining to proceed. Village relocation is scheduled to be completed by the summer of 2015 and prior to this date no road construction or mining activity is planned on the ridge above the village. Initial ore for the processing plant will come from the Guajes deposit.

A preliminary trade-off study was conducted to compare truck haulage versus overland conveying for transporting El Limón ore to the process plant. Torex selected overland conveying of El Limón ore for safety and environmental reasons, since this option significantly reduces downhill-loaded truck haulage of ore, allows the generation of electricity and reduces dust, noise, and diesel engine exhaust. The LOM plan presented in this report incorporates conveying of crushed El Limón ore to the process plant.

The LOM plan in this report presents planned development after December 31, 2014. Mine construction began at the end of October 2013, and mine development progress to December 2014 included Guajes haul road development and pre-production mining, and most of the El Limón access road development.

16.2 GEOTECHNICAL PIT SLOPE EVALUATION

The following information summarizes the findings of the SRK report "Feasibility-level Geotechnical Pit Slope Evaluation, Morelos Gold Project, Guerrero, Mexico" as well as subsequent geotechnical characterization and analysis for the El Limón Sur pit.

16.2.1 Geotechnical Characterization

A series of field data collection programs were designed and carried out for the mine with the primary objective of determining rock mass characterization and discontinuity orientation to serve as the basis of geotechnical model development. Field data collection consisted of geotechnical core logging and discontinuity orientation, point load testing, and laboratory strength testing. Geotechnical mapping was also carried out where suitable outcrops were accessible within the pit areas.

Results of the data collection programs indicate very competent rock conditions over much of the El Limón and Guajes open pit areas. In particular, most of the intrusives, hornfels, and skarns anticipated to comprise much of the pit highwalls (SE wall at Guajes and SW wall at El Limón) are all quite competent with average unconfined compressive strength (UCS) values typically ranging from 50 up to 300 MPa and rock mass rating (RMR) values of approximately 75 to 85 according to the Bienawski (1989) criteria.

When undisturbed, the marble is also generally characterized as good geomechanical quality with a mean UCS value of 58 MPa and RMR of 75. The marble is expected to be present primarily in the northeast wall of El Limón beneath the primary ramp system. Based on drilling intersections with voids and observations of marble outcrops on site, the marble appears to be host to karst voids. These voids are assumed to be solution caverns of various shapes and sizes that have formed along geologic structure. While these voids are not expected to be sufficiently prevalent to significantly impact overall slope stability, they are expected to present operational hazards, particularly since a large portion of the primary El Limón ramp system, including the access to and from the El Limón crusher loading pad, will be underlain by marble. While the potential for large underground voids does present risk to project schedule and budget, SRK believes that their presence does not adversely impact the feasibility of the mine.

Two areas of lesser rock quality were noted: the La Amarilla Fault hanging wall material at Guajes and a zone near the La Flaca Fault in El Limón. The La Amarilla hanging wall material will comprise the northwest wall of the Guajes pit and typically consists of intensely fractured intrusive rock and breccia that has been appreciably altered in most places. The La Amarilla hanging wall materials showed a mean UCS value of 28 MPa and RMR of 68.

At the intersection of La Flaca Fault and the marbles-hornfels contact, a thick northeast trending zone of relatively poor quality rock exists, with increased fracturing and intense alteration of the rock mass. This zone, referred to herein as the La Flaca fault zone, is characterized with a mean UCS value of 30 MPa and RMR of 47. Most of this poor rock quality zone will be mined out and it does not appear to extend deeply into the marble rock mass that will comprise the final El Limón northeast pit wall. South of La Flaca Fault, the eastern edge of this zone roughly parallels the final pit wall suggesting that localized areas of the weaker rock mass may remain in final pit walls, possibly resulting in localized bench sloughing. Such sloughing is not anticipated to significantly impact overall slope stability and has been accounted for in the slope design.

At El Limón Sur, the fresh rock appears to be of similarly high quality as the majority of the El Limón and Guajes pits with RMR values typically ranging between 65 and 75 and UCS values generally between approximately 100 and 300 MPa. Given the relatively shallow depth of the El Sur Limón pit, the upper weathered rock is anticipated to comprise a higher percentage of the overall pit slopes than in the El Limón and Guajes pits. The depth of weathering also appears to be deeper in the lower lobe of the El Limón Sur pit due to its intersection with a high angle, east-west trending fault zone. RMR values of the weathered rock were generally in the 30 to 50 range with UCS estimated between approximately 50 and 100 MPa.

16.2.2 Slope Stability Analyses

To optimize the slope design for the ELG mine, SRK evaluated both global and bench scale stability for the proposed open pits. Overall slopes were analyzed with limit equilibrium methods using the Hoek-Brown (2002) rock mass shear strength criteria and the "end of mining" groundwater surface exported from the SRK (2012) hydrogeologic model. The competent materials of the El Limón and Guajes pit walls were evaluated deterministically and demonstrated greater than acceptable factors of safety indicating that stability of the walls will be structurally controlled. For the lower quality Guajes La Amarilla hanging wall (northwest wall) and the La Flaca fault zone, more rigorous probabilistic models were used to incorporate the high degree of variability in rock quality and strength.

Resulting probabilities of failure are considered acceptable for their respective areas (approximately 10 % for the current Guajes La Amarilla haning wall design and 20 % for the El Limón La Flaca Fault Zone.

Slope kinematics were also evaluated with a qualitative risk assessment for each pit sector. The purpose of the assessment was to judge the risk or likelihood of plane shear and wedge-type failures occurring in a given pit sector. Where relatively high risks of instabilities are present, more detailed quantitative analyses should be carried out; however, given the predominantly steep dip angle of the dominant structural trends at the ELG mine, no sectors were identified as high risk based on the kinematic viability of plane shear and wedge type failures.

16.2.3 Pit Slope Design Recommendations

Pit slope design recommendations for the LOM plan pit designs are summarized below.

Table 16-1: Pit Slope Design Parameters

Sector	Max. Slope Height (m)	Max. Stack Height (m)	Max. Interramp Slope Angle (°)	Max. Overall Slope Angle (°)	Bench Face Angle (°)	Bench Height (m)	Berm Width (m)
El Limón – NW, East and South	380	126 (6x21)*	55	51	75	21	9.0*
El Limón - La Flaca Fault Zone	150	126 (6x21)*	47	42	65	21	9.8*
El Limón – NN	250	84 (6x14)*	47	40	70	14	8.0*
Guajes- La Amarilla Footwall	400	126 (6x21)*	55	51	75	21	9.0*
Guajes - La Amarilla Hanging Wall	150	84 (6x14)*	38	35	58	14	9.2*
El Limón Sur – Weathered	190	63 (3x21)*	46	39	62	21	9.0*
El Limón Sur – Fresh	190	63 (3x21)*	53	39	72	21	9*

*A minimum 20 m stepout or "geotechnical berm" should be designed between bench stacks. The 20 m minimum width includes the normal 9 m berm width.

A 75° bench face angle is recommended for the El Limón pit NW, East and South sectors and the Guajes pit La Amarilla footwall sector based on the dip and dip directions of the structures relative to the slope orientation. The geotechnical advantage of the 75° bench face angle is improved rockfall control based on the anticipation that the 75° face angle can be successfully achieved without requiring exceptional care in excavation practices. It is recommended that trials in non-critical areas of the pit be implemented in order to determine the operational parameters required to achieve this design. Pre-shear blasting techniques may be required to consistently achieve the 75° bench face angle.

16.3 RECOMMENDED MINE ACCESS AND HAUL ROAD CONFIGURATIONS

The steep and irregular terrain which the mine access and haul roads will traverse necessitates a lengthy approach with multiple switchbacks to connect the mining benches to the plant site and waste dumps. In areas where the terrain is too steep for cut-fill construction, the roads must be constructed entirely in cut, producing relatively high cut slopes. The complexity of the mine road routing and construction mandated that a sub-study, as described in this section, be conducted to evaluate the issue. The mine roads considered during this sub-study include:

- The south access road from Guajes to the top of El Limón (now complete)
- The haul road from the top of El Limón to the crusher and ore conveyor loading station
- The southeast El Limón pit haul road

For evaluation, the road alignments were subdivided into sectors of similar geography and anticipated geotechnical characteristics, as shown on Figure 16-2.

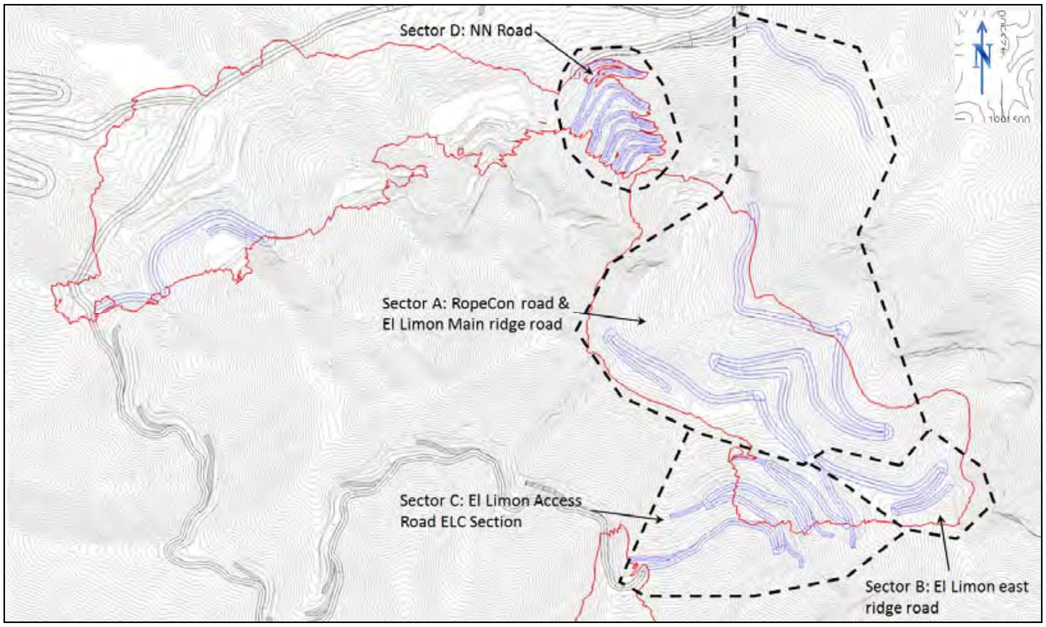


Figure courtesy of SRK USA, May 2015.

Figure 16-2: Mine Road Sectors

Due to site access limitations and project schedule, geotechnical drilling was not possible in some areas, particularly along the south access road alignment. Based on available information from geotechnical drillholes in the open pit areas and outcrop mapping along accessible road cuts in the area, the construction of access and haul roads as recommended in Table 16-2 is considered feasible. Confirmation of actual conditions along the alignments during construction and, especially, mapping of the geotechnical and geochemical characteristics of the materials exposed during the initial road cuts will be necessary.

Table 16-2: Mine Access and Haul Road Design Recommendations

Road Cut Slope Angle Recommendations					
Road Sector		A	B	C	D
Weathered rock depth	m	15	10	-	-
Weathered rock bench face angle	deg	45	50	75	-
Weathered rock bench width	m	-	-	9.3	-
Fresh bedrock bench face angle	deg	78	78	75	70
Catch bench width	m	7.3	7.3	7.3	7
Catch bench height/interval	m	14	14	14	14
Interramp slope angle (fresh rock)	deg	54	54	52	49

Note: Recommendations are based on the use of pre-shear blasting practices.

It is anticipated that localized areas of relatively poor rock quality and adverse geologic structure could be encountered along the alignments. In such areas, specific modifications to the design recommendations presented herein are anticipated; however, such modifications are expected to be limited to minor rock bolting and/or installation of mesh. In some areas, narrow pushbacks of slopes may also be required.

The actual performance of higher cut slopes will depend largely on the quality of blasting practices. Pre-shearing to maximize road cut slope angles is recommended in fresh rock in order to increase achievable fresh rock slope angles, thereby minimizing road cut slope heights and road excavation quantities. Haul road geotechnical design criteria, with pre-shearing, are summarized in Table 16-2. The extent and thickness of the weathered zones were estimated based on existing road cuts and drillhole information where available and will need to be confirmed during construction.

Achieving 78-degree bench face angles in Sectors A and B is considered aggressive; however, based on observations of current El Limón access road cuts, existing geological mapping of the area and the current understanding of geologic structure at the site, 78-degrees with pre-shear is believed to be achievable for those areas. In addition, with the incorporation of 7.3 m catch berms every 14 m, minor raveling or small-scale bench instabilities particularly during the rainy season, should be expected.

16.4 WASTE ROCK DUMP GEOTECHNICAL ASPECTS

Amec Foster Wheeler provided geotechnical guidance on open pit waste rock dump (WRD) design, which is presented in Section 18.8.3 of this report.

WRDs will be developed by end dumping from platforms located at the dump crest elevation, as bottom-up dump construction (i.e., hauling to the base of the dump and constructing the dump in lifts) is not considered practical due to the large elevation difference between the waste rock mining benches and the base of the waste WRDs. Such WRD construction (end dumping from high elevations on steep terrain) has parallels at many other mining operations located in mountainous regions. Some of the best examples are Teck Resources Elk Valley Coal and Rio Tinto's Bingham Canyon operations. The El Limón WRD will be developed by construction of a waste rock buttress by end dumping rock from elevation 861 m. Subsequently, waste rock will be end dumped from higher crest platform elevations. The Guajes WRD will be developed by end dumping rock from four crest elevations along the valleys forming four crest platforms. The El Limón Sur WRD will be developed on the east and west side of the El Limón Sur open pit. The east WRD will be developed by end dumping rock from five elevations along the valley forming five crest platforms. The El Limón Sur West WRD will be developed by dumping rock from two elevations forming two crest platforms.

Geotechnical investigations have been carried out near the toe of the El Limón and Guajes WRD locations that included boreholes and test pits. In general, the foundation conditions are conducive to this type of waste rock dump construction. The sub-surface conditions were assumed to be similar at the El Limón Sur WRD locations and will be confirmed during detailed engineering study by performing geotechnical investigations. Flow-through drains will be constructed in areas of groundwater seeps to ensure the water drains freely.

To ensure safe operation of the dumps a safety zone will be established at the base of all WRDs, signifying the maximum limit of potential rock run-out. These zones will not be entered during operation of the dumps. The location and extent of these zones have been determined based on evaluation of the dumps and is described in Section 18.8.3. Safe dumping procedures have been developed and will be utilized during mine operation.

Surface water drainage from all of the WRDs will be collected in surface water management ponds. Runoff from the El Limón WRD will report to Ponds 5 and 6. Runoff from the Guajes West WRD will report to Pond 8. Runoff from El Limón Sur WRD will report to Pond 9. These ponds will settle solids and provide discrete monitoring locations. Additional information on these ponds is described in Section 18 of this report.

At closure the waste rock dump slopes will be re-graded to 2H:1V for long-term stability and safety.

16.5 PIT HYDROGEOLOGY

Pit dewatering requirements for the Guajes and El Limón open pits were evaluated by SRK based on 3D numerical groundwater flow modelling completed in 2012 (SRK, 2012b and 2012c) by using the MODFLOW-SURFACT finite-difference code and Visual MODFLOW interface. This model was developed based on hydrogeological data collected during the 2011 and 2012 field programs, and calibrated to measured water levels in 44 monitoring wells/test holes. Groundwater model predictions were updated in 2015 by incorporation the additional El Limón Sur pit. Torex's pit plans for the Guajes, and El Limón and El Limón Sur open pits with ultimate pit bottom elevations of 560 msl, 966 msl, and 777 msl, respectively were incorporated into the groundwater model.

The model predicts that maximum groundwater inflow to the proposed pits would be very small due to the low hydraulic conductivity of surrounding country rock. Maximum passive groundwater inflow rates are predicted to be approximately:

- Guajes Pit: 210 m^3/day
- El Limón Pit: 100 m^3/day
- El Limón Sur Pit: 21 m^3/day

These very small groundwater inflows to the proposed pits could be managed by in-pit dewatering system (no active dewatering would be required).

16.6 PIT HYDROLOGY

The contributions from surface runoff into the open pits for average year precipitation are estimated to be 580 m^3/day and 450 m^3/day for Guajes and El Limón open pits, respectively. In the case of the El Limón Sur open pit, the runoff is estimated to be 102 m^3/day. The pumping capacity has been sized to evacuate the 1:10 year return period, 24-hour storm event in about 48 hours. The runoff volumes for the 1:10 year 24-hour storm event are estimated to be 68,000 m^3 for the Guajes open pit, 49,000 m^3 for the El Limón open pit, and 15,865 m^3 for El Limón Sur. The design pump capacities required at the Guajes and El Limón open pits are 1,420 m^3/hour and 1,020 m^3/hour, respectively, and 331 m^3/hour for El Limón Sur.

These values apply to the fully developed pits scenario and also include runoff from adjoining sub-catchments, which are assumed to drain into the pits.

16.7 PIT OPTIMIZATION

Lerchs-Grossmann (LG) pit optimization was conducted using Whittle® software. The LG algorithm determines a pit shell that provides the maximum operating margin or cash flow (before capital, taxes or discounting) based on a resource model and a set of input economic and technical parameters. The technical parameters include overall pit slope angles that incorporate approximate allowances for haulage ramps. The pit shell generated shows the depth and shape of the economic mining area, although the shell itself is quite irregular since it is based on mining entire resource blocks.

A series of nested pit shells are generated by varying or factoring input revenue estimates and rerunning the LG algorithm. The nested pit shells generated with various revenue factors are analyzed on a present value and incremental basis to determine the optimal pit shell to be utilized as a guide to ultimate pit design with haulage ramps. Smaller nested pit shells are also useful as a guide to stage or phase pit design.

16.7.1 Input Parameters

Pit optimization for the LOM plan is based on metal prices of US$1,250/oz gold and US$20/oz silver, with value only applied to Measured and Indicated mineral resources. Inferred mineral resources are considered waste rock. The pit optimization gold price was selected early in the mine planning process. Subsequent to pit optimization analysis the long term gold price forecast was reduced to US$1,200/oz due to market conditions. The 4% reduction in gold price is not believed to materially impact on pit optimization findings, since as shown in Section 16.7.2 the pit shells selected to guide ultimate pit designs all utilize revenue factors of less than 0.96.

Process recovery of gold is expected to vary by ore type and by head grade. As described in Section 13, a gold grade-recovery equation and a constant silver recovery were estimated for each of six ore types and utilized to forecast process plant recovered gold and silver production. Because process recovery is quite variable depending on the head grade and ore type, it was considered expedient to estimate recovered metal grades by block and utilize these for pit optimization purposes. The grade-recovery formulas were utilized to estimate process recovery for each mineralized block in the resource model. Recovered gold and silver grades by block, defined as in situ grade (g/t) x process recovery (%), were generated and exported to Whittle for pit optimization purposes.

Input parameters for ELG pit optimization are summarized in Table 16-3. Unit operating cost estimates were sourced from previous project studies and mine plan analyses, escalated to 2014 Q4. The overall pit slope angles were chosen to reflect the various geotechnical slope domains and inter-ramp angles with allowances for haulage ramps as deemed appropriate.

Table 16-3: Pit Optimization Parameters

	Units	**Guajes & El Limón**	**EL Sur**
Long Term Gold Price	$/oz	1,250	1,250
Payable	%	99.925%	99.925%
Refining	$/oz	1.48	1.48
Au value in dore	$/oz	1248	1248
Royalty	%	2.5%	2.5%
Value of recovered Au	$/oz	1216	1216
Value of recovered Au	**$/g**	**39.11**	**39.11**
Long Term Silver Price	$/oz	20	20
Payable	%	99.5%	99.5%
Refining	$/oz	1.48	1.48
Ag value in dore	$/oz	18.42	18.42
Royalty	%	2.5%	2.5%
Value of recovered Ag	$/oz	17.96	17.96
Value of recovered Ag	**$/g**	**0.58**	**0.58**
Process rate	Mt/yr	*5.04*	*0.60*
Discount rate	%	*10%*	*10%*
Operating Costs			
Ore mining, with allowance for GC	$/t	2.32	4.90
Waste mining	$/t	2.27	3.00
Processing	$/t feed	15.27	15.27
G&A	$/t feed	3.10	3.10
Dilution	% in situ	15%	15%
Mining loss	%	5%	5%
Cut-off grade, in situ[1]	g/t RAu	0.53	0.57
Overall pit slopes (with allowances for ramps)			
Weathered rock	degrees	30-45	35
Bedrock	degrees	30-49	39

[1] Cut-off grade on a "recovered gold grade" basis, i.e., Au grade g/t x process recovery %.

16.7.2 Pit Optimization Results

To guide pit design, pit optimization analyses were conducted separately for the Guajes, El Limón, and El Limón Sur deposits. The results of these analyses are described below.

16.7.2.1 Guajes Deposit

Guajes deposit pit optimization results are presented graphically in Figure 16-3. Based on incremental and present value analysis, pit shell O31 developed using a revenue factor of 0.90 (equivalent to a gold price of about US$1125/oz) was selected to guide Guajes deposit pit design. Guajes pit shell O31 is illustrated in Figure 16-4.

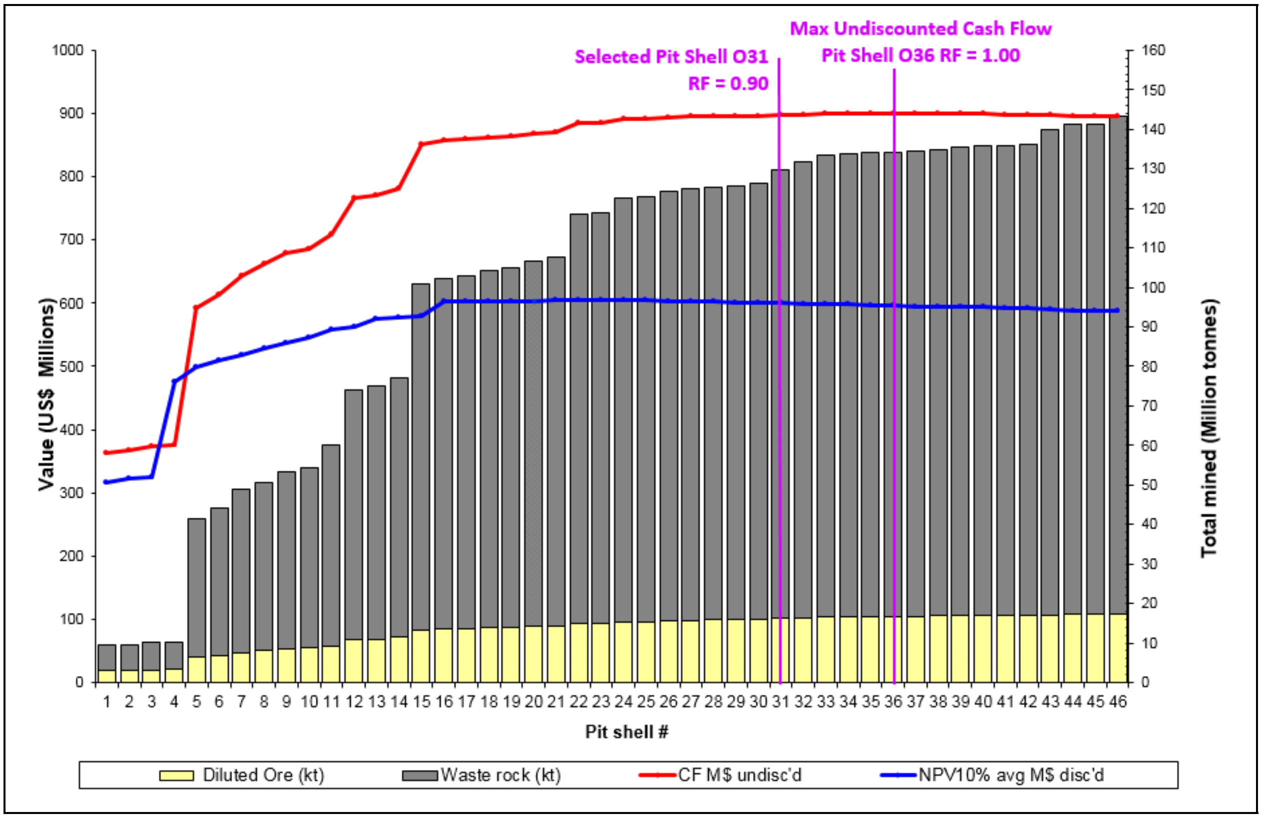


Figure courtesy of SRK Canada, May 2015

Figure 16-3: Guajes Pit Optimization Results

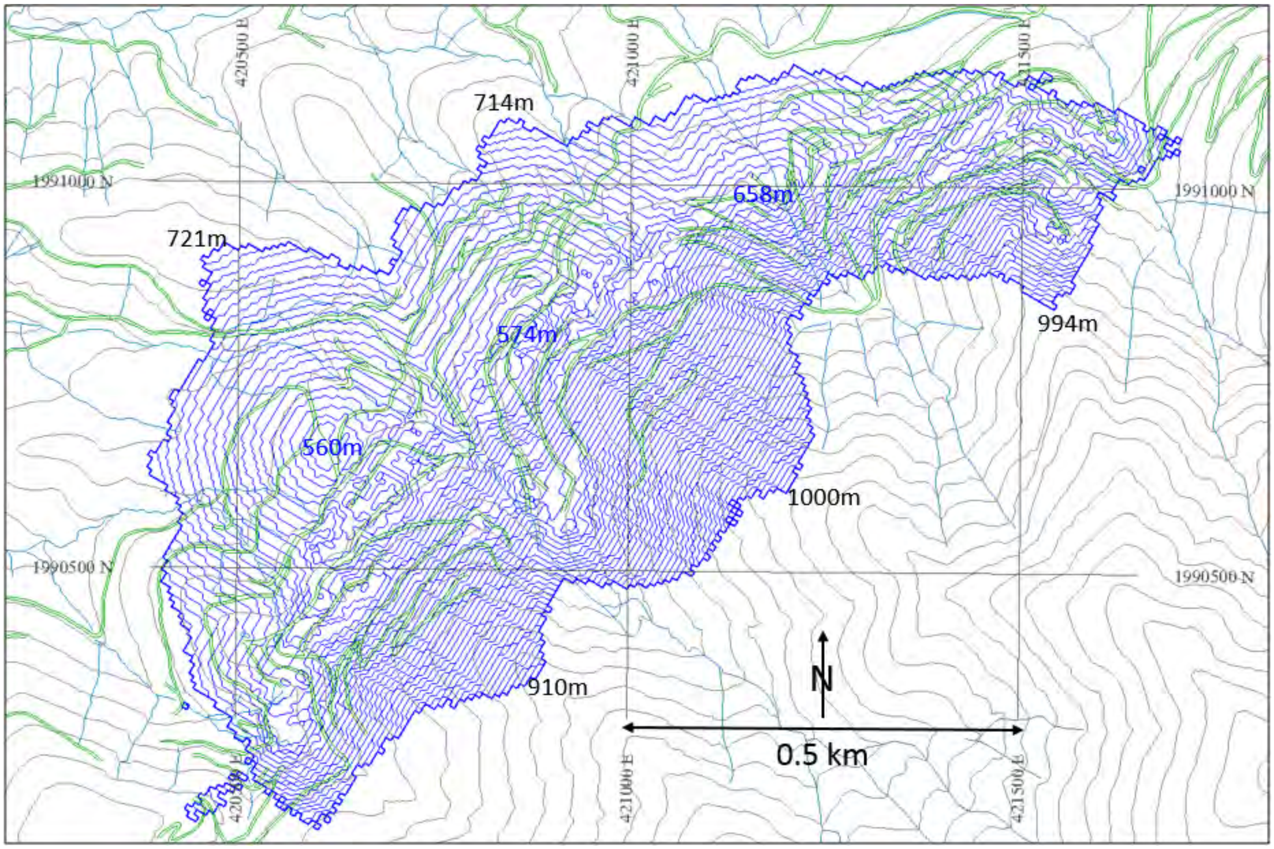


Figure courtesy of SRK Canada, May 2015

Figure 16-4: Guajes Selected Pit Shell O31

16.7.2.2 El Limón Deposit

El Limón deposit pit optimization results are presented graphically in Figure 16-5. The graph reveals a pronounced step increase in pit quantities at Shell P26. The incremental additional mineralization added for pit shells larger than P25 is at very high strip ratio. For the purposes of the LOM plan presented in this report the smaller shell P25 developed using a revenue factor of 0.78 (equivalent to a gold price of about US$975/oz) was utilized to guide El Limón pit designs. Pit shell P25 is illustrated in Figure 16-6.

The step increase in pit size was also evident during the 2012 feasibility study pit optimization. At that time, detailed mine planning analysis that included alternate phase pit designs, alternate production schedules, and financial analysis, showed that a larger pit was economic, albeit with lower NPV and IRR due to high strip ratios. It was determined that the El Limón resources at depth require further definition drilling. SRK understands that MML is planning additional definition drilling of the deeper El Limón resource and plans to re-evaluate the El Limón ultimate pit depth when the drilling results are available.

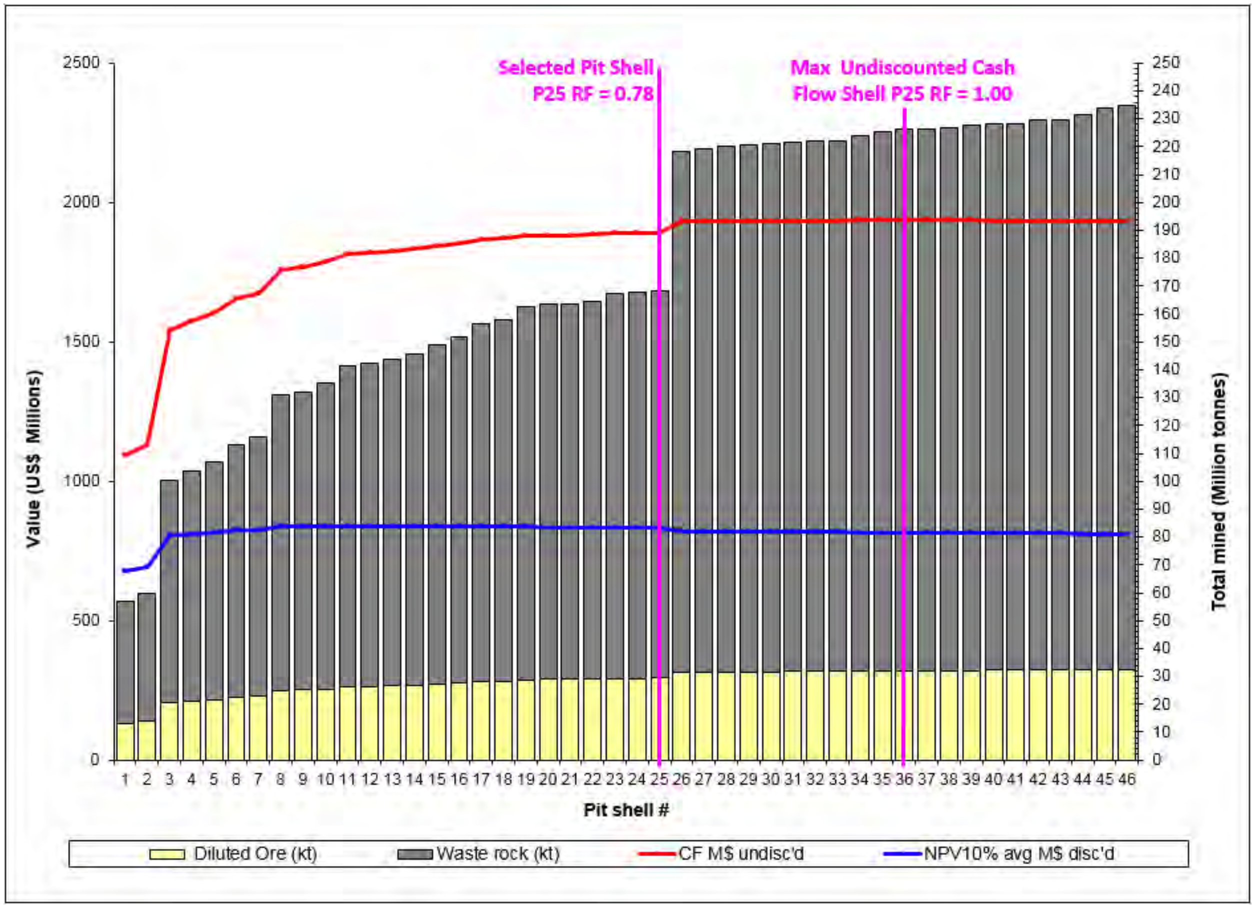


Figure courtesy of SRK Canada, May 2015.

Figure 16-5: El Limón Pit Optimization Results

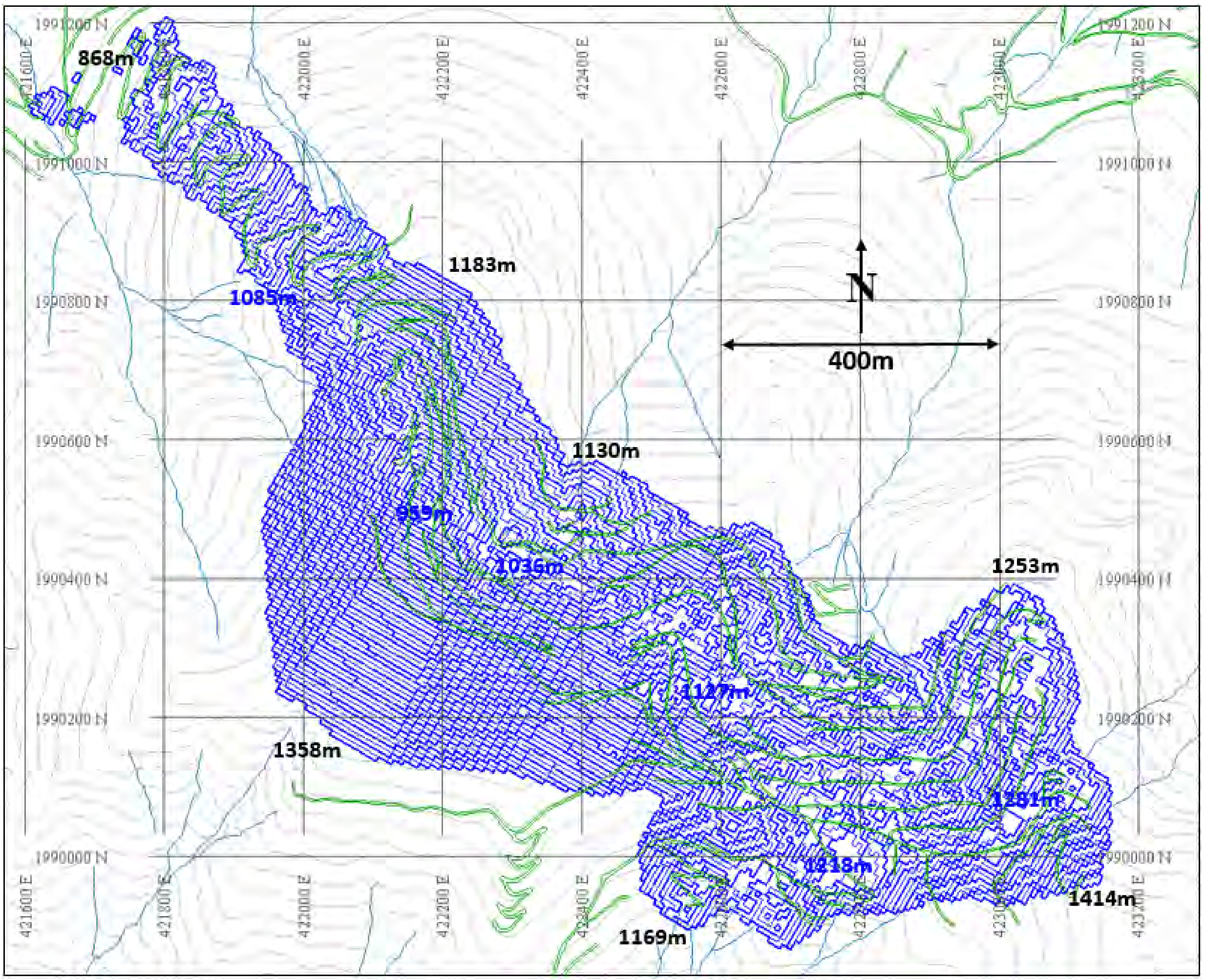


Figure courtesy of SRK Canada, May 2015.

Figure 16-6: El Limón Selected Pit Shell P25

16.7.2.3 El Limón Sur Deposit

The small El Limón Sur deposit is located to the south of the main El Limón deposit. El Limón Sur deposit pit optimization results are presented graphically in Figure 16-7. Based on incremental and present value analysis pit shell L28 developed using a revenue factor of 0.85 (equivalent to a gold price of about US$1063/oz) was selected to guide the El Limón Sur deposit pit design. El Limón Sur pit shell L28 is illustrated in Figure 16-8.

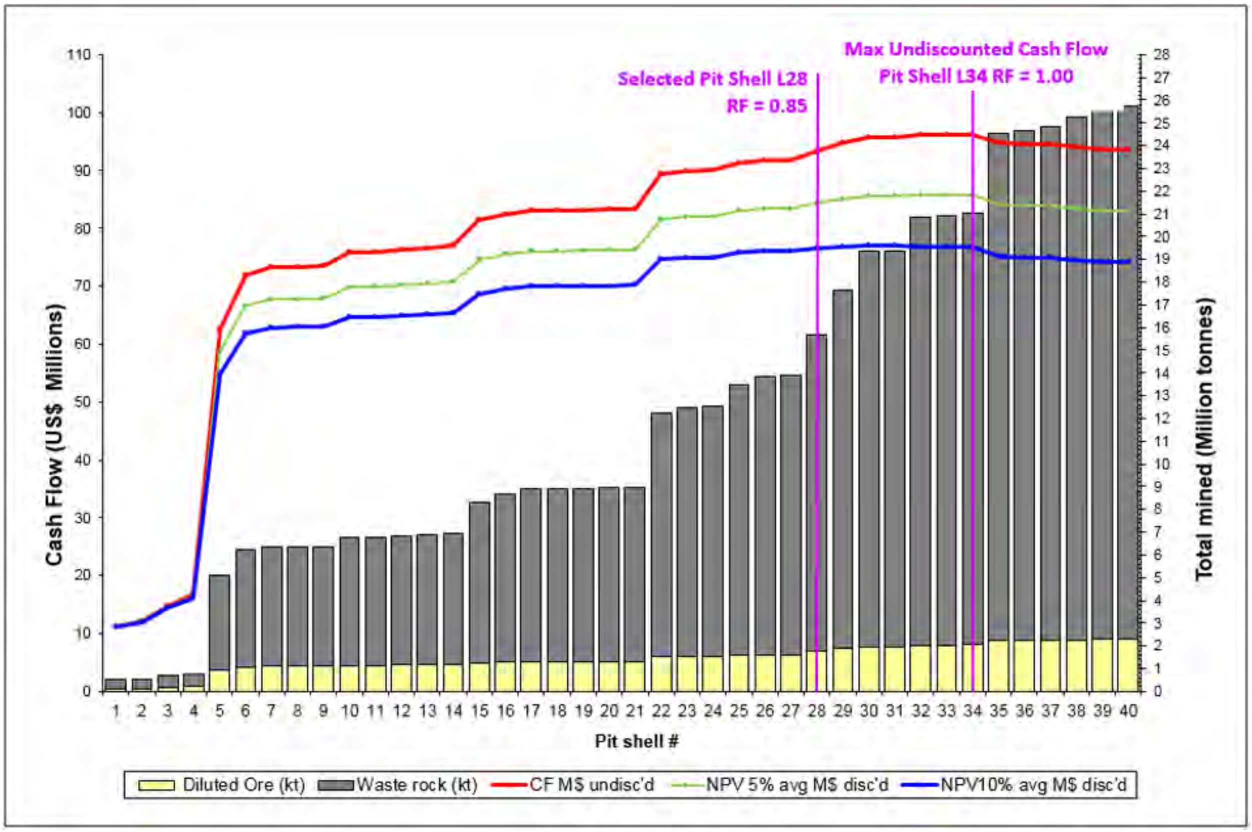


Figure courtesy of SRK Canada, May 2015.

Figure 16-7: El Limón Sur Pit Optimization Results

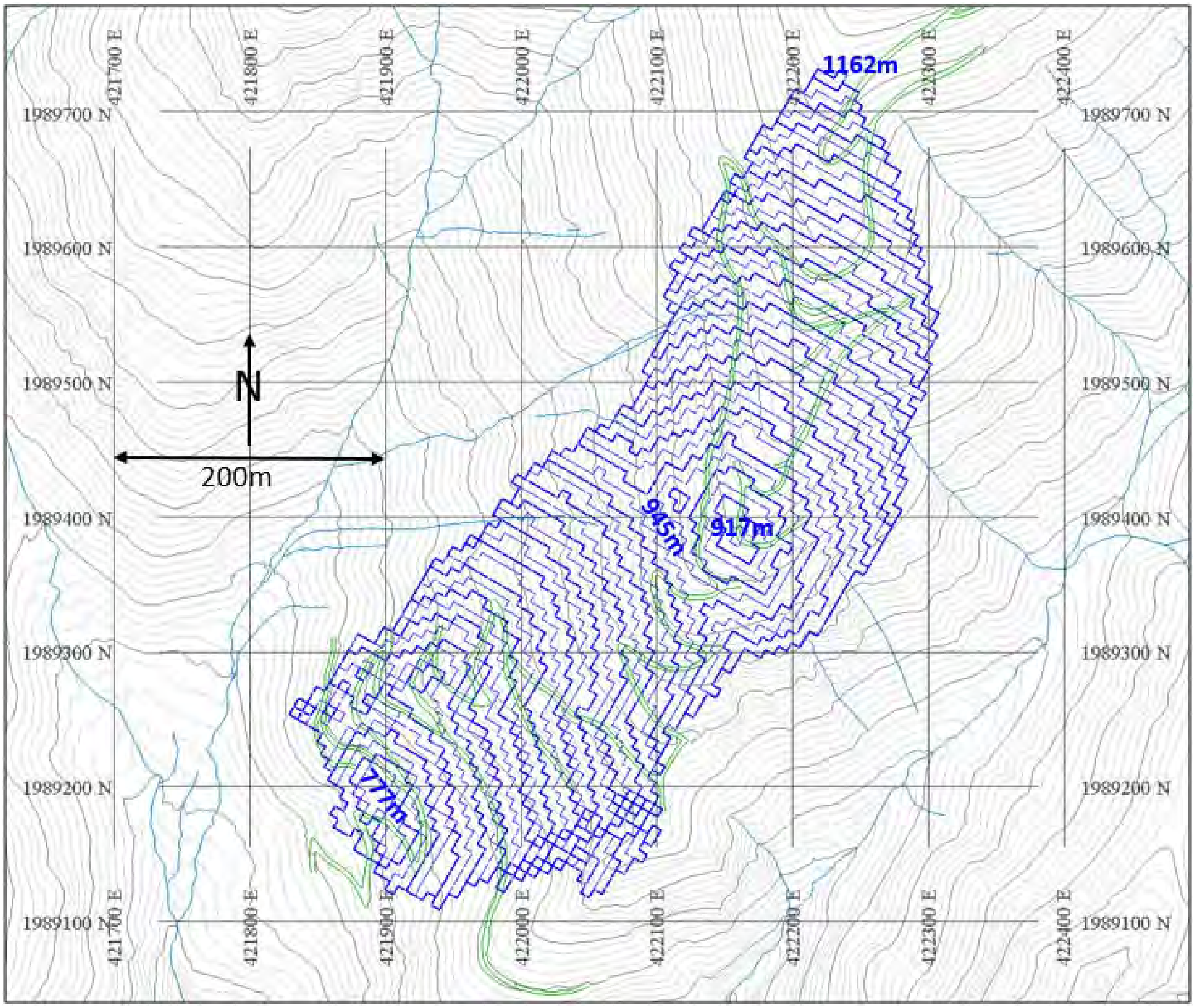


Figure courtesy of SRK Canada, May 2015.

Figure 16-8: El Limón Sur Selected Pit Shell L28

16.8 MINE ROAD LAYOUT

ELG haul roads are in general designed to a width of 25 m, including allowances for a drainage ditch and shoulder safety berm, to support two-way uninterrupted haulage by 90-tonne class mining trucks. The haul roads have been designed with gradients up to 8.5% and level switchbacks, to facilitate braking on the predominantly downhill loaded hauling profiles. Roads utilized for pit access only are designed 18 m in width at gradients up to 10.5%, which is considered adequate for single lane equipment traffic. Pullouts are required for large vehicle passing.

Because of the steep terrain, construction of pit access and haul roads is challenging. The layout of the mine roads is shown in Figure 16-9. All road layouts are based on an updated topographical surface derived from 2012 aerial mapping data. The Guajes East and Guajes West haul roads were completed in 2014. El Limón access road and the NN pit haul road development were in progress at the end of 2014. The El Limón in-pit haul road layouts shown in Figure 16-9 are considered feasibility-level layouts. Final designs for construction should incorporate run-out ramps at appropriate locations including switchbacks.

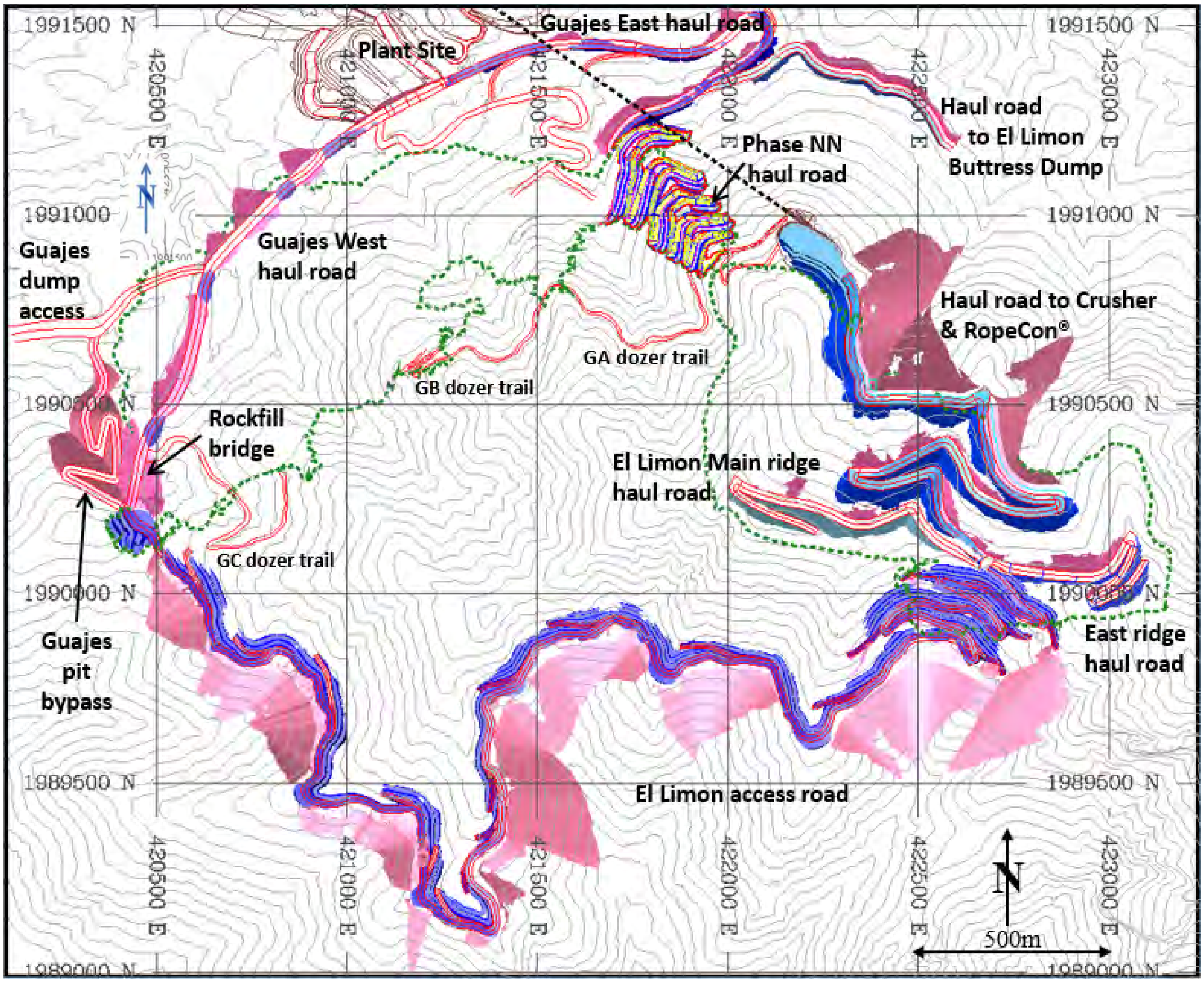


Figure courtesy of SRK Canada, May 2015

Figure 16-9: Mine Road Layout

Mine roads illustrated in Figure 16-9 include:

- Guajes dozer trails completed in 2013 and 2014, to facilitate bulldozers and drill access to initial high elevation mining ridges.
- Guajes haul roads, generally located on gentle terrain, connecting initial Guajes truck-loader mining areas with the process plant and waste dump. These roads were completed in 2014 using cut-fill techniques and with rockfill mined from an initial Guajes starter pit.
- El Limón access road, under construction at 2014 year end. This 18-meter wide road at 10% gradient is located on the south facing slopes to the south of the El Limón deposit. The road width is suitable for single lane traffic by 90-tonne class haulage trucks and pullouts are required for passing. The access road terminates at the El Limón ridge "saddle" location at 1298 m elevation and is scheduled to be complete by mid-2015. Due to the steep terrain the road is designed almost entirely in cut, requiring relatively high cut slopes with benches and berms. During mine operation the access road segment traversing the Guajes pit will be replaced with a Guajes pit bypass section connecting to the Guajes West waste dump haul road.

- El Limón ore and waste haul roads, to be built after La Fundición village relocation in mid-2015. These roads include:
    - Main ridge and south ridge waste haul roads, constructed from the "saddle" upper terminus of the access road to the highest truck-loader mining benches on the two ridges.
    - El Limón haulage road built from the "saddle" upper terminus of the access road down to the El Limón crusher and ore conveyor location at 1120 m elevation. This road, 25 m in width at 8.5% gradient, will be utilized for both El Limón ore haul and waste hauling.
- El Limón Phase NN haul road. This road is designed 11 m wide at 10% gradient for single lane haulage by 36-tonne class articulated trucks, and includes multiple switchbacks that are developed almost entirely in cut with extensive use of pre-shearing. The road was under construction at 2014 year end to facilitate early mining of El Limón northwest ridge ore. The road will also provide service vehicle access to the El Limón crusher area from the plant site.

Features of the mine roads are summarized in Table 16-4.

Table 16-4: Features of Mine Roads

ROAD	Status end 2014	Width m	Length km	Start elev, m	End elev, m	Rise m	Gradient % (max)
Guajes Phase GW road to plant site	complete	25	1.5	770	715	55	8.5%
Guajes Phase GE road to plant site	complete	25	1.5	840	715	125	8.5%
Phase NN pit haul road	in progress	15	2.4	1071	840	231	10%
El Limón access road	in progress	18	5.6	770	1298	528	10%
El Limón east ridge haul road	planned	25/18	0.8	1298	1358	60	8%
El Limón main ridge haul road	planned	25	1.0	1298	1372	74	8%
El Limón ore haul road (to crusher)	planned	25	2.2	1298	1120	178	8.5%

16.9 PIT DESIGN

The ultimate and phase pits were designed using MineSight® mining software based on pit slope geotechnical criteria. All pits are designed with 7 m bench heights, which match the vertical dimension of the resource blocks. Pit walls are designed with catchbenches at 14 m intervals (i.e., double benched) or at 21 m intervals (triple benched). In general, based on geotechnical parameters, Guajes pit walls located to the west of the La Amarilla fault are designed with catchbenches at 14 m intervals, whereas pit walls to the east of the fault (i.e., the higher pit walls) are designed with catchbenches at 21 m intervals. The main El Limón pit and El Limón Sur pit are designed with catchbenches at 21 m intervals, and the small El Limón northwest ridge Phase NN pit is designed with catchbenches at 14 m intervals.

Pit haulage ramps in general are designed 25 m in width at 10% gradient for uphill loaded hauls and at 8% gradient for downhill loaded hauls. Near pit bottom the haulage ramp designs are narrowed to 18 m, which is suitable for single lane traffic by the 90-tonne class haulage trucks contemplated. For two small phase pits, Phase NN and El Limón Sur, narrower ramps are designed for haulage by 36-tonne class articulated haulage trucks.

The geotechnical slope sectors shown in Table 16-1 were coded into the MineSight block model so that variable pit slope geotechnical criteria by sector could be followed on a block-by-block basis during pit design. Pit design parameters are summarized in Table 16-5.

Table 16-5: Pit Design Parameters

Parameter	Units	Guajes pit		EL N ridge	El Limón (EL)	
		Highwall	W of fault	NN pit	Main pit	EL Sur
Bench height	m	7	7	7	7	7
Bench face angle	deg	75	58	70	65 - 75	62 - 72
Catchbench vertical interval	m	21	14	14	21	21
Catchbench width	m	9	9.2	7	9.0 - 9.8	9
Inter-ramp slope angle	deg	55	38	49	47 - 55	46 - 53
Highwall geotech berm width	m	25	na	na	25	na
Highwall geotech berm interval	m	126	na	na	126	na
Haulage width - two way	m	25	25	8*	25	17
Haulage width - single lane (near pit bottom)	m	18	18	5*	18	11
Max in-pit ramp gradient	%	10	10	10*	10	12
Overall slope (with ramps & geotech berms)	deg	50	30	39	35 - 50	36 - 39

** Service ramp for small vehicles*

16.9.1 Guajes Pit Design

It is planned that the Guajes deposit will be mined utilizing a series of phase pits guided by pit shell O31 illustrated in Figure 16-4.

The high Guajes ridges were mined as dozer phase pits, to avoid extremely difficult truck haul road construction to high elevations on the ridges. Blasted rock was dozed downhill to lower elevations and then shaped into in-pit haulage roads for subsequent lower elevation truck-loader mining. The dozed rock (including the in-pit roads built with rockfill) will eventually be rehandled into trucks for hauling to the waste dump. The highwall layouts for the dozer pits included 8 m wide 14% gradient access ramps, to facilitate equipment and personnel access to the operating benches from the surface dozer trails described in Section 16.8. Three dozer pits were designed to pioneer the three high Guajes ridges. The dozer pit on the easternmost ridge, i.e., Phase GA pit, was completed in 2014. The remaining two dozer phase pits, i.e., Phases GB and Phase GC, were in progress at 2014 year end and are illustrated in Figure 16-10. Phases GB and GC mining was completed in the first half of 2015.

Also shown in Figure 16-10 is an initial Guajes starter pit, Phase GD, which was mined by truck and loader in 2014. Phase pit GD contained no ore but served as an in-pit source of rockfill for road construction. The completed pit also serves as a sump for water management purposes, and provides a rockfall catchment zone between the GW haul road (part of the El Limón access route) and high elevation mining on the ridges above.

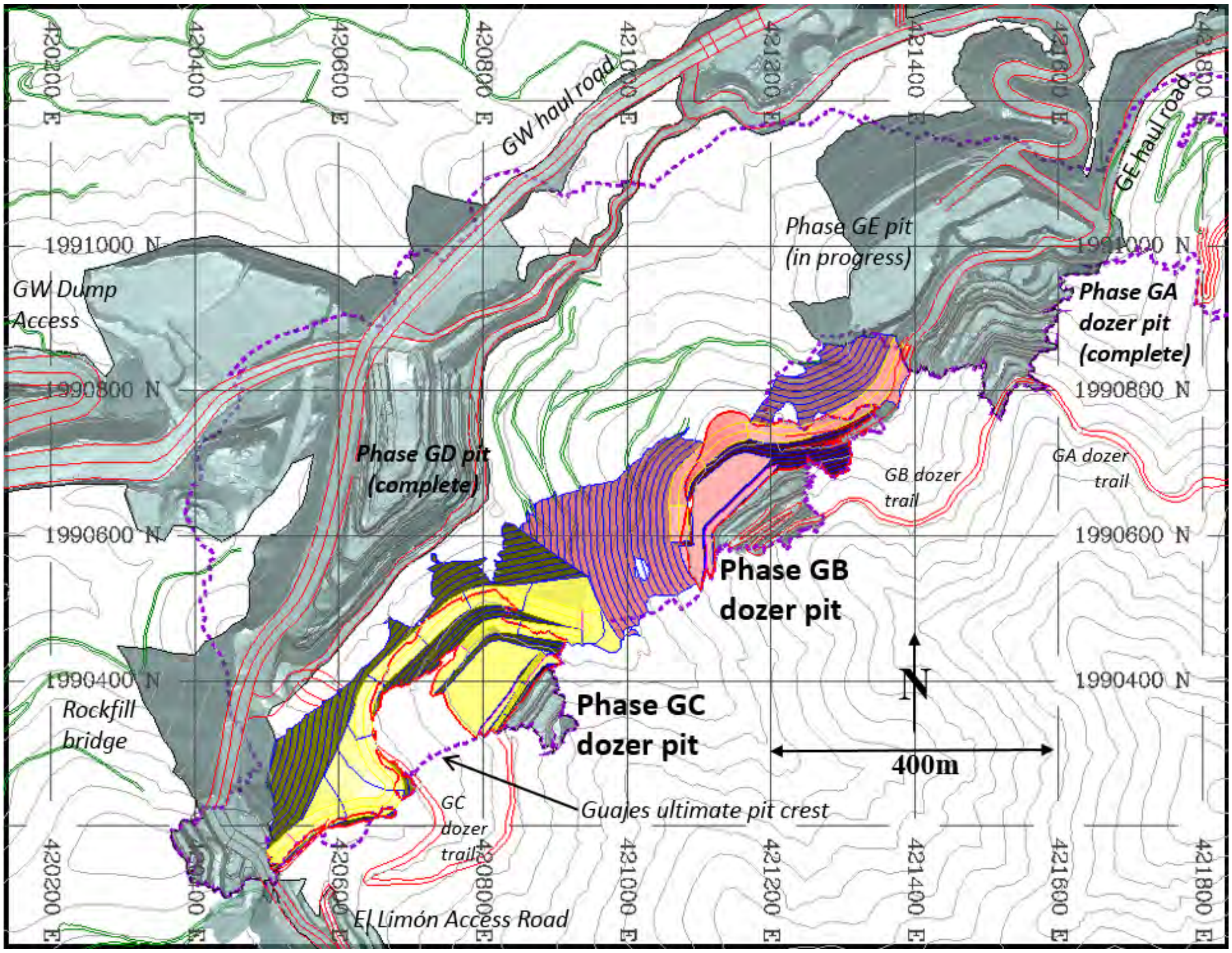


Figure courtesy of SRK Canada, May 2015.

Figure 16-10: Guajes Dozer Phase Pits GB and GC

The Guajes East truck-loader phase pit, referred to as Phase GE, is the source of the initial ore feed at plant start-up. Mining of this pit commenced in 2014 once the Phase GA dozer pit was completed. Guajes Phase GE (Guajes East) pit design is illustrated in Figure 16-11. A haulage ramp is incorporated in the pit highwall to facilitate planned mining of the adjacent Guajes West pit.

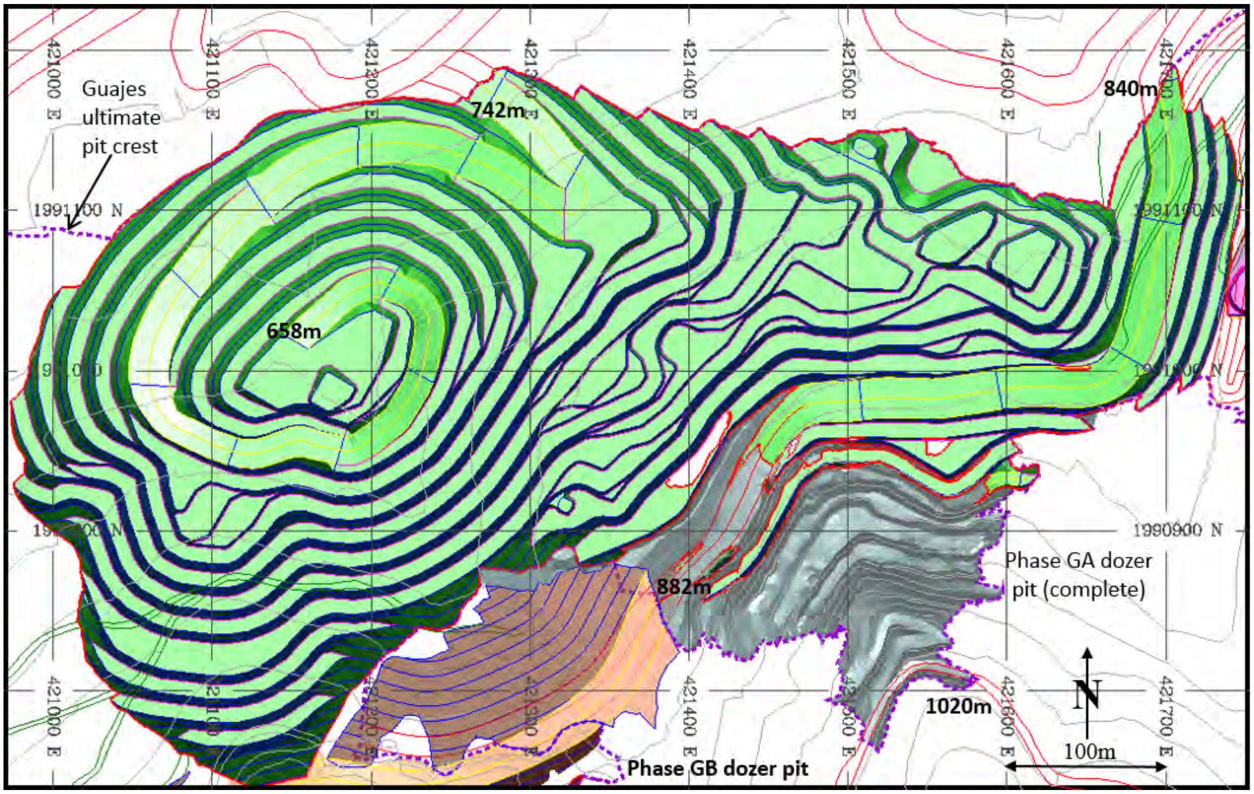


Figure courtesy of SRK Canada, May 2015.

Figure 16-11: Guajes Phase GE (Guajes East)

When the Phase GB dozer pit is completed, Guajes West (i.e., Phase GW) truck-loader pit mining will commence. Initially Phase GW pit access and waste rock hauling will be to the east via the ramp left on the Guajes East pit highwall. When the Phase GC dozer pit is complete and Phase GW mining has progressed to the 868 m bench, pit access and hauling will be to the west via the ramp developed as part of Phase GC.

The Guajes Phase GW (Guajes West) pit design is illustrated in Figure 16-12. The pit encompasses the Guajes starter truck-loader pit, Phase GD, which was completed in 2014.

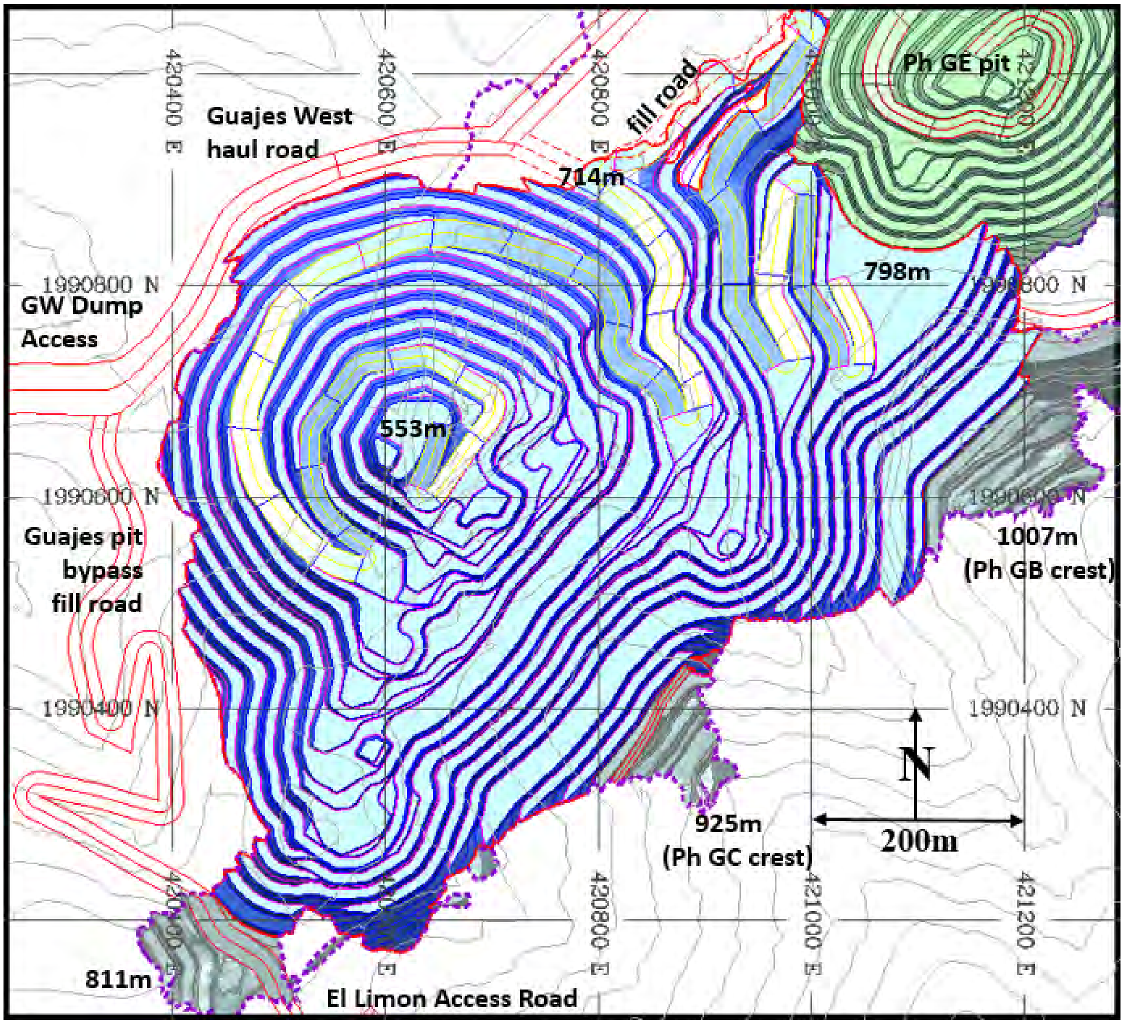


Figure courtesy of SRK Canada, May 2015.

Figure 16-12: Guajes Phase GW (Guajes West)

The final Guajes Phase pit, Phase GX, which is designed to mine the lower elevation ore located between Guajes East and Guajes West, is illustrated in Figure 16-13.

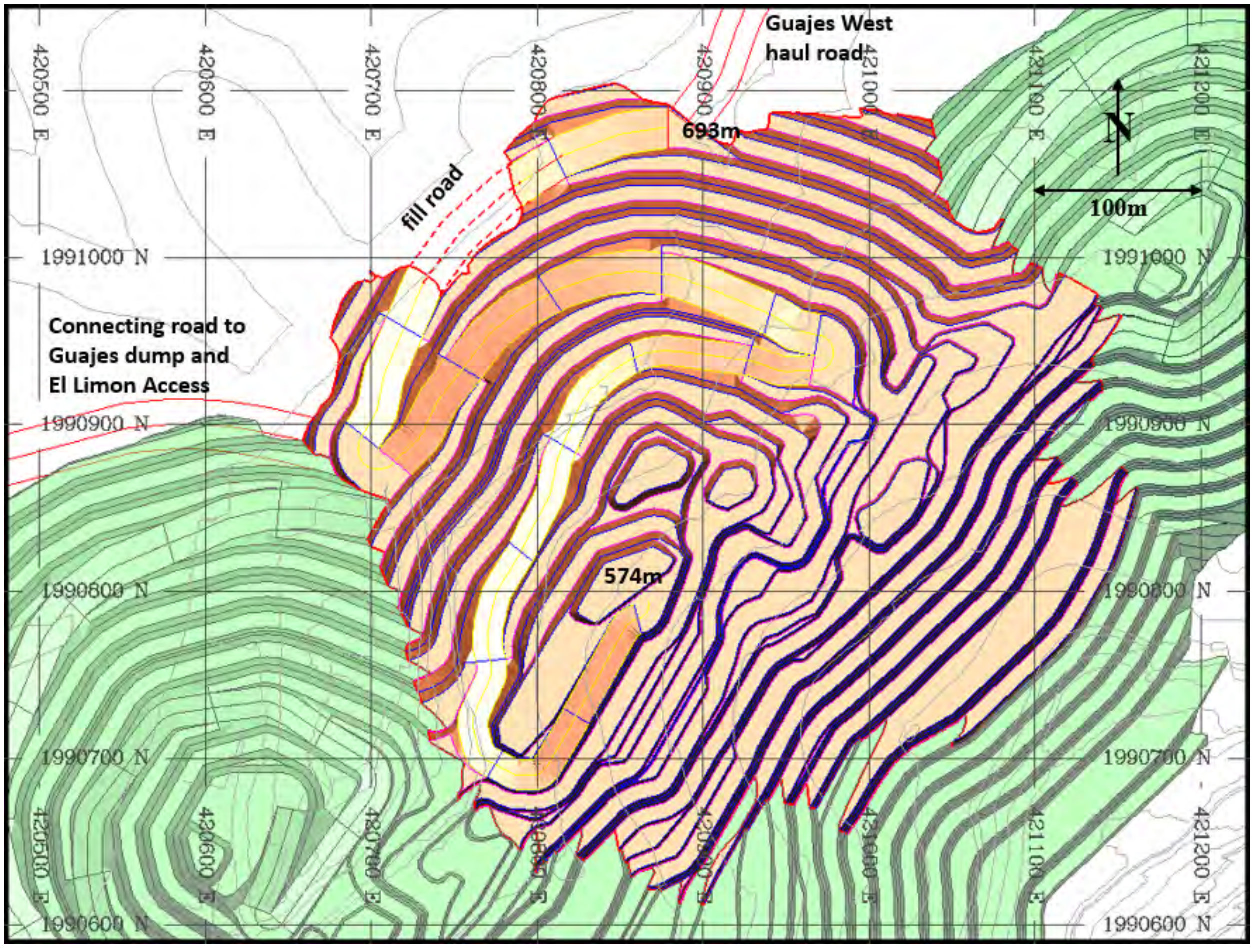


Figure courtesy of SRK Canada, May 2015

Figure 16-13: Guajes Phase GX (Guajes final phase)

El Limón Phase NN is designed to mine the El Limón northwest ridge mineralization early in the LOM Plan. It is included with Guajes pit designs since the NN pit is adjacent to the Guajes Phase GE pit, and because NN pit ore and waste will be hauled to Guajes crusher stockpiles and Guajes waste dumps, respectively.

NN pit development is planned in two stages, utilizing small scale mining equipment. Stage one is development of a multi-switchback surface haul road on the ridge—essentially an upgrade of the exploration access trail. The haul road will be utilized for pit access and for downhill ore and waste hauling. Stage two is NN pit development by bench, guided by the selected El Limón pit optimization shell P25 illustrated in Figure 16-6. The two NN pit development stages are shown in Figure 16-14. The NN pit design includes ramp segments in the pit highwall to replace mined out segments of the surface haul road, so that service road access from the plant site to the El Limón crusher area can be maintained during and after Phase NN pit operation.

The NN pit is located adjacent to the planned El Limón aerial ore conveyor. At the end of 2014 NN haul road development was underway and the road was completed in early 2015 well before conveyor installation. An MML mine planning and operational target is to complete Phase NN pit mining in 2015 prior to the conveyor being placed into service. If Phase NN pit mining is still in progress when the conveyor is installed, then careful drilling and blasting practises that minimize flyrock will be needed to minimize the risk of damage to the conveyor.

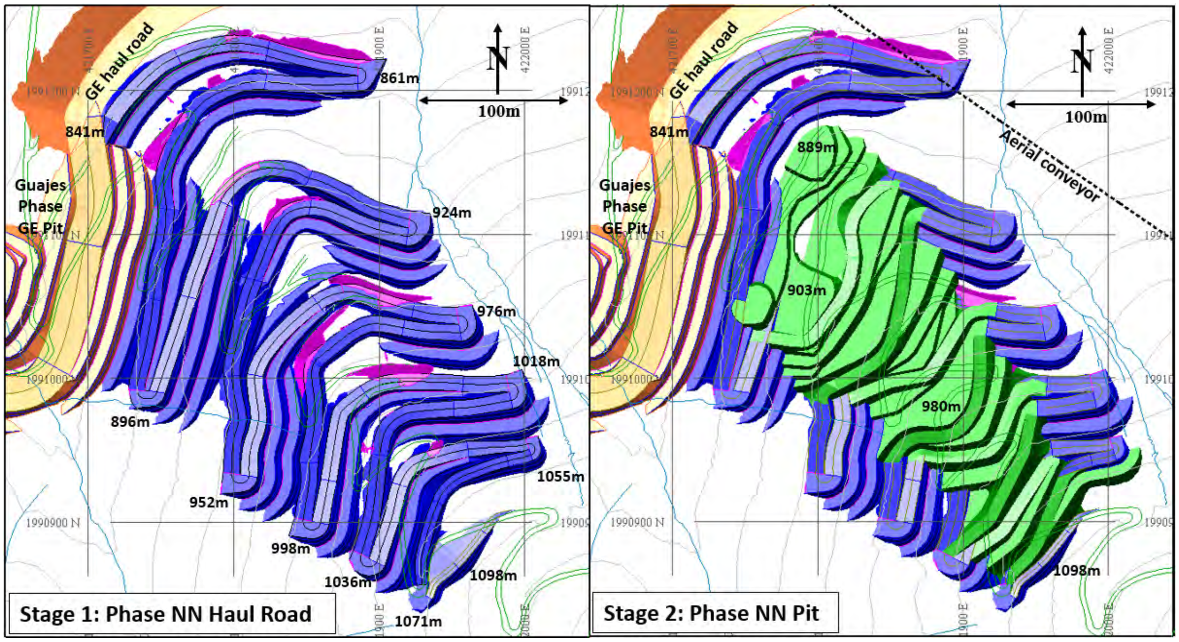


Figure courtesy of SRK Canada, May 2015.

Figure 16-14: Phase NN Haul Road and Pit

The Guajes and NN ultimate pit, which is a combination of all Guajes phase pits and NN pit, is illustrated in Figure 16-15.

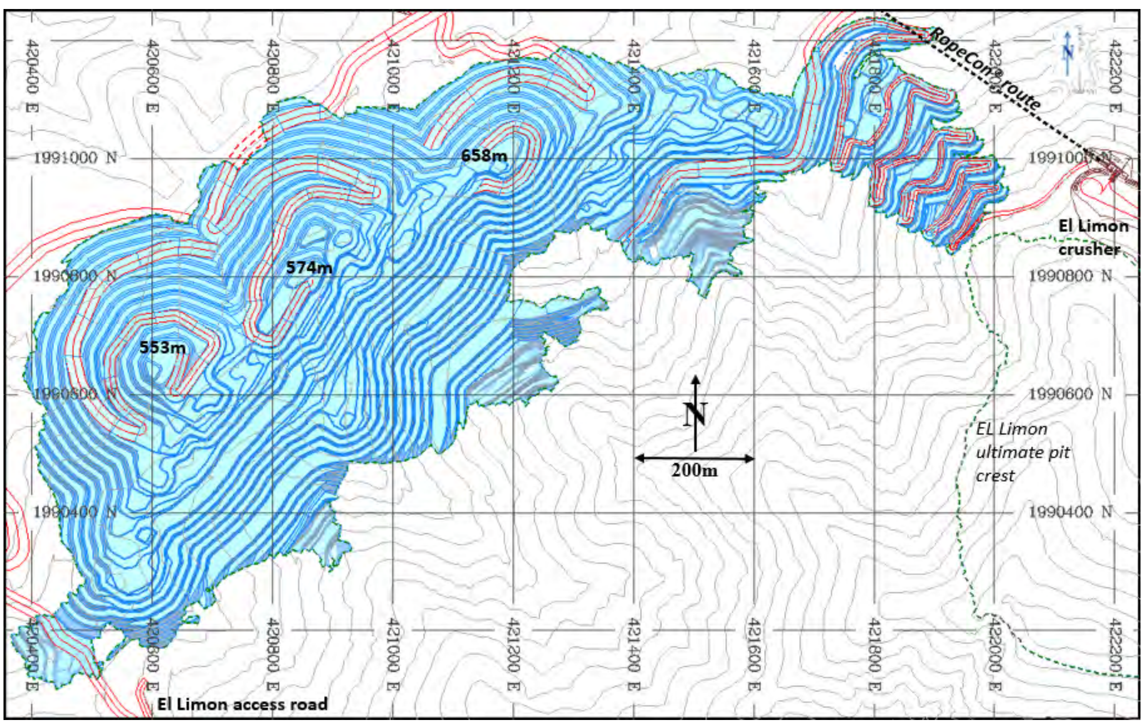


Figure courtesy of SRK Canada, May 2015.

Figure 16-15: Guajes and NN Ultimate Pit

16.9.2 El Limón Pit Design

El Limón main pit mining commences after the access road is complete and the village of La Fundición has been relocated. Haul roads to be constructed on the north facing slopes, principally within pit limits, are shown in Figure 16-16.

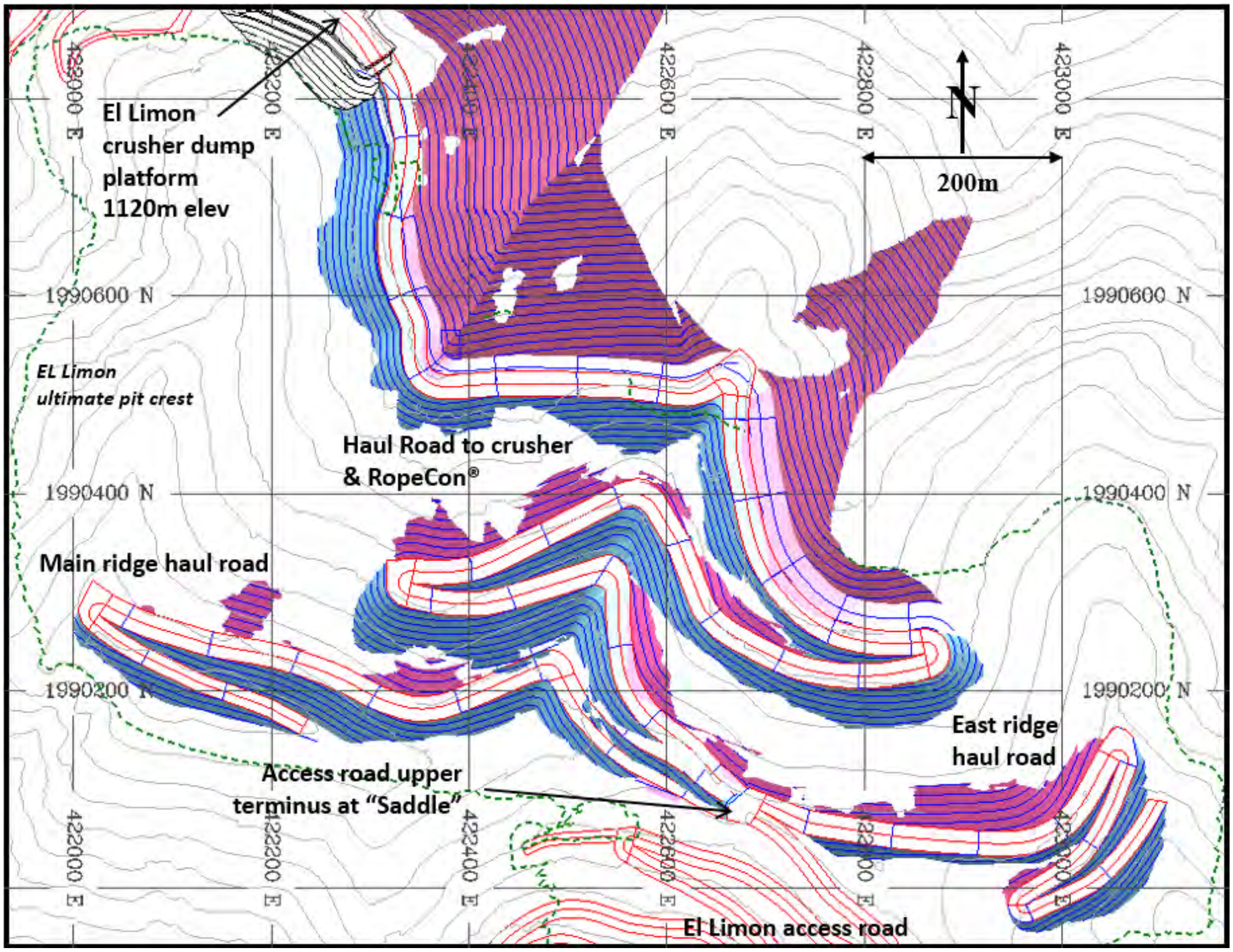


Figure courtesy of SRK Canada, May 2015.

Figure 16-16: El Limón Haul Roads

El Limón main pit designs for the LOM plan are guided by pit optimization shell P25 illustrated in Figure 16-6. The first phase pit to be developed is the small dozer pit Phase EA shown in Figure 16-17. This phase, the only El Limón dozer pit, mines the upper benches of the El Limón east ridge to ultimate pit limits down to the 1365 m elevation. It is planned that the waste rock will be dozed to the El Limón dump site to the northeast and no subsequent Phase EA waste rehandle is expected to be required.

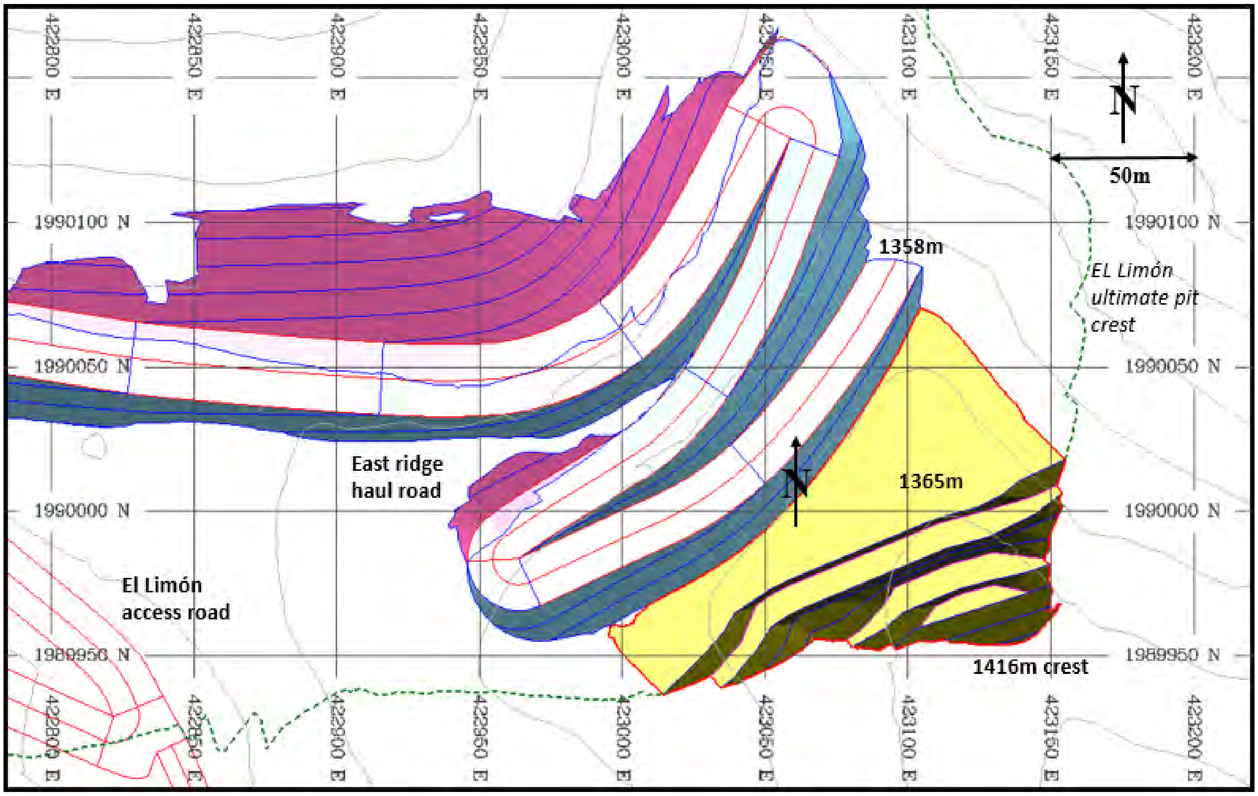


Figure courtesy of SRK Canada, May 2015.

Figure 16-17: El Limón Phase EA Dozer Pit

The first El Limón truck-loader pit is Phase EB located below Phase EA on the east ridge. Phase EB is illustrated in Figure 16-18.

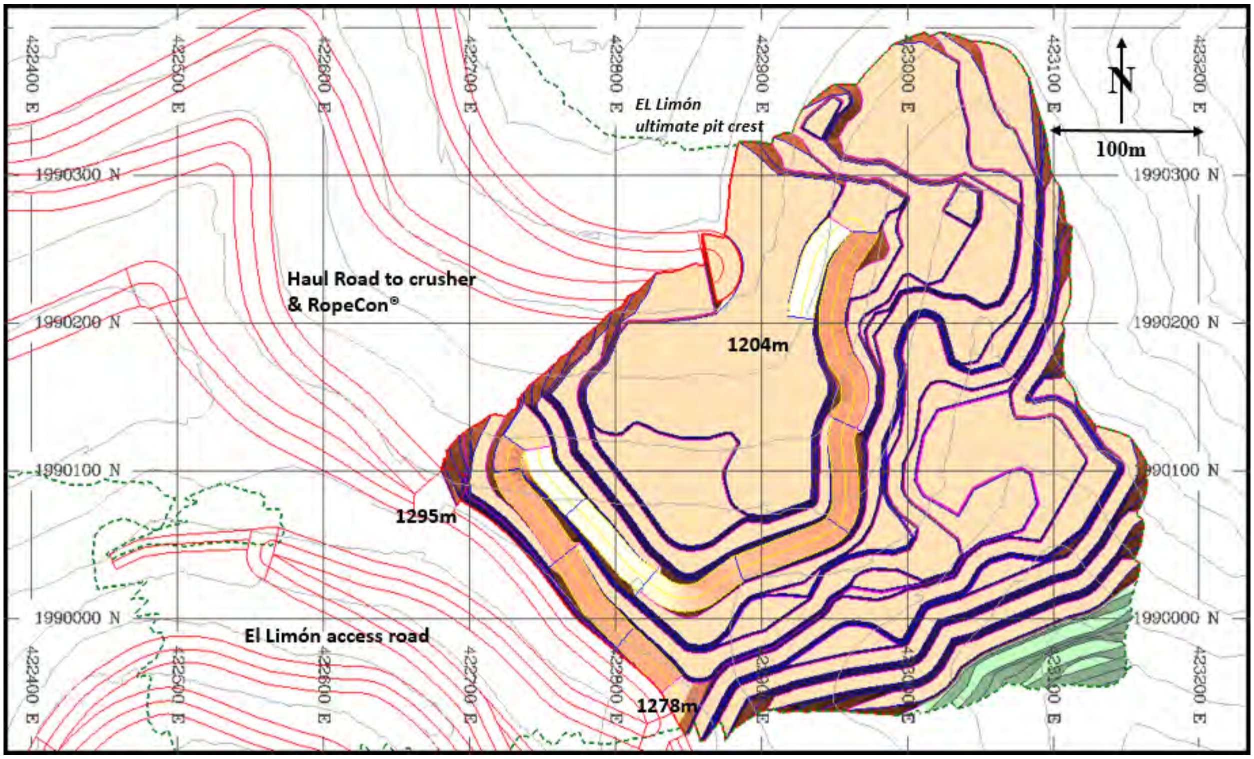


Figure courtesy of SRK Canada, May 2015.

Figure 16-18: El Limón Phase EB

The next El Limón truck-loader phase pit is Phase EC, which mines the main ridge to an interim highwall. Phase Pit EC is shown in Figure 16-19. The design includes a haulage ramp left in the interim highwall to facilitate subsequent Phase ED mining of the main ridge to ultimate pit limits. Phase ED is shown in Figure 16-20.

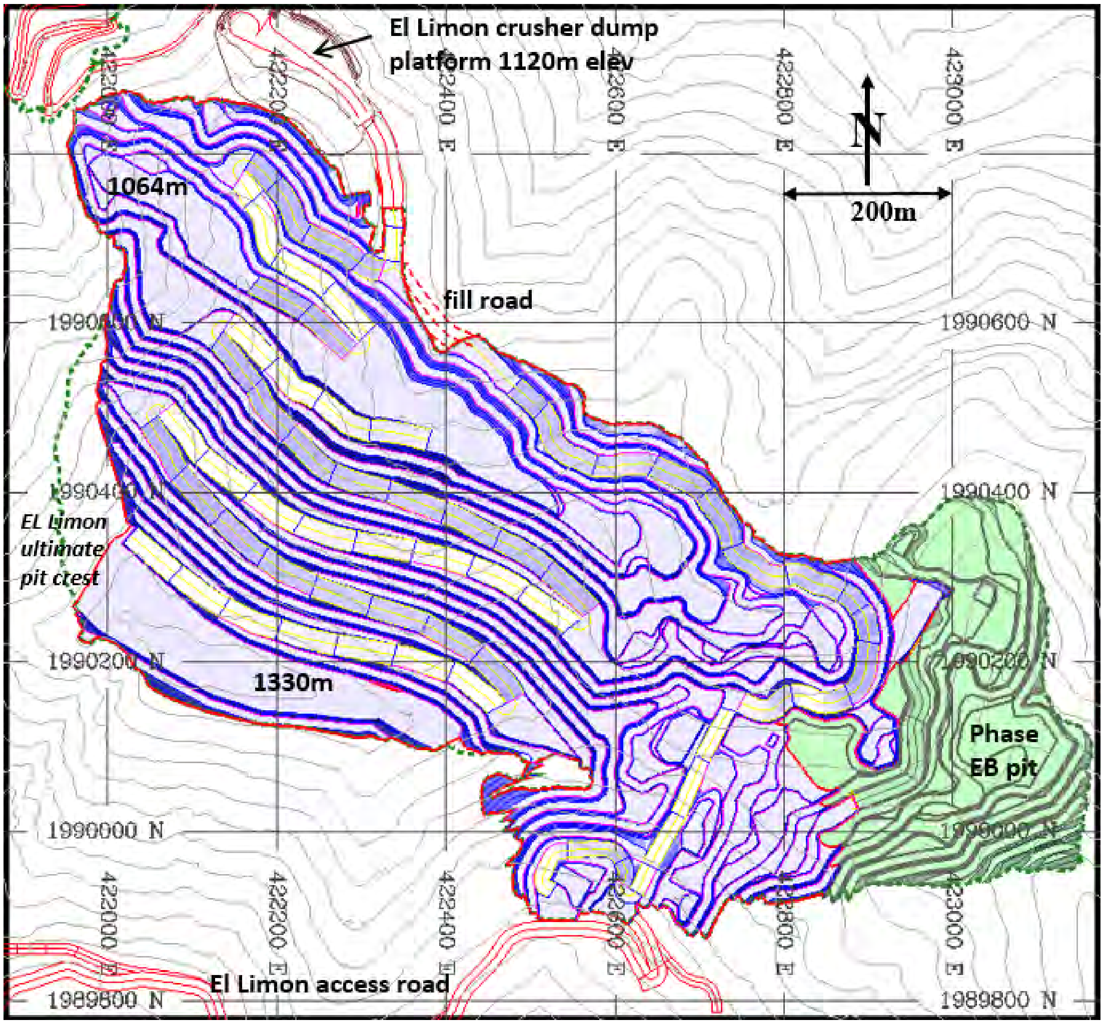


Figure courtesy of SRK Canada, May 2015.

Figure 16-19: El Limón Phase EC

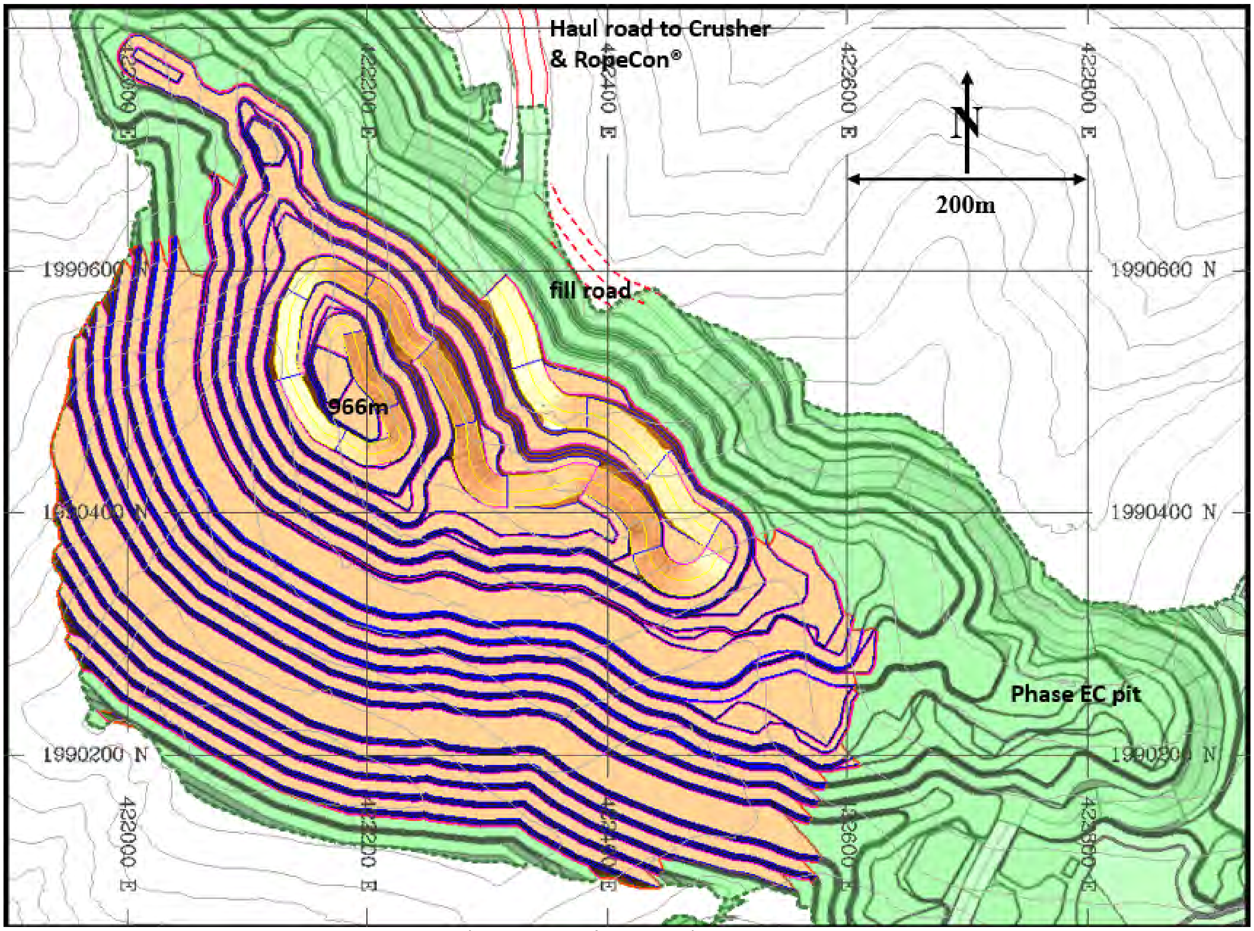


Figure courtesy of SRK Canada, May 2015.

Figure 16-20: El Limón Phase ED

The final El Limón phase is the small El Limón Sur pit located to the south of the main pit, with the design guided by selected pit optimization shell L28 illustrated in Figure 16-8. The El Limón Sur pit design is illustrated in Figure 16-21. The pit highwall ramp is sized for 36-tonne articulated mining trucks. Waste will be dumped in the gullies adjacent to the pit. Ore will be stockpiled near the pit and rehandled by larger trucks to the El Limón crusher. The El Limón Sur pit has been scheduled late in the LOM plan but could be advanced in the schedule.

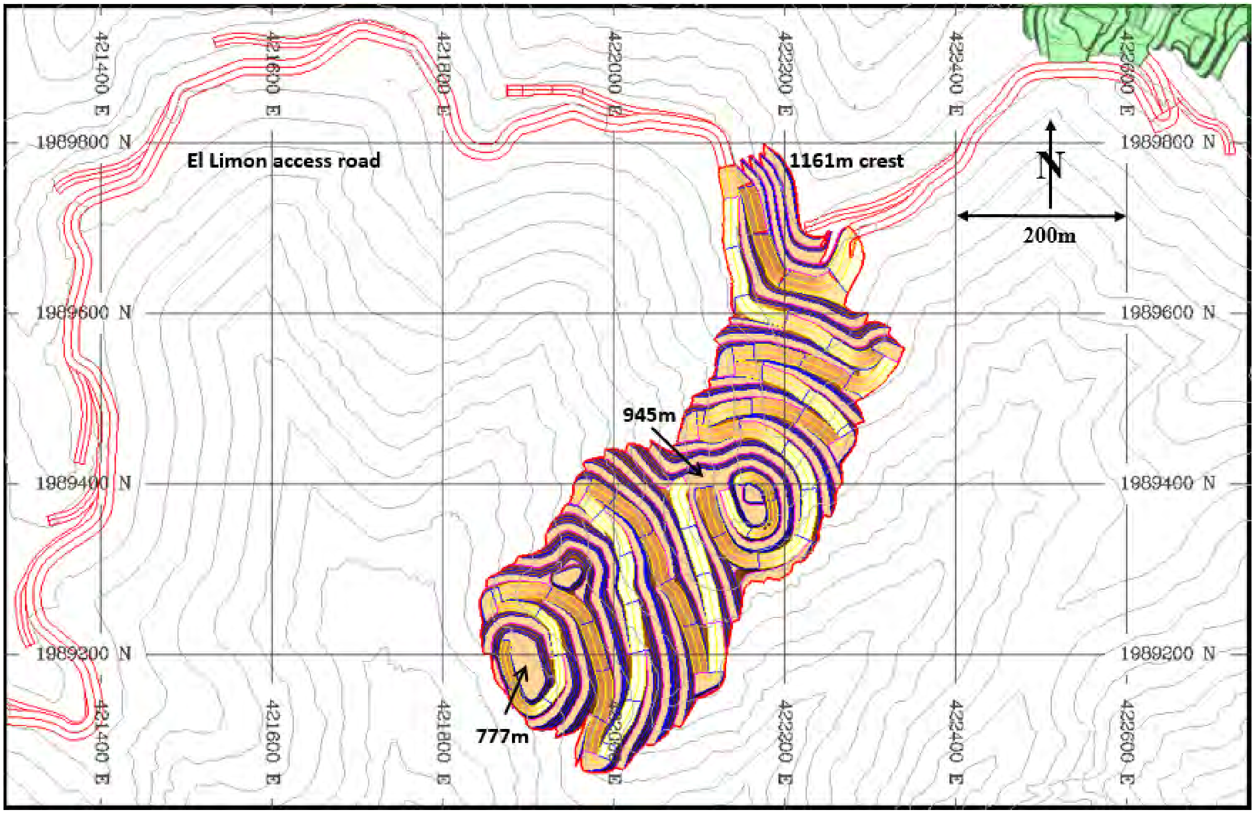


Figure courtesy of SRK Canada, May 2015

Figure 16-21: El Limón Sur Pit

The El Limón ultimate pit, comprised of all El Limón main pit phases and the El Limón Sur pit is shown in Figure 16-22.

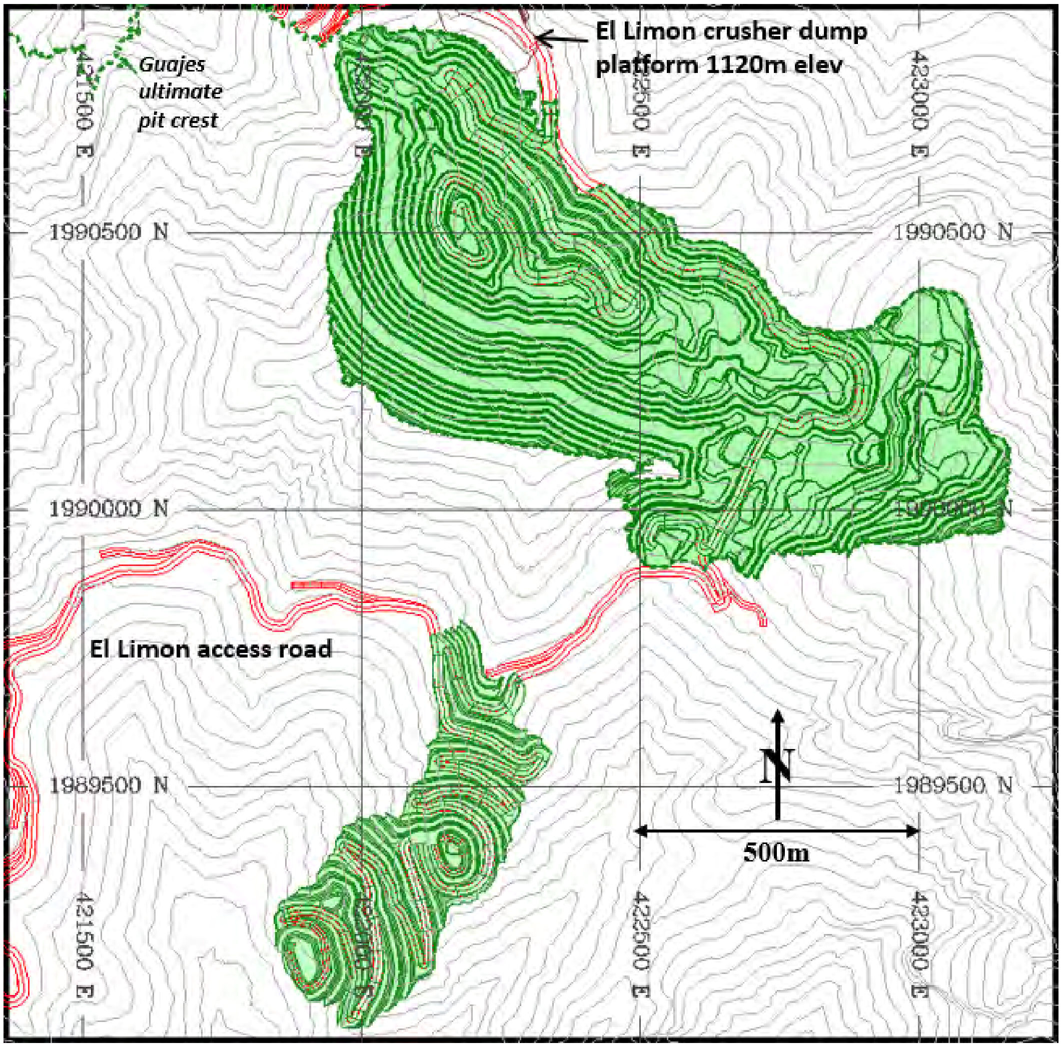


Figure courtesy of SRK Canada, May 2015.

Figure 16-22: El Limón Ultimate Pit

16.10 WASTE DUMP LAYOUT

Waste rock dumps were designed to minimize where possible the haul truck cycle time for each pit, considering the terrain, access road and facility layout, pit waste disposal requirements, dump re-sloping requirements, and dump capacity constraints, with geotechnical guidance provided by Amec Foster Wheeler. Waste dumps, with ultimate dump platform elevations, are shown in Figure 16-23. The figure also shows rock fill from access and haul road development. The waste dumps shown in Figure 16-23 include:

- Guajes West Dump: The main destination dump for Guajes waste rock, developed by end dumping from dumping platforms starting at 625 m elevation. Subsequent 25 m dump lifts are stepped back to facilitate future dump re-sloping requirements.
- Guajes North Dump: A northerly extension of the Guajes West dump adjacent to the filtered tailings stockpile. The Guajes North dump has been designed to cover the final west and south faces of the filtered tailings stockpile, to facilitate closure at the end of the mine life.

- El Limón Dump: The main destination dump for El Limón waste rock, located on the El Limón north slopes downhill from the pit and developed by end dumping from a series of dumping platforms selected based on phase pit layouts, waste disposal quantities, and future dump re-sloping requirements.
- Buttress Dump: Located at the toe of El Limón dump to serve as a barrier for rock runout from the El Limón dumps above during mine operation and to facilitate re-sloping of the main El Limón dumps at closure. The buttress dump will be developed by end dumping waste rock from Guajes and NN pits from a dumping platform at 865 m elevation. It is planned that the buttress downhill slope will be progressively re-sloped to 2H:1V as dumping advances to the east.
- EL Sur dumps: Dump destination for waste rock from the El Limón Sur pit, located in the gullies to the east and west of the pit. Developed by end dumping from a series of dumping platforms as pit mining progresses from high to low elevation.
- Guajes pit backfill: Includes backfilling of the completed Phase GE pit with waste from Phases GW and GX, and backfilling the completed Phase GW pit with waste from Phase GX.

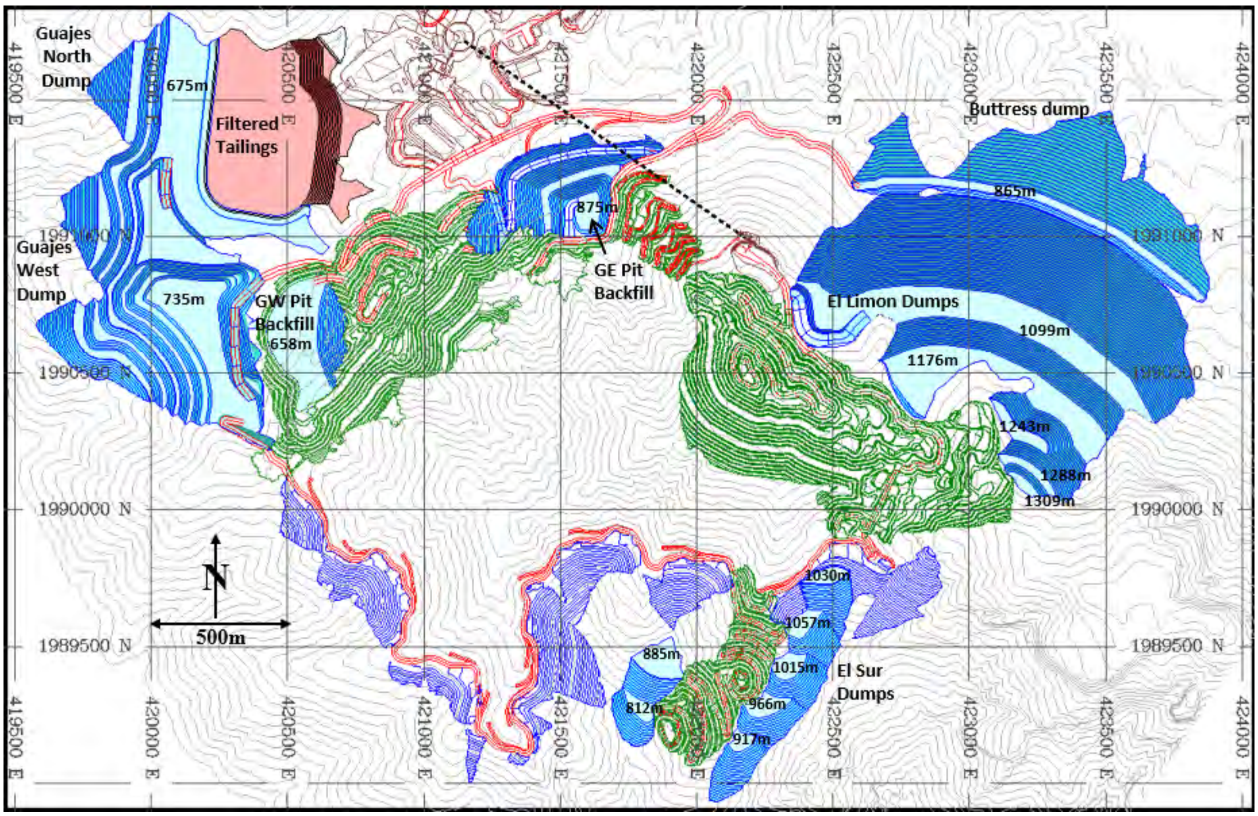


Figure courtesy of SRK Canada, May 2015.

Figure 16-23: Waste Dumps

16.11 ESTIMATE OF MINEABLE QUANTITIES

16.11.1 Mine Planning Model

Project resource geologists provided the resource block model supporting the mineral resource statement for use in the mine planning. Model items in this mine planning model included the portion of the resource block below topography, gold and silver grades, rock type codes, rock density, resource classification (i.e., Measured, Indicated or Inferred), flags for Guajes versus El Limón mineralization, and flags for blocks within the conceptual pit shell utilized to report resources. Blocks are coded on an entire 7x7x7 m block basis as mineralized or non-mineralized.

For mine planning purposes additional model items were coded into the mine planning block model. These include recovered gold and silver grades, pit slope and road slope geotechnical sectors, and codes for dilution analysis. Recovered gold and silver grades are defined as in situ grades multiplied by process recovery (%). Process recovery varies by ore type and grade as described in Section 13.4. Table 13-11 shows the rock types included within each of six ore types and the gold extraction equations by ore type utilized to estimate process recovery. Estimated silver recovery by ore type is shown in Table 13-12.

In the LOM plan, run-of-mine (ROM) ore quantities and plant feed estimates are founded only on Measured and Indicated mineral resources. Inferred resources are included within waste rock stripping quantities and are identified separately for sensitivity analysis purposes.

16.11.2 Mining Dilution and Losses

Plant feed is expected to incur dilution as a result of ore and waste mixing during blasting, limitations on loading unit selectivity, and limitations on grade control information obtained from definition drilling and blasthole sampling. SRK estimated a dilution thickness of 1 m at the contact between ore and waste. Based on analysis of ore in contact with waste and the grade of waste in contact with ore within a preliminary pit shell, dilution is estimated at 15% of in situ quantities at a grade of 0.13 g/t Au and 1.6 g/t Ag. The dilution grade estimates exclude any contribution from Inferred mineralization adjacent to ore.

A 5% mining loss was applied to all in situ quantity estimates. These losses are expected to arise from isolated ore blocks that are mined as waste (estimated at 2.2% to 3.3% based on the preliminary pit shell analysis), unrepresentative blast hole assays resulting in misdirected loads, and occasional excessive dilution requiring material to be wasted.

16.11.3 Estimated Cut-off Grade

SRK estimated an in situ economic cut-off grade that could be applied to the resource block model to initiate the open pit mine planning process for the ELG Mine. Cut-off grade derivation is based on a gold price of $1250/oz provided by MML in late 2014 and 2014 Q4 unit cost estimates sourced from previous project studies and mine plan analyses.

The economic cut-off grade varies with ore type due to a variable process recovery. The variable process recovery is described in Section 13, and gold extraction equations by ore type are presented in Table 13-11. The derived in situ Au cut-off grades by ore type and estimation methodology are shown in Table 16-6. In situ cut-off grades by ore type vary from 0.59 g/t Au to 1.11 g/t Au and average approximately 0.65 g/t Au. Note that cut-offs are based only on gold grades. Silver is a minor contributor to revenue compared to gold and was excluded from cut-off grade derivation.

The in situ cut-off grades by ore type shown in Table 16-6 were utilized to estimate ELG Mine phase pit ROM quantities, which form the basis of the LOM plan mine production and plant feed schedule.

Subsequent to cut-off grade estimation the long term gold price forecast was reduced to US$1,200/oz due to market conditions. In addition the ELG Mine 2015 processing and G&A unit cost estimates presented in Section 21 of this report are higher than the 2014 Q4 unit cost estimates utilized for cut-off grade derivation. It is estimated that if the higher unit cost estimates and lower gold price forecast had been incorporated in cut-off estimation, the cut-off grades by ore type would have increased by approximately 0.1 g/t Au. A sensitivity analysis showed that the higher cut-off grades would have reduced resulting ROM tonnage and contained gold ounces by only 2.7% and 0.6%, respectively. It is concluded that the ELG Mine ROM quantity and gold content is relatively insensitive to the cut-off grade.

SRK understands that during the remaining pre-production period MML plans to mine ore utilizing an elevated cut-off grade of 0.80 g/t Au for the all ore types with the exception of Breccia. A Breccia cut-off grade of 1.3 g/t Au is planned. The elevated cut-off grades allow for additional rehandle costs that will be incurred to load and haul stockpiled pre-production ore to the crusher after plant start up.

Table 16-6: Cut-off Grade by Ore Type

Ore type:	Units	Prograde Skarn	Retrograde skarn	Oxides	Breccia	Intrusive	Hornfels
Rock types:		Endoskarn, FaultGouge	Exoskarn,Massive Sulphides	Iron Oxides, Alluvium, Marble-Limestone	Breccia	Intrusives Granodiorite	Hornfels
Gold value							
Long Term Gold Price	$/oz	1,250	1,250	1,250	1,250	1,250	1,250
Payable	%	99.93%	99.93%	99.93%	99.93%	99.93%	99.93%
Refining	$/oz	1.48	1.48	1.48	1.48	1.48	1.48
Au value in dore	$/oz	1248	1248	1248	1248	1248	1248
Royalty	%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Value of recovered Au	$/oz	1216	1216	1216	1216	1216	1216
Value of recovered Au	$/g RAu	39.11	39.11	39.11	39.11	39.11	39.11
Estimated mill recovery at cut-off grade*	%	85.7%	74.8%	80.6%	48.0%	81.6%	90.0%
(A) Value of Au in plant feed	**$/g Au**	**33.51**	**29.25**	**31.51**	**18.77**	**31.92**	**35.20**
Operating costs							
Ore mining+allowance for GC	$/t	$2.32	$2.32	$2.32	$2.32	$2.32	$2.32
Waste mining	$/t	$2.27	$2.27	$2.27	$2.27	$2.27	$2.27
Processing	$/t feed	$15.27	$15.27	$15.27	$15.27	$15.27	$15.27
G&A	$/t feed	$3.10	$3.10	$3.10	$3.10	$3.10	$3.10
Marginal cut-off grade (COG)							
Additional mining (ore vs waste)	$/t feed	0.05	0.05	0.05	0.05	0.05	0.05
Processing	$/t feed	15.27	15.27	15.27	15.27	15.27	15.27
G&A	$/t feed	3.10	3.10	3.10	3.10	3.10	3.10
(B) Total extra ore cost, versus waste	**$/t feed**	**18.42**	**18.42**	**18.42**	**18.42**	**18.42**	**18.42**
COG, diluted Au in feed =(B)/(A)	g/t Au	0.550	0.630	0.585	0.982	0.577	0.523
Dilution, % of in situ	%	15%	15%	15%	15%	15%	15%
Dilution grade	g/t Au	0.13	0.13	0.13	0.13	0.13	0.13
COG, Au in situ	g/t Au	0.613	0.705	0.653	1.109	0.644	0.582
COG, Au in situ, rounded	g/t Au	**0.62**	**0.71**	**0.66**	**1.11**	**0.65**	**0.59**
COG, RAu in situ (i.e. Au COG x mill recovery)*	g/t RAu	*0.53*	*0.53*	*0.53*	*0.54*	*0.53*	*0.53*

** estimated mill recovery at cutoff grade, based on gold extraction equations by ore type*

16.11.4 Mining Quantities

In this LOM plan, ROM ore quantities and plant feed estimates are founded only on Measured and Indicated mineral resources. Inferred mineral resources are included within waste rock stripping quantities and are identified separately for sensitivity analysis purposes.

Mining quantities are defined as material below the YE2014 (i.e., 2014 year-end) surveyed topography to ultimate pit limits and include road construction excavation quantities (within pit limits only) and quantities within the phase pit designs presented in Section 16.8. Pre-production mining began in late 2013 and the YE2014 surveyed topography reflects road and pit development completed in 2013 and 2014.

Mining quantities are summarized by phase pit and road project in Table 16-7. ROM ore quantity within the designed pits as of December 31, 2014 totals 47.6 Mt at grades of 2.70 g/t Au and 4.38 g/t Ag with a strip ratio averaging 5.8:1. In addition ROM stockpiles at YE2014 total 0.4 Mt at grades of 1.40 g/t Au and 1.97 g/t Ag. The ROM stockpiles contain ore mined from Guajes pit and Phase NN road in 2014.

The roads and dozer phase pits are generally located in areas with minimal above cut-off mineralization. Due to the excavation method planned (i.e., dozer push) most of the above cut-off grade mineralization encountered in these pits and roads will not be recoverable and is included in waste rock quantities. In total, approximately 141 kt of above cut-off grade mineralization within pit limits is considered non-recoverable and is excluded from ROM ore quantities in Table 16-7.

Table 16-7: Mining Quantity Estimates, 31 December 2014

Phase Pit or in-pit road	Total ROM ore Tonnes (kt)	Au (g/t)	Ag (g/t)	Inferred waste Tonnes (kt)	Au (g/t)	Other Waste (kt)	Total Waste (kt)	Strip Ratio W/O	Total Mined (kt)
Guajes Pit									
Phase GB -Dozer	-	-	-	-	-	588	588	n/a	588
Phase GC -Dozer	-	-	-	-	-	689	689	n/a	689
Phase GE	5,100	3.27	5.35	32	1.96	19,419	19,451	3.8	24,551
Phase GW	8,584	2.38	2.63	51	1.80	67,838	67,889	7.9	76,472
Phase GX	3,046	2.18	1.70	13	0.96	25,766	25,779	8.5	28,825
Guajes Pit Total	**16,730**	**2.62**	**3.29**	**95**	**1.74**	**114,300**	**114,396**	**6.8**	**131,125**
El Limón NW ridge NN Pit									
Phase NN Road	75	2.31	4.12	25	1.43	726	751	10.0	827
Phase NN Pit	687	3.07	5.54	18	1.67	901	919	1.3	1,606
Total Phase NN	762	3.00	5.40	43	1.53	1,627	1,671	2.2	2,433
El Limón Main Pit									
EL access road	-	-	-	-	-	628	628	n/a	628
EL east ridge haul road	-	-	-	-	-	427	427	n/a	427
EL main ridge haul road	-	-	-	-	-	1,075	1,075	n/a	1,075
EL RopeCon haul road	22	1.92	13.52	-	-	2,370	2,370	106	2,392
Phase EA -Dozer	-	-	-	-	-	353	353	n/a	353
Phase EB	6,703	2.05	8.37	521	2.06	10,333	10,854	1.6	17,557
Phase EC	14,854	2.69	4.05	718	1.51	79,737	80,455	5.4	95,310
Phase ED	6,814	3.47	3.71	671	1.44	47,945	48,617	7.1	55,431
Total El Limón Main pit	28,394	2.73	5.00	1,910	1.64	142,868	144,778	5.1	173,172
El Limón Sur Pit	1,673	2.98	4.18	219	1.87	13,325	13,544	8.1	15,218
El Limon Total	**30,830**	**2.75**	**4.97**	**2,172**	**1.66**	**157,821**	**159,993**	**5.2**	**190,823**
ALL PITS	**47,560**	**2.70**	**4.38**	**2,267**	**1.66**	**272,121**	**274,389**	**5.8**	**321,948**
ROM Stockpiles, EY2014	390	1.40	1.97						
Grand Total Ore	**47,950**	**2.69**	**4.36**						

The planned mining method in the dozer phase pits is to drill and blast the rock by bench and doze the blasted rock over the bench crest to lower elevations. This method avoids haul road construction to the high elevation pit crests but frequently necessitates subsequent dozer and/or truck-loader waste rock rehandle when the dozed rock remains within the ultimate pit limits. Similarly, in-pit roads are planned to be constructed with dozers, and the dozed rock that remains within pit limits must be rehandled by truck to the waste dumps during subsequent truck-loader phase pit mining. Allowances for such waste rock rehandle are included in the mine production schedule and mining cost estimates.

The mining quantities in Table 16-7 were compared to contained quantities within the pit optimization shells that guided the designs. The designed pits contain virtually the same ROM quantities as the pit shells but at a 6% higher strip ratio after adjustments for 2013-2014 mining. The lower strip ratio in the pit shells is believed due to approximations of the impact of pit ramps that were incorporated in pit shell overall slope angle estimates.

16.12 PRODUCTION SCHEDULE

Principal mine production schedule parameters and constraints include:

- Process plant capacity 14,000 tpd
  A key objective of the LOM production schedule is mining sufficient ore to meet the ELG process plant capacity of 14,000 tpd (i.e., 5040 kt/a). Preliminary mine plan analysis at processing rates ranging from 9,500 tpd to 14,000 tpd show that these process rates are possible once Guajes and El Limón are developed to the point where ore is available on active benches in both pits, and the higher process rates provide the most favorable project economics.

- Process plant start-up and feed rate ramp-up
  ELG Mine facility construction commenced in late 2013 and process plant start-up is forecast in November 2015. Ramp-up of the plant has been assumed to follow a McNaulty "type 1" ramp-up curve (12 months until 100% availability). In the LOM plan production schedule it is assumed that plant feed rates will gradually increase from 20% of nameplate capacity in November 2015 to 100% of nameplate capacity (i.e., 14,000 tpd full production) in October 2016.

  For the purposes of this report, MML designated March 2016 as the start of commercial production based on certain criteria including the average plant feed rate. Mining activities prior to the March 1, 2016 commercial production date are considered pre-production mining. Mining activities after March 1, 2016 are considered mine operation.

- Minimum ROM Stockpile
  ROM stockpiles are maintained at a minimum level of 1 Mt ore through to the end of 2017, so that additional plant feed will be readily available should the plant feed rate ramp-up occur more quickly than anticipated.

- La Fundición village relocation by mid-2015.
  In the LOM plan, it is assumed that La Fundición village will be relocated by mid-2015 and the El Limón in-pit haul road and phase pit development is delayed until this date, since earlier development would impact on the village. Development of the El Limón access road on the south facing slopes of the El Limón ridge does not affect the village, and access road construction is underway with completion forecast by mid-2015. Guajes pit and El Limón Phase NN development are also not constrained by the village and development is underway. Guajes ore will be the initial source of feed at process plant start-up.

- Guajes Feed versus El Limón Feed.
  Plant feed via the Guajes crusher (i.e., Guajes ore and El Limón Phase NN ore) is maintained at approximately 35% or more of total feed throughout the LOM plan. This constraint necessitates that Guajes Phase GW pit be developed to provide Guajes plant feed when Guajes Phase GE ore is depleted, and ensures that there is a readily available alternate source of plant feed should there be any production interruptions associated with the El Limón crusher or ore conveyor.

16.12.1 ELG Mine Development in 2013 and 2014

Guajes development in 2013-2014 included:

- Completion of dozer trails to the ultimate pit crest on the three Guajes ridges (east, central, and west).
- Dozer pit mining on the three ridges, i.e., Phase GA (completed in 2014), Phase GB, and Phase GC.
- Guajes haul road development, i.e., Phase GE and Phase GW haul roads, completed in 2014.

- Truck-loader pit mining in two phase pits, i.e., Phase GD (completed in 2014) and Phase GE (Guajes East pit).
- Mining and stockpiling of 292 kt Guajes ore with estimated grades of 1.14 g/t Au and 1.52 g/t Ag.

El Limón development in 2013-2014 included:

- Most of the El Limón access road excavation. Road finishing (culvert installation, surfacing, etc.) of completed segments was underway at 2014 year end.
- Partial development of the Phase NN haul road. A total of 98 kt of ore grading 2.16 g/t Au and 3.33 g/t was reported mined and stockpiled during 2014 Phase NN road construction.

16.12.2 LOM Planned Development 2015 to 2025

The general sequence of remaining Guajes development is:

1) Continue mining the high priority Guajes Phase GE (Guajes East pit), the primary source of Guajes plant feed until 2017.
2) Complete Guajes Phase GB and GC dozer pits and associated interim haulage ramps, in preparation for Phase GW truck-loader pit mining. Phase GB, which mines the central ridge to a platform at 924 m elevation and includes haul roads connecting the platform to the Phase GE highwall ramp at 884 m is expected to be completed in early 2015. Phase GC, which mines the westernmost ridge to a platform at 847 m and includes haul road development connecting the platform to the Phase GW haul road at 770 m elevation, is expected to be completed by mid-2015.
3) Commence mining Phase GW truck-loader pit when Phase GB dozer pit is complete. It is planned that Phase GW haulage above 875 m elevation will be via the Phase GE pit highwall ramp to the northeast, and hauls below 875 m elevation will be via interim in-pit roads connecting to the GW haul road to the southwest. Phase GW contains more than half of Guajes ROM ore, and is the source of Guajes plant feed starting in 2018. The pit is scheduled to be completed in 2023.
4) Commence the final Guajes Phase pit, Phase GX, in 2020. The pit is scheduled to operate until 2025.

The general sequence of remaining El Limón development includes:

1) Complete Phase NN road in 2015 Q1 and begin Phase NN pit mining. Phase NN pit is scheduled for completion in 2016 Q2. An MML operational target is to complete the Phase NN pit ahead of schedule - prior to commissioning of the nearby El Limón ore conveyor, if possible.
2) Complete El Limón access road development by mid-2015, to provide equipment access to the El Limón ridge “saddle” location in preparation for El Limón pit development. The remaining segment of the access road to be constructed is located within the El Limón ultimate pit limits and excavation quantities for this segment are included within pit production estimates.
3) El Limón road and dozer pit development on the north facing slope, scheduled to commence in mid-2015 after village relocation. This involves:
    a. Phase EA dozer pit mining to ultimate pit limits on the El Limón east ridge down to the 1365 m bench in 2015 Q3.
    b. Haul road development from the saddle to 1358 m bench on the east ridge, to facilitate Phase EB truck-loader mining.

c. Haul road development from the saddle to the top of the El Limón main ridge, followed by mining of two main ridge Phase EC benches to establish an ore stockpiling platform.

d. Development of the main El Limón ore and waste haul road from the saddle to the El Limón crusher and ore conveyor, scheduled for completion in 2016 Q2. It is expected that a portion of the ore encountered during road development can be selectively mined and stockpiled until road completion.

e. Completion of the El Limón buttress dump haul road in 2015 Q3, to facilitate hauling of Guajes rock to the buttress dump starting in 2015 Q4.

4) El Limón Phase EB (east ridge) truck-loader pit mining will commence in the fourth quarter 2015, once the Phase EA dozer pit is complete. The upper benches mined consist mainly of waste rock. It is planned that the minimal ore encountered will be stockpiled until the ore haul road is operational. In 2016 Q2, El Limón ore from Phase EB is scheduled to be fed to the plant via the El Limón crusher and ore conveyor. Phase EB will be depleted by late 2018.

5) Mining of the El Limón Phase EC (Main ridge) will resume in 2016 Q2 and contribute a small portion of El Limón plant feed by year end. Major ore production from Phase EC starts in 2018 when Phase EB ore is depleted. Phase EC mining will extend to 2023.

6) El Limón Phase ED, the main ridge pushback to ultimate pit limits, will be mined from 2018 to 2025.

7) The El Limón Sur pit will be mined from 2021 to 2025. Ore mining and hauling to the El Limón crusher is planned to start in 2022.

The phase pit mining sequence described above is illustrated in Figure 16-24. Truck-loader pit mining has generally been scheduled at a maximum sinking rate of two benches per quarter, which is believed achievable considering the drill-blast-load-haul sequence. The dozer pits and small truck-loader pits are scheduled at higher rates, which are supported by MML operational experience in 2014.

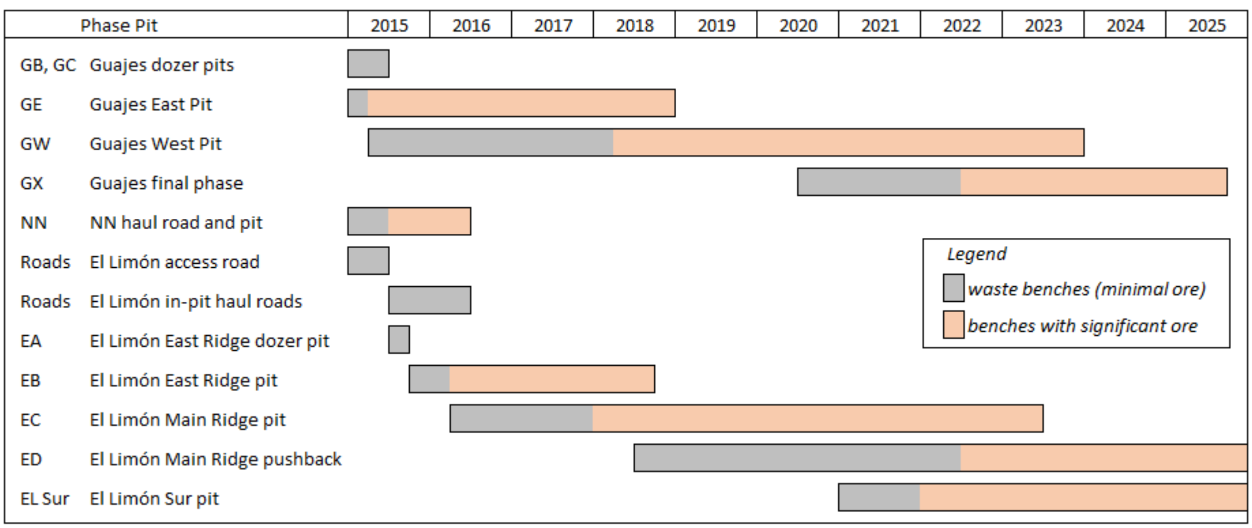


Figure courtesy of SRK Canada, May 2015.

Figure 16-24: Phase Pit Mining Sequence

The overall production schedule is summarized in Table 16-8. Annual mining rates are shown in Figure 16-25.

Pit progress to the end of 2014, 2015, 2016, 2018, 2021, and 2024 is illustrated in Figure 16-26. The progress maps also show the expected filtered tailings stockpile configuration. By 2017, Guajes pit waste dumping is planned to have progressed to the vicinity of the filtered tailings dump and starting in 2018 waste rock is deposited on the completed west face of the filtered tailings stockpile, as shown in the pit progress maps.

Table 16-8: Production Schedule

		Total	YE2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Pit Production														
Ore mined	kt	47,560		1,533	3,362	5,060	4,339	4,816	5,418	5,333	4,411	6,159	5,087	2,043
Au grade	g/t	2.70		2.79	2.29	2.69	2.29	2.24	2.37	2.40	2.81	3.76	2.92	3.01
Ag grade	g/t	4.38		5.08	5.67	7.10	6.79	3.19	3.66	3.04	3.31	4.46	2.96	3.58
Measured portion of ore mined	%	21%		30%	24%	16%	11%	25%	28%	28%	19%	16%	23%	19%
		-												
Total Waste mined	kt	274,389		13,625	19,343	29,314	30,199	33,669	32,921	33,756	32,029	26,216	18,297	5,019
Inferred mineralization included	kt	2,267		55	258	371	113	222	294	272	217	332	120	14
Au	g/t	*1.66*		*1.73*	*1.60*	*1.93*	*1.77*	*1.56*	*1.77*	*1.26*	*1.12*	*1.73*	*2.47*	*1.17*
Other Waste	kt	272,121		13,571	19,085	28,943	30,087	33,447	32,627	33,484	31,812	25,884	18,177	5,006
Total Prod'n Mined	kt	321,948		15,158	22,706	34,373	34,538	38,485	38,339	39,089	36,440	32,374	23,383	7,063
Strip Ratio	W/O	5.8		8.9	5.8	5.8	7.0	7.0	6.1	6.3	7.3	4.3	3.6	2.5
Waste rehandle by dozer	kt	2,016		2,016	-	-	-	-	-	-	-	-	-	-
Total waste dozed	kt	8,145		7,280	865	-	-	-	-	-	-	-	-	-
Waste rehandle by truck	kt	9,390		2,713	1,387	908	1,593	1,473	636	167	272	237	2	-
Total waste hauled	kt	277,649		11,075	19,865	30,222	31,792	35,142	33,557	33,923	32,302	26,452	18,299	5,019
Ore rehandle by truck, stpl to crusher	kt	8,902		11	1,827	570	953	476	252	252	1,352	949	469	1,791
Total ore hauled	kt	56,462		1,544	5,189	5,630	5,292	5,292	5,670	5,585	5,763	7,107	5,556	3,834
Total hauled (ore plus waste)	kt	334,111		12,618	25,055	35,852	37,084	40,434	39,227	39,509	38,065	33,560	23,854	8,853
Ore trammed, stpl to crusher	kt	2,397		11	204	252	252	252	252	252	252	252	252	167
ROM Stockpile														
ROM Stpl, end of period	kt		390	1,709	996	1,015	314	90	467	761	132	1,250	1,297	-
Au grade	g/t		1.40	2.52	2.17	2.29	2.28	2.13	2.26	2.30	2.13	3.55	3.56	-
Ag grade	g/t		1.97	4.45	4.39	4.70	4.72	5.58	3.86	3.52	3.03	4.21	4.21	-
Plant Feed					*> approximately 8.5 years at full production*									
Process rate	tpd	13,083		3,511	11,196	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	9,278
Process days	days	3,665		61	364	360	360	360	360	360	360	360	360	360
Feed to Crusher	kt	**47,950**		214	4,075	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	3,340
Au grade	g/t	2.69		2.40	2.41	2.67	2.29	2.25	2.38	2.40	2.75	3.77	2.91	3.23
Au contained	kg	129,007		514	9,827	13,455	11,520	11,323	11,991	12,089	13,852	18,987	14,674	10,774
Au contained	000oz	4,148		17	316	433	370	364	386	389	445	610	472	346
Ag grade	g/t	4.36		4.43	5.47	7.05	6.50	3.24	3.68	3.05	3.35	4.48	2.95	3.83
Measured portion of feed	%	22%		29%	29%	17%	14%	25%	28%	28%	20%	16%	23%	19%

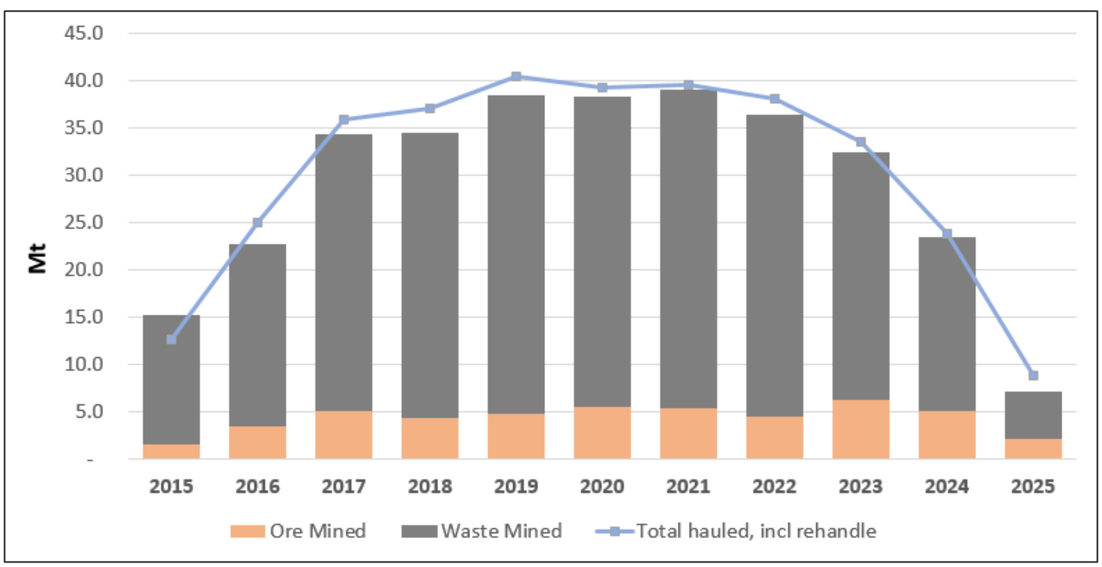


Figure courtesy of SRK Canada, May 2015.

Figure 16-25: Annual Mining Rates

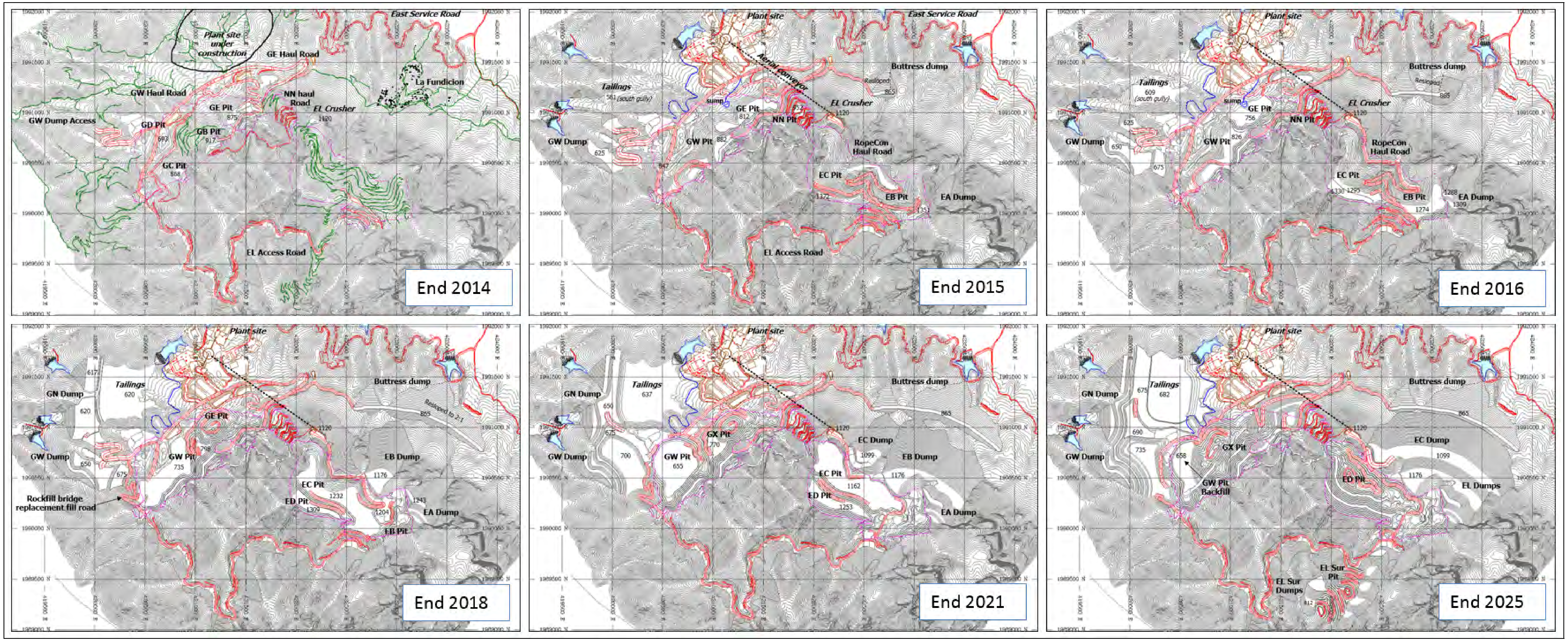


Figure 16-26: Pit Progress Maps

16.12.3 ELG Mine Development Progress to Mid-2015

ELG preproduction mining to mid-2015 compared to the LOM plan is summarized below:

- Guajes dozer pit mining is complete as planned;
- NN haul road development is complete, as planned;
- Guajes and NN pit reported mining rates are higher than planned, and truck-loader mining is approximately 3-4 months ahead of schedule. Due to the higher mining rates total ore stockpiles are larger than planned;
- El Limón access road construction is complete, as planned;
- New La Fundición village construction is virtually complete and it is expected that El Limón pit and road development will commence during the second half of 2015, once residents relocate to the new village. This is later than forecast in the LOM plan but, based on MML's mining performance to date in Guajes, it is not expected to have a significant impact on meeting overall LOM plan pit development targets.

16.13 OPEN PIT OPERATION

16.13.1 Mode of Operation

Mining is planned utilizing the owner's workforce generally on a continuous 24 hour/day basis, 356 days/year, with 3 production crews working 12 hour shifts on a 20 day on – 10 day off rotation. Mining and maintenance activities planned to be performed by contractors include:

- Contract mining of the smaller phase pits that require small scale mining equipment, including the Phase NN and El Limón Sur pits.
- Access and haul road construction support to owner crews. It is planned that owner crews will construct the majority of remaining mine roads. However, some contractor support is anticipated to augment owner dozing and drilling capacity, and complete culvert installation and road surfacing.
- Blasting services by an explosives vendor under a full down-hole service explosives supply contract.
- Production equipment maintenance until the end of 2017 by equipment suppliers under maintenance and repair contracts ("MARC"). After 2017, it is planned that production equipment maintenance will be carried out by the owner's workforce.

Mine operating parameters that impact on equipment operation, and fleet and workforce sizes include:

- An estimated 10 operating hours per 12 hour shift, based on a deduction of 1.0 hour for meal breaks, an average deduction of 0.25 hours for safety and crew lineup meetings, and an average deduction of 0.75 hours for shift change and equipment start-up checks. The Guajes pit is relatively close to the plant site where the deployment area will be located, and transit time at the beginning and end of the shift is estimated at 0.50 hours. El Limón pit is more isolated and shift changes are expected to total about one hour.
- Operating efficiency of 83% (i.e., a 50 min hour), which allows for operating delays during the shift, such as fueling, blast delays, deadheading to another work location, operating at reduced speeds due to congestion, etc.
- Drill, shovel and dozers moves between Guajes and El Limón are scheduled infrequently (i.e., annually or less often). Due to the long travel distance it is expected to be difficult to relocate tracked equipment from one mining area to the other. Within each mining area equipment must relocate between phase pits on a more frequent basis (possibly bi-weekly or monthly).
- Equipment mechanical availability estimates ranging from 85% for the hydraulic shovels and trucks, to 80% for the drills and loaders.
- Use of availability ranging from 95-97% for the hydraulic shovels and trucks, 80-90% for loaders, and 70-90% for drills.

16.13.2 Drilling and Blasting

LOM plan study blasting estimates are based on an average powder factor of 0.32 kg/t utilizing a combination of Anfo and emulsion explosives. The powder factor, slightly higher than typical of open pit operations, was chosen due to the ELG rock relatively high uniaxial compressive strength, estimated to average 160 MPa.

LOM plan drilling equipment includes 171 mm drills and 114 mm drills. The drill fleet peaks at seven 171 mm units and three 114 mm units, based on drill productivities averaging 823 t/ophr including allowances for operating delays and buffer and in-fill drilling. A total of three larger drills and one smaller drill were acquired by the end of 2014.

The larger diameter drills are forecast to drill approximately 70% of ELG rock. The 171 mm drill selected is capable of rotary drilling or downhole hammer drilling for a range of hole diameters. It is expected that the downhole hammer configuration will be used in most areas due to the relatively high rock strength. These drill units are currently equipped to drill 140 mm diameter blastholes in ore and 171 mm diameter blastholes in waste.

The smaller drills were chosen to allow for small diameter drilling near the El Limón crusher and ore conveyor and in other confined mining areas. The El Limón crusher and ore conveyor will be located on the El Limón ridge, in close proximity to the active mining area, i.e., approximately 120 m from the El Limón main pit limits. For the 2012 feasibility study, Torex commissioned a blasting consultant to prepare a blasting study to assess the impact of blasting on the facilities (i.e., flyrock and vibration) and provide general mine drill-blast recommendations in terms of blast pattern layout and explosive distribution in order to provide adequate rock fragmentation. The blasting consultant expected that the incidence of flyrock should be minimal provided that the blasting study drilling and blasting recommendations are followed. The study recommended that small diameter blastholes be utilized to maximize flyrock prevention and recommended that test blasts be conducted to demonstrate blast round performance at locations remote from the ore conveyor. Pending the results of test blasts MML has selected 114mm hydraulic downhole hammer drills for small diameter drilling of approximately 24% of El Limón and Guajes rock. In addition about 6% of total rock is forecast to be drilled with smaller drills by contractors during road development and mining of the NN and El Limón Sur phase pits.

16.13.3 Loading

It is planned that in pit rock loading will be principally done with wheeled loaders.

The initial loading units acquired by the end of 2014 include three 12 m^3 wheeled loaders and one 15 m^3 hydraulic shovel. Currently, due to the small working bench areas on the upper benches of the Guajes truck-loader pits, wheeled loaders are primarily utilized. The hydraulic shovel will be introduced in 2015 Q4 when larger pit benches are being mined. The second hydraulic shovel is planned for the El Limón pit and will be acquired in 2016 Q3. Both hydraulic shovels are scheduled for waste rock loading only.

Wheeled loaders are planned for ore and approximately 50% of waste rock loading. In addition, they will be used for ore rehandle at the crushers and to perform miscellaneous out-of-pit loading. The mine plan includes a total of six 12 m^3 wheeled loaders.

Loading unit productivity (loading 90-tonne haul trucks) is estimated at 1229 t/ophr for the 15 m^3 hydraulic shovels and 938 t/ophr for the wheeled loaders.

16.13.4 Hauling

Based on an analysis of haulage cycle times and truck fleet requirements it was decided to utilize 90-tonne size haulage trucks in the mine plan. Truck payload is estimated at 86 dry tonnes, based on an average fill factor of 98% (by weight) and an allowance of 2% for moisture content. Morelos waste haul distances average 1.93 km and the ore haul distances average 1.66 km over the mine life. Haulage truck productivities are similar, 275 t/ophr for ore and 260 t/ophr for waste rock production. Haulage truck requirements are estimated to peak at 28 units in 2017 and 2018. The initial haulage units acquired by the end of 2014 include 12 trucks.

It should be noted that it is planned to operate small scale mining equipment in the El Limón Phase NN and El Limón Sur pit, i.e. 36-tonne articulated mining trucks and 5 m^3 hydraulic excavators.

16.13.5 Dozing

Dozing requirements will be performed by a fleet of two 455 kW tracked bulldozers and three 335 kW tracked bulldozers. These units were acquired in 2013 and 2014, since they were needed in the Guajes dozer pits at the start of pre-production development. After dozer pit mining is complete the units will be utilized in the truck-loader pits and on the waste dumps.

Two 393 kW rubber-tired dozer units are included in the mine plan, to work principally on bench cleanup around the shovels, and on road maintenance.

16.13.6 Support

Support equipment includes three road graders and two 75,000 L water trucks. Water will be pumped from the plant site to a storage tank near the El Limón crusher, in order to provide an El Limón water supply for the water truck. Due to terrain limitations an El Limón fuel storage facility is not planned. A 45,000 L El Limón fuel truck is included in equipment requirements. It is expected that at peak production approximately one truckload of fuel per day will be required at the El Limón pit.

Support equipment also includes smaller units including a small backhoe for ditching and occasional ore mining, and service equipment. A crane is available from the process plant so is not included in pit equipment requirements. It is understood the maintenance contractors, working under the MARC will provide maintenance service vehicles. It is planned that a field maintenance truck be acquired by 2018, when production equipment maintenance by the owner's workforce commences.

16.13.7 Grade Control

Ore is not distinguishable from waste rock visually but rather will be separated based on cut-off grade, which requires sampling and assaying. Sampling and assaying for grade control purposes is planned based on a combination of in-fill definition drilling and blasthole sampling.

The definition drilling program proposed involves approximately 20,000 m of selective in-fill drilling annually, starting in 2016 when significant quantities of ore will be encountered. A reverse circulation drill is included for this purpose within 2015 mining equipment acquisitions.

In addition to dedicated reverse circulation in-fill drilling, blast holes drilled in the vicinity of expected ore (including those drilled in the adjacent waste rock), will be sampled and assayed for grade control purposes. It is estimated that at full production approximately 65,000 blasthole sample assays will be required annually.

Criteria for blasthole sampling will likely include rock type. It is expected that most blastholes drilled in skarns, breccia, iron oxides, massive sulphides, and fault gouge material will be sampled, since based on the resource model about 44% of this material mined is projected to be above cut-off grade, representing 72% of total ore tonnage and 85% of contained gold. Additional sampling criteria will be needed for El Limón hornfels, intrusives, and marble/limestone rock types mined since only small portions of these rock types are expected to be ore. This additional criteria will include the results from exploration and in-fill drilling in the vicinity, and/or the presence of geological features such as fracture zones, quartz veining, or adjacent skarns identified by field mapping.

MML recognizes the inherent variability of skarn deposits and is in the process of establishing site specific grade control procedures to manage this variability at the ELG Mine. Grade control involves preparation of a grade control block model informed by blasthole sampling and/or reverse circulation in-fill drilling. At the time of preparation of this report field tests were underway to directly compare blasthole assays with corresponding assays from twinned diamond drill holes, in order to assess the reliability of blasthole assaying and to assess alternate methods of sampling blasthole cuttings. Deeper in-fill diamond drilling from the current operating bench into the heart of the Guajes East orebody is also planned to help refine the resource block model.

Ore and waste mining zones on each bench or blast are defined based on the grade control block model. Once the process plant is operational actual plant feed and gold production will be reconciled with mine plan predictions to assess the validity of the grade control block model, the resource block model, and mining dilution and loss parameters.

16.13.8 Pit Dewatering

Pit dewatering estimates are based on groundwater inflow estimates presented in Section 16.5, and rainfall estimates and storm event predictions presented in Section 16.6. Pit groundwater and runoff will be discharged at the pit crests and collected in sumps and settling ponds located downstream of the pits as described in Section 18.

Many of the phase pit mining benches are located on mountain side slopes so water encountered on the benches can be managed by ditching to the surrounding topography. The first phase pit where mining occurred completely below grade and where in-pit pumping was required is Guajes Phase GD, completed in 2014. The mined out Phase GD pit serves as a sump to temporarily collect storm event runoff from the southeast Guajes slopes above the pit. It is planned that water collected in the sump will be pumped to the tailings dry stack east toe perimeter ditch (TDS ditch) that discharges into Water Management Pond 3, or pumped directly to Pond 3.

In 2015 a surface sump is required on the slopes below the Phase GE (Guajes East) pit to temporarily collect storm event runoff from the northeast Guajes slopes above. It is planned that water collected in the sump will also be pumped to the TDS ditch or directly to Pond 3.

The surface sump will be replaced by a Phase GE in-pit pumping system in 2017. The GD pit sump will be replaced by a Phase GW (Guajes West) in-pit pumping system in 2020. The main El Limón dewatering system is expected to be established in 2021 when Phase EC pit mining reaches the 1127 m bench.

Planned in-pit pumping capacity is governed principally by peak inflow estimates based on predicted runoff during storm events. The mine dewatering system capacity is based on the 10 year return 24-hour storm event inflow being pumped out in a nominal 48 hours. Skid-mounted diesel pumps were selected for pit dewatering. In total, five operating pumps plus one spare pump are included in LOM plan requirements. The Morelos site receives relatively low rainfall on an annual basis and little groundwater inflow is predicted, so the annual operating hours incurred by the pit pumping systems are expected to be low.

16.14 OPEN PIT EQUIPMENT ACQUISITION

Equipment acquisitions over the mine life are summarized in Table 16-9. Equipment will be acquired in the period before it is needed in service at the mine. Acquisitions include replacement equipment.

Mining equipment acquired in 2013 and 2014 include 29 major production units and 23 support equipment units. No major production equipment additions are required during the remaining pre-production period (i.e., to February

2016). Support equipment additions during this period include a reverse circulation drill for grade control purposes and a dewatering pump.

Major production equipment required after March 1, 2016 includes additional drilling, loading and hauling units in 2016 and 2017 for El Limón mining and increased Guajes mining rates. Replacement production units over the mine life consist of two small and one large drill, one 15 m^3 hydraulic shovel, three 12m^3 wheel loaders, two 455 kW and two 335 kW track bulldozers, one 393 kW wheel bulldozer, and one grader. Other replacement equipment includes light towers and mine pickup trucks.

Table 16-9: Pit Equipment Acquisitions

Units	Initial Acquisitions 2013-2014	Pre-production Requirements 2015-Feb 2016	Additions & Replacements* Mar 2016-2025	Total LOM Acquisitions
Major Production Equipment				
Production Drill, 114 mm	1	0	4	5
Production Drill, 140-171 mm	3	0	5	8
Hyd. Shovel, 15m3	1	0	2	3
Wheel Loader 12 m3	3	0	6	9
Haul Truck 90 t	12	0	16	28
Track Bulldozer 455 kW	2	0	2	4
Track Bulldozer 335 kW	3	0	2	5
Wheel Bulldozer 393 kW	1	0	2	3
Grader, 4.3m blade	1	0	0	1
Grader, 4.9m blade	1	0	2	3
Water truck, 75000 L	1	0	1	2
Support Mobile Equipment				
Drill, RC (grade control)	0	1	0	1
Ancillary Units	22	7	17	46
Dewatering Pumps, 447 kW	1	1	4	6
Total	**52**	**9**	**63**	**124**

**Additions & Replacements after Mar 1, 2016 (i.e. sustaining capital during mine operation)*

16.15 OPEN PIT PERSONNEL

Mine workforce requirements are summarized in Table 16-10. Estimates exclude contractor personnel, which principally consists of the blasting contractor and maintenance contractor. Contract maintenance of production equipment is planned during the period 2013-2017. After 2017, owner maintenance by the owner's workforce is planned, which is the reason for the large increase in maintenance personnel in 2018.

Table 16-10: Pit Workforce

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Staff Manpower												
Operations Supervision	12	17	15	15	15	15	15	15	15	15	15	12
Maintenance Supervision	1	2	2	2	10	10	10	10	10	10	10	7
Technical services	18	25	29	29	29	29	29	29	29	29	27	19
Sub-total	31	44	46	46	54	54	54	54	54	54	52	38
Mine Operations												
Drillers	8	21	38	43	44	48	50	50	41	36	27	9
Blasting (excl contractors)	0	3	3	3	3	3	3	3	3	3	3	2
Shovel/Loader Operators	12	8	17	19	20	22	21	21	18	16	11	6
Truck Drivers	22	29	66	85	86	71	70	68	66	65	43	19
Support Equipment Operators	34	27	35	39	38	36	36	36	36	35	30	18
Dump Attendants, trainees, Laborers	0	12	17	18	18	18	18	18	17	16	13	6
Sub-total	76	99	175	207	209	198	198	195	181	172	127	60
Mine Maintenance												
Mechanics, Welders	1	1	1	1	64	61	61	60	56	50	37	12
Fuel/Lube/Tyre service	0	6	12	12	12	12	12	12	12	12	12	4
Trainees, Laborers	0	1	2	2	6	6	6	7	7	6	6	2
Sub-total	1	8	15	15	82	79	79	79	75	68	55	18
Total Mine	**108**	**151**	**236**	**268**	**345**	**331**	**331**	**328**	**310**	**294**	**234**	**116**

17 RECOVERY METHODS

The key points of this section are:

- The process design follows these steps: Fine grind > Cyanide leach > Carbon in pulp (CIP) > Electro winning > Onsite refining to Doré bars.
- Tailings disposal will involve filtered tailings at 13.3% moisture content.
- Process plant utilizes technology and equipment which are standard to the industry.
- Process plant is designed to process 14,000 tonnes per day, or 5,040,000 tonnes per year at 90% utilization, operating for 360 days per year.
- Process water is reclaimed and recycled and thus minimizes water consumed by process.

17.1 PROCESS PLANT

17.1.1 General

The design basis for the processing facility is 14,000 tonnes per day or 5,040,000 tonnes per year at 90% mill availability. This section presents the process design criteria that will govern the design of the processing facility (mill) including crushing, grinding, agitation leaching, carbon adsorption, carbon desorption (stripping), carbon regeneration, gold electrowinning, gold refining, tailing detoxification, tailing filtration and disposal. The process plant designed for the ELG Mine utilizes processes and equipment which are standard for the industry. This includes cyanide leach followed by carbon-in-pulp recovery, and utilizing filtered tailing for disposal.

17.1.2 Process Overview

The following items summarize the process operations required to extract gold and silver from the ELG Mine ore.

- Size reduction of the ore by a gyratory crusher, wet semi-autogenous grinding mill (SAG), and ball milling to liberate gold and silver minerals.
- Thickening of ground slurry to recycle water to the grinding circuit.
- Recovery of precious metals contained in the recycle water by carbon columns (CIC).
- Cyanide leaching of the slurry in agitated leach tanks.
- Adsorption of precious metals onto activated carbon by carbon-in-pulp (CIP) technology.
- Removal of the loaded carbon from the CIP and CIC circuits and further treatment by acid washing, stripping with hot caustic-cyanide solution, and thermal reactivation of stripped carbon.
- Recovery of precious metal by electrowinning.
- Mixing electrowon sludge with fluxes and melting the mixture to produce a gold-silver doré bar which is the final product of the ore processing facility.
- Thickening of CIP tailings to recycle water to the process.
- Detoxification of residual cyanide in the tails stream using the SO_2/Air process.
- Filtering of detoxified tailings to recover water to recycle to the process.
- Disposal of the filtered detoxified tailings to a dry stack tailings pad.
- The water from filtrate solution pond is recycled for reuse in the process. Water stream types include: process water, fresh water and potable water.
- Storage, preparation, and distribution of reagents to be used in the process. Reagents which require storage and distribution include: sodium cyanide, caustic soda, flocculant, copper sulphate, sodium metabisulphite, hydrochloric acid, and lime.

The overall process flow diagram of the proposed processing plant is presented in Figure 17-1.

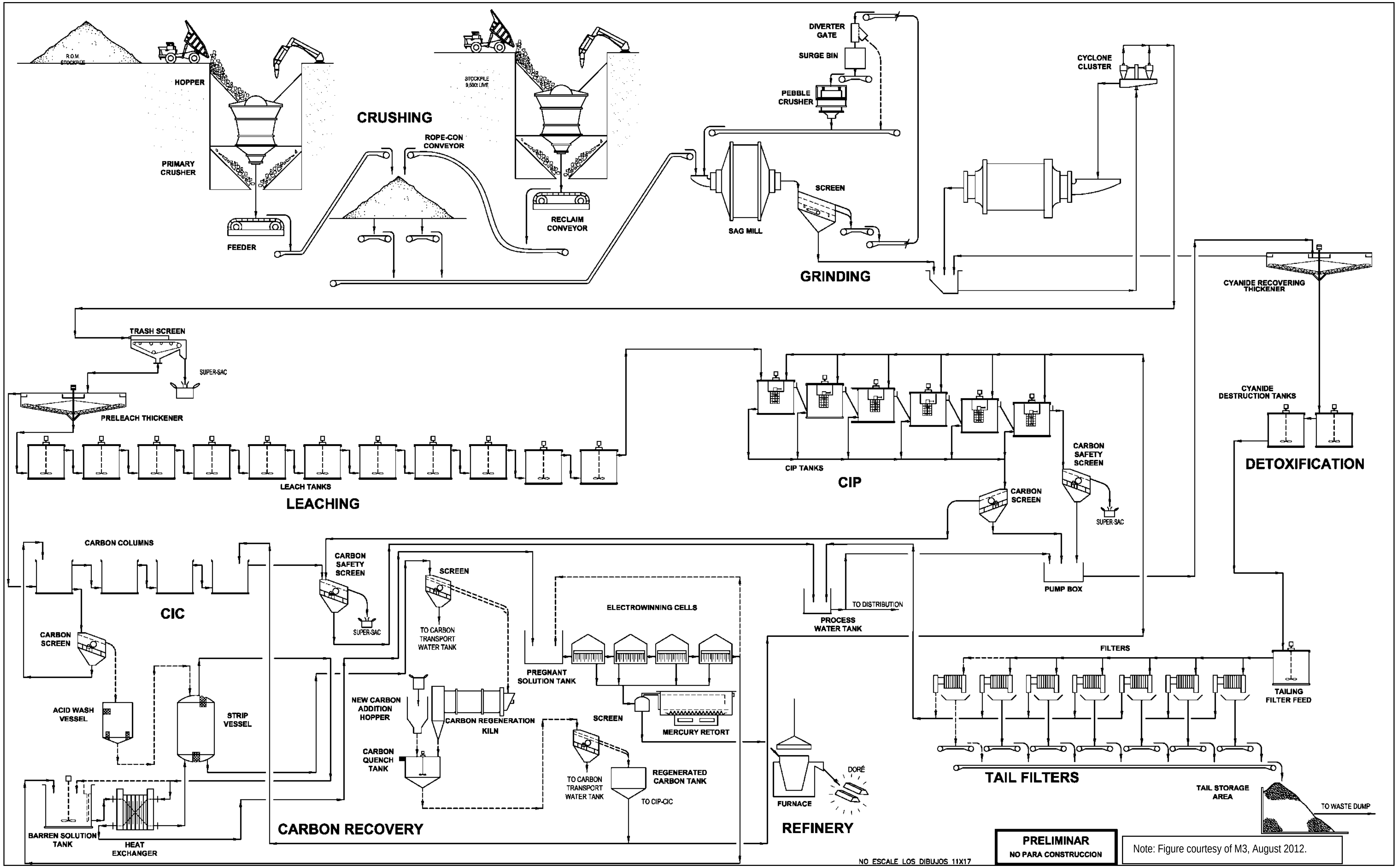


Figure 17-1: Overall Process Flow Sheet

17.1.3 Crushing and Grinding

Two identical crushing systems will be installed to crush ROM ore from the El Limón pit and the Guajes pits. A RopeCon® conveyor system will deliver ore from the El Limón pit to the processing plant.

The RopeCon is a bulk material and unit load handling conveyor which combines the benefits of well proven technologies, the ropeway and the conventional conveyor belt, hence the brand name RopeCon. The hauling function is performed by the belt. The RopeCon operates well above the ground thereby minimizing space requirements and making it easy to go over buildings, roads, rivers or other obstacles.

For each crusher location, a crusher feed hopper, with 200 tonnes of capacity, will be fed directly from 100 tonne capacity, rear dump, ore haulage trucks. The crusher feed hopper will feed the 1.067 m by 1.651 m primary gyratory crushers that will produce a 150 mm size product to feed the SAG mill circuit. Crushed ore at the Guajes pits crushing plant will be withdrawn from the crusher discharge hopper by a 1.372 m wide by 6 m long apron feeder that will feed a 1.219 m wide by 149 m long belt conveyor. The conveyor will transport the ore to a coarse ore stockpile. Crushed ore from the El Limón pit crushing plant will be withdrawn from the crusher discharge hopper by a 1.372 m wide by 6 m long apron feeder that will feed the RopeCon® conveyor which will haul crushed ore to the coarse ore stockpile. The coarse ore stockpile will have a live capacity of 14,000 tonnes.

The crushed ore will be reclaimed with reclaim feeders which will feed a 1,219 mm wide by 200 m long SAG mill feed conveyor belt that feeds the grinding circuit.

Ore will be ground to a final product size of 80% minus 60 microns in a semi-autogenous (SAG) primary and ball mill secondary grinding circuit.

Primary grinding will be performed in a 9.15-meter diameter by 4.15-meter (effective grinding length) long SAG mill with a 7,000-kilowatt motor. The SAG mill will operate in closed circuit with a SAG mill discharge screen and a pebble crusher.

Secondary grinding will be performed in a 7.3 m diameter by 12.65 m (effective grinding length) long ball mill with two 7,000-kilowatt motors operated in closed circuit with hydrocyclones. Hydrocyclone underflow will flow by gravity to the ball mill. Hydrocyclone overflow (final grinding circuit product) will flow by gravity to the pre-leach thickener.

17.1.4 Leaching

A 32-meter diameter high rate thickener will be used to thicken the grinding cyclone overflow to 50% solids to feed the leach tanks and remove clear overflow (cyanide solution with gold from leaching in the mills) to feed the CIC (Carbon in Column) tanks. Flocculant and dilution water will be added to the thickener feed to aid in settling.

The withdrawal rate of settled solids will be controlled by a variable speed, thickener underflow pump to maintain either the thickener underflow density or the thickener solids loading. The thickener underflow will be pumped to the leach circuit. Thickener Overflow water that contains precious metals dissolved in the grinding and thickening circuit will flow by gravity to four carbon columns arranged in series. The carbon columns will remove the dissolved precious metals from the overflow water.

The precious metals in the ore will be leached in eleven 15.55 m diameter by 21.34 m high tanks. Each tank will have a slurry level of 20.1-meter resulting in a working volume of 3,815 m^3. The eleven tanks will provide approximately 49 hours of plug-flow retention time for cyanide leaching at 50 percent solids. Cyanide solution can be added to the first and third leach tanks. Lime will be piped to the first and second leach tanks. Process air will be piped to all leach tanks.

Gold and silver leached into the cyanide solution (pregnant solution) will be adsorbed onto activated carbon in the carbon-in-pulp (CIP) circuit which will consist of six 250 m^3 "AAC Pump Cell" tanks operated in a carousel configuration. The CIP tanks will nominally contain 50 g/L of 6 by 12 mesh granular activated carbon to adsorb the dissolved precious metal values.

Carbon will be retained in each CIP tank by an inter-stage screen that will allow only the ore slurry to flow from tank to tank. The feed point will be advanced to the next tank in series on a daily basis and the contents of the isolated tank will be pumped by recessed impeller pump to the loaded carbon screen ahead of the acid wash vessel. CIP plant size is 12 tonnes per day.

The slurry from the last CIP tank will be sampled and flow by gravity to a single deck vibrating carbon safety screen fitted with 0.5 mm slotted polyurethane panels to remove coarse granular carbon that may inadvertently get by the inter-stage screen in the last CIP tank. The undersize will be pumped to the CIP tailing thickener.

17.1.5 Tailing Detoxification, Dewatering and Disposal

The tailings that leave the CIP process will be pumped to a 32-meter diameter high rate cyanide recovery thickener in order to recover the aqueous solution with cyanide content and recirculate it to the sump that feeds the Ball Mill. The cyanide recovery thickener underflow slurry will be pumped to the cyanide detoxification process.

In the tailing detoxification tanks, Weak Acid Dissociable (WAD) cyanide will be oxidized to the relatively non-toxic form of cyanate by the SO_2/Air process using sodium metabisulphite and air with copper sulphate as a catalyst. Lime will be added to maintain a slurry pH in the range of 8.0 to 8.5.

Oxygen, required by the reaction will be introduced by sparging atmospheric air into the reaction vessels. (Cu^{2+} ions, introduced as $CuSO_4$, catalyzes the reaction)

The detoxification reactors will be two 9.7 m diameter by 11.6 m high tanks. Each tank will have a slurry level of 10.9 m resulting in a working volume of 803 m^3. The two tanks will provide a residence time of approximately 2 hours.

The slurry discharged from the detoxification circuit will be the final plant tailing and will be filtered for the recovery of water.

The tailings from the cyanide detoxification plant will be pumped to the filter feed tank and from there they will feed seven tailings filters (6 in operation, 1 standby) in order to separate the water and return it to the process. The filtrate will flow by gravity to the filtrate solution pond to be recycled and the filter cake will be disposed as dry stack tails. The cake with about 13.3% moisture by weight (weight of water/total weight of cake) will be transported to the dry tails storage area. A description of the design of the dry tails storage area, and placement procedures is given in Section 18.8.2.

The dewatered, detoxified tailing will be transported to a tailing disposal area on conveyor belts.

Advantages of the dry tailings disposal over wet disposal are the following (source "Torex Gold Resources Inc. Morelos Property, Guerrero State, Mexico Filtered Tailings versus Slurry Tailings Trade-off Study, Final, January 27, 2011"):

- No stability issues related to dam construction;
- Increased water recycling;
- Larger capacity;
- Lower capital cost;
- Reduced footprint;

- Lower overall cost (capital and operating); and,
- Improved reclamation and closure.

The design criteria and objectives for the dry tailing disposal include:

- Provision of secure long-term storage of up to 57.6 million tonnes of tailing which is projected at the end of the mine life.
- Location within the immediate general area of the mine.
- Prevention of airborne release of tailing solids to the environment by provision of dust suppression measures.
- Compliance with all applicable regulations including Mexican BADCT standards for groundwater protection.
- Integration of environmental monitoring technology for water quality assurance.
- Establishment of an effective and efficient reclamation program, with a focus on concurrent reclamation.
- Material is at optimum moisture for placement and compaction which optimizes long term stability of the tailing.

17.1.6 Carbon Stripping (Elution) and Regeneration

Loaded carbon will be pumped from the CIP circuit and the carbon in column (CIC) circuit to two 1.22 m x 3.7 m loaded carbon screen. The carbon will be water washed on the screen and then discharged by gravity into a 25 m^3 (~12 t carbon) acid wash tank. The carbon will be acid washed to remove inorganic contaminants (mainly calcium) by circulating dilute hydrochloric (possibly nitric) acid from the acid storage tank upwards through the bed of carbon. Residual acid in the acid wash vessel will be neutralized with caustic before transferring the carbon to the strip circuit. The carbon is transferred with water using a horizontal recessed impeller pump to reduce carbon attrition.

Carbon stripping (elution) will utilize a pressure Zadra circuit which comprises of circulating 140ºC caustic cyanide solutions upward through a partially fluidized bed of carbon. Carbon will be stripped in 12 tonne batches as follows.

The carbon from the acid wash circuit will be pumped into the top of the strip column and the excess water drained to the floor sump. After the complete batch of carbon has been transferred, the strip cycle will be initiated by pumping hot caustic cyanide solution from the barren tank through two heat exchangers (heat recovery and final) into the bottom of the strip column. The solution will discharge through a screen in the top of the column before passing through the heat recovery exchanger to the pregnant solution tank. The hot side of final heat exchanger is connected through a circulated glycol system to an oil fired heater. Approximately 12 Bed Volumes (BV's) at a rate of 2 BV/h will be passed through the carbon to remove all the gold. A final 2 BV of hot water will be used to wash the carbon at the end of the stripping cycle. After the stripping circuit has been cooled down, the carbon will be transferred with water to the reactivation circuit using a horizontal recessed impeller pump.

Following stripping, the carbon will be thermally regenerated before being returned to the adsorption circuits. Stripped carbon will be pumped from the bottom of the strip vessel to a dewatering screen ahead of the kiln. Well drained, damp carbon will be fed at a rate of 500 kg/h to horizontal rotary carbon reactivation kiln. The carbon will be heated to 750ºC in a non-oxidizing environment followed by quenching in water. The carbon will be pumped from the quench tank to a carbon sizing screen. Carbon fines will be removed and discarded before the regenerated carbon is returned to the adsorption circuits.

17.1.7 Refining

Gold will be recovered from pregnant strip solution by electrowinning onto woven wire, stainless steel cathodes. Pregnant solution will be pumped at a rate of 13.71 m^3/h through four 6 m^3 electrowinning cells in series. The gold (and silver) from the pregnant solution will be deposited on the cathodes as a weakly bonded sludge. The sludge will intermittently be washed off the cathodes and recovered as a damp cake in a pressure filter press. The filter cake will be retorted in a 0.4 m^3 (15 ft^3) mercury retort furnace to remove mercury prior to smelting to gold bullion. The retort temperature will be ramped up gradually to 600ºC-700ºC to enable the sludge to dry completely before mercury is vaporized and to allow time for the mercury to diffuse to the solid surfaces.

Dried retorted sludge will be mixed with fluxing materials and charged to a diesel fired melting furnace. After the furnace charge is melted, it will be poured into slag pots and bar molds. The doré bars will be cleaned, weighed, and stamped before shipment to a custom precious metals refinery.

17.1.8 Reagents

The following reagents used in the processing of the ELG Mine ore will require handling, mixing, and distribution systems:

- Flocculant,
- Sodium cyanide,
- Caustic soda,
- Lime,
- Sodium metabisulphite,
- Copper sulphate, and
- Hydrochloric acid.

17.1.8.1 Flocculant

A flocculant will be added to the slurry stream feeding the thickeners to enhance the settling characteristics of the ore.

The flocculant will be delivered in super sacs and stored in a dry area in the mill building. Flocculant mixing will be through a packaged flocculant mixing system that will mix the reagent to a 0.25 percent solution.

17.1.8.2 Sodium Cyanide

Sodium cyanide solution will be added to the ore in the leach circuit to leach gold and silver. Sodium cyanide solution will also be used in the carbon stripping process.

Dry sodium cyanide will be delivered in 20 tonne bulk ISO containers as a solid. Delivery will be contracted to a supplier who is certified and a signatory to the Cyanide Code.

Sodium cyanide solution will be prepared by adding water to a sodium cyanide mix tank and circulating the solution between the mix tank and ISO container until all dry cyanide has been dissolved. Sodium cyanide solution (25%) will be distributed to the grinding and leach circuits using timer controlled on-off valves in a circulating loop.

17.1.8.3 Caustic Soda

Caustic soda (sodium hydroxide) solution will be used to neutralize acidic solutions after acid washing, in the carbon elution process and for pH control for cyanide mixing.

Dry caustic soda will be delivered in 500 lb. cardboard drums. The caustic mix system will comprise of a 2.5 m^3 agitated mixing tank and a 3 m^3 holding tank. A 25% solution of caustic will be pumped to the various manually controlled addition points.

17.1.8.4 Lime

Dry pebble lime will be added to the SAG mill feed conveyor to control the pH in the grinding circuit. Milk of lime slurry will be produced by slaking pebble quicklime in a packaged lime slaker and will be distributed to the leach and cyanide destruction circuits using timer controlled on-off valves in a circulating loop.

Pebble quicklime will be delivered to the site in bulk quantity by 20 tonne trucks and pneumatically off loaded to either one of two lime silos. The milk of lime silo will be 3.7 m diameter by 4.0 m high with storage capacity for 35 tonnes of pebble lime. The bulk lime silo for the SAG mill will be 3.7 m diameter by 8.2 m high with a storage capacity of 75 tonnes.

17.1.8.5 Sodium Metabisulphite

Sodium metabisulphite will be added to the tailing detoxification circuit as the primary source of SO_2 for the cyanide destruction process.

Dry sodium metabisulphite will be delivered in super sacs and stored in a dry area. The metabisulphite mix system will comprise an 18 m^3 agitated mixing tank and a 20 m^3 holding tank. Metering pumps will be used to deliver a 20% solution of metabisulphite to the two cyanide destruction reactors.

17.1.8.6 Copper Sulphate

Copper sulphate is added to the cyanide destruction reactors to catalyze the SO_2/air cyanide destruction reaction.

Copper sulphate will be delivered in super sacs and stored in a dry area. The copper sulphate mix system will comprise an 18 m^3 agitated mixing tank and a 20 m^3 holding tank. Metering pumps will be used to deliver a 20% solution of copper sulphate to the two cyanide destruction reactors.

17.1.8.7 Hydrochloric Acid

Hydrochloric acid will be used to acid wash carbon prior to the carbon stripping circuit.

Hydrochloric acid will be delivered and stored in drums. A 5% acid solution will be prepared by pumping acid directly from the drums into the acid wash circulating tank.

17.1.9 Water System

The water system for the ELG plant site will consist of two grades of water; fresh water and process water. The two grades of water that will be used at the plant site are described below.

17.1.9.1 Fresh Water

Fresh water will be supplied from three wells located near the village of Atzcala, eighteen kilometers from the mine site. Water from the wells will be pumped via two well field pumps (650-PP-001/002) to the fresh water transfer tank and pumped to the fresh/fire water tank. Fresh water from the Fresh/fire water tank will be distributed by gravity to:

- Fire water loop
- Chlorinator system (650-WT-001) which will produce potable water stored in the potable water tank for use in offices, laboratory, housing, rest rooms and eyewash/safety showers
- Gland seal water to be used as seal water for mechanical equipment
- Mine water trucks to be used in mine road dust control

- Process use points (e.g. crusher dust suppression and reagent mixing)

17.1.9.2 Process Water

Underflow from the carbon safety screen and fresh water from the fresh/fire water tank will flow to the process water tank for distribution to process usage points. Water will also be pumped from the central water pond to the process water tank.

A central water pond (Water Collection Pond) is provided near the process plant site. This will serve as the central water management facility for all mine-affected discharge, including discharge from the open pits, the tailings dry stack, the plant area, and the waste rock dumps. The central water pond will be used as backup water supply to process plant in case of emergencies only, and will not ordinarily be used to supply reclaim water.

17.2 DESIGN CRITERIA

The design of the ELG Process facility is based on the following criteria which have been provided, calculated or recommended.

17.2.1 Run-of-Mine Ore Characteristics

Maximum mine-run ore size, mm	1,000
Ore specific gravity, design	3.2
Ore bulk density, t/m^3, design	1.8
Ore moisture content, %, design	3

17.2.2 Production Schedule

Milling Rate, dry tonne per year	5,040,000
Mine Operating Schedule	
Days per year	360
Hours per day	24
Shifts per day	2
Hours per shift	12
Shifts per week	13
Primary Crusher Operating Schedule	
Days per year	360
Hours per day	24
Shifts per day	2
Hours per shift	12
Shifts per week	13
Percent availability	75
Mill Operating Schedule	
Days per year	360
Hours per day	24
Shifts per day	2
Hours per shift	12
Shifts per week	14
Percent availability	90

Carbon Stripping and Refining Operating Schedule		
	Days per year	360
	Hours per day	12
	Shifts per day	1
	Hours per shift	12
	Shifts per week	7
	Percent availability	N/A
		Batch Operation
Process Rate Schedules		
	Primary Crushing, tonne per week, average (5,040,000 / 360) x 7	98,000
	Primary Crushing, t/h, design	1,000
	Primary Crushing, t/h, average (5,040,000 x 7) / (360 x 13 x 12 x 75%)	838
	Milling, t/h, design	648
	Milling, dry tonnes per day, average (5,040,000 / 360)	14,000
Metal Production Schedules		
	Ore Grade, gold, g/t, average	2.69
	Mineralized Grade, silver, g/t, average	4.36
	Gold Recovery, percent	87.33
	Silver Recovery, percent	32.46
	Gold Production, grams per day, average (5,040,000 / 360) x 2.69x87.33%)	32,888
	Silver Production, grams per day, average (5,040,000 / 360) x 4.36x32.46%)	19,814

17.2.3 Primary Crushing and Coarse Ore Reclaim Area

	Mine Truck - Capacity, tonne	100
	Dump Pocket	
	Number	2*
	Mode of Feeding	Truck
	Pocket Capacity, tonne	200
	Rock Breaker	
	Number	2
	Type	NPK-B9500H/D
	Primary Crusher Discharge Hopper	
	Number	2
	Pocket Capacity, tonnes	TBD
Primary Crusher		
	Number	2
	Type	Gyratory
	Size, mm	1,067 x 1,651

Primary Crusher Discharge Feeder

Number	2
Type	Apron
Drive	Hydraulic, variable speed
Turndown	50%
Size, width x length, mm x m	1372 x 6
Capacity, flowsheet design, DMTPH	778
Capacity, operating maximum, DMTPH	1000
Power Installed, kW	200

Crushing Area Dust Collector

Number	2
Type	

RopeCon Conveyor

Horizontal length, m	1298
Vertical fall, m	385
Hourly Capacity, t/h	1000
Maximum lump size, mm	200
Bulk Density, t/m3	1.6 to 2.0
Continuous operating speed, m/sec	0 to 3.6
Belt Width, mm	660
Belt utilization width, mm	510
Side wall height, mm	200
Power required, continuously, kW	-906**
**Regenerative	

Coarse Ore Stockpile

Number	1
Live capacity, tonne	14,000

*Identical Primary crushing systems for El Limón and Guajes pits.

17.2.4 Grinding Area

Primary Grinding SAG Mill

Number	1
Mill Size:	
Diameter inside shell, meters	9.15
Effective grinding length, meters	4.15
Mill Speed, % critical speed	75
Mill Motor, kilowatt	7,000
Mode of Operation	Closed circuit
Horsepower Calculation:	
Ore Bond Work Index	17.5
Feed Size, 80% passing, µm	150,000
Product Size, 80% passing, µm	2000
Calculated kW/t, Sag mill pinion	8.97
Kilowatts required at 648.8 t /h	5,814

	Circuit Operating Characteristics:	
	Mill feed slurry, % solids	70
	Mill circulating load, %	20
	Ball top size, mm	127
SAG Mill Discharge Screen		
	Type	Double Deck Vibrating
	Number	1
	Screen Size:	
	Width, meters	3.05
	Length, meters	
	Deck material	Polyurethane
	Screen opening size, mm	12.5
Pebble Crusher		
	Type	Cone HP400
	Number	1
	Size	TBD
	Crushed Feed, F80, mm	20
	Crushed Product, P80, mm	9
	Capacity, Flow Sheet Design, tph	207
	Capacity, Operating Maximum, tph	260
	Power Required, kW, calculated	268
	Power Installed, kW	300
Pebble Crusher Feeder		
	Number	1
	Type	Belt
	Drive Hydraulic	Variable Speed
	Capacity Range, tph	180-300
	Size, Width x Length, m x m	1.219 x 10
	Capacity, Flow Sheet Design, tph	242
Secondary Grinding-Ball Mill		
	Number	1
	Mill Size:	
	Diameter inside shell, meters	7.33
	Effective grinding length, meters	12.65
	Mill Speed, % critical speed	75
	Mill Motor, kilowatts	7,000 (2)
	Mode of Operation	Closed circuit
	Ball Mill, Bond Work Index	17.5
	Feed Size, 80% passing, µm	2000
	Product Size, 80% passing, µm	60
	Calculated kW/t, ball mill pinion	20.55
	Kilowatts required at 648.8 t/h	13,320
	Circuit Operating Characteristics:	
	Mill feed slurry, % solids	75
	Mill circulating load, %	300
	Ball top size, inches	2

Hydrocyclones

Model/Size	WEIR, 650CVX13
Number Operating	6
Number Standby	1
Feed Pressure, psig	10
Feed, % solids, design	52
Overflow, % solids, design	29.3
Underflow, % solids, design	70
Overflow size, P80, µm	60

Grinding Circuit Trash Screen

Type	Linear
Number	1
Screen Size:	
Width, meters	5.0
Length, meters	6.0
Number of screen decks	1
Deck material	Fabric
Screen opening, size, µm	2000
Screen opening, type	Square

17.2.5 Leach and CIP Area

Pre-Leach Thickener

Type	High rate
Number	1
Specific Area Requirement, $t/h/m^2$	1.0
Operating Characteristics:	
Thickener Feed:	
Slurry, % solids w/w, design	29.3
Thickener Underflow:	
Slurry, % solids w/w, design	50

Carbon in Column

Type	Open Top
Number	4
Size:	
Diameter, meters	4.4
Height, meters	2.8
Mode of operation	Cascading, series
Operating Characteristics:	
Specific flow rate $m^3/h/m^2$	76
Carbon:	
Carbon size, mesh	6 x 12

CIC Carbon Advance Pumps

Type	Horizontal
Number	1
Mode of operation	Intermittent

Leach Tanks

Type	Open Top with Agitator
Number	11
Size, meters:	
Diameter	15.55
Height	21.34
Freeboard	1
Mode of operation	Series
Residence time, hours, total	49
Residence time, hours, each	4.45
Operating Characteristics:	
Tank Feed Rate:	
Slurry, % solids w/w, design	50

Carbon in Pulp (CIP)

Type	Open Top with pump cell
Number	6
Size, meters:	
Volume, (m^3)	250
Diameter	7
Height	8
Freeboard	0.3
Mode of operation	Carousel
Residence time, hours, total	1.75
Residence time, min., each	17.5
Operating Characteristics:	
Slurry, % solids w/w, design	50
Carbon:	
Carbon size, mesh	6. X 12
Carbon concentration in CIP tank slurry, g/L	48

CIP Intertank Screens

Type	AAC Pump Cell
Number	1 per CIP tank
Screen surface material	Stainless Steel
Screen opening size, µm	630
Screen opening type	slotted wedge wire
Specific flow rate, m^3, slurry/hour/m^2, design	20.5

CIP Carbon Advance Pumps

Type	Horizontal
Number	1
Operating Characteristics:	
Mode of Operation	Intermittent

17.2.6 Thickening and Tailing Detox Area

Cyanide Recovering Thickener

Type	High Rate
Number	1

	Unit Area Requirement, t/h/m^2	1.0
	Operating Characteristics:	1
	Thickener Feed:	
	Slurry, % solids w/w, design	35
	Thickener Underflow:	
	Slurry, % solids w/w, design	55
Carbon Safety Screen		
	Type	Vibrating
	Number	1
	Screen Size:	
	Width, meters	1.83
	Length, meters	3.66
	Number of screen decks	1
	Deck material	Polyurethane
	Screen opening, size, mm	0.200
	Screen opening, type	Slotted
Tailing Detoxification Tank		
	Type	flat top w/agitator
	Number	2
	Tank Size, meters:	
	Diameter	9.7
	Height	11.6
	Freeboard	0.3
	Residence time, minutes, total	120
	Residence time, minutes, each	60
	Operating Characteristics:	
	Tank Feed:	
	Slurry, % solids w/w, design	55
Tailing Filter		
	Type	Plate and Frame Pressure Filter
	Number	7 (6 operating, 1 standby)
	Size, Each Filter Unit:	
	Numbers of Plates	127
	Total Filter Area, m^2	1,204.56
	Specific Flow Rate, m^3/h/m^2	0.478
	Feed Flow Rate, per 24-h	
	Flow Sheet Design, dt/d	15,574
	Maximum, dt/d	23,360
	Flow Sheet Design, m^3/d, slurry	17,676
	Feed	
	Solids, Specific Gravity	3.20
	Slurry, % Solids	54.9
	80% Passing, Microns	60
	Filter Cake	
	Moisture, % w/w	13.3
	Bulk Density, lb. /ft^3	100

17.2.7 Carbon Stripping Area

Activated Carbon		
	Type	Coconut Shell
	Size, mesh (new)	6 x 12
	Bulk density, dry	480
	Bulk density, wet	961
	Voids in settled carbon, % by volume	40
Acid Wash Circuit		
	Type	Hydrochloric Acid Wash Sodium Hydroxide Neutralization
	Mode of operation	Batch
	Batch size, design, t carbon	12
	Batches per day, design	1
	Batches per day possible in available time	2
Elution Circuit		
	Type	Pressure Zadra
	Mode of operation	Batch
	Batch size, design, t carbon	12
	Carbon metal loading, g/t	
	Loaded carbon, gold	3,862
	Loaded carbon, silver	4,406
	Stripped carbon, gold	50
	Stripped carbon, silver	50

17.2.8 Refining Area

Electrowinning Circuit		
	Type	DC Electric Current
	Stainless Steel Anodes	
	Knitted Stainless Steel Mesh Cathodes	
	Mode of Operation	Continuous Sludging
	Number of Cells	4
	Cell configuration	series
Refining Circuit		
	Type	Diesel Melting Furnace
	Mode of Operation	Batch
	Batches per day	-
	Days per week	2
	Number of furnaces	1

17.2.9 Carbon Reactivation Area

Carbon Reactivation Circuit		
	Type	Horizontal kiln Electric
	Mode of Operation	Continuous
	Batch Size, design, t carbon	12

Batches per day, design	1

17.2.10 Reagents Area

Sodium Cyanide Solution System

Delivered Form	Flow Bins or Bulk
Method of Storage	Solution
Solution Mixing Concentration	25%
Usage Rate, kg/t	1.0

Caustic Solution System

Delivered Form	Dry Flakes in Cardboard Drums
Method of Storage	Dry in Drums and in Solution
Solution Mixing Concentration	25%
Usage Rate, kg/t	0.125

Package Flocculant System

Delivered Form	Dry Flakes
Method of Storage	Dry on Pallets and in Solution
Solution Mixing Concentration	0.25%
Usage Rate, kg/t	0.05

Copper Sulphate System

Delivered Form	Dry, Crystals
Method of Storage	Dry on Pallets and in Solution
Solution Mixing Concentration	10%
Usage Rate, kg/t	0.02

Lime System

Delivered Form	Dry, Pebble Pneumatic Unloading Delivery Truck 20 to 30 Ton Truck Capacity
Method of Storage	Dry in Bin and Slurry
Slurry Mixing Concentration, % w/w/ solids	10%
Usage Rate, kg/t	2.7

HCl Acid System

Delivered form	Drums of 34% solution
Method of storage	Drums
Solution mixing concentration	5%
Usage rate, kg/t	0.1

Sodium Metabisulphite System

Delivered form	dry, powder Super Sacs
Method of storage	Dry on pallets
Solution mixing concentration	20%
Usage rate, kg/t	0.836

18 PROJECT INFRASTRUCTURE

This section discusses the infrastructure not directly related to processing for the ELG Mine. This includes:

1. The off-site infrastructure to secure a source of water and power (wells and electrical switching station).
2. The off-site infrastructure to get people, supplies and services to the site (including water and power).
3. The off-site infrastructure to house people (including the camp).
4. The on-site infrastructure to service and support the operations (The non-process buildings).
5. The on-site infrastructure to secure the site and product (fencing, access control points, helipad, and product storage in the Refinery).
6. The on-site infrastructure to store and contain waste products (including waste rock, tailings, water, and domestic waste).
7. Geo-technical considerations for foundations.

The key points of this section are:

- Construction of the Overall ELG Mine is approximately 73% complete at the end of June 2015, as such the bulk of the items outlined below are completed or nearing completion.
- The source of water is from three wells located ~11 km from the site. These wells have been drilled, water quantities confirmed, pumps installed in place and permits for the water have been received. Connection to ELG Mine for the well field is scheduled for completion in H2 of 2015.
- Connection to a 115 kV transmission line located 2 km from the plant site within the land package boundary has been made and the line energized. A switching station has been built along with a short power line to the ELG Mine on-site substation.
- A 23.7 km road, the East Service Road, has been completed which connects the plant site to highway 95. The water line from the well field follows this roadway. Power lines to supply the well site also follow the new roadway. All mine supplies, including cyanide, will be transported along the East Service Road. To reduce the risk of a potential future cyanide accident involving water, the roadway has been routed away from the Balsas River.
- A permanent camp for company personnel has been constructed adjacent to the East Service Road, approximately 8 km from the plant entry.
- The villages of La Fundición and Real del Limón are being relocated to a new site called El Potrerillo. The new town site is approximately 6 km from the plant site and is connected to the East Service Road by a short spur road. The portion of El Portrerillo that will house the people of La Fundición has been completed and the actual move of villagers is scheduled to begin July 2015. The remaining portion of the village to accommodate the people of Real del Limón is scheduled for October 2015 with the relocation planned to follow immediately upon completion.
- Service facilities (such as maintenance facilities, explosives magazines, administration facilities, etc.) have been or will be constructed by March 2016.
- The plant site has been completely fenced at the perimeter of the ELG Mine. Access through this fence is controlled by a guard house, where incoming personnel will be directed as appropriate. The final level of security control is in the refinery where the finished product is well protected behind concrete and secure access.
- Tailings disposal is through a filtered dry stack process. This method uses less land, eliminates the risk of a tailings dam failure and has the added benefit of recycling water. Preparation for development of the dry stack is nearing completion.
- The waste rock is not expected to produce acid rock drainage (ARD), hence there is no infrastructure planned to manage ARD. The El Limón Sur waste rock characteristics are also generally similar to the waste rock from ELG Mine. The drainage from the waste rock piles will be monitored for ARD and metal

leaching above acceptable limits. Mitigation efforts will be taken in the future if the trend points towards a need.

- Water management infrastructure has been planned for and construction is in progress. The process plant recycles water and hence there in no process water that is discharged to the environment. The majority of the water control infrastructure that is installed is meant to control rain events.
- Geotechnical studies were completed and all major earthworks completed. Monitoring of potential geotechnical issues was completed during construction and any identified were mitigated.

Figure 18-1 provides the relative location of infrastructure described in this section.

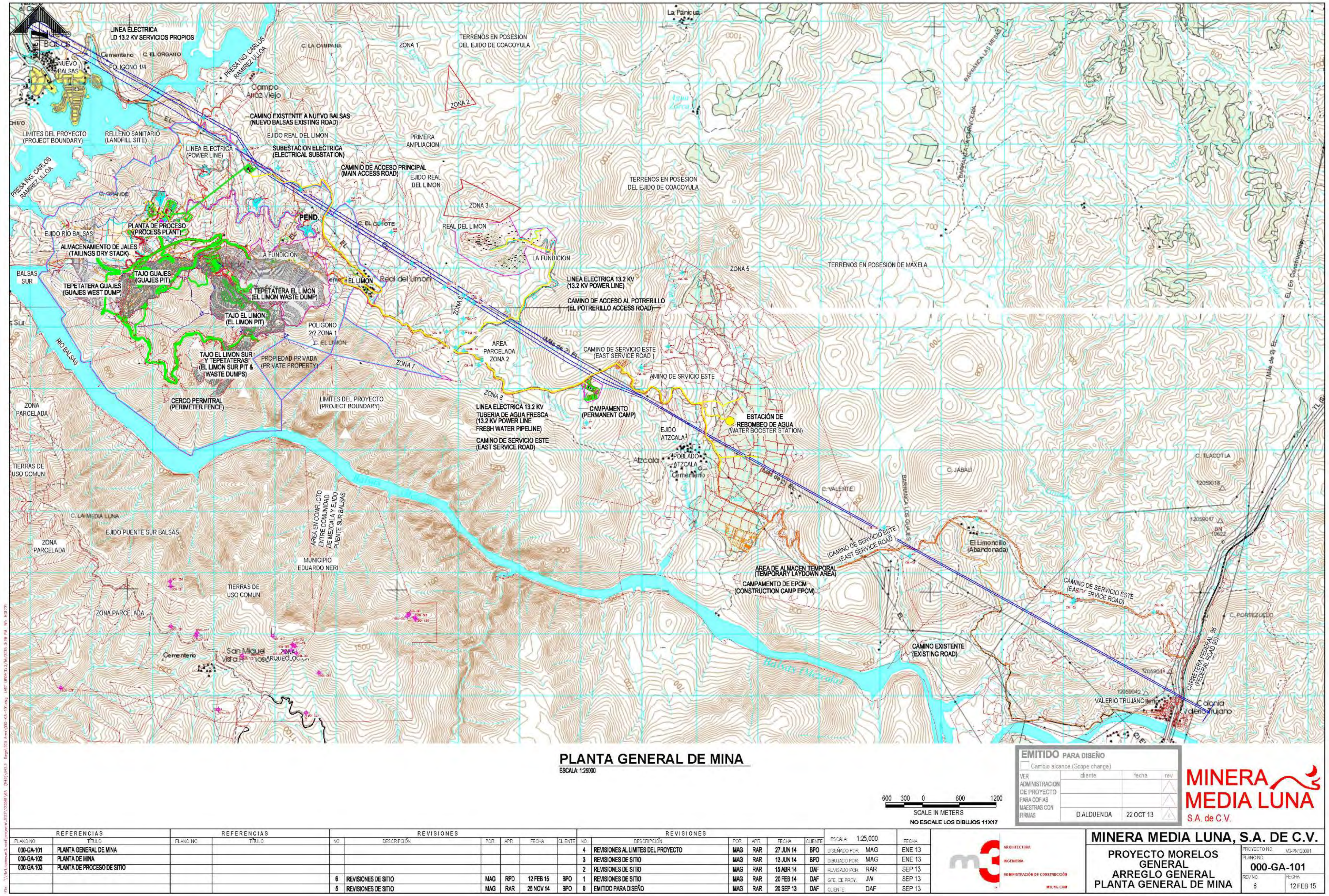


Figure 18-1: ELG Mine Site Infrastructure Layout

18.1 GENERAL SITE AREA

The following section describes the general site layout of the ELG area. The site has a fence around the entire mine area with a controlled entrance at the East Service Road. Figure 18-2 provides a view of the main ELG Mine area, identifying the main mine facilities. Construction of the Overall ELG Mine is approximately 73% complete as of June 2015 with project completions targeted for March 2016. A large portion of the infrastructure described below is constructed or nearing completion.

The plant site proper includes the administration, process plant, crusher and mine operation infrastructure. The bulk of the infrastructure is located approximately 5 kilometers from the guardhouse to the plant area. The plant site is located north of the Guajes pit and northwest of the El Limón pit. The facilities are all outside a 500 m blast radius from the pits. The plant layout was based on cutting down existing hills to provide relatively flat areas for the plant facilities. The process plant is on one leveled hill area and the mine truck shop is located on another leveled ridge area. The crusher building is located on the same ridge as the truck shop, set in the side slope of the ridge. The coarse ore stockpile is located on grade between the crusher and the mill. The administration, assay lab, and warehouse are located on benches adjacent to the process plant. All facilities are located within the capture area of the Central Water Pond; thus, all runoff will be collected and recycled from the plant area. The main facilities are all located within a small footprint (approximately 70 ha) to improve efficiencies and to minimize the impact on the environment. To minimize impact on the village of Nuevo Balsas, the plant site has been located on the opposite side of a natural ridge. Placing the plant in this location screens the plant site from view as well as reducing noise and dust impacts to Nuevo Balsas.

Details on the process plant are given in Section 17 of this report. Exiting the Administration building to the east provides a view of the process plant, about 200 m northeast. Directly east is the crushed ore stock pile (14,000 t live capacity) and to the south east is the Guajes primary crusher station. The tailing filter plant is located approximately 200 m further west of the process plant.

A second primary crusher station is located near the El Limón pit approximately 440 m above the plant site. This primary crusher station is connected to the process plant at the Coarse Ore Stockpile by an aerial conveyor (RopeCon) provided by Doppelmyer. The RopeCon will convey the ore from the El Limón pit downhill and will generate power. A tradeoff study was prepared to justify the economics of the additional crusher station and RopeCon versus additional mining truck fleet and operating costs. An additional benefit is that downhill hauls of loaded trucks were eliminated, thereby providing a safer, greener (reduced greenhouse gases, less dust) mining operation.

The El Limón crusher is within 500 m of the pit, so blasting safety procedures have been kept in mind when performing design work for this study.

The following sections describe the mine site infrastructure. The Mine site infrastructure is located within the fenced area as indicated in Figure 18-2. For the Process Plant General Layout, see Figure 18-2.

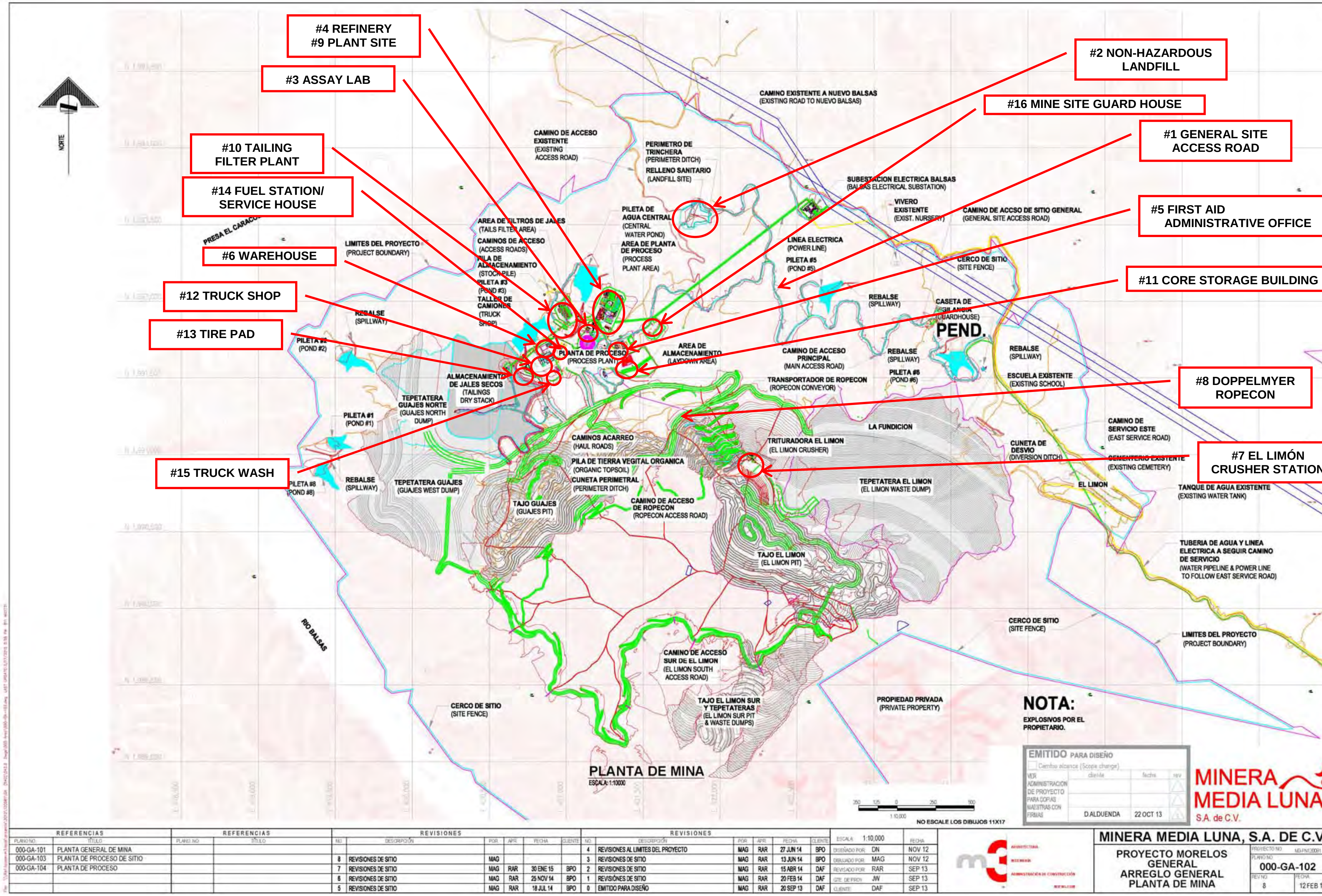


Figure 18-2: Mine Site Layout

18.2 OFF-SITE INFRASTRUCTURE – WELLS AND SWITCHING STATION

18.2.1 Water Wells

Water supply for ELG (Mine, Mill and Camp) is from a well field developed near the village of Atzcala approximately 11 km east of the mine site and is being pumped to the plant site via a 14.5 km pipeline. Torex has been granted a water concession from CONAGUA for taking up to 5 million cubic meters of water per year. Current water requirements for the mine are estimated at 1.9 million cubic meters per year (200 m^3/hr), providing sufficient water for any expansion needs. This water includes water for the Camp, process water for the mining and milling operation, water for dust control on the unpaved roads as well as domestic use at the mine and mill site. The well water is high in sulfates. Package water treatment plants are being utilized for supplying potable water for domestic use at the camp and mine/plant facilities.

Four wells were developed in the Atzcala area by IDEAS with three of them intercepting water. The three successful wells were completed and tested for flow capacity. A combination of any two of the three wells is capable of meeting the mine water needs. This provides redundant capacity for the wells and well pumps. The three wells have been outfitted with well pumps to feed a booster station storage tank.

18.2.2 Switching Station

Power is supplied to the plant site at 115 kV from a transmission line that is within 2 km of the plant site. A switching station at the base of the 115 kV line has been installed, followed by a 2 km transmission line to a substation located at the mine site. The switching station is powered by an existing 115 kV power line from El Caracol and was energized in July 2015.

18.3 OFF-SITE INFRASTRUCTURE SUPPLY AND DISTRIBUTION – WATER, POWER, ROADS, AND SERVICES

18.3.1 Water – Supply & Distribution

18.3.1.1 Fresh Water Storage & Distribution System

As described above the water supply for the mine will come from three wells located near the village of Atzcala. The three wells are planned to produce the 200 cubic meters per hour average flow rate required for the mine. The three well pumps will discharge into a 376,000 gallon (1,424 cubic meters) water tank near the well heads. The water is then pumped from the tank by three 400 HP booster pumps into a 305 mm (12 inch) steel pipeline to the permanent camp area. From the permanent camp, an HDPE pipe is used for gravity feed to the mine. Average flow rate to the plant will require two pumps, running 12 hours a day while a third standby pump will be installed for redundancy.

The booster station and well pumps will be controlled by fiber optic from the plant.

The fresh water tank is located on a hill above the process plant which allows for gravity flow to the process water tank adjacent to the mill building. The fresh water tank will have a dedicated volume for fire protection of 430,000 liters (113,500 gallons). A diesel fire pump is provided for operating the fire water system. Two fire water loops are provided; one around the plant site and the other around the truck shop.

18.3.1.2 Potable Water Supply & Distribution System

Fresh water is drawn from the Fresh Water Tank and is then pumped through a packaged treatment plant that filters, treats, and chlorinates the water and then stores the water in the potable water tank for use. Design potable water consumption is 62,000 liters (16,600 gallons) per day. The water is distributed to the Administration Building, the Assay Lab, and the Truck Shop Area. Eye wash and emergency showers will use potable water as well.

18.3.1.3 Reclaim Water System

Reclaim Water from the Tailings Filter Plant will be piped to the Process Water Tank.

18.3.2 ELG Mine Power Supply

Power for the plant and mine will be via a short connecting line from the CFE 115 kV transmission line located at the north boundary of the mine area. Power at 13.2 kV for the water well field and camp will be supplied from the new CFE Balsas Substation, built within mine area. Torex has been given assurance from CFE that power is available from both these source to meet the needs of the mine.

18.3.2.1 Plant and Mine Power

Power is supplied to the plant site at 115 kV from a transmission line that is within 2 km of the plant site. A switching station has been constructed at the base of the 115 kV line, followed by a 2 km transmission line to a substation located at the mine site. The switching station will be powered by an existing 115 kV power line from CFE El Caracol Substation.

The connected load for the facility is estimated at 40 MVA with a demand of 25 MVA. Two 37.5/50 MVA transformers are provided in the substation. Each transformer will be connected to a section of the 13.8 kV switchgear and the switchgear sections will be connected through a normally open tie breaker. One transformer is large enough to feed the plant in the event of a failure in one unit. The substation is monitored by a PLC connected to the process control system to provide status indications and alarms.

Power to the El Limón crusher will be via a 13.8 kV overhead line run along the RopeCon installation. An overhead 13.8 kV line supplies power to the crusher, truck shop, waste dump and seepage pond areas. Power from the substation to the process plant will be by underground feeders. Transformers will be provided to reduce voltage, and switchgears and motor control centers will control power at the appropriate utilization voltage.

18.3.2.2 Camp and Well Field

Power for operation of the water pumps at Atzcala as well as the camp is via a 13.2 kV overhead line that parallels the east service road from Balsas Substation. This power line has an estimated load of 3.3 MVA.

18.3.3 East Service Road

Originally the El Limón Guajes Mine was accessed from Iguala through the town of Cocula as well as other smaller communities. This road is approximately 60 km long and, although paved, is narrow with many switchbacks to navigate the slopes of the hills and mountains. The road also passes a number of villages, including the town of Cocula. Evaluations showed that the best way to provide permanent access to the ELG Mine was via a new road which provides a connection to the Mexican Federal Highway 95. This road has been completed and is referred to as the East Service Road.

The East Service road is approximately 25 km in length. Travel way width is 7 meters with a maximum grade of 12%. The road will be paved where it travels through populated areas.

As the road is the primary supply route for the site and therefore will be the main transport route for cyanide, the road has been built to minimize the potential for accidents involving water. This was done by moving the route away from the Balsas River and minimizing water crossings. The Service road also provides access to the Permanent Camp and the well field at Atzcala. The water supply pipeline along with power to the Camp parallel this access road. Construction of the road includes a bypass around the community of Atzcala (approximately 500 meters).

18.3.4 Communications

Modern mining and industrial plants require a data networking and telecommunication system similar to that found in office buildings and commercial businesses. Remote access from other owner locations, equipment suppliers as well as access to and from the Internet is now considered essential. The communication platform being installed at the mine has been designed with this in mind.

The anticipated bandwidth required is 200 Mbps, or approximately 30% of an E3 connection. This bandwidth will be allocated between Internet service and telecommunication services. The service demarcation point and physical media will be a microwave radio link. The demarcation point will pass through a firewall to provide network security and then into redundant high bandwidth network switches. The switches will then feed a dedicated office system Ethernet network and a dedicated control system network. A single connection with a gateway between the office system and the control system will allow business accounting systems to retrieve production data from the control system.

A voice over I/P (VoIP) phone system is part of the office network and VoIP handsets will be used for voice communication. A dedicated server will be provided for setup and maintenance of the VoIP system and for accounting of all long distance phone calling. It is anticipated that between 50 and 70 handsets will be required for this facility.

A security system is incorporated into the plant network. Using a dedicated video server and monitors, I/P cameras utilizing Power over Ethernet connections will be plugged into dedicated switches. Security cameras will be located in store rooms, parking lots, visitor lobbies, warehouses, and areas where sensitive materials are kept.

Internal communications within the plant will utilize the same voice over I/P phone system, which will provide direct dial to other phones throughout the plant site. Mobile radios will also be used by the mine and plant operation personnel for daily control and communications while outside the offices.

18.3.5 Process Control System

The control system being installed uses Programmable Logic Controllers (PLC) and personal computers connected together with a fiber optic network using the Ethernet protocol. A PLC with an adequate number of I/O ports will be in each electrical room. Interface to these PLCs will be by personal computers running the appropriate Human Machine Interface (HMI) programs. Interactive screens on the monitors will allow process control.

The basic system will incorporate PLCs in each electrical room, two personal computers in the main control room in the grinding area and two computers in the filter building control room. If access to the system is required in other areas such as the laboratory, it can be added.

A supervisory expert system has not been incorporated at this time.

18.4 OFF-SITE INFRASTRUCTURE – CAMP AND VILLAGE RELOCATION

18.4.1 Permanent Camp

To enable staffing of the mine and process plant it was recognized that a camp facility was required to house non-local workers. The camp has been designed to provide accommodations for 240 persons and is located along the East Service Road.

The following sections describe the location, and design of this facility. As of the writing of this report, the Permanent Camp was nearing 100% completion with planned move in date of August 2015.

18.4.1.1 General

The permanent camp site is located on (9) hectares of common land which has been leased from the Atzcala Ejido. The camp is located approximately 8 kilometers east of the mine site via the East Service Road. The camp includes the following site infrastructure:

1. Electrical distribution
2. Communication
3. Domestic water
4. Fire water
5. Sewage treatment
6. Storm drainage
7. Security fence

18.4.1.2 Overall Camp Site Layout

The camp is situated between two hills in order to minimize earthwork, and is orientated to maximize the views towards the southeast from the buildings. The layout has been constructed to separate vehicular and pedestrian circulation from the sleeping quarter to minimize noise. This is done by having access to the camp site at the north, camp facilities in the middle and dormitories at the south.

The design concept was to organize the buildings around a central gathering, recreation, and public core, with separate housing for additional privacy. Tying the recreation wing together to the cafeteria is a covered breezeway. Perpendicular to the axis of the breezeway is the check-in office building and parking lot.

A 2.5-meter high security fence with top barbed wire angle extension arms is located around the entire perimeter of the camp site. The perimeter fence line is approximately 1,250 meters in length.

18.4.1.3 Circulation Concept

Vehicles arrive at the camp site from the East Service Road connecting the town of Atzcala to the mine. The entrance to the site is on the northwest side. A new camp access road will continue to the main parking/drop-off lot. Busses will drop off mine personnel in front of the check-in building. Deliveries utilize the same site access road, but will continue straight through the parking lot and make deliveries in the delivery area between the kitchen and the utility building.

18.4.1.4 Facilities

18.4.1.4.1 Check-in/Office Building

The check-in/office building is the center of operation for the camp. It is where visitors check in, and receive direction to their units. It also serves as the center for communications to the mine, and shuttle busses.

The building layout incorporates a small waiting area with receptionist, (1) two person office, and bathrooms/utility spaces to serve the building. Additional offices can be added to the check-in building if required in future design phases.

18.4.1.4.2 Recreation Building

The recreation building is designed to serve all camp site personnel. An exterior covered breezeway connects the recreation building to the cafeteria. The intent is to provide an exterior space that both the recreation building and the cafeteria can share. From here, the breezeway continues to all other camp site buildings. The main axis of the breezeway terminates at the east end at an outdoor covered ramada. This ramada is an outdoor lounge area with a thatched shade structure.

The layout for the recreation building includes a TV room, reading room, computer lab, pool hall, gym, and bathrooms/utility spaces. The recreation building will be a free span structure, enabling 2.5 meter high interior partition walls constructed and relocated as space needs change.

18.4.1.4.3 Cafeteria/Kitchen

The layout for the cafeteria includes the main dining hall, kitchen, walk-in refrigerator/freezer, pantry, serving station, dishwashing station, kitchen offices, and bathrooms/utility spaces to serve the building.

The size of the kitchen/cafeteria is 36 meters by 20 meters and provides seating for 144 people at one time. This complex also includes a chef's office, additional storage area, and mechanical spaces.

18.4.1.4.4 Utility Building

The utility building incorporates a laundry facility with a staff locker area for personal items and an open garage area for maintenance equipment and storage. The laundry area is divided into two spaces. The "industrial laundry" area is the larger of the two, and will process all the linens and sheets of the entire camp. The other area is the laundry room for the general population of the camp to use for their personal clothes.

18.4.1.4.5 Housing

Total camp housing capacity is for 192 people with expansion for another 48 people. Each room is single occupancy with a bed, armoire, desk, individual air conditioning and shared bathroom. The construction incorporates (4) 48 unit two story buildings with (2) 24 unit single story buildings deferred for future expansion. The concept is to have the same room type for all visitors. All rooms are 15.5 square meters. Two adjacent rooms share a 7.3 square meter bathroom. Each building also incorporates a central circulation hallway, and mechanical spaces to serve the building.

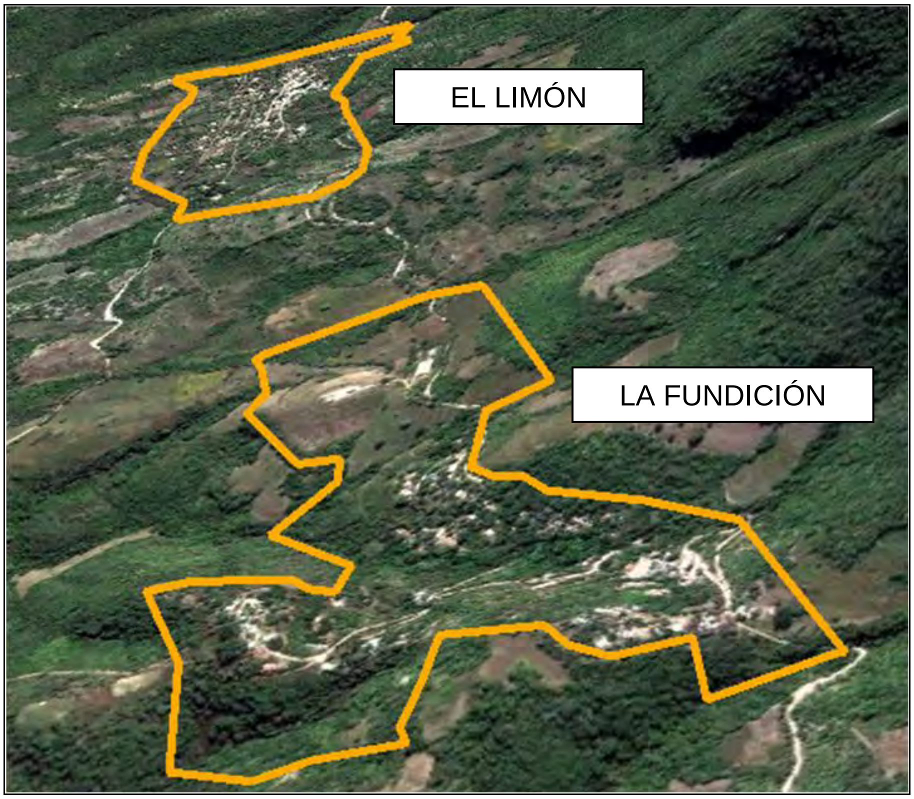
18.4.2 Village Relocation Project

To enable open pit mining of the El Limón deposit the relocation of the community of La Fundición and Real del Limón is required. The following sections describe this aspect of the ELG Mine construction. El Potrerillo (the new village) is currently under construction to accommodate the villagers of La Fundición with move planned for July 2015. Construction of the Real del Limón village is scheduled to be completed October 2015 with the move in during the same month.

18.4.2.1 Settlement Relocation Scope

Included within the land access agreement with Real del Limón is the resettlement of the two communities within the Real del Limón Ejido, La Fundición and El Limón. Both villages were identified as being impacted by the construction and operation of the ELG Mine. This relocation is being completed under International Financial Corporation standards.

Figure 18-3 provides an aerial view of the two communities. The guiding principle in the relocation project is that the community will have homes and services equal to or better then they currently have. The new community will also meet all applicable Mexican standards.



Note: Figure courtesy of M3, August 2012.

Figure 18-3: Existing Settlements – La Fundición & El Limón (Looking East)

The project scope of work is to relocate 170 homes along with all community building and infrastructure. The site for the new village is the El Potrerillo. The El Potrerillo site has favorable topographic conditions and is located east of the mine site approximately 5 km from the plant site covering approximately 46 Hectares.

18.4.2.2 New Site Layout

The preliminary site layout is based on cut and fill earthwork providing relatively flat areas for the residential sites, public areas and structures. The site is also graded for proper road slopes and storm drainage. Separate residential areas are defined by the community access road that links all residential areas with public and green areas.

Note: Figure courtesy of M3, July 2015.

Figure 18-4: La Fundicion Village nearly Complete

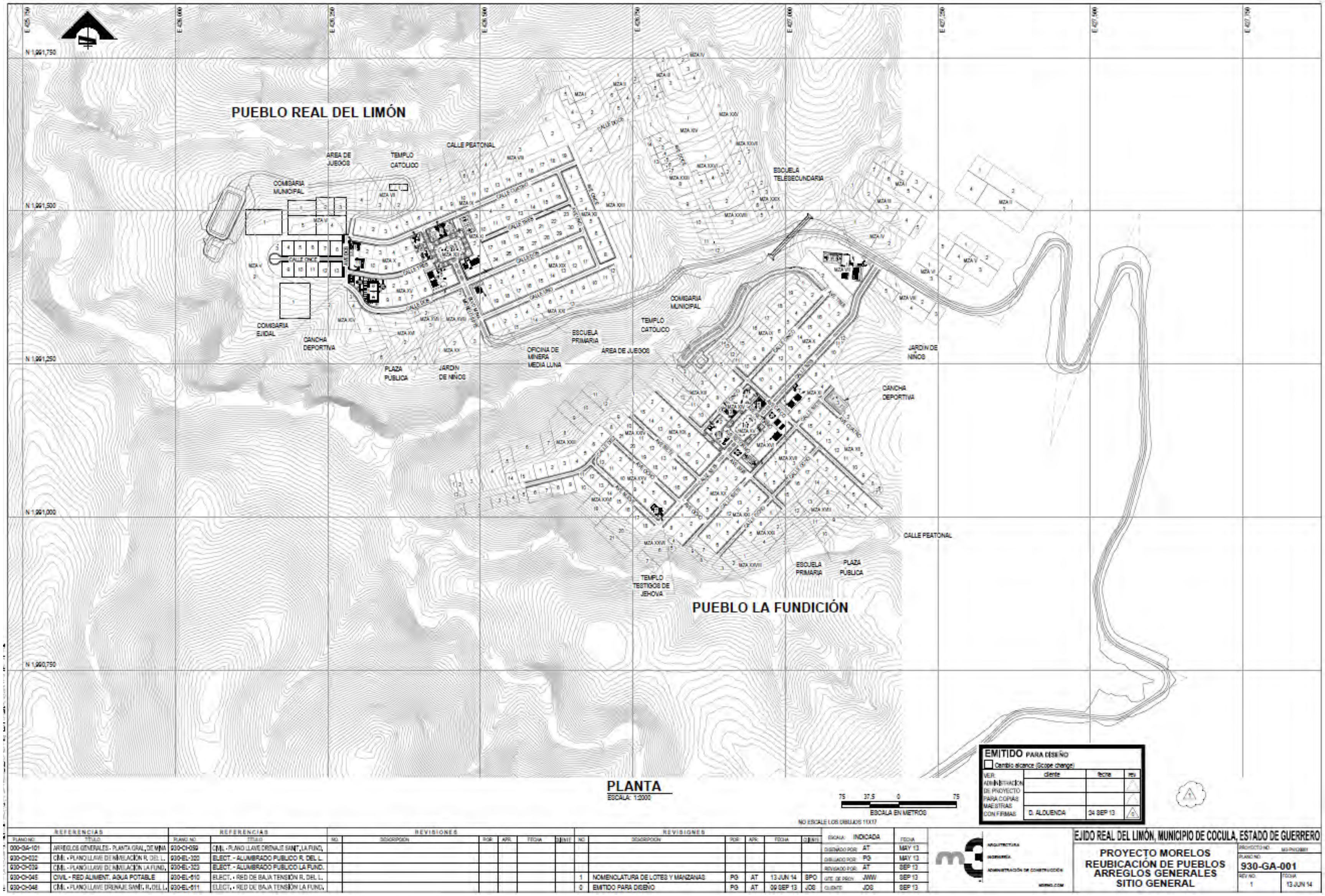


Figure 18-5: Village Relocation Map

18.4.2.3 Village Access Road

The access road to the new village is similar in design to the East Service Road and connects the village to the East Service Road. This provides access for community members to both Nuevo Balsas (west) and east to the village of Valerio Trujano on highway I-95.

18.4.2.4 Infrastructure

The project infrastructure includes all community roads, and utilities to all homes, public areas and structures. Infrastructure will be developed to meet all Mexican regulations as well as the guiding principles of provided homes and services as good as or better than existing.

18.4.2.5 Housing

The project is considering three different home base designs providing at a minimum the same area and amenities of the existing homes in both communities. The home size varies from 90 to 120 m^2. Each homeowner selected a home type of three models, yard and amenities.

The existing homes on El Limón and La Fundición have adobe walls and metal panel roof. The new homes built have a concrete slab with concrete block walls and concrete slab roof, which the residents would consider an overall improvement to current conditions. All homes have as a minimum electrical, water and sewage services.

18.4.2.6 Potable Water

The water source for the potable water system comes from a well located northwest of El Potrerrillo.

The water is then pumped to a packaged treatment plant that filters and chlorinates the water and stores it in potable water tank for consumption. The potable water is distributed via underground piping to all the homes, schools, churches, offices, etc.

18.4.2.7 Sewage Treatment and Sewage Treatment System

All homes have and will be connected to the municipal sewage network. Three sewage plants will be built. Each consists of septic tanks, effluent to feed a wetland, and then to a percolation field.

18.4.2.8 Relocated Village Electrical Supply

Electrical power is supplied to the Potrerillo Site at 13.8 kV from the new Balsas switching substation near the process plant.

The projected total connected load to the new village is estimated at 1.5 MVA.

All electrical distribution is underground providing service to all homes, community building and street lighting as required.

18.5 ON-SITE INFRASTRUCTURE – NON-PROCESS BUILDINGS

18.5.1 First Aid Clinic (see #5 on Figure 18-2)

Approximately 5 km along the general site access road is located a second controlled entrance to the mine area and a first aid clinic.

The first aid clinic is located at the main entrance to the mine. This allows for direct access to the mine site. A 24.6 meter by 13.6 meter building is designed to provide first aid treatment of minor injuries and stabilize personnel for transport elsewhere. This building also provides a covered area for the ambulance and fire truck, an emergency room and an exam room along with a small pharmacy storage room, doctor's offices and other support space.

18.5.2 Administration Offices (see #5 on Figure 18-2)

The Administration Building is a 48 meter by 18 meter metal building located at the entry point of the mine site. Office space is provided for up to 40 people in both separate offices (a total of 18) as well as open areas. This building will house the main administration components of the operation with work areas for the management team, accounting, human resources, purchasing, and environmental services. Support spaces such as conference rooms, break room, communications and data management are also provided at this facility. The administration building has access to both sides of the second controlled area, allowing visitors to enter from the parking lot and exit the building to the plant site.

18.5.3 Warehouse (see #6 on Figure 18-2)

The warehouse is central located between the plant site and truck shop. The facility is a 33 meter by 19 meter metal building with 6 meter eave height. Spare parts and consumables will be stored in the warehouse. The warehouse includes 550 m^2 of storage rack area with forklift access, personnel office space and pick-up area. An exterior, fenced storage area (1,200 m^2) adjacent to the warehouse is provided for secured outdoor inventory. There is also a warehouse within the truck shop for mobile equipment parts.

18.5.4 Yards

From the guard gate, plant roads provide access to the process plant, warehouse, office buildings, coarse ore storage, mine truck shop, and primary crusher. Laydown yards are provided at the warehouse area, coarse ore storage, and the Guajes primary crusher.

18.5.5 Assay Lab (see #3 on Figure 18-2)

The assay laboratory consists of two modular units that are 12 meter by 2 meter and one 6 meter by 2.5 meter modular unit oriented around a 13 meter by 15 meter roofed area. It is located about 30 meters southwest of the pebble crusher (350 Area).

The lab includes space for sample preparation, fire assay, storage, wet and environmental lab complete with all equipment and ventilation equipment. Opposite and separated from the lab environment are personnel spaces including offices, break room and locker space.

Equipment for this lab will be sourced from the current assay lab Torex has established in Nuevo Balsas. Sample prep equipment will be purchased new.

18.5.6 Truck Shop (see #12 on Figure 18-2)

The truck shop (5,100 m^2) building incorporates three distinct areas, the shop area, parts warehouse and office space for mine maintenance and operations personnel. The design incorporates input from suppliers as well as being comparable to current operating truck shops. Additionally, the design was validated by comparing it to the shop viewed during a visit to Goldcorp's Los Filos operation.

The shop area covers 1,702 m^2 and consists of bays for the mine fleet. The shop has 6 drive-through bays equipped with two 40-tonne overhead bridge cranes. These bays are sized for the largest piece of equipment which may operate at the ELG Mine, a 150 tonne haul truck. Current plans are to operate a fleet of 100 tonne haul trucks. This decision allows for the move to the large truck if this is deemed beneficial during mine operations. To the east of the haul truck service bays is a mechanical room for lube tank storage, and two additional bays for light vehicle maintenance and repair, in addition to the parts storage area and offices. An additional two large bays have been allowed for at the end of the truck shop and will be constructed later in the mine life when required. Adjacent and with direct access to the truck shop is a 1,000 m^2 parts warehouse serving the maintenance crew exclusively. Within the ware house is 1,000 m^2 of storage on the ground floor and an additional 500 m^2 storage space in a mezzanine area used for light storage and small parts. The warehouse also has two (2) offices for warehouse personnel.

The third area within the building is for office space which is located in the northeast end of the building. The office spaces are located on two floors. This office space is for mine operations, maintenance and engineering personnel. The 1st floor will be used for mine operations and maintenance and features the dispatch office and maintenance offices. The 2nd floor is for mine planning, engineering and geology. The design incorporates 280 m^2 of shell space for future expansion if required. The office area includes conference rooms, break room and other support spaces as common use.

18.5.7 Truck Wash (see #15 on Figure 18-2)

The truck wash facility is located adjacent to the truck shop. It is complete with a water treatment and recycling system housed within a separate building adjacent to the wash area for all truck wash equipment and electrical service.

18.5.8 Fuel Station and Service House (see #14 on Figure 18-2)

The fuel station design for the ELG Mine consists of a fuel storage area, a dispensing facility and a service house. This facility is centrally located adjacent to the mine truck shop and is designed to fill fuel trucks, which will then fuel the mining equipment at their work areas. There is also a small vehicle fuel station at the facility.

All tanks are double containment tanks and are placed on a concrete pad. Four 120 cubic meter capacity tanks will store Diesel and one 80 cubic meter capacity tank will store gasoline. The total fuel storage capacity is approximately 560,000 liters. A concrete slab is provided at all dispensing location to contain any spillage. All designs are according to the applicable Mexican regulations, notably "ESPECIFICACIONES 2006 PEMEX PARA AUTOCONSUMO". Substation will work as a Pemex Self Consumption Franchise.

18.5.9 Tire Pad (see #13 on Figure 18-2)

Located in close proximity of the truck shop is an 800 m^2 concrete pad which will be utilized for changing of heavy equipment tires. The location allows for easy vehicle access to have their tires changed, movement of the tire changing equipment and close access to the tire storage area. The pad is designed to handle the size and weight of the haul trucks as well as the tire handling equipment. Adjacent to the tire pad is a small 50 m^2 building which will be used as an office, storage and toilet room.

18.5.10 Core Storage (see #11 on Figure 18-2)

The core storage building is 76 meter by 54 meter metal building utilized for long term core sample storage. The building has a 5.7 meter eave height for rack storage with forklift access. The building also includes a core logging area, small office area and support space. The building can contain approximately 104,000 linear meters of core samples.

18.5.11 Powder Magazines and Ammonium Nitrate Silos

Explosive supply and onsite manufacturing will be carried out under contract by a Mexican explosive supplier. It will be the responsibility of the supplier to supply, install and operate all explosive storage facilities, which include the magazines, Ammonium Nitrate (AN) storage silos and the bulk emulsion storage silo. To accommodate these facilities, a building area of 180 m^2 will be used. Construction of this facility is currently underway.

The facilities include two storage magazines (one for package explosive and a second for detonators) and initially 2 x 30 tonne storage silos (1 for AN and 1 for emulsion). By year 4 of the mining operations, there will be a total of 5 x 60 tonne storage silos (3 for AN and 2 for emulsion).

18.6 ON-SITE INFRASTRUCTURE – SECURITY AND PRODUCT STORAGE

18.6.1 General Site Access Road (See #1 on Figure 18-2)

The main access to the plant is off of the upgraded East Service Road. The site access road will be upgraded by widening and realignment. A guard gate and fenced parking lot controls the access to the plant. The gate is set back from the existing road to allow semi-trailer trucks to wait at the gate without blocking road traffic.

18.6.2 Guard House (at East Service Road entrance) (See #16 on Figure 18-2)

Located along the mine site access road, the guard house serves as the main entrance and check point for all mine visitors, employees and vehicles. The building allows for a large area used to screen all pedestrians entering and leaving the mine site. A gated entrance is designed to enable inspection of all incoming and exiting vehicle traffic. The building provides space for security personnel, orientation room and other support space.

18.6.3 Refinery (see #4 on Figure 18-2)

The refinery is located within the process plant and consists of separate process and personnel spaces for security and health reasons. The overall layout is designed around the high security and restricted circulation of all personnel and visitors to this facility. Before entering the process area or exiting the building, personnel are required to go through a screening process and check points. All entrances into the building are monitored and alarmed at all times. The structure is designed with solid grout block walls and concrete roof structure.

The process area (440 m^2) includes an electro-winning area, mercury retort, vault, furnace and filter area with a secured, fenced area for shipping and receiving. The personnel space (290 m^2) includes change rooms, locker space, break room and offices for security personnel.

18.7 HYDROLOGY AND WATER MANAGEMENT

Amec Foster Wheeler was contracted to complete the hydrology component of the ELG Mine. The complete assessment for the site hydrology is presented in the Amec Foster Wheeler Report “Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project-Report No. RP-113911-1000-002” (Amec Foster Wheeler 2012), Site Water Management Detailed Engineering Report Morelos Gold Project – Report No. 133911-7000-001 (Amec Foster Wheeler 2014d), El Limón Sur Feasibility Design Geotechnical Stability and Water Management – Technical Memorandum (Amec Foster Wheeler 2015a), Screening Level Water Quality Estimates for El Limón Sur Open Pit – Technical memorandum (Amec Foster Wheeler 2015c) and El Limón Buttress Dump Water Management – Technical Memorandum (Amec Foster Wheeler 2014b). The main water management components at the ELG Mine site are runoff, groundwater and fresh water drawn from the Atzcala well field for the mill operations. The major outcome of this work was the site water balance and water management plan.

18.7.1 Overall Site Water Balance

The overall site water balance is presented in Figure 18-6. The ELG Mill is designed to be a closed circuit for water. The main consumptions of water are in the following uses:

- Plant make up water from the loss of water to the tailings (minimum as it is tailings dry stack)
- Domestic use
- Dust control water in the mine and process plant

The main water requiring management is surface run-off from rain events. The central point for water management is the Central Water Pond (CWP). The following is a description of the Water Balance utilizing the CWP as the center point. A detailed description of the water management system is presented in Section 18.7.2.

The known sources of water inflows to the CWP are:

- Pumped water from Pond 3 (which includes water pumped from Ponds 1, 2 and Guajes open pit (groundwater inflow plus surface runoff from pit and catchment uphill of the pit);
- Runoff from surrounding catchment areas including the mill site;
- Pumped water from El Limón open pit (groundwater inflow and surface runoff from pit and catchment adjacent to the pit;

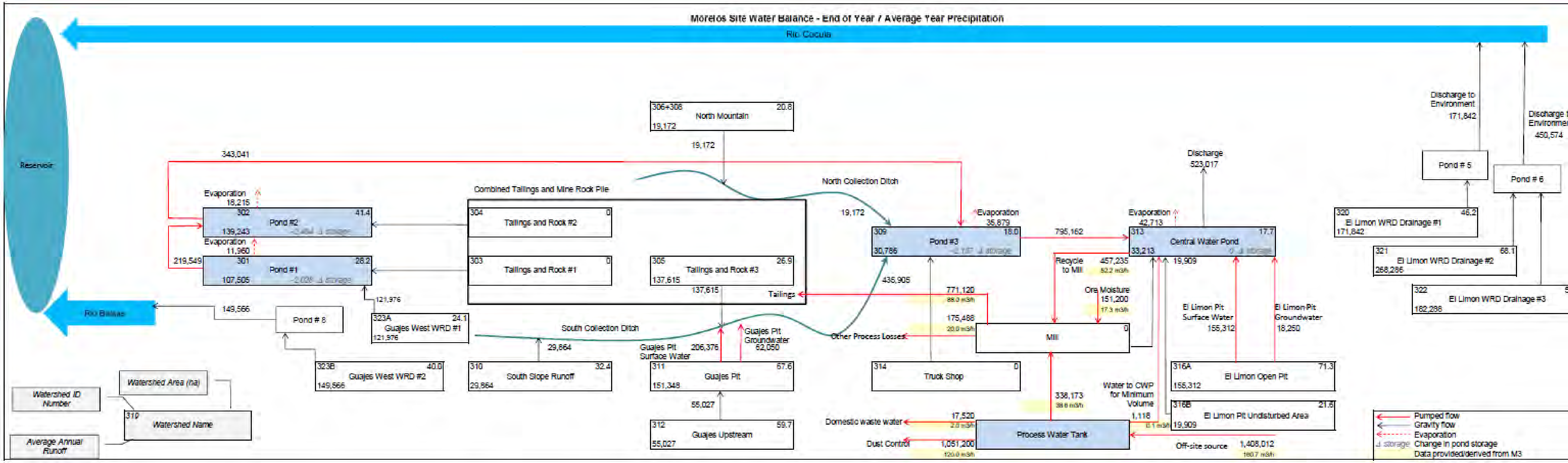
The water outflows from the CWP will be the following:

- Evaporation;
- Water recycled to the mill for processing;
- Water discharged to environment during high rain events;
- Water lost due to potential seepage (considered negligible).

Three hydrological scenarios were examined: the average year rainfall, 1:100 return period dry and wet rainfall. The estimated recycle rates for the end of year 7 of mine operation are shown in Table 18-1 and the average annual site water balance is presented in Figure 18-6 for the end of year 7 in mine life. Based on the anticipated inflows and outflows summarized above, it appears feasible that a significant portion of the makeup water could be sourced from the CWP. However it is also anticipated that there will be significant portions of time when the CWP is dry and all make up water will be required from the well field at Atzcala.

Table 18-1: Estimated Recycle Rates from Central Water Pond (End of Year 7)

Hydrologic Scenario	Process Plant Water Requirement (m^3/h)	Water Recycled from Central Water Pond (m^3/h)	Percent of Process Water Recycled from Central Water Pond
Dry	90.8	40.7	45%
Average	90.8	52.2	57%
Wet	90.8	63.7	70%



Note: Figure courtesy of Amec Foster Wheeler July 2015

Figure 18-6: Site Water Balance (End of Year 7 in Mine Life – Average Year Rainfall)

18.7.2 Water Management – Collection and Reuse

The water management system is designed to collect, reuse and to monitor the water quality prior to release. As the El Limón Guajes Mill is a closed system there is no release of plant process water. The focus of the El Limón Guajes water management system maximizes recycling and minimizes the potential impact to the environment of run-off from rain events.

The general water management plan diverts runoff water from coming in contact with mining/plant areas, and to collect and monitor runoff water which does come in contact with the mining/plant areas. In the case of runoff water which contacts the plant, pits and tailings dry stack this water is collected in the central water pond for recycling. In the case of the waste rock dumps the runoff water is captured in sediment ponds to remove suspended solids prior to release to the environment.

Following is a description of the water management plan for each of the main areas within the El Limón Guajes Mine. For additional detail on this study please see Amec Foster Wheeler report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project- Report No. RP-113911-1000-002" (Amec Foster Wheeler 2012), Site Water Management Detailed Engineering Report Morelos Gold Project – Report No. 133911-7000-001(Amec Foster Wheeler 2014d) and El Limón Sur Feasibility Design Geotechnical Stability and Water Management - Technical Memorandum (Amec Foster Wheeler 2015a).

18.7.2.1 Pit Dewatering System

The open pits will require dewatering from surface runoff and seepage once the pits are developed below grade. The design concept is to use diesel sump pumps in collection sumps in the pit. As seepage will be minimal, the pit dewatering systems have been designed to dewater the pit in 48 hours after a 1:10 year rain event. Completed below grade phase pits would be temporarily used as sumps until mining progresses to new benches below the sumps.

The Guajes pit water will be pumped to the TDS east toe perimeter ditch (TDS ditch) that drains to the Pond 3. Water from the El Limón open pit will be directly pumped to the CWP. Water from El Limón Sur pit will be pumped out to Pond 9. Based on hydrological analyses, pumps with a capacity of about 1,420m^3/hr, 1020m^3/hr for Guajes and El Limón open pits respectively and 331m^3/hr for El Limón Sur open pit are required to evacuate the volume of water from these open pits.

Pit dewatering wells are not required.

18.7.2.2 Tailings Dry Stack

Runoff from the TDS will be collected in Ponds 1, 2 and 3. Water from Ponds 1 and 2 will be pumped to the CWP via Pond 3. Water from the CWP will be utilized for mill operations and the excess will be monitored, and released via the overflow spillway.

Ponds 1, 2, 3 and the CWP have been designed for an environmental design flood (EDF) of a 1:100 year return event. For Ponds 1 and 2, critical duration was adjudged to be 90 days and for Pond 3 critical duration was 24 hours, meaning that they will handle water from a 1:100 year storm prior to requiring release to the environment via the spillways.

To ensure structural integrity of the dams during extreme rain events, the spillways have been designed for a threshold design flood (which is the 1:5,000 year return period event) for all ponds except Pond 3 consistent with the Mexican Conagua guidelines. A 24 hour balanced hydrograph has been assumed as the critical duration and distribution. The threshold design flood for Pond 3 will be the probable maximum flood (PMF) of 24 hour duration.

Spillways for ponds 1 and 2 will discharge water from events exceeding the EDF up to 1:5,000 year storm event to Balsas River. Pond 3 spillway discharges into the CWP. The CWP will discharge to an existing creek flowing north towards Rio Cocula.

18.7.2.3 Plant Site

The plant site will drain to Pond 3 or the CWP. Water from Pond 3 will be pumped to the CWP. An overflow spillway will be constructed at the CWP to discharge safely water from events exceeding the environmental design flood up to the PMF.

18.7.2.4 Waste Rock Dumps

Ponds 5, 6, 8 and 9 are designed to settle solids. The overflow spillways are designed to convey the 1:5,000 year return period runoff event without overtopping the dams. Spillways for Ponds 5 and 6 discharge into existing natural creeks flowing north towards Rio Cocula, whereas Ponds 8 and 9 spillways discharge towards Balsas River.

18.7.2.5 Structural Stability of Pond Dams

All of the dams have been designed to meet the following design criteria to ensure their long-term stability.

- End of construction condition and steady state long term: factor of safety of 1.5
- Pseudo-static factor of safety corresponding to 1:500 return period seismic event of 1.1

18.7.2.6 Contingency Plan

The contingency plan would be enacted in the event that runoff and seepage from the waste rock dumps exceeds relevant water quality guidelines for release. Runoff from all WRDs and TDS would be collected in ponds and pumped to the CWP for reuse as mine water. All ponds will be designed to contain runoff, in combination with pumping, from the 1:100 year rainfall event (EDF).

The contingency plan includes collection of runoff from all waste rock dumps at their base and pumping to the central water pond. The upstream slopes of the pond dams will also be provided with a geomembrane liner as a low permeability element. Under the contingency plan the pumping arrangements will be as follows.

- Pond 9 to CWP
- Pond 8 to Pond 1
- Pond 6 to Pond 5
- Pond 5 to CWP
- Pond 3 to CWP
- Pond 2 to Pond 3
- Pond 1 to Pond 2

A range of contingency plans would be considered if necessary, however ultimately if necessary the contingency plan could include, if required, for a water treatment plant (WTP) to be built northeast of the CWP. Based on the hydrological analyses, the required maximum capacity of the WTP is estimated to be about 2,500 m^3/hr. Water would be pumped to the WTP for treatment from the CWP. The treated water would be discharged to an existing seasonal creek course to the north flowing to the Rio Cocula. The sludge from the WTP would be disposed of in the tailings dry stack interior in separate cells.

18.8 ON-SITE INFRASTRUCTURE – WASTE STORAGE

18.8.1 Non-hazardous Landfill (see #2 on Figure 18-2)

A landfill site has been included and is being constructed for non-hazardous waste (i.e. wood and domestic garbage) within the mine site boundary.

The landfill site, included in the ELG Mne, is located northeast of the plant site. The site is being developed in accordance with the Mexican regulations related to the urban solid waste management facility.

Based on design criteria and parameters, the landfill site is designed for a nominal capacity of 36,000 m^3 and total capacity of 60,000 m^3 which includes a contingency capacity of 24,000 m^3. An HDPE geomembrane base liner will be provided to act as a low permeability element in the landfill impoundment. Perimeter ditches around the landfill site will be provided to intercept and divert clean water from the upstream watershed. Leachate collection and disposal system will be provided. At closure the waste will be capped with a geomembrane cover as a low permeability element and re-vegetated.

For additional detail on this work please see Project Landfill Detailed Engineering Report Morelos Gold Project Report No. RP133911-4000-001 (Amec Foster Wheeler 2014c).

18.8.2 Tailing Dry Stack Design (TDS) and Operation

Tailings will be stored in a tailings dry stack (TDS). Tailings filtered to their optimum water content will be spread and compacted in the TDS. The advantages of the TDS for the ELG Mine are:

- Small tailings footprint;
- Maximum usage of recycled water reducing fresh water requirements;
- Mitigation of operation risk; and
- Deposition flexibility and expansion potential.

The TDS will be south west of the process plant and northwest of the Guajes open pit. The TDS area is characterized by two valleys formed by abutting hills. The TDS, with its final crest at EL 725 m, will accommodate approximately 32 million m^3 (57.6 million tonnes) of tailings allowing additional ore to be identified or accommodating changes in the mining plan in the future. Current mine design is for the recovery of 47.95 million tonnes (with TDS crest at EL 690 m) which allows for approximately 20% excess capacity. Following is a description of the design of the TDS along with the input criteria. For a more detailed presentation of this work please see Amec Foster Wheeler report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project - Report No. RP-113911-1000-002" (Amec Foster Wheeler 2012) and Mine Waste Management Detailed Engineering Report – Tailings Dry Stack- Report No. RP-133911-2000-001 (Amec Foster Wheeler 2015b).

18.8.2.1 Tailings Characteristics

The tailings will be derived mainly from prograde skarn ore (57% of total tailings) which has a specific gravity (SG) of 3.1 with lesser amounts derived from oxide ore, breccia and hornfels material. The tailings are classified as 'silt'.

Based on laboratory tests to date other relevant characteristics are:

- Saturated vertical hydraulic conductivity: $5.6x10^{-6}$ to $2.7x10^{-5}$ cm/s (k_h/k_v = 4 (assumed))
- Effective shear strength: Cohesion =0 kPa and ´= 35.9° to 36°
- In place density: 1.8 t/m^3

Based on static and kinetic testing of tailings samples, the tailings are classified as non-potentially acid generating (non-PAG). While the tailings are assumed to be non-metal leaching, there is potential for arsenic leaching and additional studies are underway to address this. Water management systems are being put in place which facilitate to monitor water quality and control arsenic leaching if required.

18.8.2.1.1 Geotechnical Conditions

A geotechnical investigation program was carried out in 2006, 2011/2012 and 2013 to characterize the surface and sub-surface conditions at the ELG Mine site. The 2006 program focused on general geotechnical and hydrogeological characterization of the whole mine site, including the proposed open pits. The 2011/2012 program covered specific areas of the TDS, WRDs and plant site. The 2011/2012 program included drilling of 19 boreholes and digging of 38 test pits. All of the 19 boreholes drilled are equipped with piezometers to allow groundwater level measurements. The 2013 program included 14 boreholes and 48 test pits. Two boreholes each at Pond 5 and Pond 6 were not done due to access issues however, the test pits at these pond locations were completed for sub-surface characterization. Additional information on this program is provided in Mine Waste Management and Site Water Management Feasibility Designs (Amec Foster Wheeler 2012) and Site Water Management Detailed Engineering Report (Amec Foster Wheeler 2014d).

Soil samples from the test pits and core from the boreholes were tested in a geotechnical laboratory for their physical characteristics. From this work the following conclusions were developed:

- Very dense and dry colluviums overburden. Overburden of 7.4 m thickness in the eastern parts of the north valley comprising mainly sandy gravel with cobbles and boulders;
- Decreasing overburden thickness away from the valleys towards the mountains;
- The main bedrock unit is ‘intrusive’, moderately weathered poor quality in the upper 1.5 m followed by excellent quality rock. The RQD vary from 80% to 100%;
- The bedrock hydraulic conductivity varies from 3.5 x 10^{-05} cm/sec in the upper bedrock of 50 m depth to 8.1x 10^{-07} cm/sec below 50m depth; and
- While groundwater was reported 6-10 m below ground surface in some locations, visual surface indications (cobble drainage paths) are that during raining season some surface flow occurs for limited time periods.

In general the foundation conditions are conducive to construction of the TDS. During construction the geotechnical conditions will be monitored. Precautions will be taken at groundwater seeps to ensure the water drains freely and does not saturate the soil or tailings. Flow-through drains will be installed to address this concern.

18.8.2.1.2 Seismicity

In accordance with the official Mexican norm NOM-141 SEMARNAT -2003, the ELG site is classified under seismic region ‘C’ and ‘D’, where the seismic events are common (including major historical earthquakes) and large ground accelerations can exceed 70% of acceleration of gravity (Figure 1 of the norm).

Consequently, a site specific study on the preliminary earthquake ground motion hazard assessment for the ELG Mine site was carried out. The primary objective of the study was to characterize site specific probabilistic ground motion hazard for possible future earthquakes in the region leading to the computation of peak ground acceleration (PGA) and spectral acceleration for seismic events for different return periods. The study results are utilized in the design of various components of the ELG Mine.

Stability analyses were undertaken utilizing the results of this study to ensure the TDS is stable under seismic conditions. Additional information on these analyses is available in Section 18.8.2.5.

18.8.2.2 Tailings Transport to TDS

The tailings from the filter plants will be transported to the TDS by conveyors to a radial stacker and placed with trucks and/or bulldozers.

18.8.2.3 Key Design Elements

The key design elements of the TDS include:

- The foundation will be prepared by removing organics and unsuitable materials and compacted where required.
- Flow-through drains will be constructed in the bottom of the existing valleys within the TDS footprint to convey groundwater seepage, if any, from the bottom of the valley below the TDS.
- Tailings will be placed in 0.3 m thick horizontal lifts and compacted.
- Tailings in the perimeter shell of width 100 m will be compacted to ≥ 95% SPMDD.
- Tailings placed in the interior part of the TDS (outside of the perimeter shell) will be compacted to ≥ 90% SPMDD.
- The tailings perimeter slopes will be covered as soon as practical with an erosion protection cover (EPC) to prevent erosion from precipitation and wind.
- The TDS surface will be graded away from the perimeter slopes toward the plant site to minimize runoff reporting over the perimeter slopes of the TDS.
- The western slopes of the TDS will be covered with the Guajes North WRD at the end of mine life.

A typical cross-section of the TDS is shown on Figure 18-7.

18.8.2.4 Tailings Dry Stack Construction

The TDS construction will be carried out in the five following stages. The intent is to identify when clearing, stripping, ditches, ponds or other infrastructure need to be completed.

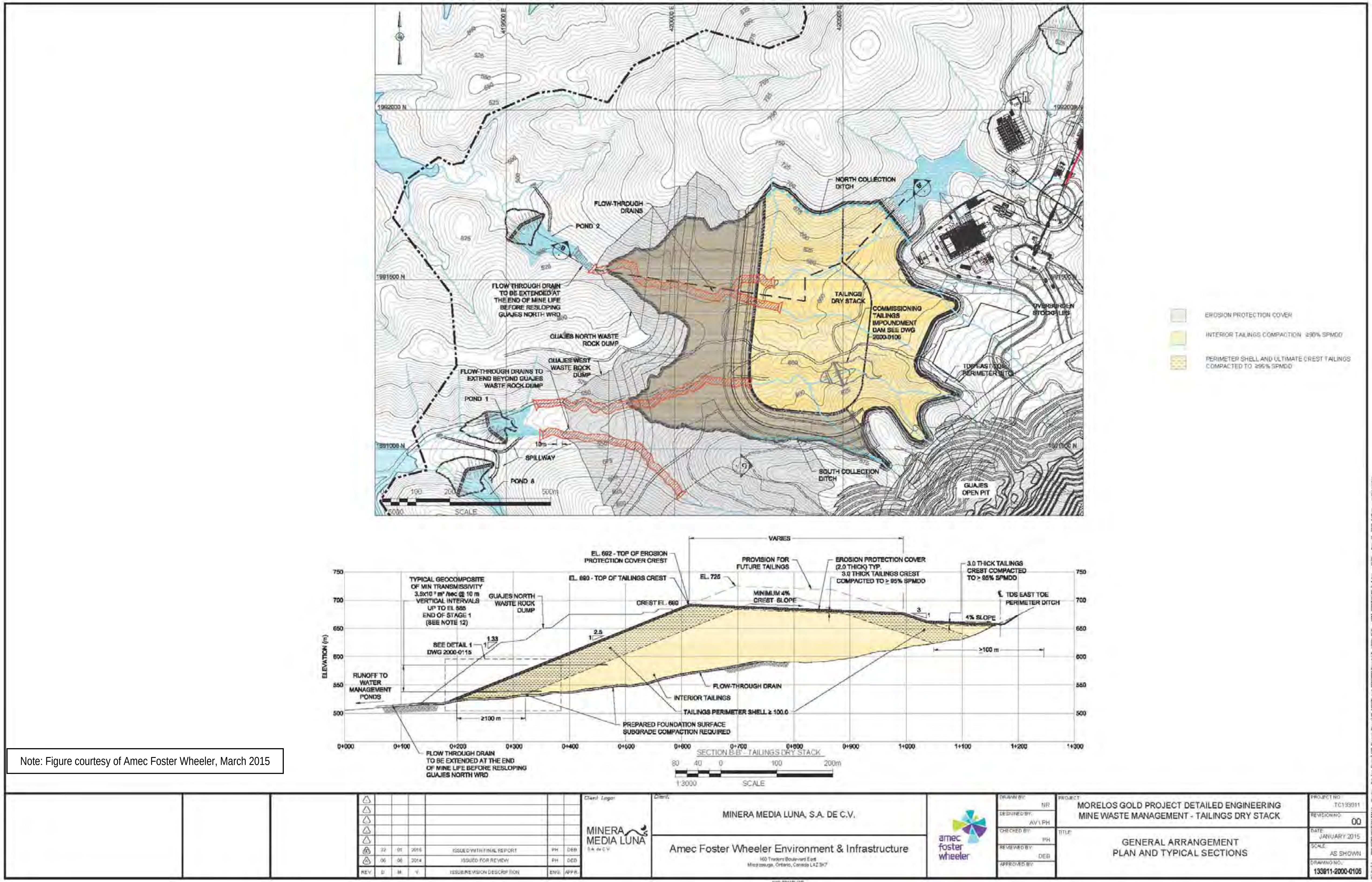
- Stage 1 in south valley to EL ± 585 m;
- Stage 2 in north valley to EL ± 602 m;
- Stage 3 in north valley to EL ± 570 m;
- Stage 4 in north valley to EL ± 595 m;
- Stage 5 to EL ± 615 m;
- Stage 6 to EL ± 651 m;
- Stage 7 to EL ± 670 m and,
- Stage 8 to final crest elevation EL 690 m.

Surface water runoff from the TDS will be managed through grading of the top of the TDS during operation towards the plant site as well as a series of water management ponds and ditching. Designs have been developed for water management of the TDS as it is developed during the life of the mine. Figure 18-8 shows the schematic water management strategy during the second year (Stage 3) of mine operation. Construction timing for the main water management structures is presented below:

- Pond 1 in the south valley downstream of the west toe of the TDS (to be built prior to start of mill operations);
- Pond 2 in the north valley downstream of west toe of TDS with spillway (to be built in first year of operation).
- Pond 3 in the north valley upstream of east toe of TDS (to be built prior to start of mill operations);
- Central water pond (CWP) on the west side of the process plant (to be built prior to start of mill operations);
- TDS east toe perimeter ditch (to be built prior to start of mill operations).

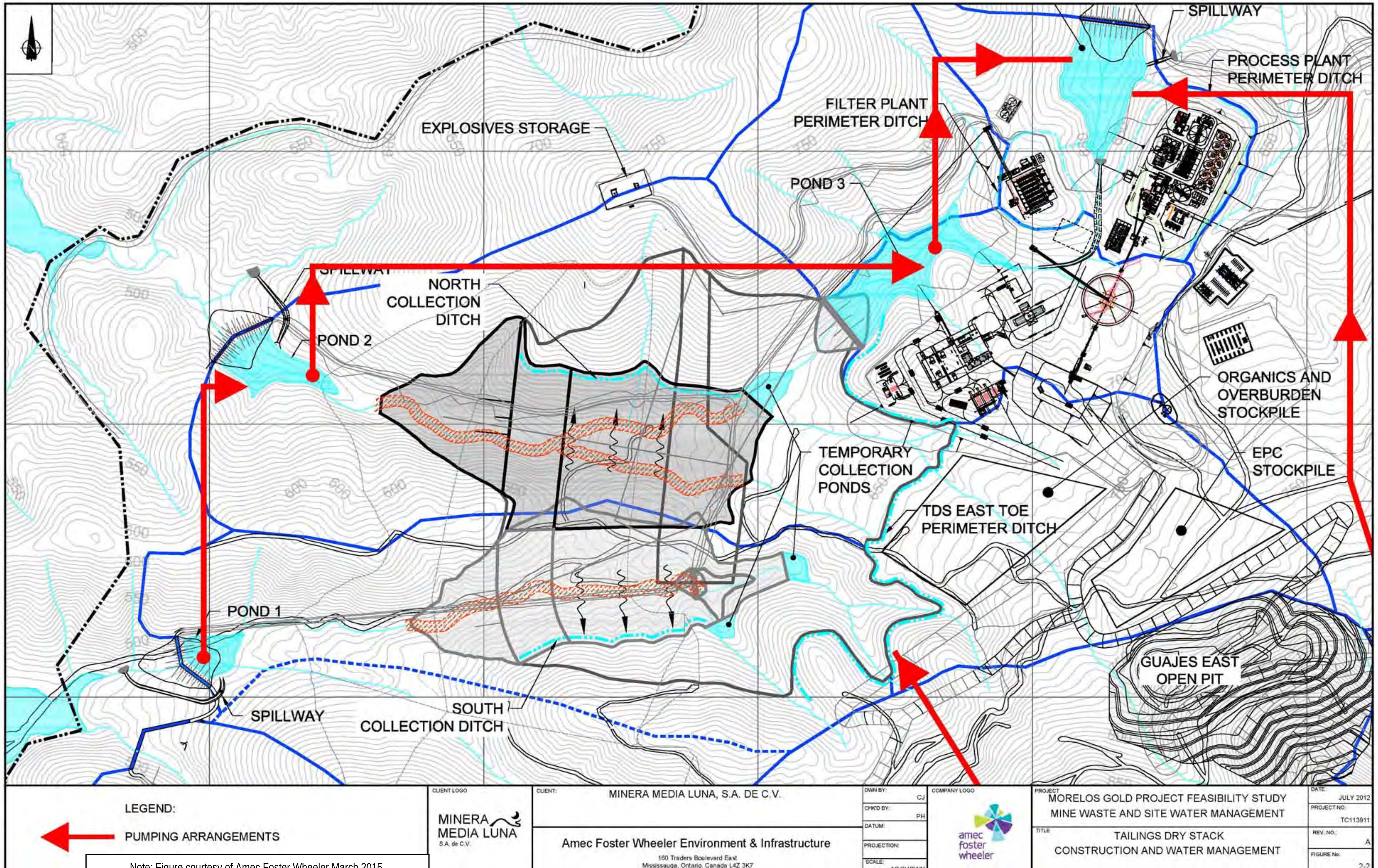
The dams for Ponds 1, 2, 3 and the CWP will be constructed of mine waste rock with graded granular filters and a geomembrane liner on the upstream slope as the low permeability element. The geomembrane will be anchored to a reinforced concrete plinth constructed on competent bedrock. A typical section for these pond dams is included in Figure 18-9.

Runoff and seepage from the TDS will be collected in Ponds 1 and 2. Water from Ponds 1 and 2 will be pumped to the CWP via Pond 3 (Figure 18-8). Water from the CWP will be utilized for mill operations and the excess will be decanted through the overflow spillway.



Note: Figure courtesy of Amec Foster Wheeler, March 2015

Figure 18-7: Tailings Dry Stack Plan and Section



Note: Figure courtesy of Amec Foster Wheeler March 2015.

Figure 18-8: Tailings Dry Stack Construction (Typical for Stage 3) and Water Management

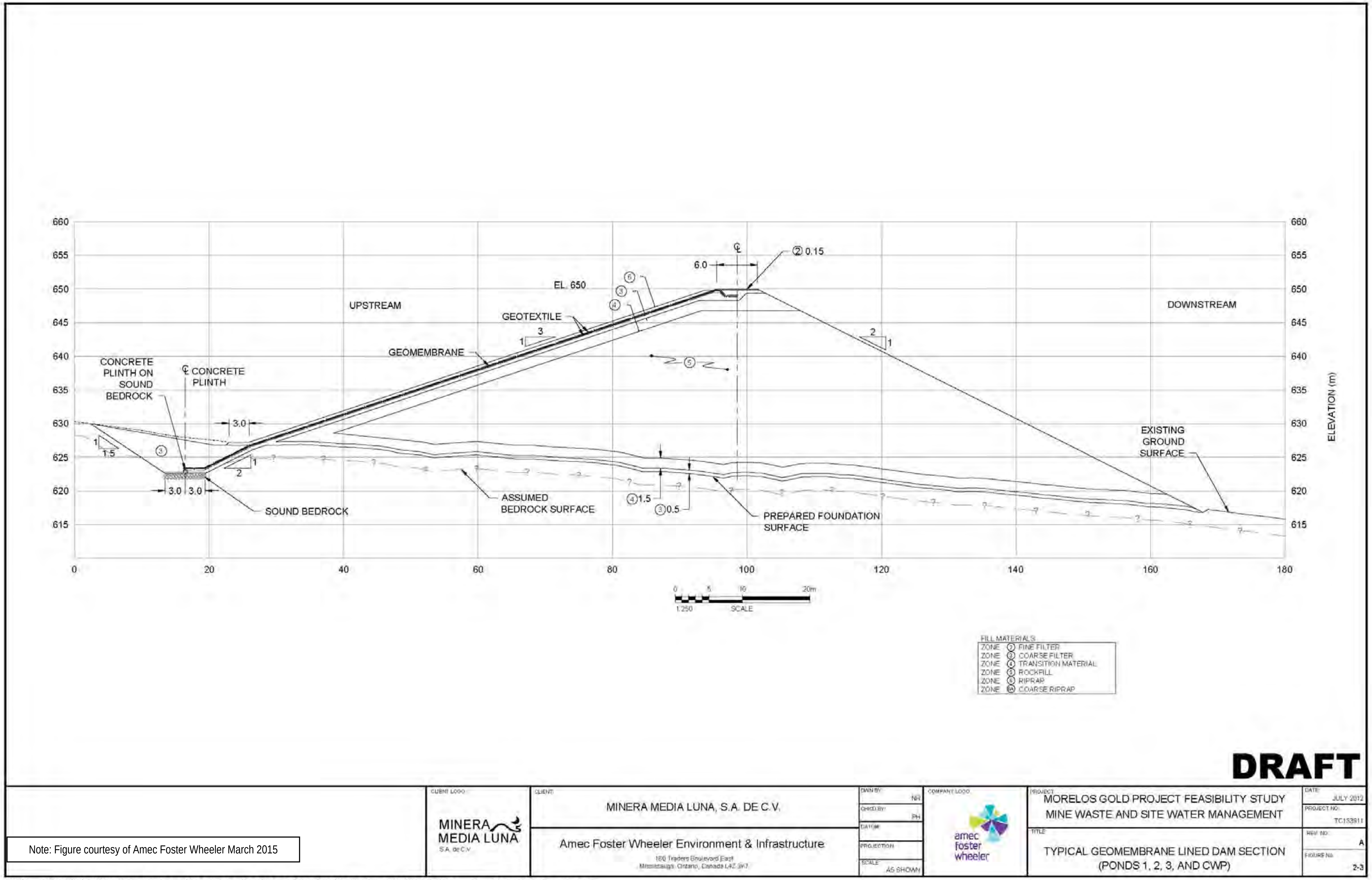


Figure 18-9: Typical Geomembrane Lined Dam Section (Ponds 1, 2, 3 and CWP)

18.8.2.5 TDS Stability and Seepage Analyses

The TDS is designed for stability during operations (construction) as well as long term stability after closure. As the tailings are compacted, they are not considered to be sensitive to liquefaction during a seismic event. The stability analyses indicate that the factors of safety of the TDS slopes exceed the required static factor of safety of 1.5 and the TDS is stable in a seismic event with a 1:10,000 year return period. Some deformation is anticipated during the seismic event; however, it would not affect the stability of the structure. See Mine Waste Management and Site Water Management Feasibility Designs, Morelos Gold Project (Amec Foster Wheeler 2012) and Site Water Management Detailed Engineering Report (Amec Foster Wheeler 2014d) for details on the stability analyses.

To assess and design for seepage from the TDS, two dimensional seepage analyses were conducted to evaluate the potential for seepage to bypass Ponds 1 and 2. The following significant conclusions were reached with respect to the seepage modeling:

- All seepage from the TDS reports to Ponds 1 and 2.
- The only seepage reporting to the environment downstream of Ponds 1 and 2 or the CWP was seepage from the ponds.

Cyanide will be destroyed in the tailings to ≤ 4 mg/L. Therefore cyanide in the tailings pore water cannot exceed 4 mg/L. Given that much of the water collected will be surface water from the hill sides and from the surface of the tailings which will not contain cyanide, the cyanide concentration in the water collected and retained in Ponds 1 and 2 is expected to be negligible. Therefore, seepage from the ponds is expected to have negligible consequences. Water quality within ponds 1 and 2 and the CWP will be monitored.

18.8.3 Waste Rock Dump (WRD) Design and Construction

A complete description of the design and analyses of the WRD is presented in the reference document “Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project, Report No. RP-113911-1000-002” (Amec Foster Wheeler 2012), El Limón Buttress Dump- Geotechnical Stability and Buffer Zone Estimation – Technical Memorandum (Amec Foster Wheeler 2014a) and El Limón Buttress Dump Water Management – Technical Memorandum (Amec Foster Wheeler 2014b).

18.8.3.1 Design data

The bulk density of waste rock material is considered to be 2.0 t/m^3 and angle of repose of 37°.

18.8.3.2 Waste Rock Dump Configuration

18.8.3.2.1 El Limón Waste Rock Dump

The El Limón WRD, is located north of the El Limón open pit. El Limón WRD will be constructed by initially building a waste rock buttress dump (buttress) at the toe of the El Limón WRD followed by top down by end dumping rock from the El Limón open pit. The buttress will be resloped to 2H:1V slopes prior to dumping rock from the El Limón open pit at higher elevations.

18.8.3.2.2 Guajes West and North Waste Rock Dumps

The Guajes West WRD will be formed west of Guajes open pit and will advance in a northerly direction towards the TDS. Waste rock will be end dumped from the WRD crest on the western slopes of the TDS. The Guajes WRD will be developed by end dumping rock from four elevations along the valleys forming four crest platforms.

18.8.3.2.3 El Limón Sur Waste Rock Dumps

El Limón Sur WRDs will be developed on the east and west side of the El Limón Sur open pit. The east WRD will be developed by end dumping rock from five elevations along the valley forming five crest platforms. The El Limón Sur West WRD will be developed by dumping rock from two elevations forming two crest platforms. Rock will be dumped from north to south from upper platforms before dumping from lower platforms. This prevents water from being impounded.

18.8.3.3 Waste Rock Dump Stability

18.8.3.3.1 Geotechnical Characterization

Based on the findings of the geotechnical investigations, in general the colluvial overburden material in the foundation of WRDs is compact to very dense overlain by slightly weathered strong bedrock. The overburden is coarse, free draining, not susceptible for brittle shear and is very favorable for WRD foundations.

18.8.3.3.2 Geochemical Characterization

The waste rock from the El Limón and Guajes pits is not expected to produce ARD, hence there is no infrastructure planned to manage ARD. Assessment work completed has estimated a generally low quantity of potentially acid generating rock (<18%) that is widely dispersed through the El Limón and Guajes pits. The waste rock is low sulphide content (typical range in major rock units of 0.1 to 1%) and available NP mostly in the form of carbonate is also widely present in most rock units.

The El Limón Sur waste rock characteristics are generally similar to the waste rock from ELG Mine. A higher apparent degree of in-situ oxidation of the El Limón Sur waste rock has been identified, the effect of which (if any) is being assessed. There may be a potential risk that the water that percolates through the waste rock will dissolve arsenic to concentrations that are above acceptable limits. This risk is not high enough to install mitigation processes at this time. However, the potential mitigation process has been designed and the drainage from the waste rock piles will be monitored. Mitigation efforts will be taken in the future if the trend points towards a need. Assessment along the El Limón access road identified largely unmineralized rock with little concern for ML/ARD. Rock in transitional areas crossing the limits of the Guajes Pit in the east and El Limón pit in the west is similar to El Limón and Guajes waste rock (Amec Foster Wheeler 2015c).

18.8.3.3.3 Waste Rock Dump Stability during Operations

The compact and often unsaturated native overburden soils are strong, competent and non-liquefiable. There are no adverse foundation conditions affecting the stability of the WRDs.

18.8.3.3.4 Waste Rock Dump Stability after Closure

After closure the WRDs will be reconfigured to 2H:1V slopes. This slope provides a long term static factor of safety of 1.5.

18.8.3.3.5 Assignment of a Safety Zone

The design approach considered the following three methods for determination of 'rock run out' and assignment of a 'safety zone':

- Empirical approach;
- Buffer zone corresponding to the stable slope of 2H:1V; and

- Rock run out characteristics based on computer modeling e.g., “Rockfall”.

The maximum extent of safety zone obtained from the above analyses will be assigned as safety zone for the WRDs during operations. See Figure 18-10.

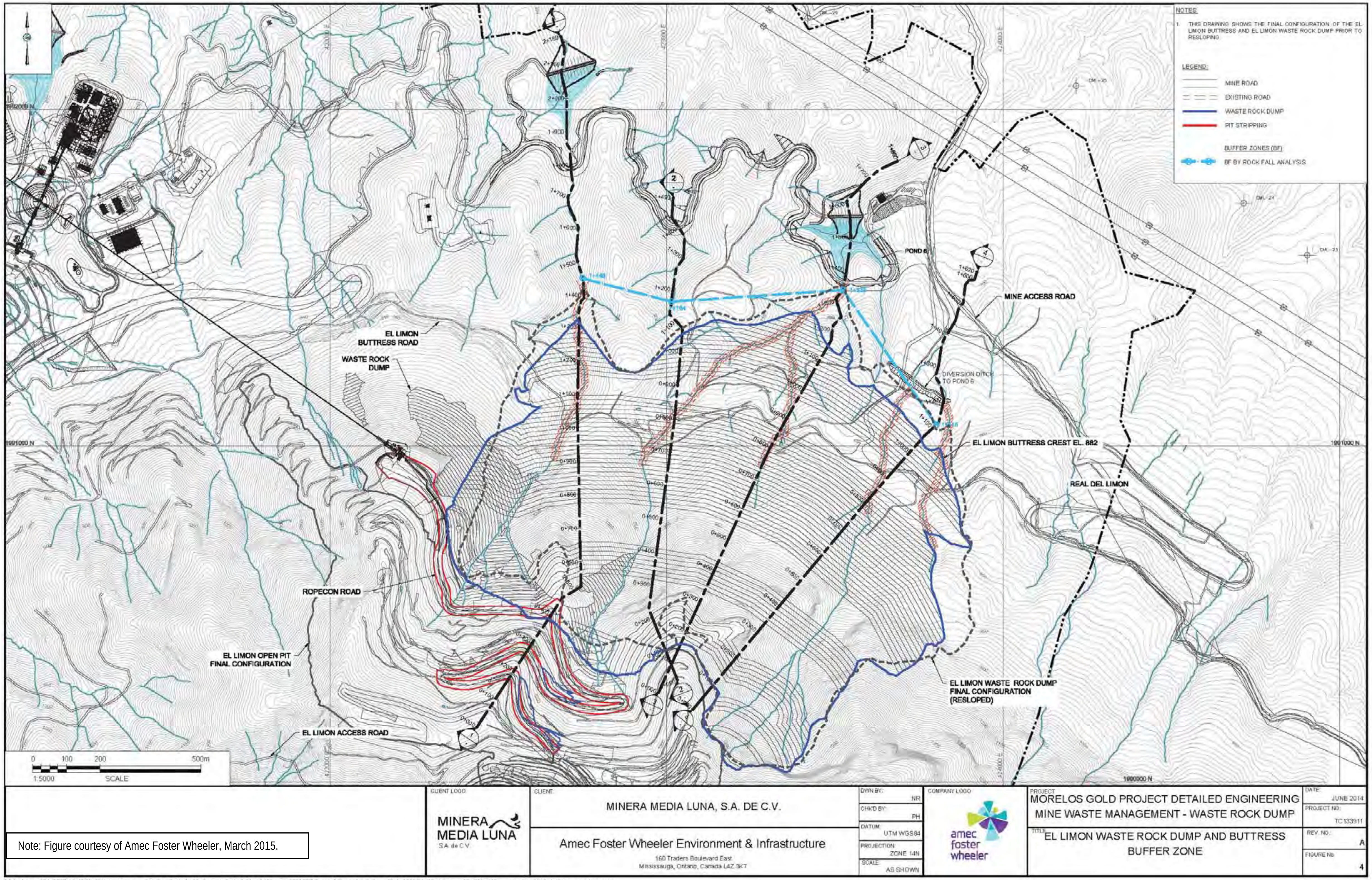


Figure 18-10: El Limón Waste Rock Dump Buffer Zone

18.9 OVERALL GEOTECHNICAL CONSIDERATIONS

This section summarizes the geotechnical investigation of the general site (covering infrastructure and waste disposal areas). Geotechnical investigations were completed to enable safe, environmentally sound designs to be completed for all infrastructure and waste disposal areas. This work was carried out through both surface and subsurface (drilling) in three campaigns, one completed in 2006 and the other two completed in 2012 and 2013. Results of this investigation and subsequent analysis identified no areas of concern. During ELG Mine construction, work monitoring of the geotechnical conditions was maintained and confirmed that no areas of concern exist.

The proposed plant site is underlain by granodiorite. The surficial conditions vary significantly over the general area, from material that will be easily excavated to material that will require blasting. Overburden thicknesses were typically less than 0.25 meter over most of the area but generally appeared to increase to over 2 meters on the east and south sides of the general plant area. Some local pockets existed where the overburden was greater than 5 meters in thickness. The overburden was mainly residual soil, consisting of angular to sub angular gravel and silty sand/sandy silt. The contact between overburden and highly or completely weathered bedrock can therefore be difficult to define. There was typically a thin veneer, approximately 0.05 meters thick, of organics at the ground surface.

The depth to fresh or slightly weathered bedrock over the general plant site area varied between 5 meters and 38 meters although generally was either 5 to 7 meters or greater than 20 meters. The fresh bedrock was typically unaltered and strong but can be highly fractured and there were zones of highly to completely weathered rock generally of limited extent (less than 0.2 meter).

The topography and generally shallow depth to fresh bedrock expected over most of the plant site appear consistent with spread footings on fresh to moderately weathered bedrock. It is planned to develop a flat bench for the plant site by mass excavation of rock to the 689 m elevation. The major equipment foundations will be on fresh rock; 20-30 meters below current ground surface.

In general, bedrock conditions appear to be more favorable (i.e. shallower fresh bedrock) in the north and western areas of the proposed plant site. The proposed layout takes advantage of this by having most of the major facilities located in these more favorable areas. In particular, the proposed crusher is located in an area of shallow, competent bedrock and the proposed grinding mills are located in an area of relatively shallow bedrock. Ancillary facilities (e.g. water tanks, guard shacks, etc.) have generally been located in areas where bedrock is at greater depths. Additional geotechnical investigations are recommended at the locations of main mine facilities to more accurately define subsurface conditions prior to construction.

The plant site has been graded to have all runoff water directed away from the buildings and towards a collection ditch. Runoff from the area will be considered contact water and as such will be contained and directed to flow directly into the Central Water Pond.

A geotechnical investigation of the El Limón Crusher Station was completed in 2012 by SRK (SRK, 2012a). Two geotechnical borings showed that the proposed bench area consists of limestone and marble. The presence of a karst feature was noted in the area, and follow-up investigation was identified. During 2014 this work was completed with a small change being made and incorporated into the design.

A 25 meter vertical wall is planned to be excavated, with the crusher structure constructed against the vertical wall.

19 MARKET STUDIES AND CONTRACTS

The El Limón Guajes Mine will produce gold/silver doré in the form of bars. A contract for the purchase and refining of these bars has been entered into with Asahi Refining (formerly Johnson Matthey Gold and Silver Refinery Inc.). The terms and conditions described within this contract have been used in the financial modelling of the mine.

The agreement provides for the refiner to process the mine's doré produced during the first 3-years of production. Transfer of responsibility occurs at the ELG Mine site through the refiners secure liability carrier who will be responsible for transporting the bars to the refinery.

Refinery treatment, transportation, and deleterious element charges have been agreed to and are typical to charges in the industry. Title to all recoverable metals resides with the mine until arranged to be sold to a third party. Gold and silver sales are expected to be at the precious metal spot prices of the London Metals Exchange (LME) or physically delivered into existing gold hedges. In connection with the mine's loan facility, the mine entered into commitments to deliver 204,360 ounces of gold over an 18-month period commencing in January 2016 at an average flat forward gold price of $1,241 per ounce. The hedging contracts are in the form of International Swaps and Derivatives Association ("ISDA") Agreements. For the purposes of this technical report, the gold hedges described above are excluded from the financial model.

No other sales contracts or agreements have been entered into or proposed.

Other than as disclosed elsewhere in this Report, including without limitation, the EPCM contract, the agreements referred to in Section 4.4 – Surface Ownership, and the agreements referred to in this Section 19, there are no contracts material to the issuer that are required for property development. All major contracts are within industry norms.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 INTRODUCTION

Minera Media Luna S.A. de C.V. (MML) engaged Golder Associates Ltd. (Golder) to complete the environmental and social section of the Technical Report for the El Limón Guajes Mine. This work was completed in September of 2014, since this time Golder has been involved in the Mine construction. This section will:

- Provide reader with current environmental and social data and information on the ELG Mine based on available data to date, and
- Address the known or perceived potential environmental and social-economic risk and potential impacts associated with the ELG Mine at the current stage of development.

The ELG Mine, for the purposes of this report, is defined to include the following components and modifications.

- El Limón and Guajes Pits;
- North Nose Pit;
- Development of El Limón Sur Pit;
- ELG Process plant
- Waste rock storage facilities (WRSFs); and
- Tailings dry stack
- Camp, well field, and other associated infrastructure.

All National, State and Municipal permits/authorizations required for the exploration and development of the original ELG Mine have been received from the various levels of Mexican government and construction is underway.

MML is also conducting exploration on the south side of the Balsas River, designated as Media Luna (ML). A Preliminary Economic Analysis (PEA) and is described in section 24.20.

This Section 20 also includes a summary of completed and ongoing efforts related to affected communities, compensation and resettlement, environmental and social mitigation measures for the various phases of the ELG Mine, and the environmental design basis that will be used for monitoring compliance.

Key points based on Golder's assessment are as follows:

- A full ESIA compliant to the Equator Principles (EP), the International Finance Corporation (IFC) Performance Standards (PS) and World Bank Group General and mining specific Environmental, Health, and Safety Guidelines (EHS Guidelines) was finalized in September 2014 and the results are consistent with the findings from the Mexican Impact Assessment.
- No social or environmental issues have been identified that will impact construction and operation of the ELG Mine utilizing the current design.
- Additional studies are underway to evaluate the incremental impacts associated with the modification of the ELG Mine.
- The potential impacts on groundwater and surface water have been identified and control plans have been established, including:
    - Additional studies such as water quality of receiving water and modeling will be conducted to evaluate the effects of waste rock and water control structures for El Limón Sur. As the waste rock characteristics are expected to be similar to the other waste rock disposal areas for ELG Mine and water management ponds, there is no specific anticipated aquatic or human health risks to Presa

Caracol associated with the El Limón Sur component. These features will be managed using the environmental management and monitoring procedures developed for ELG Mine.

- MML has a high functioning Community Relations Team (CRT) that is actively engaged with local stakeholders; all work is of an open and transparent nature. The CRT team will continue to engage and communicate the local stakeholders on the proposed modifications to ELG Mine.
- A Resettlement Action Plan (RAP) was developed and is being followed during the relocation of the villages of Real del Limón and La Fundición. Relocation of the La Fundición is underway as of the writing of this report.
- ELG Mine is in compliance with the Mexican law and IFC Performance Standards on cultural heritage resources identified in the ELG area and resources found have been mitigated by INAH-Guerrero.

20.2 REGULATORY, LEGAL AND POLICY FRAMEWORK

20.2.1 International Policy Framework

20.2.1.1 Environmental Regulations

All National, State and Municipal permits/authorizations required for the exploration and development of the ELG Mine have been received from the various levels of Mexican government (Table 20-1).

A full ESIA compliant to IFC Performance Standards was finalized in September 2014, the results of which are consistent with the findings from the Mexican Impact Assessment.

Environmental future work to be completed for the El Limón Sur will continue to satisfy Mexican legislative requirements as well as comply with the standards that are consistent with international financial institutions and IFC requirements. Specifically the Equator Principles, IFC Performance Standards, and the World Bank Group General and Mining Environmental, Health and Safety Guidelines.

Table 20-1: Environmental Permits and Timeline

Permit / Agency	Source Document	Type	When Needed	Transaction Time	Date File	Date Res.	Comments
1.1 ELG Mine Construction							
1.1.1 Environmental Impact Resolution for Morelos Property SEMARNAT (Secretariat for the Environment and Natural Resources) Mexico City	• Environmental Impact Manifest (MIA). • Additional Information. • Supplementary Information 1 • Supplementary Information 2	P	Before any construction work may commence.	12 weeks	Sep 12	May 13	COMPLETE The authorization was granted on May 15th, 2013 by means of the Environmental Impact Resolution No. S.G.P.A./DGIRA/DG.-03171. The resolution encompasses construction, operation and closure.
1.1.2 Permit to Change the Use of Land SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Technical Economic Justification Study (ETJ) • Additional Information	P	Before any construction work may commence.	60 working days	Dec 12	Dec 13	COMPLETE The notification of payment of compensatory duties was received on May 23, 2013 by means of Resolution No. DFG.SGPARN.UARRN.559/2013. The Change in Land Use Permit was issued on December 2, 2013 by means of Resolution No. DFG.SGPARN.UARRN.907/2013
1.1.3 Concession to Extract Underground Water CONAGUA (National Commission for Water) Delegation at Guerrero	• Application form supported by technical documents.	P	Before any water extraction is undertaken	60 working days	Oct 11	Dec 11	COMPLETE The concession title to operate 5 wells and extract 5 million cubic meters per annum was issued on December 5, 2011 by means of Title No. 04GRO150254/18EMDL11
1.2 East Service Road Construction							
1.2.1 Environmental Impact Resolution for East Service Road SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Environmental Impact Manifest (MIA). • Additional Information.	P	Before any construction work may commence.	12 weeks	Nov 11	Mar 12	COMPLETE The authorization was granted on March 20th, 2012 by means of the Environmental Impact Resolution No. DFG-UGA-DIRA-306-2012 NO. DE REF.11267 4. The resolution was, subsequently, modified, to include changes in road design, by means of Resolution No. DFG-UGA-DIRA-1880-2012 dated December 14th, 2012.
1.2.2 Permit to Change the Use of Land SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Technical Economic Justification Study (ETJ) • Additional Information	P	Before any construction work may commence.	60 working days	Nov 13	Apr 14	COMPLETE The notification of payment of compensatory duties was received on April 30, 2014 by means of Resolution No. DFG.SGPARN.UARRN.374/2014. Payment of said duties was completed on April 30, 2014. The Change in Land Use Permit was received on May 29, 2014 by means of Resolution No. DFG.SGPARN.UARRN.521/2014. Further modifications include intersection with Federal Highway 95 and inclusion of drop zones and aggregate banks.
1.3 EL POTRERILLO Construction							
1.3.1 Unified Environmental Impact and Change in Land Use Resolution SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Unified Technical Document (DTU) • Additional information.	P	Before any earthworks may commence	60 working days	Nov 13	Apr 14	COMPLETE The notification of payment of compensatory duties was received on March 14, 2014 by means of Resolution No. DFG.SGPARN.UARRN.334/2014. Unified environmental impact and change in land use resolution was received on April 30, 2014 by means of Resolution No. DFG.SGPARN.UARRN.495/2014
1.3.2 Environmental Impact Resolution for EL POTRERILLO Settlement SEMAREN (State Secretariat for the Environment and Natural Resources) Guerrero	• State Environmental Impact Manifest (MIA). • Additional Information.	P	Before construction of housing and urban infrastructure may commence	120 working days	Nov 13	May 14	COMPLETE The construction of EL POTRERILLO was authorized by SEMAREN, on May 19, 2014, by means of Resolution No. SEMAREN/DIAOT/081/05/14.
2.1 ELG Mine OPERATION							
2.1.1 Environmental Impact Resolution for Morelos Property SEMARNAT (Secretariat for the Environment and Natural Resources) Mexico City	• Environmental Impact Manifest (MIA). • Additional Information. • Supplementary Information 1 • Supplementary Information 2	P	Before plant and mine operation may commence.	12 weeks	Sep 12	May 13	COMPLETE The authorization was granted on May 15th, 2013 by means of the Environmental Impact Resolution No. S.G.P.A./DGIRA/DG.-03171. The resolution encompasses construction, operation and closure.
2.1.2 Permit to Change the Use of Land SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Technical Economic Justification Study (ETJ)	P	Before any additional land, over approved polygons, is	60 working days	June 14	Nov 14	COMPLETE Additional areas, compared to the approved Change in Land Use (CUS), are required for construction and operation. Therefore, an extended ETJ was filed. The notification of payment of compensatory duties was received on September 9, 2014 by means of Resolution No. DFG.SGPARN.UARRN.1051/2014. The Change in Land Use permit was

Permit / Agency	Source Document	Type	When Needed	Transaction Time	Date File	Date Res.	Comments
			affected.				received on November 14, 2014 by means of Resolution No. DFG.SGPARN.UARRN.1198/2014
2.1.3 Request for Modification of an Environmental Impact Resolution SEMARNAT (Secretariat for the Environment and Natural Resources) Mexico City	• Application for a modification of an environmental impact resolution. • Project description. • Environmental impact assessment as compared with the original resolution. • Additional mitigation measures if applicable.	**P**	Before any modification of the approved project is implemented	10 working days	PEND	PEND	Permit required for El Limón Sur Pit Changes must be reviewed and approved by the authority. The resolution will indicate if a new MIA is required or if the modification is authorized provided that it does not, significantly, alter the assessed impacts and consequent mitigation measures. Since the EL LIMÓN SUR pit will come on stream later in life of mine, the application for this request has been deferred.
2.1.4 Effluent Discharge Permit CONAGUA (National Commission of Waters) Mexico City	• Project description. • Effluent treatment system description. • Estimated analysis of final effluent	**T**	Before plant and mine operation may commence.	60 working days	PEND	PEND	The occasional and temporary discharge, from the Central Water Pond, has been approved in the environmental impact resolution for the Morelos Property. An effluent discharge permit depends on how CONAGUA classifies the outflow from the hydraulic structures. Effluents from sewage treatment facilities will require a discharge permit.
2.1.5 Accident Prevention Plan SEMARNAT (Secretariat for the Environment and Natural Resources) Mexico City	• Environmental Impact Manifest (MIA) • Level II Environmental Risk Assessment. • Safety audit.	**T**	Upon completion of plant construction	Not Defined	PEND	PEND	The overall risk, associated with the project, has been categorized as acceptable by means of the positive environmental impact resolution. A detailed risk assessment, based on construction engineering, needs to be undertaken. As a result of this assessment, a contingency plan (Accident Prevention Plan – PPA) must be submitted for approval and must be implemented once operations commence.
2.1.6 Environmental License SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Positive environmental impact resolution for the plant. • Installation of platforms and monitoring portholes on stacks. • Measurement of air emissions.	**M**	After plant start up	70 days	PEND	PEND	The application will provide an environmental registration number to MML. In case that the authority does not provide an answer during the allocated transaction time, the license is considered granted.
2.1.7 License to Operate a Radioactive Source SE – CNSNS (Secretariat of Energy – National Commission for Nuclear Safety and Safeguards) Mexico City	• Description of radioactive source and its installation. • Integration of Radiological Operating Procedures and Safety Manual. • Certified person in charge of radiological procedures and operation of radioactive sources. • Disposal procedures for spent radioactive waste.	**M**	After source is installed	60 days	PEND	PEND	The supplier of the radioactive measurement equipment has to provide information and assist in obtaining the license. The equipment may be installed but it may not be operated until the operating procedures and the person in charge of implementation are certified.
2.1.8 Registration as Generator of Hazardous Wastes SEMARNAT (Secretariat for the Environment and Natural Resources) Delegation at Guerrero	• Complete the registration form. • Provide physical and chemical characteristics of the waste. • Provide estimated volume of generation. • Request classification as generator based on the declared yearly volume	**M**	After plant start up	30 days	PEND	PEND	A waste management plan will have to be implemented, based on the guidelines issued by SEMARNAT, particularly as referred to mining wastes.

Type of Permit:
P: Principal (indispensable and could possibly be denied)
T: Technical Review (reviewing agency can only challenge the design, but cannot deny it)
M: Minor (eventually needed, but does not impact development of the project)

20.3 PERMITTING STATUS, SCHEDULE AND PROCESS

20.3.1 Existing and Required Permits and Rights

The main environmental permits required in México is the *Resolución de Impacto Ambiental* for Construction and Operation (RIA) and the Change in Land Use Permit (ETJ) which are issued by *Secretaría de Medio Ambiente y Recursos Naturales* (SEMARNAT). Four primary documents must be submitted for approval and issue of these permits:

1) MIA; Manifestación De Impacto Ambiental (Mexican Impact Assessment). *Construction and operation.*
2) ETJ; Estudio Técnico Justificativo (Technical Justification Study for the Change in Land Use). *Construction and operation.*
3) Estudio de Riesgo Ambiental Mina Morelos (Environmental Risk Assessment).
4) PPA; Programa para la Prevención de Accidentes (Program to prevent risk) to be submitted once construction has been completed.

To date, MIAs and the ETJ have been completed, submitted and approved by SEMARNAT for the exploration phases of ELG, the development of ELG, the upgrades to the East Service Road, and the development of the resettlement site (El Potrerillo).

A full ESIA compliant with Equator Principles and IFC PS as well as World Bank Group General and Mining Sector Environmental, Health, and Safety (EHS) Guidelines was finalized in September 2014. As part of the ESIA, an Environmental and Social Management System (ESMS) was developed which includes an Environmental Management Plans framework, the RAP and Social Management Plans. Following the refinement of the conceptual development plans for the modifications to the ELG Mine, all National, State and Municipal permits/authorizations required will be updated to include the additional components described in Section 20.1, which form part of the modified ELG Miine for the purposes of this summary.

20.4 PHYSICAL, ECOLOGICAL AND SOCIO-ECONOMIC SETTING

The subsections under this Section 20.4 present a summary of the environmental and social setting for the ELG Mine, as well as key findings, potential risk and impacts, and corresponding mitigation measures.

20.4.1 Physical Environment

For the purposes of the ESIA, the physical environment was defined to include the following components:

- Atmosphere (air quality, greenhouse gas, climate change, noise and vibration);
- Visual (light and visual aesthetics);
- Water (hydrogeology, hydrology, surface water and sediment, and risk assessments); and
- Physical (soil, and natural and industrial hazards).

The following subsections present a summary of existing conditions, key findings, likely impacts and corresponding mitigation measures (as appropriate) for the ELG Mine.

20.4.1.1 Atmosphere

The Mine site is located in a region called the Balsas River Basin, at the convergence of the Trans-Mexican Volcanic Belt and the Sierra Madre del Sur. The regional climate ranges from semi-warm to temperate sub-humid. Using the

Koppen climate classification, the climate can be described as a Tropical Wet-Dry category, with year-round mean temperatures above 18°C. The Balsas River Basin experiences distinct dry and wet seasons, with the wet season peaking in the late summer to early fall and a dry season during the winter months. Less than 5% of the total annual rainfall occurs during the winter months. The late summer months are also a period of increased activity for tropical cyclones that bring significant precipitation pulses to the region.

On-site data indicates that the predominant winds are from the southwest and south southwest. The majority of the hourly wind speeds are between 1 and 5 m/s. The monthly average temperature peaks in April at around 32°C. From July through January, the temperature remains fairly constant, with monthly average temperatures between 24°C and 27°C. Based on long-term data from the nearby town of Mezcala, the annual estimated precipitation is 715 mm. Precipitation levels increase and peak in the summer months, with limited precipitation occurring during December to April. On an annual basis, evaporation far exceeds the amount of rainfall.

The existing air quality in and around the Mine area is primarily influenced by agricultural activities, open burning and dust from unpaved roads. There are currently no major industrial sources that contribute to reduced air quality in the area.

Generally, the sound levels at each of the measured locations are influenced heavily by local traffic and other human activity during the daytime. In the evenings and throughout the nighttime, sounds of nature dominate the background noise levels at most of the measurement locations.

The key findings from the detailed assessment of atmospheric components (air quality, greenhouse gas, climate change, noise and vibration) are as follows:

- Maximum predicted concentrations of contaminants released into the atmosphere are below regulatory requirements;
- Contributions of greenhouse gas from ELG Mine are too minimal to result in a measurable change in global climate;
- At their peak, the change in noise levels will be barely audible from Nuevo Balsas, Balsas Sur, Campo Arroz Viejo, El Potrerillo or the permanent camp (Figure 20-1); and
- During blasting events, air and ground vibrations are unlikely to be perceivable beyond the fenced perimeter of the mine site area.

The commitments made as part of the ESIA to address any residual atmospheric effects include the development and implementation of the following:

- Air Quality Management Plan
- Noise and Vibration Management Plan

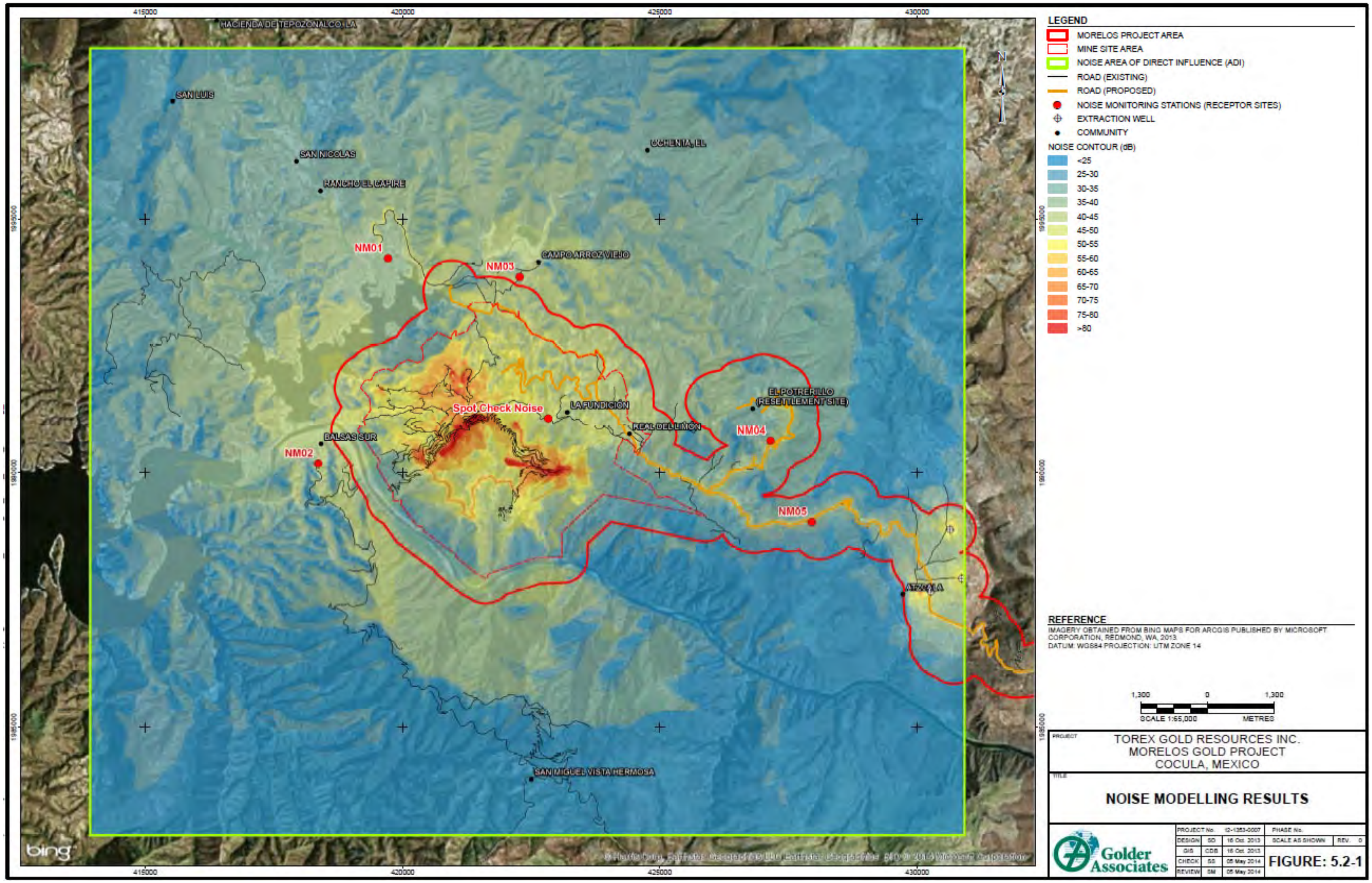


Figure 20-1: Noise Modelling Results

20.4.1.2 Visual Aesthetics and Light

The existing visual landscape conditions prior to the development of the ELG Mine were evaluated to describe and rate the quality of the visual landscape conditions from established vantage points, looking towards the mine site area, which is the area that will be most affected by ELG Miine activities. This baseline characterization provides the basis against which to assess visual landscape changes.

The existing light environment was characterized prior to the development of ELG Mine in order to establish existing conditions, predict light emissions associated with the mine site area activities, assess the potential for ELG Mine to contribute to environmental change, evaluate the predicted effects of ELG Mine on the surrounding environment, and identify the need for any supplementary mitigation measures. The existing light trespass levels were characterized as low ambient brightness and the existing sky glow ranges between low distinct brightness to suburban residential area, depending on the receptor location. There are no existing industrial developments within the vicinity of the ELG Mine.

- The assessment of light components included:
- Evaluation of the amount of light that will be visible from local points of receptions and the potential change in sky glow, either of which could cause a disturbance.
- Assessment of the visual changes on the landscape, which has an intrinsic value for local residents.
- The following mitigation measures were incorporated into the design of the facilities in an effort to mitigate potential effects from ELG Mine:
  - Use of full-cut-off lights, to the extent feasible, where there will not be a compromise to health and safety of site personnel.
  - Sequencing and phasing of project activities to reduce changes in the visual landscape.
  - Development of a reclamation and closure plan to reverse, to the extent feasible, the visual impacts of ELG Mine on the landscape.

The key findings from the detailed assessment of visual components (light and visual aesthetics) are as follows:

- During operations, light emissions from ELG Mine may be visible from Campo Arroz Viejo; however, the area will continue to be classified as an area with low ambient brightness;
- The amount of sky glow, perceivable from Campo Arroz Viejo and Nuevo Balsas, will increase as a result of ELG Mine. With maximum use of full-cut-off lights, a change of approximately 20% compared to baseline conditions is predicted.
- Portions of the ELG Mine-related infrastructure will be visible from each of the evaluated receptor locations.

The commitments made as part of the ESIA to address any residual visual effects include the development and implementation of the following:

- Light Management Plan
- Closure and Reclamation Plan
- Environmental Protection Plan

20.4.1.3 ELG Modifications

The proposed modifications to ELG Mine will all be within the overall footprint evaluated during the MIA and ESIA. Additional studies will be conducted to assess the incremental environmental and social risk and potential impacts associated with El Limón Sur on air quality, noise, visual and light.

20.4.1.4 Hydrogeology

Hydrogeologic investigations conducted in the ELG area to date indicate that the bedrock has relatively low permeability. Most of the fieldwork related to monitoring well drilling, installation, and hydrogeologic testing was undertaken by SRK Consulting (Canada) Inc. (SRK). In addition to the SRK drilling program, additional fieldwork was completed in 2012 by AMEC Foster Wheeler M&M. Based on these two studies, the average hydraulic conductivity of the shallow bedrock above approximately 50 m is 3 x 10^{-7} m/s, while the average hydraulic conductivity of the deep bedrock below approximately 50 m depth is 8 x 10^{-9} m/s. Geologic mapping and drilling at ELG Mine have identified a number of faults, which play an important role in defining the groundwater flow regime. One fault, La Amarilla, intersects the Guajes pit complex and appears to be moderately transmissive with an estimated hydraulic conductivity of 4 x 10^{-6} m/s. La Amarilla fault trends northeast-southwest and is interpreted to extend from the banks of the Balsas River to the vicinity of the Range Front fault, which is interpreted to be coincident with the low land boundary (Figures 1 and 2, SRK 2012).

Groundwater flow within the vicinity of the mine site area is generally to the west, southwest, and northwest following the topography; groundwater is estimated to discharge to the Presa el Caracol along La Amarilla fault at a rate of approximately 100 m^3/day, while also discharging at other locations subaerially and subaqueously, depending on the water level within the reservoir.

Hand dug wells, springs and seeps in the area are used as domestic, livestock and agricultural water sources; however, from a groundwater resource perspective, there is no reported extraction of groundwater within ELG Mine. To the east of the ELG Mine in the town of Atzcala, a number of water wells have been installed in the carbonate rocks, likely associated with the Morelos Group geologic formation. Although the yield of these wells is appropriate for use as a potable source, the quality is generally poor. The wells at Atzcala provide the water source for the ELG Mine.

The effects of mine operations on the hydrogeological conditions in the project area are anticipated to include potential changes in the groundwater quantity and quality as a result of developing the El Limón and Guajes pit complexes. The effects of pit development were assessed using a numerical groundwater model developed by SRK as part of the pit design. Pit lake filling during closure was also assessed by SRK using an analytic solution. Pit lake water quality predictions were assessed using analytic solution developed by Interralogic. The impact of the pit lake water quality on the groundwater was assessed by comparing baseline groundwater conditions to the predicted pit lake quality.

A number of analytes exhibited average concentrations in groundwater in excess of their applicable standards, including ph, total dissolved solids (TDS), total suspended solids (TSS), turbidity, chlorine, aluminum, antimony, arsenic, barium, iron, manganese, selenium, silver, ammonia nitrogen, phosphorus and total phenols.

Current groundwater quality indicates that dissolved arsenic is discharging to the Presa el Caracol at an average rate of approximately 0.05 kg/d through La Amarilla fault. Loading from bedrock (i.e., not in the vicinity of faults) is considered negligible due to the lower hydraulic conductivity of the bedrock. Loading through La Flaca fault is currently considered to be negligible, based on the current understanding of the fault's transmissivity, however this may be revised following additional characterization of the fault.

A number of analytes exhibited average concentrations in spring and seep water in excess of their applicable standards, including TDS, turbidity, aluminum, arsenic, barium, manganese, selenium, ammonia nitrogen, nitrate, and phosphorus.

The potential effects of mine operations on groundwater quality during construction, operations and closure/post closure are considered to be:

- changes in water groundwater levels as a result of pit dewatering; and
- changes in groundwater level as a result of well field pumping.

The potential effects of mine operations that could affect groundwater quality are those related to release of contaminants via seepage from mine facilities, and include the following:

- Development and operation of the open pits.
- Seepage from Tailings Dry Stack Facility (TDSF) ponds (water management ponds 1, 2 and 3).
- Groundwater and surface water contamination from impacted pit lake water during post-closure.

The impact of pit dewatering on the groundwater flow conditions during closure and post-closure were evaluated by constructing a composite groundwater contour map which incorporated the simulated groundwater contours at the end of mining combined with the final pit lake elevations.

The primary impacts to groundwater quality which may occur during construction and operations periods include the possibility of point source releases of contaminants to the groundwater (e.g., fuel spills), and the potential seepage of surface water which has been impounded in ponds downgradient of the TDSF and WRSFs. Potential point source contamination has not been included in the predictive effects assessment as it is assumed that these events, should they occur, will be mitigated at the time of occurrence.

Potential seepage of surface water which has been impounded in ponds downgradient of the TDSF has been evaluated through the development of a SEEP/W model completed by AMEC as part of their design engineering. Details of this modelling are included in the report on the predicted water quality for catchment ponds. Based on the seepage rates calculated by AMEC, and the predicted surface water quality results, the quality and quantity of the seepage at the three pond locations was assessed using the receiving environment water quality model presented in the ESIA Report. Given the current understanding of hydrogeological conditions at the site, the ultimate discharge point for groundwater is the Balsas River or the Presa el Caracol.

The key findings and results from the predictive modelling for the water components are as follows:

- Development of the pits will not result in drawdown of groundwater levels that would affect water levels in the Presa el Caracol or the well fields in El Potrerillo or Atzcala.
- There will be no change to the existing contributions of potential contaminants to the Presa el Caracol through groundwater. These represent existing, natural contributions and are not anticipated to change as a result of ELG Mine.

The proposed modifications to ELG Mine will require additional studies in order to assess the incremental environmental and social risk and potential impacts associated with El Limón Sur on the hydrogeology.

20.4.1.5 Hydrology

The ELG Mine is situated in an area with significant surface water resources that includes: Presa El Caracol, Rios Balsas and Cocula, Arroyo La Culebra (Snake Stream), ephemeral surface streams, and groundwater resources that are utilized for domestic, livestock and agricultural water supply. Presa El Caracol is the predominant surface water feature within the regional project area. This reservoir was formed following construction of El Caracol Dam (formerly the Carlos Ramirez Ulloa Dam) in 1986. The reservoir has intrinsic value for the local people, aquatic animals, and environmental and aquatic health, and it supports an important commercial and subsistence fishery.

Stormwater collection and sedimentation ponds will be constructed downstream of the tailings dry stack and waste rock dumps, respectively, to collect seepage and runoff, and to reduce concentrations of TSS through sedimentation.

Under the base case plan, seepage and surface runoff from the tailings dry stack and from pit dewatering will be collected and pumped to the central water pond (CWP). Water from the CWP will be recycled for mine water needs, with excess water treated to an appropriate standard, if required, before discharge to the environment. Seepage and runoff from waste rock dumps will be detained in sedimentation ponds to allow reduction in TSS and monitoring of the water quality before discharge to the environment (AMEC 2012f). All ponds are to be constructed as rock fill structures and each will have an overflow spillway to discharge surface water from large events directly to the environment, which will ultimately discharge into Presa El Caracol. The stormwater collection ponds will be constructed to contain runoff from the 1-in-100 year event, while the sedimentation ponds will be designed to contain smaller storm events (AMEC 2012f).

There are a number of mitigation measures that can be considered if the risk assessment, or ongoing monitoring, indicates that that runoff and seepage from the waste rock dumps exceeds relevant water quality guidelines for release. Such measures range from pond-specific treatments through to the construction of a water treatment plant for the site. Additional measures that could mitigate the water quality in the ponds include, but are not limited to: use of flocculants, changes to pH or alkalinity; use of liners to eliminate seepage; increases to the storage capacity; pumping water back to the CWP for reuse as mine water; and construction of secondary ponds. Water quality triggers are being evaluated so the water quality can be monitored and proposed actions as described above can be activated if certain pre-determined levels are reached.

As with the base case plan, excess water in the CWP will be treated to an appropriate standard, if required, before discharge to the environment (AMEC 2012c). In combination with pumping, all ponds will be designed to contain runoff from the 1-in-100 year event.

The key findings and results from the predictive modelling for the water components are as follows:

- Potential increases in existing contributions of specific contaminants to the tributaries and the Balsas River. These were further evaluated through detailed risk assessments.
- The aquatic risk assessment identified the potential for localized effects to aquatic organisms at the outlet of specific tributaries; however, there is no predicted increased risk to human health as a result.
- The human health risk assessment determined that naturally elevated concentrations of certain contaminants in the Presa el Caracol exist. There is no predicted increase in risk to human health as a result of ELG Mine activities.

Modifications to ELG Mine will include El Limón Sur and associated infrastructure such as waste dumps and water management ponds. Similarly, the design and mitigation measures that have been adapted for the ELG ponds will be applied for the modifications associated with El Limón Sur.

20.4.1.6 Surface Water and Sediment Quality

Quality of surface water is influenced by geology, climate and landscape such that seasonal and yearly variability in water quality is expected. The predominant surface water bodies in the study area are 1) the Balsas River to the south and west of the ELG area, flowing east to west along the south perimeter, and 2) the Rio Cocula to the north and east of the study area, flowing southwest, where it then flows into the Balsas River. Water elevations in Balsas River and Rio Cocula are controlled by the hydroelectric dam (El Caracol Dam) approximately 20 km downstream of the ELG Mine. There are numerous smaller tributaries in the immediate study area that transfer water from the immediate ELG area to Rio Cocula and Balsas River. Many of these tributaries only contain water during the wet season.

To adequately characterize existing water quality for a study area, data was collected during the ESIA baseline program over temporal and spatial scales and from drainages at the mine site that could potentially be affected by

ELG development. The baseline program also collected baseline data from a “reference” area that is outside the influence of the potential development.

Surface water quality is influenced by sediment quality and thus evaluation of sediment quality was conducted as part of the water quality programs. Sediment quality is influenced by landscape topography, landscape cover, geology, watershed disturbance and amount of runoff. To characterize sediment quality at the ELG Mine site, sediment samples were collected during the ESIA from depositional areas within watersheds that could potentially be affected by ELG Mine. Sediments accumulate over longer time frames, and therefore seasonal and yearly variability is not usually expected unless development or other changes have occurred in the watershed.

At all stations sampled as part of the surface water and sediment quality baseline data collection program, at least one water quality parameter exceeded the applicable standards or guidelines. Water quality parameters that exceeded standards/guidelines most frequently in the Local Study Area (LSA) were aluminum, barium, iron, manganese, TDS, true colour, turbidity, sulfate, hardness, and total phosphorus. Parameters with occasional exceedances were arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, zinc, fluoride, ammonia, nitrate, total coliforms, fecal coliforms, pH and TSS. Metals exceedances were less common in samples from the tributaries and Rio Cocula as compared to samples from Balsas River. Sediment quality parameters that exceeded standards/guidelines in the study area were arsenic, cadmium, chromium, copper, lead, mercury, and zinc.

Established water quality guidelines are used as generic benchmarks in order to evaluate potential adverse effects to aquatic life or human health. It is not uncommon for mineral-rich areas such as those developed for mining projects to have background concentrations in receiving waterbodies that exceed the generic water quality guidelines. As part of the ESIA, these guideline exceedances were interpreted with respect to relevant site-specific and toxicological information, as generic water quality guidelines are not intended to be site-specific. A series of mitigation measures were presented in the ESIA, including implementation of ongoing monitoring programs. These monitoring programs have been incorporated into the Environmental and Social Management Plans (ESMPs).

The proposed modifications to ELG Mine utilized existing baseline data gathered and evaluated during the MIA and ESIA. Additional studies, if required, will be conducted to assess the incremental environmental and social risk and potential impacts associated with El Limón Sur on the surface water and sediment quality along the Balsas River.

20.4.1.7 Receiving Environment Water Quality/Geochemistry

Chemical weathering of sulphide-bearing rock exposed by mining and construction can result in acid rock drainage and metal leaching. Therefore, handling of mine waste materials and related contact water is an integral component of the surface water quality assessment. The following sections provide a summary of the mine waste and water management plans. These management plans are discussed in greater detail in AMEC (2012) and AMEC (2013).

Mine Waste Management Plan

Mining of the El Limón and Guajes open pits is expected to generate approximately 302 million tonnes (Mt)of waste rock and 50 Mt of dry stacked tailings over a mine life. Waste rock mined from the El Limón open pit will be stored in the El Limón waste rock dump (WRD). Waste rock mined from the Guajes pit will be stored in two (2) WRDs: the Guajes North WRD and the Guajes West WRD (Figure 20-2). Geochemical testing of 645 waste rock samples (Teck, 2004; SRK, 2008; AMEC, 2012) indicates 77% of the waste rock samples had neutralization potential ratios (NPR) greater than three and are thus characterized as non-potentially acid generating (non-PAG) according to the Draft Mexican Regulation PROY-NOM-157-SEMARNAT-2009. Since the majority of the waste rock is expected to be non-PAG (AMEC, 2012), MML does not propose to segregate potentially acid generating (PAG) and non-PAG waste rock during mining.

Tailings produced from processing of ore will be stored in the tailings dry stack (Figure 20-2). The geochemical properties of tailings were characterized based on five process plant samples (SRK, 2008; AMEC, 2012). A comparison of the NPR measured in the samples to the Mexican Regulation NOM-141-SEMARNAT-2003 NPR threshold (1.2) indicates two of the five pilot plant tailings samples are PAG.

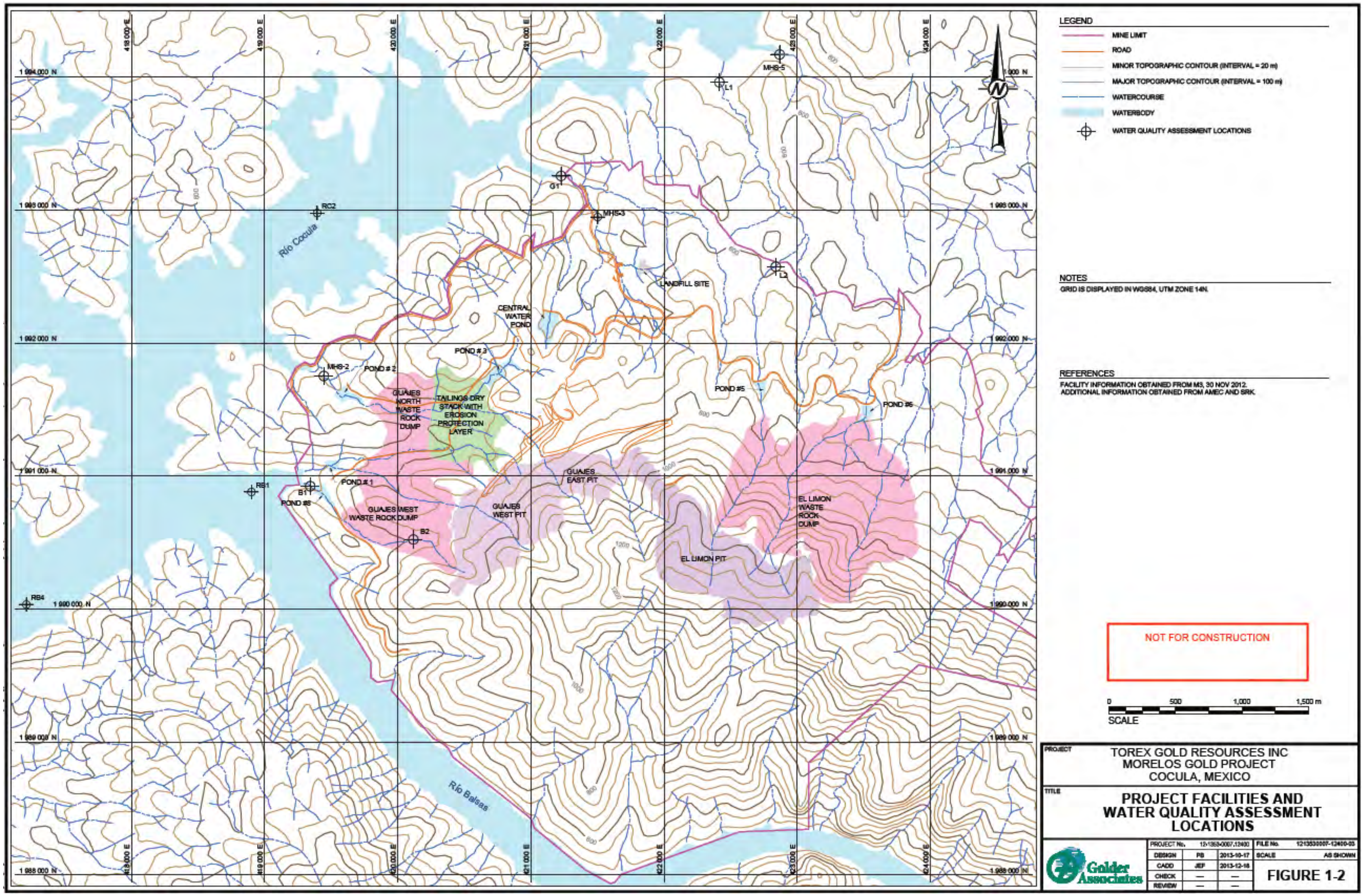


Figure 20-2: ELG Facilities and Water Quality Assessment Locations

Mine Water Management Plan

Water management plan has been developed to manage water from the following site facilities:

- Guajes and El Limón Open Pits
- El Limón Waste Rock Dump
- Guajes North Waste Rock Dump
- Guajes West Waste Rock Dump
- Tailings Dry Stack

The water management strategies are discussed in the following sections for each stage of the mine.

Operations

Contact and non-contact water originating from mine site facilities will drain towards downstream collection ponds. Ponds 1 to 3 are lined and no surface discharge from these facilities is expected during operations (AMEC, 2013). Hydrogeological modelling indicates approximately 32 and 12 m^3/day of seepage will be lost from Ponds 1 and 2, respectively, and seepage from Pond 3 will drain to the lined CWP. Seepage from Ponds 1 and 2 is expected to occur only during wet season months (May to October) and the first month of the dry season (November) at half the wet season rate. For the purpose of the receiving environment water quality assessment, it was assumed that seepage from Ponds 1 and 2 would report to the Río Balsas and Río Cocula, respectively.

During operations, water stored in Ponds 1 to 3 will be pumped to the CWP. Additionally, all water originating from the El Limón and Guajes open pits will be pumped to the CWP. During the dry season, water stored in the CWP is used to supplement the process plant freshwater requirements. Water stored in the CWP is also reclaimed to the process plant in the wet season; however, water balance modelling (AMEC, 2013) indicates excess water will need to be released from the CWP to the receiving environment during the wet season. Water discharged at surface from the CWP will be drained by downstream tributaries to the Río Cocula. Hydrogeological modelling indicates approximately 47 m^3/day will continuously seep through the liner of the CWP. Base seepage from the CWP is expected to report to the Río Cocula.

Ponds 5 and 6 collect runoff and seepage from the El Limón WRD and Pond 8 collects runoff and seepage from the southern region of the Guajes West WRD. The primary purpose of these unlined ponds is to settle sediment in WRD runoff and seepage, prior to releasing it to the receiving environment (AMEC, 2012). These ponds are unlined and discharge to the receiving environment will occur during the wet season. A small amount of seepage will continue to drain from the pond in the dry season until all water retained in the pond has evaporated and/or drained. Water balance modelling (AMEC, 2013) indicates there will be no discharge from Ponds 5, 6, and 8 during the dry season. Ponds 5 and 6 drain to downstream tributaries to the Río Cocula and Pond 8 will drain to the Río Balsas.

Closure

Initiation of the mine closure phase corresponds to the cessation of mining in the El Limón and Guajes open pits. At closure, Pond 3 will be filled with tailings and cease to exist. A dry cover will be placed over the tailings dry stack and the project area previously occupied by Pond 3. Following emplacement of the cover, runoff and seepage from the covered tailings dry stack facility will drain to the CWP. Water balance modelling (AMEC, 2013) indicates water stored in the CWP during the closure period will only discharge at surface to the Río Cocula, via downstream tributaries, during the wet season. Approximately 47 m^3/day of seepage will discharge through the CWP liner to the Río Cocula during the closure period of the ELG Mine.

Pit lakes will begin to develop from the passive refilling of the El Limón and Guajes open pits but there is no surface discharge from these facilities in the closure period. Hydrogeological modelling (Interralogic, 2012) indicates that La Amarilla fault, located at the base of the Guajes pit, will transport approximately 200 m^3/day of pit lake seepage to the Río Balsas during the refilling period. No seepage is expected to occur from the El Limón open pit during closure.

During closure, active pumping of water stored in Ponds 1, 2 and 3 to the CWP, will no longer occur. Ponds 1 and 2 will continue to collect runoff and seepage from the Guajes North WRD and water stored in these ponds will discharge directly to the Río Balsas and Río Cocula, respectively. Water balance modelling (AMEC, 2013) indicates these ponds will only discharge at surface during the wet season. In closure, approximately 32 and 12 m^3/day of seepage will discharge through the liners of Ponds 1 and 2, respectively, during the wet, and the first month of the dry season (November) at half the wet season rate.

Post-Closure

The post-closure phase of the ELG Mine begins after the pit lake elevation in the El Limón and Guajes open pits reaches the spillway elevation. Water balance modelling (Interralogic, 2012) indicates approximately 40 to 60 and 140 to 150 years will be required to develop in the El Limón and Guajes pit lakes, respectively. Following refilling of the pits, the lakes will discharge at surface to the Río Cocula via constructed channels designed to direct pit lake overflow to downstream tributaries along the same pathway as surface discharges from the CWP. Surface discharge from the El Limón and Guajes pit lakes will only occur during the wet season (Interralogic, 2012). Discharge from mine site collection ponds will continue in post-closure.

20.4.1.8 Soils

The ELG Mine is located in the Oaxaca Valley which is characterized by semi-arid to sub-humid climate with hot temperatures and a summer rainfall pattern. The soils covering this region have been described as dominantly Regosols, Leptosols, Cambisols, and Luvisols. Other soils reported in the regional study area include: Andosols, Phaeozems, Acrisols, Vertisols, and Calcisols (FAO, 2006b). The results of the field surveys in the LSA indicated that Leptosols are the most common soils. Weakly developed Cambisols occur in association with Regosols and Leptosols both in the mountainous and lowland regions. Medium textured and organic rich Phaeozems and Chernozems are found in mid elevation well drained sites throughout the LSA. Fluvisols occur in recent alluvial deposits near along the shorelines of the Balsas River and drainage channels and valley bottoms in the upland areas. Exposed bedrock is commonly found in high elevation mountainous zones.

Approximately 470 ha (or 8% of the Area of Direct Influence [ADI]) of the total 705 ha soil disturbance during construction and operation phases will be reclaimed to pre-project equivalent levels, assuming successful reclamation. Approximately 236 ha (or 4% of the ADI) of soil will be permanently lost and replaced by the following permanent project facilities:

- The maximum boundary of the two open pit areas which will remain as open pit-lakes post-closure (139 ha).
- The permanent camp site facilities (23 ha).
- The ease service access road upgrade and utilities corridor (27 ha).
- The new resettlement community of El Potrerillo (47 ha).

With proper mitigation in place, impact on soil quality from erosion, compaction, contamination, acidification, and moisture regime alterations is predicted to have a negative and negligible magnitude rating. Therefore, the overall environmental residual consequence on soil quality due to ELG Mine and its proposed modification is predicted to be negligible. Additional soils in the area of El Limón Sur will be evaluated to verify that the same soil properties are present.

20.4.1.9 Natural and Industrial Hazards

A natural and industrial risk assessment was undertaken for ELG Mine. The objective of this assessment was to evaluate the potential risks from major natural hazards (e.g., earthquake and flooding) and industrial hazards (e.g., industrial accidents and malfunctions and transportation spills and collisions) that may affect public safety and the environment, and to identify the need for any supplementary mitigation measures to avoid, minimize and/or control any identified risks.

Natural hazards included extreme meteorological, geomorphic, or seismic events that could affect any of the project components. Industrial hazards include potential accidents and malfunctions from all engineered facilities and transportation systems where they could adversely affect the environment or public safety.

Overall, 19 public safety risks, and 51 environmental risks were estimated. Each hazard scenario could involve public safety, or environmental risks, or both as appropriate.

None of the hazard scenarios were estimated as highest risk. Fourteen hazard scenarios were estimated as High risk, including the risk of slope failure at the WRSF, TDSF and above pit lake during post-closure; release of mine affected runoff; dam failure; fuel spill; transportation accidents affecting public safety; and post-closure mine discharge not meeting criteria. Mitigation measures will be implemented and resources allocated to manage these risks according to international industry standards. Risks will continue to be identified, estimated, and managed in ongoing risk management programs throughout detailed design, construction, and operations.

The ELG Mine will be compared to the hazard scenario and risk evaluation developed during the ESIA to assess the incremental risk associated with addition of El Limón Sur and related modifications.

20.4.2 Biological Environment

For the purposes of the ESIA, the biological environment was defined to include the following components:

- Aquatic Biology;
- Terrestrial Biology;

The following subsections present a summary of existing conditions, key findings, likely impacts and corresponding mitigation measures (as appropriate) for ELG Mine.

20.4.2.1 Aquatic Biology

The aquatic biology assessment included a seasonal characterization of the existing conditions of aquatic biology in the region, to 1) evaluate the direct and indirect effects of contact water runoff and sediment loading on the aquatic communities, and 2) assess the potential surface water quality and potential alterations to downstream flow regimes, which could affect the quality and quantity of habitat available for aquatic organisms. Based on this evaluation and assessment, measures were incorporated into the design of the facilities in an effort to mitigate potential effects from ELG Mine, including:

- Development of seven (7) water management ponds that will capture run-off from the mine site area, improve peak flows downstream, reduce the amount of sediment being washed into the Presa el Caracol and enable the managed release of water from the site.
- Design of ponds such that there is no direct discharge of mine process water to the Presa el Caracol.

The key findings and results from the assessment of aquatic biology are as follows:

- The aquatic risk assessment identified the potential for localized effects to aquatic organisms at the outlet of specific tributaries.
- No measurable change is predicted in zooplankton, benthic invertebrates and fish communities.
- Beneficial effects associated with the reduction in sediment loadings to the Presa el Caracol through the use of the water management ponds.
- A water management plan is being developed in addition to an environmental protection plan.

The ELG Mine will be evaluated during a two season campaign to assess the seasonal incremental effects on the aquatic biology associated with the addition of El Limón Sur and related modifications.

20.4.2.2 Flora and Fauna

The assessment of flora and fauna included the evaluation of the predicted effects associated with the removal and degradation of vegetation and fauna communities; nuisance-related effects from ELG Mine; and the individual project activities that could affect the availability of habitat, the distribution of flora and fauna and the level of biodiversity in the area. The evaluation included the predicted effects on species of concern.

The following mitigation measures were incorporated into the design of the facilities in an effort to mitigate potential effects from ELG Mine:

- Sighting of the vegetation propagation area away from process facilities, which could be sources of dust.
- Reducing the footprint of the upgrades to the east service road to minimize disturbance.
- Limiting the footprint of the processing facilities and utilizing a RopeCon to limit the need for additional haul roads.
- Limiting, to the extent feasible, the amount of disturbance in areas of known large mammal concentrations.
- Designing the perimeter fence, to the extent feasible, to enable the movement of wildlife, without compromising the security of the mine site area.
- Committing to a 3:1 compensation ratio for all disturbed areas.

The key findings and results from the assessment of flora and fauna are as follows:

- No predicted changes in hydrological regimes that would influence the composition of floral communities.
- Habitat loss that represents an approximate reduction of 11%, 33% and 11%, respectively of natural, critical and modified habitats within the ELG area.
- Degradation of the natural environment, from the potential spread of non-native species and increased fragmentation of habitats.
- Loss of individuals (for both flora and fauna) and the loss of ecosystem units as a result of increased disturbance activities.
- Limited potential for increased exposure of fauna to increased levels of potential contaminants.

The ELG Mine will be evaluated during a two season campaign to assess the seasonal incremental effects on the terrestrial flora and fauna associated with the addition El Limón Sur and related modifications, and the incremental effects to biodiversity.

20.4.2.3 Biodiversity

Biodiversity in the region (based on the findings of the flora and fauna investigations), evaluated ELG Mine effects in the context of natural habitat; critical habitat; degradation and fragmentation; invasive species; hydrological changes;

atmospheric pollution; and direct mortality to individuals. The need for mitigation measures to avoid, minimize and/or control any predicted effects were incorporated into the Environmental and Social Management Plans.

The ELG area is primarily occupied by tropical deciduous forests, which represents approximately 63% of the land area. The plant communities and habitat areas in the area of ELG Mine are more than 75% “natural”, or relatively unaffected by anthropogenic activities. Modified ecosystem units, including tilled fields, pasturelands and plantations, that represent “modified” habitat occupy approximately 1,620 ha, representing just under 25% of the area. Less than 1%, (i.e., 0.03%), qualifies as “critical habitat”.

Many of the mitigation measures have already been incorporated into the MIA and will be implemented as conditions of permit approval. Furthermore, additional measures have been identified as part of the ELG Mine ESIA that have been addressed in the ESMPs.

The physical footprint of ELG Mine has been reduced (and refined) to avoid such potential effects on natural and critical habitats. ELG facilities have been sited and mitigation implemented to eliminate or minimize impacts to species present in the Area of Indirect Influence (AII) that are designated as ‘species at risk’, although the development of ELG Mine should not have a measurable negative effect on biodiversity within the AII and beyond. Nonetheless, ELG Mine will result in the direct loss of approximately 540 ha of natural habitat.

One (1) endangered species (IUCN, 2012), the golden-cheeked warbler, has been identified in the AII, but the species is a winter migrant that is not restricted to a particular habitat type. As a result no “critical habitat” for this species, as defined by the IFC (2012) is being impacted by the ELG Mine. No critically endangered species has been identified in the AII.

One (1) species identified in the ADI, the lesser long-nosed bat, is designated as nationally threatened (SEMARNAT, 2010) and as vulnerable by the IUCN (2012). This species is of conservation concern and is described to congregate in specific localized habitat. As a result, two (2) caverns that will be directly affected by ELG Mine have been identified as Criteria 1, Tier 2 Critical Habitat. A negative effect has been identified for this species for ELG Mine.

A Flora and Fauna Rescue and Protection Plan that has been approved by SEMARNAT addresses the methodology for capturing and relocating bats and confirmation of the state of health prior to release with records of all relocations, as well as on-going monitoring reports for released species that are to be maintained by MML.

Category 1, Tier 2 Critical Habitat can be mitigated by a habitat offset, but it is important to demonstrate that the replacement habitat represents “like-for-like” and can satisfy the habitat requirements of the lesser long-nosed bat.

Additional direct loss of natural habitat resulting from the ELG Mine due to the addition of El Limón Sur will be further evaluated to assess the potential impacts to biodiversity.

20.4.2.4 Aquatic Health Risk Assessment

The aquatic health risk assessment evaluated the potential interactions between ELG Mine and surface water quality, and consequent potential effects on aquatic life. Identified interactions were then assessed for environmental and social consequence based on ELG Mine design elements or mitigation strategies to avoid or manage the potential risks.

The assessment considered potential exposure of receptors in three streams that drain the ELG Mine site area and flow into the Presa el Caracol. These streams are dry for most of the year and only experience intermittent flows during the wet season; they are not considered suitable habitat for fish or other aquatic life. ELG Mine baseline studies did identify the ability of small fish to intermittently access the lowest reach of tributary MHS-5 under wet conditions.

Two exposure scenarios were identified for evaluation in the aquatic health impact assessment:

- An assessment of the potential for effects to aquatic life in the downstream receiving environment at assessment nodes RC2 in the Presa el Caracol and RB1 in the Balsas River (ADI), and at RB4 downstream of the confluence of the Balsas River and the Rio Cocula (AII). Direct (waterborne) exposure and indirect (tissue) exposure of aquatic biota in the Presa el Caracol to mine discharges were considered in the impact assessment of chronic effects on aquatic health.
- An assessment of the potential for localized effects in the north-east basin of the Presa el Caracol due to waterborne exposure in the mixing zones of streams represented by assessment nodes L1, G1 and MHS-5, as a result of mine-related discharges conveyed to the Presa el Caracol via these tributary streams. Tributary mixing zones represent a small fraction of aquatic habitat in the Presa el Caracol. The assessment of potential effects in these mixing zones focused on potential acute effects related to intermittent exposure of biota to conditions similar to those predicted at assessment nodes L1, G1 and MHS-5 (Figure 20-3).

The key findings and results from the aquatic risk assessment are as follows:

- Potential increases in existing contributions of specific contaminants to the tributaries and the Balsas River. These were further evaluated through detailed risk assessments.
- The aquatic risk assessment identified the potential for localized effects to aquatic organisms at the outlet of specific tributaries; however, there is no predicted increased risk to human health as a result.

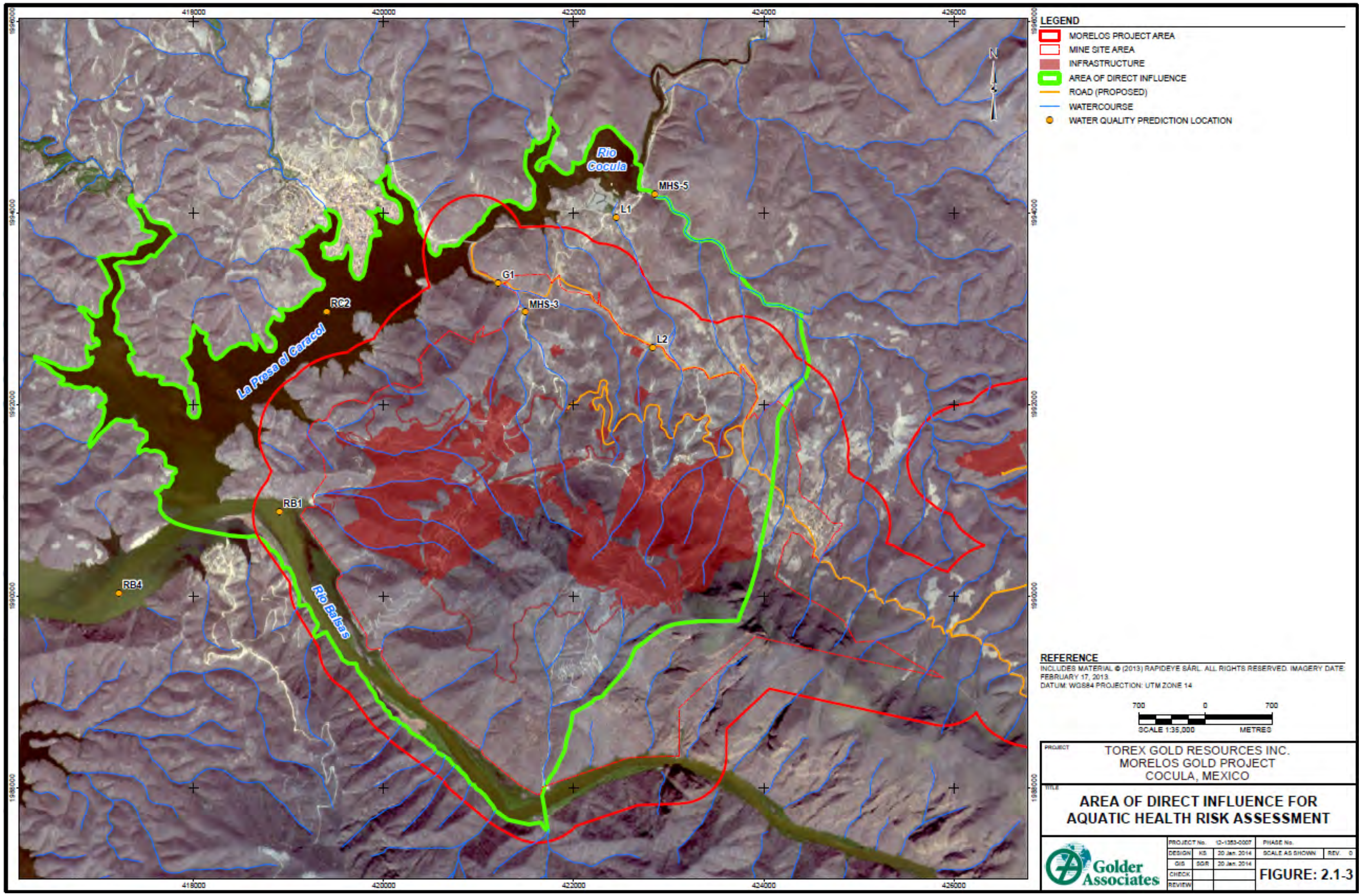


Figure 20-3: Area of Direct Influence for Aquatic Health Risk Assessment

20.4.2.5 Human and Terrestrial Wildlife Health Risk Assessment

The human and terrestrial wildlife health risk assessment evaluated the potential for the ELG Mine to result in adverse effects to human and terrestrial wildlife health via predicted changes to soil, surface water and air (human only) quality. Substances of Potential Concern were identified by comparing predicted concentrations of surface water, groundwater, soil and air quality to relevant and available numerical guideline values.

The human and terrestrial wildlife health risk assessment is comprised of three components:

1) An air quality risk assessment to evaluate the acute and chronic effects to human health associated with certain airborne or gaseous substances (i.e., only present in air). The air quality assessment also includes the evaluation of acute and chronic effects associated with inhalation of particulate matter.
2) A multimedia assessment to evaluate risks to human health from contaminants that might be present in air, soil, water and food pathways.
3) A multimedia assessment to evaluate risks to wildlife health from contaminants that might be present in soil, water and food pathways.

The key findings and results from the human and terrestrial wildlife risk assessment are as follows:

- Contaminants of Potential Concern (COPCs) that could be emitted or released by the ELG Mine to which people may be exposed included acid gases (e.g., SO_2, NO_2), particulate matter, volatile organic carbons, metals and polycylic hydrocarbons. The human health acute air inhalation assessment for parameters identified as COPCs in the 1-hour and 24-hour assessment by comparing the concentration predicted for each location with toxicity benchmarks for the baseline and impact cases. The magnitude of risk of incremental increases in COPCs concentrations associated with ELG Mine activities were considered negligible.
- The human health risk assessment determined that naturally elevated concentrations of certain contaminants in the Presa el Caracol do exist. There is no predicted increase in risk to human health as a result of the ELG Mine.
- The wildlife multi-media assessment concludes that residual effects from the project wildlife receptors are not significant. Terrestrial-feeding wildlife were not evaluated quantitatively in the risk assessment but the lack of COPCs for terrestrial environments indicates that the residual effects on terrestrial-feeding receptors would also not be significant.

20.4.3 Social Environment

20.4.3.1 Socio-economics

The assessment of socio-economics included the potential social and economic effects at the local and regional level, which could have implications on the local economy; population and demographics; education; infrastructure (e.g., water, wastewater, housing, transportation); community health, safety and security; as well as land use and sustainability. The evaluation included a predicted macro-economic effects at the State and National levels.

The key findings and results from the socio-economic assessment are as follows:

- ELG Mine represents a large mining project in México, especially within State of Guerrero, where ELG's initial capital investment represents the single largest investment in the State's recent history and provides for a substantial economic contribution to the National economy.

- ELG Mine will result in beneficial creation of direct and indirect employment opportunities, as well as business development opportunities, with preferential hiring practices for local residents; however, this could also result in increased inflation.
- There will be increased opportunities, availability and accessibility to education and skills-based training programs to build the capacity of workers.
- The area will experience a beneficial improvement of health services, as well as improved access to services and resources for medical emergencies.
- There is the potential for increased in-migration and subsequently, demand on existing infrastructure, including: housing, water, wastewater and waste management systems.
- There is the potential for increased safety and security issues associated with the improvement of the local economic situation.

The following key mitigation measures were incorporated into the design and planning for the facilities in an effort to mitigate potential effects from ELG Mine:

- Active and on-going engagement and consultation with local stakeholders.
- Development of a Resettlement Action Plan for implementation by MML.
- Development and implementation of local hiring practices and skills training programs.
- Development and implementation of irrigation pilot projects.
- Development and implementation of temporary housing for workers throughout the life of ELG Mine.
- Financial support for infrastructure improvements in some of the nearby communities.
- On-going financial compensation for the occupation of the land.
- On-going financial support for medical and nursing resources to the existing health services branches in the area.
- On-going support for the establishment of a local security force in the area and the implementation of a convoy transportation system.
- Development and implementation of infrastructure improvement plans, including: the design and development of water and wastewater systems; the development of new well fields to supply drinking water in El Potrerillo and Atzcala; the development of a new solid waste management system; and the development of new schools and recreational areas.
- Development of seven (7) water management ponds that will capture run-off from the mine site area, improve peak flows downstream, reduce the amount of sediment being washed into the Presa el Caracol and enable the managed release of water from the site.
- Design of the El Limón and Guajes pits to limit changes in groundwater levels, including changes in the Presa el Caracol.
- Upgrade of the existing east service road to improve road safety.
- Designation of lands outside the mine area for sustainable resource use (e.g., firewood collection areas).

Management plans are being developed for employment and training; in-migration; health services, water infrastructure and security; sustainable livelihoods; and transportation. A stakeholder engagement plan is also being developed.

20.4.3.2 Cultural Heritage

The assessment of cultural heritage as included in the ESIA was prepared to satisfy the requirements of the Mexican legislation and IFC PS8. The assessment included:

- Documentation of palaeontological, archaeological, historical and cultural sites, as well as an evaluation of the potential effects to each of those sites.

- Incorporation of the following mitigation measures into the design and planning for the facilities in an effort to mitigate potential effects from ELG Mine:
  - Active and on-going consultation with INAH.
  - Adoption of INAH's Chance Find Procedure to address cultural heritage discoveries during construction and operations.
  - Protection of the Colonial Church in accordance with the recommendations from INAH-Guerrero.
  - Protection of the cemetery in Real del Limón and development of a new access location away from ELG activities.
  - Implementation of all INAH-required mitigation for specific sites.
  - The key findings and results from the assessment of cultural heritage are as follows:
  - There will be project-related effects on cultural heritage resources; however, mitigation measures (e.g., salvage of artefacts) will be completed in accordance with the INAH requirements.
  - A cultural heritage plan is being developed.

20.4.3.3 Resettlement Action Plan

Land acquisition for ELG Mine required the relocation of two (2) villages; the community of Real del Limón is located within the 500 m safety buffer zone of the proposed El Limón pit and the community of La Fundición is located within the active mining area. Both communities are located within the boundaries of the Ejido Real del Limón lands and are members of the Ejido collective. These communities will be directly affected by ELG Mine activtites and are being relocated to a new community, approximately 5 km east of the mine site area, referred to as El Potrerillo. Each of the existing communities will have a residential zone in the new community, the design of which includes layouts of all residential plots, locations for public services and community infrastructure, internal and external access roads, and patrimonial land. A total of 144 project affected households along with all community building and infrastructure are being relocated. One-hundred and seventy (170) dwellings are currently being constructed or have been constructed to accommodate these households, as well as to provide for overcrowding and enable the relocation of some additional households from Campo Arroz Viejo. The new resettlement site includes community access roads, public services to all homes and community infrastructure. Water supply for El Potrerillo will come from a well located within the community. The well water will be treated in a package water treatment plant and will be pumped using a fresh water network to supply potable water for domestic use.

The relocation process is being conducted in accordance with the federal laws pertaining to land use changes and the creation of a new human settlement under the Agrarian Law and guided by the recommendations in the IFC's PS5 on Land Acquisition and Involuntary Resettlement. A RAP was developed to describe the procedures and practices MML is following to properly resettle and compensate the communities affected by ELG Mine. The RAP identified the stakeholders and processes for resettlement planning, as well as identified MML's on-going commitments to implement resettlement in a manner that is transparent and fair.

During and after relocation, MML and its contractors will continue to engage in consultation with resettlement stakeholders through use of the legal Ejido processes, communal meetings, public information meetings and informal meetings with individuals and families.

A monitoring and evaluation program is in use by MML with purpose to provide MML, displaced and other resettlement stakeholders with timely information during the resettlement, and to track the objectives, targets, unforeseen impacts or risks that may emerged during the resettlement to verify compliance with the international standards.

Performance monitoring is being conducted throughout the resettlement process and will measure specific achievements against pre-set targets. Throughout the process, the Community Relations Department monitoring team will continue to identify and measure changes that have occurred during or after resettlement. Evaluation of these changes will be through regular dialogue and surveys of a representative subset of individuals from each of the affected communities.

In order to be aware of, and respond to, concerns and complaints from resettlement stakeholders, and to facilitate the resolution of grievances brought to its attention, MML has established a grievance and dispute resolution process. The grievance and dispute resolution process is a part of MML's broader process for stakeholder engagement and quality and compliance assurance during development, construction, operation and closure of the ELG Mine.

The modifications to ELG Mine will not result in any economic or physical displacement.

20.5 ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

MML has established an ESMS as described below that addresses the management of the environmental and social impacts, risks, community health, security and corrective actions required to comply with applicable Mexican social and environmental laws and regulations, and requirements of the applicable IFC Performance Standards and EHS Guidelines.

As part of the ESMS, an over-reaching ELG Mine specific policy that defines the environmental and social objectives and principles will be established to guide the ELG and all associated projects (such as the modifications to ELG Mine and Media Luna exploration) to achieve environmental and social compliance through a process of continuous evaluation.

20.5.1 Environmental Management Plan

The ESMS includes the development of an over-arching Environmental Management Plan (EMP), environmental plans specific to site activities, and an Environmental Training Program. Successful implementation of the ESMS is hinged on a dedicated team of MML personnel responsible for creating and implementing an "environmental culture" from the onset of the ELG Mine. This team will be responsible for updating and implementing the specific environmental plans and providing training to MML personnel as well as contractors.

The ESMS outlines and recommends policies, standards, guidelines, procedures and processes to be used by the ELG management team and contractors, and defines roles and responsibilities during the various phases of the ELG Mine.

The EMP will cover all major aspects of the physical and biological environment, and will also address some key social aspects (i.e., external communication) (water management and consequent mitigation of soil erosion are frequently the major concerns). The EMP is based on international best practice as reflected in the IFC Safeguard Policies and the Equator Principles; it will be included in contract tender packages/specifications (contractual requirement) and will be made available to all ELG Mine personnel (employees and contractors).

MML will also include a chance find procedure for cultural heritage resources in the EMP. This site-specific procedure is a requirement of IFC PS8 (Section 8) and outlines steps to follow should previously-unknown cultural heritage be encountered.

The EMP and specific plans will be completed prior to commencement of construction and drilling activities, and will be revised and updated throughout the various ELG Mine phases, as required. The objective of the ESMS is to promote the following concepts:

- Maintain good will and good relations with communities, civil society and governments at local and national levels.

- Develop a culture of environmental awareness among operations teams, ELG teams and contractors that includes verification and corrective management consistent with the objectives of the ELG Mine.
- Foster employee involvement in order to promote ownership and commitment to the ELG Mine through activities such as training and capacity building.
- Provide a systematic approach for the identification of significant environmental risks, objectives and targets.
- Achieve compliance with Mexican legislation and consistency with international guidelines and best practices.
- Minimize and/or manage negative impacts on the environment.
- Communicate benefits arising from the ELG Mine activities and, where possible, enhance dialogue between MML and the local communities and stakeholders.
- Establish a detailed water management and sediment control system to deal with erosion issues.
- Establish a detailed soil management system to address removal and stockpiling of overburden.
- Establish a performance monitoring plan to track overall environmental performance including regular monitoring, and promptly address non-conformances with applicable standards.
- Maintain regular internal and external communications regarding environmental performance.

20.5.2 Social and Community Relations Management

20.5.2.1 Social Management

The social management plan includes mitigation and benefit enhancement measures to address general categories of socioeconomic effects. These collectively present a preliminary social management plan for the ELG Mine as described below:

- Management of in-migration and population effects.
- Management measures to support economic benefits.
- Effects on services and infrastructure.
- Effects on community health and safety.
- Mine closure effects.

20.5.2.2 Community Relations Management

MML's eight-person CRT for the ELG Mine has offices in Nuevo Balsas and is led by a Director of Community Relations who is also a member of the MML Senior Management Team. In addition to the Director of the CRT, the team is comprised of four lawyers; two engineers and one individual with training in the social sciences. The CRT appears to be respected and community members actively solicit the CRT's involvement in labor disagreements and similar community matters.

20.6 RECLAMATION AND CLOSURE

20.6.1 Objectives

The purpose of the mine closure plan is to describe mitigating actions for potential impacts to environmental resources in the ELG Mine area caused by ELG Mine development and operations. The main objectives of the closure plan are:

- Protect public safety
- Minimize and mitigate long-term ELG Mine impacts;
- Remove, to the extent practical, mine- and mill-related structures;

- Make landforms stable;
- Restore, to the extent practical, the original land use;
- Progressively rehabilitate;
- Monitor the water quality until suitable for discharge to the environment;
- Monitor the impact of mining and the effectiveness of reclamation after mine closure until suitable for the proposed end land use; and
- Return the land for use by the local community as practical.

These objectives consider the following areas for closure and rehabilitation:

- Land use;
- Process site;
- Waste rock dumps;
- Tailings dry stack;
- Landfill;
- Pit lake management;
- Monitoring and surveillance; and
- Stakeholder consultation.

The Mine Waste Management and Site Water Management Feasibility Designs (AMEC 2012b) present details concerning the closure design for the ELG Mine. This Section 20.6 presents a summary of the closure activities.

20.6.2 Land Use

The land use after mining is anticipated to be open land for basic farming/ranching, similar to much of the surrounding area except along the slopes of the tailings dry stack and waste rock dumps which will remain as exposed rock similar to talus slopes. The mill and stockpile areas will be revegetated and will eventually return to forest. The open pits will remain as pits and may be flooded. The top of the tailings dry stack will be revegetated and eventually returned to forest or possibly used as agriculture. Evaluation of the potential for metal uptake by vegetation will be assessed prior to returning the land to agricultural uses.

20.6.3 Soil Salvage and Vegetation Management

Overburden and grubbed material obtained during construction, including trees, bushes, shrubs, undergrowth and other forms of organic material will be stockpiled and used for revegetation efforts during closure and reclamation. Non-woody biomass may be mulched and used for erosion control measures.

20.6.4 Soil Placement and Revegetation

Revegetation efforts and the method of revegetation are subject to the availability of topsoil/organics. The first priority will be to revegetate the mill site and associated stockpile areas; the top of the tailings dry stack will be a secondary priority and areas where topsoil/organics cannot cover will be left as exposed rockfill. The tops of the waste rock dumps will be a third-level priority.

The required overburden and grubbed material for closure will be obtained from the overburden and top soil stockpiled during construction. A material balance will be developed during detailed design and updated during construction. As indicated by the priorities listed above there may not be sufficient topsoil or fine grained soils to revegetate all of the flat areas at closure.

20.6.5 Decommissioning of the Process Site

After closure, equipment associated with the mill site and other facilities will be removed from the site to be used in other projects, recycled, or disposed of in an approved landfill. Lubricants, oils and other industrial materials will be disposed of in accordance with applicable regulations. Unless required for another use building foundations will be demolished, covered or removed from the site as per Mexican regulatory requirements applicable at the time of closure. Power lines feeding electricity to the process plant will be decommissioned and removed. The process site will be graded to promote surface water drainage and will be revegetated.

20.6.6 Waste Rock Dumps

The flow through drains of the waste rock dumps will be extended to the bottom of the valleys prior to re-grading the slopes. The slopes of the waste rock dumps will be graded to conform to the local topography. Placement of vegetative cover on the crest will depend on the availability of organic materials, next land use and slope.

Ponds associated with the waste rock dumps (Ponds 5, 6, and 8) will be breached, if water quality monitoring demonstrates that these ponds are no longer needed. Rockfill dams will be moved to the base of the dumps, stockpiled and graded to stable slopes. Sediment from ponds may be used during the revegetation effort or placed on top waste rock dumps, tailings dry stack or in open pits at time of closure.

20.6.7 Tailings Dry Stack

The top of the tailings dry stack will be re-vegetated, and the potential for metal uptake by vegetation will be assessed prior to returning the land to agricultural/pastoral uses.

Ponds 1 and 2 will be breached if water quality monitoring demonstrates that these ponds are no longer needed. Sediment from the ponds will be placed on top of waste rock dumps, on top of the tailings dry stack or in the open pits. Pond 3 will be filled and compacted with tailings.

The east toe perimeter ditch of the tailings dry stack will be extended and connected to the Pond 3 spillway ditch to direct runoff towards the north.

20.6.8 Landfill

The landfill will contain only non-hazardous waste and will be closed in accordance with applicable regulations at the time of closure.

20.6.9 Open Pit Lakes

The Guajes and El Limón open pits will be allowed to flood, forming pit lakes. Based on post-closure water quality for the pits (Interralogic, 2012), the water quality in the proposed pit lakes is predicted to meet Mexican NOM-001-ECOL-1996 (SEMARNAT, 1996) for all discharge parameters except arsenic. The predicted arsenic concentration for both pits is about 0.5 mg/L which is similar to and below many of the groundwater and surface water samples collected by MML on site, or below existing conditions. This will be confirmed with additional studies to be assessed based on the results of the ongoing geochemical characterization and modelling.

20.6.10 Reclamation Monitoring

Water quality in the collection ponds and monitoring wells downstream of dams and the tailings dry stack will be monitored for at least two years after closure.

Reclaimed areas will be monitored for evidence of erosion, invasive species ingress, native species cover and health and wildlife usage. Monitoring will continue until a mature, self-sustaining community has developed and land can be returned to the local community.

20.7 STAKEHOLDER CONSULTATION AND INFORMATION DISSEMINATION

MML has taken to involving stakeholders in the development of the ELG Mine, and has documented the outcomes from consulting and engaging with stakeholders over a period of three years. Stakeholder engagement is one of the seven key components in MML's ESMS outlined under IFC PS1.

MML has been engaging with ELG Mine stakeholders since 2010. Engagement to date has been divided into three phases:

- A pre-scoping phase that ended in December 2011. The purpose of engagement in this phase was to secure land access for exploration drilling in the MML concession area. Engagement was focused on negotiations with surface rights holders (ejidatarios) in the MML concession area. The phase concluded with MML's decision to prepare an ESIA on ELG Mine to IFC and Equator Principle standards.
- A scoping phase that went from January to December 2012, and included completion of the ELG Mine feasibility study. Scoping stage engagement confirmed the key issues for review in the ESIA. This was accomplished by providing stakeholders with information on ELG Mine and holding formal consultations to identify environmental and social concerns and expectations. A stakeholder engagement plan and grievance mechanism for ELG Mine was prepared in April 2012.
- An ESIA preparation and disclosure phase that began in January 2013 for ELG Mine. Baseline data collection was completed and the ESIA was prepared. Formal disclosure of the ESIA began in late 2013, continued throughout the completion of the ESIA in September 2014, and will continue through the construction, operation and closure phases of the ELG Mine. The purpose of engagement was to inform all affected and interested stakeholders about the ELG Mine and the preliminary findings of the ESIA, and to offer a meaningful opportunity for affected stakeholders to comment on and influence the final project design.

The stakeholder engagement plan will be updated, with the engagement strategy informed by the results of the ESIA as well as to account for exploration drilling associated with the Media Luna. As the ELG Mine moves forward, company commitments will be linked into a strategic, Sustainable Community Investment framework.

The stakeholders in ELG fall into two groups:

- Directly affected stakeholders: these stakeholders live in eight small communities located near the mine area: Nuevo Balsas, San Nicolas, La Fundición, Real del Limón, Atzcala, Balsas Sur, San Miguel Vista Hermosa (affected by exploration only) and Valerio Trujano. As of 2010, these communities had a total population of 3,277. Many of the stakeholders are ejidatarios – small-scale farmers who hold land usage rights through a form of communal land ownership protected under Mexican legislation. There are also two (2) indirectly affected communities, Mazapa and Mezcala, located 25 km south of ELG that have been growing rapidly since the Los Filos gold mine opened in 2007.

  The ejidatarios belong to five Ejidos in the ELG Mine area – Ejido Real del Limón, Ejido Balsas River, Ejido Atzcala, Ejido Puente Sur Balsas and Ejido Valerio Trujano. The Ejidos are legal entities with whom MML has signed long-term land leases and land purchase agreements to allow construction of ELG and associated facilities.

The affected stakeholders include 367 potentially vulnerable and disadvantaged individuals, or approximately 11% of the population in the eight directly affected communities.

- Interested stakeholders: these are key interested stakeholders from three levels of government – Municipal, State and Federal. A small number of civil society organizations, local institutions and individuals have also been identified as interested parties but have not taken any notable positions on ELG Mine during consultation.

In general, the directly affected and interested project stakeholders support ELG Mine. Two (2) small non-governmental organizations, Tlachinollan and Red Mexicana de Afectadas y Afectados por la Minería (REMA), may hold negative attitudes towards the ELG Mine but they are located outside the area and have not shown any interest in the ELG Mine to date.

The key concerns and interests of project stakeholders have generally been consistent since the pre-scoping phase of ELG Mine. These include:

- Water pollution, especially contamination of the Balsas River and potential economic losses linked to fishing in the Presa el Caracol.
- Environmental pollution, especially potential soil and water contamination from cyanide leakage and possible spillage during transportation, and dust from construction and operations.
- Human health risks due to chemical usage, exposure and disposal arrangements for chemicals.
- Employment and training.
- Investment and economic benefits.
- Mine closure arrangements, especially
- Rehabilitation of pits and mined areas; and
- Sustainability of communities post closure.

MML has made a variety of project modifications to accommodate stakeholder concerns and interests including a local hiring policy; building a new service road to bypass communities on the main access route to the ELG Mine site; switching to a dry stack tailings system to allay concerns about spillage from tailing ponds; and replacing ore haul trucks with a conveyor system (RopeCon®) from pits to mill that will reduce dust and noise. These mitigations and other project controls have been incorporated into the ESIA and will be explored with stakeholders during formal disclosure and consultations during and after the ESIA process.

Disclosure and consultation arrangements for the ESIA have been planned in accordance with IFC Equator Principle guidelines for Informed Consultation and Participation (ICP), as set out in Annex C, Guidance Note 1, Assessment and Management of Environmental and Social Risks and Impacts. Consultations target stakeholders at three levels of government – Federal, State and Municipal – and local stakeholders in the directly affected communities of Nuevo Balsas, San Nicolas, La Fundición, Real del Limón, Atzcala Balsas Sur, San Miguel Vista Hermosa and Valerio Trujano.

- Government sponsors are being consulted in a format that includes an update on the mine and disclosure of the ESIA results.
- Local stakeholders are being consulted through formal, company-led, presentations on the project and ESIA results in each location.

The draft ESIA has been made available locally and a non-technical summary has been provided to stakeholders to permit easy, non-technical access to the relevant ESIA outcomes. Consultation will focus on the assessment of mine effects and benefits, especially the proposed mitigations, compensations and residual impacts of ELG Mine.

Stakeholder questions, concerns, and satisfactions will be recorded for review and response by senior MML management. Stakeholder feedback, company commitments and mine design changes, if any, were incorporated into the Final ESIA and social and environmental management plans.

In addition to the IFC requirements, MML has complied with the applicable Mexican requirements and procedures related to public access to information as part of the MIA approvals process.

20.8 ENVIRONMENTAL VARIABLES MODEL

20.8.1 Introduction

Amec Foster Wheeler was requested by Torex to create a geological model containing estimates of arsenic, calcium, iron, magnesium and sulfur, (the environmental variables). Data used in the model were current as at 15 March 2012, and were sourced from the El Limón and Guajes areas.

Although no significant issues with the drill hole database have been observed relating to these five elements, no official database audit has been performed by Amec Foster Wheeler. Additionally, approximately half of the drill holes have not been assayed for sulfur, and the confidence in the sulfur estimates is therefore lower.

20.8.2 Drilling and Data Verification

Environmental modeling of As, Ca, Fe and Mg used the same MineSight drill hole database that was used in modeling of Au and Ag. Sulphur estimation used a separate MineSight database. Environmental assays were imported from an MS Access database file supplied to Amec Foster Wheeler by Torex. Collar and survey measurements are shared with the Au and Ag data, which were validated by Amec Foster Wheeler as free of significant errors and omissions. Environmental assay values were not audited.

A number of calcium assays display an anomalous value of exactly 15% Ca, likely corresponding to the upper limit of the ICP assay technique, for samples that did not have overlimit re-assays performed. For most rock types this affects on the order of 0.5% to 3% of the population, but for samples of the marble rock type, a significant proportion of the population are stored as exactly 15% Ca (between 20% and 45% of assays, depending on the domain). Therefore, block grades interpolated using these data are expected to be underestimated.

Approximately half of the drillholes contain no sulphur assays in the database. This mostly pertains to the GT-06 and DLIM holes, of which only 12 holes contained sulphur data. Other drill campaigns were also missing occasional sulphur data, usually for part of a drillhole where no gold data were present. Since sulphur and gold are positively correlated, not sampling the lowest-grade gold zones has the potential to underestimate sulphur during block grade estimation. However, this effect is expected to be somewhat mitigated by domaining and estimation of material inside and outside of the mineralized gold grade shells.

20.8.3 Estimation Domains and Grade Capping

Estimation domains were determined largely from box plots of composites, and further refined by contact plot analyses. Populations were compared for each rock type, and also inside and outside of the gold mineralized shells. Guajes and El Limón populations were domained separately, due to differences in character of rock types and mineralization, and also due to the larger proportions of non-skarn group rock types included in the El Limón mineralized Au shells.

Grade capping was not applied during block estimation, for any of the environmental variables. Ca, Fe, and Mg had fairly low CV values, and the extreme values were not expected to be problematic during grade estimation. Although As and S had higher CV values and more extreme outliers, capping would risk underestimating elements that were expected to be deleterious. In addition, comments from Torex and from Amec Foster Wheeler's environmental department suggested that selectivity of environmental elements would be coarse. Therefore, it was planned to deal with As outliers by generating a "smooth" block model estimate.

20.8.4 Composites

Final block estimates for As, Ca, Fe and Mg used the same 3.5 m composite file structure (collar coordinate, dip, azumith, down-hole survey, sample interval "from's" and "to's", and interval length) as were used for estimation of Au and Ag. Sulphur estimation used a separate MineSight database.

NN models were generated using 7 m composite files. NN estimation of As, Ca, Fe and Mg at El Limón used the same files as were used for Au and Ag. At Guajes, NN estimation of As, Ca, Fe and Mg used files that were updated slightly from those used for NN estimation of Au and Ag: These updated composites honored changes in gold mineralized shell as well as changes in skarn flag. NN estimation for sulphur used separate MineSight databases.

20.8.5 Exploratory Data Analysis

An evaluation of the impact of using 7 m composite or 3.5 m composite data was undertaken. No significant bias was found to be generated during 3.5 m and 7 m compositing. As a further check on 7 m compositing, 3.5 m and 7 m composite statistics of arsenic were compared for each estimation domain group. The agreement of means for each domain is reasonable, considering that some smearing occurred between rock types during 7 m compositing.

Amec Foster Wheeler performed preliminary scatterplots for Au vs. As, but the sheer volume of data resulted in plots that were visually unclear. In addition, regression lines on the scatterplots produced results that seemed to greatly understate the correlation between Au and As, when compared to analyses of As inside and outside of the Au shells. This is expected to result from limitations of regression on populations that are close to a lognormal distribution. As a result, correlation with Au for each environmental variable was determined via comparison of means inside and outside of the Au mineralized shells, using box plots and contact plots.

Amec Foster Wheeler performed variography for arsenic and calcium. Correlograms were modeled in Sage2001 software, with autofits adjusted as required to deal with unusual or erratic correlograms. Ranges of exponential models are expressed as "practical" ranges (~3x longer than "traditional" ranges). Rotations use the MineSight rotation convention (ZXY LRL), and were "locked" so that the first and second structures had the same rotation, to allow for more precise validation with geologic trends. Populations with low data density had parameters adopted from domains that were expected to have similar properties. Guajes East and West were assessed separately due to broadly different geometry, as were the "steep" and "flat" domains in El Limón.

Very extreme arsenic composites were capped during calculation of correlograms, but *not* during estimation. Although it is typical to use the same cap for variography and estimation, Amec Foster Wheeler expects that the estimation weights will be adequately representative, while allowing the model to remain uncapped.

Amec Foster Wheeler did not perform variography or assess anisotropy for iron, magnesium or sulphur. This is because a comparison of calcium block estimates using kriging and isotropic inverse distance weighting yielded similar results in mean grades. In addition, any improvements in local estimation due to anisotropy and/or kriging are expected to be insignificant relative the size of the "environmental selective mining unit". For sulphur, although the data have a higher CV population than the calcium data, the density of data was not considered to be sufficient to warrant further investigation.

20.8.6 Grade Estimation and Validation

Grade interpolation strategy varied by element, since each element had differences in statistical properties, correlation with Au, and data configuration in the case of sulphur. For all grade interpolations, domain boundaries were considered “hard” (i.e. no sharing of samples from other domains).

Amec Foster Wheeler performed kriging in three passes for arsenic, to accommodate its highly variable nature. These passes were run sequentially, with each shorter pass taking precedence over the longer passes, if the minimum criteria for the shorter pass were met.

For the first (longest) estimation pass, simple kriging (SK) was applied. The SK mean used the naïve mean of composites that resided within blocks classified as “Inferred” or “Unclassified” in the Au model. This was intended to reflect the distinctly lower arsenic grades observed outside of the well-drilled areas. The first pass interpolated grade in areas with very little drilling and no anisotropy was assumed. Amec Foster Wheeler selected a “generic” variogram model that corresponds to a visual average of all correlograms performed outside of the Au shells, with the following parameters: C0 = 0.3, C1 = 0.5, C2 = 0.2, two exponential structures, 25 m range for the first structure, and 80 m range for the second structure. The interpolation searched in a 500 m radius sphere to ensure all blocks in the pit area received a grade, and used a minimum of 1 composite, a maximum of 35 composites, and a maximum of 6 composites per hole. Domains for the SK pass were independent of the Au mineralized shells.

For arsenic’s second (intermediate) and third (shortest) passes, OK was used. Searches for the 2nd pass were typically 50% longer than searches for the 3rd pass. The second pass required a minimum of 1 composite to interpolate a block, and allowed a maximum 30 composites and a maximum of six composites per hole. The third pass required a minimum of 20 composites, and allowed a maximum of 35 composites and a maximum of six composites per hole.

The interpolation strategy and sample search parameters for calcium were the same as those used for arsenic. However, the “generic” variogram model for the SK pass used the following model: C0=0.2, C1 = 0.5, C2 = 0.3, 50 m range for the 1st exponential structure and 200 m range for the 2nd exponential structure. SK means for calcium for each domain were the average of all composites falling outside of blocks that were classified as Measured or Indicated in the Au model. The search ellipsoids for calcium’s 2nd and 3rd OK estimation passes were oriented with rotations from the variogram models. Ellipsoidal search distances were tailored to the anisotropy observed in variography. Calcium interpolations used the same number of minimum and maximum samples as were used for the respective passes. Amec Foster Wheeler performed a comparative interpolation for calcium, using a single pass ID3 interpolation. The search was isotropic with a 500 m distance, a minimum of one composite, a maximum of 35 composites, and a maximum of six composites per hole. Since an isotropic ID3 model was used, Guajes East and West domains were merged, and El Limón Flat and Steep domains were merged. When compared to the kriged model, calcium in the ID3 model was 0.3% lower, for blocks inside the resource-constraining pits within 40 m of a drillhole. For blocks inside the pit greater than 40 m from a drillhole, calcium in the ID3 model was 1.1% lower.

Iron, magnesium and sulphur were each interpolated using a single pass of ID3. Parameters were the same as for the ID3 interpolation of calcium.

For all elements, overburden (RKTYP 38) was interpolated using SK interpolation method. The SK mean for each element was assigned the average of all composites with RKTYP 38.The search ellipsoid for RKTYP 38 was 500 m in all directions, with a minimum of 1 composite, a maximum of 30 composites, and a maximum of six per hole. Correlograms had a low number of pairs, so a generic variogram was used with two exponential models and the following parameters: C0 = 0.3, C1 = 0.5, C2 = 0.2, 40 m range for the first structure, and 200 m range for the second structure.

NN models were generated for each element, to validate the primary grade interpolations. These models used an isotropic searched of 150 m to find the closest composite, and used the same domains as were used for the primary interpolators.

Amec Foster Wheeler generated swath plots that compared kriged/ID3 block grades to NN block grades for each element in 100 m “windows”. Matches were generally excellent. A few slight mismatches were noted in sulphur, and these typically occurred in areas of sparse drilling.

Table 20-2 summarizes the environmental grade estimates for blocks with Au grade above and below 0.5 g/t and that are within the Mineral Resource LG cone, as described in Section 14. All estimates were prepared by Clay Craig, P.Eng., Sr. Resource Geologist with Amec Foster Wheeler and reviewed by Edward J. C. Orbock III, RM SME.

Table 20-2: Summary of Environmental Variables, inside the Mineral Resource-Constraining Pit

Au Cutoff g/t)	Tonnes (Mt)	Arsenic (ppm)	Calcium (%)	Iron (%)	Magnesium (%)	Sulphur (%)
>=0.5	64.8	1,341	5.57	5.42	0.401	1.61
<0.5	168.4	347	3.60	1.91	0.488	0.541

Notes to accompany table of environmental variables estimates:
1. Estimates are reported as undiluted; grades are contained grades
2. Estimates are reported within a conceptual gold and silver economic open pit shell

20.8.7 Comments on Environmental Variables Model

The arsenic distribution is highly variable, even after being sub-domained using Au mineralized shells. Amec Foster Wheeler recommends investigating the use of separate As mineralized shells in future estimates.

Amec Foster Wheeler considers calcium, iron and magnesium to be well-behaved datasets. However, further investigation of relationships with local geology may allow for some improved domaining. Additionally, iron and magnesium estimates may be modestly improved by application of anisotropy and/or kriging during estimation.

Future block estimates of sulphur will benefit most significantly from assaying of holes that currently lack sulphur data. Amec Foster Wheeler additionally recommends investigating the benefits of generating sulphur mineralized shells, particularly if assaying of sulphur in older holes is not performed. Some improvement of estimation will be achieved by the application of anisotropy. Kriging may offer some additional improvement if smoothing is controlled (by assay of old holes, or constraint by sulphur mineralized shells).

In areas of wide-spaced drilling, the arsenic model may achieve a representative mean, but be too smooth. Volume-variance calculations could be used to estimate a representative grade-tonnage curve for areas of less dense data, but the accuracy of these predictions will be limited by the scarce data.

Since the environmental variables model was prepared in 2012, a different approach has been taken to compositing in the Guajes and El Limón Sur areas. As a result, the portions of the environmental variables model for those areas should be updated with the new composite intervals.

21 CAPITAL AND OPERATING COSTS

The key points of this section are:

- Overall construction of the ELG Mine is approximately 73% at the end of June 2015.
- A definitive estimate was completed for current build efforts at the end of 2014 to account for changes in scope and newly acquired knowledge from the date of the budget to the date of definitive estimate completion.
- Capital cost for construction of the ELG Mine is estimated at $800 M.
- Mining equipment required for the remaining preproduction period was acquired in 2013 and 2014 and is on site. Remaining mining preproduction capital costs are virtually all associated pit and haul road development.
- Mining sustaining capital costs are principally for additional mining equipment in 2016 and 2017 for El Limón mining and increased Guajes mining, and for replacement equipment later in the mine life.
- Operating costs have been estimated based on current labor rates (MML employee rates in effect for 2015) as well as current contract with supplies and updated exchange estimates (15 Mexican peso to 1 USD).

21.1 BASIS OF CAPITAL COST ESTIMATE (EL LIMÓN GUAJES MINE)

21.1.1 ELG Mine Execution

Project execution for the construction, commissioning and start-up of the ELG Mine followed industry standards. M3 is the EPCM contractor on the mine and they have been supported by a Torex/MML owner's team. Permits were received for the work in November of 2013 with a subsequent start to field work.

As of June 30th, 2015 the overall construction of the ELG Mine is 73% complete. Construction of the Mine has been grouped into three main areas:

- The Guajes Project – This project contains all of the work required to produce gold from the Guajes Pit. As of June 30th, 2015 it was approximately 74% complete and is expected to be completed in the 4th quarter of 2015. Assumed within the ELG Mine plan is a plant start date of November 2015.

- The El Limón project - This aspect of the project includes all work required to enable production of ore from the El Limón open pit. The main features for bringing the ELG Mine to full production include the El Limón South Access Road (completed), re-location of the La Fundición village (currently underway), construction and commissioning of the El Limón Crusher and RopeCon system (currently underway). Within this mine plan El Limón scope of work is assumed to be completed by the end of the 2nd quarter of 2016.

- Overall project - This includes all items required for the mine but not directly related to operation of the process plant or pits. A good example of this is the core shack and administration building. Within the ELG Mine plan this has been assumed to be completed in the 3rd quarter of 2016.

- Development and operation of the Guajes and North Nose pits have been underway since receipt of the permit with approximately 1 million tonnes of ore stockpiled at the end of June 2015.

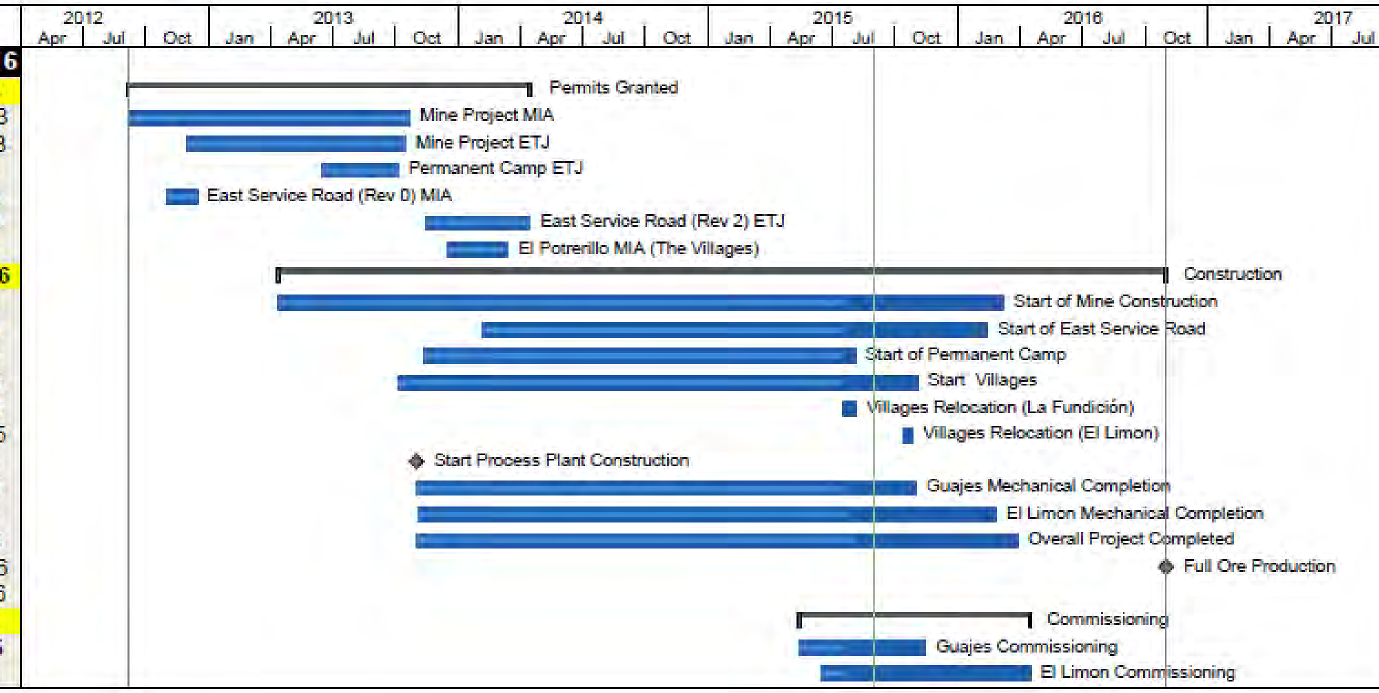
Commissioning efforts for portions of the Guajes project have commenced, with process plant start up, within this technical report, planned for November 2015. Ramp-up of the plant has been assumed to follow a "McNaulty type 1" ramp-up curve (12 months until 100% availability). The process plant ramp up also includes a reduced gold recovery during the 1st two months (50% and 80% of design recovery respectively) and a reduced silver recovery for the first 3 months of production (20%, 70% and 95% of design recovery respectively). This reduced recovery is to account for the building of gold inventory during start-up along with unforeseen issues which could arise. Project milestones completed and yet to come are noted in the Gantt chart shown in Figure 21-1.

Mine construction and development continues to proceed with a focus on delivery of the mine to meet cost and schedule assumed in this plan.

M3-PN120081 Morelos Schedule
NI-43101

Wed 9/2/15
Client: Minera Media Luna

ID	Name	Duration	% Complete	Start	Finish
1	**El Limon Guajes**	**1083.75 days**	**73%**	**Wed 9/5/12**	**Mon 10/31/16**
2	**Permits Granted**	**420 days**	**100%**	**Wed 9/5/12**	**Tue 4/15/14**
3	Mine Project MIA	294 days	100%	Wed 9/5/12	Mon 10/21/13
4	Mine Project ETJ	228 days	100%	Fri 11/30/12	Tue 10/15/13
5	Permanent Camp ETJ	81 days	100%	Fri 6/14/13	Fri 10/4/13
6	East Service Road (Rev 0) MIA	32 days	100%	Thu 11/1/12	Fri 12/14/12
7	East Service Road (Rev 2) ETJ	108 days	100%	Fri 11/15/13	Tue 4/15/14
8	El Potrerillo MIA (The Villages)	64 days	100%	Tue 12/17/13	Fri 3/14/14
9	**Construction**	**926.25 days**	**75%**	**Fri 4/12/13**	**Mon 10/31/16**
10	Start of Mine Construction	1231 days	78%	Fri 4/12/13	Tue 3/8/16
11	Start of East Service Road	856 days	71%	Thu 2/6/14	Sat 2/13/16
12	Start of Permanent Camp	731 days	97%	Tue 11/12/13	Mon 8/3/15
13	Start Villages	881 days	86%	Sat 10/5/13	Tue 11/3/15
14	Villages Relocation (La Fundición)	22 days	0%	Fri 7/17/15	Wed 8/5/15
15	Villages Relocation (El Limon)	17 days	0%	Mon 10/12/15	Tue 10/27/15
16	Start Process Plant Construction	0 days	100%	Fri 11/1/13	Fri 11/1/13
17	Guajes Mechanical Completion	848 days	85%	Fri 11/1/13	Sun 11/1/15
18	El Limon Mechanical Completion	980 days	74%	Mon 11/4/13	Fri 2/26/16
19	Overall Project Completed	1020 days	73%	Fri 11/1/13	Tue 3/29/16
20	Full Ore Production	0 days	0%	Mon 10/31/16	Mon 10/31/16
21	Start of Process Plant (Ramp Up)	407.38 days	0%	Sun 11/15/15	Sun 10/30/16
22	**Commissioning**	**240.75 days**	**19%**	**Fri 5/15/15**	**Fri 4/15/16**
23	Guajes Commissioning	213.5 days	34%	Fri 5/15/15	Sat 11/14/15
24	El Limon Commissioning	355 days	10%	Mon 6/15/15	Fri 4/15/16



Project: 120081 Morelos

Work — Summary — Progress
Milestone — Project Summary — Manual Progress

Page 1

Figure 21-1: Gantt Chart

21.1.2 General Condition Parameters for the Definitive Estimate

As part of M3 EPCM work a Definitive Estimate (DE) through the completion of the ELG project was completed in January 2015. The estimated project cost was determined to be $800 million. The construction, cost and schedule, in this LOM plan, incorporate this estimate. Work at site is tracking to this DE. The general condition parameters for the DE are as follows:

1. At the start of the definitive estimate, construction of the ELG Mine was 31% and engineering completeness was well advanced at an overall average of weighted percent complete of 90%. Individual disciplines percent complete are as follows:

   - Civil 96%
   - Concrete 90%
   - Structural 90%
   - Architectural 94%
   - Mechanical 98%
   - Piping 94%
   - Electrical 90%
   - Instrumentation 50%

2. Documents available to the estimators included the following:

a)	Design Criteria	(Yes)
b)	Vendor Data	(Yes)
c)	Equipment List	(Yes, per version P23 dated 24 Nov 12)
d)	Equipment Specifications	(Yes)
e)	Construction Specifications	(Yes)
f)	Flowsheets	(Yes)
g)	P&IDs	(Yes)
h)	General Arrangements	(Yes)
i)	Architectural Drawings	(Yes)
j)	Civil Drawings	(Yes)
k)	Concrete Drawings	(Yes)
l)	Structural Steel Drawings	(Yes)
m)	Mechanical Drawings	(Yes)
n)	Piping Drawings	(Yes)
o)	3D Models	(Yes)
	o Version 01-Nov-14; Areas 450, 500, and 550 were based off models and Vendor Drawings	
p)	Electrical Schematics	(Yes)
q)	Electrical Physicals	(Partial)
r)	Instrumentation Schematics	(Partial)
s)	Instrument Log	(Yes)
t)	Pipeline Schedule	(Yes)
u)	Valve List	(Yes)
v)	Cable and Conduit Schedule	(Yes)
w)	Cable Trays	(Yes)

3. All costs are in Q4 2014 dollars. Escalation has not been included.

4. Exchange Rates

   Prevailing exchange rates at the date listed above are as follows, compared to the United States Dollar ("USD"):

Currency	Exchange Rate
Euro	1.32
Mexican peso	13.00

   It is noted that the estimate does not take into consideration FX gains and losses.

5. Escalation from June 2013 through December 2014 = $14,024,803 (for reference).

   a) This is based on updated ENR through Nov 2014 and backup data from the Draft Nov 2014 Cash Flow. This does not include the recent addition of the North Nose mining for this or future periods.

6. Labor rates are based on current rates on existing contracts and consist of average craft rates which include craft, supervision, safety professional, small tools, consumables, labor burdens, and overhead and profit costs:

Table 21-1: Labor Rates

Commodity	Rate (USD per Hr)
Earthworks	$9.20
Concrete	$9.00
Structural	$14.00
Mechanical	$14.00
Piping	$14.00
Electrical	$16.00
Instrumentation	$16.00

7. General Costs:

   - Mobilization: @ 1% of total constructed cost.
   - Total Camp and Bussing cost included at $18,728,800. Includes food cost contracted at $208 MXN per day per worker and busing cost contracted with union at $2,800 MXN per day for a 10 passengers van plus fuel. Cost included in estimate is calculated through current expenses and construction progress and prorated to the end of the project. Cost excludes mining equipment contractor, maintenance and operations personnel.
   - Construction Power is considered in direct costs. Start-up power to turn mills is not included.
   - EPCM Trailers with Utility Setup in $503,928
   - Owners Cost:
     - Includes $66,880,000 for Owner's Site Support Costs, excluding working capital.
     - First Fills and Consumables allowance of $500,000 was included in the baseline budget under the capital spares allowances. First Fills and Consumables will be by MML, and have now been included in the Owner's Cost for this estimate.
     - Cost includes $3,292,000 for miscellaneous mobile equipment at mine, including pick-up trucks, passenger vans, mine generator, warehouse parts, consumables, computer, survey hardware and software, and a dispatch system. These items were all originally considered in equipment direct cost.
     - Costs of $9,378,128 have been included to allow for consistency between initial budget release figures and this report. These dollars are above and project contingency values and are accounted for only on the bottom line.

8. The estimated costs are based on project execution by an experienced EPCM contractor(s) in the hard rock mining industry. In addition, it is assumed that all contracts and subcontracts are based on a competitively bid unit cost basis. New work has been released to existing contractors at established unit costs which were competitively bid earlier in the project.

9. For horizontal and vertical contracts in process areas, it is assumed that at least two sufficiently sized self-performing local contractors are in place for all trades, such as civil, concrete, steel, architectural, mechanical, electrical, instrumentation and controls, and process piping. Certain contractors will have multiple trade capabilities.

10. Indirect labor hours for this project are up to 30 percent of total direct 'boots-on-the-ground' labor hours. The costs for indirect labor hours as well as any Contractor profit are captured in the direct hours labor rate.

11. Portable sanitary facilities will be provided by Contractor. Any existing or newly constructed facilities are for Owner's use and in general will not be available to construction personnel.

12. No allowance has been made for fire protection during construction. Owner will provide security services, access to construction water and communication links. The Contractors will provide their own communication system, equipment, radio frequencies and power. The Contractors are responsible for their own drinking water and portable toilets, all utility hookups (e.g., telephone and power into construction trailer), delivery of construction water, all construction (portable or temporary) power.

13. Construction site will be available to Contractors 24 hours per day, 7 days per week. Night shift will be worked as required in limited areas of the project.

14. It has been assumed that construction work areas would be accessible during all scheduled working hours. Allowance is not included in this estimate for stand-by time for inefficiencies resulting from work stoppages or interferences initiated by operations or revisions or extraordinary weather conditions or blockade access.

15. Contractors have trailers and laydown yards in designated areas near the construction site. Construction personnel park their construction vehicles in designated areas near the construction site. Personal vehicles will be parked at the Atzcala camp and personnel bused to the site by the Contractor.

16. Contractors shall be responsible for Quality Control of Safety. The EPCM shall be responsible for Quality Assurance of Safety. Third party inspectors will also participate to ensure construction specifications are maintained.

17. Equipment costs match PO costs in most cases. When a finalized PO is not available, budgetary quote have been utilized for the estimate. All major equipment has been finalized. Purchased Plant equipment represents 85% of the total plant equipment budget.

18. Material unit prices for the project were developed using available quotations for most cases as well as contact with local regional suppliers, information from recently constructed projects and M3 in-house data. This data is utilized to arrive at material unit prices applied to updated MTO quantities.

19. The "Tabulation of Work Scope" is an appendix to the EPCM contract. This tabulation is part of the Basis of Capital Cost Estimate.

20. The accuracy of this estimate is assumed to be in the range of 5 percent plus 5 percent minus; i.e., the cost could be 5 percent lower to 5 percent higher than the estimate to the estimate total. Accuracy is an issue separate from contingency and is largely dependent on the bidding climate and the likely duration of time between preparing the estimate and the bidding of the contracts.

21.1.3 Material Takeoff and Field Labor

1. Quality Control, General Pricing and Global Labor Metrics

   a) Productivity Rates for the ELG Mine in Guerrero, Mexico: are based on actual contract labor amounts / actual or average craft rates to produce unit manhours.

Item	Rate
Structural Concrete Placement	22.7 hr/m^3
Structural Steel Erection	79.2 hr/mt
Pipe Installation	5.0 hr/m
Cable Tray Installation	3.2 hr/m
Power Cable Installation	0.29 hr/m
Control Cable Installation	0.95 hr/m

   b) An additional 1 percent of total direct costs have been added for all commodities in each area for quality assurance testing (e.g., compaction) of civil, concrete, steel, architectural, mechanical, piping, electrical and instrumentation works.

   c) An additional 1 percent of total direct costs has been added in each area for surveying of just the civil and concrete

2. Civil

   a) Civil general and miscellaneous items are included as follows:

      - Environmental Rescue
      - Topsoil removal
      - Rough grading
      - Structural Excavation
      - Structural Backfill Liners
      - Culverts
      - Rip-Rap, if any
      - Process Plant property fencing and gates
      - Power station fencing
      - Well field fencing
      - Civil specialties including man holes, drainage piping, multi-plate tunnels, etc.
      - Septic Systems
        - Site Access Guardhouse
        - Administration Area (serves Mill area)
        - Filter Area
        - Truck Shop Area (serves Mine Ancillaries)
      - M.S.E. walls include required backfill as a separate quantity

   b) Civil general and miscellaneous items do not include:

- Paving – asphaltic or concrete, (considered as sustaining capital, if any)
- Road improvements

c) Civil Earthwork quantities and the associated costs are attributed to Area 000 General.

d) Civil work quantities of general excavation, grading and backfill were taken off the site and grading plans except for the Area 060 Water Control Structures where AMEC's material take-off (MTO) was used.

e) Capital costs for the Area 620 Dry Stack Tails included using AMEC MTO's. Engineering including construction plans and specifications are by AMEC. Construction Management, Procurement, and Cost Control is by M3.

f) Capital cost for the Area 050 Mine road and pre-production stripping by SRK and Owner.

3. Utilities

a) Public Utilities for the operations were included as follows:

- Process Plant, Permanent Camp and Construction camp water supply via Atzcala well field
- Village water supply via village wells
- Process Plant, Permanent Camp and Village permanent power via Balsas Substation
- Construction camp power via existing power lines and generators.
- For this project "potable water" shall be understood to mean that which may be used for eyewash stations, as well as for lavatories and human consumption.
- For the construction camp; sewer connections are provided by the Project.

b) Fuel Storage consists of double walled self-contained fuel tanks situated on concrete slabs on grade. Containment is assured by the container, and the concrete is for support and protection only.

4. Concrete

a) Concrete quantities were developed from completed engineering MTO's. Typically slab thickness is based on engineering MTO's. Unit and material costs are as follows:

Description	Unit	Installation Cost (US$ per Unit)	Material (US$ per Unit)
Concrete			
100 kg/cm2	m^3	$22.66	$134.48
200 kg/cm2	m^3	$37.53	$175.32
300 kg/cm2	m^3	$37.53	$178.84
Rebar	mt	$534.71	$831.47
Formwork	m2	$7.14	$30.62

5. Structural Steel

a) Structural steel quantities were developed from detailed MTO's Quantities include base plates, bracing, bolts, gussets, etc.

b) Structural steel has four contributing components:

- Detailing of steel (done primarily by M3) at $0.15/pound (2014 prices)
- Fabrication of steel
- Freight from fabricator to ELG site
- Erection of steel Unit and material costs are as follows:

Description	Unit	MH/Unit	Installation Cost (US$ per Unit)	Material (US$ per Unit)
Painted Light Steel	mT	80.1	$2,795.86	$1,602.50
Painted Light Steel	mT	78.9	$2,582.51	$1,577.46
Painted Lattice Columns	mT	80.1	$2,043.87	$1,602.50
Painted Heavy Steel	mT	77.8	$2,355.72	$1,556.01
Painted Handrail	mT	110.9	$3,162.80	$2,218.11
Painted Stairs	mT	78.4	$3,659.67	$1,567.35
Painted Grating	mT	165.3	$3,543.37	$3,306.15
Painted Checkered Plate	mT	74.0	$2,172.58	$1,479.17
Painted Ladders w/ Cage	mT	86.9	$3,090.87	$1,737.97
Sag Rods	mT	103.1	$2,452.69	$2,061.74
Galvanized Steel	mT	65.0	$3,250.00	$1,300.00
Unpainted A36 Wear Plate	mT	75.8	$2,169.23	$1,516.77
Unpainted AR Plate	mT	139.7	$6,984.62	$2,793.85
Plate Work	mT	75.8	$2,153.85	$1,516.77
Cold Formed	mT	80.1	$2,330.58	$1,602.50
Crane Rail	mT	80.2	$4,000.00	$1,603.41
Unpainted Embed Steel	mT	69.0	$2,950.54	$1,380.59
Steel Deck	m2	2.0	$ 5.65	$ 40.77

6. Architecture (Including Plumbing and HVAC)

a) Architectural costs are based on the following:

- Guardhouse, Administration, Clinic and Truck Scale buildings are metal stud framed buildings.
- Building architectural costs are based on material takeoffs for new construction. Security at the gold process in the Refinery building has been reviewed by Owner security department and consultant.
- Permanent Camp dormitories, kitchen and recreation buildings for personnel are metal stud framed buildings. The cost estimate for these buildings were based on material takeoffs and actual unit pricing.
- Internal framing of partitions
  - Contractor will supply all interior light gage metal framing members and drywall material from local vendors, utilizing standard sizes and availability.
- Doors
  - Door sizes and locations are developed by M3
  - All large openings to be designed as roll-up type doors
  - Doors within the Refinery / gold room are to be armored type and reinforced
  - It is M3's intention to procure all doors within country using all standard sizes.
- Plumbing
  - Standard USA plumbing specs are not typically applied in Mexico.
  - M3 will apply the International Plumbing Code and local requirements; also all material is to be purchased within country. Other items such as sinks, facets, shower pans, shower heads, valves, toilets, and divider walls are to be standard and supplied Mexico products. These are to be contractor furnished.
- HVAC

- Wall mount AC/heat units, compact split units, and other larger units are also to be acquired within country utilizing local vendors.
- Fire Protection
  - M3 designed the Fire Protection.
  - A water loop and hydrants are required by Owner's insurance underwriter (Allianz) as well as Local/National standards.
  - Fire hydrant hose cabinets within the plant were placed to allow coverage for a radius of 50 meters with the capacity for local close-range firefighting. Hose cabinets are also located inside buildings with more than two floors. Hose cabinets were added on each floor.
  - Mill building (Area 300) has a fire sprinklers system for the two lube oil rooms.
  - The Electrical Room Fire Suppression System Includes a Clean Agent System.
  - Fire protection water tank installed for the Fresh/Fire Water system (Area 660) is a shared tank.
  - Tank and pump system are included.
  - Fire suppression, including the fire water loop, is included under Mechanical and allocated to individual areas. Fire Protection within the building envelope, but not outside, was included.

7. Mechanical Steel

a) Takeoffs have been made for mechanical steel including platework, abrasion resistant liners, ductwork, etc. based on the general arrangement drawings, mechanical drawings, equipment list and engineering MTO's.

b) Mechanical steel also has four contributing components:

- Detailing of steel (done primarily by M3) at $0.20/pound (2014 prices)
- Fabrication of steel
- Freight from fabricator to ELG site
- Erection of steel

c) Mechanical steel cost estimating is further defined as follows:

- A36 Liner Plates – $2,169/mt fabrication only
- AR Plates - $2,392/mt fabrication only
- Conveyor and belt feeder cost estimates were formulated as follows:
  - Conveyors component costs were determined by using actual project PO's.
  - Costs for trusses and bents are part of the structural MTO.
- Mechanical chute platework has generally been designed to 1/2 inch (13 mm) plate, although some areas required 3/8 (10 mm) to 2 inch (50 mm) plate.
- Mechanical abrasion resistant liners has been designed to be no less than 1 inch (25 mm) thick.

d) General piping quantities were taken off from MTO's based on experience with similar installations as well as General Arrangement drawings and lists generated from P&IDs. The piping material costs include 3 percent of material costs for spool detailing. In addition, allowances have been made for the following specific systems:

- Tanks were originally estimated based on unit costs for similar sized tanks on similar installations. In this estimate, tanks are included based on let purchase orders or quotations using updated engineering documents.
- Piping is specified based on the most appropriate and economic material for a particular installation with respect to the installation and capital cost. Some pipe is de-rated to account for wear and gouging of the pipe wall.
- The sizes of the slurry pipes were specified to maintain low velocities to avoid wear on the pipe wall, but not too low to avoid settlement of solids.
- The wall thickness for each pipe was determined by the working pressure of the system.
- Hydraulic power units for valves will be by M3.
- HDPE fusion machines are assumed to be by contractors.
- Tailings piping and return water are based on 4 inch HDPE pipe. Tailings pump and standby spare are included. Return water line pump is included in this cost estimate.
- Project has included CPVC for HCl acid and carbon steel for the rest of the process plant.

e) Water Supply

- Capital costs of the well field are included in this estimate.
- New wells have been drilled, cased and developed by Owner.
- Equipping the 3 project site wells is the responsibility of M3.

8. Electrical

a) Electrical takeoffs were performed using experience with similar installations and advanced project design. This includes:

- Power cable, control cable, conduit and cable tray are by material takeoff (MTO).
- Emergency power generators
- Lightning protection
- Estimate utilizes central power generation at the Balsas Substation to serve the Process Plant and Ancillary facilities, Village, Permanent Camp and Well Field. Overhead power is utilized for power distribution.
- All concrete vaults and pull boxes used in support of the underground site power distribution system are field cast and modified to accommodate various duct bank routing and incoming and outgoing configurations.
- All duct banks are buried a minimum of 1 meter below top of finished grade and be construction of 200 kg/cm2 (3000 PSI) cast-in-place concrete complete with continuous bare copper ground wire, red oxide dye color applied to the top of duct bank, and continuous plastic yellow warning tape.
- All Motor Control Centers have a minimum of 20 percent spare across the line motor starters of various horsepower sizes.
- All low voltage (480 V) variable frequency drives (VFDs) 50 HP (37 kW) are fully integrated into each Motor Control Center line up. All low voltage VFDs larger than 50 HP (37 kW) up through 500 HP (360 kW) are in a stand-alone enclosure.
- All large diesel driven engine/generators rated at 1.0 MW or larger have 13.2kV medium voltage output rating with local main disconnecting switch and fully integrated into weather and sound proof enclosure.
- The contracted unit price for 13.2kV overhead electrical power lines is $64,680 per kilometer.

- It is considered that power generators will not be required for production as all power will be supplied by Balsas Substation. Backup Power Generators will be only to feed critical activities (emergency lights, agitators at leach and filter feed tanks, thickeners, some sump pumps, one filters and associated equipment)

9. Instrumentation and Controls

a) Instrumentation MTO was based on experience with similar installations. Control valve work has been included as follows:

- A final set of P&IDs and Instrument List was used as the basis for the Instrument MTO utilized in this estimate.
- Actuated valves, both modulating and open/close, are included in this estimate. Extra solenoid valves have been added to the list to accommodate any discrepancies in deliveries.
- CCTV pricing has been added for both the Process and Security Systems. It is recommended that the servers/recorders be separate for each system to accommodate security concerns.
- Uninterruptable Power Supplies (UPS) have been included for the Process Servers and the Client IT Servers.
- Networking hardware is included.
- The fiber optic (single mode) campus backbone has been included. Adequate fiber counts will allow usage by the process, process cameras, security, access control, fire, and data/phone systems. Fiber routing includes the Process Plant buildings and Administration Building IT room. Fiber patch panels, slack boxes, and splice boxes are included.
- Fiber optic campus backbone will be single mode 9/125 micron OS2 fiber. All fiber will be single mode OS2. For interior dielectric interior/exterior fiber, riser, low smoke, gel free, flame retardant. ADSS for exterior fiber optic dedicated poles and underhung in transmission lines. If necessary, in metal conduit for underground and inside buildings.
- Costs have been included for Process Plant surveillance in the Refinery (Area 550), Guardhouse (Area 901), and the Administration building (Area 902). Access control has not been included.
- UPS's have been included for the IT rooms.
- The Process IT room is sized sufficiently to house the security storage racks, access hardware, and fire detection/suppression controller.
- Plant phones have been included.
- Process Control and Voice & Data fiber optic (ADSS, Interior/Exterior) have been included in the I&C budget for the Process Plant, Permanent Camp and Wells.
- It is noted that communication (Voice & Data) transmissions are by microwaves and has a 100Mb bandwidth.
- Low Smoke Zero Halogen (LSZH) cable is to be used in occupied structures. Interiors will use dielectric interior/exterior, riser, low smoke, gel free, flame retardant fiber.
- Steel interlocked armored cable is used inside the plant structures for CCTV, not for Voice and Data use.

b) Programming

- Programming charges are included as a direct cost as part of the 000 Area. These costs have been estimated as 0.2 percent of the total direct cost.

21.1.4 Indirect Costs

1. Indirect costs have been included as follows:

   a) Temporary Construction Facilities:

      - This indirect cost item is to accommodate costs for temporary power lines, temporary water lines, general communications and emergency requirements associated with construction. This cost is in addition to the construction camp.
      - This cost has been calculated as 0.125 percent of direct costs for temporary EPCM construction support facilities plus the costs already committed for existing road improvements, and other field changes required.

   b) Communication is provided by Owner. Communication bandwidth shall be able to accommodate reasonably rapid transfer of large data files and unrestrictive multiple concurrent voice communications (phone conversations). In Aztcala construction camp, M3 provides the phones and Owner provides internet and radios.

   c) Camp costs, including any busing, housing, and meals, are included.

   d) Spare parts:

      - Most of Capital and Commissioning Spares has been identified and quoted.
      - Two-Year Spares are part of operating costs and as such are not included in the Capital Cost Estimates, but are included in the financial model.

   e) Vendor's representative's costs during fabrication and construction are included in the general allowance listed on the summary page.

   f) Vendor Support has been included as follows:

Supervision of specialty construction @ $2,830,502	Estimated based on quotations for each major equipment that may require it, plus CFE fees, and Pemex Fees.
Pre-commissioning & Commissioning Support	As estimated. Includes instrument calibration (not in direct cost), M3 field support, and contractor assistance.
Vendors Commissioning	As estimated for each major equipment that will be required.

2. The EPCM included is based on the proposed activities for the current scope of work. An allowance has not been made for field engineering.

3. The contingency was estimated for the Scope of Work items as defined. It was not for items outside the present Scope of Work. The contingency was calculated at a percentage of the total contracted cost including commissioning and spare parts. Contingency is calculated on an item-by-item basis, and then applied as an average percentage and collected into one accounting bucket for general drawdown. The Project Contingency should be applied after the EPCM rollup with Direct Costs and other Indirect Costs such as spares, vendor supervision and commissioning, mobilization and construction trailers.

Contingency is not applied to the Owner Costs as presumably the Owner has included this cost before transmitting a single bottom line cost to M3. Costs exclude Operating and Maintenance Manuals.

4. Costs are included for plant acceptance and initiation of operations as per the following:

- Mechanical Completion – by Contractor/EPCM
- Pre-Commissioning of Unit Operations – by Owner/EPCM
- Commissioning – by Owner/EPCM
- Initial Fills – by Contractor/Owner/EPCM
- Start-up – by Owner
- Ramp-Up – by Owner
- Demonstration Test – by Owner

21.1.5 Exclusions

1. General

a) Excluded from the estimate are the following:

- Finance and interest charges
- Depreciation and depletion allowances
- Performance bonding
- Taxes
- Any gold and foreign exchange hedging
- Builders risk insurance
- Escalation
- Start-up and support services
- As-built drawings by M3
- Credits for further expansion accommodations
- Salvage values of existing equipment not reused
- This project does not include asphaltic pavement in process and mine areas, but pavement is included in the village relocation

b) Excluded from the EPCM estimate are the following which are assumed to be included with Owner capital and operating cost:

- Land acquisition
- Water rights acquisition
- Owners project management
- Hiring and relocation
- Legal
- Public relations
- Sunk costs prior to this estimate
- Mine development, including haul roads
- Fuel distribution
- Mobile and shop equipment
- Communication systems (radio, internet and phone services)
- Operating spare parts

- Road repair and maintenance
- Reagents and Carbon
- Grinding or process media
- First fill of lubricants and glycol
- Operation and maintenance of Dry Stack Tailings

Note: Reagents, grinding media and lubricants are always ordered by the Owner, but the cost is included in the capital project.

21.1.6 Freight and Construction Equipment

1. Included in direct costs.
2. Construction equipment installation costs were estimated according to the tasks performed and the crew hours involved.
3. Freight has been included at 10 percent of equipment and material costs

21.1.7 Project Specific Interfaces and Conditions

1. Safety signage and road markings will be authorized by Owner Safety Department. An allowance is made in the estimate for such signage.
2. Pipe and valve tagging and labeling are included within the specifications submitted to the vendors and suppliers of the materials.
3. Construction Office will be comprised of trailers.
4. Fuel Station is designed to meet Pemex standards for a self-consumption franchise.
5. No allowance has been made for lost construction time.
6. Plant air system interfaces have been included, both plant and instrument air.
7. Crusher Liners
    a) Initial set as Project Cost.
    b) First replacement (one capital spare set, good for both crushers), as Project Cost.
    c) Sets beyond first replacement by Operations.
8. Mill Liners
    a) Initial set as Project Cost.
    b) First replacement (capital spare set, one set for each Mill) set as Project Cost.
    c) Sets beyond first replacement by Operations.
9. Filter Clothes
    a) Initial set as Project Cost.

b) First replacement and beyond by Operations

21.2 CAPITAL COST TABULATION

The key results of the capital cost estimates (for mine and process facilities) are as follows:

Table 21-2: Capital Direct, Indirect and Total Costs ($M)

Case	Direct Costs	Indirect Costs	Total Costs
Definitive Estimate	$392.4	$407.6	$800.0
Sustaining Capital	$83.0	$15.3	$98.3

During the initial studies for the ELG Mine a potential risk was identified that an unacceptable level of Arsenic may be leached from the waste rock dumps. To address this concern an "Alternate" plan was developed and carried within the 2012 Feasibility Study. To date test work has yet to produce a conclusive result. This potential risk will continue to be monitored and if higher than acceptable levels of arsenic are found in the runoff water from the waste rock dumps, mitigation plans will be put in place.

Table 21-3 shows the capital cost summary table for the base case. Table 21-4 summarizes sustaining capital costs.

Table 21-3: ELG Definitive Capital Cost Estimate

Torex Gold Resources. Inc. — **12/18/2014**
ESTIMATE UPDATE - DEFINITIVE ESTIMATE — **Revision 17B - modified for pre-pro**
TOTAL PROJECT COST SUMMARY SHEET
Morelos Project - M3 PN 120081

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	*****DIRECT COST*****							
000	General Site	429,109	$1,525,760	$3,409,686	$3,988,880	$0	$6,616,136	$15,540,462
010	East Service Road	555,389	$0	$3,097,504	$4,648,880	$0	$8,183,787	$15,930,171
050	Mine Equipment (Mobile and Pit Dewatering)	21,623	$290,650	$2,392,726	$254,147	$0	$79,009	$3,016,532
060	Mine Waste Management (AMEC)	370,541	$1,472,152	$8,758,645	$3,556,342	$0	$14,089,009	$27,876,149
100	Primary Crushing - Guajes	194,801	$5,040,922	$3,269,243	$2,004,961	$0	$1,091,861	$11,406,987
110	Primary Crushing - El Limon	302,725	$4,673,691	$3,632,522	$3,316,651	$0	$2,549,449	$14,172,312
120	Rope-Con	92,514	$17,488,781	$723,379	$931,759	$0	$1,455,155	$20,599,074
150	Stockpile Cover	81,000	$14,068	$2,486,770	$708,034	$0	$1,105,782	$4,314,654
200	Reclaim Tunnel	135,152	$1,693,209	$1,409,100	$1,314,139	$0	$885,880	$5,302,327
300	Grinding & Classification	525,326	$27,754,362	$8,577,168	$6,234,679	$0	$1,904,769	$44,470,978
350	Pebble Crushing	60,853	$1,775,020	$955,180	$763,077	$0	$170,613	$3,663,891
400	Leaching Area	472,389	$13,314,323	$4,504,358	$6,500,549	$0	$1,187,170	$25,506,399
450	CIP Area	117,063	$5,618,224	$2,052,479	$1,511,555	$0	$488,846	$9,671,104
500	Carbon Handling	60,905	$5,067,448	$517,665	$818,425	$0	$283,637	$6,687,175
550	Refinery Building	60,834	$2,595,409	$1,206,932	$739,748	$0	$174,635	$4,716,725
600	Filter Building	577,555	$22,545,384	$8,148,030	$7,607,978	$0	$2,787,849	$41,089,241
610	Cyanide Destruction	118,917	$2,911,876	$1,957,350	$1,493,981	$0	$423,807	$6,787,015
620	Dry Stack Tailings	154,450	$6,174,726	$1,444,196	$2,083,587	$0	$790,454	$10,492,962
650	Process Water System	13,671	$808,424	$139,469	$159,822	$0	$51,808	$1,159,523
660	Fresh/Fire Water System	43,647	$813,725	$1,410,958	$569,033	$0	$260,690	$3,054,406
670	Wells	184,404	$1,425,697	$3,011,978	$2,425,919	$0	$751,103	$7,614,697
700	Main Substation	41,357	$3,454,591	$826,564	$562,407	$0	$137,212	$4,980,773
750	Power Transmission Lines	43,007	$0	$1,317,216	$641,275	$0	$218,146	$2,176,636
760	Balsas Substation	68,541	$2,162,916	$1,954,839	$781,544	$0	$556,952	$5,456,251
800	Reagents	72,478	$1,978,182	$1,583,793	$910,002	$0	$202,413	$4,674,390
900	Ancillaries	0	$0	$0	$0	$0	$0	$0
901	Site Access Guardhouse	32,934	$149,583	$408,492	$334,623	$0	$367,711	$1,260,409
902	Truck Scale	4,665	$101,998	$80,232	$43,615	$0	$5,877	$231,721
903	Administration Building	46,135	$534,154	$737,977	$541,045	$0	$201,192	$2,014,369
904	First Aid Clinic	9,828	$58,567	$269,560	$106,283	$0	$9,434	$443,843
905	Core Storage Building	102,222	$77,603	$1,820,512	$968,608	$0	$821,157	$3,687,880
906	Fuel Station	18,433	$396,260	$323,444	$184,990	$0	$38,111	$942,805
907	Warehouse	17,127	$78,513	$487,595	$174,198	$0	$28,598	$768,905
908	Truck Shop	336,536	$983,067	$5,025,221	$3,297,815	$0	$3,254,381	$12,560,485
909	Tire Pad	14,802	$165,508	$252,109	$132,116	$0	$37,570	$587,303
910	Laboratory	11,995	$508,913	$144,257	$146,103	$0	$35,303	$834,576
911	Truck Wash	14,749	$210,998	$226,350	$136,172	$0	$25,438	$598,959
912	Explosive Storage	10,272	$0	$159,173	$59,948	$0	$29,880	$249,001
913	Mill Shop	9,911	$52,036	$236,266	$95,069	$0	$13,455	$396,827
920	Permanent Camp	296,404	$1,308,600	$8,322,216	$2,887,322	$0	$923,431	$13,441,569
930	Village Relocation	1,005,807	$487,586	$17,159,109	$9,505,356	$0	$4,332,324	$31,484,376
	Freight, Logistic and Warehouse		$10,852,871	$7,240,343	$0	$0	$0	$18,093,215
	Importation Taxes and Fees		$2,713,218	$1,772,586	$0	$0	$0	$4,485,804
	Subtotal DIRECT COST	**6,730,071**	**$ 149,279,017**	**$ 113,453,191**	**$ 73,140,639**	**$ -**	**$ 56,570,032**	**$ 392,442,880**
			135,712,928					

TOTAL DIRECT FIELD COST	$392,442,880
Total Without Mine Mobile Equipment	$392,442,880
Mobilization	$3,924,429
Camp & Busing Costs	$18,728,800
Construction Power	In Direct Cost
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST	**$415,096,109**
MANAGEMENT & ACCOUNTING (3)	$3,127,232
ENGINEERING (4)	$26,075,858
PROJECT SERVICES (5)	$4,269,642
PROJECT CONTROL (6)	$3,327,232
CONSTRUCTION MANAGEMENT (7)	$23,617,854
EPCM FEE Fixed	$2,827,232
EPCM FEE at Risk	$2,827,232
EPCM Construction Trailers	$503,928
Supervision of Specialty Construction (8)	$2,830,502
Temporary Construction Facilities (9)	$4,195,714
Precommissioning & Commissioning (10)	$1,315,049
VENDOR'S COMMISSIONING (11)	$438,375
CONSTRUCTION COMMISSIONING SPARES (12)	$1,763,691
Capital Spares (12)	$5,898,334
TOTAL CONTRACTED COST	**$498,113,983**
CONTINGENCY - Total Contracted w/o Owner's & Mining (13)	$27,136,815
TOTAL CONTRACTED COST With Contingency	**$525,250,798**
OWNER'S Mine Mobile Equipment Costs	$43,909,128
OWNER'S Site Support Costs (14)	$66,880,000
OWNER'S Guajes and El Limon Roads Costs	$29,716,000
OWNER'S Preproduction Stripping	$70,134,839
OWNER'S Preproduction Processing	$22,571,617
OWNER'S North Nose Mining	$7,048,000
CONTINGENCY - OWNER'S COSTS	$25,111,489
BUDGET CONSISTENCY ALLOTMENT	$9,378,128
ESCALATION (Excluded)	$0
TOTAL CAPITAL COST (15,16,17,18,19)	**$800,000,000**

NOTES:

1. Indirect Field Costs are allocated as follows:
   Field payroll burden and overhead (included in labor); field supervision, field supervisory burden, and support (included in labor); and the estimated contractor field overhead cost (included in labor & unit rates).
   Camp & Busing Cost is calculated thru current expenses and construction progress and prorated to the rest of project (excludes mining equipment assembly contractor & maintenance & operation personnel).
   Mobilization included at 1% of Direct Cost
2. Contractors' fee included in labor rate or unit cost.
3. Management & Accounting as estimated in June 2013 approved budget, plus estimation for remaining work.
4. Engineering included as estimated in June 2013 approved budget, plus estimation for remaining work.
5. Project services included as estimated in June 2013 approved budget, plus estimation for remaining work.
6. Project control included as estimated in June 2013 approved budget, plus estimation for remaining work.
7. Construction Management included as estimated in June 2013 approved budget, plus estimation for remaining work.
8. Supervision of Specialty Construction calculated per Vendor Quotes, plus CFE Fees and GUMEX Fees for Pemex Franchise Application
9. Temporary Construction Facilities includes repairs to existing access road, warehouse, and an allowance estimated for remaining construction.
10. Precommissioning & Commissioning calculated with vendor quotes, contractor quotes and estimated hours.
11. Vendor representatives are included at 0.3% of Plant Equipment Costs.
12. Construction Commissioning Spares and Capital Spares as estimated per Spare Log
13. Contingency included on uncommitted portions of TOTAL CONTRACTED COSTS.
14. Added Owners Cost allocated by Owner for land acquisition, permitting and environmental studies, owner's project administrative costs, mine development cost, and mine equipment cost, and operator training cost, first fills, and all other Owner's Costs are included in the estimate.
15. All costs are in Fourth Quarter 2014 dollars with no escalation added.
16. Total Project Cost is projected to be accurate within the range of -5% to +5%.
17. Indirect labor hours are approximately 15% of total direct labor hours. The costs for indirect labor hours as well as any Contractor profit are captured in the direct hours labor rate.
18. The following exchange rates were used
    Mexican Pesos per US Dollar 13.00
    US Dollar per Euro 1.32
19. IVA is not included in this estimate.

Table 21-4: Process Facilities Sustaining Capital Cost Estimate

Torex Gold Resources. Inc.
ESTIMATE UPDATE - SUSTAINING CAPITAL
TOTAL PROJECT COST SUMMARY SHEET
Morelos Project - M3 PN 120081

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	DIRECT COST							
000	General Site	15,097	$ 521,188.55	$ -	$ 211,353.91	$ -	$ 195,453.91	$ 927,996.38
010	East Service Road	113,309	$ -	$ 1,887,266.04	$ 963,969.54	$ -	$ 447,242.39	$ 3,298,477.97
050	Mine Equipment	0	$ -	$ -	$ -	$ -	$ -	$ -
060	Mine Waste Management (AMEC)	5,577	$ -	$ 135,006.98	$ 50,192.97	$ -	$ 37,450.00	$ 222,649.95
908	Truck Shop	76,874	$ 24,446.33	$ 2,328,301.69	$ 888,853.37	$ -	$ 235,788.81	$ 3,477,390.20
911	Truck Wash	25,026	$ 122,829.36	$ 615,698.42	$ 185,539.92	$ -	$ 25,293.76	$ 949,361.46
920	Permanent Camp	182,736	$ 300,321.35	$ 4,834,157.95	$ 1,674,183.12	$ -	$ 405,882.24	$ 7,214,544.67
	Freight		$ 96,878.56	$ 827,664.06	$ -	$ -	$ -	$ 924,542.62
	Importation Taxes and Fees		$ 29,063.57	$ 233,299.22	$ -	$ -	$ -	$ 262,362.79
	Subtotal DIRECT COST	**418,618**	**$ 1,094,728**	**$ 10,861,394**	**$ 3,974,093**	**$ -**	**$ 1,347,111**	**$ 17,277,326**

NOTES:
1 Indirect Field Costs are allocated as follows:
Field payroll burden and overhead (included in labor); field supervision, field supervisory burden, and support (included in labor); and the estimated contractor field overhead cost (included in labor & unit rates).
Camp & Busing Cost included at $4 per M.H.
(excludes mining equipment assembly contractor & maintenance & operation personnel).
Mobilization included at 1% of Direct Cost
2 Contractors' fee included in labor rate or unit cost.
3 Management & Accounting included at .75% of Total Constructed Cost.
4 Engineering included at 6.5% of Total Constructed Cost.
5 Project services included at 1% of Total Constructed Cost.
6 Project control included at 0.75% of Total Constructed Cost.
7 Construction Management included at 6% of Total Constructed Cost.
8 Supervision of Specialty Construction included at 1% of Total Constructed Cost.
9 Contingency included as calculated = 25%
10 Total Project Cost is projected to be accurate within the range of -20% to +20%.
11 Construction Manhours do not include subcontract hours.
12 Indirect labor hours are approximately 15% of total direct labor hours. The costs for indir labor hours as well as any Contractor profit are captured in the direct hours labor rate.

TOTAL DIRECT FIELD COST	$ 17,277,326
Total Without Mining	$ 17,277,326
Mobilization	$ 172,773
Camp & Busing Costs	$ 1,674,472
Construction Power	$ 86,387
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST	**$ 19,210,958**
MANAGEMENT & ACCOUNTING (3)	$ 144,082
ENGINEERING (4)	$ 1,248,712
PROJECT SERVICES (5)	$ 192,110
PROJECT CONTROL (6)	$ 144,082
CONSTRUCTION MANAGEMENT (7)	$ 1,152,657
EPCM FEE Fixed	$ 144,082
EPCM FEE at Risk	$ 144,082
EPCM Construction Trailers	$ 38,422
Supervision of Specialty Construction (8)	$ 10,947
Temporary Construction Facilities	$ 96,055
Precommissioning	$ 3,284
VENDOR'S COMMISSIONING	$ 3,284
CONSTRUCTION COMMISSIONING SPARES	$ 5,474
Capital Spares	$ 43,789
TOTAL CONTRACTED COST	**$ 22,582,021**
CONTINGENCY - Total Contracted w/o Mining (9)	$ 5,645,505
TOTAL CONTRACTED COST With Contingency	**$ 28,227,526**
Mining Cost	$ -
OWNER'S COST Excluding Working Capital	$ -
ESCALATION (Excluded)	$ -
TOTAL CAPITAL COST (16,17,20,21)	**$ 28,227,526**

21.3 MINE CAPITAL COSTS

Basis of mine capital cost estimate:

- Mine capital costs consist of mine equipment and preproduction mining costs estimated to be incurred after Jan 1, 2015 to order meet the LOM plan ore and waste mining requirements. ELG Mine development started in late 2013, and costs incurred in 2013 and 2014 for equipment and mine development are excluded from mine capital costs presented below. Costs incurred in 2013 and 2014 are, however included in overall project capital cost estimates presented in Section 21.2 above.
- Mine equipment fleet requirements are described in Section 16. The equipment capital cost estimate is based on actual purchase order costs and where these are not available, on budgetary quotes solicited from two equipment suppliers. Smaller equipment unit prices are sourced from SRK data on other projects and from industry cost reference guides.
- The majority of the remaining mine access and haul roads will be constructed by the owner with some support from contractors. The road construction unit costs for contractor support are based on the quotations obtained from two contractors at the end of 2013.
- Preproduction Mining-Contractor refers to the El Limón Phase NN haul road and pit development
- Preproduction Mining-Owner is the estimated costs for Guajes and El Limón pit and road development by the owner to the end of February 2016.
- Preproduction development cost estimates are based on a MXN:USD exchange rate of 15:1.
- Mine capital costs incurred after the forecast start of commercial production, i.e. March 1, 2016, are considered sustaining capital, and principally consist of equipment additions and replacement units.
- It is planned that until the end of 2017 major production equipment maintenance will be provided by equipment suppliers under maintenance and repair contracts. Owner maintenance is planned beyond 2017. Parts inventories and maintenance service vehicles are assumed to be provided by the maintenance contractors until 2017. These items are included in the sustaining capital requirements when owner maintenance begins in 2018.
- Mine capital costs exclude explosive storage facilities and bulk explosives trucks. These items are assumed to be supplied by an explosive vendor under a full service explosive supply contract.
- Mine capital costs exclude mine infrastructure and facilities, including the office-warehouse-maintenance complex, fuel storage, and truck wash. These items are included in the project infrastructure capital.
- Mine capital costs include a 5% contingency on the mine production equipment, 10% contingency on the pre-production mining, and 20% contingency on the road construction support by contractor. The pre-production mining and road construction support contingency is included within Owner's costs in the overall project cost estimates presented in Section 21.2 above.
- Mine capital costs exclude import duties and VAT.

Mine Capital Costs are summarized in Table 21-5.

Table 21-5: Mine Capital Cost Summary

	Mine Preproduction Capital ($M)			Mine Sustaining Capital ($M)								Grand
	2015	Jan-Feb'16	**Total**	Mar-Dec'16	2017	2018	2019	2020	2021	2022	**Total**	Total
Mine Production Equipment												
Drills	1.3	-	**1.3**	5.2	0.8	-	1.1	1.6	-	-	**8.7**	10.0
Loading Units	-	-	-	8.7	1.9	-	5.8	4.9	-	-	**21.3**	21.3
Haul trucks	-	-	-	20.3	1.4	-	-	-	-	-	**21.6**	21.6
Bulldozers	-	-	-	0.8	1.0	1.7	1.5	-	-	-	**5.1**	5.1
Graders & Water Trucks	-	-	-	2.4	-	-	0.7	-	-	-	**3.0**	3.0
Subtotal	1.3	-	**1.3**	37.4	5.1	1.7	9.1	6.4	-	-	**59.7**	61.0
Other Mine Equipment	0.5	-	**0.5**	2.8	0.8	1.3	0.3	-	0.3	0.3	**5.8**	6.3
Road Construction -Contractor	3.4	0.3	**3.7**	0.3	-	-	-	-	-	-	**0.3**	4.0
Preproduction Mining -Contractor	5.9	0.8	**6.7**	-	-	-	-	-	-	-	-	6.7
Preproduction Mining -Owner	35.9	7.2	**43.1**	-	-	-	-	-	-	-	-	43.1
Subtotal, before contigency	47.0	8.3	**55.3**	40.4	5.8	3.0	9.3	6.4	0.3	0.3	**65.7**	121.0
Contigency	4.9	0.9	**5.8**	2.1	0.3	0.2	0.5	0.3	0.0	0.0	**3.4**	9.3
Mine Total capital	51.9	9.2	**61.1**	42.6	6.1	3.2	9.8	6.7	0.3	0.4	**69.2**	130.3

21.4 OPERATING & MAINTENANCE COSTS

21.4.1 Summary

This section addresses the following costs:

- Mining Costs
- Process Plant Operating & Maintenance Cost
- General and Administrative Costs

The operating and maintenance costs for the ELG Mine operations are summarized by areas of the operation, and shown in Table 21-6. Cost centers include mine operations, process plant operations, and the General and Administration area. Operating costs were determined annually for the life of the mine. Actual Labor rates and contractual supply rates as available are used as basis for the cost summary. No escalation was included within this study. The life of mine operating unit cost per total ore tonne is $33.45. The table below shows details for a typical year of operations.

Table 21-6: Typical Year (Year 4 – 2018) Operating Costs by Area

	Ore Processed Tonnes	5,040,000
	Mined Tonnes	34,538,000
	Annual Cost - ($M)	**$/tonne ore Processed**
Mining Operations		
Drill	$11.4	$2.26
Blast	$16.9	$3.36
Load	$8.6	$1.71
Haul	$20.4	$4.06
Roads & Dumps	$6.3	$1.24
Support	$2.4	$0.48
Contract Mining	$0	$0.00
Grade Control	$1.2	$0.23
Mine General	$2.8	$0.55
Subtotal Mining	**$70.0**	**$13.89**
	Annual Cost - ($M)	**$/tonne ore Processed**
Processing Operations		
Crushing and Ore Storage	$3.2	$0.64
Grinding	$28.7	$5.71
Leaching	$22.6	$4.50
Carbon Handling & Refinery	$1.3	$0.25
Filtered Tailings	$22.4	$4.45
Ancillaries	$2.5	$0.45
Subtotal Processing	**$80.7**	**$16.02**
Supporting Facilities		
Laboratory	$1.2	$0.25
General and Administrative	$19.0	$3.76
Subtotal Supporting Facilities	**$20.2**	**$4.02**
Total Mine Site Operating Cost	**$170.9**	**$33.93**

21.4.2 Mine Operating Costs

Key mine operating cost parameters include the following:

- Mine operating costs extend from March 1, 2015 to the end of the mine life in 2025. Mining costs incurred prior to this are included in mine capital costs as pre-production mining.
- Continuous 24 hour per day mining operation for 356 days per year. The mine labor is based on three operating crews on a 20-day-on-10-day-off rotation.
- Labor rates for the various job classifications as provided by Torex, including appropriate burden for each category to cover items such as overtime, health care, vacation, and federal holidays.
- It is anticipated that a portion of the workforce will live in camp. Camp costs (catering, etc.), travel allowances for employees who live in camp, and bussing costs for local employees are excluded from labor rates and mining cost estimates. SRK understands that camp operating costs, employee transportation allowances, and bussing costs for local employees are included within G&A cost estimates.
- Contract maintenance of production equipment is planned for 2015-2017. Contractor maintenance costs are based on fixed and variable rates that MML has established with maintenance service contractors. Owner maintenance of production equipment is planned after 2017 and maintenance costs beyond this date are based on SRK estimates of maintenance workforce requirements and service parts costs.
- Drilling consumables cost estimates range from $4.19/m to $4.91/m for various drills and hole diameters.
- Blasting based on an average explosive powder factor of 0.32 kg/t, using 50% anfo-50% emulsion explosives. Explosives are assumed supplied under full service contract with an explosives supplier.
- Diesel fuel is included based on MML's reported early 2015 unit diesel cost per liter.
- The grade control in-fill drilling program utilizes a reverse circulation (RC) drill rig at an estimated cost at $1.2M/year at full production. Blasthole assaying for grade control purposes will be done at the ELG Mine site laboratory. No assaying costs are included in the mine operating costs. SRK understands that the laboratory operating costs are adequate to handle the mine sample assaying.
- Mine operating costs estimates are based on a MXN:USD exchange rate of 15:1.
- No VAT or import duties are included in the mining cost estimates.

Mine operating costs are summarized in Table 21-7. Mine operating costs average $2.13/t mined over the mine life.

Table 21-7: ELG Mine Mining Costs

		Pre-production Mining Cost - CAPEX			***Mine Operating Costs***										
Period (US$)		*2015*	*Jan-Feb'16*	*Total PPN*	Mar-Dec'16	2017	2018	2019	2020	2021	2022	2023	2024	2025	**Total Opex**
Ore & waste mined	Mt	*15.2*	*2.8*	*18.0*	19.9	34.4	34.5	38.5	38.3	39.1	36.4	32.4	23.4	7.1	**304.0**
Ore mined	Mt	*1.5*	*0.6*	*2.1*	2.8	5.1	4.3	4.8	5.4	5.3	4.4	6.2	5.1	2.0	**45.4**
Strip ratio	W:O	*8.9*	*3.6*	*7.4*	6.2	5.8	7.0	7.0	6.1	6.3	7.3	4.3	3.6	2.5	**5.7**
Ore processed (incl stockpiles)	Mt	*0.2*	*0.4*	*0.6*	3.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.3	**47.4**
Total Mining Costs, by function															
Drill	$M	*4.5*	*0.9*	*5.4*	6.7	11.9	11.4	12.5	13.1	13.1	10.9	9.7	7.6	1.5	**98.3**
Blast	$M	*8.5*	*1.3*	*9.8*	9.3	16.3	16.9	18.5	18.8	18.8	16.2	14.1	10.9	2.5	**142.5**
Load	$M	*2.3*	*0.6*	*2.9*	5.0	9.6	8.6	9.2	9.0	8.9	8.1	6.4	4.8	1.6	**71.2**
Haul	$M	*7.9*	*1.8*	*9.7*	13.2	23.9	20.4	16.8	16.6	16.1	15.7	15.4	10.1	3.5	**151.9**
Roads & Dumps	$M	*4.5*	*0.9*	*5.4*	5.7	7.4	6.3	5.9	5.9	5.9	5.8	5.7	4.7	2.0	**55.3**
Support	$M	*1.4*	*0.3*	*1.6*	1.6	2.2	2.4	2.4	2.5	2.5	2.5	2.5	2.1	1.1	**21.7**
Contract Mining	$M	*0.0*	*0.0*	*0.0*	1.6	0.0	0.0	0.0	0.0	3.5	15.8	18.6	13.2	8.3	**60.9**
Grade Control	$M	*0.0*	*0.2*	*0.2*	1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	**11.0**
Mine General	$M	*6.8*	*1.3*	*8.1*	6.5	8.1	2.8	2.8	2.8	2.8	2.8	2.8	2.6	2.0	**35.9**
Total	$M	*35.9*	*7.2*	*43.1*	50.6	80.7	70.0	69.3	69.9	72.7	78.8	76.3	57.1	23.2	**648.7**
Unit Mining Costs, by function															
Drill	$/t mined	*0.29*	*0.33*	*0.30*	0.34	0.35	0.33	0.32	0.34	0.33	0.30	0.30	0.32	0.21	**0.32**
Blast	$/t mined	*0.56*	*0.46*	*0.55*	0.47	0.48	0.49	0.48	0.49	0.48	0.44	0.44	0.47	0.36	**0.47**
Load	$/t mined	*0.15*	*0.20*	*0.16*	0.25	0.28	0.25	0.24	0.24	0.23	0.22	0.20	0.21	0.22	**0.23**
Haul	$/t mined	*0.52*	*0.62*	*0.54*	0.66	0.70	0.59	0.44	0.43	0.41	0.43	0.48	0.43	0.50	**0.50**
Roads & Dumps	$/t mined	*0.30*	*0.34*	*0.30*	0.29	0.22	0.18	0.15	0.15	0.15	0.16	0.18	0.20	0.28	**0.18**
Support	$/t mined	*0.09*	*0.10*	*0.09*	0.08	0.07	0.07	0.06	0.06	0.06	0.07	0.08	0.09	0.15	**0.07**
Contractor Mining	$/t mined	*0.00*	*0.00*	*0.00*	0.08	0.00	0.00	0.00	0.00	0.09	0.43	0.57	0.56	1.17	**0.20**
Grade Control	$/t mined	*0.00*	*0.07*	*0.01*	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.05	0.11	**0.04**
Mine General	$/t mined	*0.45*	*0.45*	*0.45*	0.33	0.24	0.08	0.07	0.07	0.07	0.08	0.09	0.11	0.29	**0.12**
Total Unit Mining Cost	$/t mined	*2.37*	*2.56*	*2.40*	2.55	2.35	2.03	1.80	1.82	1.86	2.16	2.36	2.44	3.29	**2.13**
Unit Mining Costs, by component															
Labor	$/t mined	*0.25*	*0.27*	*0.25*	0.23	0.21	0.27	0.23	0.23	0.23	0.23	0.24	0.27	0.48	**0.24**
Drill supplies	$/t mined	*0.13*	*0.15*	*0.13*	0.15	0.15	0.16	0.16	0.17	0.16	0.15	0.15	0.16	0.09	**0.16**
Explosives	$/t mined	*0.52*	*0.42*	*0.50*	0.44	0.45	0.47	0.46	0.47	0.46	0.42	0.42	0.44	0.29	**0.45**
Tires	$/t mined	*0.12*	*0.12*	*0.12*	0.14	0.15	0.15	0.12	0.12	0.11	0.12	0.13	0.12	0.16	**0.13**
Fuel	$/t mined	*0.49*	*0.52*	*0.49*	0.54	0.54	0.55	0.46	0.46	0.44	0.45	0.47	0.47	0.54	**0.48**
Lube	$/t mined	*0.10*	*0.10*	*0.10*	0.11	0.11	0.11	0.10	0.09	0.09	0.09	0.10	0.09	0.11	**0.10**
GEC	$/t mined	*0.05*	*0.06*	*0.05*	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.05	**0.05**
Repair parts	$/t mined	*0.00*	*0.00*	*0.00*	0.00	0.00	0.18	0.15	0.15	0.15	0.15	0.14	0.15	0.15	**0.13**
Contract maintenance services	$/t mined	*0.61*	*0.77*	*0.63*	0.68	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.11**
Supplies	$/t mined	*0.04*	*0.04*	*0.04*	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	**0.02**
Services & Other	$/t mined	*0.07*	*0.13*	*0.08*	0.17	0.06	0.07	0.07	0.07	0.15	0.50	0.65	0.66	1.40	**0.28**
Total Unit Mining Cost	$/t mined	*2.37*	*2.56*	*2.40*	2.55	2.35	2.03	1.80	1.82	1.86	2.16	2.36	2.44	3.29	**2.13**
Total Unit Mining Cost	$/t ore mined	*23.43*	*11.87*	*20.15*	18.39	15.95	16.14	14.39	12.90	13.64	17.87	12.39	11.22	11.36	**14.28**
Total Unit Mining Cost	$/t processed	*167.69*	*19.18*	*73.02*	13.69	16.01	13.89	13.75	13.87	14.43	15.64	15.14	11.33	6.95	**13.70**

21.4.3 Process Plant Operating & Maintenance Costs

The process plant operating costs are summarized by areas of the plant and then by cost elements of labor, power, reagents, maintenance parts and supplies and services. The process plant operating costs are shown at end the section.

21.4.3.1 Process Labor & Fringes

Process labor costs were derived from a staffing plan and based on current pay structure at the mine site. Labor rates and fringe benefits for employees include all applicable social security benefits as well as all applicable payroll taxes. The staffing plan shows 118 employees.

21.4.3.2 Electrical Power

Power costs were based on the Comisión Federal de Electricidad (CFE) billing formula for in effect Q4 2014, with peak summer and winter hours and rates applied. Power consumption was based on the equipment list connected kW, discounted for operating time per day and anticipated operating load level. The overall power rate is estimated at and assumed to be $0.112 for the ELG Mine LOM. A detailed list of equipment and power consumption and a summary of the power cost and consumption are shown the end of this section.

Table 21-8: Typical Year 4 Operating Cost – Electrical Power Summary

	Total (kW hr/yr)	**Annual Cost $**
Crushing & Ore Storage	7,775,236	$641,377
Grinding and Classification	145,557,750	$16,302,468
Leaching	19,931,101	$2,232,283
Carbon Handling & Refinery	2,798,349	$313,415
Reagents Systems	979,296	$109,681
Filtered Tailings	54,219,185	$6,072,549
Fresh Water	10,651,416	$1,192,959
Ancillaries	882,622	$98,854
Total	**242,794,956**	**$26,963,586**

21.4.3.3 Reagents

Consumption rates were determined from the metallurgical test data or industry practice. Contracted price or budget quotations were used for reagents supplied from local sources where available with an allowance for freight to site.

Reagents for the process plants are estimated to be approximately $19 million per year. The details are not shown to protect the confidentiality of existing contracts.

21.4.3.4 Maintenance Wear Parts and Consumables

Grinding media consumption and wear items (liners) were based on industry practice for the crushing and grinding operations. The consumption rates and unit prices are based on formal Vendor quotations or existing contractual agreements. Total annual cost for grinding media and liners is estimated at approximately $10 million.

An allowance was made to cover the cost of maintenance of all items not specifically identified and the cost of maintenance of the facilities. The allowance was calculated using the direct capital cost of equipment times a percentage for each area. The maintenance costs are shown at the end of this section.

21.4.3.5 Process Supplies & Services

Allowances were provided for outside consultants, outside contractors, vehicle maintenance, and miscellaneous supplies. The allowances were estimated using M3's information from other operations and projects along with the Torex operating budget reviewed by M3. The process supplies and services are summarized at the end of this section.

Table 21-9: Typical Year 4 Operating Cost – Process Supplies & Services

Processing Units Base Rate (tonnes/year ore)	5,040,000
	Annual Cost $
Crushing & Ore Storage	
Lubricants	$75,000
Safety Items	$15,000
Outside Services	$31,250
Tools	$25,000
Crusher Feed and Stockpile Management	$252,000
Subtotal Crushing & Ore Storage	$398,250
Grinding	
Water Charges	$758,959
Lubricants	25,000
Safety Items	6,000
Outside Services	250,000
Tools	63,000
Subtotal Grinding	$1,102,959
Leaching	
Lubricants	13,000
Safety Items	6,000
Outside Services	50,000
Tools	8,000
Subtotal Leaching	$77,000
Carbon Handling & Refinery	
Lubricants	6,000
Safety Items	6,000
Diesel	345,760
Outside Services	50,000
Tools	8,000
Subtotal Carbon Handling & Refinery	$415,760
Filtered Tailings	
Lubricants	6,000
Safety Items	6,000
Tailings Compaction	$9,324,000
Outside Services	75,000
Filter Cloth	$4,838,400
Tools	8,000
Subtotal Filtered Tailings	$14,257,400
Ancillary	
Safety Items	6,000
Outside Services	10,000
Tools, Misc. Equipment	52,000
Subtotal Ancillary	$68,000
Total Process Plant Supplies & Services	$16,319,369

21.4.4 General and Administration

The operating cost for the General and Administration areas were determined and summarized by cost element. The cost elements include labor, supplies, support infrastructure, services, and other expenses.

21.4.4.1 General and Administration (G&A)

General and administration costs include labor and fringe benefits for the administrative personnel, human resources, safety and environmental and accounting. Also included are land owners cost, office supplies, communications, insurance, employee transportation and camp, and other expenses in the administrative area. The G&A costs are summarized in at the end of this section.

Labor costs are based on a staff of 132. (This includes the 15 employees for the environmental department.) The costs are detailed at the end of this section. All other G&A costs were developed from the Torex operating budget which was reviewed by M3.

Laboratory costs estimates are based on labor and fringe benefits, power, reagents, assay consumables, and supplies and services. The laboratory costs are summarized in at the end of this section. The labor costs for the laboratory is based on a staff of 16 are detailed in the process plant labor table. All other laboratory costs were developed from the Torex operating budget which was reviewed by M3.

Table 21-10: Typical Year 4 – Laboratory Costs

Processing Units Base Rate (tonnes/year ore)	5,040,000	
	Annual Cost $	**$/tonne ore Processed**
Labor & Fringes	$407,968	$0.08
Power	$3,459	$0.00
Reagents & Fuel	$56,886	$0.01
Assay Consumables	$462,201	$0.09
Wear & Maintenance Parts	$177,770	$0.04
Maintenance Labor, Fringes, and Allocations	$142,789	$0.03
Supplies and Services	$17,778	$0.00
Total Laboratory Cost	**$1,268,850**	**$0.25**

Table 21-11: Typical Year 4 General & Administrative Cost

Processing Units Base Rate (tonnes/year ore)		5,040,000
	Annual Cost $	**$/tonne ore Processed**
Labor & Fringes	$4,132,366	$0.82
Property & Business Interruption Insurance	$2,800,000	$0.56
Accounting, Legal & Tax	$386,466	$0.08
Administrative	$633,489	$0.13
Building Lease & Maintenance	$52,791	$0.01
Catering Service	$1,203,911	$0.24
Charge Back to Corporate	-$159,357	-$0.03
Community Relations Projects	$600,000	$0.12
Contractors & Consultants	$915,000	$0.18
Drilling	$0	$0.00
Employee Related	$0	$0.00
Fuel Oil and Lubricants	$52,791	$0.01
Materials & Supplies	$52,791	$0.01
Land Ownership	$5,775,000	$1.15
Sampling	$0	$0.00
Travel Expenses	$200,000	$0.04
Vehicles	$184,873	$0.04
Transportation from Camp	$850,000	$0.17
Camp Operation Cost	$90,000	$0.02
Yearly Cost for Meals per Non-local Personnel	$421,200	$0.08
Yearly Travel Cost for Site to Home for Non-local Personnel	$784,250	$0.16
Total General & Administrative Cost	**$18,975,570**	**$3.76**

21.5 OPERATING COST TABULATION

The following tables show operating costs in a more detailed fashion.

Table 21-12: Detailed Operating Cost

Torex Gold Resources Inc. - ELG Mine
Operating Cost

	LOM		Year 1		Year 2		Year 2		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10		Year 11	
	Ore Tonnes	47,949,832		214,200		376,600		3,698,800		4,075,400		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000		3,340,232
	Mined Tonnes	321,948,221		15,158,215						22,705,661		34,373,306		34,537,852		38,484,905		38,338,963		39,089,190		36,440,066		32,374,003		23,383,499		7,062,561
	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined					Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined
Mining Operations																												
Drill	$98,269,418								$6,731,334		11,865,458		$11,386,971		$12,460,820		$13,108,484		$13,059,583		$10,865,867		$9,693,313		$7,582,688		$1,514,900	
Blast	$142,482,999								$9,329,601		16,341,413		$16,931,723		$18,544,468		$18,823,605		$18,758,602		$16,173,206		$14,136,637		$10,913,498		$2,530,246	
Load	$71,202,535								$5,024,528		9,571,121		$8,629,696		$9,246,573		$9,024,234		$8,909,254		$8,065,031		$6,372,565		$4,801,391		$1,558,141	
Haul	$151,852,885								$13,192,803		23,935,915		$20,448,119		$16,781,220		$16,598,965		$16,145,625		$15,702,575		$15,427,351		$10,081,920		$3,538,394	
Roads & Dumps	$55,342,743								$5,701,595		7,431,993		$6,271,470		$5,927,317		$5,932,744		$5,897,594		$5,813,749		$5,724,525		$4,666,868		$1,974,888	
Support	$21,740,709								$1,611,981		2,242,014		$2,420,123		$2,427,148		$2,463,395		$2,479,710		$2,469,716		$2,457,696		$2,113,861		$1,055,066	
Contract Mining	$60,904,645								$1,555,779		0		$0		$0		$0		$3,534,979		$15,786,014		$18,578,297		$13,191,851		$8,257,724	
Grade Control	$11,043,938								$969,167		1,163,000		$1,163,000		$1,163,000		$1,163,000		$1,163,000		$1,163,000		$1,163,000		$1,163,000		$770,772	
Mine General	$35,882,416								$6,532,203		8,145,160		$2,775,396		$2,771,196		$2,771,196		$2,770,296		$2,764,896		$2,760,096		$2,577,477		$2,014,503	
Subtotal Mining	**$648,722,289**		$0						$50,648,992		$80,696,073		$70,026,497		$69,321,741		$69,885,623		$72,718,642		$78,804,055		$76,313,479		$57,092,555		$23,214,633	
			Pre-production - Year 1		Pre-production - Year 2		Production		Total Year 2																			
	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed	Annual Cost - $	$/tonne ore Processed
Processing Operations																												
Crushing and Ore Storage	$31,246,899	$0.65	$240,032	$1.12	$291,279	$0.77	$2,544,831	$0.69	$2,836,110	$0.70	$3,244,963	$0.64	$3,249,135	$0.64	$3,245,658	$0.64	$3,249,135	$0.64	$3,249,135	$0.64	$3,249,135	$0.64	$3,249,135	$0.64	$3,249,135	$0.64	$2,185,328	$0.65
Grinding	$274,454,113	$5.72	$1,366,851	$6.38	$2,206,614	$5.86	$21,250,492	$5.75	$23,457,105	$5.76	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$28,803,444	$5.71	$19,202,604	$5.75
Leaching	$216,134,417	$4.51	$1,037,760	$4.84	$1,733,764	$4.60	$16,710,613	$4.52	$18,444,377	$4.53	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$22,698,161	$4.50	$15,066,990	$4.51
Carbon Handling & Refinery	$12,761,351	$0.27	$428,584	$2.00	$123,137	$0.33	$1,029,795	$0.28	$1,152,932	$0.28	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$983,729	$0.29
Filtered Tailings	$214,450,076	$4.47	$1,308,079	$6.11	$1,782,143	$4.73	$16,868,812	$4.56	$18,650,954	$4.58	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$22,448,211	$4.45	$14,905,352	$4.46
Ancillaries	$21,704,849	$0.45	$201,223	$0.94	$206,907	$0.55	$1,709,385	$0.46	$1,916,292	$0.47	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$1,517,778	$0.45
Subtotal Processing	**$770,751,705**	**$16.07**	$4,582,529	$21.39	$6,343,844.06	$16.85	$60,113,927	$16.25	$66,457,772	$16.31	$80,727,987	$16.02	$80,732,159	$16.02	$80,728,682	$16.02	$80,732,159	$16.02	$80,732,159	$16.02	$80,732,159	$16.02	$80,732,159	$16.02	$80,732,159	$16.02	$53,861,781	$16.13
Supporting Facilities																												
Laboratory	$12,147,590	$0.25	$236,408	$1.10	$156,568	$0.42	1,095,161	$0.30	$1,251,729	$0.31	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$1,268,850	$0.25	$508,651	$0.15
General and Administrative	$195,022,031	$4.07	$8,204,156	$38.30	$3,048,112	$8.09	16,078,305	$4.35	$19,126,416	$4.69	$19,142,020	$3.80	$18,975,570	$3.76	$18,828,320	$3.74	$18,681,070	$3.71	$18,581,820	$3.69	$18,581,820	$3.69	$18,581,820	$3.69	$18,581,820	$3.69	$17,737,199	$5.31
Subtotal Supporting Facilities	**$207,169,621**	**$4.32**	$8,440,564	$39.41	$3,204,680		$17,173,466	$4.64	$20,378,146	$5.00	$20,410,870	$4.05	$20,244,420	$4.02	$20,097,170	$3.99	$19,949,920	$3.96	$19,850,670	$3.94	$19,850,670	$3.94	$19,850,670	$3.94	$19,850,670	$3.94	$18,245,850	$5.46
Total Mine Site Operating Cost	**$1,626,643,615**	**$33.92**	$13,023,093	$60.80	$9,548,524	$25.35	$77,287,393	$20.90	$137,484,909	$33.74	$181,834,930	$36.08	$171,003,076	$33.93	$170,147,594	$33.76	$170,567,702	$33.84	$173,301,471	$34.39	$179,386,884	$35.59	$176,896,308	$35.10	$157,675,384	$31.28	$95,322,264	$28.54

Table 21-13: Typical Year 4 Operating Cost – Process Plant Cost Summary

Processing Units Base Rate (tonnes/year ore)		5,040,000
	Annual Cost - $	$/tonne ore Processed
Crushing and Ore Storage		
Operating Labor and Fringes	$173,590	0.0344
Power	$641,377	0.1273
Grinding Media & Wear Parts	$387,374	0.0769
Maintenance Parts & Services	$1,428,917	0.2835
Maintenance Labor and Fringes	$219,626	0.0436
Supplies & Services	$398,250	0.0790
Subtotal Crushing Plant	$3,249,135	0.6447
Grinding		
Operating Labor and Fringes	$273,075	0.0542
Power	$16,302,468	3.2346
Grinding Media & Wear Parts	$9,233,812	1.8321
Maintenance Parts & Services	$1,639,186	0.3252
Maintenance Labor and Fringes	$251,944	0.0500
Supplies and Services	$1,102,959	0.2188
Subtotal Grinding	$28,803,444	5.7150
Leaching		
Operating Labor and Fringes	$273,075	0.0542
Power	$2,232,283	0.4429
Reagents	$19,198,418	3.8092
Grinding Media & Wear Parts		-
Maintenance Parts & Services	$795,167	0.1578
Maintenance Labor and Fringes	$122,218	0.0242
Supplies and Services	$77,000	0.0153
Subtotal Flotation	$22,698,161	4.5036
Carbon Handling & Refinery		
Operating Labor and Fringes	$174,031	0.0345
Power	$313,415	0.0622
Reagents		-
Maintenance Parts & Services	$321,840	0.0639
Maintenance Labor and Fringes	$49,467	0.0098
Supplies and Services	$415,760	0.0825
Subtotal Carbon Handling & Refinery	$1,274,513	0.2529
Filtered Tailings		
Operating Labor and Fringes	$585,521	0.1162
Power	$6,072,549	1.2049
Reagents		-
Maintenance Parts & Services	$1,328,543	0.2636
Maintenance Labor and Fringes	$204,198	0.0405
Supplies and Services	$14,257,400	2.8288
Subtotal Filtered Tailings	$22,448,211	4.4540
Ancillary Services		
Operating Labor and Fringes	$342,091	0.0679
Power	$1,401,493	0.2781
Maintenance Parts & Services	$387,544	0.0769
Maintenance Labor and Fringes	$59,566	0.0118
Supplies and Services	$68,000	0.0135
Subtotal Ancillary Services	$2,258,694	0.4482
Total Process Plant	$80,732,159	$16.02

Manpower	$2,728,402	$0.54
Power	$26,963,586	$5.35
Reagents	$19,198,418	$3.81
Grinding Media & Wear Parts	$9,621,186	$1.91
Maintenance Parts & Services	$5,901,198	$1.17
Supplies & Services	$16,319,369	$3.24
Total Process Plant	$80,732,159	$16.02

Table 21-14: Operating Cost – Process Maintenance

Torex Gold Resources Inc. - Morelos Project

Operating Cost - Process Maintenance

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
	Tonnes	214,200		4,075,400		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing & Ore Storage														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$57,837		$1,100,417		$1,360,873		$1,360,873		$1,360,873		$1,360,873		$1,360,873	
Maintenance Outside Repairs	$13,609		$55,021		$68,044		$68,044		$68,044		$68,044		$68,044	
Maintenance: Allocation Labor and Fringes	$36,705		$219,626		$219,626		$219,626		$219,626		$219,626		$219,626	
Subtotal Crushing & Ore Storage	$108,150		$1,375,064		$1,648,543		$1,648,543		$1,648,543		$1,648,543		$1,648,543	
Grinding														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$66,348		$1,262,347		$1,561,130		$1,561,130		$1,561,130		$1,561,130		$1,561,130	
Maintenance Outside Repairs	$15,611		$63,117		$78,056		$78,056		$78,056		$78,056		$78,056	
Maintenance: Allocation Labor and Fringes	$42,106		$251,944		$251,944		$251,944		$251,944		$251,944		$251,944	
Subtotal Grinding	$124,065		$1,577,408		$1,891,130		$1,891,130		$1,891,130		$1,891,130		$1,891,130	
Leaching														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$32,185		$612,363		$757,302		$757,302		$757,302		$757,302		$757,302	
Maintenance Outside Repairs	$9,466		$30,618		$37,865		$37,865		$37,865		$37,865		$37,865	
Maintenance: Allocation Labor and Fringes	$20,425		$122,218		$122,218		$122,218		$122,218		$122,218		$122,218	
Subtotal Leaching	$62,077		$765,199		$917,385		$917,385		$917,385		$917,385		$917,385	
Carbon Handling & Refinery														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$13,027		$247,851		$306,514		$306,514		$306,514		$306,514		$306,514	
Maintenance Outside Repairs	$3,831		$12,393		$15,326		$15,326		$15,326		$15,326		$15,326	
Maintenance: Allocation Labor and Fringes	$8,267		$49,467		$49,467		$49,467		$49,467		$49,467		$49,467	
Subtotal Carbon Handling & Refinery	$25,125		$309,710		$371,307		$371,307		$371,307		$371,307		$371,307	
Filtered Tailings														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$53,774		$1,023,119		$1,265,279		$1,265,279		$1,265,279		$1,265,279		$1,265,279	
Maintenance Outside Repairs	$15,816		$51,156		$63,264		$63,264		$63,264		$63,264		$63,264	
Maintenance: Allocation Labor and Fringes	$34,126		$204,198		$204,198		$204,198		$204,198		$204,198		$204,198	
Subtotal Filtered Tailings	$103,717		$1,278,473		$1,532,742		$1,532,742		$1,532,742		$1,532,742		$1,532,742	
Ancillary Process Services														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$15,686		$298,450		$369,090		$369,090		$369,090		$369,090		$369,090	
Maintenance Outside Repairs	$6,151		$14,923		$18,454		$18,454		$18,454		$18,454		$18,454	
Maintenance: Allocation Labor and Fringes	$9,955		$59,566		$59,566		$59,566		$59,566		$59,566		$59,566	
Subtotal Ancillary Process Services	$31,793	$0	$372,939	$0	$447,110	$0	$447,110	$0	$447,110	$0	$447,110	$0	$447,110	$0
	$454,927		$5,678,793		$6,808,217		$6,808,217		$6,808,217		$6,808,217		$6,808,217	

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
		5,040,000		5,040,000		5,040,000		3,340,232		-		-		-
	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing & Ore Storage														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$1,360,873		$1,360,873		$1,360,873		$901,911		$0		$0		$0	
Maintenance Outside Repairs	$68,044		$68,044		$68,044		$45,096		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$219,626		$219,626		$219,626		$144,411		$0		$0		$0	
Subtotal Crushing & Ore Storage	$1,648,543		$1,648,543		$1,648,543		$1,091,418		$0		$0		$0	
Grinding														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$1,561,130		$1,561,130		$1,561,130		$1,034,630		$0		$0		$0	
Maintenance Outside Repairs	$78,056		$78,056		$78,056		$51,731		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$251,944		$251,944		$251,944		$165,662		$0		$0		$0	
Subtotal Grinding	$1,891,130		$1,891,130		$1,891,130		$1,252,024		$0		$0		$0	
Leaching														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$757,302		$757,302		$757,302		$501,898		$0		$0		$0	
Maintenance Outside Repairs	$37,865		$37,865		$37,865		$25,095		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$122,218		$122,218		$122,218		$80,362		$0		$0		$0	
Subtotal Leaching	$917,385		$917,385		$917,385		$607,355		$0		$0		$0	
Carbon Handling & Refinery														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$306,514		$306,514		$306,514		$203,141		$0		$0		$0	
Maintenance Outside Repairs	$15,326		$15,326		$15,326		$10,157		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$49,467		$49,467		$49,467		$32,526		$0		$0		$0	
Subtotal Carbon Handling & Refinery	$371,307		$371,307		$371,307		$245,824		$0		$0		$0	
Filtered Tailings														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$1,265,279		$1,265,279		$1,265,279		$838,557		$0		$0		$0	
Maintenance Outside Repairs	$63,264		$63,264		$63,264		$41,928		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$204,198		$204,198		$204,198		$134,267		$0		$0		$0	
Subtotal Filtered Tailings	$1,532,742		$1,532,742		$1,532,742		$1,014,752		$0		$0		$0	
Ancillary Process Services														
Maintenance Parts Allocation - Capital (New) Equipment Cos	$369,090		$369,090		$369,090		$244,612		$0		$0		$0	
Maintenance Outside Repairs	$18,454		$18,454		$18,454		$12,231		$0		$0		$0	
Maintenance: Allocation Labor and Fringes	$59,566		$59,566		$59,566		$39,167		$0		$0		$0	
Subtotal Ancillary Process Services	$447,110	$0	$447,110	$0	$447,110	$0	$296,009	$0	$0	$0	$0	$0	$0	$0
	$6,808,217		$6,808,217		$6,808,217		$4,507,382		$0		$0		$0	

Table 21-15: Detailed Power Summary

Torex Gold Resources Inc. - ELG Mine
Detail Power Summary

Equipment	Tag Number	Connected HP	Connected Kilowatt	Full Load Current %	Oper Load @ Motor Eff (kw)	Operating Factor	Available Hours	Days	Year 1 Operating Factor	Year 1 Annual kWhr	Year 2 Operating Factor	Year 2 Annual kWhr	Year 3 Operating Factor	Year 3 Annual kWhr	Year 4 Operating Factor	Year 4 Annual kWhr	Year 5 Operating Factor	Year 5 Annual kWhr	Year 6 Operating Factor	Year 6 Annual kWhr	Year 7 Operating Factor	Year 7 Annual kWhr	Year 8 Operating Factor	Year 8 Annual kWhr	Year 9 Operating Factor	Year 9 Annual kWhr	Year 10 Operating Factor	Year 10 Annual kWhr	Year 11 Operating Factor	Year 11 Annual kWhr	Year 12 Operating Factor	Year 12 Annual kWhr	Year 13 Operating Factor	Year 13 Annual kWhr	Year 14 Operating Factor	Year 14 Annual kWhr
										4.3%		80.9%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		100.0%		66.3%		0.0%		0.0%		0.0%
									Tonnes	214,200	-	4,075,400	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	3,340,232	-	-	-	-	-	-
						0.9																														
Area 100,110,120 & 150 - Crushing & Ore Storage																																				
Crushing Area Air Compressor	100-CM-001	40	30	80%	26	68%	24	365	3%	6,434	55%	122,418	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	45%	100,335	0%	-	0%	-	0%	-
Primary Crusher	100-CR-001	500	373	80%	320	68%	24	365	3%	80,428	55%	1,530,227	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	45%	1,254,187	0%	-	0%	-	0%	-
Primary Crusher Seal Air Blower	100-CR-001	2	1	80%	1	68%	24	365	3%	241	55%	4,591	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	45%	3,763	0%	-	0%	-	0%	-
Lubrication System Pump No. 1 (on-line)	100-CR-001	37	27	80%	24	68%	24	365	3%	5,919	55%	112,625	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	45%	92,308	0%	-	0%	-	0%	-
Hydraulic System Pump	100-CR-001	5	4	50%	2	68%	24	365	3%	503	55%	9,564	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	45%	7,839	0%	-	0%	-	0%	-
Coarse Ore Stockpile Feed Conveyor	100-CV-001	400	298	80%	256	68%	24	365	3%	64,342	55%	1,224,181	68%	1,513,931	68%	1,513,931	68%	1,513,931	68%	1,513,931	68%	1,513,931	68%	1,513,931	68%	1,513,931	68%	1,513,931	45%	1,003,349	0%	-	0%	-	0%	-
Primary Crusher Dust Collector	100-DC-001	50	38	80%	32	68%	24	365	3%	8,091	55%	153,941	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	45%	126,171	0%	-	0%	-	0%	-
Crusher Discharge Feeder	100-FE-001	40	30	80%	26	68%	24	365	3%	6,434	55%	122,418	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	45%	100,335	0%	-	0%	-	0%	-
Apron Feeder Monorail Hoist	100-HO-002	8	6	80%	5	68%	24	365	3%	1,287	55%	24,484	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	45%	20,067	0%	-	0%	-	0%	-
Tramp Iron Magnet	100-MG-001	10	7	80%	6	68%	24	365	3%	1,609	55%	30,605	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	45%	25,084	0%	-	0%	-	0%	-
Belt Reel Motor	100-MS-001	20	15	80%	13	9%	24	365	0%	429	7%	8,161	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	6%	6,689	0%	-	0%	-	0%	-
Rock Breaker	100-RP-001	150	112	80%	96	36%	24	365	2%	12,894	29%	245,326	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	24%	201,071	0%	-	0%	-	0%	-
Crushing Area Air Compressor	110-CM-001	40	30	80%	26	68%	24	365	3%	6,434	55%	122,418	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	45%	100,335	0%	-	0%	-	0%	-
Primary Crusher	110-CR-001	500	373	80%	320	68%	24	365	3%	80,428	55%	1,530,227	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	68%	1,892,414	45%	1,254,187	0%	-	0%	-	0%	-
Primary Crusher Seal Air Blower	110-CR-001	2	1	80%	1	68%	24	365	3%	241	55%	4,591	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	68%	5,677	45%	3,763	0%	-	0%	-	0%	-
Lubrication System Pump No. 1 (on-line)	110-CR-001	37	27	80%	24	68%	24	365	3%	5,919	55%	112,625	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	68%	139,282	45%	92,308	0%	-	0%	-	0%	-
Hydraulic System Pump	110-CR-001	5	4	50%	2	68%	24	365	3%	503	55%	9,564	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	68%	11,828	45%	7,839	0%	-	0%	-	0%	-
RopeCon Feed Conveyor	110-CV-001	25	19	80%	16	68%	24	365	3%	4,021	55%	76,511	68%	94,621	68%	94,621	68%	94,621	68%	94,621	68%	94,621	68%	94,621	68%	94,621	68%	94,621	45%	62,709	0%	-	0%	-	0%	-
Primary Crusher Dust Collector	110-DC-001	50	38	80%	32	68%	24	365	3%	8,091	55%	153,941	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	68%	190,377	45%	126,171	0%	-	0%	-	0%	-
Crusher Discharge Feeder	110-FE-001	40	30	80%	26	68%	24	365	3%	6,434	55%	122,418	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	68%	151,393	45%	100,335	0%	-	0%	-	0%	-
Apron Feeder Monorail Hoist	110-HO-002	8	6	80%	5	68%	24	365	3%	1,287	55%	24,484	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	68%	30,279	45%	20,067	0%	-	0%	-	0%	-
Motor & Tail Pulley Bridge Crane	110-HO-003	27	20	80%	17	68%	24	365	3%	4,279	55%	81,408	68%	100,676	68%	100,676	68%	100,676	68%	100,676	68%	100,676	68%	100,676	68%	100,676	68%	100,676	45%	66,723	0%	-	0%	-	0%	-
Tramp Iron Magnet	110-MG-001	10	7	80%	6	68%	24	365	3%	1,609	55%	30,605	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	45%	25,084	0%	-	0%	-	0%	-
Dust Suppresion Water Pump	110-PP-002	10	7	80%	6	68%	24	365	3%	1,609	55%	30,605	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	45%	25,084	0%	-	0%	-	0%	-
Rock Breaker	110-RP-001	150	112	80%	96	36%	24	365	2%	12,894	29%	245,326	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	36%	303,392	24%	201,071	0%	-	0%	-	0%	-
Rope-Con® Motor	120-CV-001	804																																		
Rope-Con® Motor	120-CV-001	804																																		
Rope-Con® Spillage Conveyor	120-CV-002	20																																		
Rope-Con® Spillage Conveyor	120-CV-003	20																																		
Rope-Con® Service Trolley	120-MS-001	101																																		
StockPile Dust Suppresion Water Pump	150-PP-001	10	7	80%	6	68%	24	365	3%	1,609	55%	30,605	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	68%	37,848	45%	25,084	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										6,479		123,277		152,456		152,456		152,456		152,456		152,456		152,456		152,456		152,456		101,039		-		-		-
Total kWh/year		3,924	1,622		1,390					330,448		6,287,142		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		5,152,995		-		-		-
Area 200,300 & 350 - Grinding and Classification																																				
Motor for Lime Bin Activator	200-BN-001	1	1	80%	1	83%	24	365	4%	197	67%	3,754	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	55%	3,077	0%	-	0%	-	0%	-
Lime Feeder Motor	200-BN-001	10	7	80%	6	83%	24	365	4%	1,973	67%	37,542	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	55%	30,769	0%	-	0%	-	0%	-
SAG Mill Feed Conveyor	200-CV-001	400	298	50%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Reclaim Conveyor Dust Collector	200-DC-001	15	11	50%	6	83%	24	365	4%	1,887	67%	35,899	83%	44,396	83%	44,396	83%	44,396	83%	44,396	83%	44,396	83%	44,396	83%	44,396	83%	44,396	55%	29,423	0%	-	0%	-	0%	-
Reclaim Feeder	200-FE-001	25	19	80%	16	83%	24	365	4%	4,933	67%	93,854	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	55%	76,923	0%	-	0%	-	0%	-
Reclaim Feeder	200-FE-002	25	19	80%	16	83%	24	365	4%	4,933	67%	93,854	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	55%	76,923	0%	-	0%	-	0%	-
Belt Reel Motor	200-MS-001	20	15	80%	13	83%	24	365	4%	3,946	67%	75,083	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	55%	61,539	0%	-	0%	-	0%	-
Plant Air Compressor	300-CM-001	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Plant Air Compressor	300-CM-002	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Plant Air Compressor	300-CM-003	75	56	80%	48	45%	24	365	2%	8,043	36%	153,023	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	30%	125,419	0%	-	0%	-	0%	-
SAG/Ball Mill Inching Drive Motor	300-DA-001	50	37	80%	32	5%	24	365	0%	536	4%	10,202	5%	12,616	5%	12,616	5%	12,616	5%	12,616	5%	12,616	5%	12,616	5%	12,616	5%	12,616	3%	8,361	0%	-	0%	-	0%	-
Grinding Area Overhead Crane	300-HO-001	47	35	80%	30	45%	24	365	2%	5,040	36%	95,894	45%	118,591	45%	118,591	45%	118,591	45%	118,591	45%	118,591	45%	118,591	45%	118,591	45%	118,591	30%	78,596	0%	-	0%	-	0%	-
Valves Hydraulic Power Unit	300-HY-001	5	4	80%	3	5%	24	365	0%	54	4%	1,020	5%	1,262	5%	1,262	5%	1,262	5%	1,262	5%	1,262	5%	1,262	5%	1,262	5%	1,262	3%	836	0%	-	0%	-	0%	-
Bolt Breaker Hydraulic Power Pack Motor	300-LH-002	40	30	80%	26	5%	24	365	0%	429	4%	8,161	5%	10,093	5%	10,093	5%	10,093	5%	10,093	5%	10,093	5%	10,093	5%	10,093	5%	10,093	3%	6,689	0%	-	0%	-	0%	-
SAG Mill	300-ML-001	9,387	7,000	80%	6,008	83%	24	365	4%	1,852,202	67%	35,240,262	83%	43,581,224	83%	43,581,224	83%	43,581,224	83%	43,581,224	83%	43,581,224	83%	43,581,224	83%	43,581,224	83%	43,581,224	55%	28,883,215	0%	-	0%	-	0%	-
Ball Mill	300-ML-002	18,774	14,000	80%	12,017	83%	24	365	4%	3,704,404	67%	70,480,523	83%	87,162,447	83%	87,162,447	83%	87,162,447	83%	87,162,447	83%	87,162,447	83%	87,162,447	83%	87,162,447	83%	87,162,447	55%	57,766,429	0%	-	0%	-	0%	-
Cyclone Feed Pump	300-PP-001	1,250	932	80%	800	83%	24	365	4%	246,645	67%	4,692,695	83%	5,803,401	83%	5,803,401	83%	5,803,401	83%	5,803,401	83%	5,803,401	83%	5,803,401	83%	5,803,401	83%	5,803,401	55%	3,846,172	0%	-	0%	-	0%	-
Cyclone Feed Pump (standby)	300-PP-002	1,250	932	80%	800	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Grinding Area Sump Pump	300-PP-004	25	19	80%	16	9%	24	365	0%	536	7%	10,202	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	6%	8,361	0%	-	0%	-	0%	-
Ball loading System Area Sump Pump Motor	300-PP-005	10	7	80%	6	9%	24	365	0%	214	7%	4,081	9%	5,046	9%	5,046	9%	5,046	9%	5,046	9%	5,046	9%	5,046	9%	5,046	9%	5,046	6%	3,344	0%	-	0%	-	0%	-
SAG Mill Discharge Screen	300-SR-001	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
SAG Mill Discharge Screen (uninstalled spare)	300-SR-002	-	-	80%	-	83%	24	365	4%	-	67%	-	83%	-	83%	-	83%	-	83%	-	83%	-	83%	-	83%	-	83%	-	55%	-	0%	-	0%	-	0%	-
Trash Screen	300-SR-003	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Pebble Crusher Lubrication System	350-CR-001	39	29	80%	25	83%	24	365	4%	7,636	67%	145,286	83%	179,673	83%	179,673	83%	179,673	83%	179,673	83%	179,673	83%	179,673	83%	179,673	83%	179,673	55%	119,077	0%	-	0%	-	0%	-
Pebble Crusher	350-CR-001	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
SAG Oversize Conveyor, No. 1 Motor	350-CV-001	15	11	50%	6	83%	24	365	4%	1,850	67%	35,195	83%	43,526	83%	43,526	83%	43,526	83%	43,526	83%	43,526	83%	43,526	83%	43,526	83%	43,526	55%	28,846	0%	-	0%	-	0%	-
SAG Oversize Conveyor, No. 2 Motor	350-CV-002	75	56	50%	30	83%	24	365	4%	9,249	67%	175,976	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	55%	144,231	0%	-	0%	-	0%	-
Pebble Crusher Discharge Conveyor Motor	350-CV-003	75	56	50%	30	83%	24	365	4%	9,249	67%	175,976	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	55%	144,231	0%	-	0%	-	0%	-
Pebble Crusher Feeder	350-FE-001	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Tramp Iron Magnet - Rectifier	350-MG-001	11	8	80%	7	83%	24	365	4%	2,111	67%	40,169	83%	49,677	83%	49,677	83%	49,677	83%	49,677	83%	49,677	83%	49,677	83%	49,677	83%	49,677	55%	32,923	0%	-	0%	-	0%	-
Pebble Crushing Area Sump Pump	350-PP-001	25	19	80%	16	9%	24	365	0%	536	7%	10,202	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	9%	12,616	6%	8,361	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										121,298		2,307,836		2,854,074		2,854,074		2,854,074		2,854,074		2,854,074		2,854,074		2,854,074		2,854,074		1,891,521		-		-		-
Total kWh/year		32,404	24,163		20,602					6,186,204		117,699,614		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		96,467,593		-		-		-
Area 400 & 450 - Leaching																																				
Leach Tank Agitator	400-AG-001	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-002	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-003	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-004	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-005	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-006	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-007	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-008	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-009	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-010	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Tank Agitator	400-AG-011	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Leach Compressor	400-CM-001	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	400-CM-002	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	400-CM-003	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	400-CM-004	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Valves Hydralic Power Unit	400-HY-001	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Preleach Thickener Underflow Pump	400-PP-001	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Preleach Thickener Underflow Pump	400-PP-002	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Carbon Advance Pump	400-PP-004	15	11	80%	10	83%	24	365	4%	2,960	67%	56,312	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	55%	46,154	0%	-	0%	-	0%	-
Preleach Thickener Area Sump Pump	400-PP-013	15	11	80%	10	9%	24	365	0%	322	7%	6,121	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	6%	5,017	0%	-	0%	-	0%	-
Leaching Area Sump Pump	400-PP-014	50	37	80%	32	9%	24	365	0%	1,072	7%	20,403	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	6%	16,722	0%	-	0%	-	0%	-
Leaching Area Submersible Pump	400-PP-015	50	37	80%	32	9%	24	365	0%	1,072	7%	20,403	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	6%	16,722	0%	-	0%	-	0%	-
CIC Barren Solution Pump Motor	400-PP-018	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIC Barren Solution Pump Motor	400-PP-019	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Carbon Safety Screen - CIC	400-SR-001	9	7	80%	6	83%	24	365	4%	1,815	67%	34,538	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	55%	28,308	0%	-	0%	-	0%	-
Carbon Safety Screen - CIC	400-SR-001	9	7	80%	6	83%	24	365	4%	1,815	67%	34,538	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	83%	42,713	55%	28,308	0%	-	0%	-	0%	-
Preleach Thickener	400-TH-001	11	8	80%	7	83%	24	365	4%	2,170	67%	41,296	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	55%	33,846	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-001	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-002	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-003	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-004	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-005	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Agitator and Screen	450-AG-006	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Area Bridge Crane	450-HO-001	37	28	80%	24	45%	24	365	2%	4,000	36%	76,103	45%	94,116	45%	94,116	45%	94,116	45%	94,116	45%	94,116	45%	94,116	45%	94,116	45%	94,116	30%	62,375	0%	-	0%	-	0%	-
Carbon Advance Pump	450-PP-001	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
CIP Tailing Pump	450-PP-003	125	93	80%	80	83%	24	365	4%	24,664	67%	469,269	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	55%	384,617	0%	-	0%	-	0%	-
CIP Tailing Pump	450-PP-004	125	93	80%	80	83%	24	365	4%	24,664	67%	469,269	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	55%	384,617	0%	-	0%	-	0%	-
CIP Area Sump Pump	450-PP-010	15	11	80%	10	9%	24	365	0%	322	7%	6,121	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	6%	5,017	0%	-	0%	-	0%	-
Carbon Safety Screen - CIP Motor	450-SR-001	50	37	80%	32	83%	24	365	4%	9,866	67%	187,708	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	55%	153,847	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										16,609		316,010		390,806		390,806		390,806		390,806		390,806		390,806		390,806		390,806		259,004		-		-		-
Total kWh/year		4,342	3,238		2,779					847,072		16,116,510		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		13,209,227		-		-		-

Area 500 & 550 - Carbon Handling & Refinery																																				
Carbon Attrition Tank Agitator Motor	500-AG-001	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Dilute Acid Tank Agitator Motor	500-AG-002	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Neutralization Tank Agitator Motor	500-AG-003	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Kiln Feed Bin Motor	500-BN-001	20	15	80%	13	83%	24	365	4%	3,946	67%	75,083	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	55%	61,539	0%	-	0%	-	0%	-
Acid Wash Fan	500-FN-001	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Burner Exhaust Fan	500-FN-002	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Kiln Exhaust Fan	500-FN-006	7	5	80%	4	83%	24	365	4%	1,322	67%	25,153	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	55%	20,615	0%	-	0%	-	0%	-
Kiln Combustion Fan	500-FN-007	7	5	80%	4	83%	24	365	4%	1,322	67%	25,153	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	83%	31,106	55%	20,615	0%	-	0%	-	0%	-
Carbon Attrition Tank Hoist	500-HO-001	2	1	80%	1	27%	24	365	1%	129	22%	2,448	27%	3,028	27%	3,028	27%	3,028	27%	3,028	27%	3,028	27%	3,028	27%	3,028	27%	3,028	18%	2,007	0%	-	0%	-	0%	-
Strip Solution Heater	500-HT-001	3	2	80%	2	83%	24	365	4%	631	67%	12,013	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	55%	9,846	0%	-	0%	-	0%	-
Strip Solution Heater	500-HT-002	3	2	80%	2	83%	24	365	4%	631	67%	12,013	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	83%	14,857	55%	9,846	0%	-	0%	-	0%	-
Carbon Regeneration Kiln	500-KN-001	34	25	80%	21	83%	24	365	4%	6,610	67%	125,764	83%	155,531	83%	155,531	83%	155,531	83%	155,531	83%	155,531	83%	155,531	83%	155,531	83%	155,531	55%	103,077	0%	-	0%	-	0%	-
Dilute Acid Pump	500-PP-001	7.5	6	80%	5	83%	24	365	4%	1,480	67%	28,156	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	55%	23,077	0%	-	0%	-	0%	-
Acid Washed Carbon Transfer Pump	500-PP-003	5.0	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Stripped Carbon Transfer Pump	500-PP-004	7.5	6	80%	5	83%	24	365	4%	1,480	67%	28,156	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	55%	23,077	0%	-	0%	-	0%	-
Carbon Transport Water Pump	500-PP-005	10.0	7	80%	6	83%	24	365	4%	1,973	67%	37,542	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	55%	30,769	0%	-	0%	-	0%	-
Barren Strip Solution Pump	500-PP-007	40.0	30	80%	26	83%	24	365	4%	7,893	67%	150,166	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	55%	123,078	0%	-	0%	-	0%	-
Carbon Handling Area Sump Pump	500-PP-008	7.5	6	80%	5	9%	24	365	0%	161	7%	3,060	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	6%	2,508	0%	-	0%	-	0%	-
Strip Area Sump Pump	500-PP-009	7.5	6	80%	5	9%	24	365	0%	161	7%	3,060	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	6%	2,508	0%	-	0%	-	0%	-
Acid Wash Area Sump Pump	500-PP-010	7.5	6	80%	5	9%	24	365	0%	161	7%	3,060	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	6%	2,508	0%	-	0%	-	0%	-
Regenerated Carbon Transfer Pump	500-PP-012	10.0	7	80%	6	30%	24	365	1%	708	24%	13,466	30%	16,653	30%	16,653	30%	16,653	30%	16,653	30%	16,653	30%	16,653	30%	16,653	30%	16,653	20%	11,037	0%	-	0%	-	0%	-
Quench Tank Carbon Tansfer Pump Motor	500-PP-012	20.0	15	80%	13	30%	24	365	1%	1,416	24%	26,932	30%	33,306	30%	33,306	30%	33,306	30%	33,306	30%	33,306	30%	33,306	30%	33,306	30%	33,306	20%	22,074	0%	-	0%	-	0%	-
Anti Scalant Metering Pump Motor	500-PP-014	1.0	1	80%	1	30%	24	365	1%	71	24%	1,347	30%	1,665	30%	1,665	30%	1,665	30%	1,665	30%	1,665	30%	1,665	30%	1,665	30%	1,665	20%	1,104	0%	-	0%	-	0%	-
Barren Strip Solution Pump	500-PP-017	40.0	30	80%	26	83%	24	365	4%	7,893	67%	150,166	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	83%	185,709	55%	123,078	0%	-	0%	-	0%	-
Hot Water Circulation Pump Motor	500-PP-018	5.0	4	80%	3	30%	24	365	1%	354	24%	6,733	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	20%	5,518	0%	-	0%	-	0%	-
Neutralization Pump Motor	500-PP-019	5.0	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Carbon Attrition Pump Motor	500-PP-020	20.0	15	80%	13	83%	24	365	4%	3,946	67%	75,083	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	55%	61,539	0%	-	0%	-	0%	-
Carbon Fines Pump	500-PP-021	15.0	11	80%	10	9%	24	365	0%	322	7%	6,121	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	9%	7,570	6%	5,017	0%	-	0%	-	0%	-
Hot Water Circulation Pump Motor	500-PP-022	5.0	4	80%	3	30%	24	365	1%	354	24%	6,733	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	30%	8,327	20%	5,518	0%	-	0%	-	0%	-
Diesel Pump Motor	500-PP-070	1.5	1	80%	1	9%	24	365	0%	32	7%	612	9%	757	9%	757	9%	757	9%	757	9%	757	9%	757	9%	757	9%	757	6%	502	0%	-	0%	-	0%	-
Diesel Pump Motor	500-PP-071	1.5	1	80%	1	30%	24	365	1%	106	24%	2,020	30%	2,498	30%	2,498	30%	2,498	30%	2,498	30%	2,498	30%	2,498	30%	2,498	30%	2,498	20%	1,656	0%	-	0%	-	0%	-
Loaded Carbon Desliming Screen	500-SR-001	4	3	80%	3	83%	24	365	4%	829	67%	15,767	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	55%	12,923	0%	-	0%	-	0%	-
Loaded Carbon Desliming Screen	500-SR-001	4	3	80%	3	83%	24	365	4%	829	67%	15,767	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	55%	12,923	0%	-	0%	-	0%	-
Kiln Dewatering Screen Motor	500-SR-002	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Kiln Dewatering Screen Motor	500-SR-002	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Carbon Sizing Screen Motor	500-SR-003	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Carbon Sizing Screen Motor	500-SR-003	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Loaded Carbon Desliming Screen	500-SR-004	4	3	80%	3	83%	24	365	4%	829	67%	15,767	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	55%	12,923	0%	-	0%	-	0%	-
Loaded Carbon Desliming Screen	500-SR-004	4	3	80%	3	83%	24	365	4%	829	67%	15,767	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	83%	19,499	55%	12,923	0%	-	0%	-	0%	-
Barren Strip Solution Tank Fan Motor	500-TK-004	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Furnace Exhaust Fan Motor	550-DC-002	25	19	80%	16	83%	24	365	4%	4,933	67%	93,854	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	83%	116,068	55%	76,923	0%	-	0%	-	0%	-
EW Exhaust Fan	550-FN-003	20	15	80%	13	83%	24	365	4%	3,946	67%	75,083	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	55%	61,539	0%	-	0%	-	0%	-
Retort Furnace Exhaust Fan Motor	550-FN-005	7	5	80%	4	45%	24	365	2%	718	36%	13,670	45%	16,906	45%	16,906	45%	16,906	45%	16,906	45%	16,906	45%	16,906	45%	16,906	45%	16,906	30%	11,204	0%	-	0%	-	0%	-
Mercury Retort	550-FU-002	105	79	80%	67	45%	24	365	2%	11,292	36%	214,844	45%	265,695	45%	265,695	45%	265,695	45%	265,695	45%	265,695	45%	265,695	45%	265,695	45%	265,695	30%	176,088	0%	-	0%	-	0%	-
EW Barren Solution Pump	550-PP-005	8	6	80%	5	83%	24	365	4%	1,480	67%	28,156	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	55%	23,077	0%	-	0%	-	0%	-
EW Barren Solution Pump	550-PP-006	8	6	80%	5	83%	24	365	4%	1,480	67%	28,156	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	55%	23,077	0%	-	0%	-	0%	-
Refinery Area Sump Pump	550-PP-014	8	6	80%	5	9%	24	365	0%	161	7%	3,060	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	9%	3,785	6%	2,508	0%	-	0%	-	0%	-
Electrowinning Cell Rectifier	550-RC-001	48	36	80%	31	83%	24	365	4%	9,530	67%	181,326	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	55%	148,616	0%	-	0%	-	0%	-
Electrowinning Cell Rectifier	550-RC-002	48	36	80%	31	83%	24	365	4%	9,530	67%	181,326	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	55%	148,616	0%	-	0%	-	0%	-
Electrowinning Cell Rectifier	550-RC-003	48	36	80%	31	83%	24	365	4%	9,530	67%	181,326	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	55%	148,616	0%	-	0%	-	0%	-
Electrowinning Cell Rectifier	550-RC-004	48	36	80%	31	83%	24	365	4%	9,530	67%	181,326	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	83%	224,243	55%	148,616	0%	-	0%	-	0%	-
Pressure Washer	550-WA-001	8	6	80%	5	83%	24	365	4%	1,480	67%	28,156	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	83%	34,820	55%	23,077	0%	-	0%	-	0%	-
			-	80%	-	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										2,332		44,368		54,870		54,870		54,870		54,870		54,870		54,870		54,870		54,870		36,365		-		-		-
Total kWh/year		712	531		456					118,930		2,262,776		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		1,854,591		-		-		-
Area 600, 610 & 620 - Filtered Tailings																																				
Filter Feed Tank Agitator	600-AG-001	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Filter Feed Tank Agitator	600-AG-002	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Filter Feed Tank Agitator	600-AG-003	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Filter Feed Tank Agitator	600-AG-004	75	56	80%	48	83%	24	365	4%	14,799	67%	281,562	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	83%	348,204	55%	230,770	0%	-	0%	-	0%	-
Recirculation Taings Tank Agitator Motor	600-AG-005	20	15	80%	13	83%	24	365	4%	3,946	67%	75,083	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	83%	92,854	55%	61,539	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-001	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-002	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-003	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-004	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-005	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-006	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-007	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-008	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Filter Press Air Compressor	600-CM-009	400	298	80%	256	83%	24	365	4%	78,926	67%	1,501,662	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	83%	1,857,088	55%	1,230,775	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-001	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-002	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-003	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-004	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-005	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-006	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Discharge Conveyor	600-CV-007	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Tailing Filter Collecting Conveyor	600-CV-008	75	56	50%	30	83%	24	365	4%	9,249	67%	175,976	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	83%	217,628	55%	144,231	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-001	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-001	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-001	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-002	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-002	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-002	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-003	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-003	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-003	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-004	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-004	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-004	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-005	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-005	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-005	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-006	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-006	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-006	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Fan Motor	600-FL-007	1	0	80%	0	83%	24	365	4%	99	67%	1,877	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	83%	2,321	55%	1,538	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Oil Heater	600-FL-007	1	1	80%	1	83%	24	365	4%	257	67%	4,880	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	83%	6,036	55%	4,000	0%	-	0%	-	0%	-
Tailing Filter Hyraulic Unit Motor	600-FL-007	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Filter Area Bridge Crane	600-HO-001	44	33	80%	28	45%	24	365	2%	4,718	36%	89,773	45%	111,022	45%	111,022	45%	111,022	45%	111,022	45%	111,022	45%	111,022	45%	111,022	45%	111,022	30%	73,579	0%	-	0%	-	0%	-
Filter Discharge Conveyor Monorail Hoist	600-HO-002	8	6	80%	5	45%	24	365	2%	858	36%	16,322	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	30%	13,378	0%	-	0%	-	0%	-
Belt Reel	600-MS-001	20	15	80%	13	45%	24	365	2%	2,145	36%	40,806	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	30%	33,445	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-001	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-002	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-003	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-004	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-005	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-006	450	336	80%	288	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-007	450	336	80%	288	83%	24	365	4%	88,792	67%	1,689,370	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	83%	2,089,225	55%	1,384,622	0%	-	0%	-	0%	-
Tailings Cloth Wash Water Pump	600-PP-009	50	37	80%	32	83%	24	365	4%	9,866	67%	187,708	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	55%	153,847	0%	-	0%	-	0%	-
Tailing Filtrate Pump	600-PP-011	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Tailing Filtrate Pump	600-PP-012	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Tailing Filter Area Sump Pump	600-PP-013	20	15	80%	13	9%	24	365	0%	429	7%	8,161	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	9%	10,093	6%	6,689	0%	-	0%	-	0%	-
Tailing Sludge Recirculation Pump Motor	600-PP-016	200	149	80%	128	83%	24	365	4%	39,463	67%	750,831	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	55%	615,388	0%	-	0%	-	0%	-
Tailing Sludge Recirculation Pump Motor	600-PP-017	200	149	80%	128	83%	24	365	4%	39,463	67%	750,831	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	83%	928,544	55%	615,388	0%	-	0%	-	0%	-
Tailing Filter Area Sump Pump	600-PP-018	50	37	80%	32	9%	24	365	0%	1,072	7%	20,403	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	9%	25,232	6%	16,722	0%	-	0%	-	0%	-
Core Wash Pump	600-PP-030	30	22	80%	19	83%	24	365	4%	5,919	67%	112,625	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	55%	92,308	0%	-	0%	-	0%	-
Core Wash Pump	600-PP-031	30	22	80%	19	83%	24	365	4%	5,919	67%	112,625	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	83%	139,282	55%	92,308	0%	-	0%	-	0%	-
Cyanide Destruction Agitator	610-AG-001	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-
Cyanide Destruction Agitator	610-AG-002	150	112	80%	96	83%	24	365	4%	29,597	67%	563,123	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	83%	696,408	55%	461,541	0%	-	0%	-	0%	-

Leach Compressor	610-CM-001	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	610-CM-002	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	610-CM-003	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Leach Compressor	610-CM-004	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Sodium Metabisulfite Tank Vent Scrubber Fan Motor	610-DC-001	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Sodium Metabisulfite Monorail Hoist	610-HO-002	8	6	80%	5	45%	24	365	2%	858	36%	16,322	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	45%	20,186	30%	13,378	0%	-	0%	-	0%	-
Valves Hydraulic Power Unit	610-HY-001	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Cyanide Recovery Underflow Pump	610-PP-001	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Cyanide Recovery Underflow Pump (spare)	610-PP-002	100	75	80%	64	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Cyanide Recovery Overflow Pump	610-PP-003	250	186	80%	160	83%	24	365	4%	49,329	67%	938,539	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	83%	1,160,680	55%	769,234	0%	-	0%	-	0%	-
Cyanide Recovery Overflow Pump (spare)	610-PP-004	250	186	80%	160	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Cyanide Destruction Tail Pump	610-PP-005	100	75	80%	64	83%	24	365	4%	19,732	67%	375,416	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	83%	464,272	55%	307,694	0%	-	0%	-	0%	-
Cyanide Destruction Tail Pump (spare)	610-PP-006	100	75	80%	64	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Cyanide Destruction Area Sump Pump	610-PP-008	30	22	80%	19	9%	24	365	0%	643	7%	12,242	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	6%	10,033	0%	-	0%	-	0%	-
Cyanide Destruction Area Sump Pump	610-PP-008	30	22	80%	19	9%	24	365	0%	643	7%	12,242	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	9%	15,139	6%	10,033	0%	-	0%	-	0%	-
Cyanide Recovering Thickener	610-TH-001	11	8	80%	7	83%	24	365	4%	2,170	67%	41,296	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	83%	51,070	55%	33,846	0%	-	0%	-	0%	-
Stacking System Radial Stacker no. 2	610-CV-018	2	1	50%	1	83%	24	365	4%	247	67%	4,693	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	55%	3,846	0%	-	0%	-	0%	-
Stacking System Radial Stacker no. 2	610-CV-018	125	93	50%	50	83%	24	365	4%	15,415	67%	293,293	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	55%	240,386	0%	-	0%	-	0%	-
Stacking System Overland Conveyor no. 1 Motor	610-CV-601	200	149	50%	80	83%	24	365	4%	24,664	67%	469,269	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	55%	384,617	0%	-	0%	-	0%	-
Stacking System Overland Conveyor no. 2 Motor	610-CV-602	200	149	50%	80	83%	24	365	4%	24,664	67%	469,269	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	83%	580,340	55%	384,617	0%	-	0%	-	0%	-
Stacking System Radial Stacker no. 1 Drive	610-CV-603	2	1	50%	1	83%	24	365	4%	247	67%	4,693	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	83%	5,803	55%	3,846	0%	-	0%	-	0%	-
Stacking System Radial Stacker no. 1 Motor # 1	610-CV-603	125	93	50%	50	83%	24	365	4%	15,415	67%	293,293	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	83%	362,713	55%	240,386	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 1 Motor	610-CV-604	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 2 Motor	610-CV-605	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 3 Motor	610-CV-606	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 4 Motor	610-CV-607	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 5 Motor	610-CV-608	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 6 Motor	610-CV-609	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 7 Motor	610-CV-610	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 8 Motor	610-CV-611	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 9 Motor	610-CV-612	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 10 Motor	610-CV-613	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 11 Motor	610-CV-614	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 12 Motor	610-CV-615	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 13 Motor	610-CV-616	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
Stacking System Grasshopper Conveyor no. 14 Motor	610-CV-617	100	75	50%	40	83%	24	365	4%	12,332	67%	234,635	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	83%	290,170	55%	192,309	0%	-	0%	-	0%	-
			-	80%	-	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										45,183		859,652		1,063,121		1,063,121		1,063,121		1,063,121		1,063,121		1,063,121		1,063,121		1,063,121		704,578		-		-		-
Total kWh/year		13,563	10,114		8,002					2,304,315		43,842,236		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		35,933,465		-		-		-
Area 650,660 & 670 - Fresh Water																																				
Process Water Pump	650-PP-003	400	298	80%	256	60%	24	365	3%	57,479	49%	1,093,602	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	40%	896,325	0%	-	0%	-	0%	-
Process Water Pump	650-PP-004	400	298	80%	256	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Seal Water Pump	650-PP-005	15	11	80%	10	60%	24	365	3%	2,155	49%	41,010	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	40%	33,612	0%	-	0%	-	0%	-
Seal Water Pump	650-PP-006	15	11	80%	10	60%	24	365	3%	2,155	49%	41,010	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	60%	50,717	40%	33,612	0%	-	0%	-	0%	-
Jockey Pump	660-PP-002	2	1	80%	1	60%	24	365	3%	287	49%	5,468	60%	6,762	60%	6,762	60%	6,762	60%	6,762	60%	6,762	60%	6,762	60%	6,762	60%	6,762	40%	4,482	0%	-	0%	-	0%	-
Potable Water Pump	660-PP-004	5	4	80%	3	60%	24	365	3%	718	49%	13,670	60%	16,906	60%	16,906	60%	16,906	60%	16,906	60%	16,906	60%	16,906	60%	16,906	60%	16,906	40%	11,204	0%	-	0%	-	0%	-
Crusher Fresh Water Pump	660-PP-005	400	298	80%	256	60%	24	365	3%	57,479	49%	1,093,602	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	60%	1,352,445	40%	896,325	0%	-	0%	-	0%	-
PWTP Feed Pump	660-WT-001	2	1	80%	1	60%	24	365	3%	216	49%	4,101	60%	5,072	60%	5,072	60%	5,072	60%	5,072	60%	5,072	60%	5,072	60%	5,072	60%	5,072	40%	3,361	0%	-	0%	-	0%	-
Well #2 Pump	670-PP-001	125	93	80%	80	60%	24	365	3%	17,962	49%	341,751	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	40%	280,102	0%	-	0%	-	0%	-
Well #4 Pump	670-PP-002	200	149	80%	128	60%	24	365	3%	28,739	49%	546,801	60%	676,222	60%	676,222	60%	676,222	60%	676,222	60%	676,222	60%	676,222	60%	676,222	60%	676,222	40%	448,163	0%	-	0%	-	0%	-
Well Field Pump Level Switch	670-PP-003	125	93	80%	80	60%	24	365	3%	17,962	49%	341,751	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	60%	422,639	40%	280,102	0%	-	0%	-	0%	-
Fresh Water Booster Pump	670-PP-004	600	447	80%	384	60%	24	365	3%	86,218	49%	1,640,403	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	40%	1,344,488	0%	-	0%	-	0%	-
Fresh Water Booster Pump	670-PP-005	600	447	80%	384	60%	24	365	3%	86,218	49%	1,640,403	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	40%	1,344,488	0%	-	0%	-	0%	-
Fresh Water Booster Pump	670-PP-006	600	447	80%	384	60%	24	365	3%	86,218	49%	1,640,403	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	60%	2,028,667	40%	1,344,488	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										8,876		168,879		208,851		208,851		208,851		208,851		208,851		208,851		208,851		208,851		138,415		-		-		-
Total kWh/year		3,489	2,601		2,233					452,685		8,612,853		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		7,059,167		-		-		-
Area 800 - Reagents Systems																																				
Milk of Lime Tank Agitator	800-AG-001	15	11	80%	10	83%	24	365	4%	2,960	67%	56,312	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	55%	46,154	0%	-	0%	-	0%	-
Milk of Lime Tank Agitator	800-AG-002	15	11	80%	10	83%	24	365	4%	2,960	67%	56,312	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	55%	46,154	0%	-	0%	-	0%	-
Flocculant Mix Tank Agitator Motor	800-AG-021	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Sodium Metabisulfite Mix Tank Agitator Motor	800-AG-030	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Sodium Metabisulfite Distribution Tank Agitator Motor	800-AG-031	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Copper Sulfate Mix Tank Agitator Motor	800-AG-041	1	1	80%	1	83%	24	365	4%	158	67%	3,003	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	55%	2,462	0%	-	0%	-	0%	-
Copper Sulfate Distribution Tank Agitator Motor	800-AG-042	1	1	80%	1	83%	24	365	4%	158	67%	3,003	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	83%	3,714	55%	2,462	0%	-	0%	-	0%	-
Caustic Soda Mix Tank Agitator Motor	800-AG-050	2	1	80%	1	83%	24	365	4%	395	67%	7,508	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	83%	9,285	55%	6,154	0%	-	0%	-	0%	-
Motor for Lime Bin Activator	800-BN-001	1	1	80%	1	83%	24	365	4%	197	67%	3,754	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	83%	4,643	55%	3,077	0%	-	0%	-	0%	-
Lime Feeder Motor	800-BN-001	10	7	80%	6	83%	24	365	4%	1,973	67%	37,542	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	83%	46,427	55%	30,769	0%	-	0%	-	0%	-
Flocculant Feeder Motor	800-FE-021	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Reagent Area Bride Crane	800-HO-001	24	18	80%	15	27%	24	365	1%	1,544	22%	29,380	27%	36,334	27%	36,334	27%	36,334	27%	36,334	27%	36,334	27%	36,334	27%	36,334	27%	36,334	18%	24,080	0%	-	0%	-	0%	-
M.O.L. Distribution Pump	800-PP-001	50	37	80%	32	83%	24	365	4%	9,866	67%	187,708	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	55%	153,847	0%	-	0%	-	0%	-
M.O.L. Distribution Pump	800-PP-002	50	37	80%	32	83%	24	365	4%	9,866	67%	187,708	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	83%	232,136	55%	153,847	0%	-	0%	-	0%	-
Lime Area Sump Pump	800-PP-003	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Hydrated Lime Transfer Pump Motor	800-PP-004	15	11	80%	10	83%	24	365	4%	2,960	67%	56,312	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	83%	69,641	55%	46,154	0%	-	0%	-	0%	-
Sodium Cyanide Transfer Pump	800-PP-010	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Sodium Cyanide Distribution Pump	800-PP-011	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Sodium Cyanide Distribution Pump	800-PP-012	3	2	80%	2	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Sodium Cyanide Area Sump Pump	800-PP-013	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
General Reagent Area Sump Pump	800-PP-020	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Flocculant Transfer Pump	800-PP-021	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Flocculant Transfer Pump	800-PP-022	5	4	80%	3	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Flocculant Transfer Pump	800-PP-023	5	4	80%	3	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Sodium Metabisulfite Transfer Pump	800-PP-030	3	2	80%	2	9%	24	365	0%	64	7%	1,224	9%	1,514	9%	1,514	9%	1,514	9%	1,514	9%	1,514	9%	1,514	9%	1,514	9%	1,514	6%	1,003	0%	-	0%	-	0%	-
Sodium Metabisulfite Distribution Pump	800-PP-031	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Sodium Metabisulfite Distribution Pump	800-PP-032	3	2	80%	2	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Sodium Metabisulfite Sump Pump	800-PP-033	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Copper Sulfate Transfer Pump	800-PP-040	1	1	80%	1	9%	24	365	0%	21	7%	408	9%	505	9%	505	9%	505	9%	505	9%	505	9%	505	9%	505	9%	505	6%	334	0%	-	0%	-	0%	-
Copper Sulfate Distribution Pump	800-PP-041	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Copper Sulfate Distribution Pump	800-PP-042	3	2	80%	2	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Caustic Transfer Pump	800-PP-050	2	1	80%	1	9%	24	365	0%	43	7%	816	9%	1,009	9%	1,009	9%	1,009	9%	1,009	9%	1,009	9%	1,009	9%	1,009	9%	1,009	6%	669	0%	-	0%	-	0%	-
Caustic Distribution Pump	800-PP-051	3	2	80%	2	83%	24	365	4%	592	67%	11,262	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	83%	13,928	55%	9,231	0%	-	0%	-	0%	-
Caustic Distribution Pump	800-PP-052	3	2	80%	2	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Hydrochloric Acid Pump	800-PP-060	5	4	80%	3	83%	24	365	4%	987	67%	18,771	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	83%	23,214	55%	15,385	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										816		15,527		19,202		19,202		19,202		19,202		19,202		19,202		19,202		19,202		12,726		-		-		-
Total kWh/year		273	203		174					41,620		791,870		979,296		979,296		979,296		979,296		979,296		979,296		979,296		979,296		649,023		-		-		-

Area 906, 908, 909, 910 & 911 - Ancillaries																																				
Fuel Dispenser Pump Motor	906-PP-001	2	1	80%	1	45%	24	365	2%	161	36%	3,060	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	30%	2,508	0%	-	0%	-	0%	-
Fuel Dispenser Pump Motor	906-PP-002	2	1	80%	1	45%	24	365	2%	161	36%	3,060	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	30%	2,508	0%	-	0%	-	0%	-
Fuel Dispenser Pump Motor	906-PP-003	2	1	80%	1	45%	24	365	2%	161	36%	3,060	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	45%	3,785	30%	2,508	0%	-	0%	-	0%	-
Diesel Fuel Station Sump Pump Motor	906-PP-004	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Filling System Pump Motor	906-PP-005	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Filling System Pump Motor	906-PP-006	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Filling System Pump Motor	906-PP-007	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Fast Dispensing System Pump Motor	906-PP-008	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Fast Dispensing System Pump Motor	906-PP-009	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Air Compressor	908-CM-001	100	75	80%	64	45%	24	365	2%	10,724	36%	204,030	45%	252,322	45%	252,322	45%	252,322	45%	252,322	45%	252,322	45%	252,322	45%	252,322	45%	252,322	30%	167,225	0%	-	0%	-	0%	-
Truck Shop Overhead Crane	908-HO-001	109	81	80%	70	45%	24	365	2%	11,646	36%	221,577	45%	274,021	45%	274,021	45%	274,021	45%	274,021	45%	274,021	45%	274,021	45%	274,021	45%	274,021	30%	181,606	0%	-	0%	-	0%	-
Diesel Fuel Station Sump Pump Motor	908-PP-012	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Air Compressor	909-CM-001	75	56	80%	48	45%	24	365	2%	8,043	36%	153,023	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	45%	189,241	30%	125,419	0%	-	0%	-	0%	-
Laboratory Equipment	910-LE-001	12	9	80%	8	45%	24	365	2%	1,287	36%	24,484	45%	30,279	45%	30,279	45%	30,279	45%	30,279	45%	30,279	45%	30,279	45%	30,279	45%	30,279	30%	20,067	0%	-	0%	-	0%	-
Air Compressor Motor	911-CM-001	20	15	80%	13	45%	24	365	2%	2,145	36%	40,806	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	45%	50,464	30%	33,445	0%	-	0%	-	0%	-
Truck Wash Water Pump Motor	911-PP-001	5	4	80%	3	45%	24	365	2%	536	36%	10,202	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	45%	12,616	30%	8,361	0%	-	0%	-	0%	-
Truck Wash Dewatering Sump Pump Motor	911-PP-002	5	4	80%	3	9%	24	365	0%	107	7%	2,040	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	9%	2,523	6%	1,672	0%	-	0%	-	0%	-
Hot water Pressure Washer System	911-WA-001	9	6	80%	6	45%	24	365	2%	933	36%	17,751	45%	21,952	45%	21,952	45%	21,952	45%	21,952	45%	21,952	45%	21,952	45%	21,952	45%	21,952	30%	14,549	0%	-	0%	-	0%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										776		14,764		18,258		18,258		18,258		18,258		18,258		18,258		18,258		18,258		12,100		-		-		-
Total kWh/year		374	279		239					39,574		752,945		931,158		931,158		931,158		931,158		931,158		931,158		931,158		931,158		617,120		-		-		-
Cost per kWh																																				
Area 100,110,120 & 150 - Crushing & Ore Storage		3,924	1,622		1,390					330,448		6,287,142		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		7,775,236		5,152,995		-		-		-
Area 200,300 & 350 - Grinding and Classification		32,404	24,163		20,602					6,186,204		117,699,614		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		145,557,750		96,467,593		-		-		-
Area 400 & 450 - Leaching		4,342	3,238		2,779					847,072		16,116,510		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		19,931,101		13,209,227		-		-		-
Area 500 & 550 - Carbon Handling & Refinery		712	531		456					118,930		2,262,776		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		2,798,349		1,854,591		-		-		-
Area 800 - Reagents Systems		273	203		174					41,620		791,870		979,296		979,296		979,296		979,296		979,296		979,296		979,296		979,296		649,023		-		-		-
Area 600, 610 & 620 - Filtered Tailings		13,563	10,114		8,002					2,304,315		43,842,236		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		54,219,185		35,933,465		-		-		-
Area 650,660 & 670 - Fresh Water		3,489	2,601		2,233					452,685		8,612,853		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		10,651,416		7,059,167		-		-		-
Area 906, 908, 909, 910 & 911 - Ancillaries		362	270		232					37,511		713,698		882,622		882,622		882,622		882,622		882,622		882,622		882,622		882,622		584,953		-		-		-
Area 910 - Laboratory Equipment		12	9		8					1,313		24,973		30,884		30,884		30,884		30,884		30,884		30,884		30,884		30,884		20,468		-		-		-
Total		59,079	42,751		35,876					10,320,098		196,351,673		242,825,840		242,825,840		242,825,840		242,825,840		242,825,840		242,825,840		242,825,840		242,825,840		160,931,481		-		-		-
Unit Cost per kWh										**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**		**$0.112**
Area 100,110,120 & 150 - Crushing & Ore Storage										$37,010		$624,200.43		$637,206		$641,377		$637,901		$641,377		$641,377		$641,377		$641,377		$641,377		$409,777		$0		$0		$0
Area 200,300 & 350 - Grinding and Classification										$692,855		$13,182,357		$16,302,468		$16,302,468		$16,302,468		$16,302,468		$16,302,468		$16,302,468		$16,302,468		$16,302,468		$10,804,370		$0		$0		$0
Area 400 & 450 - Leaching										$94,872		$1,805,049		$2,232,283		$2,232,283		$2,232,283		$2,232,283		$2,232,283		$2,232,283		$2,232,283		$2,232,283		$1,479,433		$0		$0		$0
Area 500 & 550 - Carbon Handling & Refinery										$13,320		$253,431		$313,415		$313,415		$313,415		$313,415		$313,415		$313,415		$313,415		$313,415		$207,714		$0		$0		$0
Area 800 - Reagents Systems										$4,661		$88,689		$109,681		$109,681		$109,681		$109,681		$109,681		$109,681		$109,681		$109,681		$72,691		$0		$0		$0
Area 600, 610 & 620 - Filtered Tailings										$258,083		$4,910,330		$6,072,549		$6,072,549		$6,072,549		$6,072,549		$6,072,549		$6,072,549		$6,072,549		$6,072,549		$4,024,548		$0		$0		$0
Area 650,660 & 670 - Fresh Water										$50,701		$964,640		$1,192,959		$1,192,959		$1,192,959		$1,192,959		$1,192,959		$1,192,959		$1,192,959		$1,192,959		$790,627		$0		$0		$0
Area 906, 908, 909, 910 & 911 - Ancillaries										$4,201		$79,934		$98,854		$98,854		$98,854		$98,854		$98,854		$98,854		$98,854		$98,854		$65,515		$0		$0		$0
Area 910 - Laboratory Equipment										$147		$2,797		$3,459		$3,459		$3,459		$3,459		$3,459		$3,459		$3,459		$3,459		$2,292		$0		$0		$0
Total										$1,155,851		$21,911,428		$26,962,873		$26,967,045		$26,963,569		$26,967,045		$26,967,045		$26,967,045		$26,967,045		$26,967,045		$17,856,967		$0		$0		$0
									Tonnes	-		1,150,000		3,360,000		3,300,000		3,350,000		3,300,000		3,300,000		3,300,000		3,300,000		3,300,000		2,407,000		-		-		0
									$/Tonne Credit	-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953
									RopeCon Credit	$0		-$79,960		-$233,621		-$229,449		-$232,926		-$229,449		-$229,449		-$229,449		-$229,449		-$229,449		-$167,359		$0		$0		$0

22 ECONOMIC ANALYSIS

Key Points:

- Economic Analysis based on model prepared by M3, assumes no financing costs and no hedging
- Project capital cost as per definitive estimate of $800 M; excluding pre-production revenues.
- Project Capital period from start of construction Q4 2013 to Q1 2016, Q2 2016 to 2025 operating
- Metal prices used for base case $1,200/oz gold, and $20/oz Silver
- ELG Mine provides the following economic results over mine life

Cumulative Cash Flow (US$M)	1,036
After Tax NPV @ 5% (US$ M)	605
After Tax IRR (%)	15.7
Capex Payback (Years)	5.0
2017 EBITDA (US$ M)	259

22.1 INTRODUCTION

The following section presents the results of the economic analysis of the ELG Mine plan which was completed to a feasibility level of detail. The financial evaluation presents the determination of the Net Present Value (NPV), payback period (time in years to recapture the initial capital investment), and the Internal Rate of Return (IRR) for the ELG Mine. Annual cash flow projections were estimated over the life of the mine based on the estimates of capital expenditures and production cost and sales revenue. The sales revenue is based on the production of gold and silver doré. The estimates of capital expenditures and site production costs have been developed specifically for this mine and have been presented in earlier sections of this report.

22.2 MINE PRODUCTION STATISTICS

Mine production is reported as ore and waste from the mining operation. The annual production figures were obtained from the mine plan as reported earlier in this report.

The life of mine ore and waste quantities and ore grade are presented in Table 22-1. This is for material mined after December 31, 2014.

Table 22-1: Life of Mine Ore, Waste Quantities, and Ore Grade

	Tonnes	Gold Grade	Silver Grade
	(kt)	(g/t)	(g/t)
Ore	47,560	2.70	4.38
Waste	274,389	-	-
Total Tonnes Mined	321,948	-	-

22.3 PLANT PRODUCTION STATISTICS

The design basis for the process plant is 14,000 tonnes per day at 92% mill availability. The gold recovery is projected to average 87.1% for gold and 32.5% for silver over the life of the mine. For the financial model, recoveries are calculated for each period using the equations, and recovered gold accumulated to estimate an average LOM recovery. This method, which reflects variations in head grades over the mine life, gives marginally different LOM overall recoveries versus applying the recovery formulas to LOM average head grades as shown in Table 13-11. In addition, the financial model imposes reduction in recoveries during startup in the overall recovery estimates.The estimated metal production is estimated to be 3.6 million ounces of gold and 2.2 million ounces of silver.

	Tonnes	Gold Grade	Silver Grade
	(kt)	(g/t)	(g/t)
Ore Processed*	47,950	2.69	4.36

* accounts for processing of stockpiled ore at the end of 2014

22.3.1 Refinery Return Factors

The refining, transportation and insurance charges are based on the current agreement Torex has with Asahi Holding Inc. "Asahi" (formerly Johnson Mathey Refining).

22.3.2 Capital Expenditure

22.3.2.1 Initial Capital

The base case financial indicators have been determined with 100% equity financing of the initial capital. Any acquisition cost or expenditures prior to start of the full project period have been treated as "sunk" cost and have not been included in the analysis.

The total initial capital carried in the financial model for new construction and pre-production mine development is expended over a three year period. The initial capital includes Owner's costs and contingency. The cash flow is shown being expended in the years before production with some carried over into the first production year. This capital cost is as per the definitive estimate, and is net of revenue of gold and silver produced during the pre-production period.

Presented below is the initial capital.

Table 22-2: Initial Capital

	In Millions
Mining	150.8
Process Plant	555.1
Owner's Cost	94.1
Pre-production revenues	-34.0
Total	766.0

22.3.3 Sustaining Capital

A schedule of capital cost expenditures during the production period was estimated and included in the financial analysis under the category of sustaining capital. The total life of mine sustaining capital is estimated to be $98.3million. This capital will be expended during a 7 year period.

22.3.4 Working Capital

A 12 day delay of receipt of revenue from sales is used for accounts receivables. A delay of payment for accounts payable of 30 days is also incorporated into the financial model. In addition, working capital allowance of $6.8 million for plant consumable inventory is estimated in year -1 and year 1. All the working capital is recaptured at the end of the mine life and the final value of these accounts is $0.

22.3.5 Salvage Value

A $13.6 million allowance for salvage value has been included in the cash flow analysis at the end of mine life. Salvage value is 10% of the purchase price of the equipment purchased.

22.4 REVENUE

Annual revenue is determined by applying estimated metal prices to the annual payable metal estimated for each operating year. Sales prices have been applied to all life of mine production without escalation or hedging. The revenue is the gross value of payable metals sold before treatment charges and transportation charges. Metal sales prices used in the evaluation are as follows:

Table 22-3: Gold and Silver Prices

Gold	$1,200.00
Silver	$20.00

22.5 OPERATING COST

The average Cash Operating Cost over the life of the mine is estimated to be $34.06 per metric tonne of ore processed, excluding the cost of the capitalized pre-stripping and operating cost. Cash Operating Cost includes mine operations, process plant operations, general administrative cost, smelting and refining charges and shipping charges. Table 22-4 shows the estimated operating cost by area per metric tonne of ore processed (after pre-production period).

Table 22-4: Operating Cost

Operating Cost	$/ore tonne
Mine	$13.70
Process Plant	$16.04
General Administration	$4.13
Smelting/Refining Treatment	$0.19
Total Operating Cost	$34.06

22.6 TOTAL CASH COST

The average Total Cash Cost over the life of the mine is estimated to be $38.05 per metric tonne of ore processed. Total Cash Cost is the Total Cash Operating Cost plus royalties, salvage value and reclamation and closure costs.

22.6.1 Royalty

A royalty payment is based on 2.5% of the gross metal sales starting the first year of production. The estimated royalty payments are $108.5 million.

22.6.2 Reclamation & Closure

An allowance of $93.9 million for the cost of reclamation and closure of the ELG Mine has been included in the cash flow projection.

22.6.3 Depreciation

Depreciation was calculated using the straight line method using a 10 year life. The depreciation includes a beginning balance of $2.9 million for assets acquired before the analysis. The last year of production is the catch-up year if the assets are not fully depreciated by that time.

22.7 TAXATION

22.7.1 Mining Royalties

Production costs include two mining royalty taxes:

- A 7.5% royalty tax has been applied to include from mining activities. The tax is calculated on a base of earnings before interest, taxes depreciation and amortization (i.e. EBITDA),
- A 0.5% royalty tax on revenue from precious metals.

22.7.2 Corporate Income Tax

The ELG Mine is evaluated with a 30% corporate tax based taxable income from the operations. A loss carry forward of $60.4 million and other deductions for expenditures of $144.7 million were included in the tax calculation.

Corporate income taxes paid are estimated to be $417.8 million.

22.8 ELG MINE FINANCING

It is assumed the mine will be all equity financed.

22.9 NET INCOME AFTER TAX

Net Income after Tax amounts to $1,033.6 million.

22.10 NPV AND IRR

The economic analysis indicates that the ELG Mine has an Internal Rate of Return (IRR) of 15.7% with a payback period of 5.0 years after taxes. Table 22-5 below compares the base case financial indicators with the financial indicators for other cases when the metal sales price, the amount of capital expenditures, the operating cost, and ore grade are varied from the base case. This continues to reinforce the fact that the ELG Mine is most sensitive to changes in gold prices and grade and less so to changes in capital and operating costs.

Table 22-5: Sensitivity Analysis ($M) – After Taxes

	NPV @ 0%	NPV @ 5%	NPV @ 8%	IRR%	Payback (yrs)
Base Case	$1,036	$605	$413	15.7%	5.0
Gold Price $1,400	$1,487	$950	$711	21.0%	4.0
Gold Price $1,300	$1,262	$778	$562	18.4%	4.5
Gold Price $1,100	$811	$432	$264	12.9%	5.7
Gold Price $1,000	$586	$260	$114	9.8%	6.5
Iniital Capital +15%	$949	$510	$314	13.1%	5.6
Iniital Capital +10%	$978	$541	$347	13.9%	5.4
Iniital Capital +5%	$1,007	$573	$380	14.8%	5.2
Iniital Capital - 5%	$1,066	$637	$446	16.8%	4.8
Iniital Capital - 10%	$1,095	$668	$479	17.9%	4.6
Iniital Capital -15%	$1,124	$700	$512	19.1%	4.4
Operating Cost +15%	$880	$484	$307	13.7%	5.6
Operating Cost +10%	$932	$524	$343	14.4%	5.4
Operating Cost +5%	$984	$565	$378	15.1%	5.2
Operating Cost - 5%	$1,089	$645	$448	16.4%	4.9
Operating Cost - 10%	$1,141	$686	$483	17.0%	4.7
Operating Cost -15%	$1,193	$726	$518	17.7%	4.6
Ore Grade +15%	$1,445	$918	$683	20.5%	4.1
Ore Grade +10%	$1,309	$814	$593	19.0%	4.4
Ore Grade +5%	$1,173	$710	$503	17.4%	4.7
Ore Grade - 5%	$900	$501	$323	14.0%	5.4
Ore Grade - 10%	$764	$396	$232	12.3%	5.9
Ore Grade -15%	$628	$292	$142	10.4%	6.4

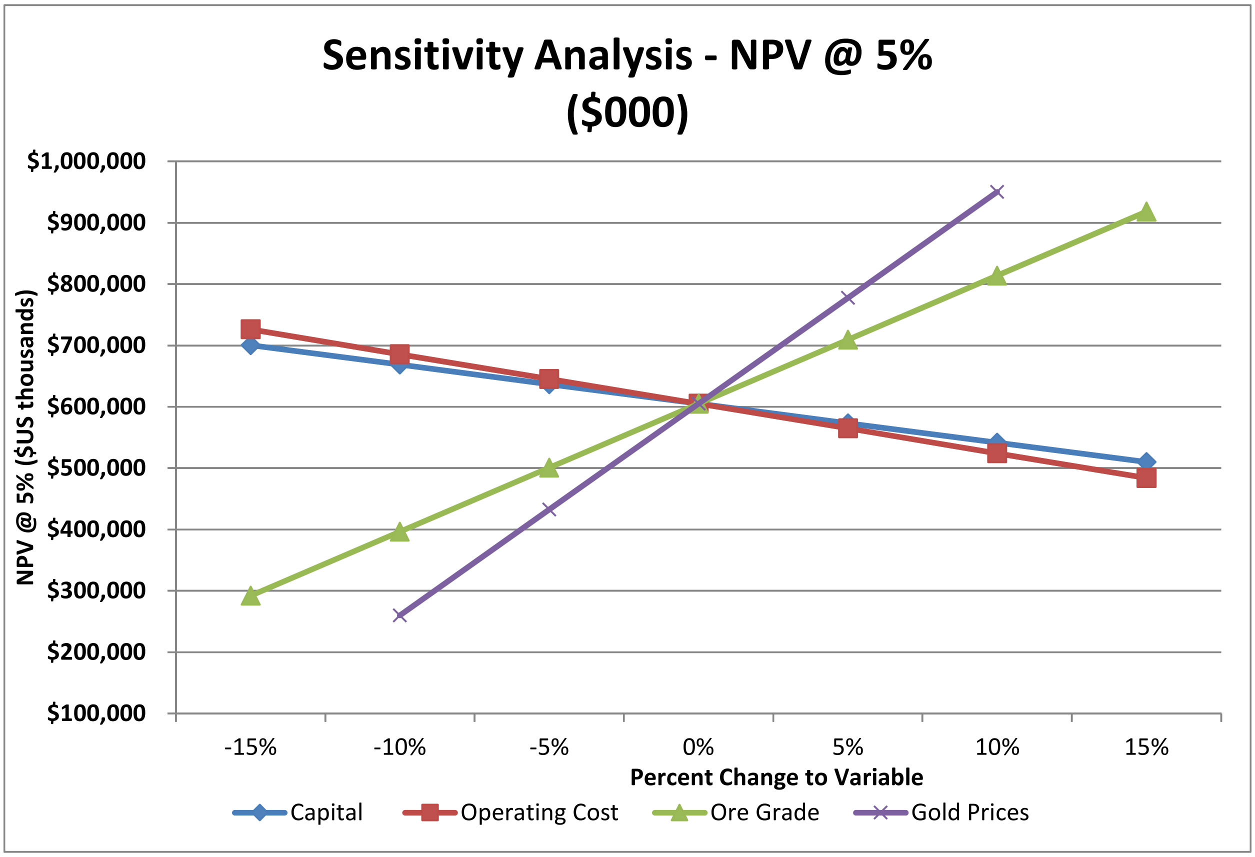


Figure 22-1: Sensitivity Analysis – NPV @ 5% - After Taxes ($000)

Table 22-6: Base Case Detail Financial Model

14,000 TPD	Total	2013 -2	2014 -1	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2025 11	2026 12	2027 13	2028 14	2029 15
Mining Operations																		
Ore																		
Beginning Inventory (kt)	47,560	47,560	47,560	47,560	46,027	42,665	37,605	33,267	28,451	23,033	17,700	13,289	7,130	2,043	(0)	(0)	(0)	(0)
Mined (kt)	47,560	-	-	1,533	3,362	5,060	4,339	4,816	5,418	5,333	4,411	6,159	5,087	2,043	-	-	-	-
Ending Inventory (kt)	-	47,560	47,560	46,027	42,665	37,605	33,267	28,451	23,033	17,700	13,289	7,130	2,043	(0)	(0)	(0)	(0)	(0)
Gold Grade (g/t)	2.701	-	-	2.787	2.285	2.691	2.285	2.242	2.373	2.397	2.807	3.758	2.921	3.010	-	-	-	-
Silver Grade (g/t)	4.376	-	-	5.076	5.673	7.099	6.792	3.187	3.662	3.043	3.312	4.460	2.965	3.584	-	-	-	-
Contained Gold (kozs)	4,130	-	-	137	247	438	319	347	413	411	398	744	478	198	-	-	-	-
Contained Silver (kozs)	6,692	-	-	250	613	1,155	947	493	638	522	470	883	485	235	-	-	-	-
Waste																		
Beginning Inventory(kt)	274,389	274,389	274,389	274,389	260,763	241,420	212,106	181,907	148,238	115,317	81,560	49,531	23,316	5,019	0	0	0	0
Mined (kt)	274,389	-	-	13,625	19,343	29,314	30,199	33,669	32,921	33,756	32,029	26,216	18,297	5,019	-	-	-	-
Ending Inventory (kt)	-	274,389	274,389	260,763	241,420	212,106	181,907	148,238	115,317	81,560	49,531	23,316	5,019	0	0	0	0	0
Total Material Mined (kt)	321,948	-	-	15,158	22,706	34,373	34,538	38,485	38,339	39,089	36,440	32,374	23,383	7,063	-	-	-	-
Process Plant Operations																		
Beginning Ore Inventory (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mined Ore to Concentrator (kt)	47,950	-	-	214	4,075	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	3,340	-	-	-	-
Mined Ore - Processed (kt)	47,950	-	-	214	4,075	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	3,340	-	-	-	-
Ending Ore Inventory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold Grade (g/t)	2.690	-	-	2.402	2.411	2.670	2.286	2.247	2.379	2.399	2.748	3.767	2.912	3.226	-	-	-	-
Silver Grade (g/t)	4.357	-	-	4.426	5.474	7.047	6.499	3.240	3.678	3.047	3.351	4.485	2.954	3.826	-	-	-	-
Contained Gold (kozs)	4,148	-	-	17	316	433	370	364	386	389	445	610	472	346	-	-	-	-
Contained Silver (kozs)	6,716	-	-	30	717	1,142	1,053	525	596	494	543	727	479	411	-	-	-	-
Recovery Gold (%)	87.1%	0.0%	0.0%	58.4%	87.1%	88.9%	87.4%	85.8%	86.7%	87.3%	87.0%	88.1%	87.0%	85.9%	0.0%	0.0%	0.0%	0.0%
Recovery Silver (%)	32.5%	0.0%	0.0%	15.9%	33.9%	34.1%	32.6%	30.9%	31.9%	32.7%	31.6%	31.8%	31.7%	32.2%	0.0%	0.0%	0.0%	0.0%
Recovered Gold (kozs)	3,612	-	-	10	275	385	324	312	334	339	387	538	411	298	-	-	-	-
Recovered Silver (kozs)	2,181	-	-	5	243	389	343	162	190	161	172	231	152	132	-	-	-	-
Payable Metals																		
Payable Gold (kozs)	3,609	-	-	10	275	384	323	312	334	339	387	538	410	297	-	-	-	-
Payable Silver (kozs)	2,170		-	5	242	387	341	161	189	161	171	230	151	132	-	-	-	-
Income Statement ($000)																		
Metal Prices				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Gold ($/oz)	$ 1,200.00	$ -	$ -	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00
Silver ($/oz)	$ 20.00	$ -	$ -	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00
Revenues																		
Gold Revenue ($ 000)	$ 4,296,582	$ -	$ -	$ -	$ 307,018	$ 461,110	$ 387,982	$ 374,424	$ 400,895	$ 406,704	$ 464,326	$ 645,050	$ 492,231	$ 356,842	$ -	$ -	$ -	$ -
Silver Revenue ($ 000)	$ 42,989	$ -	$ -	$ -	$ 4,522	$ 7,748	$ 6,826	$ 3,226	$ 3,784	$ 3,213	$ 3,417	$ 4,599	$ 3,019	$ 2,634	$ -	$ -	$ -	$ -
Total Revenues	$ 4,339,571	$ -	$ -	$ -	$ 311,539	$ 468,858	$ 394,809	$ 377,650	$ 404,679	$ 409,918	$ 467,743	$ 649,649	$ 495,250	$ 359,477	$ -	$ -	$ -	$ -
Operating Cost																		
Mining	$ 648,722	$ -	$ -	$ -	$ 50,649	$ 80,696	$ 70,026	$ 69,322	$ 69,886	$ 72,719	$ 78,804	$ 76,313	$ 57,093	$ 23,215	$ -	$ -	$ -	$ -
Process Plant	$ 759,825	$ -	$ -	$ -	$ 60,114	$ 80,728	$ 80,732	$ 80,729	$ 80,732	$ 80,732	$ 80,732	$ 80,732	$ 80,732	$ 53,862	$ -	$ -	$ -	$ -
General Administration	$ 195,524	$ -	$ -	$ -	$ 17,173	$ 20,411	$ 20,244	$ 20,097	$ 19,950	$ 19,851	$ 19,851	$ 19,851	$ 19,851	$ 18,246	$ -	$ -	$ -	$ -
Treatment & Refining Charges	$ 10,118	$ -	$ -	$ -	$ 835	$ 1,329	$ 1,142	$ 841	$ 926	$ 891	$ 998	$ 1,375	$ 1,012	$ 768	$ -	$ -	$ -	$ -
Total Operating Cost	$ 1,614,190	-	-	-	128,772	183,164	172,145	170,989	171,494	174,193	180,385	178,272	158,687	96,090	-	-	-	-

14,000 TPD	Total	2013 -2	2014 -1	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2025 11	2026 12	2027 13	2028 14	2029 15
Royalty	108,489		-	-	7,788	11,721	9,870	9,441	10,117	10,248	11,694	16,241	12,381	8,987	-	-	-	-
Salvage Value	(13,571)		-	-	-	-	-	-	-	-	-	-	-	-	(13,571)	-	-	-
Reclamation & Closure	93,880		-	-	-	-	-	-	-	-	-	-	-	-	42,403	44,881	2,207	4,390
Total Production Cost	1,802,988	-	-	-	136,560	194,885	182,015	180,430	181,611	184,441	192,079	194,513	171,068	105,077	28,831	44,881	2,207	4,390
Operating Income	2,536,583	-	-	-	174,979	273,973	212,794	197,219	223,068	225,477	275,664	455,136	324,181	254,400	(28,831)	(44,881)	(2,207)	(4,390)
Initial Capital Depreciation	768,862				-	76,886	76,886	76,886	76,886	76,886	76,886	76,886	76,886	76,886	76,886	-	-	-
Sustaining Capital Depreciation	98,323				-	6,288	7,786	8,110	9,090	9,764	9,796	9,832	9,832	27,824	-	-	-	-
Total Depreciation	867,184	-	-	-	-	83,174	84,672	84,996	85,976	86,650	86,683	86,718	86,718	104,710	76,886	-	-	-
Net Income After Depreciation	1,669,399	-	-	-	174,979	190,799	128,122	112,223	137,092	138,826	188,982	368,418	237,463	149,690	(105,717)	(44,881)	(2,207)	(4,390)
Mining Royalty	196,267			-	-	13,123	20,548	15,960	14,791	16,730	16,911	20,675	34,135	24,314	19,080	-	-	-
Gold & Silver Royalty	21,698			-	-	1,558	2,344	1,974	1,888	2,023	2,050	2,339	3,248	2,476	1,797	-	-	-
Net Income after Royalties	1,451,434			-	174,979	176,118	105,230	94,289	120,412	120,073	170,021	345,404	200,080	122,900	(126,595)	(44,881)	(2,207)	(4,390)
Income Taxes	417,820			-	16,197	48,494	27,227	23,945	31,782	31,680	46,665	99,279	55,682	36,870	-	-	-	-
Net Income After Taxes	1,033,613	-	-	-	158,782	127,624	78,003	70,344	88,630	88,393	123,357	246,125	144,398	86,030	(126,595)	(44,881)	(2,207)	(4,390)
Cash Flow																		
Operating Income after Depreciation	1,451,434	-	-	-	174,979	176,118	105,230	94,289	120,412	120,073	170,021	345,404	200,080	122,900	(126,595)	(44,881)	(2,207)	(4,390)
Add Back Depreciation	867,184	-	-	-	-	83,174	84,672	84,996	85,976	86,650	86,683	86,718	86,718	104,710	76,886	-	-	-
Working Capital																		
Account Recievable (15 days)	-	-	-	-	(10,242)	(5,172)	2,435	564	(889)	(172)	(1,901)	15,378	-	-	-	-	-	-
Accounts Payable (30 days)	-	-	-	-	10,584	4,471	(906)	(95)	42	222	509	(174)	(1,610)	(5,145)	(7,898)	-	-	-
Inventory - Parts, Supplies	0	-	-	(4,750)	(2,036)	-	-	-	-	-	-	-	-	6,786	-	-	-	-
Total Working Capital	0	-	-	(4,750)	(1,694)	(702)	1,529	469	(847)	50	(1,392)	15,204	(1,610)	1,641	(7,898)	-	-	-
Capital Expenditures																		
Initial Capital																		
Mine	150,808	13,640	81,774	47,052	8,342	-	-	-	-	-	-	-	-	-	-	-	-	-
Process Plant	555,061	-	235,783	300,673	18,595	-	-	-	-	-	-	-	-	-	-	-	-	-
Owners Cost	94,141	22,684	27,119	27,661	16,677	-	-	-	-	-	-	-	-	-	-	-	-	-
Pre-production Revenues	(34,032)			(11,372)	(22,660)													
Sustaining Capital																		
Mine	69,611	-	-	-	34,168	14,976	3,244	9,800	6,742	321	359	-	-	-	-	-	-	-
Process Plant	28,712	-	-	-	28,712	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital Expenditures	864,291	36,324	344,676	364,015	83,833	14,976	3,244	9,800	6,742	321	359	-	-	-	-	-	-	-
Cash Flow before Taxes	1,454,328	(36,324)	(344,676)	(368,765)	89,452	243,615	188,186	169,955	198,799	206,452	254,953	447,327	285,188	229,251	(57,606)	(44,881)	(2,207)	(4,390)
Cummulative Cash Flow before Taxes		(36,324)	(381,000)	(749,765)	(660,313)	(416,699)	(228,513)	(58,557)	140,242	346,693	601,646	1,048,973	1,334,161	1,563,412	1,505,805	1,460,925	1,458,718	1,454,328
Taxes																		
Income Taxes	417,820	-	-	-	16,197	48,494	27,227	23,945	31,782	31,680	46,665	99,279	55,682	36,870	-	-	-	-
Cash Flow after Taxes	1,036,508	(36,324)	(344,676)	(368,765)	73,254	195,121	160,959	146,010	167,017	174,772	208,288	348,048	229,506	192,381	(57,606)	(44,881)	(2,207)	(4,390)
Cummulative Cash Flow after Taxes		(36,324)	(381,000)	(749,765)	(676,510)	(481,389)	(320,430)	(174,420)	(7,403)	167,369	375,657	723,704	953,211	1,145,592	1,087,985	1,043,106	1,040,898	1,036,508

Economic Indicators before Taxes	$ 2,894	
NPV @ 0%	0%	$1,454,328
NPV @ 5%	5%	$915,073
NPV @ 10%	10%	$542,893
IRR		20.1%
Payback	Years	4.3
Economic Indicators after Taxes		
NPV @ 0%	0%	$1,036,508
NPV @ 5%	5%	$605,013
NPV @ 10%	10%	$305,573
IRR		15.7%
Payback	Years	5.0

23 ADJACENT PROPERTIES

This section is not relevant to this report.

24 OTHER RELEVANT DATA AND INFORMATION - MEDIA LUNA PROJECT PRELIMINARY ECONOMIC ASSESSMENT

24.1 SUMMARY

Section 24 of the technical report has been prepared to disclose relevant information concerning the PEA for the ML Project. Within this section the conceptual mining plan for the ML Project and the alternate mining plan for the ELG Mine is described along with the resulting financial indicators from this conceptual mining plan. The PEA is preliminary in nature. It includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results set forth in the PEA will be realized. Mineral resources that are not mineral reserves do not demonstrate economic viability.

An excutive summary on the ML PEA was presented in Section 1 of this report. For brevity the key concepts of this study are presented below, followed by summaries for each sub section of section 24:

- ML resource processed through an existing/enhanced ELG Process Plant
- ML resource recovered via underground mining methods
- ML resource transported to ELG plant site via an underground/aerial/underground conveyor (RopeCon)
- Access for personnel and material to ML would be via a tunnel from the ELG Mine site
- ELG mining plan altered to make “room” for ML resource in ELG process plant. This Alternate ELG mining plan is the same as presented in section 16 but with preferential feeding of higher grade ELG feed to the process plant and stockpiling of lower grade material. This change would occur in 2020, with material continued to be drawing of stockpile till 2031

24.1.1 ML Project PEA Key Project Data

To identify the incremental benefit of the ML Project a conceptual combined mine plan was developed for ML and the ELG Mine. The economic results for the ELG LOM (presented in section 22) were then subtracted from the financial projections of this conceptual mine plan to give financial projections for the ML Project. This approach demonstrates the potential incremental benefit of the ML Project to Torex.

Table 24-1 summarizes the key project data for the ML-ELG Conceptual project plan. Table 24-2 presents the before and after tax incremental benefit of the ML Project. Unless noted otherwise, the currency used in the technical report is U.S. dollars.

Table 24-1: ML-ELG Key Conceptual Project Data

Mining	
El Limón Guajes (ELG)	
Ore (ktonnes) (not including stockpile)	47,560
Gold Grade (g/t)	2.70
Silver Grade (g/t)	4.38
Waste (ktonnes)	274,389
Total Tonnes Mined (ktonnes)	321.948
Media Luna (ML)	
Mineralized Material (ktonnes)	30,964
Copper Grade (%)	1.03%
Gold Grade (g/t)	2.563
Silver Grade (g/t)	27.435
Total Tonnes Mined (ktonnes)	30,964
Process Plant	
Ore Milled (ktonnes)	78,914
Bullion Production	
Gold Production (kozs)	4,334
Gold Recovery - %	64.7%
Silver Production (kozs)	4,087
Silver Recovery - %	12.0%
Copper Concentrate Production	
Copper Concentrate (ktonnes)	1,190
Copper Production (klbs)	629,764
Copper Recovery %	90.0%
Gold Production (kozs)	1,531
Gold Recovery - %	60.0%
Silver Production (kozs)	22,395
Silver Recovery - %	82.0%
Metal Prices	
Copper ($/lb)	$3.00
Gold ($/oz)	$1,200
Silver ($/oz)	$20
ML-ELG Economic Indicators Before Taxes	
Revenues ($000)	$9,248,357
Initial Capital – ELG ($000)	$800
Initial Capital – ML ($000), Including mine pre-development prior to production	$481,807
Sustaining Capital – ELG ($000)	$99,613
Sustaining Capital – ML ($000) Including mine development	$109,051
Mining Cost - ELG ($/tonne mined)	$2.19
Mining Cost - ML ($/tonne mined)	$27.41
Mining Cost ($/tonne milled)	$19.32
Concentrator Operating Cost ($/tonne milled)	$17.81
General Administration Cost ($/tonne milled)	$4.81
Treatment & Refining Charges ($/tonne milled)	$4.33
Total Operating Cost ($/tonne milled)	$46.27
Average Cash Cost per oz Au Eq	$555
Average AISC per oz Au Eq	$634
NPV @ 0% ($M)	$3,408
NPV @ 5% ($M)	$1,842
NPV @ 10% ($M)	$1,255
IRR %	22.2%
Payback - years	6.3
ML-ELG Economic Indicators After Taxes	
NPV @ 0% ($M)	$2,438
NPV @ 5% ($M)	$1,252
NPV @ 8% ($M)	$805
IRR %	18.3%
Payback – years	6.9

Table 24-2: ML Incremental Project Financial Data

	Before Taxes	After Taxes
After Tax IRR	27.5%	24.6%
After Tax NPV @ 5% ($M)	$1,038	$729
After Tax NPV @ 8% ($M)	$709	$488
Cumulative Undiscounted Cash Flow ($M)	$1,954	$1,402
CAPEX Payback (years)	2.5	3.7
Mine Life (years)	13	13

24.1.2 Property Description and Ownership

The ML Project is located in Guerrero State, Mexico, approximately 200 km south–southwest of Mexico City. The project consists of a skarn-hosted copper–gold–silver deposit at Media Luna and a number of prospects. Approximate centroids for the Media Luna deposit are 17.9597 N, 99.7322 W.

See section 4 of the report for additional information.

24.1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The ML Project is located approximately 48 km south–southwest of Iguala and 13 km west of Mezcala. The ML deposit can be accessed from ELG Mine site by crossing El Caracol reservoir by boat and then via a 4.5 km single-lane gravel road or by gravel road from Mezcala (~22km).

See section 5 of the report for additional information.

24.1.4 History

See section 6 of the report for additional information.

24.1.5 Geological Setting and Mineralization

See section 7 of the report for additional information.

24.1.6 Deposit Types

See section 8 of the report for additional information.

24.1.7 Exploration

See section 9 of the report for additional information.

24.1.8 Drilling

See section 10 of the report for additional information.

24.1.9 Sample Preparation, Analyses, and Security

See section 11 of the report for additional information.

24.1.10 Data Verification

See section 12 of the report for additional information.

24.1.11 Mineral Processing and Metallurgical Testing

Metallurgical testing on the ML resource material was conducted for Torex by SGS in Tucson, Arizona. This work was completed to establish a conceptual design criteria for the mineral extraction process from this resource.

The process considered in the PEA for the Media Luna resource is standard Cu-Au flotation followed by agitated cyanide leaching of the flotation tails. The results of the test work indicate that there are no deleterious elements present in sufficient quantity that would have a significant impact on processing the material.

The estimated overall metal recoveries of the Media Luna metallurgical study is 88% for gold, 89% for silver, and 90% for copper.

24.1.12 Mining Methods

Mining methods proposed are transverse longhole open stoping (LHOS) (66% of production) and cut and fill stoping (C&F) (34% of production). In the conceptural mine plan, Media Luna is anticipated to begin production in 2020 at 7,000 tonnes per day feed to the processing plant. At this time, plant feed from ELG would be reduced by 7,000 tonnes per day to keep the overall feed to the process plant at 14,000 tonnes per day. Mining rate would remain constant for ELG, and ore would be preferentially sent to the process plant based on grade. The remainder of the open pit ore material would be stockpiled and fed to the process plant at the end of mine life.

24.1.13 ELG Open Pit Mining within Conceptual PEA Plan

ELG plant feed as presented in Section 16.12 of this report is scheduled at 14,000 tpd (5040 ktpa) for about 8.5 years starting in late 2016. This production schedule is referred to as the ELG base case mine plan. For the purposes of the Media Luna PEA, an alternate ELG Mine plan has been developed with the objective of reducing ELG plant feed to 7,000 tpd starting in 2020. The remaining 7,000 tpd of plant feed from 2020 onward is expected to be sourced from Media Luna underground.

24.1.14 Media Luna Underground Mining

24.1.14.1 Mining Concept

Media Luna (ML) is a shallow dipping skarn deposit with a dip of approximately 35° to the south west and mineralization thickness varying between 5 m and 70 m. The mineralized skarn is located between marble hanging wall and granodiorite footwall.

A review of the ML resource identified two distinct and separate areas of higher tonnage and grade. Based on this assessment a conceptual mining plan was developed which establishes two independent mining zones. The plan provides operational flexibility for planning and scheduling while targeting high grade material early in production life. The conceptual mine design considers the two zones as independent mining areas that share a main materials handling system to transport mineralized material across the Balsas River to the ELG process plant. Processing of the ML mineralized material would take place in the existing/enhanced ELG process plant.

24.1.14.2 Mine Access

Access to the Media Luna resource during the production period would be from the ELG site via an access tunnel which originates from the ELG site and would be driven beneath Balsas River to connect with the Lower Zone development. During the development phase, two additional accesses are planned from the south side of Media Luna Ridge, named the Upper Zone South Access and San Miguel Access. These tunnels would provide early access for underground diamond drilling and development of the deposit. The Media Luna Main Access would provide the primary access for personnel and material during production, and the North RopeCon/Upper Zone RopeCon tunnels would be used for materials handling by the rope conveyor (RopeCon) system.

24.1.14.3 Mining Method Selection

Based on a review of the geology and shape of the Media Luna resource along with a high level geotechnical review, LHOS was selected as the main mining method. In areas where the resource is narrow, C&F stoping would be utilized. Based on the conceptual mine plan, LHOS would contribute approximately 66% of the total production with the remaining 34% being C&F.

24.1.14.4 RopeCon Conveyor System

RopeCon was the preferred material handling system and was chosen based on safety, efficiency, and low environmental impact, while also providing a means for delivery of filtered tailings to the backfill plant. The system consists of two separate conveyors, Lower zone RopeCon and ML Main RopeCon.

24.1.14.5 Potential Mining Inventory

Cut-off grade of 2.6 g/t AuEQ was used for the upper and lower zones (for both LHOS and C&F). Cut-off grade for the EPO zone was 4.0 g/t AuEQ and 3.5 g/t for LHOS and C&F respectfully. Unplanned dilution was estimated at 8.7% (at 0.76 g/t AuEQ) for the LHOS and 10% (at 0.68 g/t AuEQ) for the C&F. Mining recovery ranges from 80% to 95% depending on the mining method. Unplanned dilution ranges from 8% to 10%. The potential mining inventory was estimated at 31M tonnes at 2.56 g/t Au, 27.43 g/t Ag and 1.03% Cu for an equivalent grade of 4.77 g/t AuEQ.

24.1.14.6 Underground Development

Total underground development was estimated at 122,700 meters, including main accesses, ramps, sublevels and raises. ML Project development amounts to 41,240 meters, during the intial capital phase, and 81,460 meters during the sustaining capital phase.

24.1.14.7 Geotechnical Considerations

Initial geotechnical assessment anticipates good ground conditions with minor areas of poor ground. The assessment was based on existing information: core logs, RQD data, and high quality core photos. A 25 meter stand-off pillar was used for permanent development headings. Three types of ground conditions (good, poor and very poor) were identified for development and ground support requirements selected for each condition.

24.1.14.8 Labor Requirements

Initial access/mine development would be conducted by a mining contractor during the first 4 years of development, with company crews phasing in during years 2 and 3 and continuing until end of project life. A training period for company crews is planned to begin in Year 2. The steady state workforce would be approximately 310 employees.

24.1.14.9 Ventilation and Backfill

A pull ventilation system has been designed for ML including six exhaust raises developed from the underground workings to surface. Each raise would be fitted with a high performance fan exhausting air from the underground. The negative pressure from these fans draws fresh air into the surface access ramps, as well as one fresh air raise. All raises to surface would be raisebored at a diameter of 4m. Based on the anticipated equipment list, the overall airflow was estimated at 800 m^3/s. The criteria used to determine air quantities is 0.06 m^3/s per kW of diesel power.

Both C&F and LHOS methods would require backfill. When waste rock is available, the post pillar cut and fill stopes and secondary longhole open stopes would be filled with waste rockfill. The remaining stopes, as well as the primary longhole open stopes would be filled with cemented paste backfill. Cement content wouldl be dependent on mining sequence and geotechnical requirements.

24.1.15 Recovery Methods and ML Project Infrastructure

24.1.15.1 Process Plant

The following is the listing of the process operations that would be used to extract copper, gold and silver from the Media Luna mineralized material:

- Primary crushing
- SAG Mill/Ball Mill Grinding
- Cu-Au flotation
- Cu-Au flotation tails dewatering
- Cu-Au concentrate dewatering and handling
- Cu-Au flotation tails leaching
- Carbon-in-Pulp process
- Tailings Handling and disposal
- Reagent storage, preparation and distribution

24.1.15.2 Waste Disposal

The conceptual plan for tailings from the processing of the ML resource would be for placement in one of three areas, the existing ELG TDS, a TDS to be developed in the Guajes Pit once it is mined out or underground as backfill.

The conceptual plan for waste rock from the development of the ML resource would be for placement in existing waste rock dumps at the ELG site, waste rock dumps on the south side of the Balsas River or within the ML workings as backfill.

Preliminary geochemical testing has resulted in the assumption that Media Luna tailings is potentially acid generating (PAG) and a low permeability cover is assumed at this stage to reduce contaminant transport.

24.1.16 Capital and Operating Costs

24.1.16.1 Capital Costs

Capital cost estimates for the surface and process plant were completed by M3 and mine development cost estimates were completed by AMC. The cost estimate describes the "additional" cost for the exploitation of the ML resource. The cost estimates are "net" of the ELG LOM plan, i.e. taking the overall initial and sustaining project cost for the Combined ML-ELG Project and subtracting the ELG Mine cost in order to present the incremental cost for development of the ML Project. The accuracy of the process plant estimate is ±25% while the accuracy of the underground mining estimate is ±23%. All costs are in Q2, 2015 US Dollars. Table 24-3 summarizes initial capital costs.

Table 24-3: Initial Capital Costs for ML Project

	$M
Mine Pre-Development	$118.6
Mining Equipment and Infrastructure	$146.4
Process Plant	$203.8
Owner's Cost	$13.0
Total	**$481.8**

Sustaining capital cost for the underground mining of the ML resource was estimated at $109 million.

Process plant and surface infrastructure were identified as not requiring any sustaining capital at this level of study.

24.1.16.2 Operating Costs

Operating costs were built up based on anticipated labor and estimated consumption rates. Table 24-4 summarizes operating costs on a cost per mineralized tonne processed for the Combined ML-ELG Project by presenting a typical year of operations.

Table 24-4: Operating Cost Summary (ML-ELG; Typical Year 2026)

	$/mineralized tonne
Process Plant Operating & Maintenance Cost	$19.79
Open Pit Mining	$1.19
Underground Mining	$26.93
General and Administrative	$1.30
Total	**$49.21**

24.1.17 Economic Analysis

The Combined ML-ELG Project economics were done using a discounted cash flow model. The financial indicators examined for the project included the Net Present Value (NPV), Internal Rate of Return (IRR) and payback period (time in years to recapture the initial capital investment). Annual cash flow projections were estimated over the life of the mine based on capital expenditures, production costs, transportation and treatment charges and sales revenue. Metal price assumptions are $1,200/oz gold, $20/oz silver, and $3.00/lb copper. The financial indicators for the Combined ML-ELG Project are based on a 100% equity case and are summarized in Table 24-5 and the financial model indicators for the ML Project based on a 100% equity case are summarized in Table 24-6.

Table 24-5: ML-ELG PEA Project Financial Data

	Before Taxes	**After Taxes**
NPV @ 0% ($M)	$3,408	$2,438
NPV @ 5% ($M)	$1,842	$1,252
NPV @ 10% ($M)	$957	$579
IRR %	22.2%	18.3%
Payback (years)	6.3	6.9

Table 24-6: ML Incremental Project Financial Data

	Before Taxes	After Taxes
After Tax IRR	27.5%	24.6%
After Tax NPV @ 5% ($M)	$1,038	$729
After Tax NPV @ 8% ($M)	$709	$488
Cumulative Undiscounted Cash Flow ($M)	$1,954	$1,402
CAPEX Payback (years)	2.5	3.7
Mine Life (years)	13	13

24.2 INTRODUCTION

Please refer to Section 2 of this Report for the relevant Introduction.

24.3 RELIANCE ON OTHER EXPERTS

Please refer to Section 3 of this Report for the relevant Reliance on Other Experts.

24.4 PROPERTY DESCRIPTION AND LOCATION

Please refer to Section 4 of this Report for the relevant Property Description and Location.

24.5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

Please refer to Section 5 of this Report for the relevant Accessibility, Climate, Local Resources, Infrastructure, and Physiography.

24.6 HISTORY

Please refer to Section 6 of this Report for the relevant Project history discussion.

24.7 GEOLOGICAL SETTING AND MINERALIZATION

Please refer to Section 7 of this Report for the relevant discussions on geology and mineralization. The section also includes example geological maps and deposit cross-sections.

24.8 DEPOSIT TYPES

The deposit model being used for exploration targeting is described in Section 8 of this Report.

24.9 EXPLORATION

Exploration completed on the Project area is outlined in Section 9 of this Report.

24.10 DRILLING

Drilling completed on the Project area is summarized in Section 10 of this Report.

24.11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Sample preparation and analytical methods, together with the sample security measures taken for Project samples are included in Section 11 of this Report.

24.12 DATA VERIFICATION

Data verification undertaken on the data collected is outlined in Section 12 of this Report.

24.13 MINERAL PROCESSING AND METALLURGICAL TESTING

Material from the Media Luna resource would be processed through a Flotation circuit to recover the copper and precious metals. Tailings from the flotation process would be placed in the existing ELG Mine cyanide leach circuit for additional recovery of precious metals. The Cu-Au-Ag flotation concentrate would be sold and shipped off site for further processing.

This section summarizes the testwork performed to evaluate the metallurgical aspects of the ML Project. The interpretation of the testwork is also discussed and an estimate for the consumption of reagents and other consumables is presented.

The Key Points of this section are as follows:

- The tests were conducted by an independent commercial laboratory, SGS METCON of Tucson, Arizona.
- The optimal recovery process selected for the Media Luna mineralized material was copper/gold flotation followed by agitated cyanide leaching of the flotation tails.
- The 60-micron grind size selected from metallurgical testing would be optimal for flotation and compatible with the existing ELG grinding circuit.
- Estimated overall recovery of the process is 90% for copper, 88% for gold and 89% for silver. No sulfide flotation of Cu-Au flotation tailings, regrinding or pre-leach aeration was found necessary resulting in a simple flowsheet for copper, gold and silver recovery with reduced footprint and lower overall cost (capital and operating)
- No deleterious elements that would adversely impact recoveries were found.
- Selected treatment process requires simple reagent scheme and lower reagent dosages.
- Liquid/solid separation tests on leached flotation tails residue achieved high pressure filtration rates with good discharge and stacking properties at reasonable dry times which would be amenable for use with the existing ELG tailing filters.
- Flotation concentrates from the EPO area have high arsenic levels that may attract penalties if shipped on its own. Testwork to depress arsenic is being conducted.

24.13.1 General

In November 2012, Torex Gold Resources initiated testwork to provide a better understanding of the Media Luna sulfide mineralized material metallurgy and to establish design criteria for the mineral extraction process. To date this work has been completed in 3 phases, with each phase advancing the metallurgical understanding of the resource. The following outlines the scope of metallurgical testing conducted at the three phases.

I. The Phase I metallurgical testing included initial scoping studies, flotation process development for sulphide material, cyanide leaching development for the sulfide concentrate and magnetic separation to ascertain the effect on flotation.

II. Phase II metallurgical testing consisted of flowsheet development to improve the quality of concentrate, to upgrade copper content, reduce arsenic content and conduct cyanidation tests on the sulfide concentrates and sample ML-46M.

III. Phase III metallurgical testing were conducted to optimize the flotation and cyanidation flowsheet selected in the Phase II testing on the two mineralized material types identified as Massive sulfide/Oxide (MSO) and SKARN from the Media Luna area and the new area identified as the EPO area. Phase III tests objective was to produce a clean copper flotation concentrate maximizing gold recovery and a sulfide concentrate which would be leached for the recovery of gold and silver in the sulfide concentrate using samples of different grades and mineralogy.

The test results are reported in the following documents and relevant tests are summarized below.

- "Preliminary Metallurgical Froth Flotation Study on Three Composites", Project No. M-806-02, May 2013, SGS METCON/KD Engineering, Tucson, Arizona.
- "Preliminary Metallurgical Study on Three Composites (Phase II)", Project No. M-806-04, August 2013, SGS METCON/KD Engineering, Tucson, Arizona.
- "Metallurgical Studies on Media Luna South Ore Composites" Project No. M-806-06, February 2015, SGS North American Inc., Tucson, Arizona.

24.13.2 Summary of Results

24.13.2.1 Phase I Test Results

The results of the Phase I scoping and flotation process development tests are summarized as follows:

- Mineralogical studies conducted on the head composite samples showed that the main rock forming minerals were pyroxene, pyrrhotite and iron oxide/hydroxide with chalcopyrite being the main copper mineral.
- Comminution testing of a blended (1:1:1) composite sample gave a Bond Crusher Work Index of 7.95 kW-hr/MT, Bond Rod Mill Work Index of 13.71 kW-hr/MT, Bond Ball Mill Work Index of 11.53 kW-hr/MT, and Abrasion Index of 0.1885.
- Cu-Au rougher flotation kinetics testing conducted at three grinding sizes of 50 percent passing 74 microns, 60 percent passing 74 microns and 75 percent passing 74 microns showed that the finest grind size of 75 percent passing 74 microns achieved the highest copper, gold and silver recoveries.
- Collector dosage evaluation using caustic soda (NaOH) and lime (CaO) for pH modification showed that using lime with the selected collector A-7249 gave significantly lower recoveries for all the samples compared to using caustic soda with A-7249
- Magnetic separation conducted ahead of flotation to evaluate the effect on metal recovery and concentrate grade showed that magnetic separation should not be conducted prior to the rougher flotation step due to losses of gold and silver to the magnetic concentrate.
- Mineralized material characterization testing using blended (1:1:1) composite of the three samples to develop a flow sheet for the exploitation of the Media Luna mineralized material showed that 91.9% copper, 71.2% gold and 71.6% silver were recovered into the Cu-Au rougher concentrate and 1.34% copper, 15.92% gold and 4.32% silver were recovered in the agitated cyanide leaching step resulting in an overall metal recoveries of 93.3% copper, 87.1% gold and 75.9% silver. A magnetic separation concentrate with iron content of 62% containing 0.18% copper, 4.63% gold and 8.04% silver was produced.

24.13.2.2 Phase II Test Results

The results of the Phase II flotation development testing are shown as follows:

- The Cu-Au 2nd cleaner flotation, magnetic separation and agitated cyanide leach testing results on the 1:1:1 blended composite were 87.5% copper, 69.7% gold and 76.6% silver recoveries to the Cu-Au 2nd cleaner concentrate and 1.89% copper, 12.52% gold and 2.93 % silver recoveries in the agitated cyanide leach. This gives a total precious metal recovery (flotation concentrate plus pregnant solution) as 89.4% copper, 82.2% gold and 79.6% silver. The magnetic concentrate had iron content of 61.4% with 1% copper, 6.1% gold and 3% silver recovered in the magnetic concentrate.
- The testing results on the 1:1(ML-2M : ML-5M) blended composite were 90.9% copper, 81.0% gold and 81.8% silver recoveries to the Cu-Au 2nd cleaner concentrate and 0.02 % copper, 5.7% gold and 0.05 %

silver recoveries in the agitated cyanide leach. This gives a total precious metal recovery (flotation concentrate plus pregnant solution) as 90.9% copper, 86.7% gold and 81.9% silver. The magnetic concentrate had iron content of 63% with 1% copper, 2.74% gold and 2.28% silver recovered into the magnetic concentrate.

- The testing results on the ML-46M composite were 77.4% copper, 31.8% gold and 57.3% silver recoveries to the Cu-Au 2nd cleaner concentrate and 0.8 % copper, 33.1% gold and 3 % silver recoveries in the agitated cyanide leach. This gives a total precious metal recovery (flotation concentrate plus pregnant solution as 78.2% copper, 64.9% gold and 60.3% silver. The magnetic concentrate had iron content of 60.2% with 2.1% copper, 17.3% gold and 7.9% silver recovered into the magnetic concentrate.
- Whole mineralized material agitated cyanide leach conducted on the ML-46M composite sample gave gold recovery of 87.3%, silver recovery of 14.1% and copper recovery of 16.0% at 48-hour retention time.

24.13.2.3 Phase III Test Results

The results of the Phase III flotation optimization and mineralized material type and grade recovery evaluation testing results are summarized as follows:

- Head sample assays of the Media Luna project mineralized material showed gold assays ranging from 0.86 g/t to 6.31 g/t, silver assays were from 11.3 g/t to 73 g/t and copper assays ranged from 0.31 % to 3.21% with high arsenic in the EPO samples.
- Mineralogical analysis showed that chalcopyrite is the primary and virtually only copper mineral in the Media Luna head samples. Pyrrhotite, pyrite and arsenopyrite are the major sulfides and pyroxene is the main non-sulfide gangue except in the MSO composite where iron oxide is 50%.
- Regrind optimization tests showed that flotation results were not improved by regrinding the rougher flotation concentrate ahead of cleaning flotation.
- A new collector MC-47 that worked at lower pH with lower dosage of 10 g/t was found to replace Phase II collector A-7249 that required rougher pH of 11.5 and dosage of 32 g/t.
- Grade variability tests did not show strong relationship between grade and recovery with all the samples showing good copper recoveries to the Cu-Au 2nd cleaner concentrate with good grades.
- Metallurgical response of the EPO material showed good copper recoveries to the Cu-Au 2nd cleaner concentrate for the EPO MSO and EPO Skarn samples with lower gold recoveries and high arsenic contents. The Media Luna MSO/Skarn composite sample gave a high grade concentrate with higher gold recovery. All the Cu-Au 2nd cleaner concentrates had good grades between 24% to 26% copper.
- Bottle roll tests run on sulfide flotation concentrates to verify whether pre-aeration would be beneficial to cyanidation showed that there was no great benefit to be realized by pre-aeration.
- Locked cycle flotation tests results conducted on the MSO and Skarn composites to generate Cu-Au flotation concentrate, leached Fe sulfide concentrate residue, and Fe sulfide flotation tails for liquid solid separation tests gave very high metal recoveries with poor grades because the cleaner tails were not discarded.
- Copper recovery to the MSO composite 2nd cleaner concentrate was 96.6% with a grade of 10.4% copper.
- The results of the SLS tests on the Cu-Au 2nd Cleaner Concentrate, Iron sulfide Rougher Tailings and Combined Cyanide Leach residue samples conducted by Pocock Industrial Inc., showed that non-ionic flocculant worked with the solids with high rate thickener underflow density of 72.5% for the flotation tails. Pressure filtration tests gave cakes with low moistures and good discharge and stacking properties.

24.13.3 Phase I Metallurgical Study

24.13.3.1 Sample Preparation and Head Assays

The three composite samples used in the Phases I and II metallurgical testing were compiled using only copper grade information (high, medium, and low copper grade) since mineralogical and lithological information were not as yet included in the drill data base. These samples were considered adequate to obtain first indication of the possible metallurgical treatment that could be necessary. It was recommended that future test programs should incorporate mineralogical and lithological data. The Phase III test composites sampling incorporated the mineralogy and lithology of the Media Luna resource and was statistically constituted to ensure a more representative sample of the resource.

Three composite samples were reconstituted and subjected to sample preparation, sample characterization and froth rougher flotation testing in the Phase I testing and flotation development tests in Phase II testing. The head assays of the samples and the 1:1:1 blended composite used in these tests are given in the Table 24-7 below.

Table 24-7: Head Assays on Phases I & II Composite Samples

Sample ID	Cu (%)	Au (g/t)	Ag (g/t)	As (ppm)	Fe (%)	S_T (%)	Zn (%)	Insol (%)
ML - 02M	1.04	2.34	35.5	122	40.73	8.93	1.01	18.59
ML - 05M	3.43	5.18	52.0	75	33.50	19.05	0.18	21.91
ML - 46M	0.37	3.10	15.4	3189	29.43	4.75	0.04	41.97
1:1:1 Blend	1.92	2.96	39.0	1269	39.9	12.45	0.49	29.30

Note: S_T = total sulfur

24.13.3.2 Mineralized Material Characterization on a Blended Composite

Scoping tests in the Phase I testing were used to select reagents, grinding size, and flotation and cyanidation parameters to conduct mineralized material characterization tests on the 1:1:1 blended composite. The mineralized material characterization was conducted according to a simplified flow sheet in Figure 24-1 below with the results displayed in Table 24-8 and Table 24-9 and a graph in Figure 24-2.

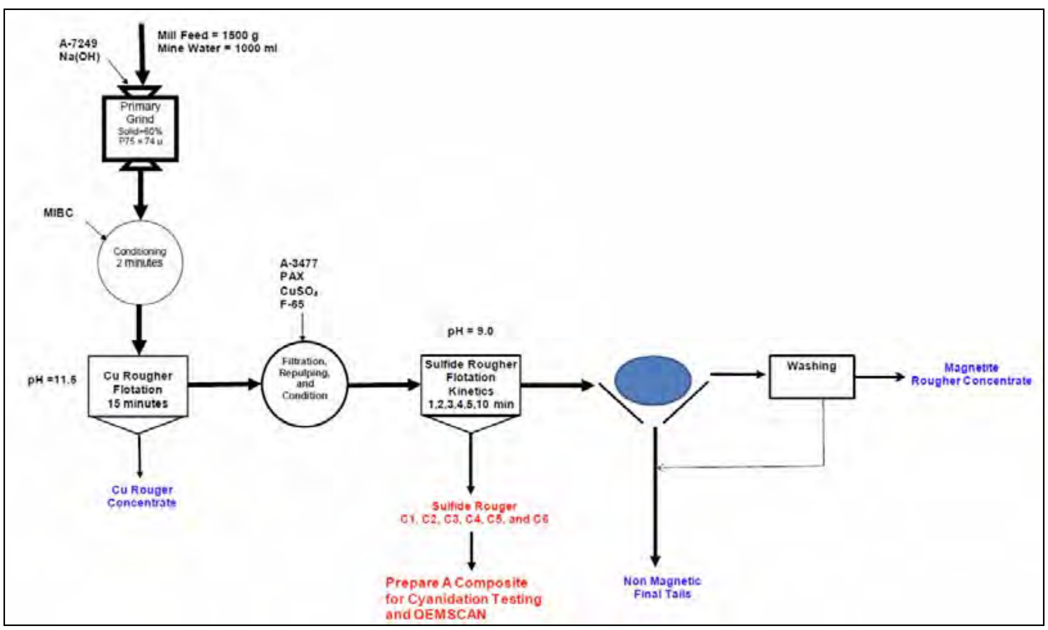


Figure 24-1: Mineralized Material Characterization – ML-2M, ML-5M, and ML-46M Blend Composite

Table 24-8: Mineralized Material Characterization on the 1:1:1 Blended Composite- Summary of Results

Cumulative Time (Minute)	Mass Recovery (%)	Cumulative Grade (%)								Cumulative Recovery (%)							
		Cu	Au (g/t)	Ag (g/t)	Fe	ST	Insol.	As (ppm)	Zn	Cu	Au	Ag	Fe	ST	Insol.	As	Zn
Cu Concentrate	**9.92**	**16.10**	**24.40**	**290.0**	**26.40**	**23.39**	**21.50**	**486**	**0.87**	**91.91**	**71.19**	**71.56**	**6.78**	**18.38**	**7.63**	**4.36**	**20.58**
1	5.26	0.71	3.45	28.2	50.00	33.63	7.15	7171	2.04	2.15	5.33	3.69	6.80	14.00	1.34	34.05	25.57
3	15.61	0.57	2.85	22.9	51.99	32.79	7.78	5390	1.64	5.09	13.09	8.89	20.99	40.52	4.34	75.99	61.11
6	25.82	0.45	2.33	20.2	52.39	31.63	8.80	3826	1.21	6.66	17.72	13.00	35.01	64.69	8.13	89.25	74.26
10	30.55	0.41	2.15	19.4	51.71	30.36	9.99	3248	1.05	7.12	19.30	14.75	40.88	73.45	10.92	89.64	76.49
15	33.22	0.38	2.13	19.1	50.61	29.27	11.56	2988	0.97	7.31	20.83	15.76	43.50	76.99	13.74	89.64	77.05
25 Fe Sulfide Concentrate	**35.58**	**0.36**	**2.06**	**18.4**	**49.24**	**28.12**	**13.28**	**2789**	**0.91**	**7.44**	**21.56**	**16.25**	**45.34**	**79.22**	**16.91**	**89.65**	**77.40**
Magnetite Concentrate	**26.71**	**0.01**	**0.59**	**12.1**	**62.00**	**0.76**	**8.00**	**1**	**0.02**	**0.18**	**4.63**	**8.04**	**42.85**	**1.61**	**7.65**	**0.02**	**1.02**
Calculated Head		1.74	3.40	40.2	38.64	12.63	27.95	1107	0.42								

Table 24-9: Cu Flotation and Agitated Cyanide Leach 1:1:1 Blended Composite – Overall Summary of Results

Products	Weight (%)	Grade				Distribution			
		Cu (%)	Au (g/t)	Ag (g/t)	Fe (%)	Cu (%)	Au (%)	Ag (%)	Fe (%)
Cu Concentrate	**9.92**	**16.10**	**24.40**	**290.0**	**26.40**	**91.91**	**71.19**	**71.56**	**6.78**
Pregnant Solution		**0.04**	**0.91**	**2.7**		**1.34**	**15.92**	**4.32**	
Leach Residue	35.58	0.34	0.56	12.5	49.2	6.10	5.65	11.93	45.34
Magnetite Concentrate	26.71	0.01	0.59	12.1	62.0	0.18	4.63	8.04	42.85
Flotation Tails	27.79	0.03	0.32	6.0	7.0	0.46	2.61	4.15	5.03
Calculated Head		1.74	3.40	40.2	38.6	100.00	100.00	100.00	100.00
Head Assay		1.92	2.96	39.0	39.9				
Total Recovery (Cu Concentrate + Pregnant Solution)						**93.25**	**87.11**	**75.89**	

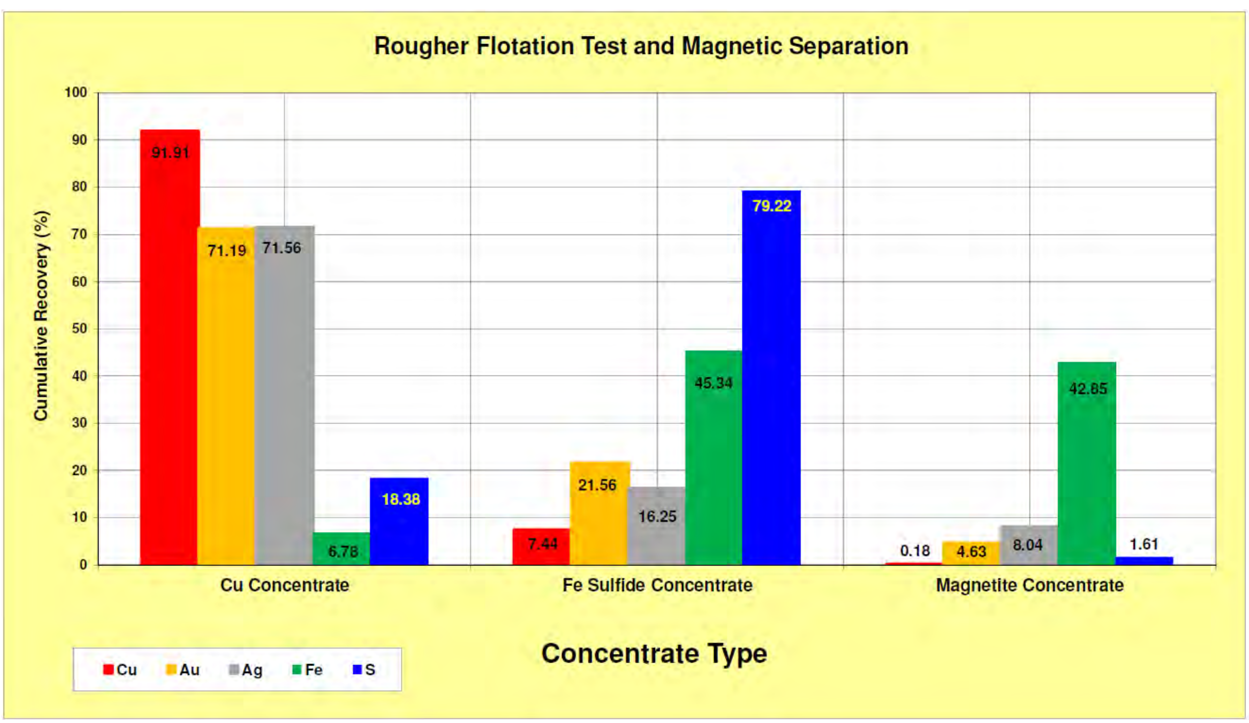


Figure 24-2: Mineralized Material Characterization – Rougher Flotation Test and Magnetic Separation

24.13.4 Phase II Metallurgical Study

The Phase II testing continued to develop the Phase I test with finer grinding, the addition of cleaner flotation and regrinding of the Cu-Au first cleaner concentrate. The Phase II study was conducted according to the following simplified flow sheet depicted in Figure 24-3 with test results shown in Table 24-10 below. The rougher flotation tails were subjected to iron sulfide rougher flotation and the iron sulfide rougher tails subjected to magnetic separation. The iron sulfide 1st cleaner concentrate was subjected to agitated cyanide leaching for 72 hours.

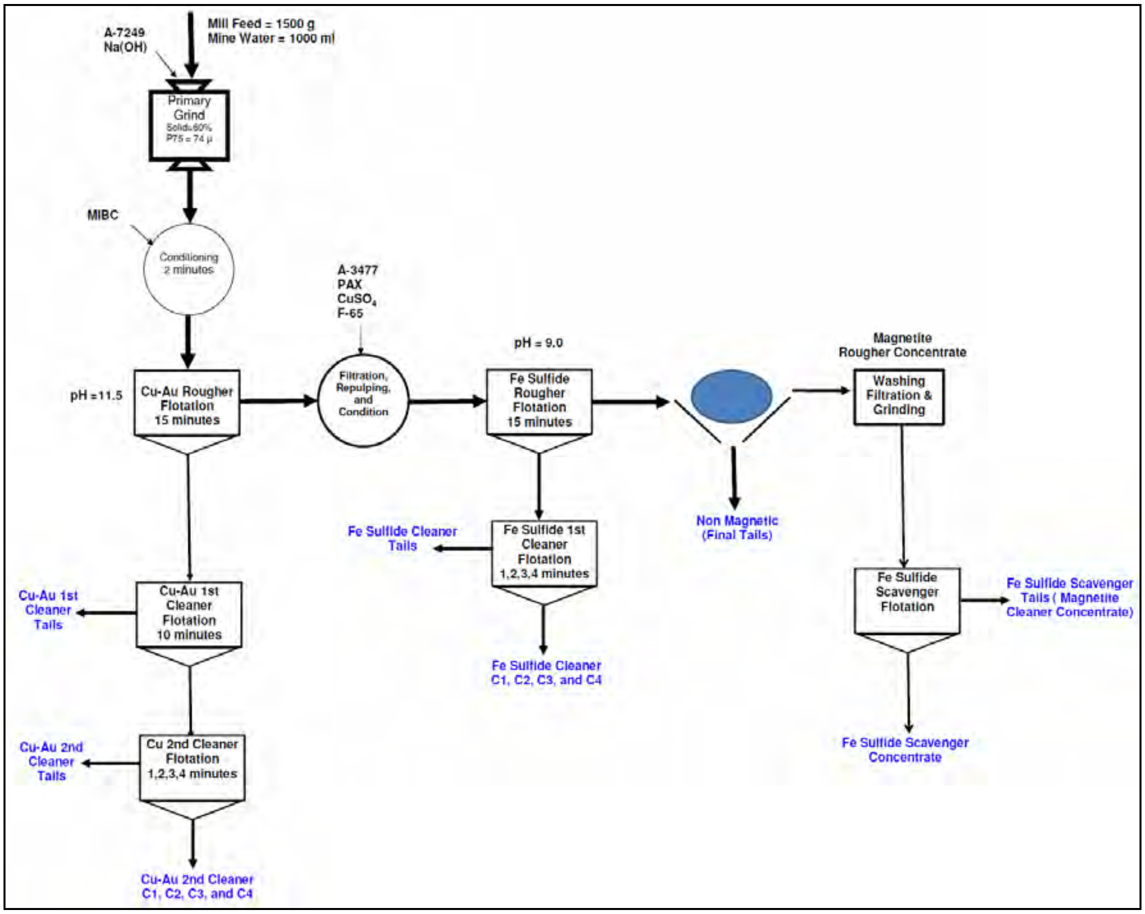


Figure 24-3: Flowsheet of Cu-Au 2nd Cleaner Flotation Kinetics Test on 1:1:1 Blended Composite

Table 24-10: Cu-Au 2nd Cleaner Flotation Kinetics Test Results on 1:1:1 Blended Composite

Products	Weight (%)	Grade				Distribution			
		Cu (%)	Au (g/t)	Ag (g/t)	Fe (%)	Cu (%)	Au (%)	Ag (%)	Fe (%)
Cu-Au 2nd Cleaner Concentrate	**6.86**	**21.96**	**31.63**	**415.0**	**28.5**	**87.47**	**69.71**	**76.61**	**5.13**
Cu-Au 1st Cleaner Concentrate	8.64	18.35	26.64	351.1	28.3	91.99	73.88	81.55	6.41
Cu-Au Rougher Concentrate	12.09	13.37	19.37	258.5	27.6	93.79	75.20	84.06	8.75
Pregnant Solution		**0.08**	**1.22**	**3.4**		**1.89**	**12.52**	**2.93**	
Leach Residue		0.07	0.57	10.5		1.28	4.23	6.99	
Magnetite Concentrate	25.60	0.07	0.41	2.90	61.4	0.96	6.10	2.99	9.90
Flotation Tails	28.44	0.09	0.24	3.10	6.60	0.94	3.36	2.92	11.0
Calculated Head		1.72	3.11	37.19	38.2	278.3	245.0	258.0	41.2
Head Assay		1.92	2.96	39.00	39.8				
Precious Metals Total Recovery (Cu-Au 2nd Cleaner Concentrate + Pregnant Solution)						**89.36**	**82.23**	**79.55**	

The ML-46M Composite (which did not do well in flotation testing) was subjected to whole mineralized material agitated cyanide leach. The metallurgical testing results summarized in Table 24-11 below showed that gold extraction of 89.3% was obtained after 48 hours leaching compared to 77.4% in the froth flotation testing.

Table 24-11: Agitated Cyanide Leach Testing on Whole Mineralized Material – ML-46M Composite

Leach Time	Pregnant Solution Grade (ppm)			Cumulative Extraction					
	Au	Ag	Cu	Au (%)	Ag (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (g/t)
2	1.20	0.46	93.00	58.90	3.59	3.26	1.50	0.58	116
4	1.37	0.92	128.00	68.67	7.28	4.57	1.75	1.17	163
6	1.56	1.10	173.00	79.61	8.86	6.26	2.03	1.42	223
24	1.64	0.15	333.00	85.37	1.64	12.02	2.18	0.26	429
48	1.64	1.74	438.00	87.29	14.09	15.98	2.23	2.26	570
72	1.64	1.74	438.00	87.29	14.09	15.98	2.23	2.26	570
96	1.59	2.12	515.00	88.65	17.77	19.45	2.26	2.85	694

24.13.5 Phase III Metallurgical Study

24.13.5.1 Sample Selection

The selection of drill core has been made with the usual standard of care so that the samples submitted for testing represent all the mineralized rock types within the mineralized area. Analytical Solutions Ltd., a geochemical consulting firm familiar with the Media Luna deposit, worked with Torex project geologists to define drill core intervals to represent 10 different possible mineralized material types based on lithology, gold-copper-silver grades and spatial distribution. The NQ-sized drill core that had been previously sawn in half was sampled with a minimum 0.5 m to 1 m core length to create approximately 30 kg samples of each mineralized material type.

Drill core samples were taken from drill core stored as split core in core boxes. The dry climate in the storage area and the drill core being stored in larger sized pieces are considered to be mitigating factors preventing significant oxidation or weathering while in storage. Preference was given to drill core less than 3 years old and additional testing was performed to document that samples were substantially free of oxidation.

The head assays of the ten composite samples used in the Phase III testing are presented in Table 24-12 below.

Table 24-12: Phase III Samples Head Assays

Sample ID	Au (g/t)	Ag (g/t)	Cu (%)	Fe (%)	Total S (%)	AuEq (g/t)
High Grade MSO	2.81	73.0	3.21	41.13	15.80	9.09
Mid Grade MSO Lower Mine	1.36	29.6	0.94	48.55	4.80	3.34
Mid Grade MSO Upper Mine	1.57	15.0	0.95	41.73	15.68	3.31
Low Grade MSO	0.86	20.3	0.85	44.51	16.19	2.54
High Grade SKARN	6.31	20.2	1.90	11.66	5.77	9.62
Mid Grade SKARN Upper Mine	1.62	16.2	0.44	9.03	2.06	2.59
Mid Grade SKARN Lower Mine	2.96	23.3	0.61	11.87	5.92	4.32
Low Grade SKARN	1.52	11.3	0.31	6.87	1.11	2.20
EPO MSO	3.90	50.7	2.03	35.37	19.10	7.95
EPO SKARN	3.00	42.2	1.42	14.88	7.95	5.95
MSO Composite	1.72	34.7	1.51	44.73	13.61	4.68
SKARN Composite	3. 09	25.6	0.86	10.07	3.85	4.88

More flotation testing were conducted in Phase III to optimize the results achieved and validate the parameters selected in Phases I & II testing. The tests includes regrind optimization, new reagent evaluation, flotation response based rock type and grade, agitated cyanide leach response of flotation products, pre-aeration requirement for sulfide flotation concentrates, locked cycle flotation tests and liquid/solid separation tests.

The results of the flotation tests with and without Cu-Au rougher flotation regrinding are shown in Table 24-13 and Table 24-14 for the Media Luna MSO and Skarn composites. The results show that regrinding of the rougher concentrate did not improve flotation results.

Table 24-13: Cu-Au Second Cleaner Flotation Kinetics on MSO Composite Summary of Results

Cu-Au Rougher Concentrate Regrind at P80 of 25 microns	Cumulative 2nd Cleaner Retention Time (Minute)	Mass Recovery (%)	Cumulative Grade (%)						Cumulative Recovery (%)					
			Cu	Au (g/t)	Ag (g/t)	Fe	S_T	As (ppm)	Cu	Au	Ag	Fe	Total S	As
No	1	1.28	21.60	16.7	425	31.43	35.77	669	18.07	12.08	15.51	0.93	3.43	2.40
	3	4.05	22.28	17.9	463	30.67	35.26	599	58.81	40.88	53.26	2.86	10.65	6.77
	6	**5.72**	**23.13**	**19.3**	**478**	**30.38**	**35.22**	**534**	**86.10**	**62.11**	**77.60**	**3.99**	**15.01**	**8.51**
	10	6.11	22.57	18.3	468	30.32	34.96	545	89.86	63.13	81.33	4.26	15.93	9.30
Yes	1	1.89	21.90	18.0	460	29.63	35.03	652	27.26	20.19	25.84	1.27	4.94	3.71
	3	4.39	20.99	16.2	429	29.93	35.58	722	60.76	42.37	56.08	2.99	11.66	9.56
	6	**5.89**	**20.79**	**16.2**	**424**	**29.81**	**35.26**	**719**	**80.62**	**56.74**	**74.23**	**3.99**	**15.48**	**12.75**
	10	6.36	19.99	17.5	411	30.02	35.10	760	83.80	65.96	77.80	4.34	16.67	14.57

Table 24-14: Cu-Au Second Cleaner Flotation Kinetics on SKARN Composite Summary of Results

Cu-Au Rougher Concentrate Regrind at P80 of 25 microns	Cumulative 2nd Cleaner Retention Time (Minute)	Mass Recovery (%)	Cumulative Grade (%)						Cumulative Recovery (%)					
			Cu	Au (g/t)	Ag (g/t)	Fe	S_T	As (ppm)	Cu	Au	Ag	Fe	Total S	As
No	1	1.39	25.40	47.1	578	23.74	27.99	1299	40.01	19.54	32.11	3.13	9.32	0.35
	3	2.22	23.48	44.6	570	26.15	31.00	1102	59.27	29.62	50.70	5.52	16.54	0.47
	6	**3.13**	**23.43**	**43.1**	**563**	**25.16**	**29.73**	**1217**	**83.16**	**40.32**	**70.49**	**7.48**	**22.32**	**0.74**
	10	3.51	22.36	41.4	541	24.20	28.36	1452	89.17	43.48	76.15	8.08	23.91	0.99
Yes	1	0.76	26.30	42.9	629	23.74	27.90	1678	23.35	11.23	20.89	1.81	5.60	0.23
	3	1.81	24.51	44.3	584	22.98	27.11	1784	51.62	27.50	46.05	4.16	12.92	0.59
	6	**2.75**	**23.85**	**43.1**	**568**	**22.57**	**26.77**	**1833**	**76.46**	**40.77**	**68.08**	**6.21**	**19.41**	**0.92**
	10	3.12	22.24	40.4	501	21.54	25.20	2106	80.76	43.24	68.08	6.72	20.71	1.19

24.13.5.2 Copper Collector Evaluation on Mid-Grade MSO Upper Mine Composite

MC-47 (Chevron Phillips, Sulfur-Based Collector) copper collector dosages were evaluated versus Cu-Au collector Aero 7249 (Cytec, dithiophosphate/monothio- phosphate) on Cu-Au rougher flotation to verify the impact on recovery and grade on the Mid Grade MSO Upper Mine sample. Cu-Au rougher flotation kinetics was conducted for 15 minutes at a grind size of approximately 80 percent passing 60 microns followed by a first cleaner stage of 10 minutes and a second stage of cleaner of six minutes.

The metallurgical data developed are summarized in Table 24-15 below.

Table 24-15: Cu-Au 2nd Cleaner Flotation Kinetics Test on Mid-Grade MSO Upper Mine Sample

Cu Collector		pH	Flotation Cumulative Time (Minute)	Mass Recovery (%)	Cumulative Grade (%)							Cumulative Recovery (%)						
Type	Dosage (g/t)				Cu	Au (g/t)	Ag (g/t)	Fe	S_T	Insol	As (ppm)	Cu	Au	Ag	Fe	S_T	Insol	As
		11.5	1	1.19	22.60	24.70	283.0	30.80	32.59	4.65	290	26.39	17.34	21.42	0.87	2.51	0.39	2.96
			3	2.98	22.00	24.34	275.2	30.46	32.19	4.92	294	64.52	42.90	52.30	2.16	6.22	1.03	7.54
			6	4.14	21.94	23.96	277.4	30.38	32.11	5.12	278	89.32	58.63	73.17	2.99	8.61	1.49	9.90
		11.5	1st Cleaner	6.02	15.80	18.84	208.6	32.28	33.17	6.12	457	93.62	67.10	80.09	4.62	12.94	2.60	23.68
A-7249	32	11.5	Rougher	8.51	11.30	13.86	153.2	32.78	30.53	8.90	432	94.60	69.71	83.09	6.63	16.82	5.33	31.58
		11.5	1	1.64	19.20	20.90	235.0	32.04	34.29	5.70	426	30.51	21.62	24.69	1.23	3.53	0.65	6.30
			3	4.08	20.16	22.04	244.0	31.44	32.95	4.89	375	79.61	56.65	63.71	3.00	8.42	1.40	13.78
			6	5.27	18.13	19.43	225.9	31.87	33.09	5.67	425	92.53	64.53	76.22	3.92	10.93	2.09	20.19
		11.5	1st Cleaner	8.14	12.01	14.03	156.1	34.15	35.22	5.98	656	94.70	72.05	81.43	6.50	17.98	3.41	48.16
MC-47	10	9.5	Rougher	12.28	8.05	9.84	107.8	36.30	32.57	8.23	545	95.75	76.21	84.82	10.42	25.08	7.07	60.42
		11.5	1	1.91	18.50	23.20	227.0	33.15	34.91	4.50	487	33.94	24.80	27.70	1.43	4.11	0.59	9.09
			3	4.45	18.39	22.63	226.4	32.72	34.36	4.84	456	78.63	56.38	64.40	3.30	9.43	1.48	19.84
			6	5.98	16.32	20.78	207.4	32.83	34.11	5.59	487	93.77	69.57	79.26	4.45	12.58	2.30	28.46
		11.5	1st Cleaner	9.51	10.47	14.40	139.2	35.49	36.01	5.96	670	95.77	76.76	84.67	7.66	21.15	3.90	62.32
MC-47	15	9.5	Rougher	14.86	6.76	9.67	92.6	38.05	33.04	7.73	522	96.64	80.44	88.02	12.82	30.30	7.90	75.85
		11.5	1	1.72	20.70	22.20	250.0	31.34	33.78	3.95	382	35.74	24.00	27.90	1.26	3.70	0.48	6.17
			3	3.97	20.64	22.43	255.1	30.87	33.41	3.98	355	82.43	56.09	65.85	2.86	8.46	1.11	13.26
			6	5.14	17.81	19.60	227.3	31.43	33.24	5.22	422	92.07	63.45	75.96	3.77	10.90	1.88	20.41
		11.5	1st Cleaner	9.30	10.18	12.55	137.7	35.10	36.74	5.47	741	95.20	73.54	83.27	7.62	21.80	3.57	64.86
MC-47	20	9.5	Rougher	14.68	6.53	8.50	91.5	37.54	33.42	7.33	585	96.40	78.51	87.25	12.86	31.28	7.55	80.73

The results show that MC-47 dosage of 10 g/t should be added at the primary grind stage to improve copper grade.

Flotation tests were conducted for all the rest of the Phase III testing using a dosage of 10 g/t of MC- 47 Cu-Au collector. Cu-Au rougher flotation kinetics was conducted for 15 minutes at a grind size of approximately 80 percent passing 60 microns followed by a first cleaner flotation stage of six minutes and a second stage of cleaner of three minutes. The rougher flotation tails was subjected to iron sulfide rougher flotation for 15 minutes. Rougher and cleaner flotation testing were conducted according to the following simplified flow sheet depicted in Figure 24-4.

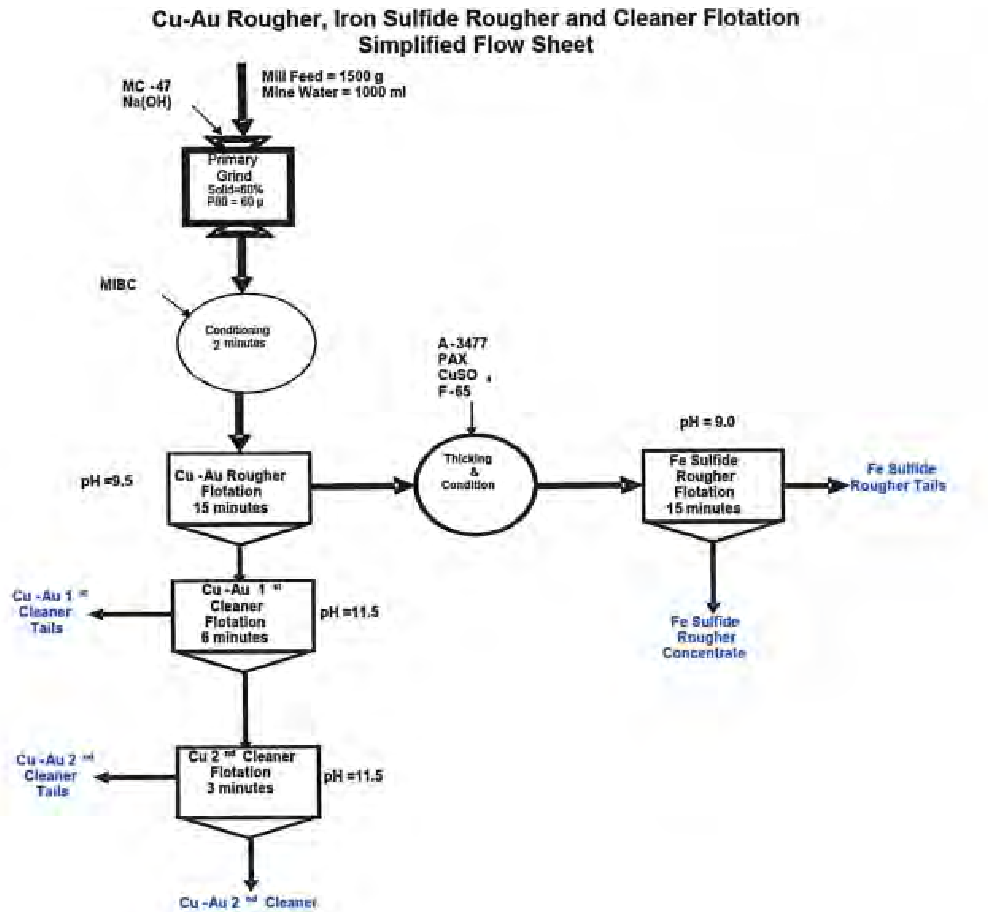


Figure 24-4: Cu-Au Rougher, Iron Sulfide Rougher and Cleaner Flotation Simplified Flowsheet

The flotation test results for the four grades of the Media Luna MSO samples are given in Table 24-16 and depicted in Figure 24-5 below.

Table 24-16: Cu-Au 2nd cleaner flotation kinetics and iron sulfide rougher concentrate production on the MSO Composites Summary of Results

Composite ID	Product	Mass Recovery (%)	Cumulative Grade (%)							Cumulative Recovery (%)						
			Cu	Au (g/t)	Ag (g/t)	Fe	S_T	Insol.	As (ppm)	Cu	Au	Ag	Fe	S_T	Insol.	As
High Grade MSO	**2nd Cleaner**	10.79	22.20	9.13	484.00	30.41	35.70	1.50	718	72.54	45.56	64.44	8.15	23.32	1.20	13.21
	1st Cleaner	19.18	16.22	8.46	375.91	33.34	36.29	2.09	1566	94.25	75.08	88.99	15.89	42.16	2.99	51.22
	Rougher	24.23	13.33	7.40	312.14	35.08	34.13	3.36	1477	97.88	82.98	93.36	21.12	50.10	6.07	61.01
	Fe Sulfide	32.21	0.17	0.75	14.40	47.40	24.88	6.40	703	1.70	11.18	5.73	37.95	48.55	15.36	38.62
	Calculated Head		3.30	2.16	81.01	40.24	16.51	13.43	586							
Mid Grade MSO Lower Mine	**2nd Cleaner**	3.48	24.90	24.80	718.00	27.22	29.14	6.40	507	85.82	53.39	81.69	1.91	20.15	1.86	3.23
	1st Cleaner	5.30	18.08	20.35	532.58	27.55	25.52	12.57	1567	95.06	66.86	92.46	2.96	26.94	5.58	15.23
	Rougher	8.40	11.56	13.26	342.49	29.76	19.16	17.31	1203	96.24	68.95	94.14	5.05	32.02	12.17	18.52
	Fe Sulfide	18.04	0.14	2.29	8.30	46.16	17.62	11.70	2444	2.45	25.59	4.90	16.84	63.25	17.66	80.81
	Calculated Head		1.01	1.61	30.55	49.44	5.03	11.95	546							
Mid Grade MSO Upper Mine	**2nd Cleaner**	3.36	25.00	13.60	291.00	29.46	31.55	2.90	207	81.51	29.92	63.58	2.22	6.57	0.73	5.32
	1st Cleaner	7.63	12.66	11.70	161.16	34.15	35.60	5.00	683	93.73	58.43	79.97	5.85	16.83	2.85	39.87
	Rougher	12.12	8.11	8.22	106.93	36.62	33.24	7.34	576	95.40	65.26	84.32	9.97	24.97	6.64	53.43
	Fe Sulfide	43.74	0.07	0.92	4.50	50.22	26.76	5.45	134	3.10	26.35	12.80	49.34	72.55	17.79	44.88
	Calculated Head		1.03	1.53	15.37	44.51	16.13	13.40	131							
Low Grade MSO	**2nd Cleaner**	3.32	19.90	12.80	368.00	31.77	33.53	3.00	498	76.15	48.05	61.95	2.32	6.89	0.78	17.36
	1st Cleaner	8.20	9.57	7.76	194.82	36.05	37.04	4.99	984	90.50	71.97	81.05	6.50	18.82	3.23	84.82
	Rougher	12.71	6.39	5.48	134.73	38.47	33.75	6.36	715	93.66	78.69	86.83	10.74	26.56	6.36	95.42
	Fe Sulfide	46.19	0.10	0.31	5.00	50.84	25.40	6.60	5	5.48	16.19	11.71	51.61	72.66	24.00	2.43
	Calculated Head		0.87	0.88	19.72	45.50	16.15	12.70	95							

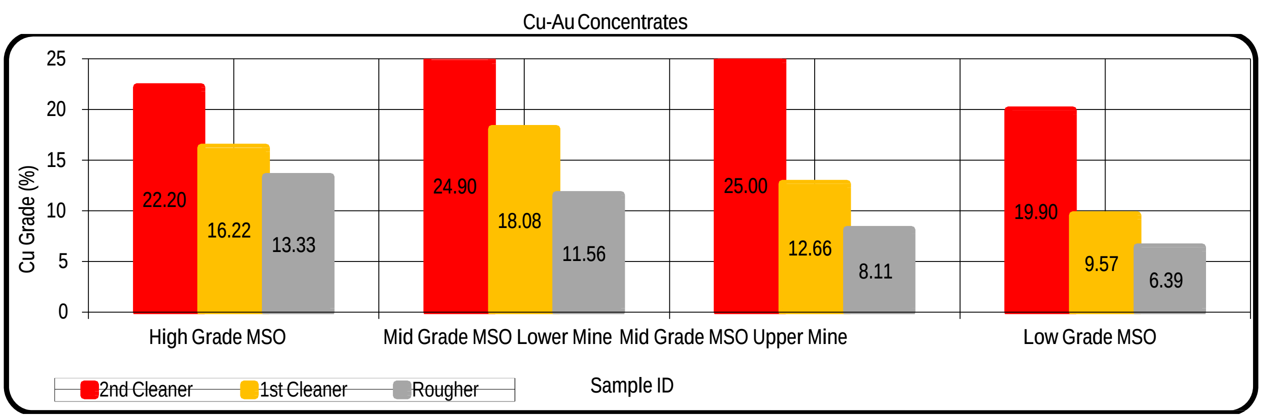


Figure 24-5: Cu-Au 2nd Cleaner Flotation on MSO Type Samples Cu-Au Concentrates

The metallurgical data developed for Media Luna Skarn Samples are summarized in Table 24-17 and depicted in Figure 24-6.

Table 24-17: Cu-Au 2nd cleaner flotation kinetics and iron sulfide rougher concentrate production on the SKARN Composites Summary of Results

Composite ID	Product	Mass Recovery (%)	Cumulative Grade (%)							Cumulative Recovery (%)						
			Cu	Au (g/t)	Ag (g/t)	Fe	S_T	Insol.	As (ppm)	Cu	Au	Ag	Fe	S_T	Insol.	As
High Grade SKARN	**2nd Cleaner**	**5.89**	**29.00**	**45.10**	**661.00**	**26.94**	**31.77**	**4.80**	**623**	**83.40**	**71.75**	**77.30**	**13.17**	**31.70**	**0.48**	**1.54**
	1st Cleaner	**8.61**	**22.68**	**34.20**	**527.05**	**26.42**	**28.50**	**12.29**	**3445**	**95.36**	**79.54**	**90.10**	**18.87**	**41.56**	**1.78**	**12.46**
	Rougher	**12.38**	**16.01**	**25.31**	**375.44**	**22.40**	**21.81**	**25.60**	**3236**	**96.81**	**84.66**	**92.30**	**23.02**	**45.75**	**5.35**	**16.84**
	Fe Sulfide	20.83	0.25	0.93	13.80	25.14	15.07	39.95	8990	2.53	5.23	5.71	43.46	53.18	14.03	78.70
	Calculated Head		2.05	3.70	50.35	12.05	5.90	59.29	2379							
Mid Grade SKARN Upper Mine	**2nd Cleaner**	**1.33**	**24.70**	**60.00**	**592.00**	**23.86**	**26.92**	**10.55**	**2270**	**71.68**	**37.44**	**52.33**	**3.36**	**16.54**	**0.23**	**0.26**
	1st Cleaner	**2.76**	**15.56**	**43.80**	**423.29**	**18.61**	**18.83**	**26.17**	**8847**	**93.93**	**56.83**	**77.81**	**5.46**	**24.06**	**1.20**	**2.11**
	Rougher	**5.22**	**8.36**	**24.36**	**233.28**	**14.10**	**11.09**	**40.52**	**8821**	**95.35**	**59.72**	**81.01**	**7.81**	**26.77**	**3.51**	**3.98**
	Fe Sulfide	15.12	0.09	4.46	13.60	18.48	10.15	42.00	72650	2.91	31.68	13.69	29.66	70.99	10.55	94.88
	Calculated Head		0.46	2.13	15.03	9.42	2.16	60.23	11581							
Mid Grade SKARN Lower Mine	**2nd Cleaner**	**2.61**	**21.40**	**40.40**	**661.00**	**22.00**	**24.31**	**22.85**	**1322**	**86.83**	**34.77**	**76.78**	**4.99**	**10.85**	**0.99**	**0.54**
	1st Cleaner	**5.37**	**11.36**	**27.05**	**362.44**	**15.06**	**15.08**	**44.75**	**3561**	**94.71**	**47.85**	**86.55**	**7.02**	**13.83**	**3.99**	**3.00**
	Rougher	**10.00**	**6.20**	**15.88**	**200.88**	**11.37**	**9.77**	**54.39**	**3675**	**96.30**	**52.34**	**89.37**	**9.88**	**16.70**	**9.03**	**5.77**
	Fe Sulfide	26.66	0.07	5.21	7.30	27.75	18.11	34.00	22230	2.82	45.78	8.66	64.27	82.50	15.05	93.00
	Calculated Head		0.64	3.03	22.48	11.51	5.85	60.21	6373							
Low Grade SKARN	**2nd Cleaner**	**0.79**	**24.40**	**32.60**	**622.00**	**24.20**	**27.05**	**9.65**	**10030**	**61.34**	**19.43**	**40.72**	**2.70**	**18.97**	**0.12**	**1.21**
	1st Cleaner	**1.65**	**17.55**	**36.02**	**533.30**	**20.12**	**21.02**	**20.46**	**20124**	**91.68**	**44.60**	**72.54**	**4.67**	**30.63**	**0.51**	**5.03**
	Rougher	**5.00**	**5.96**	**13.44**	**189.91**	**11.47**	**7.80**	**46.37**	**11207**	**94.50**	**50.49**	**78.38**	**8.08**	**34.47**	**3.51**	**8.50**
	Fe Sulfide	9.66	0.10	5.14	16.50	13.69	7.07	49.75	60740	3.06	37.32	13.16	18.64	60.39	7.28	88.99
	Calculated Head		0.32	1.33	12.11	7.10	1.13	66.01	6594							

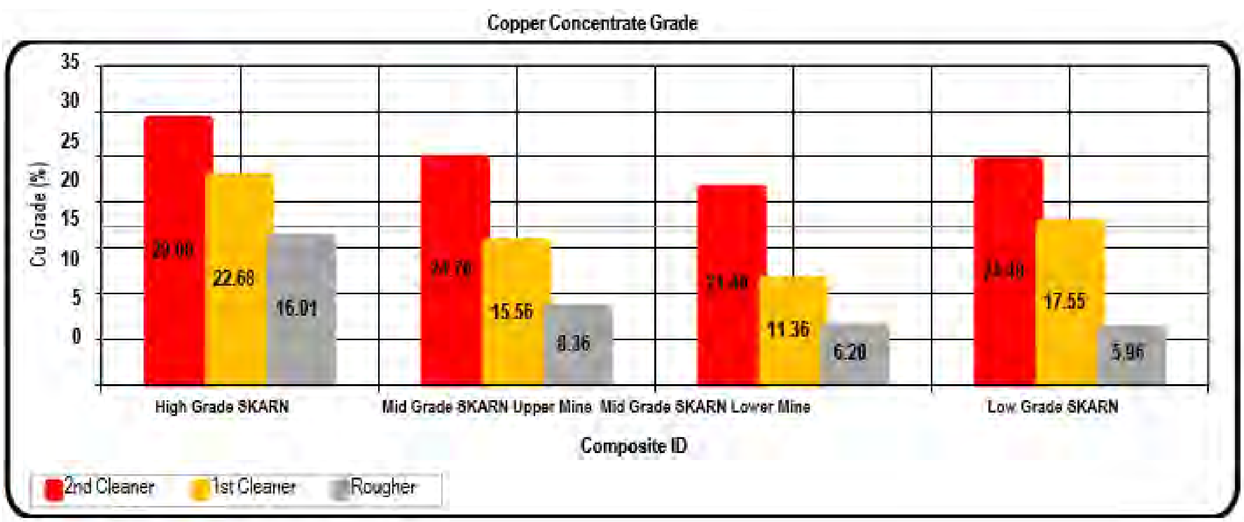


Figure 24-6: Cu-Au 2nd Cleaner Flotation on SKARN Composites

The metallurgical data developed for EPO MSO, EPO Skarn and MSO/Skarn composites are summarized in Table 24-18 and depicted in Figure 24-7 below.

Table 24-18: Cu-Au 2nd cleaner flotation kinetics and iron sulfide rougher concentrate production on the EPO MSO, EPO SKARN and MSO/SKARN Composites Summary of Results

Composite ID	Product	Mass Recovery (%)	Cumulative Grade (%)							Cumulative Recovery (%)						
			Cu	Au (g/t)	Ag (g/t)	Fe	S_T	Insol.	As (ppm)	Cu	Au	Ag	Fe	S_T	Insol.	As
EPO MSO	**2nd Cleaner**	**6.81**	**26.20**	**15.40**	**502.00**	**30.24**	**31.58**	**4.65**	**10090**	**83.19**	**28.07**	**63.76**	**5.49**	**11.08**	**1.32**	**2.10**
	1st Cleaner	**11.81**	**17.03**	**14.64**	**361.24**	**32.89**	**30.49**	**9.12**	**45001**	**93.87**	**46.32**	**79.66**	**10.37**	**18.57**	**4.49**	**16.23**
	Rougher	**17.55**	**11.63**	**11.22**	**253.44**	**34.71**	**28.00**	**13.12**	**45693**	**95.19**	**52.71**	**82.99**	**16.25**	**25.33**	**9.59**	**24.47**
	Fe Sulfide	52.45	0.18	3.00	15.60	46.11	27.17	13.00	44100	4.40	42.15	15.27	64.53	73.48	28.42	70.61
	Calculated Head		2.14	3.73	53.58	37.48	19.39	23.99	32760							
EPO SKARN	**2nd Cleaner**	**5.40**	**25.20**	**15.60**	**526.00**	**29.87**	**29.43**	**9.80**	**3831**	**88.37**	**28.88**	**65.95**	**10.15**	**19.36**	**0.93**	**1.14**
	1st Cleaner	**8.31**	**17.91**	**15.53**	**417.49**	**28.53**	**25.72**	**18.80**	**12057**	**96.64**	**44.24**	**80.54**	**14.92**	**26.03**	**2.75**	**5.53**
	Rougher	**12.39**	**12.12**	**11.45**	**289.17**	**25.20**	**20.11**	**29.84**	**13269**	**97.51**	**48.63**	**83.16**	**19.65**	**30.35**	**6.52**	**9.08**
	Fe Sulfide	27.02	0.11	4.85	23.70	33.34	20.86	29.02	59630	1.98	44.93	14.87	56.72	68.68	13.83	89.02
	Calculated Head		1.54	2.92	43.07	15.88	8.21	56.72	18101							
MSO/SKARN Composite	**2nd Cleaner**	**4.42**	**23.70**	**26.90**	**521.00**	**29.23**	**33.08**	**4.80**	**1386**	**84.57**	**46.55**	**73.11**	**4.48**	**16.22**	**0.58**	**1.92**
	1st Cleaner	**7.50**	**15.83**	**23.36**	**371.38**	**29.34**	**30.00**	**11.05**	**5802**	**95.90**	**68.65**	**88.48**	**7.63**	**24.98**	**2.25**	**13.63**
	Rougher	**9.51**	**12.57**	**18.92**	**297.41**	**28.34**	**26.39**	**16.72**	**5487**	**96.59**	**70.51**	**89.86**	**9.35**	**27.87**	**4.32**	**16.34**
	Fe Sulfide	25.38	0.13	2.40	10.00	44.20	23.95	15.15	10390	2.63	23.87	8.07	38.92	67.51	10.44	82.64
	Calculated Head		1.24	2.55	31.46	28.82	9.00	36.82	3191							

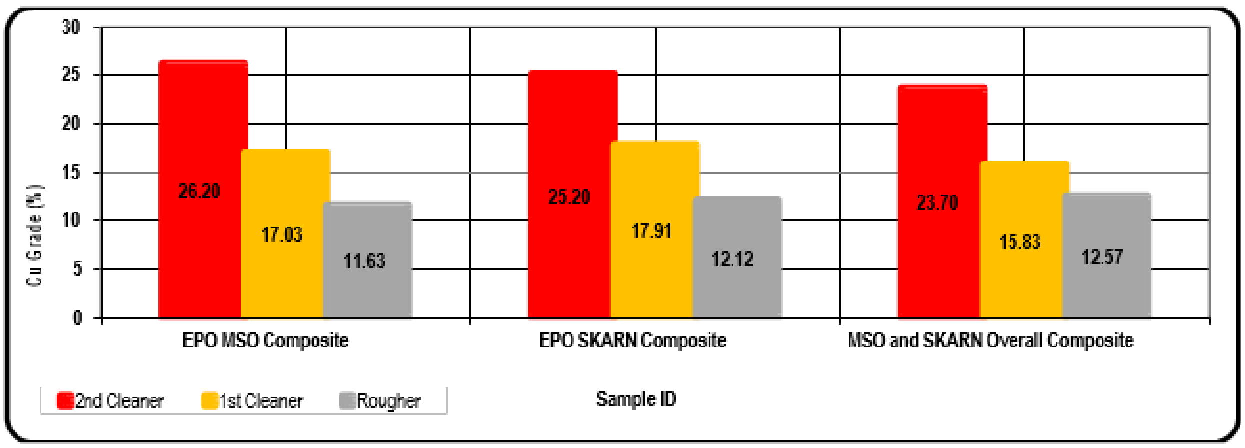


Figure 24-7: Cu-Au 2nd Cleaner Flotation on EPO MSO, EPO SKARN and MSO/SKARN Composites Copper Concentrate Grade

The metallurgical data developed from bottle roll leaching tests are summarized in Table 24-19 below.

Table 24-19: Summary of Bottle Roll Tests on Fe Sulfide Concentrates

BR Test	Head Grade				Residue Grade		PLS Grade		% Extraction based on				Consumptions	
	Assay Head		Calculated Head		Au	Ag	Au	Ag	Assay Head		Calculated Head		NaCN	CaO
No.	Au, ppm	Ag, ppm	Au, ppm	Ag, ppm	Au, ppm	Ag, ppm	Au, ppm	Ag, ppm	Au	Ag	Au	Ag	kg/t	kg/t
BR-01			1.35	7.57	0.78	6.30	0.50	1.20	66.81	17.24	42.34	16.91	2.05	4.09
BR-02	0.86	7.43	0.97	7.57	0.38	6.00	0.49	1.43	68.73	21.25	60.80	20.86	2.06	3.58
BR-03			1.14	7.52	0.54	6.00	0.50	1.47	70.18	20.71	52.74	20.46	2.11	3.45
BR-04	0.19	0.87	0.30	0.65	0.07	0.30	0.17	0.35	120.00	40.52	76.72	54.14	0.96	1.66
BR-05			5.84	13.26	3.30	9.80	2.79	3.75	66.98	29.76	43.69	26.31	1.91	3.29
BR-06	3.81	11.72	5.70	11.86	3.15	9.10	2.48	2.90	67.79	24.29	45.28	24.00	1.70	2.99
BR-07			5.85	12.63	2.90	9.30	2.59	3.07	77.75	28.81	50.65	26.73	1.77	3.06
BR-08	0.26	1.11	0.26	0.67	0.08	0.30	0.15	0.33	67.65	33.91	69.01	55.59	0.24	1.38
BR-09			2.92	14.67	1.49	14.30	1.25	0.39	47.58	1.91	48.81	2.03	2.21	6.94
BR-10	3.00	15.60	2.99	14.73	1.52	14.40	1.24	0.28	48.87	2.10	49.09	2.22	2.47	5.50
BR-11			2.56	14.55	1.10	13.90	1.26	0.60	48.69	4.13	57.04	4.43	2.67	5.46
BR-12	0.64	3.10	0.70	2.67	0.25	1.70	0.36	0.84	70.94	31.39	64.58	36.50	0.48	1.76
BR-13			5.10	23.80	3.11	20.30	1.86	3.56	41.13	14.85	39.10	14.79	1.92	4.49
BR-14	4.85	23.70	5.00	24.10	2.92	20.20	1.85	3.75	42.87	16.48	41.60	16.21	2.18	4.09
BR-15			5.26	23.73	3.10	19.60	1.86	3.75	44.84	17.81	41.34	17.78	1.91	3.85
BR-16	0.31	1.40	0.31	1.14	0.11	0.70	0.18	0.40	63.68	31.77	64.27	38.91	0.34	1.46
BR-17			2.58	9.49	1.33	7.50	1.13	1.91	52.07	19.91	48.45	20.98	1.49	2.84
BR-18	2.40	10.00	2.41	9.94	0.98	7.70	1.19	1.90	59.46	22.44	59.31	22.59	1.60	2.45
BR-19			2.48	9.84	0.97	7.50	1.23	2.03	63.09	23.59	61.01	23.97	1.46	2.16
BR-20	0.22	1.00	0.42	0.99	0.12	0.60	0.23	0.43	135.27	39.16	71.29	39.52	0.36	1.08
BR-21	2.48	9.00	2.35	9.37	1.25	7.40	1.09	1.96	44.45	21.91	46.87	21.04	2.71	3.45

24.13.5.3 Overall Recoveries

The overall metal recoveries were estimated from the flotation results in Table 24-18 and the cyanide leaching results in Table 24-19 and are presented in Table 24-20.

Table 24-20: Overall Metal Recovery

	Flotation			Leach Recovery		Leach Metals Recovered		Overall Metal Recovery		
	Cu	Au	Ag	Au	Ag	Au	AG	Cu	Au	Ag
EPO-MSO	89.2	44.4	77.7	65	25	36.1	5.6	89.2	80.5	83.3
EPO-SKARN	92.5	40.6	78.5	64.4	41.2	38.3	8.9	92.5	78.9	87.4
EPO Average	90.8	42.5	77.9	64.7	30.9	37.2	6.8	90.8	79.7	84.7
EPO Grade	25.7%	15.5 g/t	514 g/t							
MSO/SKARN	90	60	82	70	39.5	28.0	7.1	90	88.0	89.1
MSO/SKARN Grade	23.7%	26.9 g/t	521 g/t							

24.13.5.4 Concentrate Quality

32 element ICP scans were conducted on composite samples of the Cu-Au and Fe-Sulfide flotation concentrates produced in the open circuit cleaner tests conducted in this program. The results of these scans show that:

- The 2M:5M (1:1) and 2M:5M:46M (1:1:1) copper/gold concentrates, which contained 25% and 23% respectively by weight copper, would both be acceptable to the market based on the prevailing conditions.
- The copper concentrate produced from the ML-46M composite sample would not be suitable for treatment at most copper smelters because of the low grade of copper and high levels of impurities such as bismuth, arsenic, mercury and insolubles. The better treatment route for the ML-46M composite sample on its own

would be whole mineralized material cyanide leaching where 88.65% of the gold is recovered into a clean pregnant solution.

- Cu-Au concentrates obtained from the Phase III showed higher copper concentrate grade of 25.5% for the Media Luna main resource concentrate and 26.8% for the EPO resource concentrate. The Media Luna Main Resource concentrate did not have any impurities high enough to attract impurities. The EPO resource concentrate however had high arsenic (0.69%), bismuth (570 ppm), and chlorine (5640 ppm) that are over the threshold and therefore may attract penalties. It is however, very unlikely that the EPO resource would be mined and processed on its own so a blended sample with the Media Luna resource sample as the main component should give concentrates that would be acceptable to the smelters considering the high copper content of the blended concentrate.

24.13.6 Reagent Consumption & Consumables

Reagent consumption rates for the full scale plant operation have been estimated from the results of testwork used for plant design.

The flotation circuits estimated reagent consumption rates are presented in Table 24-21.

Table 24-21: Estimated Flotation Reagent Consumption Rates

Item	Rate (g/t)
Collector, MC-47	10
Frother MIBC	100
Antiscalant	5
Sodium Hydroxide, pH Modifier (Flotation)	3,000
Lime, pH Modifier (Flotation Tails Leach)	2,000
Sodium Cyanide, (Flotation Tails Leach)	1,500
Flocculant	50

24.13.7 Deleterious Elements

The flotation testwork has produced Cu-Au concentrates from composite samples 2M:5M (1:1), 2M:5M:46M (1:1:1), and ML-46M. These were analysed during the test programs for any deleterious elements that could affect marketability. The levels of deleterious elements were considered during the Marketing study and are not considered to have a significant impact on the marketability of the 2M:5M and 2M:5M:46M concentrates. The composite sample ML-46M which produced concentrate that had too low copper content and high levels of deleterious elements would not likely be processed through the plant on its own since it is more profitable to process it directly through the cyanide leaching circuit to produce clean pregnant solution.

Phase III testwork produced concentrates from the main Media Luna resource and the EPO resource which were analyzed for their marketability. It was concluded that concentrates from the main Media Luna Resource did not have high levels of deleterious elements that would attract penalties. The EPO resource concentrates had levels of arsenic, bismuth and chlorine that may attract penalties if processed on its own.

24.14 MINERAL RESOURCE ESTIMATES

The methods whereby Mineral Resources were estimated, and a tabulation of the resulting estimates is presented in Section 14 of this Report.

24.15 MINERAL RESERVE ESTIMATES

No Mineral Reserves have been estimated for Media Luna at this time.

24.16 MINING METHODS

Key points, Alternate ELG Mine Plan developed for the PEA:

- No change to the base case ELG ore and waste mining schedule presented in Section 16.
- ELG plant feed would be reduced when the Media Luna underground is operational in order to provide processing capacity for Media Luna feed.
- ELG reduced plant feed achieved by preferentially feeding higher grade ore mined to the process plant.
- The residual lower grade ELG ore mined would be stockpiled until the pits are complete and then rehandled to the process plant

Key points, Conceptual Media Luna Mine Plan:

- Media Luna resource to be recovered by underground mining methods, two methods are proposed, transverse longhole open stoping (LHOS) (66% of production) and cut and fill stoping (C&F) (34% of production).
- Transportation of mineralized material from ML to ELG and tailings for backfill from ELG to ML by a single tunnel/aerial conveyor.
- Resource extracted as two connected, but independent zones.
- Four year development period with a 6 month ramp up to full production.
- Access is via four tunnels; two for permanent access, two for development purposes.
- Permanent access for personnel via tunnel from ELG Mine.

24.16.1 Introduction

This section describes the conceptual mining plan for ML and ELG for the life of the project. In the conceptual mine plan ML is anticipated to begin production in 2020 at approximately 7,000 tpd feed to the processing plant. At this time, plant feed from ELG would be reduced by 7,000 tpd to keep the overall feed to the process plant at 14,000 tpd. Mining rate would remain constant for ELG, and ore would be preferentially sent to the mill based on grade. The remainder of the open pit ore material would be stockpiled and processed at the end of mine life. The open pit mining plan used in the conceptual PEA plan is presented in section 24.16.2.

Within the conceptual PEA plan the ML resource would produce 7,000 tpd of mineralized material using a combination of C&F, and LHOS methods. This material would be transported to the process plant via a RopeCon conveyor system. The underground mining methods, systems, and services to achieve this are described in section 24.16.3.

24.16.2 ELG Open Pit Mining within Conceptual PEA Plan

ELG plant feed as presented in Section 16.12 of this report is scheduled at 14,000 tpd (5040 ktpa) for approximately 8.5 years starting in late 2016. This production schedule is referred to as the ELG base case mine plan. For the purposes of the Media Luna PEA an alternate ELG Mine plan has been developed with the objective of reducing ELG plant feed to 7,000 tpd starting in 2020. The remaining 7,000 tpd of plant feed from 2020 onward would be expected to be produced from Media Luna underground. Shown below are two options that were analyzed to reduce ELG plant feed to 7,000 tpd from 2020 onward:

1. Reduce the ELG base case annual ore and waste mining rates by 50% after 2019 by postponing phase pit development and/or by reducing phase pit mining rates. It would be necessary to complete the Guajes pit by the end of year 2025 to provide storage capacity for Media Luna tailings, so the reduction in mining rate would occur principally in El Limón and El Limón Sur pits. This option would extend the ELG Mine operating

life until 2031 (versus 2025 in the base case plan), with ELG plant feed rate at approximately 7,000 tpd from 2020 to 2031.

2. Continue ELG annual mine production as per the base case mine plan until pit completion in year 2025. After 2019 process at 7,000 tpd utilizing higher grade ore mined and stockpile the remaining lower grade ore mined. Then from year 2026 onwards, rehandle the lower grade ore from the stockpile to plant, and maintain ELG plant feed at 7,000 tpd until stockpile depletion in 2031.

Both options assume the same total ELG ore and waste mined as scheduled in the ELG base case mine plan presented in Section 16.

A preliminary trade-off analysis showed that the second option above would provide more favorable overall project economics and this alternate ELG production option was selected for the ML PEA evaluation. Modifications to ELG Mine plan, in year 2020 and onwards, based on this selected option are described below.

24.16.2.1 Cut-off Grade

The alternate ELG Mine plan utilizes the same total ore mined as the base case mine plan, which implies no change to the marginal economic ore-waste cut-off grade utilized in the base case. The ore-waste cut-off grade in the base case mine plan presented in Section 16 varied from 0.59 to 1.11 g/t Au depending on ore type and averaged approximately 0.65 g/t Au.

In the alternate ELG Mine plan developed for the PEA an additional elevated operational cut-off grade (sometimes referred to as “cut-over” grade) would be required in order to subdivide the 28.5 Mt of ELG ore mined after 2019 into high grade (HG) and low grade (LG) portions. A number of MineSight reserve runs on the phase pit benches remaining to be mined after 2019 were performed at various cut-offs to determine the impact of cut-off grade on total tonnages. It was found that utilizing an elevated cut-off grade of 2.30g/t Au for all ore types resulted in similar tonnages of high grade and low grade ore mined after 2019.

Based on this analysis a HG-LG cut-off of 2.30 g/t Au was utilized after 2019 in the alternate ELG Mine plan prepared for ML PEA purposes. Note that this HG-LG cut-off grade was not applied to ore mined prior to 2020.

24.16.2.2 Mining Dilution and Losses

Waste dilution is estimated at 15% of in situ quantities at a grade of 0.13 g/t Au and 1.6 g/t Ag, and mining loss is estimated at 5% of in situ quantities as described in Section 16.11.2. In the alternate ELG Mine plan developed for the PEA this dilution and mining loss was applied to all ore mined, including both HG and LG ore mined after 2019.

It is expected that selectively mining LG and HG ore zones would not always be possible and some intermixing of LG ore and HG ore would likely occur. As an allowance for this intermixing 10% of the estimated LG ore mined has been included within HG ore quantities and a corresponding amount of estimated HG ore mined has been included within LG ore quantities. The net effect of this intermixing allowance would not change the tonnages but it would result in a slight reduction in the forecast average grade of HG ore and an increase in the forecast average grade of LG ore. It is estimated that the 10% allowance is approximately equivalent to a 2m wide inter-mixing zone between the high grade and low grade ore zones. SRK recommends that during subsequent engineering studies that involve ELG ore separation into grade “bins”, an in-depth analysis of ELG Mineralization geological continuity at various cut-off grades be carried out and an assessment made of the potential to selectively mine ore within various cut-off grade ranges.

24.16.2.3 Production Schedule

The alternate ELG production schedule developed for the ML PEA is summarized in Table 24-22. The phase pit mining sequence and annual total ore and waste mining matches the ELG base case production schedule throughout the 2015-2025 pit life. Note that ELG ROM ore quantity estimates are founded only on Measured and Indicated mineral resources. ELG Inferred mineral resources are included within waste rock stripping quantities and are identified separately for sensitivity analysis purposes.

Plant feed in the alternate ELG plan developed for the ML PEA matches the base case LOM plan until 2019, i.e. ELG feed at full plant capacity of 14,000 tpd starting in late 2016. After 2019 plant feed differs from that forecast in the base case LOM plan. In the alternate ML PEA mine plan, ELG plant feed would be reduced to 7,000 tpd starting in 2020 when the 7,000 tpd ML underground mine would be expected to be operational. Due to the lower feed rate, ELG plant feed would be extended to 2031 in the PEA mine plan. The changes to ELG plant feed would result in differences in ore rehandle quantities after 2019 versus the ELG base case LOM plan.

A key objective of the alternate ELG PEA production schedule is to enhance the overall PEA project economics by preferentially feeding higher-grade ore from the ELG pits in years 2020 to 2025. The residual lower grade ore mined would be stockpiled and subsequently rehandled to the plant starting in 2026 until the stockpiles are depleted in 2031.

In the ML PEA ELG Mine production schedule shown in Table 24-22, most ROM ore scheduled to be mined after year 2019 has been separated by gold grade into two categories, i.e. higher grade ore above an elevated in-situ cut-off grade of 2.30 g/t Au, and lower grade ore grading above the marginal economic cut-off grade averaging 0.65 g/t Au and below the elevated cut-off grade of 2.30 g/t Au. The ore quantities and grades shown in Table 24-22 incorporate dilution, mining losses, and estimated intermixing of HG and LG ore as described in section 24.16.2.2.

The higher grade pit feed from 2020 to 2025 is projected to increase the estimated ELG average plant feed head grade by 43% versus the base case plant feed head grade in the same period. As a result of the higher feed grades the estimated contained gold in ELG plant feed from 2020 to 2025 would only decrease by 23% even though ELG feed tonnage would decrease by about 46%.

Table 24-22: Alternate ELG Mine Production Schedule developed for the PEA

		Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Pit Production																				
Ore mined, > ~0.65 g/t Au COG	kt	21,253		1,533	3,362	5,060	4,339	4,816	1,593	-	551	-	-	-	-	-	-	-	-	-
Au grade	g/t	2.46		2.79	2.29	2.69	2.29	2.24	2.58	-	3.26	-	-	-	-	-	-	-	-	-
Ag grade	g/t	5.58		5.08	5.67	7.10	6.79	3.19	4.81	-	5.90	-	-	-	-	-	-	-	-	-
HG ore mined, > 2.30 g/t Au	kt	13,275							1,500	2,338	1,920	3,895	2,526	1,096	-	-	-	-	-	-
Au grade	g/t	4.35							3.69	3.71	4.11	5.08	4.39	4.34	-	-	-	-	-	-
Ag grade	g/t	4.47							4.31	4.10	3.75	5.53	3.61	4.98	-	-	-	-	-	-
LG ore mined, ~0.65 g/t Au - 2.30 g/t Au	kt	13,032							2,325	2,996	1,940	2,264	2,561	947	-	-	-	-	-	-
Au grade	g/t	1.42							1.38	1.37	1.39	1.48	1.47	1.47	-	-	-	-	-	-
Ag grade	g/t	2.32							2.46	2.22	2.14	2.62	2.32	1.97	-	-	-	-	-	-
Total Ore Mined > ~0.65 g/t Au COG	kt	47,560		1,533	3,362	5,060	4,339	4,816	5,418	5,333	4,411	6,159	5,087	2,043	-	-	-	-	-	-
Au grade	g/t	2.70		2.79	2.29	2.69	2.29	2.24	2.37	2.40	2.81	3.76	2.92	3.01	-	-	-	-	-	-
Ag grade	g/t	4.38		5.08	5.67	7.10	6.79	3.19	3.66	3.04	3.31	4.46	2.96	3.58	-	-	-	-	-	-
Total waste mined	kt	274,389		13,625	19,343	29,314	30,199	33,669	32,939	33,775	32,016	26,207	18,286	5,014	-	-	-	-	-	-
Inferred mineralization included in waste	kt	*2,267*		*55*	*258*	*371*	*113*	*222*	*294*	*272*	*217*	*332*	*120*	*14*	-	-	-	-	-	-
Au grade	g/t	*1.66*		*1.73*	*1.60*	*1.93*	*1.77*	*1.56*	*1.77*	*1.26*	*1.12*	*1.73*	*2.47*	*1.17*	-	-	-	-	-	-
Total production mined	kt	321,948		15,158	22,706	34,373	34,538	38,485	38,357	39,108	36,427	32,366	23,372	7,058	-	-	-	-	-	-
Strip Ratio	W/O	5.8		8.9	5.8	5.8	7.0	7.0	10.6	14.4	13.0	6.7	7.2	4.6						
Total waste dozed, including rehandle	kt	8,145		7,280	865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total waste hauled, including rehandle	kt	277,649		11,075	19,865	30,222	31,792	35,142	33,575	33,943	32,289	26,444	18,288	5,014	-	-	-	-	-	-
LG ore rehandle to crusher	kt	13,032		-	-	-	-	-	-	-	-	-	-	-	2,505	2,520	2,520	2,520	2,520	446
Other ore rehandle to crusher	kt	7,382		11	1,827	570	953	476	150	308	379	559	347	1,786	15	-	-	-	-	-
Total ore hauled, including rehandle	kt	65,829		1,544	5,189	5,630	5,292	5,292	3,975	5,642	4,239	6,717	5,434	3,829	2,521	2,520	2,520	2,520	2,520	446
Total ore & waste hauled, including rehandle	kt	343,478		12,618	25,055	35,852	37,084	40,434	37,549	39,584	36,528	33,161	23,722	8,844	2,521	2,520	2,520	2,520	2,520	446
Ore trammed by loader, stockpile to crusher	kt	1,746		11	204	252	252	252	145	126	126	126	126	126	1	-	-	-	-	-
LG ore stockpiles, end of year	kt		-	-	-	-	-	-	2,325	5,320	7,260	9,524	12,085	13,032	10,526	8,006	5,486	2,966	446	-
Au grade	g/t		-	-	-	-	-	-	1.38	1.37	1.38	1.40	1.42	1.42	1.42	1.42	1.42	1.42	1.42	-
Ag grade	g/t		-	-	-	-	-	-	2.46	2.32	2.27	2.36	2.35	2.32	2.32	2.32	2.32	2.32	2.32	-
Other ore stockpiles, end of year	kt		390	1,709	996	1,015	314	90	289	106	58	1,432	1,438	15	-	-	-	-	-	-
Au grade	g/t		1.40	2.52	2.17	2.29	2.28	2.13	3.02	3.04	2.98	4.97	4.92	4.86	-	-	-	-	-	-
Ag grade	g/t		1.97	4.45	4.39	4.70	4.72	5.58	5.42	5.45	5.36	5.45	5.28	5.12	-	-	-	-	-	-
Plant Feed					*3.25 years at 14,000 tpd*				*11 years at 7000 tpd*											
Process rate	tpd	8,232	-	3,511	11,196	14,000	14,000	14,000	8,038	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	1,240
Feed to Crusher	kt	**47,950**	-	**214**	**4,075**	**5,040**	**5,040**	**5,040**	**2,894**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**2,520**	**446**
Au grade	g/t	2.69	-	2.40	2.41	2.67	2.29	2.25	3.10	3.66	3.90	5.09	4.42	4.67	1.44	1.42	1.42	1.42	1.42	1.42
Ag grade	g/t	4.36	-	4.43	5.47	7.05	6.50	3.24	4.52	4.19	4.26	5.56	3.71	5.15	2.34	2.32	2.32	2.32	2.32	2.32

24.16.2.4 ROM Ore Stockpiles

Approximately 5.7 Mt of the total 13 Mt of low grade ore mined from 2020 to 2025 would be sourced from Guajes pit phases. It is planned that this low-grade ore would be stockpiled on a waste rock platform to be developed to the east of the plant site as shown in Figure 24-8. This figure also shows the locations of other ore stockpiles that would be utilized for higher grade Guajes and NN pit ROM ore storage throughout the mine life and the proposed location of the Media Luna underground portal in the vicinity.

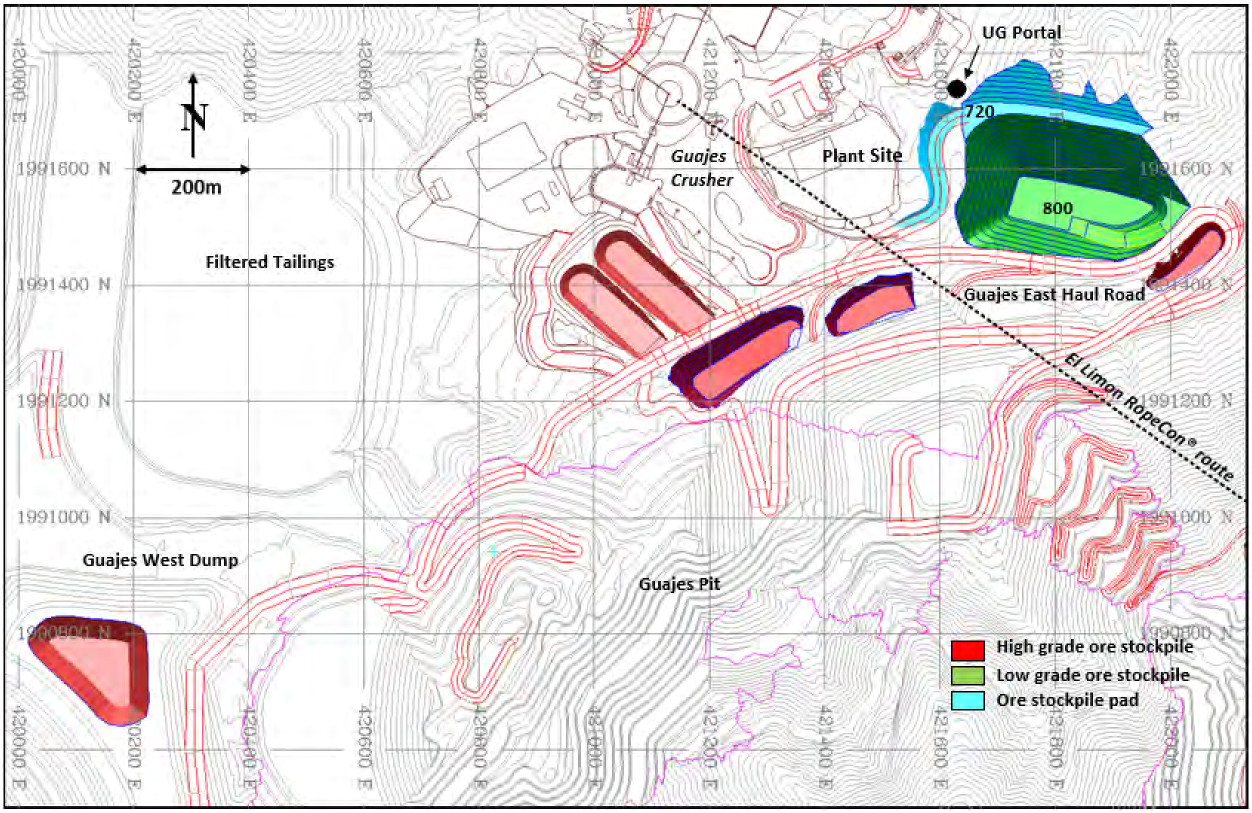


Figure courtesy of SRK Canada, June 2015.

Figure 24-8: Guajes Ore Stockpile Locations

El Limón lower grade and higher grade ore stockpiles would be located primarily on the El Limón waste rock dump platforms and in some areas of the El Limón pit, as shown in Figure 24-9. The in-pit stockpiles require small waste rock platforms that would be built by backfilling mined out areas. A total of 7.4 Mt of lower grade ore from El Limón and El Limón Sur would be stockpiled between 2020 and 2025. The short term higher grade El Limón stockpiles vary in size throughout the mine life up to a maximum of 1.2 Mt in 2024. Due to limited space availability, the higher grade El Limón ore would be stockpiled either in-pit or on top of previously developed lower grade ore stockpiles.

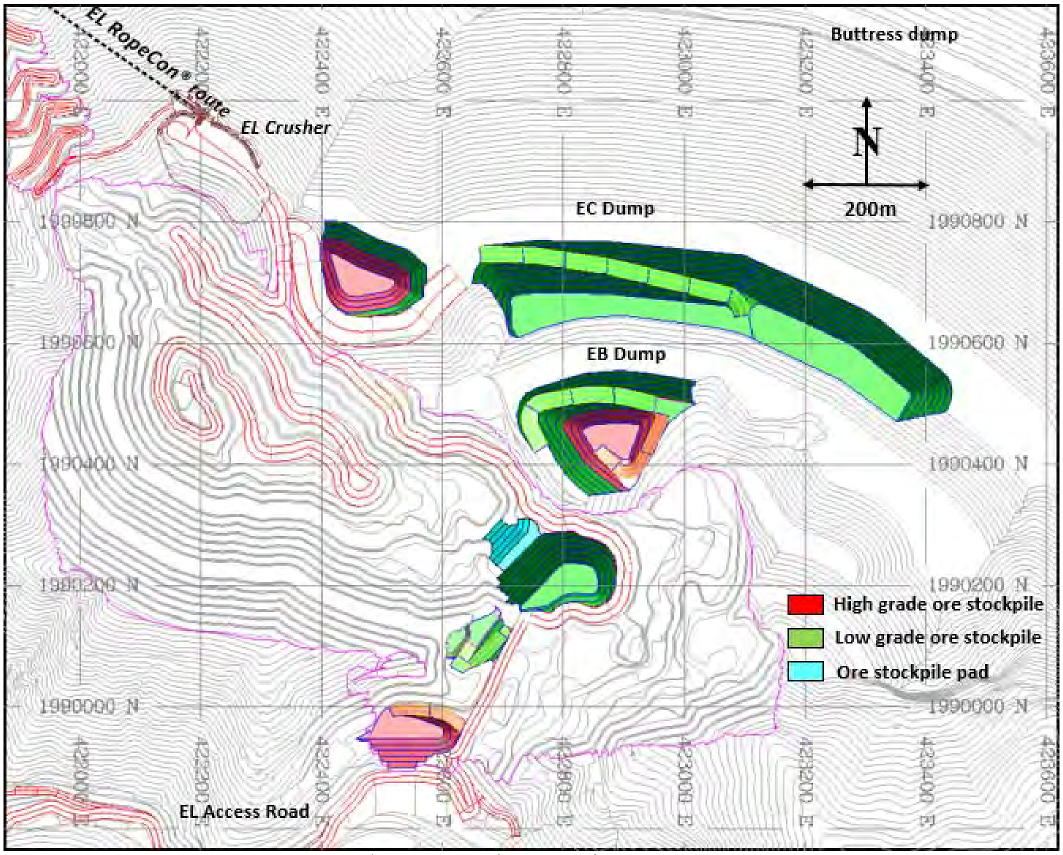


Figure courtesy of SRK Canada, June 2015.

Figure 24-9: El Limón Ore Stockpile Locations

24.16.2.5 Open Pit Operations

Mining is planned utilizing the owner's workforce on a continuous 24 hour/day basis, 356 days/year, with 3 production crews working 12 hour shifts on a 20 day on – 10 day off rotation, until pit completion at the end of year 2025, as presented in Section 16.13.1. From 2026 to mid-2031, low grade ore would be reclaimed from stockpiles utilizing 2 production crews working one 12 hour shift on a 20 day on – 10 day off rotation. Mine operating parameters that impact on equipment operation, and fleet and workforce sizes to 2025 would remain as same as presented in Section 16.13.

24.16.2.6 Open Pit Equipment

Equipment acquisitions over the mine life could remain the same as the base case mine plan until year 2025, as summarized in Section 16.14. It is estimated that two 12 m^3 wheel loaders, two tracked bulldozers, three 86 t trucks, supported by a grader, water truck, and service equipment would be sufficient for low grade ore re-handling from the stockpiles to crushers during the period 2026-2031. Based on analysis of cumulative equipment operating hours no additional replacement equipment would be expected to be required.

24.16.2.7 Open Pit Personnel

Mine workforce requirements are summarized in Table 24-23. The ELG pit would be completed by the end of year 2025 and the owner's workforce forecast would be significantly reduced in the following years since only loading/hauling of low grade ore to the crushers would be required.

Table 24-23: Pit Workforce

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Staff Manpower																		
Operations Supervision	12	17	15	15	15	15	15	15	15	15	15	12	3	3	3	3	3	1
Maintenance Supervision	1	2	2	2	10	10	10	10	10	10	10	7	2	2	2	2	2	2
Technical services	18	25	29	29	29	29	29	29	29	29	27	19	4	4	4	4	4	4
Sub-total	31	44	46	46	54	54	54	54	54	54	52	38	9	9	9	9	9	7
Mine Operations																		
Drillers	8	21	38	43	44	48	50	50	41	36	27	9	0	0	0	0	0	0
Blasting (excl contractors)	0	3	3	3	3	3	3	3	3	3	3	2	0	0	0	0	0	0
Shovel/Loader Operators	12	8	17	19	20	22	21	21	18	16	11	6	3	3	3	3	3	1
Truck Drivers	22	29	66	85	86	71	70	68	66	65	43	19	5	5	5	5	5	2
Support Equipment Operators	34	27	35	39	38	36	36	36	36	35	30	18	6	6	6	6	6	5
Dump Attendants, trainees, Laborers	0	12	17	18	18	18	18	18	17	16	13	6	0	0	0	0	0	0
Sub-total	76	99	175	207	209	198	198	195	181	172	127	60	14	14	14	14	14	8
Mine Maintenance																		
Mechanics, Welders	1	1	1	1	64	61	61	60	56	50	37	12	3	3	3	3	3	2
Fuel/Lube/Tyre service	0	6	12	12	12	12	12	12	12	12	12	4	2	2	2	2	2	2
Trainees, Laborers	0	1	2	2	6	6	6	7	7	6	6	2	1	1	1	1	1	1
Sub-total	1	8	15	15	82	79	79	79	75	68	55	18	6	6	6	6	6	5
Total Mine	**108**	**151**	**236**	**268**	**345**	**331**	**331**	**328**	**310**	**294**	**234**	**116**	**29**	**29**	**29**	**29**	**29**	**20**

24.16.3 Media Luna Underground Mining within conceptual PEA Plan

24.16.3.1 Mining Concept

The ML resource is a shallow dipping skarn deposit with a dip of approximately 35° to the south west and mineralization thickness varying between 5 m and 70 m. The mineralized skarn is located between marble hanging wall and granodiorite footwall.

A review of the ML resource identified two distinct and separate areas of higher tonnage and grade. Based on this assessment a conceptual mining plan was developed which establishes two independent mining zones. The plan provides operational flexibility for planning and scheduling while targeting high grade material early in production life. The conceptual mine design considers the two zones as independent mining areas that share a main materials handling system to transport mineralized material across the Balsas River to the ELG process plant. Processing of the ML mineralized material would take place in the existing/enhanced ELG process plant. Details on processing are provided in section 24.17 of this report.

This approach, as stated, allows for early mining of higher grade levels in both zones (765 block in the lower zone and the 1065 block in the upper zone) while only requiring the establishment of two sill pillars. The two mining areas would be linked via an internal ramp later in the project life, but would not be dependent one another. This plan would provide two concentrated mining areas with flexibility to meet the targeted production rate. A third area, the EPO Zone, would be mined as part of the lower zone and commences production in Year 10. Figure 24-10 and Figure 24-11 show a plan and cross sectional view of the conceptual Media Luna mining plan.

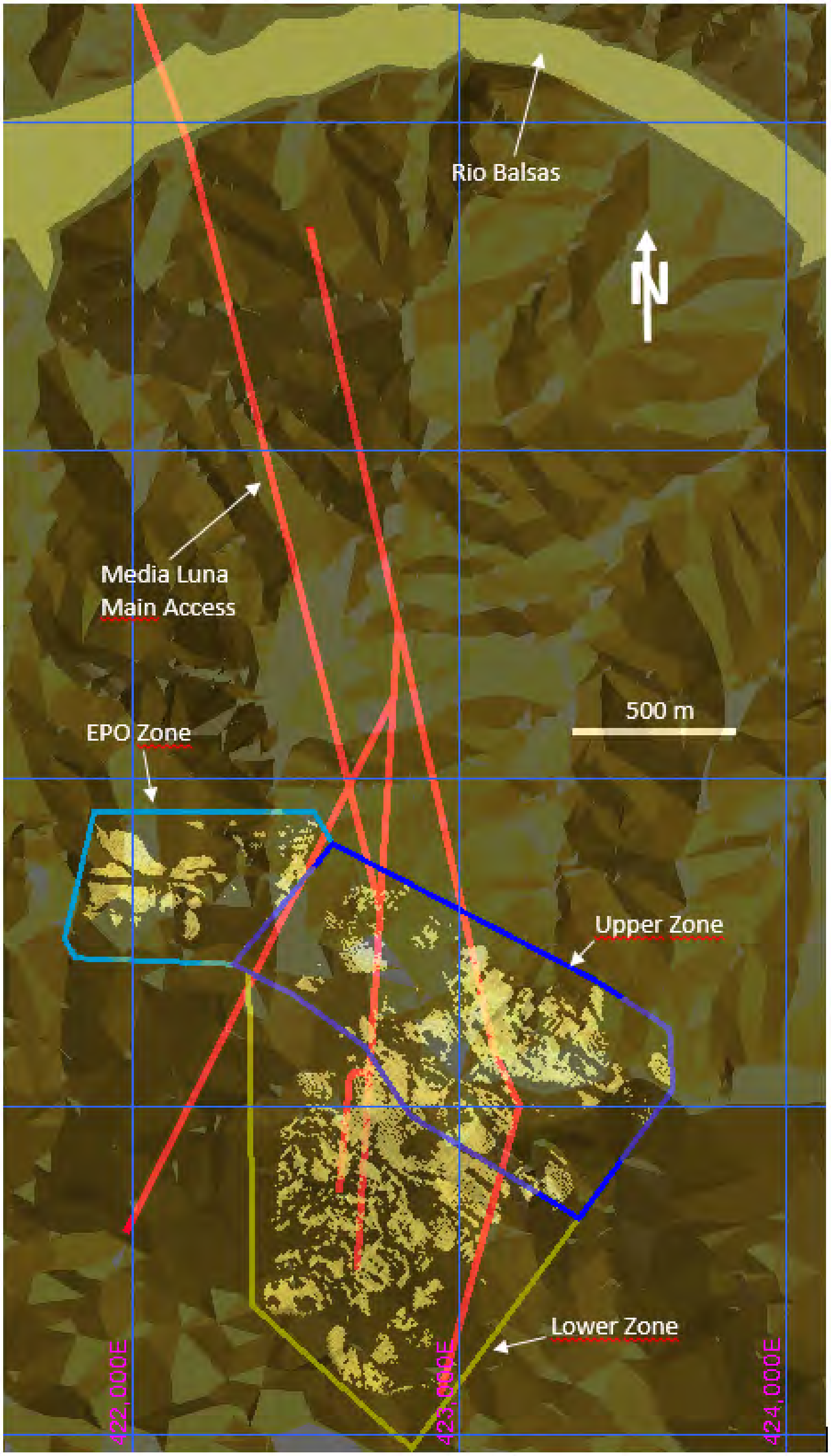
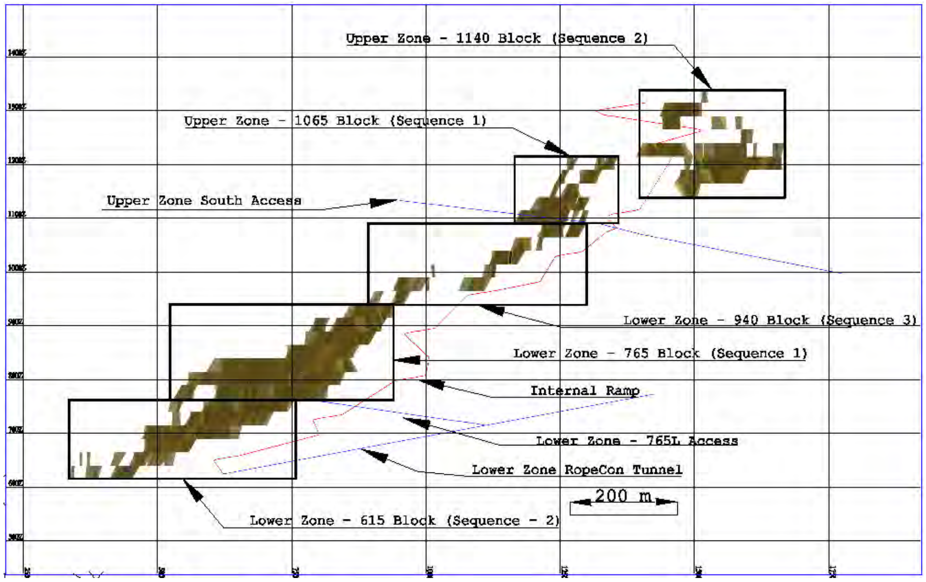


Figure 24-10: Media Luna Resource Plan View



- The EPO Zone is located off section ~900m to the NW of the lower zone at 710m Elev.

Figure 24-11: Mining Horizons Looking West

24.16.3.2 Mine Access

Access to the Media Luna resource during the production period would be from the ELG site via an access tunnel which originates from the south end of the ELG site and would be driven beneath Balsas River to connect with the Lower Zone development. During the development phase, two additional accesses are planned from the south side of Media Luna Ridge, named the Upper Zone South Access and San Miguel Access. These tunnels would provide early access for underground diamond drilling and development of the deposit. The Media Luna Main Access would provide the primary access for personnel and material during production, and the North RopeCon/Upper Zone RopeCon tunnels would be used for materials handling by the rope conveyor (RopeCon) system. The following two figures provide a sectional and plan view of the proposed access routes, see Figure 24-12 and Figure 24-13.

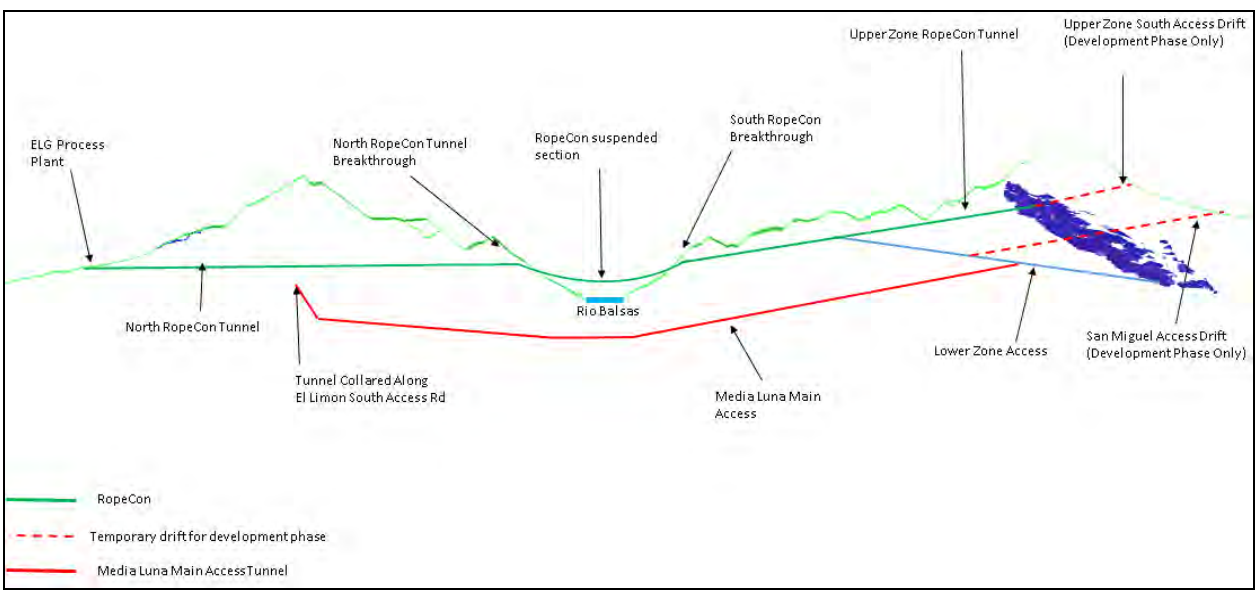


Figure 24-12: Media Luna Access Schematic (not to scale – looking east)

Figure 24-13 shows the breakthrough locations in plan view.

Figure 24-13: Media Luna Access Collar Locations

24.16.3.2.1 Considerations for Mine Access

Torex selected this access plan based on considerations of both exploration and operational factors. The access plan allows relatively quick access to the mineralized skarn for exploration work and mine development using the south tunnels and the Media Luna Main Access. The location of the Media Luna Main Access, providing the connection to the ELG site, was selected based on the following three factors:

- Minimizing the amount of land required, thereby reducing the environmental impact and the need to acquire and permit land.
- Provide a stable (long term) operation with economic benefits for all neighboring communities by continued operation of the ELG site.
- Minimizing the security exposure by maintaining the use of the ELG plant site and infrastructure.

24.16.3.2.2 Mining Method and Mine Design

Key points in this section:

- Review of the Inferred Mineral Resource indicates the deposit can be mined utilizing the sublevel transverse longhole open stoping (LHOS) method with delayed backfill.
- In areas where the vertical extent of mineralization is too narrow to utilize LHOS, cut and fill (C&F) mining is planned.
- Project infrastructure and ramp access have been designed in the footwall of the deposit in the more competent rock.
- Majority of LHOS stopes are accessed transversely from footwall drifts

24.16.3.2.3 Mining Method Selection

Media Luna is a shallow dipping skarn deposit with mineralization thickness varying between 5 and 70 meters.

Based on a review of the geology and shape of the Media Luna resource along with a high level geotechnical review, LHOS was selected as the main mining method. In areas where the resource is narrow, C&F stoping is utilized.

Preliminary mining stope shapes were estimated using CAE's Minable Shape Optimizer (MSO). The range of stope dimensions evaluated were first constrained by geotechnical parameters and maximum allowable hydraulic radii followed by an economic evaluation. This work resulted in the selection of LHOS nominal stope size of 25m high by 20m wide by 30m long. Development was planned to provide access using sublevels at 25 m spacing (elevation). C&F stopes were design in areas where LHOS could not be used. Based on the conceptual mine plan, LHOS would contribute approximately 66% of the total production with the remaining 34% being C&F.

The following is a description of the proposed mining methods.

24.16.3.2.3.1 LHOS with Delayed Backfill

LHOS would be the primary mining method employed. This method was selected based on its lower operating cost, high productive capacity, and flexibility relative to other mining methods. Mining has been planned from the bottom up using a primary-secondary mining sequence. This design and sequencing allows for a number of stopes to be in production simultaneously which supports the planned production rate of 7,000 tonnes per day.

Longhole stopes would be accessed from undercut and overcut crosscuts (see Figure 24-14). Mucking of blasted material would occur from the undercut, while fan drilling (Figure 24-16) would take place from the overcut. Backfill (rock or paste) would be introduced into the open stope from the overcut (see Figure 24-15). A sublevel interval of 25 meters has been selected (floor of undercut to floor of overcut).

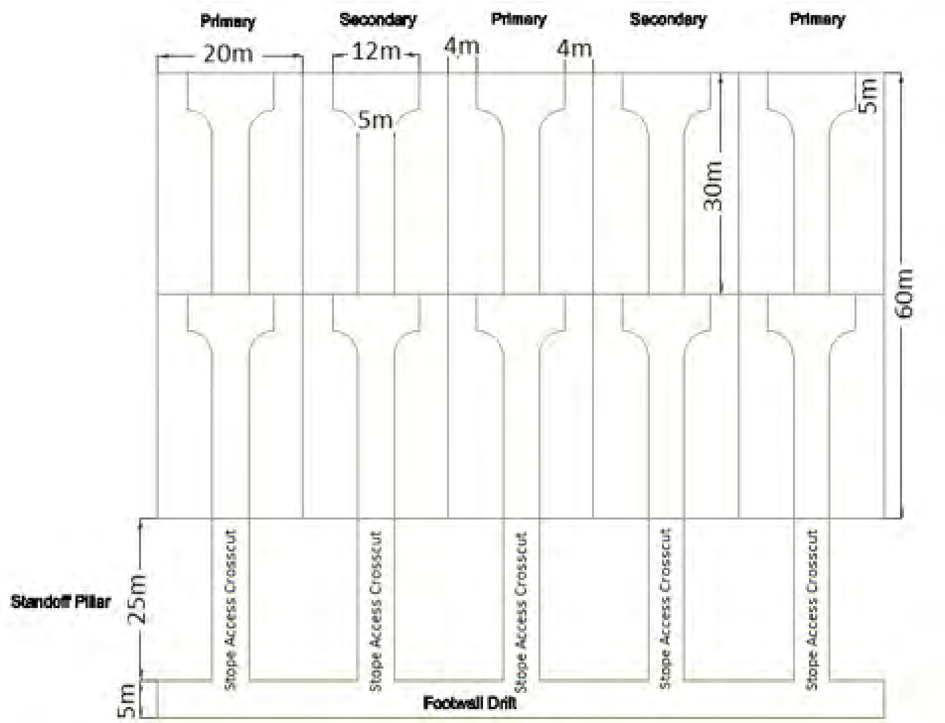


Figure 24-14: LHOS Access Design - Plan View

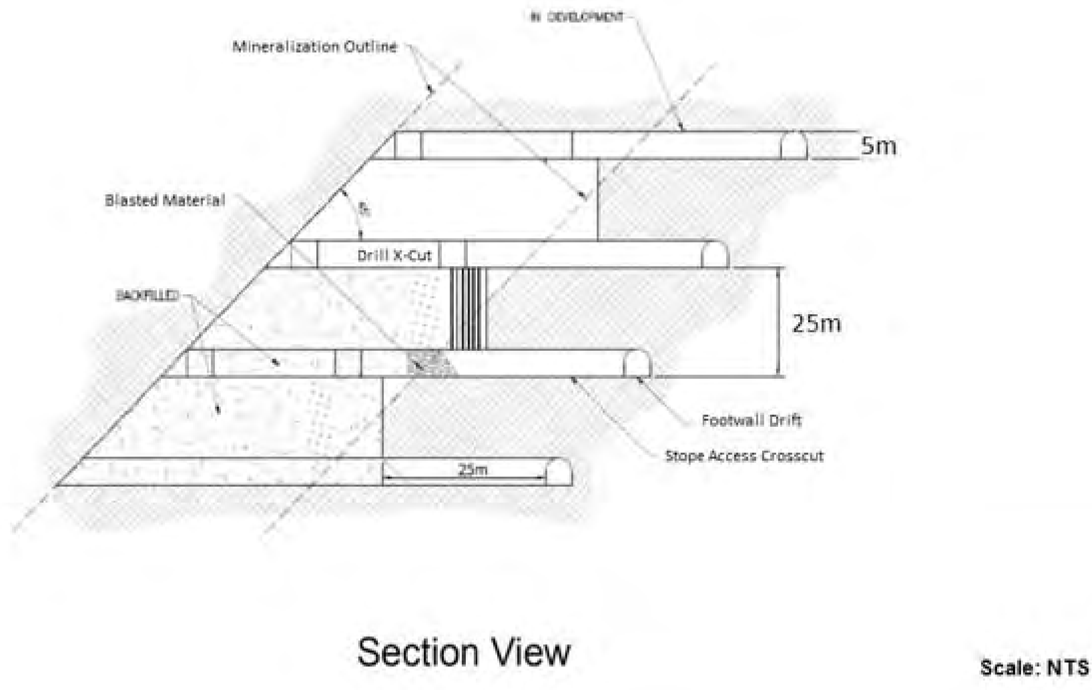


Figure 24-15: LHOS Design – Section (Looking West)

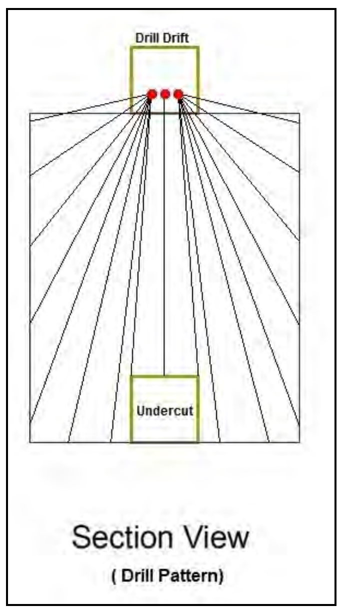


Figure 24-16 LHOS - Section - Production Drilling Ring Design (Looking North)

24.16.3.2.3.2 Cut and Fill (C&F)

In narrow sections of the deposit (less than 7 m wide) overhand C&F method would be utilized without pillars as shown in Figure 24-17. In areas with mineralization greater than 7 meters in width, the Post Pillar Cut and Fill (PPC&F) mining method would be utilized. . Pillar dimensions are 4 meters by 4 meters with a span between pillars of 5 meters. Figure 24-18 through Figure 24-20 illustrate the method.

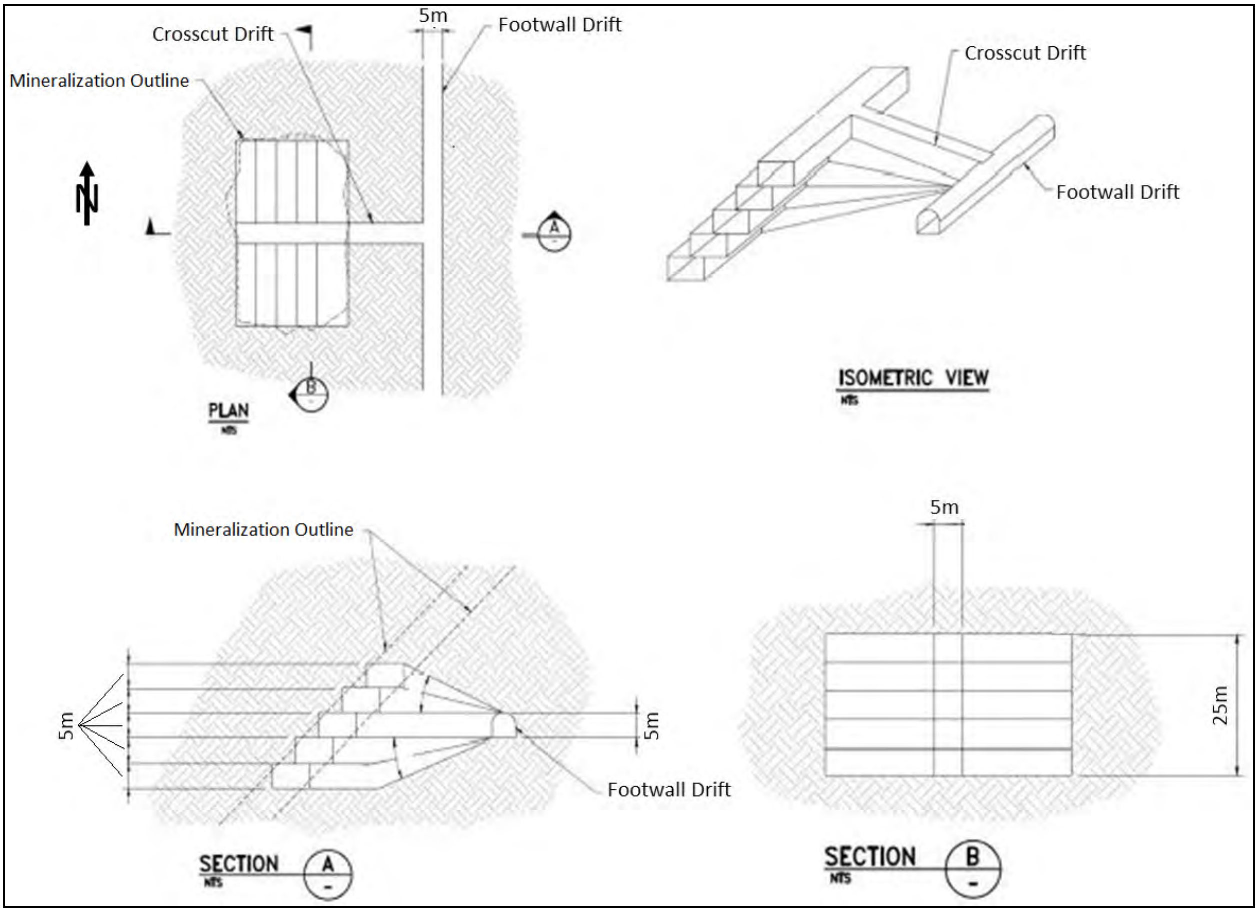


Figure 24-17: Overhand Cut and Fill (C&F) Diagram

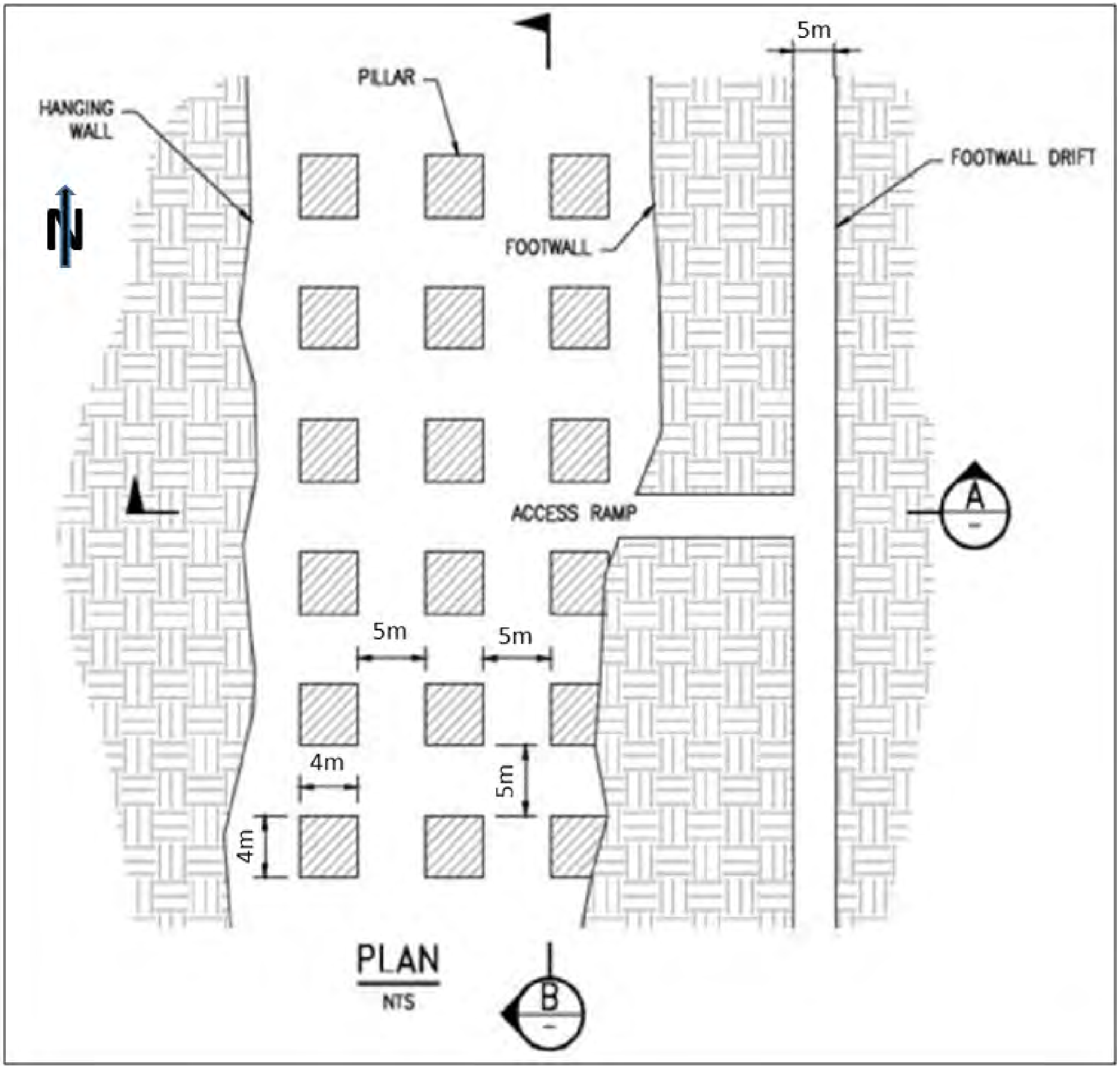
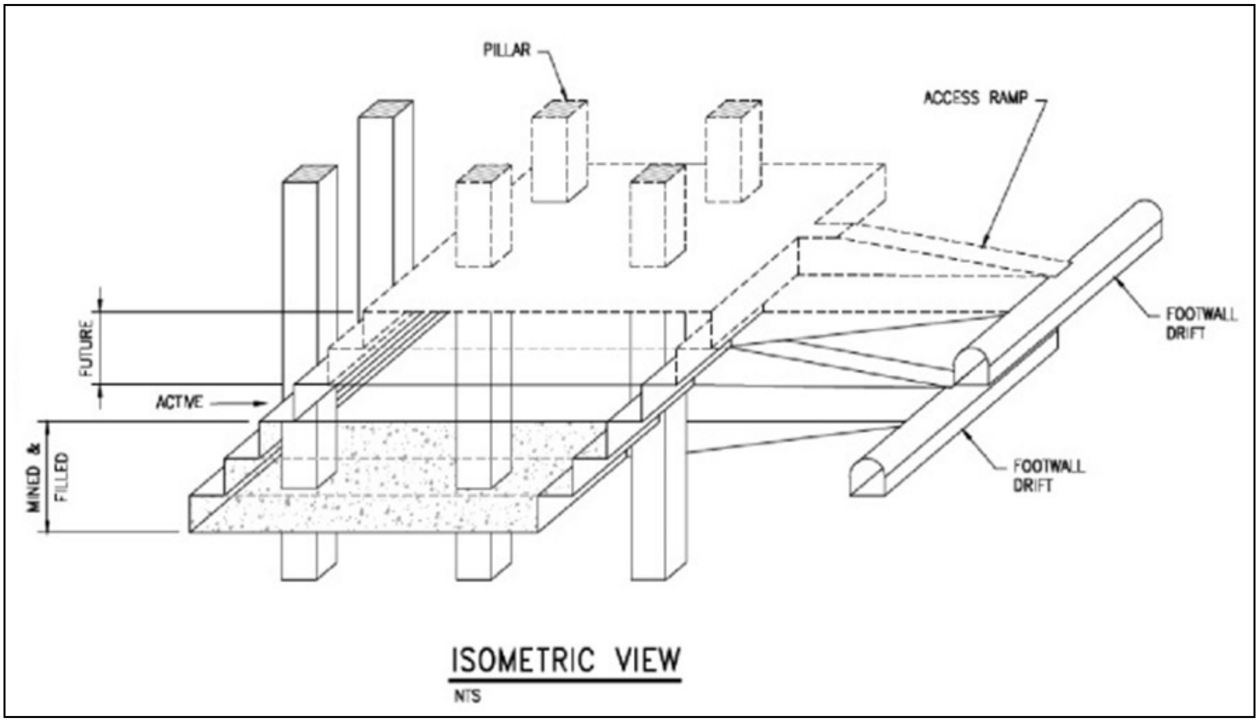
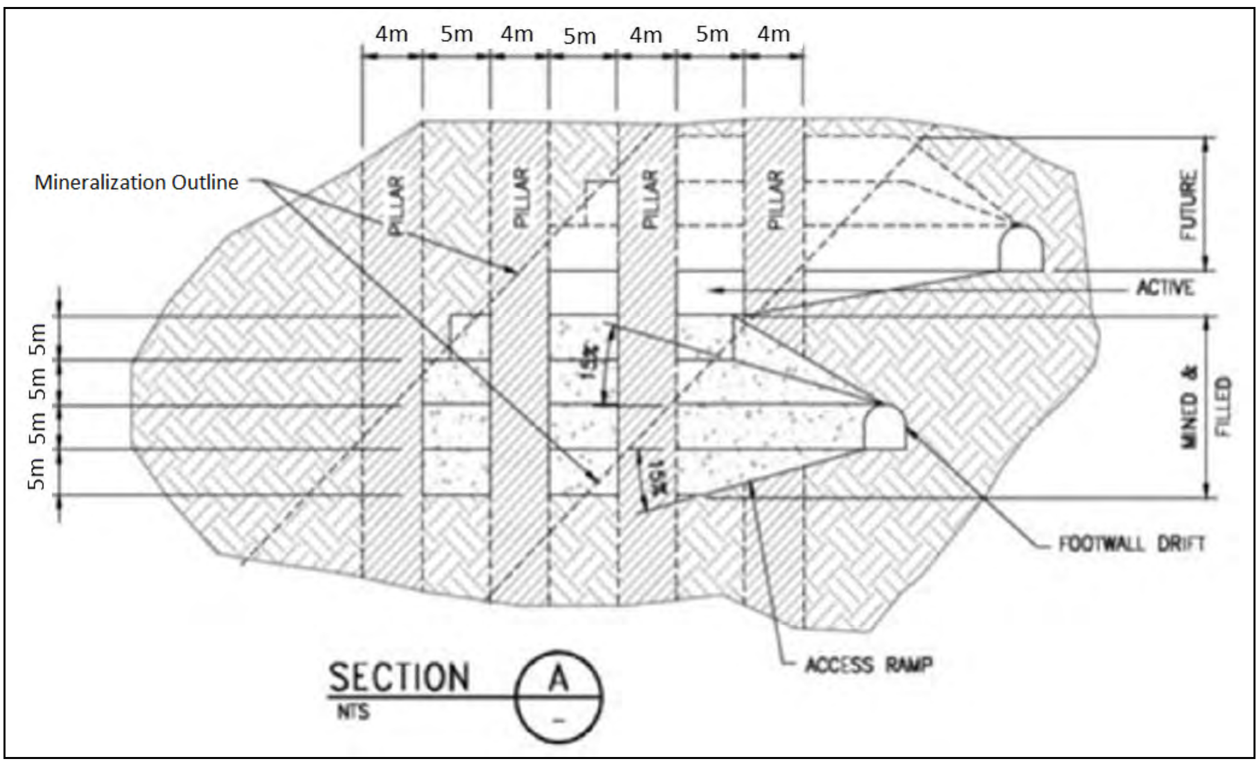


Figure 24-18: Post Pillar Cut and Fill (PPC&F) Plan View



(For illustrative purposes only – Media Luna would have 5 cuts to match with LHOS sublevels)

Figure 24-19: PPC&F Isometric View



For illustrative purposes only – Media Luna would have 5 cuts to match with LHOS sublevels)

Figure 24-20: PPC&F Section Looking West

24.16.3.2.4 Stoping Process

24.16.3.2.4.1 LHOS

Once crosscuts (over/undercuts) are established, a raisebore would be utilized to develop the 20 meter long by 1.2 m diameter slot raises between the overcut and undercut. Production drilling and loading would be performed from the overcut and blasted material would be mucked from the undercut. Fill would be placed from the overcut upon completion of mucking.

LHOS would commence on 3 horizons (640L, 765L, and 1065L) and target high grade areas in the early years of production. Mining would advance from bottom up from each horizon. Two sill pillars would be established (740L and 1040L) that would be recovered once the stoping is complete. Within the conceptual mining plan recovery of the pillars has been assumed at 88%.

24.16.3.2.4.2 C&F

C&F stopes would be mined using a combination of C&F and PPC&F. In each situation the stopes would be accessed through a main access ramp and mining would progress perpendicular to the main access.

When mining of a cut is complete and backfilled, breasting of the access ramp would take place to establish the new mining cut. Stopes are 25 meters in height consisting of five cuts per stope.

24.16.3.3 Materials Handling

Key points for this section are as follows:

- Key elements considered in design
    - Development of a materials handling system that promotes high mucking rates from the production areas.
    - Efficient movement of material to ELG and tailings back to the mining area.
    - Shallow dip of the ML resource.
- Material handling raises established close to production areas to reduce tram distance.
- Material gathered in two main areas, upper and lower zones.
- RopeCon conveyors would be loaded on the materials handling levels with material from the raises.
- Lower zone RopeCon would transfer onto the upper RopeCon to transport material to the ELG process plant.
- EPO material would be trucked to the lower zone material handling level.

24.16.3.3.1 RopeCon Conveyor System

The RopeCon is a conveyor system that runs on track ropes anchored at each end of the conveyor run. This suspended rope conveyor is made by Doppelmayr, of Austria, who have conducted a high level engineering study and cost estimation for the proposed system at the ML Project. Doppelmayr is currently in the process of installing a RopeCon to transport ore from the ELG crusher to the process plant at the ELG mine site. The following is a description of the RopeCon as it relates to the conceptual underground mining plan.

RopeCon was the preferred material handling system and chosen based on safety, efficiency, and low environmental impact, while also providing an means for delivery of filtered tailings to the backfill plant.

The system consists of two separate conveyors, lower zone RopeCon and upper zone RopeCon. The lower zone RopeCon is used exclusively to transport ROM mineralized material, at a planned nominal rate of 670tph, from the materials handling level in the lower zone (elevation 640) to a transfer point which loads the upper zone RopeCon (elevation 915).

The upper zone RopeCon transports all ROM mineralized material from ML deposit to the ELG process plant while simultaneously transporting filtered tailings back to the ML deposit on the return belt when required. The upper zone RopeCon would be loaded with the upper zone minerialized material at the 1065 elevation, which would also be the location of the underground paste fill plant. Capacity of the upper zone RopeCon is 1,000 tph of ROM material to the ELG process plant and 650 tph simultaneous backhaul of tailings to ML deposit. The system capacity would achieve the planned daily production target of 7,000 tpd in 7 hours of operation per day. The excess capacity would allow for production flexibility and future expansion. Additional information on the RopeCon is available in section 24.18.

Figure 24-21 shows the planned routes for both the upper and lower zone RopeCon conveyors.

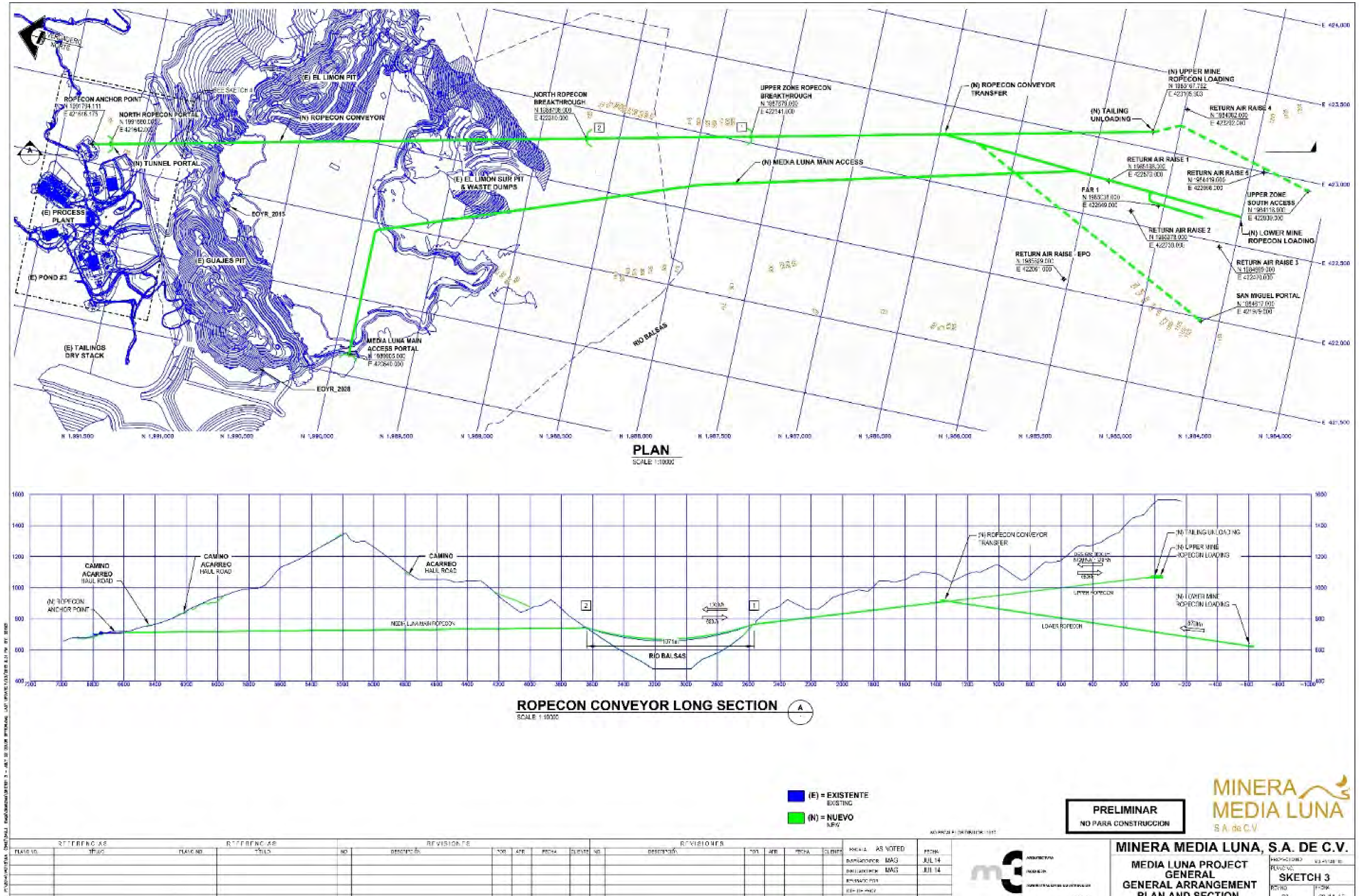


Figure 24-21: Plan and Section Profile of RopeCon System

24.16.3.3.1.1 Tailings Return to RopeCon

Tailings from the ELG plant would be transported directly to the underground paste fill plant via the return portion of the RopeCon belt at a maximum rate of 650 tph. If tailings are not required to replenish the underground stockpile, they would be conveyed and placed in the dry stack storage facility on the existing system at the ELG process plant. An underground storage area for 4,000 tonnes of tailings has been included in the design. This storage along with the delivery of tails would allow for continuous filling of stopes.

24.16.3.3.2 Internal Materials Handling

This section describes the methodology for moving material from the production levels to the RopeCon system, as well as waste removal from development drifting.

24.16.3.3.2.1 Upper & Lower Zone Materials Handling

Broken mineralized material from stopes would be mucked by Load Haul Dump (LHD) units to a central pass system which would be accessible from the sublevels. Location of the sublevel dump points have been designed to limit haulage distance and maximize LHD productivity. The mineralized material would be dumped into finger raises located on each sublevel, which direct the material into the passes. Each finger raise would be fitted with a grizzly to remove oversized material, and enable secondary breakage if required.

At the bottom of the pass, the material would be transferred to haul trucks and transported to the RopeCon load out. The bins and passes would have a one day production storage capacity. Prior to entering the bins material would pass through final grizzlies/rock breakers.

Material in the uppermost sublevels which are not serviced by the main passes would be transported to the passes using truck haulage from the footwall drifts.

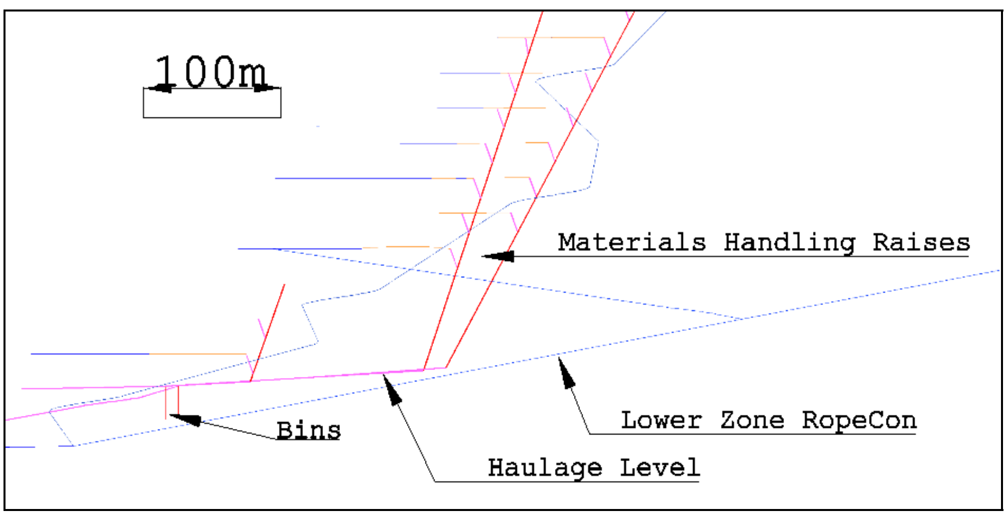


Figure 24-22: Lower Mine Materials Handling Schematic (Section facing Northwest)

24.16.3.3.2.2 EPO Materials Handling

Material from the EPO zone would be hauled from the footwall drifts by 40 tonne trucks to the Lower zone grizzly/rock breaker and loaded onto the Lower zone RopeCon.

24.16.3.3.2.3 Waste Handling

During the development of the access tunnels, waste would be trucked to surface. Waste from the development of the tunnels north of Balsas River would be placed in the existing waste dumps at the ELG Mine.

On the South side, smaller dumps would be constructed at each of the portals to store waste produced during the development of the Upper Zone South Access and the San Miguel Access. Once production mining has commenced, waste would be removed from the south surface dumps and placed in mined out areas as backfill. The approach reduces the requirement for long term storage of waste rock on surface. Figure 24-23 provides a summary of the waste stored in surface stockpiles over life of operation.

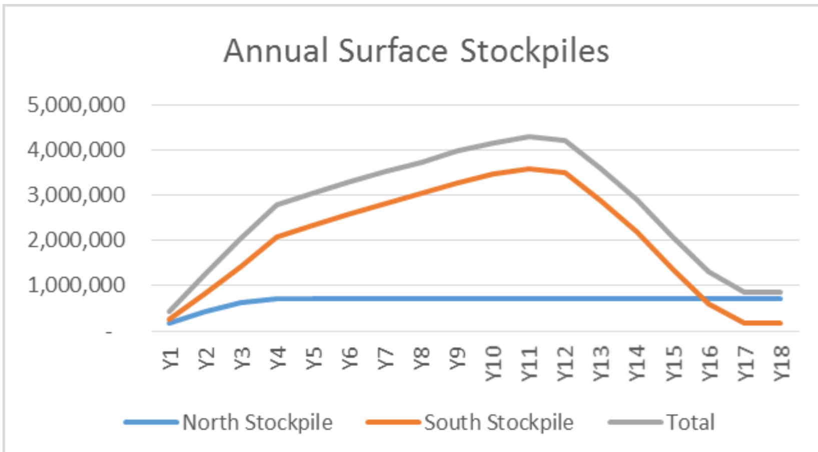


Figure 24-23: Development Waste to Surface

24.16.3.4 Potential Mining Inventory

Key Points:

- Cut-off Grade of 2.6 g/t AuEQ for upper and lower zones of the ML Mineral Resource (LHOS & C&F)
- Cut-off Grades of 4.0 g/t AuEQ (LHOS) and 3.5 g/t AuEQ (C&F) for EPO Zone
- Production distribution by mining method and tonnage: 66% LHOS, 34% C&F average over life of operation (20.5M tonnes LHOS, 10.4M tonnes C&F)
- Average life of operation diluted grade of 4.77g/t AuEQ
  - o LHOS: 5.02 g/t AuEQ
  - o C&F: 4.30 g/t AuEQ
- Average Mining Recovery – Main Zones: LHOS – 95%, C&F – 83.5%
- Average Mining Recovery – EPO: LHOS 95%, C&F – 80.2%
- Average unplanned dilution: LHOS – 8.7% at 0.76 g/t AuEQ, C&F – 10% at 0.68 g/t AuEQ

Table 24-24: Life of Mine – Media Luna Mining Inventory

		Period	Total
Media Luna - Total Mine	LHOS	Tonnes	20,535,000
		AuEQ (g/t)	5.02
		Au (g/t)	2.68
		Ag (g/t)	28.67
		Cu (%)	1.09
	Cut and Fill	Tonnes	10,429,000
		AuEQ (g/t)	4.30
		Au (g/t)	2.33
		Ag (g/t)	25.00
		Cu (%)	0.91
	TOTAL	**Tonnes**	**30,964,000**
		AuEQ (g/t)	**4.77**
		Au (g/t)	**2.56**
		Ag (g/t)	**27.43**
		Cu (%)	**1.03**

24.16.3.4.1 Cut-Off Grade

A cut-off grade (CoG) of 2.60 g/t AuEQ for the upper and lower zones was determined by comparing multiple MSO runs using the nominal LHOS stope dimensions. Grades ranging from 2 g/t to 3 g/t AuEQ were examined. Based on preliminary operating cost estimates, break-even cut-off grades of 2.2-2.6 g/t AuEQ were estimated. The estimate was further refined following a review of the resulting mining shapes and grades. Grades below the 2.60 g/t AuEQ cut-off were found to be uneconomical at the assumed metal prices. The EPO zone contains a high grade core that appears to be amenable to LHOS and C&F stoping. The CoG used in the EPO is 4.00 g/t AuEQ for LHOS and 3.50 g/t AuEQ for C&F.

The grade tonnage curves at the respective cut-off grade for each mining method and the total mined is provided in Figure 24-24.

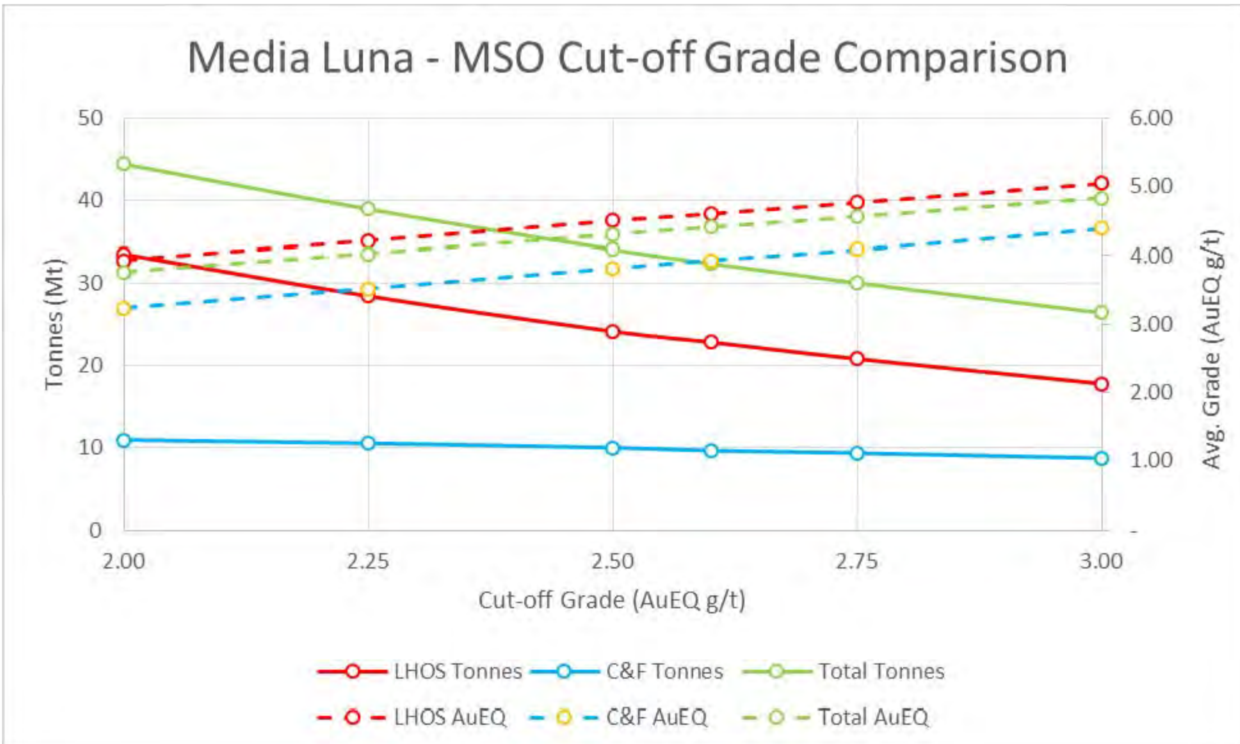


Figure 24-24: 2015 MSO Summary – Grade Tonnage Curve for Different Cut-Off Grades (Excluding EPO)

24.16.3.4.2 Dilution Estimation

24.16.3.4.2.1 Planned Dilution

An estimate of the planned dilution was developed using the MSO stope shapes followed by a manual review of the shapes and their orientation as compared to the mineral resource. The potential mineral resource has been estimated to include 21% internal planned waste dilution in the LHOS stopes and 5% in the C&F stopes. Additional waste material included in the C&F shapes was assumed to be mined and used as fill rather than being sent to the process plant. It is assumed that C&F mining would be conducted under geology control, as the skarn mineralization is assumed to be visually identifiable by a trained geologist.

24.16.3.4.2.2 Unplanned Dilution

Unplanned dilution of the longhole stopes was estimated assuming 0.5 m of equivalent linear over break and slough (ELOS) in each wall of the stope. Unplanned dilution has been estimated at 8.7% at an average grade of 0.76 g/t AuEQ in the LHOS stopes. Unplanned dilution in the C&F stopes has been estimated at an average 10% and grade of 0.68 g/t AuEQ.

24.16.3.4.3 Mining Recovery

Overall recovery of the mineral resource is estimated at 64% of the contained gold equivalent ounces of the resource stated at 2.0 g/t AuEQ cut-off. Approximately 29% of the loss is a result of higher cut off grades used in the MSO stope optimization. Table 24-25 provides the estimated mining recovery by method.

Table 24-25: Mining Method Recoveries

	Method	Mining Recovery (%)
Media Luna	LHOS - Stope	95.0%
	LHOS - Sill Pillar	88.0%
	C & F Post pillar	80.2%
	C & F Longitudinal	95.0%
	C & F Average	83.5%
EPO	LHOS - Stope	95.0%
	C & F Post pillar	80.2%

24.16.3.5 Mining Schedule

Key Points:

- 7,000 tpd at full production, 4 year development period, followed by a 6 month ramp-up to full production
- 360 operating days per year, 2 x 12 hour shifts per day, 9 effective hours per shift
- Contractor development phase (Q1Y1 – Q1Y4) – 5 m/d single heading development advance rate and a 7m/d multiple heading development advance rate.
- Company Development (Q2Y2 – Y12) – 3.5 m/d single heading development advance rate and a 7.5 m/d multiple heading development advance rate.
- Vertical development – Alimak method at a rate of 2 m/d or raisebored at 2.8 m/d.

24.16.3.5.1 Development Rates

Development advance rates used in the study are summarized in Table 24-26 below. A contractor would be engaged for the initial access development of the ML resource (Years 1 to 4). Company crews would start in Year 2 and replace contractors over a two year period.

Table 24-26: Development Advance Rates

Advance Rates (m/d)		
Resource	**Single Face**	**Multi-Face**
Contractor	5.0	7.0
Company	3.5	7.5
Raisebore	2.8	N/A
Alimak	2.0	N/A

24.16.3.5.2 Development Schedule

The development schedule includes a 30 day period for portal preparation, collar ground support, and ancillary facility installation prior to the contractor development phase. The number of working crews would be constrained by the quantity of ventilation available for development.

Critical path development to satisfy the production schedule would be as follows:

- Primary Access
- Ventilation Raises
- Materials Handling:
    - RopeCon drifts

  - o Haulage levels
  - o Ore bin, Grizzly, Rock breaker and Truck Chute Construction
- Sublevel Development

The total development required over the total Life of operation amounts to 123 km, including raising. This is comprised of 41km of development during the pre-production phase and the remaining 82km developed over the production phase of the project. A 20% contingency was added to all development to account for ancillary development such as re-mucks and storage areas.

Operating development including cross-cuts, accesses and ramps make up the majority of lateral development over the life of project.

Table 24-27: Life of Operation Development Totals

	Zone	Development Type	Drift Profile	TOTAL	PROJECT	SUSTAINING
Development (m)	Total	Contractor	5.5m W x 6.5m H	7,060	7,060	-
		Contractor	5m x 5m	13,130	13,130	-
		Drifting (Capital)	5m x 5m	45,090	19,050	26,040
		Drifting (Operating)	5m x 5m	51,590		51,590
		Raisebore	4m Diameter	3,660	1,340	2,320
		Alimak	3m x 3m	1,810	630	1,190
		Fingers	3m x 3m	360	40	320
	Total		**ALL**	**122,700**	**41,240**	**81,460**

The annual development schedule is shown in Figure 24-25.

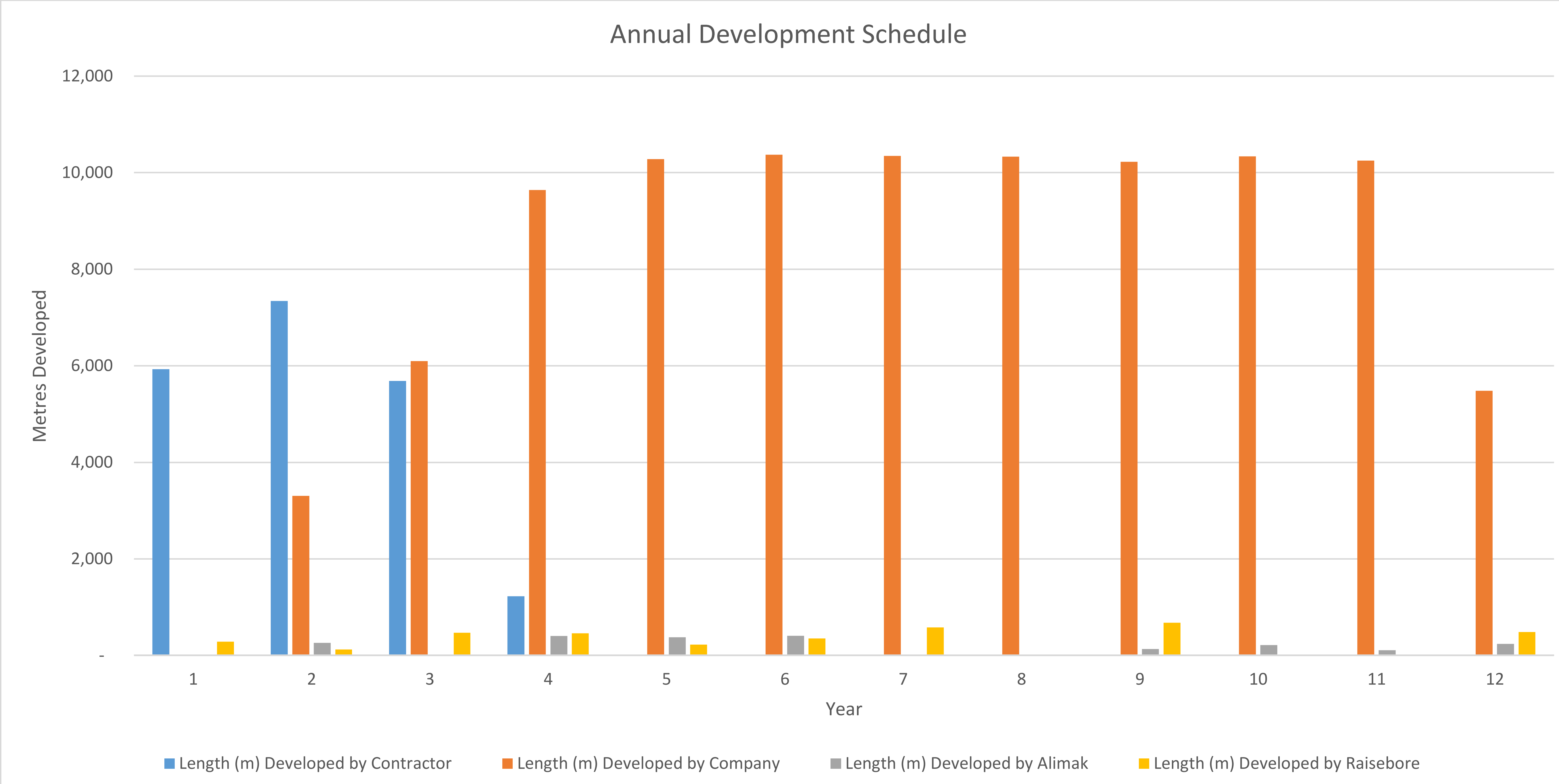


Figure 24-25: Annual Media Luna Development Schedule

24.16.3.5.3 Production Rates

Estimated daily production for LHOS would be 1,400 tpd and 700 tpd for C&F jumbo crews. The productivities were derived from first principles and estimated cycle times. Key assumptions are summarized in Table 24-28.

Table 24-28: Estimated Unit Productivities for Mining Activities

Task	Qty	Units
LHOS Mining	1,400	t/d
LHOS Production Drilling	127	m/shift
LHOS Loading	7,964	t/d
LHOS Pastefill	150	m^3/hr
C&F Mining	700	t/d
Backfill - Rockfill	1,450	t/d (avg.)

24.16.3.5.4 Production Schedule

The key production scheduling parameters and constraints are as follows:

- Daily production target of 7,000 t/d
- Sufficient development to support full production from stopes (over/undercuts, materials handling, ventilation)
- Balanced production from the upper and lower zones early in mine life and transition of the EPO zone to maintain the production target and balanced extraction of each of the zones.
- Priority would be given to the LHOS stopes.

Underground development and production activities have been sequenced in a way that would enable a rapid ramp up of ML production to 7,000 tpd. This conceptual plan was developed to allow a consistent and continuous feed to the ELG processing plant of ELG material during the development of ML and that once production commences at ML it would be in position to provide the planned 7,000 tpd.

A six month production ramp up period has been assumed for ML.

Annual production by zone and mining method are summarized in Figure 24-26 and Figure 24-27.

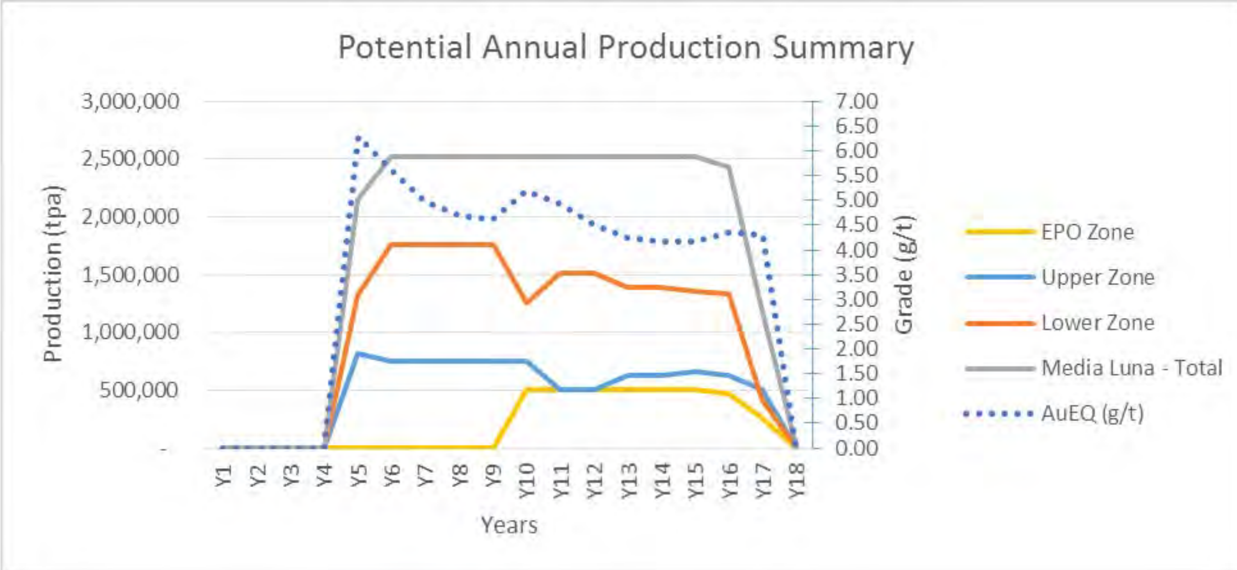


Figure 24-26: Annual Production Chart by Year by Mining Zone

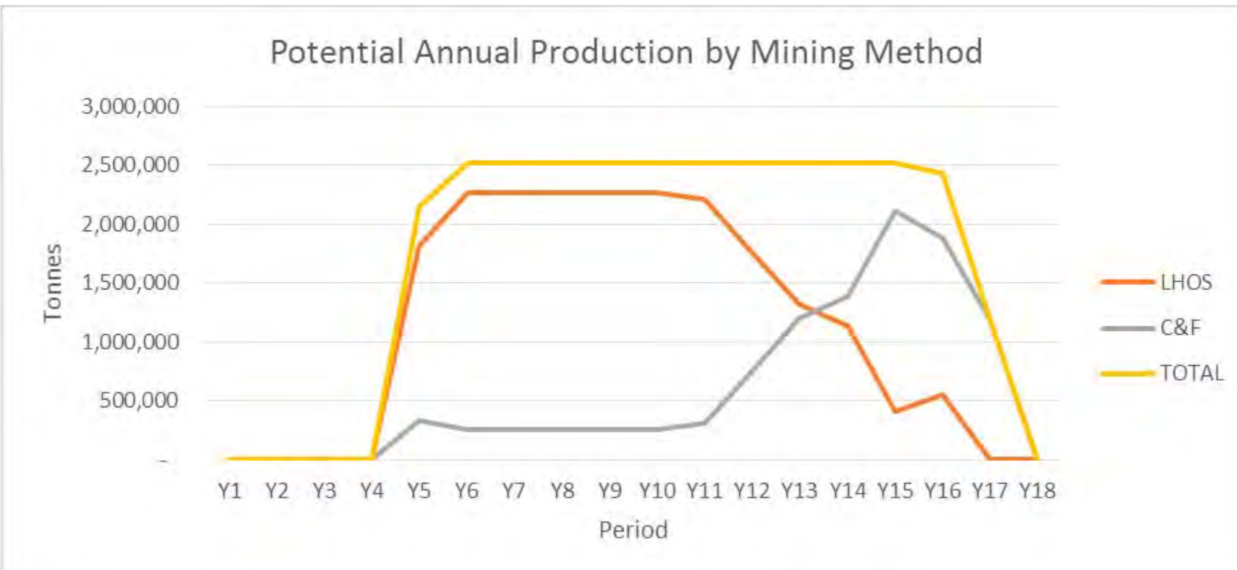


Figure 24-27: Annual Production by Mining Method

24.16.3.6 Mining Equipment

The mobile equipment fleet was determined based on estimated productivities for LHDs, development drills, production drills, and trucks. The remaining fleet consisting primarily of support equipment, was estimated based on the requirements to support the primary production equipment fleet. Table 24-29 shows the peak requirement over the life of operation for each piece of equipment.

Table 24-29: Peak Mobile Equipment Fleet Requirement during Steady State Production

Mobile Equipment Fleet	Peak Requirement
2-Boom Jumbo Drill	8
Top-Hammer Longhole Drill (Production Holes)	4
ITH Drill with reamer (Slot Raising)	2
14 tonne LHD	10
Pneumatic ANFO Loader	4
Haulage Truck, 42 Tonne	12
18 tonne LHD (Development)	1
Bolter	3
Cable Bolter	1
Personnel Carrier	4
Scissor Lift Truck	5
Lubrication Truck	2
Boom Truck	2
Toyota Landcruiser	9
Shotcrete Sprayer	2
Front End Loader	1
Transmixer	1
Forklift	4
Motor Grader	2

24.16.3.7 Geotechnical Considerations

Key Points:

- Initial geotechnical assessment anticipates good ground conditions with minor areas of poor ground
- assessment was based on existing information: core logs, RQD data, and high quality core photos
- Low stress regime predicted
- The use of deep support is not anticipated
- 25m standoff pillar from stopes for permanent development headings
- Spot bolting would be used in good quality ground with proper scaling, controlled blasting, and QA/QC procedures
- Three ground conditions identified for ground support in permanent and temporary development headings; good, poor, very poor.

Bawden Engineering Limited (Bawden) was engaged by Torex Gold Resources to provide geotechnical assistance for the design and development of the ML Project. Geotechnical recommendations were provided for the short and long terms factors affecting stope design, pillar design, ground support, stope back support, and paste fill design.

24.16.3.7.1 Stope Design

Geotechnical stope design criteria were derived using the empirical Stability Graph design technique. Based on limitations of acceptable maximum hydraulic radius, stope dimensions of 20m W x 30m L x 25m H appear suitable and would not require deep support.

24.16.3.7.2 Pillar Design

At this early design stage there is limited knowledge about pillar requirements. The recommendation for development standoff distance from production stoping is 25 m and used in the conceptual design as a minimum.

For post pillars, loads are expected to be low as the stress would arch over the stopes onto the walls. Assuming a nominal 5 m cut height, a square post pillar dimension of 4 m on 9 m centers was recommended and has been used for design.

24.16.3.7.3 Ground Support

24.16.3.7.3.1 Development Support

Development support has been analyzed for three ground conditions, good, poor, and very poor ground. Table 24-30 provides the estimated development quantities for each ground condition. Temporary openings pertain solely to cross cut accesses for LHOS and C&F stopes. All other lateral development headings have been assumed to be permanent. Recommended ground support in these situations have been provided by Bawden as a basis for mine design and is summarized in Table 24-31 .

Table 24-30: Estimated Quantities of Development in Each Category of Anticipated Ground Conditions

	% Of Lateral Dev.	Lateral Dev. (m)
Good	85.5%	99,900
Poor	8.1%	9,430
Very Poor	6.4%	7,530

Table 24-31: Development Ground Support Recommendations

Development	Option	Ground Quality		
		Good	Poor	Very Poor
Permanent 5m	1	1.8m rebar at 0.9m Spacing to within 1.5m of floor	1.8m rebar at 0.9m Spacing to floor. 50mm Shotcrete	50 mm shotcrete. Bolts and mesh to floor. 2nd coat of shotcrete – 50 mm
	2	Spot Bolting with 1.8m Rebar and check scaling routine for QA/QC	N/A	N/A
Permanent 7m	1	2.4m rebar at 1.2m Spacing to within 1.5m of floor	2.4m rebar at 1.2m Spacing to floor. 50mm Shotcrete	50 mm shotcrete. Bolts and mesh to floor. 2nd coat of shotcrete – 50 mm
	2	Spot Bolting with 2.4m Rebar and check scaling routine for QA/QC	N/A	N/A
Temporary 5m		Spot Bolting with 1.8m Rebar and check scaling routine for QA/QC	1.8m bolts at 0.9m spacing (rebar preferred). Bolts & mesh in back and over shoulders.	50 mm shotcrete. Bolts and mesh to floor. 2nd coat of shotcrete if required – 50 mm
Temporary 7m		Spot Bolting with 2.4m Rebar and check scaling routine for QA/QC	2.4m bolts at 1.2m spacing (rebar preferred). Bolts & mesh in back and over shoulders.	50 mm shotcrete. Bolts and mesh to floor. 2nd coat of shotcrete if required – 50 mm
Intersections (3 Way)		Deep support to 1/2 maximum span (diameter of inscribed circle)	Deep support to 1/2 maximum span (diameter of inscribed circle)	Intersections to be avoided. Would require special support design once conditions are known.

24.16.3.7.3.2 LHOS Back Support

No deep support has been planned for LHOS as the stope length has been maintained at 30 m and rock quality is predicted to be good. In areas where poor marble is identified a "skin" of mineralized skarn would be left in-situ. As the resource definition and project development progress this plan would be refined.

24.16.3.8 Hydrogeological Considerations

A preliminary conceptual hydrogeological model was developed and was used to assess underground dewatering. The model is based on information from the resource drill program, a review of surface water features and experience from work completed at for the ELG Mine design. Based on the model and the fact that underground workings would be above surrounding surface water features, preliminary estimates for groundwater inflows range from 2,500-6,900 m³/d at peak requirement. The average inflow assumed for design purposes is 3,500 m³/d, and is manageable with respect to pumping from the underground.

24.16.3.9 Labor Requirements

Key points in this section:

- Initial access development would be conducted by a mining contractor during the first 4 years of development, with company crews phasing in during years 2 and 3 and continuing until end of project life.
- A training period for company crews would be planned to begin in Year 2. This would assist in the transition from contractor to company development personnel. The mining contractor would provide training to company crews on completion of the initial development phase.
- Steady state labor requirements were estimated based on productivities derived from first principles and validated with industry benchmarked data where applicable.

24.16.3.9.1 Pre-Production Labor

During the initial access development the mining contractor would be responsible for providing labor and supervision. The contractor would also be responsible for site establishment, which would include a temporary shop, construction laydown, office facilities and any necessary temporary ancillaries for the initial construction.

The pre-production company labor requirements were estimated on a crew basis for specific mining activities. The crews would be scheduled to start when development headings become available and sufficient ventilation can be provided. A total of six development crews, including contractor development would be required during peak development periods.

Table 24-32 outlines the anticipated Company hired labor for the pre-production period.

Table 24-32: Pre Production Labor – Total Employee Headcount

	Y1				Y2				Y3				Y4			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Management	12	12	12	12	12	12	12	12	17	17	17	17	11	11	11	11
Technical Services	0	0	0	0	0	0	0	0	26	26	26	26	28	28	28	28
Operations	0	0	0	0	0	25	39	40	40	42	60	82	83	92	95	98
Maintenance & Logistics	0	0	0	0	12	12	12	15	42	46	52	58	76	76	110	110
Total	**12**	**12**	**12**	**12**	**24**	**49**	**63**	**67**	**125**	**131**	**155**	**183**	**198**	**207**	**244**	**247**

24.16.3.9.2 Operations Workforce

The workforce was estimated based on working 24 hours per day with two 12 hour shifts, working 360 days per year. Crews would operate on a 20 days at work, 10 days off roster. The effective shift length used in productivity estimation is nine hours to account for lunch, breaks, and travel time to the face. Eight percent of an employee's time was considered non-working time to account for training, vacation time, sick leave, etc. This results in 2,650 working hours per year per employee.

The peak workforce requirement for the operation would be 350 personnel at full production. Workforce estimates have been scheduled over the life of operation.

Table 24-33 summarizes the workforce requirements by year for the life of operation, excluding the Initial Capital period.

Table 24-33: Production Labor Requirement

	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18
Management	8	7	7	7	7	7	7	7	7	7	7	7	5	0
Technical Services	28	28	28	28	28	28	28	28	28	28	28	28	16	0
Mine Operations	157	165	165	166	164	169	173	167	158	168	205	188	112	0
Maintenance & Logistics	110	110	110	110	110	110	110	110	110	110	110	84	49	0
Total	**303**	**310**	**310**	**311**	**309**	**314**	**318**	**312**	**303**	**313**	**350**	**307**	**182**	**0**

Figure 24-28 shows the anticipated labor profile over the life of operation

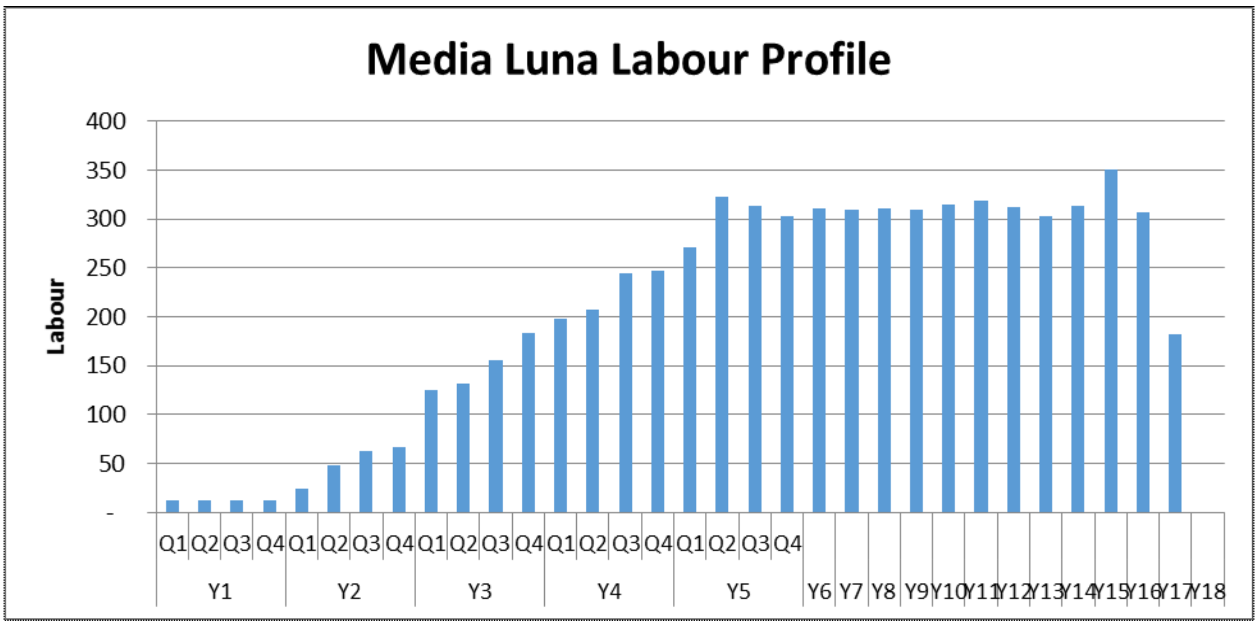


Figure 24-28: Media Luna Labor Profile

24.16.3.10 Underground Systems

Key points:

- The ventilation system was designed to meet or exceed the requirements of the Mexican and Ontario mining regulations.
- Ventilation was designed to deliver 800 m³/s of airflow to the underground workings.
- ML would use the existing infrastructure at ELG whenever feasible
- The backfill system would be provided by a paste backfill plant using the tailings from the ELG process plant, or rockfill when available.

- Tailings would be delivered to the paste fill plant located underground in the Upper zone via the return belt of the main RopeCon.
- There would be a main dewatering sump at the bottom of each zone.
- Water discharge would be recycled as much as possible on site at ML prior to discharge to the ELG processing facility.

24.16.3.10.1 Ventilation

Mine ventilation requirements were estimated based on mobile diesel equipment utilization. Airflow is provided in sufficient volumes to remove airborne contaminants from explosives, diesel emission and dust, as well as to maintain an acceptable working temperature.

A pull ventilation system has been designed for ML including six exhaust raises developed from the underground workings to surface. Each raise is fitted with a high performance fan exhausting air from the underground. The negative pressure from these fans draws fresh air into the surface access ramps, as well as one fresh air raise. All raises to surface would be raisebored at a diameter of 4m. Based on the anticipated equipment list, the overall airflow was estimated at 800 m^3/s. The criteria used to determine air quantities is 0.06 m^3/s per kW of diesel power.

Table 24-34 summarizes the diesel equipment list and corresponding ventilation requirements.

Table 24-34: Mobile Equipment list and ventilation requirements

Description	Kw/Unit Diesel Engine	Total Units (peak)	Util. factor	m³/s Required
Jumbo				
2 Boom Atlas Copco M2 – Tramming	120	7	20%	10
Bolting				
Bolter, Atlas Copco Boltec EC	115	3	50%	10
Cable Bolter, Cabletec LC	120	1	50%	4
Secondary Breaking System	55	1	30%	1
Long Hole Drill				
Top Hammer Production Drill – Tramming	120	4	20%	6
ITH Drill w/ Reamer (Slot Raising) – Tramming	120	2	20%	3
LHD				
LHD 14t	250	9	85%	115
LHD 18t	336	1	85%	17
Trucks				
Truck 42t	388	10	85%	198
Service Vehicles				
Grader	135	2	85%	14
Explosives Truck	110	3	85%	17
Mechanics Truck	100	3	60%	11
Fuel Truck	111	2	85%	11
Supervisor Vehicle	100	9	85%	46
Scissor Lift	100	3	75%	14
Cassette Carrier	150	3	75%	20
Material Supply Truck	150	2	85%	15
Personnel Carrier - Minecat 100	22	6	60%	5
Shotcrete Robo	150	2	60%	11
Transmixer	111	1	60%	4
Front End Loader	70	1	60%	3
Forklift	100	4	60%	14
Shops and Fixed Plant Ventilation				**50**
			Total	**598**
			Leakage 15%	**90**
			Contingency 15%	**103**
			Total	**800**

Figure 24-29 shows the general intake and exhaust arrangement

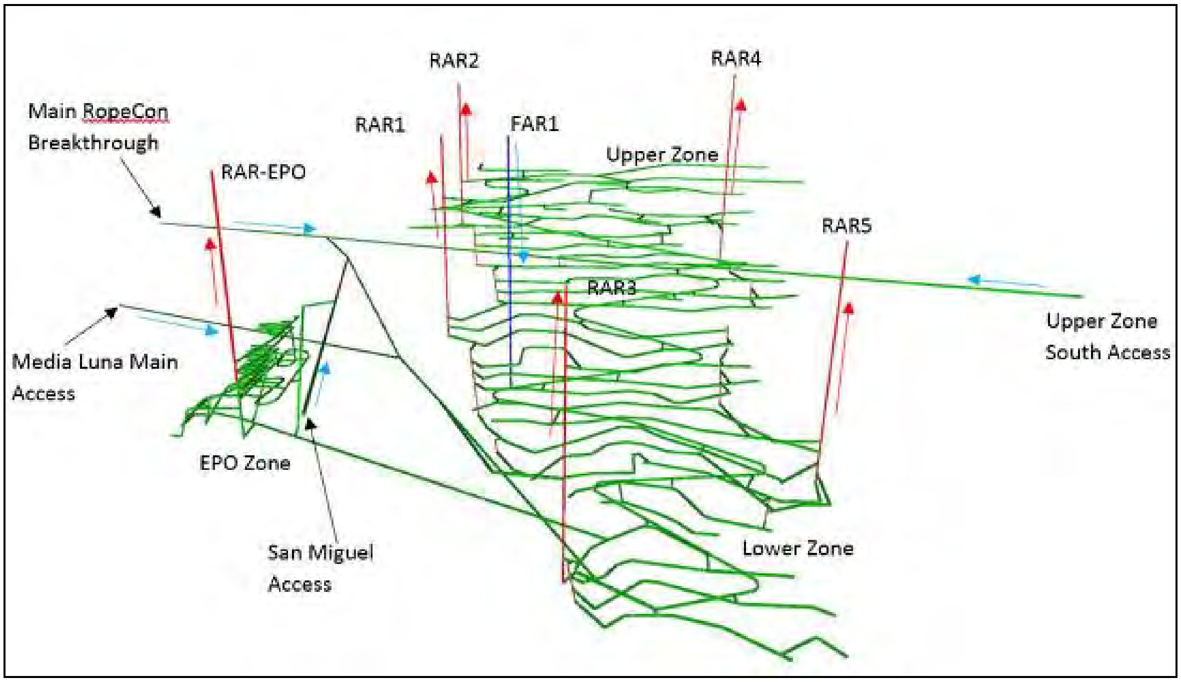


Figure 24-29: Media Luna Ventilation Overview

Table 24-35 summarizes the anticipated intake and exhaust flows for each of the portals and raises.

Table 24-35: Fresh and Exhaust Airflow

Location	Fresh Intake (m^3/s)	Exhaust (m^3/s)
RAR1		150
RAR2		100
RAR3		150
RAR4		100
RAR5		150
RAR - EPO		150
FAR1	195	
San Miguel Access	175	
Upper Zone South Access	200	
Main RopeCon BT	150	
Media Luna Main Access	80	
Total	**800**	**800**

Ventilation regulators would be used to control airflows. On each sublevel, fresh air would be directed to the work areas from the internal ramp, and exhausted to return air raises. Figure 24-30 shows the airflow on a typical sublevel.

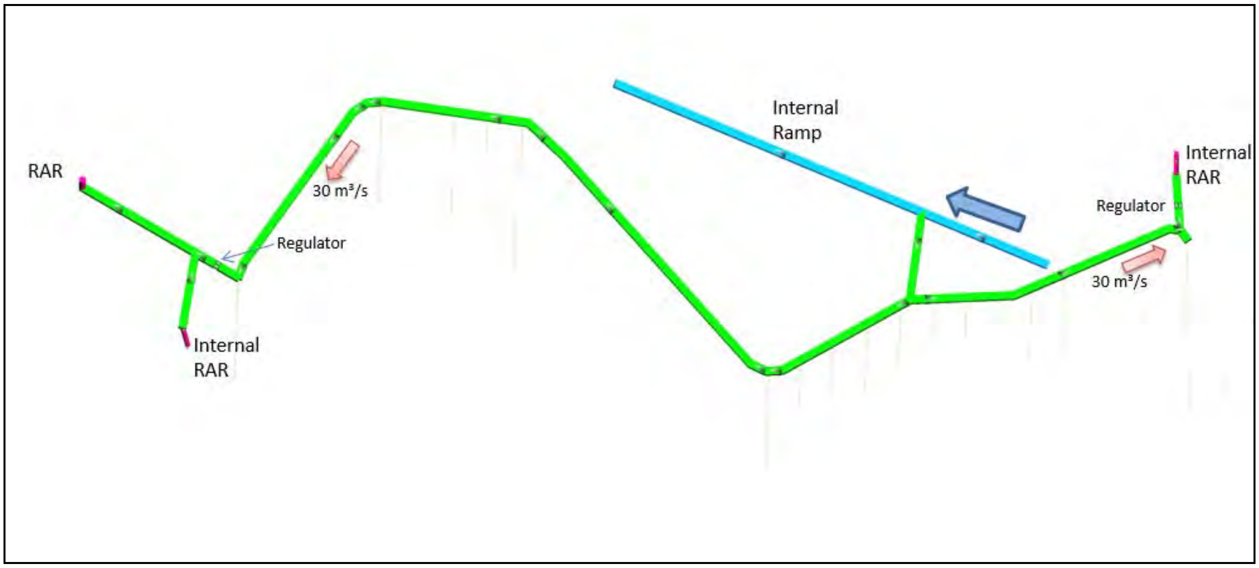


Figure 24-30: Typical Ventilation Level Plan

24.16.3.10.2 Other Mine Services

Backfill

Both C&F and LHOS methods would require backfill. When waste rock is available, the post pillar cut and fill stopes and secondary longhole open stopes would be filled with waste rockfill. The remaining stopes, as well as the primary longhole open stopes would be filled with cemented paste backfill. Cement content would be dependent on mining sequence and geotechnical requirements.

Paste backfill was selected based on four complementary reasons:

1) The reduction of environmental impact by partial placement of the ELG plant tailings underground.
2) The productivity improvement of paste fill by enabling fast filling with limited water consumption/dewatering.
3) Reduced water consumption as compared to hydraulic fill.
4) ELG Tails are already filtered thereby eliminating the high cost component of a paste fill plant

The backfill plant would be located underground on the 1065L elevation a short distance from the RopeCon tailings transfer point. The proposed backfill plant has been sized to produce cemented paste backfill at a rate of 150 m^3/hr. The paste production rate is achievable when combining a 4,000 tonne underground tailings stockpile with the RopeCon tailings transport rate of 650 tph. The production rate is sufficient for continuous filling of LHOS stopes in a single pour. Paste would be primarily gravity fed to stopes below the 1065L mining horizon. For levels above 1065L the paste would be pumped. The filtered tailings produced by the ELG process plant have been assumed suitable for paste backfill, however, further rheological testing would be required to assess the suitability of the filtered tailings.

The primary challenge associated with the distribution of paste backfill is the distribution of paste to the EPO Zone which is isolated from the main resource. Backfilling the EPO zone would be accomplished using a combination of pumping, boreholes and pipeline delivery.

Dewatering

The main sources of water into the underground workings at ML would be from groundwater inflow and water required for drilling equipment. A conceptual study was completed in 2014 to estimate expected groundwater flows using limited site specific data. Further hydrogeological investigation is required to model the groundwater flows.

The dewatering system has been designed at a conceptual level for the current underground workings. Sumps would be excavated at the bottom of the materials handling levels of each zone. These would be twin bay sumps to allow for settling of suspended solids before pumping. Mine water would be recycled underground as much as possible. Water requiring treatment would be pumped to the treatment facility at ELG through a 6" line located in the ML Main Access tunnel. The anticipated pumping requirement from Media Luna has been estimated to range between 1900 to 3800 liters per minute at peak periods.

Electric Power

Peak electric power requirements for the ML site is estimated at 10 MW. The ELG substation would be upgraded to provide power for the ML site. During the development of the San Miguel Access Tunnel and the Upper Zone South Access Tunnel, diesel generators would supply power for the temporary development infrastructure. During the development period on the north side of Balsas River, power would be provided from existing infrastructure at ELG. Table 24-36 provides a summary of the power requirements.

Table 24-36: Media Luna Power Draw

Area	Power Draw (MW)
Drilling (longhole, jumbos, bolting)	1.8
Underground Services	3.8
Backfill	1.7
Main Ventilation	2.1
Dewatering, other surface needs	0.3
Total	**10.0**

Process Water

The ML site would use a combination of process water from the ELG site and recycled water from underground. Process and potable water would be provided by ELG plant site at an average rate of 38m³/d.

Communications

A leaky feeder system would be used as the main method of underground communication. Telephones would be installed at main fixed plant locations such as the backfill plant, shops, sub-stations, refuge stations and lunchrooms.

On surface, ML site would use the existing communication infrastructure at ELG, which is outfitted with a radio network and internet in ancillary buildings. Additionally, there is cellular service on much of the property.

Compressed Air

A central air compressor plant and distribution system are not included in the estimate. Equipment requiring compressed air would be outfitted with onboard compressors. Portable compressors would satisfy any miscellaneous needs such as blast hole cleaning, pumps, handheld tools, etc. Additionally, each underground shop would be outfitted with a compressor.

24.16.3.11 Mining Support Services

Key Points in this section:

- The upper and lower zone would be treated as separate zones several years into the operating life, untiln the internal ramp connects the two zones. As a result, most mining support infrastructure would be dedicated to each zone.
- Portable refuge chambers would be used to allow for scheduling flexibility in work areas. The refuge stations can be easily relocated to any work area as required.
- The bulk of support infrastructure would be on the 765 level in the lower zone, and the 1090 level in the upper zone to allow earliest possible infrastructure construction.

Underground Maintenance Shops

Maintenance shops would be located in both the upper and lower zones. The upper zone shop would be located on the 1090 level and the Lower zone shop on the 765 level.

Each shop would have space for fixed plant maintenance, as well as mobile equipment maintenance and heavy repairs. The shops would contain the following provisions:

- Wash bay
- Parts storage/warehouse
- Electrical bay
- Maintenance office

The equipment working in the EPO zone would be serviced using the Lower zone shop.

Refuge Chambers

Refuge stations underground would be portable prefabricated units that can be moved to individual work areas. It is estimated that six portable refuge stations would be required. The stations would be outfitted with potable water, compressed air and emergency lighting.

The use of portable refuge chambers ensures that the chambers are always near the working areas where they are needed. It also reduces the need to cut permanent refuge stations.

Explosives Magazines

Explosives storage magazines are planned for both the upper and lower zones in a central location. This would reduce the travel distance for crews.

Explosives would be transported from surface at ELG Mine to the underground storage magazines at ML using an explosives supply truck.

Emergency Egress

Primary access to the underground would be through the ML Main Access Drift, secondary egress would be from the access tunnel portals on south of the Balsas River as well as through manways constructed in ventilation raises in both the lower and upper zones.

24.16.3.12 Diamond Drill Program Considerations in PEA

Early access to the deposit provides an opportunity for grade continuity drilling to test and confirm the resource and mine design assumptions. To take advantage of this early access and to provide geological information to support mine opperations a two phase drill progam has been designed and assumed within the conceptual mine plan. This diamond drilling program in the conceptual mine plan would serve two purposes.

1. Confirm grade continuity within the upper and lower zones.
2. Provide additional geological information to support detailed mine planning and operations during the production years.

To meet these two purposes a two phase approach for drilling of each of the upper and lower zones was designed (the EPO zone is only considered in Phase 2). Phase 1 would see the drilling of the 1st two years of production off in both zones prior to the end of the development phase. This work would be followed by Phase 2 which was designed to provide geological information to support operations during the production period.

Table 24-37: Drill Programs

Drill program	Metres	Start - end	Purpose
Upper Mine Exploration – Phase 1	14,200	Q1/17 –Q4/17	Confirm continuity
Lower Mine Exploration – Phase 1	27,800	Q3/18-Q3/19	Confirm continuity
Upper Mine Infill – Phase 2	63,800	Q3/18-2027	Definition & Planning
Lower Mine Infill – Phase 2	139,100	Q3/19-2027	Definition & Planning
EPO Infill – Phase 2	33,800	2021-2027	Definition & Planning

Diamond drilling conducted during the Intial Capital phase was considered capital (~66,900 m), drilling after Jan 2020 and was included in operating costs (~211,800 m).

24.16.4 Process Plant Feed

The processing plant would receive 14,000 tpd from the ELG open pits until year 2019. Beginning in year 2020, the processing plant would receive a blend of ML and ELG material with the ultimate objective of achieving a 50:50 blend. Table 24-38 shows the feed tonnage and grade by year from ML and ELG.

Table 24-38: Media Luna and El Limón Guajes Feed Tonnage

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Media Luna Material to Process Plant (kt)	-	-	-	-	-	2,146	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,433	1,185
Copper Grade (%)	-	-	-	-	-	1.00%	1.06%	1.06%	1.01%	0.95%	1.32%	1.30%	1.14%	1.02%	0.90%	0.77%	0.80%	0.90%
Gold Grade (g/t)	-	-	-	-	-	4.12	3.35	2.73	2.51	2.51	2.35	2.11	2.03	2.03	2.22	2.51	2.63	2.37
Silver Grade (g/t)	-	-	-	-	-	26.47	26.53	25.42	26.87	28.66	34.67	34.97	31.49	28.45	25.45	20.64	21.26	23.15
ELG Ore to Process Plant (kt)	214	4,075	5,040	5,040	5,040	2,894	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	446	-
Gold Grade (g/t)	2.40	2.41	2.67	2.29	2.25	3.10	3.66	3.90	5.09	4.42	4.67	1.44	1.42	1.42	1.42	1.42	1.42	-
Silver Grade (g/t)	4.43	5.47	7.05	6.50	3.24	4.52	4.19	4.26	5.56	3.71	5.15	2.34	2.32	2.32	2.32	2.32	2.32	-

24.17 RECOVERY METHODS

The key points for this section are as follows:

- Simple flow sheet required for recovery of copper, gold and silver from the Media Luna Resource
- Grinding and flotation to produce a copper/gold/silver concentrate and processing of the flotation tails through the ELG circuit for additional recovery of gold and silver
- Flow sheet designed from the results of metallurgical testing conducted by SGS METCON, Tucson, AZ
- Only one flotation stage required, resulting in reduced foot print and lower overall cost (capital and operating).
- Tailings amendable for filtration in existing tailing filter plant.
- No regrinding of rougher flotation concentrate and pre-aeration in the leaching circuit required.

24.17.1 General

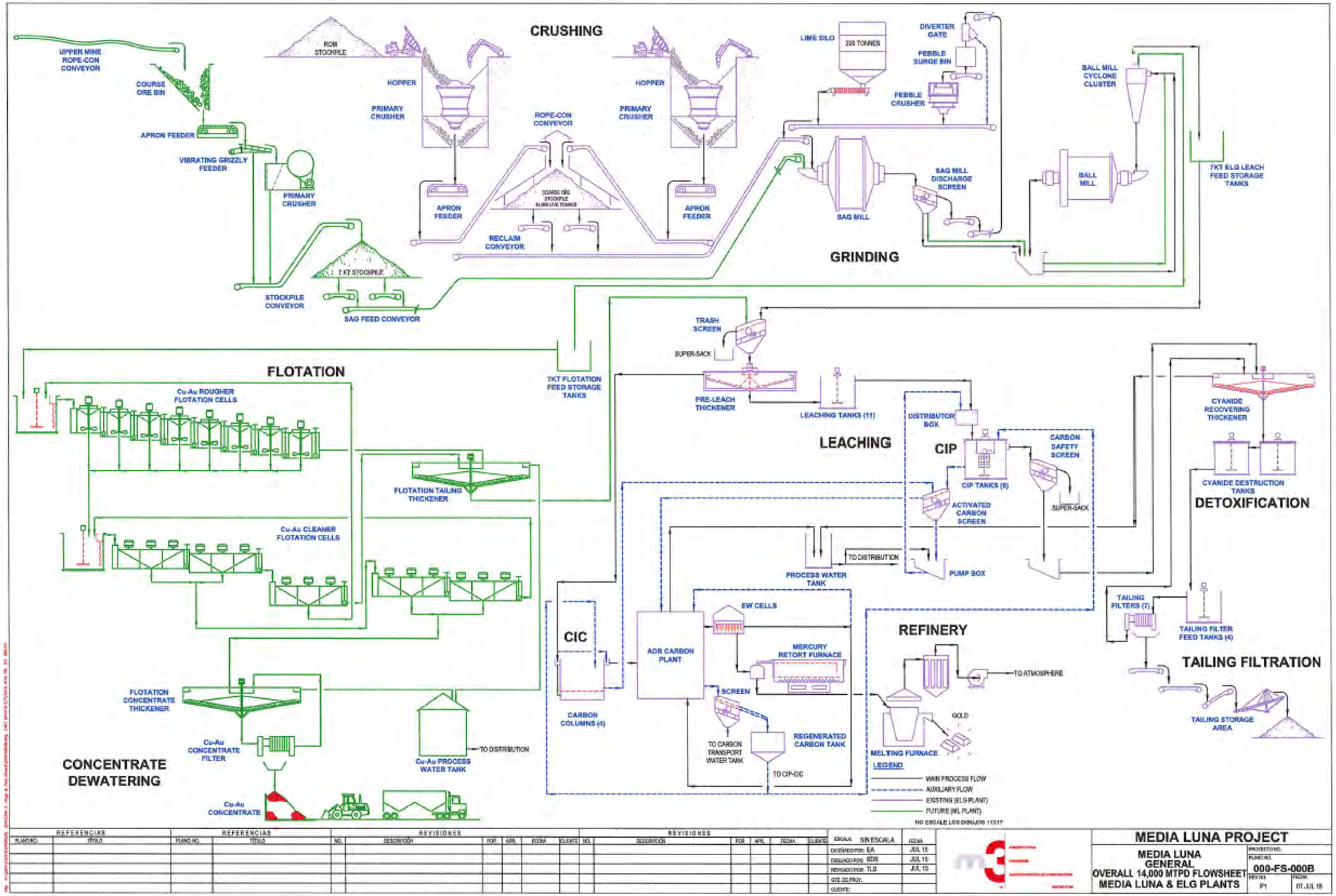
The Media Luna mineralized material processing plant would be located adjacent to the ELG processing plant and would make use of the grinding circuit, agitation leaching and tailing facilities. A RopeCon conveyor would transport material to the ELG plant area. Here, the ML material would be crushed in a jaw crusher, and stockpiled for grinding. Grinding would be performed in 12 hour batches to allow use of the same grinding equipment for the processing of the Media Luna resource and the ELG ore. After grinding, the Media Luna mineralized material would be sent through a single stage flotation circuit to recover copper, gold and silver in concentrate. The Cu-Au concentrate would be filtered, and loaded onto trucks for shipment to market and the flotation tails would be leached in the ELG processing plant for additional recovery of Au and Ag. The selected process design basis and the main physical features of the mineralized material processing facility are outlined below.

The design basis for the mineralized material processing facility is 7,000 dry tonnes per day (tpd) or 2,520,000 tonnes per year (t/a). The PEA has determined that sufficient mineralized material would be available for 12 years of processing at this rate.

A summary diagram of the overall process flowsheet is presented in Figure 24-31. Process unit operations that would be used include:

- Primary crushing
- SAG mill grinding*
- Ball mill grinding*
- Cu-Au rougher flotation
- Cu-Au 1st and 2nd cleaner flotation
- Cu-Au flotation tails dewatering
- Cu-Au concentrate dewatering
- Cu-Au flotation tails leaching*
- Tailing Handling and disposal*
  *Would be done within the existing ELG processing plant

The ML processing plant would be located to the east and on a lower bench from the ELG processing plant.



Note: Items shown in green are new items. Items shown in blue are part of the ELG processing plant.

Source: M3, 2015

Figure 24-31: Overall Process Flow Sheet

24.17.2 Process Description

The following items summarize the process operations required to extract copper, gold, and silver from the Media Luna mineralized material:

- Transporting the run-of-mine (ROM) mineralized material from the Media Luna deposit to the ELG Mine via a RopeCon conveyor. The ROM mineralized material would be fed into a coarse mineralized material bin in front of the primary crusher
- The ROM material would then be reduced to minus 150 mm with the primary jaw crusher and placed on the 7,000 tonne live stockpile.
- Crushed material would then be recovered from the stockpile via feeders and conveyor and transported to the existing ELG SAG mill-ball mill circuit prior to processing in a flotation circuit. The SAG mill would operate in closed circuit with screens and a pebble crusher. The ball mills would operate in closed circuit with cyclones to deliver a mineralized material size of 80 percent passing 60 microns to the flotation circuit. Grinding would be performed in 12 hour batches in order to use the same grinding equipment being used by the ELG Mine.
- Grinding circuit would be flushed before changing over from ELG ore to Media Luna material to remove cyanide used during ELG material grinding. The mills would also be flushed prior to changing back to the ELG ore.
- The ground material would then be pumped to 3 storage tanks located in front of the proposed flotation circuit. These three tanks would provide 3,500 tonnes of live storage to enable the flotation circuit to operate on a continuous basis while allowing grinding to be done on a batch basis (the ELG plant would also need 3 storage tanks).
- From the storage tanks, the ML material would be processed in flotation circuit for concentrating and separating copper, silver and gold minerals.
- The flotation concentrate would then be thickened, filtered and loaded for shipment to market via over-the-highway trucks.
- The flotation tails would then be thickened and processed in the ELG leaching circuit for additional recovery of gold and silver.
- Storing, preparing, and distributing reagents used in the Media Luna Cu-Au flotation process include: Orfom MC47 (promoter), methyl isobutyl carbinol (MIBC, frother), lime, sodium hydroxide and flocculant.

24.17.2.1 Primary Crushing

ROM mineralized material would be transported from Medial Luna workings using a RopeCon conveyors and would be dumped directly into coarse mineralized material bin above the crusher. The ROM mineralized material would be fed to the jaw crusher using the apron feeder which would feed the vibrating grizzly feeder. The vibrating grizzly feeder oversize would discharge onto the primary crusher. The vibrating grizzly feeder undersize and the primary crusher product would discharge directly onto the stockpile conveyor that transports the crushed coarse material to the stockpile.

Two draw points under the crushed mineralized material stockpile would provide mineralized material to two crushed mineralized material feeders. The feeders would be variable speed and would be controlled to maintain a set point mineralized material feed rate to the SAG mill feed conveyor. Each feeder would be capable of feeding up to 650 t/h of mineralized material to the SAG mill feed conveyor. Either or both feeders could be operated at any time. The control signal would be provided by a weigh meter mounted on the conveyor downstream of the feed points.

24.17.2.2 Grinding

Mineralized material would be ground to a final product size of 80% minus 60 µm in a semi-autogenous (SAG) primary and ball mill secondary grinding circuit using the grinding circuit in the El Limón Guajes Processing Plant. Grinding would be shared between the two plants and ground mineralized material would be stored in three flotation feed storage tanks to feed the flotation plant continuously.

24.17.2.3 Flotation

24.17.2.3.1 Cu-Au Flotation Circuit

Cu-Au Flotation Circuit

The Cu-Au flotation circuit would consist of a row of rougher flotation cells, one row of first cleaner flotation cells, one row of first cleaner scavenger cells and one row of second cleaner flotation cells.

Ground material from the third flotation feed storage tank would flow by gravity to the agitated Cu-Au rougher conditioning tank where reagents would be added and agitated for 5 minutes before flowing to the Cu-Au rougher flotation cells. Rougher flotation would consist of eight tank type rougher flotation cells with elevation drop between each cell. The rougher flotation concentrate from the Cu-Au rougher flotation cells of the Cu-Au rougher flotation circuit would flow to the Cu-Au concentrate sump and pumped with the Cu-Au rougher concentrate pumps to the Cu-Au cleaner conditioning tank. The Cu-Au rougher flotation tailing would be sampled with the Cu-Au rougher flotation tailing sampler and the Cu-Au rougher flotation concentrate would be sampled with the Cu-Au rougher concentrate sampler.

Tailing from the Cu-Au rougher flotation cells would flow to the Cu-Au rougher tailing sump and pumped with the Cu-Au rougher tailing pumps to the Cu-Au tailing thickener. The Cu-Au tailing thickener underflow would be pumped to the ELG Mine leaching circuit to be leached by cyanide agitated leaching to recover more gold and silver.

The Cu-Au rougher flotation concentrate would be agitated with reagents in the conditioning tank for five minutes then flow by gravity to the first cleaner flotation cells. The first Cu-Au cleaner flotation would consist of six flotation cells. Concentrate from the first cleaner flotation cells would be pumped to the Cu-Au second cleaner flotation cells. Tailing from the first cleaner flotation cells would flow by gravity to the Cu-Au first cleaner scavenger flotation cells. Tailing from the Cu-Au first cleaner scavenger flotation cells would flow by gravity to the Cu-Au 1st cleaner scavenger tailing sump and pumped to the Cu-Au tailing thickener. Concentrate from the Cu-Au first cleaner scavenger flotation cells would flow by gravity to the Cu-Au first cleaner scavenger concentrate sump and pumped back to the Cu-Au rougher conditioning tank.

The Cu-Au second cleaner flotation circuit would consist of six flotation cells. The Cu-Au first cleaner flotation concentrate would feed the Cu-Au second cleaner flotation circuit. Concentrate from the Cu-Au second cleaner cells would be sampled with the Cu-Au concentrate sampler and pumped to the Cu-Au concentrate for Cu-Au concentrate dewatering. Tailing from the Cu-Au second cleaner cells would flow to the Cu-Au first cleaner flotation cells.

Two blowers (one operating and one standby) would supply air to the flotation cells as required.

An air compressor with air receivers and one instrument air dryer would be installed for operation and maintenance.

A bridge crane would be installed for maintenance of the flotation area equipment.

Flotation reagents would be added at several points in the Cu-Au flotation circuit.

Cu-Au Flotation Tails Leaching

The Cu-Au rougher tailing would be pumped to a 23-meter diameter high rate Cu-Au tailing thickener. Flocculant would be added to the thickener feed to aid in settling. The withdrawal rate of settled solids would be controlled by a variable speed, thickener underflow pump to maintain either thickener underflow density or thickener solids loading. Underflow from the Cu-Au tailing thickener would be pumped using variable speed horizontal centrifugal slurry pumps, (one operating/one standby) at approximately 50% solids to the leach tanks of the ELG process plant where it would be leached together with the ELG ore.

The El Limón Guajes plant leach circuit would consist of eleven 15.5 m diameter by 21.3m high tanks. Each tank would have a slurry level of 20.8-meter resulting in a working volume of 3,950 m^3. The eleven tanks would provide approximately 49 hours of plug-flow retention time at 50 percent solids. Cyanide solution could be added to the first, third, and ninth tanks. Lime would be piped to the leach tank splitter box. Low pressure air would be piped to all tanks and sparged under the agitator impeller to maintain the desired dissolved oxygen level in each tank. For additional details on the ELG leach circuit please see Section 17.

A bypass system would be designed into the system to allow continued operation in an emergency shutdown of a leach tank.

Tailing Disposal

The leached slurry (consisting of pregnant solution and barren solids) would be sent to the carbon-in-pulp (CIP) section where gold and silver would be adsorbed onto carbon leaving behind a tails slurry which would be sent to the cyanide detoxification section. The detoxified tailings would be sent to the tailing filters which would remove water to be recycled to the process and filter cake which would be disposed as dry stack tails.

Part of the filter cake with about 14% moisture, would be transported with the RopeCon Return Feed Conveyors to the return side of the RopeCon Conveyor which would transport it back to the ML workings where it would be used as backfill. The tails would be discharged to a 4,000 live storage area adjacent to the underground paste backfill plant. See section 24.18 for additional information on the backfill plant. When tailings are not required for the ML mining operation, the dewatered tailings would be placed in the existing ELG TDS or the Guajes Pit after mining activity has been completed. Placement of the tailings would be similar to placement of the ELG tailings. For additional information on tailings disposal see section 24.18.8.

Concentrate Dewatering

The final Cu-Au concentrate would flow by gravity to the Cu-Au concentrate thickener feed sump and pumped to the Cu-Au concentrate thickener. Thickener overflow would gravity flow to the Cu-Au concentrate thickener overflow tank and be pumped with the Cu-Au concentrate thickener overflow pumps to the Cu-Au process water tank. Thickener underflow would be pumped by the Cu-Au concentrate thickener underflow pump to the agitated Cu-Au concentrate stock tank.

The Cu-Au concentrate would be pumped from the Cu-Au concentrate stock tank to the Cu-Au concentrate filter by the Cu-Au concentrate filter feed pump.

Cu-Au filter cake would discharge to a Cu-Au concentrate hopper which would feed the Cu-Au concentrate conveyor which would transport the cake to the Cu-Au concentrate stockpile. The Cu-Au concentrate filter cake would be packed in supersacks and transported in containers for shipment to the markets or the concentrate would be reclaimed from the storage area by front-end loader onto highway haulage trucks. Cu-Au filtrate and filter wash water would be collected in the Cu-Au filtrate storage tank and would be returned to the Cu-Au concentrate thickener by the Cu-Au filtrate solution pumps.

A Cu-Au concentrate filter blower would be installed for the Cu-Au concentrate filter.

24.17.2.3.2 Reagent Storage and Handling

Reagents that would require handling, mixing, and distribution in the Media Luna processing plant are presented in Table 24-39 together with their estimated usage rates.

Table 24-39: Media Luna Reagents

Reagent Identification	Function	Usage Rate, kg/tonne mill feed
Sodium Hydroxide	pH Modifier (Flotation)	3.00
Lime	pH Modifier (Leaching)	2.00
Orfom MC-47	Collector	0.01
MIBC, methyl Isobutyl Carbinol	Frother	0.10
Sodium Cyanide	Leaching	1.50
Flocculant	Settling Aid	0.10

24.17.2.4 Water Systems

The water system for the Media Luna Project site would consist of two grades of water; fresh water and process water.

Fresh water would be supplied from the existing ELG Mine supply. Fresh water requirement for the Media Luna processing plant would be about 300 cubic meters per hour.

There would be a separate process water system for the Cu-Au flotation circuit. Process water reclaimed in the flotation circuit cannot be mixed with process water from the ELG leaching circuit since the cyanide contained in the leach circuit would depress flotation of sulfides. Cu-Au Tailing Thickener and Cu-Au Concentrate Thickener overflows would be collected into the Cu-Au process water tank for recycle in the Cu-Au flotation circuit.

24.17.3 Process Design Criteria

24.17.3.1 General

The design of Media Luna facility is based on the following criteria which have been provided, calculated, or recommended. Each line has a code letter which identifies the source of the criteria according to the following designation:

Code letter	Source
A	Client documents or instructions
B	Recommended by M3
C	Industry standards
D	Vendor data
E	Calculated from other data
F	Consultants
G	Reference handbooks

24.17.3.2 Mineralized Material Characteristics

Run-of-Mine Mineralized Material Characteristics		Code Letter
Mineralized material specific gravity	3.81	F
Bulk density, primary crushed feed, t/m^3	2.0	B

Abrasion index, Bond, (Ai), average	0.1885	F
Mineralized material work index, kWh/t		
Crushing work index, Bond, (CWi)	7.95	F
Rod mill work index, Bond, (RWi)	13.71	F
Ball mill work index, Bond, (BWi)	11.53	F

		Code Letter
Mineralized material moisture content, %		
Design	4	B
Minimum	1	F
Maximum	7	F

24.17.3.3 Production Design Rate

Mineralized material crushing and milling rate, average, t/a	2,520,000	B / A

24.17.3.4 Metal Production Design Rate

Table 24-40: Metal Production Design

Basic Design	**Cu**	**Au**	**Ag**	**Code Letter**
Mine Head Grades (%)	1.0			A
Mine Head Grades (g/t)	-	2.56	27.43	A
Cu-Au 2nd Cleaner Flotation Recovery (%)	90.0	60.0	82.0	F
Cu-Au Flotation Tails Leaching Recovery (%)	-	28.0	7.0	F
Overall Plant %Recovery (Flotation + Leaching)	90.0	88.0	89.0	E
Production, average tpd, Cu & oz/d Au/Ag	63	507.1	5,495	E

24.18 PROJECT INFRASTRUCTURE

For information on constructed and planned infrastructure of the El Limón Guajes Mine please refer to Section 18 of this report. The majority of the Media Luna design will use the same project infrastructure as discussed in Section 18.

The key points of this Section are:

- Media Luna design makes significant use of the existing ELG infrastructure to reduce environmental impact, reduce capital expenditures and to utilize the secure ELG work area.
- Two RopeCon units would be utilized to transport mineralized material from the Media Luna resource. One conveyor would transport material from the lower zone and dump on to the upper RopeCon. The upper RopeCon would transport the material across the Rio Balsas to the process plant and would transport tailings back to the ML resource on the return side of the belt for use as backfill.
- A new crusher/storage/flotation/concentrate loadout would be constructed at the ELG site. Sufficient room has been identified for utilization of this newly acquired infrastructure
- There is sufficient room in the permitted TDS in conjunction with the mined out Guajes open pit to deposit the tailings produced.
- Preliminary geochemical testing has resulted in the assumption that Media Luna tailings is potentially acid generating (PAG) for this stage of design. The conceptual plan used within the PEA accounts for this assumption.

24.18.1 Site Description

The ML deposit is located approximately 7,800 meters southwest of the ELG process plant on the south side of the Balsas River. The process plant is at an elevation of approximately 720 meters amsl but the El Limón ridge between the plant and the Balsas River is approximately 650 m higher. This ridge then slopes down approximately 900 meters in height south to the river valley below, before rising approximately 1,100 meters back up on the south side of the river over the upper part of the resource. The current ML resource consists of two geological zones dipping to the south west. The top of the main zone outcrops on the north side of the Media Luna ridge and has been identified down approximately to the 500 meter elevation. The second zone is referred to as the EPO zone and lies on strike to the west of the main zone. The topography is rugged and steep and is similar to topography of the ELG Mine.

The concept for exploiting the ML resource would be to utilize the existing ELG Mine infrastructure as much as possible. To achieve this approach a conveying system and access tunnel would connect the ELG Mine site to ML. These connections would enable the use of portions of the existing process plant for processing and other mine infrastructure (water, power etc.) for ML. Some additional facilities would also be required, these additional facilities could be fitted amongst the existing plant with relatively minor civil work and minimal interruption to ELG plant operations. Figure 24-32 and Figure 24-33 on the following pages provide an overview of the ML and ELG area. Items to note in this figure are the two primary connections from ML to ELG, the Conveyor and the Media Luna Main access tunnel. These two connections would form the conduit for all material and personnel moved to and from ELG to ML during the production phase of ML.

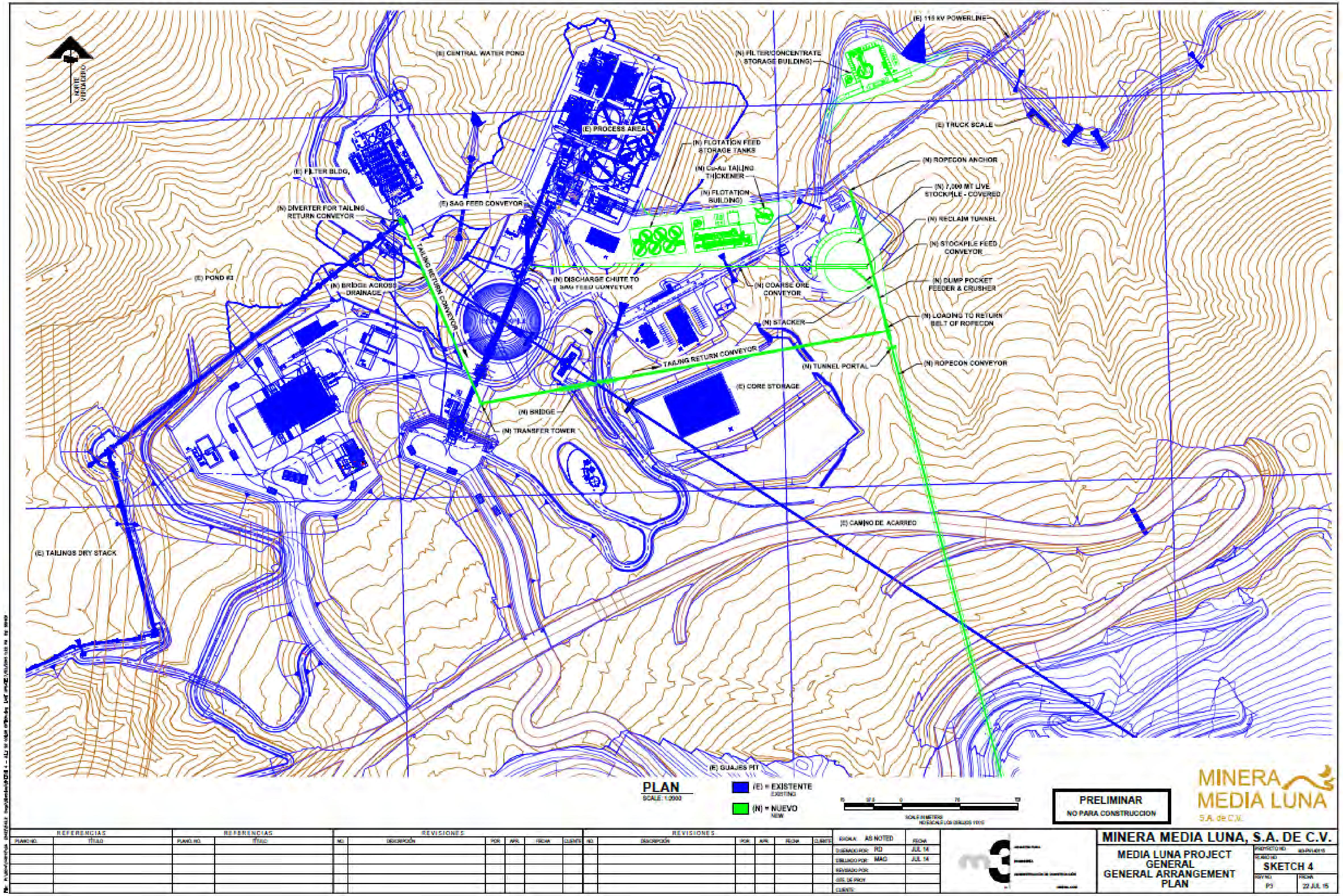


Figure 24-32: General Arrangement Plan

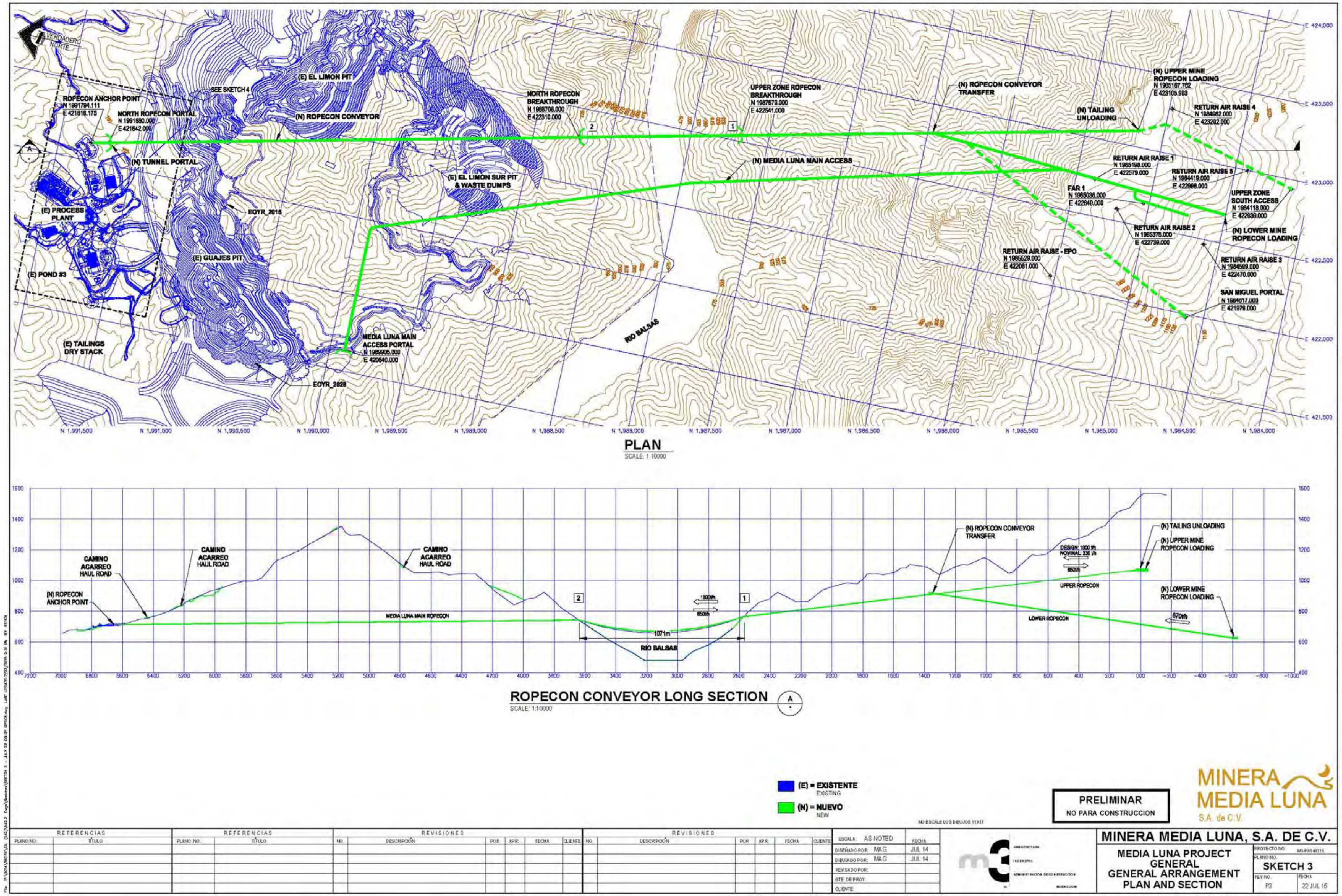


Figure 24-33: General Arrangement Plan and Section

The following is a description of the project infrastructure that would be required for the ML Project. For ease of description the different items are described in the order of travel of mineralized material from ML to and through the proposed and existing plant at the ELG Mine site. The processing is described in detail in the preceding section (24.17).

24.18.2 Run of Mine RopeCon Conveying (Areas 080 and 081)

24.18.2.1 General

As illustrated in Figure 24-32 and Figure 24-33, the mineralized material from ML is proposed to be transported to the ELG Mine site using two RopeCon conveyors. A description of this system as it relates to the mining concept is given in section 24.16. In brief, the system consists of a RopeCon (lower zone RopeCon) which would transport material from the lower mine workings to a second RopeCon. This second RopeCon is referred to as the upper zone RopeCon and would transport all the material from both upper and lower workings to the ELG Mine site. The two proposed RopeCon systems are similar in design to the RopeCon serving the El Limón pit although they have been sized to take run of mine material (95% passing 400 mm). The concept is also different in that the majority of this installation would have the conveyors suspended from the roof of the tunnels. In the case of the lower RopeCon, it would be completely underground, while the upper RopeCon would be approximately 75% (of its 6.7 km length) within tunnels and 25% suspended above the surface. The ability of the RopeCon to operate in both conditions was a key reason for selecting this technology for the PEA. Other benefits such as ease of installation, high availability, the ability to carry both ML mineralized material and tailings back to the ML resource as well as low operating cost, lead to its use of in the current concept. Design capacity for the two conveyors would be rated at 670 tph for the lower RopeCon, 1,000 tph mineralized material from ML to the ELG site and 650 tph tailings from ELG back to ML for the upper RopeCon.

24.18.2.2 Mineralized Material Handling

The lower RopeCon unit would be 2,000 meters long and would climb from the loading point at a 15% slope to meet and discharge on to the upper RopeCon unit. The upper RopeCon unit would start 1,500 meters before this point and would slope downward from its loading point at a 12% slope. The transfer would be underground with the lower RopeCon terminating in a tunnel above the upper RopeCon. The mineralized material would be discharged into a short raise downward and transversely to the upper conveyor, which continues on to the process plant. The total length of this conveyor would be 6,700 meters with an elevation drop 345 meters from load to discharge point. Approximately 2,500 meters from the loading point, the conveyor would daylights to cross the Balsas River River with a single 1,075 meter catenary span 200 meters above the river at its lowest point. Cable supports on each end of this span would be anchored into the rock at the tunnel portals. From the north side of the river, the conveyor continues in an almost horizontal 2,800 meter long tunnel under the ridge between the process plant and the river. Daylighting on the north side of the ridge, the conveyor would discharge from a suspended head pulley to a crusher coarse mineralized material surge bin on the edge of the existing concrete batch plant pad (concrete plant removed following construction of ELG Mine) and cables would be anchored immediately north of this. The 1 MW for drives the upper RopeCon would be located at the tail end of the conveyor and the 1.5 MW drives for the lower RopeCon would be located at the head end. Each RopeCon would have short conventional conveyors to feed on to them to allow for removal of tramp metal via self-cleaning magnets. The elevated section of the conveyor above the Balsas River would use a cable mounted inspection cart for maintenance while underground sections can be inspected from the ground.

24.18.3 Primary Crushing (Area 130)

Once the mineralized material has been transported to the ELG site it would be dumped directly into a dump pocket feeding a jaw crusher. The material would be crushed to P_{80} 150 mm.

The RopeCon would dump directly into a steel framed surge bin dump pocket. The dump pocket would discharge on to an apron feeder which would feed to a vibrating grizzly feeder to screen out fines and then to a jaw crusher. The crusher structure would be steel framed except for the actual crusher support which would be concrete. This arrangement also allows the RopeCon conveyor to be constructed independent of the crusher structure which avoids coordination issues and reduces design time.

24.18.4 Stockpile, Reclaim and SAG Mill Feed (Area 130)

From the crusher the material would be stored in a covered stockpile designed with a live capacity of 7,000 tonnes to enable continuous feed to the ELG grinding circuit. A concrete reclaim tunnel under the stockpile cover would house two feeders on a steel deck above the reclaim conveyor. The reclaim conveyor would report to an addition to the existing pebble crushing transfer tower straddling the existing SAG feed conveyor 200-CV-001. ML material would then be processed in the ELG grinding circuit.

24.18.5 Flotation (Area 401)

Milled ML material would be pumped to the new copper-gold-silver flotation area. The flotation process is planned to be located just to the east of the process plant. There would be three feed tanks identical to existing tanks at ELG. These tanks would have storage of 12 hours (4 hours per tank) to enable continuous operation of the flotation circuit. The rougher flotation cells would be mounted on stepped concrete foundations and the cleaners would be on raised steel decks. From here the flotation concentrate would be thickened, before being transferred to the concentrate dewatering and load out area. Tailings from the flotation circuit would be thickened and pumped to the existing ELG leach circuit for final gold and silver recovery.

24.18.6 Concentrate Dewatering (Area 501)

The final step in the concentrate production would be completed in the dewatering/load out facility. This facility is planned to be located approximately 200 meters from the flotation building along the ELG main access road to utilize existing topography. The copper-gold-silver concentrate would be thickened and fed to a single plate and frame filter (similar to existing filters used in the ELG tailings). This filter would supply a transport truck load out for shipping of the concentrate for sale off site.

24.18.7 Process Water (Area 601)

Sulfide rougher tailing thickener overflow would be collected with a standpipe and be pumped to the sulfide process water tank and seal water tank and then back to the sulfide rougher flotation. Overflow from the copper-silver concentrate thickener and tailing thickener would be pumped to a separate process water tank and seal water tank for return back to copper-silver flotation.

ML workings dewatering would provide water for the paste plant and ancillaries within the underground workings. Excess water from this process would be piped back to the ELG process plant in a pipeline routed within the ML Main Access Tunnel under the Balsas River.

24.18.8 Tailing to RopeCon (Area 621)

To provide tailings for use in the planned ML paste backfill plant a system has been developed and costed to enable direct feed from the existing ELG tailings filter system to loading of the return side on the upper RopeCon unit. This system would allow the Combined ML-ELG Project tailings to be sent to existing TDS or for transport to the ML paste backfill plant. A diverter would be installed at the head chute on the existing ELG conveyor from the filter building to discharge onto a new conveyor which would feed a second conveyor which would load the upper RopeCon unit return side. At the RopeCon loading point, the return belt track cables would be lowered closer to the ground to increase the vertical distance between the minerialized material carry belt and the return belt, to allow a transfer tower to straddle the return belt to create a dumping point. This dumping point would be to a small bin which would then load the return belt of the upper RopeCon.

At the ML end of the upper RopeCon the tailings would be discharged onto a conventional belt conveyor perpendicular to the RopeCon unit. This discharge would done by introducing two intermediate RopeCon pulleys so the belt travel direction would be reversed for a short length and the discharge conveyor would collect the tailings between the upper and lower RopeCon belts. The tailing discharge conveyor would be 70 meters long and suspended from the roof of a 6 meter wide tunnel. Multiple belt plows would be used to divert the tailings off the belt to the stockpile below so that the full length of the tunnel could be used for tailing storage. Stockpile volume would be 4,000 tonnes. Reclaim would be by mobile equipment for supply of the adjacent paste plant.

24.18.9 Reagents (Area 801)

Additional reagent storage has been designed adjacent to the new flotation building to accommodate the additional needs presented by the ML Project.

24.18.10 Ancillaries for Tunneling from ELG Side (Area 940)

Tunneling operations would primarily be supported by the existing infrastructure for the ELG process plant. The construction offices would use relocated trailers from the ELG Mine construction camp.

24.18.11 Ancillaries for Tunneling from San Miguel Side (Area 950)

Surface infrastructure to support the planned four years of development on the south side of the Balsas River would include the following.

- Expansion of the existing MML Exploration Camp to accommodate the additional workforce. Existing trailers would be sourced from the existing ELG Mine construction camp as they become available.
- Civil work to prepare the portal faces plus pad formation for temporary office, shops, water control structures etc.
- Temporary water supply via a new well would be bored to supply domestic water through a small package treatment plant.

24.18.12 Permanent Camp expansion

Within this PEA plan an expansion to the ELG camp would be undertaken. Expansion would be by relocation of the portions of the ELG construction camp (owned by MML) to the permanent camp location.

24.18.13 Power

The utility power system in place for the ELG Mine has the capacity to meet the needs of ML as envisioned within this concept. A new switching station would be required for feed from the nearby utility line as well as a new substation anticipated for installation adjacent to the flotation building.

24.18.14 Hydrology and Water Management

For ELG Mine hydrology, water management please refer to Section 18. Combined water management plan in ELG Mine to include ML Project is presented in this section.

24.18.14.1 Overall Site Water Balance

The overall site water balance is presented in Figure 24-34. From a hydrology and water management perspective the addition of the ML Project to the existing ELG Mine is in the area of tailings storage. The ML Project water would be recycled underground for use in the paste plant and ancillary services as much as practical. The excess water would be piped to ELG Mine CWP. If the combined water quality after dilution in CWP is fit for discharge it would be discharged directly to environment. If not, the ML Project water would be directed to a water treatment facility to be established at ELG Mine close to the CWP.

Based on preliminary estimates the anticipated range of pumping requirement to ELG Mine from ML Project has been estimated as 115 m^3/hr to 225 m^3/hr with an average rate of pumping of 170 m^3/hr.

24.18.14.2 GPTDS Water Balance

To support the PEA a preliminary water balance was carried out for the Guajes Pit Tailing Dry Stack (GPTDS) which is planned within the Guajes pit.

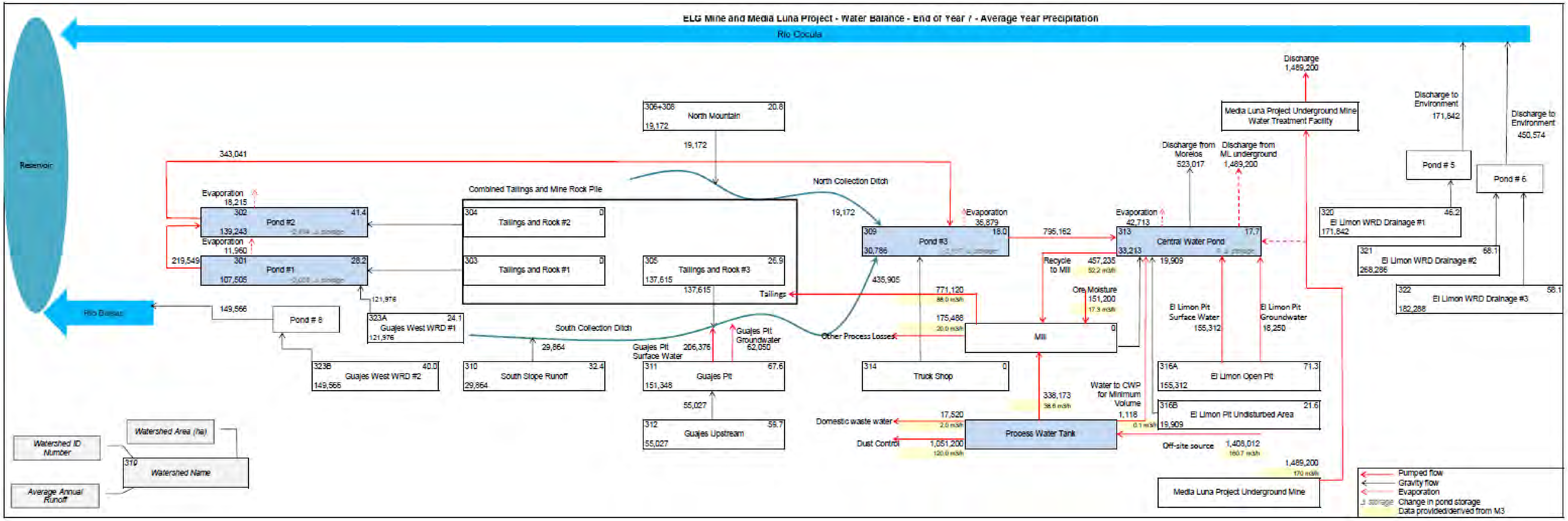
The water balance has been completed assuming only direct precipitation would require management and that runoff from areas outside the GPTDS would be intercepted and routed away from the GPTDS. Precipitation falling within the pit rim would be pumped to Pond 3 for events smaller than a 1 in 10 year storm and managed internally for larger events. Any water collected in the GPTDS water management pond would be pumped out to Pond 3 and follow the existing ELG overall site water management plan as outlined in Section 18 of this report.

The GPTDS water balance is presented in Figure 24-35. The major inflows include precipitation and groundwater seepage and the outflows include evaporation from the internal water management pond, water pumped to Pond 3, water recycled to the process plant for processing and groundwater seepage. While relatively small, groundwater movement is dominated by the La Amarilla fault at this stage of design. The migration of contaminants by groundwater including La Amarilla fault is not considered a concern for the following reasons:

- The tailings would be subject to cyanide destruct treatment prior to discharge and the generation of ARD would be avoided with the design and operation of the GPTDS (Section 24.18.5.1) and therefore the water quality is expected to be reasonably good.
- Groundwater movement through the tailings to mobilize contaminants into the groundwater is expected to be low due to the low permeability cover and the low permeability of the tailings. Therefore the quantity of contaminants that could be mobilized is expected to be low.
- While groundwater movement through the rock is dominated by the Amarilla fault, the flow of water is still low and therefore the ability to transport contaminants is considered to be low relative to the receiving waters.

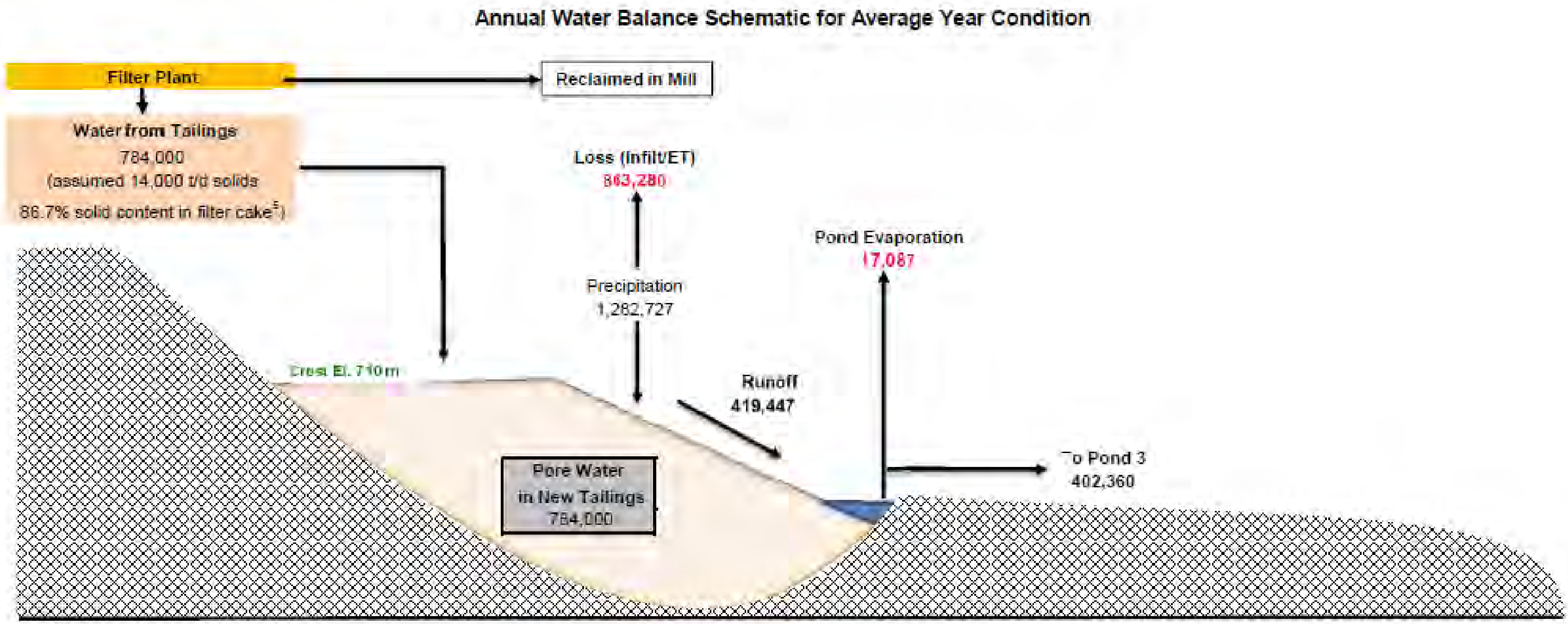
Additional analyses at subsequent design stages would be required. The analyses would focus on the water quality and transport potential related to the tailings and La Amarilla fault. If necessary, additional mitigation measures would be added to the design. The effect on the overall ELG water balance and water management facilities is judged to be manageable at this stage of design as there is no increase in the watershed area reporting to the ELG Mine water management facilities. These facilities were designed to manage water from the Guajes open pit.

The water management pond associated with the GPTDS would be designed to be compatible with the existing water management facilities.



Note: Figure courtesy of Amec Foster Wheeler E&I June 2015

Figure 24-34: Overall Site Water Balance



Note:
1) All numbers are expressed in m^3/year
2) Quantity of water reclaimed from filter plant is not provided in the balance
3) Assumed required mill make-up water to be accounted for in site wide water balance
4) Assumed runoff is 100% on progressively covered tailings, 30% on open pit surface and 12% on upstream watershed
5) Mass of solids divided by total mass
6) Groundwater seepage inflow (from upgradient) and outflow (through La Amarilla Fault) are predicted to be approximately equal and thus are not included in this balance

Note: Figure courtesy of Amec Foster Wheeler E&I June 2015

Figure 24-35: GPTDS Water Balance

24.18.15 On-Site Infrastructure – Waste Storage

24.18.15.1 Guajes Pit Tailing Dry Stack (GPTDS) Design and Operation

The key design elements of the GPTDS include:

- Tailings in the GPTDS would be placed in a similar manner as the ELGTDS
    - Tailings in the perimeter shell of width ≥ 100 m would be compacted to ≥ 95% SPMDD.
    - Tailings placed in the interior part of the TDS (outside of the perimeter shell) would be compacted to ≥ 90% SPMDD.
- The tailings perimeter slopes above the pit rim would be progressively covered with a geomembrane, geotextile, bedding material, and erosion protection cover (EPC) to prevent erosion from precipitation and wind.
- Existing pit benches on the southeast wall are assumed suitable to intercept runoff and direct water into Pond 3 for events smaller than a 1 in 10 year storm. Larger events would require in-pit containment and progressive pump out to Pond 3. It is anticipated that when deposition is taking place below the pit rim, a designated low area would be utilized to act as a sump. Once tailings are above the rim, a permanent water management pond would be established to perform this function.

A typical schematic cross-section of the GPTDS is shown on Figure 24-35.

It is anticipated ML Project would produce ~30 million tonnes of tailings of which 25% would be used for paste backfill in the underground mine. This leaves a storage requirement of ~ 23 million tonnes.

A portion of the combined tailings from both ELG Mine and ML Project would be placed at their optimum water content within the permitted ELG TDS during the initial years, after the ELG TDS has reached capacity the tailings would be deposited in the mined-out Guajes Pit (GPTDS). After approximately 11 million tonnes of tailings are placed in the GPTDS, the tailing elevation would be above the rim of the pit. Once above the rim, the tailings would be sloped and covered.

The ML tailings are currently assumed to be PAG, if left exposed, the tailings are assumed to turn net acid generating within the active operating life of the GPTDS. To manage this assumption two strategies have been assumed within the conceptual plan:

- Cover the tailings with either fresh tailings or the final cover before they generate net acidity.
- Minimize the water flowing through the tailings to avoid mobilizing potential contaminants into the environment.

With the implementation of these two strategies, water treatment should not be required. To accomplish these two strategies, careful attention would need to be paid to the deposition plan during future design stages and operation, and a low infiltration final cover would be required over the tailings.

For purposes of the PEA the final cover of the GPTDS above the open pit rim would be progressively covered with a low-permeability cover (HDPE geomembrane) to limit infiltration and therefore prevent the mobilization of contaminants. The cover would also provide erosion and dust control.

With respect to water content and compaction effort for physical slope stability, it was assumed that the tailing placement methods in the PEA would follow the same methodology as planned for at the ELGTDS.

24.18.15.1.1 Geotechnical Conditions

Please refer to Section 18.8.2.1.1 for discussion of overall site geotechnical conditions.

Within the assumed Guajes open pit the foundation conditions for construction of the GPTDS would be exposed rock with some mine rock.

24.18.15.1.2 Seismicity

Please refer to Section 18.8.2.1.2.

No stability analyses have been completed for this stage of design, however the designs presented were developed generally following the detailed design of the ELGTDS.

24.18.15.1.3 Tailings Transport to GPTDS

Please refer to Section 18.8.2.2.

24.18.15.2 El Limón Guajes Tailings Dry Stack (ELGTDS) Design Modification

Co-processing of ELG ore and ML material is assumed to produce PAG tailings. This assumption necessitates adopting the same strategy for the ELGTDS as the GPTDS of covering the tailings before they generate net acidity and limiting infiltration. Depending on the time to generate net acidity, the tailings deposition plan may need to be revised and could require more operational effort. Additional studies are planned to address this.

24.18.15.3 Waste Rock Dump (WRD) Design and Construction

The development of the Media Luna resource would have four portals being developed, two would be on the north side of the Balsas River at the ELG Mine site and two on the south side near the village of San Miguel. The two portals on the north side would see the waste being delivered to the ELG Mine site WRDs. For the two portals on the south side two WRDs would be developed during construction of the access tunnels and underground mine works. These are referred to as the "San Miguel/Lower Zone Access WRD" and "Upper Zone South Access WRD". Waste rock from the mine exploration, and development phases would be stored in these WRDs until it is removed and relocated to underground workings as backfill during production or other suitable long term storage.

24.18.15.3.1 Geotechnical Characteristics

The bulk density of waste rock material is considered to be 2.0 t/m^3 and angle of repose of 37°.

24.18.15.3.2 Geochemical Characteristics

Geochemical testing of the waste rock from the San Miguel/Lower Zone Access and the Upper Zone South Access would be undertaken in the feasibility design stage. The geological information available suggests similarity in waste rock characteristics to those of the ELG Mine. Most mine development waste rock would likely be generated from unmineralized rock away from mineralized material which may contain low sulphide and a generally lower risk of ML/ARD. For the purposes of the PEA, the geochemical characteristics of the waste rock is assumed to be the same as average waste rock characterized for the ELG Mine. If incorrect, other potentially more expensive management measures would be implemented.

The geochemical characteristics of the waste rock from the tunnels north of the Balsas River are expected to be largely similar to comparable waste rock from the Guajes pit. Waste rock from some regions of the tunnel are expected to be well away from known skarn mineralization and may be largely barren of sulphide with little risk of

ARD. The geochemical characteristics of this waste rock would be assessed in further detail at the feasibility design stage. If required, other potentially more expensive management measures would be implemented.

24.18.15.3.3 Waste Rock Dump Configuration

The San Miguel/Lower Zone access WRD would be located on the south slope of the Media Luna ridge close to the tunnel portal. This WRD would be developed by end dumping rock into an existing valley. About 2.3 million tonnes of waste rock would be deposited in this WRD.

The Upper Zone South Access WRD would be developed immediately east of the upper mine south access tunnel portal. The WRD would be developed by end dumping rock into an existing valley. About 1.6 million tonnes of rock would be stored in this WRD.

24.18.15.3.4 Waste Rock Dump Stability

24.18.15.3.4.1 Geotechnical Investigations

In view of the similar topography and geological conditions, the geotechnical conditions at the ML Proejct WRD site are expected to be similar to those at the ELG Mine (Refer to Section 18). Therefore, the overburden at Media Luna WRD foundation is assumed to be favorable for WRD foundations.

24.18.15.3.5 Waste Rock Dump Water Management

Runoff from upstream of the WRDs would be diverted considering the WRDs are temporary. The diversion schemes assumed for the PEA for the two WRDs are presented below in Figure 24-36.

San Miguel/Lower Zone Access WRD: A 3 meter high reinforced concrete headwall would be built upstream of the WRD to create a small sump. Water from this sump would be diverted downstream of the WRD into an existing ephemeral stream through a smooth wall HDPE pipe of nominal diameter 1.2 meter. The pipe would be anchored to bedrock by sleeves.

Upper Zone South Access WRD: A 6 meter wide road cut would be excavated in the hill slopes which would be a maintenance access road. This access road would have a 4% camber towards the hill side and 8% longitudinal slope. A ditch 2.5 m wide and 1 m deep would be provided on the hill side wall of the cut for diverting discharge to the neighboring watersheds. The maintenance access would also serve as a flatbed channel for diversion of runoff during very high storm events.

24.18.15.4 Closure Measures

24.18.15.4.1 Waste Rock Dumps

The WRDs would be removed and placed in underground workings as backfill or other suitable long term storage.

24.18.15.4.2 Access Tunnels, RopeCon Tunnels and Vent Raises

All seven vent raises would be provided with reinforced concrete cap anchored to bedrock. The RopeCon and mine access tunnels would be provided with reinforced concrete wall bulkheads at the portals.

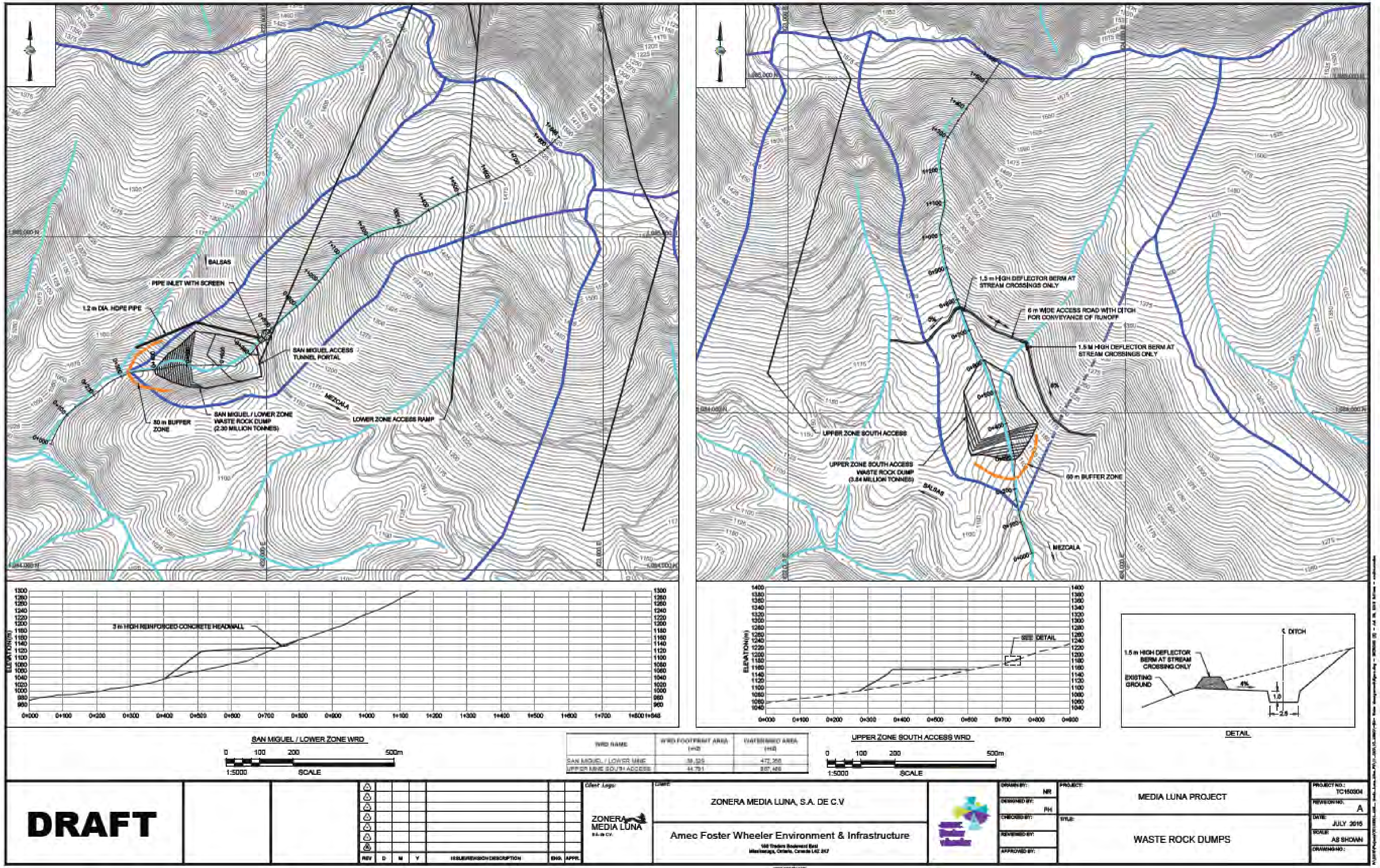


Figure 24-36: San Miguel and Upper Mine South Access Tunnel WRDs and Water Managemen

24.19 MARKET STUDIES AND CONTRACTS

Key Points

- The Combined ML-ELG Project would produce both a Copper/Gold/Silver Concentrate and Doré Bullion.
- Doré Bullion would be refined and sold under Torex's existing contract with Asahi Refining (formally Johnson Matthey Gold).
- The Copper/Gold/Silver concentrate would be expected to find a woulding market place based on its quality.

Torex's Combined ML-ELG Project is currently not in production and has no sales at this time. If placed in operation, the Combined ML-ELG Project would produce and process material that contains copper, gold, and silver. Gold and silver would be concentrated in a leach circuit and melted to produce doré bullion for sale. Copper with gold and silver would be concentrated in a flotation circuit and sold in the form of copper concentrates. The process circuits would be part of the ELG Mine facility.

The salable products would be:

- Doré bullion – gold and silver.
- Copper concentrates – copper, with byproduct gold and silver.

It is expected that the gold/silver doré bullion would be produced concurrently with the production from ELG facility as described in section 17 of this study. This production would be refined and sold under the terms of the agreements described in Section 19 of this study.

Since the ML project is presently under early development, sales contracts for metal concentrates projected to be produced are premature. Smelter agreements for the treatment and refining of copper concentrate would be put into place when a project goes into production.

24.19.1 Market Studies

No market studies of the metal to be produced were undertaken or purchased in conjunction with the preparation of this study. The annual (or total) volume of mine metal production both from doré bullion and from concentrates (after smelter deductions) would not impact world supply, demand or prices.

The concentrate produced would be sold into a world market at the market price for the metal contained. An assessment of the copper concentrate market at the time of this report writing was performed. The assessment was reported in the following document:

- "Media Luna Project: Projected Market Opportunities for Medial Luna Cu-Au Concentrates", May 13, 2015, Exen Consulting Services, Oakville, Ontario, Canada.

The concentrate sale terms would be subject to changes in the global supply, demand and prices for the contained metals in the concentrate. Details on the current supply and demand for these metals are available free and at cost from numerous sources, including government entities, banks, investment houses, mineral related consulting firms and academic institutions. Because of the global nature of these commodities and the availability of reports on these metals, market summaries for the supply and demand for copper, gold and silver have not been included in this study.

The concentrate market assessment report concluded that based on the concentrate grade and level of deleterious elements predicted to be contained in the concentrate by the metallurgical testing, the concentrates should be marketable. Flotation concentrate from early metallurgical test work and from some of the current mine zones resulted in samples that were inconsistent with respect to concentrate quality. Variations can be expected in the concentrate grade, with some samples being of attractive character and some being of lower grade that would be hard to market alone. In practice, lower grade material could be held back for blending with higher grade material to make salable product. In addition to the copper metal content grade, the sample assays indicate levels of bismuth, arsenic, antimony, lead, zinc, and mercury that could cause problems in them being classified as an attractive smelter feed stock.

The target markets would be to sell concentrate either directly to smelters or to traders. Traders would buy the concentrate in expectation of blending it with other concentrate for treatment by smelter and refiners under a larger quantity and quality contract. Several metal traders have been identified that have established blending operations in Mexico. The traders are buyers for concentrate to be blended with better material and shipped to smelters in either Europe or China. Korea and India smelters could also be an alternative smelting location.

24.19.2 Metals Prices

No metals price studies or metals price forecasts were undertaken or purchased in conjunction with the preparation of this Technical Report.

Metals price forecasting is a complex science that is practiced principally by government entities, banks, investment houses, and mineral related consulting firms. As such, the forecasts usually produced tend to be generic in their analysis. Forecasting prices is highly speculative, and significant caution tends to be used in the analysis; significant projected changes, especially by governmental entities, could lead to catastrophic effects. Thus, there is a need to balance caution and reality when predicting future prices.

For purpose of this study, Torex is using the metal prices developed and presented in the economic section of this study.

24.19.3 Smelter Studies

Although certain copper concentrate treatment terms would vary from smelter to smelter and market to market – notably the precious metal payables and penalties – most terms are market-referenced and would be consistent from one buyer to the next. Concentrates with higher levels of impurities may carry a premium on the copper treatment and refining charges, in addition to the penalties.

For purpose of this study, estimated smelter terms and costs have been developed and reported by Exen Consulting Services and presented in the economic section of this study.

24.20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Based on Golder's understanding of the Media Luna Deposit and the proposed transportation to, and processing of, ML material at the ELG Mine, it is Golder's opinion that by incorporating design elements and mitigation measures to avoid or reduce the environmental and social impacts, the ML Project (which includes expansion/modification to the ELG process plant) is practical and achievable from an environmental and social perspective.

Key points based on Golder's assessment are as follows:

- A Mexican Impact Assessment (MIA) for ML is underway to obtain all of the applicable approvals that are necessary to obtain prior to construction. Baseline studies are also planned to support an ESIA compliant with Equator Principles (EP), the International Finance Corporation (IFC) Performance Standards (PS) and World Bank Group General and mining specific Environmental, Health, and Safety Guidelines (EHS Guidelines), should an ESIA be required.
- Additional studies are underway to evaluate the incremental impacts associated with the modification of the ML Deposit.
- The footprint associated with ML Deposit would be relatively small compared to the ELG Mine and all processing of the ML material and disposal of the ML tailings would be managed at the ELG Mine.
- Based on the preliminary understanding of the ML Deposit, any social or environmental issues that arise are anticipated to be manageable.
- No economic or physical displacement would be required for the incremental components associated with the ML Project.
- The potential impacts on groundwater and surface water from the ML Deposit would be identified and control plans similar to what have been established for ELG Mine would be developed.
- Additional studies would be conducted to evaluate the effects of waste rock storage and water control management for the south access for ML Deposit. Waste rock from the north accesses to the ML resource would be placed in the permitted Guajes Waste dump.
- The Community Relations Team (CRT) would continue to engage and communicate with the local stakeholders on the proposed modifications to the ELG Mine and ML Deposit.

INAH archaeologists would be engaged during the MIA to conduct additional cultural screening in the areas of the proposed ML Deposit.

24.20.1 Introduction

MML is presently developing the ELG Mine, and carrying out studies on the ML Deposit.

MML has engaged Golder Associates Ltd. (Golder) to prepare this Technical Report for the ML Project to meet the requirements of Canadian National Instrument 43-101 (NI 43-101), the intent of which is to provide the reader with current environmental, socioeconomic and political data, information, and considerations to address the known or perceived risks and potential impacts associated with the development of the ML Deposit and the potential incremental impacts on the ML Project at the current stage of development. Section 24.20.8 summarizes the environmental studies that have been conducted to date, as well as the ongoing baseline data collection studies that are planned or underway. They also provide a discussion of any known environmental and social issues associated with the development of the ML Project that could potentially and/or materially impact the Project's ability to extract the mineral resources or mineral reserves.

If MML were to proceed to development, construction and operating activities for ML Deposit would take place after the required Mexican permitting process has been completed. For information on Environmental Studies, Permitting and Social or Community Impact of the ELG Mine please refer to Section 20 of this report.

24.20.2 Project Description and Location

The conceptual plan for exploitation of the ML Deposit is outlined in the previous sections of Section 24. Consideration for social and environmental impacts considered the following key items that have reduced the surface disturbance, utilized existing ELG infrastructure to the maximum extent and overall achieved a reduction of potential social and impacts of ML Project:

- ML Deposit mined via conventional underground mining methods.
- Access for development of ML Deposit via two tunnels from the south side of the river, access for production from the north via a tunnel from ELG Mine to ML Deposit.
- Mineralized material from ML Deposit would be transported via an underground – aerial – underground rope conveyor to the ELG Mine. This conveyor would also transport tailings back to ML Deposit for use as back fill in the mine.
- Processing of the ML Deposit mineralized material would take place at the ELG process plant site.
- ML Project would make as much use of the existing ELG infrastructure as possible i.e. water supply, power supply, camp and administration facilities.

24.20.3 Regulatory, Legal, and Policy Framework

Section 20.3 presents information on the regulatory framework, and key permits/authorizations that would be required to develop the ML Deposit and modifications associated with the ELG Mine; MML would be required to address the development of the ML Deposit and modifications to the ELG Mine to accommodate the ML mineralized material, conveyance, processing and management of waste. The main environmental permits as described Section 20.4.1 are currently underway with baseline studies being conducted to support the MIA.

As described in Section 20.2, Mexican mining concession provides the right and ownership to subsurface resources in the mining lot covered by the concession; however, the concession does not grant any surface access rights. Surface access rights must be negotiated separately with the owner of the surface land. If an agreement with the landowner can be reached, the Mining Law grants the concessionaire the right to apply to the General Mining Bureau for the expropriation or temporary occupation of the land, which would be granted to the extent that the land is indispensable for the development of the mining project. Consideration, payable once for expropriation, and yearly for temporary occupation, is set based on an appraisal of the affected land. The mining concession also grants its holder rights to any water obtained from the mine. Any other water rights must be obtained separately.

Currently MML has an exploration agreement in place with the Puente Sur Balsas Ejido and Bertoldo Pineda Tapia. An agreement is also in force on common use lands held by the Ejido Puente Sur Balsas. These temporary occupation agreements allow Torex access to all common land for the exploration of Media Luna, including the construction of exploration roads, drill pads, and drilling of diamond drill holes for three years in the case of the two land parcels and five years on the common-use land (Morelos Gold Project NI 43-101 Technical Report, September 2013). Long-term surface rights would be required for the development of the ML Deposit. There may be the need to re-negotiate the surface rights to include tunneling as this was not specified within the original agreement.

Potential risks to the ML Deposit exist if these agreements cannot be renewed as required or long-term development surface rights are not obtained.

24.20.4 Physical, Ecological and Socio-Economic Setting

The following subsections under this Section 24.20.4 present a summary of the environmental and social setting for the ML Project, as well as key baseline studies required, and potential key findings, potential risks and impacts, and corresponding mitigation measures anticipated based on the experience with ELG Mine. For the purposes of the baseline studies required to support the MIA, the baseline components consisting of the physical environment were defined to include the following components as presented in Section 20.5.1:

- Atmosphere (air quality, greenhouse gas, climate change, noise and vibration);
- Water (hydrogeology, hydrology, surface water and sediment, and risk assessments); and
- Physical (soil, and natural and industrial hazards).

24.20.4.1 Atmosphere and Climate

The ML Project is located in a region called the Balsas River Basin, at the convergence of the Trans-Mexican Volcanic Belt and the Sierra Madre del Sur. The regional climate ranges from semi-warm to temperate sub-humid. Using the Koppen climate classification, the climate can be described as a Tropical Wet-Dry category, with year-round mean temperatures above 18°C. The Balsas River Basin experiences distinct dry and wet seasons, with the wet season peaking in the late summer to early fall and a dry season during the winter months. Less than 5% of the total annual rainfall occurs during the winter months. The late summer months are also a period of increased activity for tropical cyclones that may bring large precipitation pulses to the region.

Atmospheric and climatic information indicates that the area has an annual precipitation that ranges from 645.0 to 920.1 mm and an evaporation rate that exceeds the amount of rainfall. Meteorological data are being collected at two on-site stations located within the ELG Mine footprint. These stations were installed in April and May of 2012 and have continued to provide climatology data that has been used to establish ambient air quality and meteorology baseline information for the ELG Mine ESIA and MIA that has been used to predict air quality impacts generated by the ELG Mine.

Similarly, a noise and vibration campaign has been developed to assess existing levels in the vicinity of the ELG Mine Site. Predicted noise and vibration impacts generated by the ELG Mine were assessed, and with appropriate mitigation measures are in compliance with both Mexican and International standards.

Existing air, noise and vibration emissions would be measured as part of the baseline studies to support the ML Deposit. The monitoring would be conducted at nearby communities and sensitive receptors in the area of influence of ML Deposit activities. Baseline information gathered would be used, along with modeling, to predict potential ambient air quality concentrations, as well as noise and vibration impacts from the ML Deposit.

The proposed modifications to the ELG Mine to accommodate the processing of ML material would all be within the overall footprint of the ELG Mine site that was evaluated during the MIA and ESIA. The incremental potential environmental and social risk associated with the ML Deposit activities at the ELG Mine site would be evaluated to account for the cumulative effects of the two processing systems and incremental activities that potentially add to the ELG Mine impacts previously reported in the MIA and ESIA.

It is expected that project mitigation measures can be designed such that air quality, noise and vibration levels would meet Mexican Standards and IFC Guidelines during all phases of the ML Project.

24.20.4.2 Visual

The proposed modifications to the ELG Mine would all be within the overall ELG Mine footprint evaluated during the MIA and ESIA. Additional studies would be conducted to assess the existing visual landscape conditions prior to the development of the ML Deposit. The assessment would be evaluated similar to the assessment conducted to evaluate the potential visual impacts for ELG Mine as described in Section 20.5.1.2. Potential visual effects from the development of the ML Deposit would be evaluated during the development and operation phase of the Deposit and appropriate mitigation and residual visual impacts would be addressed.

24.20.4.3 Hydrogeology

Baseline hydrogeological conditions for the ML Deposit study area would be conducted to characterize existing conditions in order to predict of the effects of the Deposit's mining activities, such as dewatering, as well as the waste dump area and ore stockpile, on the groundwater regime. Given the current understanding of hydrogeological conditions at the ML Deposit site, the ultimate discharge point for groundwater would be near tributaries that feed into the Balsas River, which in turn feeds into the Presa el Caracol.

The primary impacts on groundwater quality which may occur during construction and operations periods include the possibility of point source releases of contaminants to the groundwater (e.g., fuel spills), and the potential seepage of surface water that has been impounded in ponds down-gradient of the tailings dry stack facility (TDSF) and waste rock storage facilities (WRSFs). Potential point-source contamination would not be addressed in the predictive effects assessment as it is assumed that these events, should they occur, would be mitigated at the time of occurrence.

Preliminary findings indicate that the ML waste rock may not be acid generating but that the tailings are assumed (at this stage of planning) to be acid generating. Groundwater assessment should be initiated once the results of the geochemical testing of Media Luna waste rock and tailings are available in order to establish the parameters of concern that would be assessed.

The impact of ML Project dewatering on the groundwater flow conditions during operation, closure and post-closure would also be evaluated by constructing a composite groundwater contour map that incorporates the simulated groundwater contours at the various stages of mining.

The tailings from the ML Project would be deposited into the TDSF; Preliminary plans use the TDSF for disposal of both the ELG and ML tailings during the first 10 years. Other potential locations for tailings disposal are filling the excavated portions of the ML Deposit using paste fill technology, and depositing tailings in the Guajes pit after it has been mined out. These options would also be evaluated to determine the potential impacts from the TDSF on the groundwater quality. Potential seepage of surface water which has been impounded in ponds downgradient of the TDSF has been evaluated through the development of a SEEPw model completed by AMEC as part of their design engineering for the ELG TDSF. This modeling effort would be reevaluated in light of the co-mingling of the ML tailings with the ELG tailings in the TDSF. Development of a three-dimensional groundwater model that details predictions of mine inflows, approximate timing, and the lowering of the water table during dewatering would allow for an assessment of potential effects on the environment in support of the engineering design and the MIA/ESIA.

24.20.4.4 Surface Water and Sediment Quality

The characterization of surface water is founded on the knowledge and information that Golder has already acquired from working on the ESIA program for the ELG Mine; many of the effects from the Media Luna Deposit would be experienced within the ELG Mine footprint, therefore very little additional baseline information would be required for that area.

The risks described in the ESIA for the ELG Mine were predominately related to water, in particular high concentrations of arsenic and a few other metals. MML is implementing and approved water monitoring and management strategy at ELG Mine. The Media Luna Deposit would introduce new components (waste rock, ore body, water management) that would be addressed cumulatively with the ELG Mine.

The cumulative contribution of the Media Luna Deposit on the environment would be captured in the predictive modelling, if required.

To adequately characterize existing water and sediment quality for the established area of influence, data would be collected during the baseline program over temporal and spatial scales and from drainages at the mine site that could potentially be affected by the development of ML Project.

Surface water quality is influenced by sediment quality and thus evaluation of sediment quality would also be conducted as part of the water quality programs. Sediment quality is influenced by landscape topography, landscape cover, geology, watershed disturbance and amount of runoff. To characterize sediment quality at the ELG site, sediment samples were collected during the ESIA from depositional areas within watersheds that could potentially be affected by ELG Mine.

As presented in Section 20.5.1.6, at all stations sampled as part of the surface water and sediment quality baseline data collection program for ELG Mine at least one water quality parameter exceeded the applicable standards or guidelines. Water quality parameters that exceeded standards/guidelines most frequently in the Local Study Area (LSA) were aluminum, barium, iron, manganese, total dissolved solids, true color, turbidity, sulfate, hardness, and total phosphorus. Parameters with occasional exceedances were arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, zinc, fluoride, ammonia, nitrate, total coliforms, fecal coliforms, pH and total suspended solids. Metals exceedances were less common in samples from the tributaries and Rio Cocula as compared to samples from Balsas River. Sediment quality parameters that exceeded standards/guidelines in the study area were arsenic, cadmium, chromium, copper, lead, mercury, and zinc. Based on the ELG Mine experience, the characteristics of sediments associated with tributaries in the immediate ML study area that transfer water from the immediate area to Balsas River would be evaluated. As with ELG Mine, it is anticipated that these tributaries would only contain water during the wet season. The extent of surface disturbance associated with the ML Project would be significantly less than ELG Mine and any potential impacts would be managed following the surface water management plans being developed for ELG Mine.

24.20.4.5 Soil and Natural Hazards

The effects on soil due to ML activities would be limited, as the surface disturbance would be minimized and the majority of the effects from the Media Luna Deposit would be experienced within the ELG footprint; therefore, soil mapping would be limited to the area to be disturbed associate with ML. The overall environmental residual consequence on soil quality due to ML is predicted to be negligible.

An assessment of industrial risk similar to that undertaken for ELG Mine would be conducted for ML. The incremental risk associated with the addition of ML mineralized material for processing and management of waste at the ELG site would be evaluated by updating the risk assessment conducted for ELG Mine. The assessment would evaluate the incremental potential risks from major natural hazards (e.g., earthquake and flooding) and industrial hazards (e.g., industrial accidents and malfunctions, and transportation spills and collisions) that may affect public safety and the environment, and to identify the need for any supplementary mitigation measures to avoid, minimize and/or control any identified risks.

Mitigation measures would be implemented and resources allocated to manage these risks according to international industry standards. Risks would continue to be identified, estimated, and managed in ongoing risk management programs throughout detailed design, construction, and operations that would encompass both the ML Deposit and ELG Mine collectively.

24.20.5 Biological Setting

The characterization of aquatic biology in the area of influence would be evaluated during a two season campaign to assess the seasonal incremental effects on the aquatic biology associated with the addition of the ML Deposit. As many of the biological effects from the Media Luna Deposit would be experienced within the ELG footprint, very little additional baseline information would be required. Baseline data would be focused on the following:

1) Evaluate the direct and indirect effects of contact water runoff and sediment loading on the aquatic communities near the vicinity of ML

2) Assess the potential surface water quality and potential alterations to downstream flow regimes, which could affect the quality and quantity of habitat available for aquatic organisms.

Based on this evaluation, similar measures that were incorporated into the design of the facilities in an effort to mitigate potential effects from ELG Mine, would be also incorporated into ML by designing water management ponds that would capture run-off from the mine site area, and erosion and sediment control at the portal and ancillary areas associated with ML to reduce the amount of sediment being washed into the Balsas River, so that the release of water from the ML site can be managed. Existing infrastructure to control runoff from the new ML mineralized material stockpile and processing area at the ELG Mine site would be evaluated so that runoff from these areas are managed to control the potential impacts to the downstream aquatic environment.

Baseline studies of flora and fauna are currently underway to characterize the main types of vegetation in the study area and to identify species of interest, distribution and conservation status. The vegetation communities, and the type of species and their composition would be used to characterize the ecosystems and their function within the study area and the potential impacts to biodiversity from ML Project activities related to the development, operation and the restoration of the affected areas. Fauna surveys would be based on the type of habitat with sufficient coverage of the area of study and representative sampling of all types of habitats.

The species of interest are those species of flora and fauna with endemic or restricted ranges, migratory or congregatory and/or are under any national or international conservation category (also known as protected species or endangered); these would all be identified. The presence of species of interest, their relative populations, seasonal distribution and specific habitats would be assessed to evaluate the potential impacts to biodiversity.

24.20.6 Social Environment

24.20.6.1 Socio-economics

As stated in Section 20.4.3.1, the assessment of socio-economics for the ELG Mine included the potential social and economic effects at the local and regional level, which could have implications on the local economy; population and demographics; education; infrastructure (e.g., water, wastewater, housing, transportation); community health, safety and security; as well as land use and sustainability. The evaluation included predicted macro-economic effects at the State and National levels.

The estimated contribution of the Media Luna Deposit to both the national and local economy would be evaluated. The contribution would consider the foreign direct investment, export values, GDP, and government revenues. Project investment into the local economy and economic benefits that include direct as well as indirect and induced local employment generation, income growth, local business development, training and skill diversification and support for livelihood opportunities would be evaluated against the incremental investment associated with the ML Deposit.

The cumulative effects of population and in-migration to the local communities from the ELG Mine, the Media Luna Deposit, and other mining projects in the area would be evaluated in terms of Project employment and business opportunities; demographic changes from in-migration would be evaluated as well as change in demand on local services and infrastructure due to population growth and direct service and infrastructure usage by project.

The incremental effects of ML would also consider the safety, security and human rights of the affected stakeholders.

The ML Project land acquisition, changes to land and or/water-based environment and potential effects on:

a) land and water access and use,

b) integrity/productivity of resources used for livelihoods (e.g., water, crops, grazing areas and livestock, fishing, non-timber forest products); and

c) effects on sustainable livelihoods with respect to food security and income, would all be evaluated during the socio-economic assessment of the ML Project.

24.20.7 Environmental and Social Management System

The established an Environmental and Social Management System (ESMS) for the ELG Mine would be updated to address the addition of the ML Deposit. As part of the ESMS, an over-reaching Project-specific policy that defines the environmental and social objectives and principles would be established to guide the ML Project and all associated projects (such as the modifications to ELG mine and Media Luna exploration) to achieve environmental and social compliance through a process of continuous evaluation.

24.20.8 Environmental Management Plans

The Environmental Management Plan (EMP) would cover all major aspects of the physical and biological environment as described in Section 20.5.1, and would be updated to incorporate the modifications to ELG Mine and ML Project. As described, the EMP and specific plans would be completed prior to commencement of construction and drilling activities, and would be revised and updated throughout the various Project phases, as required.

24.20.8.1 Social and Community Relations Management

The socio-economic assessment conducted for the ELG Mine would be updated to account for the incremental assessment of the ML Deposit, as would the social management plan that includes mitigation and benefit enhancement measures to address general categories of socioeconomic effects. These collectively present a preliminary social management plan for the Project, as described below:

- Management of in-migration and population effects.
- Management measures to support economic benefits.
- Effects on services and infrastructure.
- Effects on community health and safety.
- Mine closure effects.

Interactions with the ejidos have commenced with the securing exploration agreement with the Puente Sur Balsas Ejido and Bertoldo Pineda Tapia to obtain temporary surface right agreements.

MML's Community Relations Team (CRT) would continue to interact with the stakeholders identified during the ELG Mine ESIA and modify the Stakeholder Engagement Plan to capture additional stakeholders associated with the ML Deposit.

24.20.8.2 Stakeholder Engagement

The existing stakeholder engagement plan for ELG Mine would be updated by identifying and documenting new stakeholders interested in the addition of ML Project to the overall Project area. The plan would continue to track stakeholders' issues and concerns as well as MML's responses, commitments, and actions. The plan would specifically address how MML has and would follow up with stakeholders through a stakeholder reporting program.

The SEP would document the consultation activities (e.g., public meetings, workshops with government representatives, and open houses) that have taken place to date with existing and newly identified stakeholders with respect to: a) informing stakeholders of the ML Deposit and modifications to the ELG Mine, the MIA timelines and opportunities for stakeholders to participate in the MIA review; b) communicating the studies that are being completed for the MIA; and c) engaging with the stakeholders to understand their concerns and issues with the overall ML Project. The plan would also consider the future consultations as the ML Project moves from permitting to implementation.

24.21 CAPITAL AND OPERATING COSTS

A Preliminary Economic Assessment was completed for the Combined ML-ELG Project which estimated capital and operating cost based on the mining/processing plan described in earlier parts of section 24. The costs presented within this section are for the "additional" cost for the development and operation of the ML Project and effects it would have on the ELG Mine cost estimates which were described in section 21.

This section describes the additional capital cost to enable exploitation of the ML resource followed by the operating cost for the Combined ML-ELG Project during three distinct operating phases:

- Processing of ELG ore only (year 2016 to 2019), identical operating cost for both mining and processing of the ELG ore as per the LOM plan presented in section 21.
- Combined operating period from both the ELG Mine/stockpile and from the ML resource (2020 to 2031).
- Operations from the ML resource only (2031-2032).

Key Points:

- No changes to the capital costs (initial or sustaining) for the ELG Mine and Processing Plant were identified. Capital cost estimates from the LOM ELG Mine were used in the Combined ML-ELG Project cost estimate.
- No changes were made to the ELG Mine operating cost during mining of the pits from 2013 to 2025. After completion of mining an average cost of $1.22/t for movement of stockpiled material off stockpile to the process plant was estimated. This cost is referred to as "rehandle" and is built into the financial model for the period 2025 to 2031.
- Estimated Initial Capital cost of $482 Million for development of the ML Project. This cost includes $204 million for the process plant and surface infrastructure (including RopeCon) and a total underground development Initial Capital cost of $278 million. The Initial Capital cost is the expenditure incurred over the first 4 years of the ML Project life.
- Sustaining capital for ML was estimated at $109 million to be spent after the four year project phase.
- Operating costs for mining and processing of the ML resource have been estimated based on current labor rates in use at ELG Mine and budgetary pricing from suppliers.
- Underground mining costs (combined LHOS and C&F) are estimated at $27.41/t.

24.21.1 Capital Cost Estimate

24.21.1.1 ML Project Capital Cost

An initial capital cost estimate was prepared for the development, mining and processing elements of the ML Project. Capital cost estimates for the surface and process plant were completed by M3 and mine development cost estimates were completed by AMC. The cost estimate in this section describes the "additional" cost for the exploitation of the ML resource. The cost estimates are "net" of the ELG LOM plan, i.e. taking the overall Initial and Sustaining project cost for the Combined ML-ELG Project and subtracting the ELG LOM plan cost in order to present the incremental cost for development of the ML Project. Table 24-41 provides a summary of the costs.

No additional capital cost was identified for the construction or operation of the ELG Mine above those outlined in section 21 of this report.

Table 24-41: ML Initial Capital (2016-2019) Summary

Design Element	Initial Capital ($M)	EPCM ($M)	Other Indirects ($M)	Owner's Cost ($M)	Contingency ($M)	TOTAL ($M)
Surface and Process Plant	$132.1	$20.1	$11.2	$0	$40.4	$203.8
Underground Development	$197.7	$16.1	$0	$13.0	$51.2	$278.0
TOTAL	**$329.8**	**$36.2**	**$11.2**	**$13.0**	**$91.6**	**$481.8**

Sustaining capital cost for the underground mining of the ML resource was estimated at $109 million. This estimate does not include EPCM, owner's cost or contingencies.

Process plant and surface infrastructure were identified as not requiring any sustaining capital at this level of study.

24.21.1.1.1 Estimate Accuracy

The accuracy of this estimate for those items identified in the project scope are estimated to be within the range of plus 25% to minus 25%; i.e. the cost could be 25% higher than the estimate or it could be 25% lower. Accuracy is an issue separate from contingency, contingency accounts for undeveloped scope and insufficient data (i.e. geotechnical data).

The following is a summary of the approach used to estimate the costs in the ML Project.

- Processing Facilities: Costs for the processing facilities were developed by utilizing a major equipment list, benchmarking similar projects, and information from the ongoing ELG Mine build.
- Infrastructure: Costs for the power line were estimated based on the cost per kilometer for a similar installation. Other infrastructure costs were estimated based on similar projects and information from the ongoing ELG Mine build.
- Indirect: Indirect costs are based on standard percentages of direct level costs. EPCM, mobilization, commissioning, owner's costs and first fills are included in indirect costs.
- Contingency: Contingency was assumed to be 25% of the total contracted cost for the processing plant and surface infrastructure, and 23% for the underground cost estimate.

24.21.1.2 Surface and Process Plant Capital (M3 estimate)

24.21.1.2.1 Basis of Estimate

In general, M3 based this capital cost estimate on its knowledge and experience gained during the construction of the ELG Mine and of similar types of facilities and work in similar locations. Resources available to M3 included the actual and estimated costs/contracts for construction of the ELG Mine and plant designs for similar process plants under construction, design or study in other locations.

To assist in the estimating, M3 used quantity estimates, and in some cases costs, supplied by specialist sub-consultants, including AMC. Equipment costs were based on recent vendor quotations for the specific equipment planned for this plant. The ML Project is assumed to be constructed in a conventional EPCM format similar to that being utilized for construction of the ELG Mine, i.e. Torex would retain a qualified contractor to manage and design the ML Project; bid and procure materials and equipment as agent for Torex; bid and award construction contracts as agent; and manage the construction of the facilities as agent.

Torex would order major material supplies (i.e., structural and mechanical steelwork) as well as bulk orders (i.e. piping and electrical). These would be issued to construction contractors on site using strict inventory control.

All costs to date by the Owner on the ML Project are considered as sunk costs. Any costs incurred for this preliminary economic assessment and the completion of any future feasibility study, including field geotechnical drilling and lab testing, are not included.

"Initial Capital" is defined as all capital costs through to the end of the construction period or the end of year prior to the commencement of commercial scale production. Capital costs estimated for later years are "Sustaining Capital" in the financial model. ML Project estimated initial capital costs are summarized in Table 24-41. No escalation has been included. All costs are in 2nd quarter 2015 US dollars.

It was assumed that no geo-synthetic bottom liner would be required for the Tailing Facility and local borrow material is available for use during construction.

24.21.1.2.2 Documents

Documents available to the estimators include the following:

- Design Criteria — No
- Equipment List — Partial
- Equipment Specifications — No
- Construction Specifications — No
- Flowsheets — Yes
- P&IDs — No
- General Arrangements — Partial
- Architectural Drawings — No
- Civil Drawings — Partial
- Concrete Drawings — No
- Structural Steel Drawings — No
- Mechanical Drawings — No
- Electrical Schematics — No
- Electrical Physicals — No
- Instrumentation Schematics — No
- Instrument Log — No
- Pipeline Schedule — No
- Valve List — No
- Cable and Conduit Schedule — No

24.21.1.2.3 Initial Capital Cost Tabulation

Table 24-42 shows the initial capital cost summary table for the PEA study.

Table 24-42: Surface & Process Plant Capital Cost Estimate

Torex Gold Resources. Inc. **6/30/2015**
PEA ESTIMATE - June 15 PEA Plan - P1
TOTAL PROJECT COST SUMMARY SHEET
140115 Media Luna Ore Processing

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	*****DIRECT COST*****							
000	General Site	66,364	$170,600	$251,083	$890,750	$0	$71,618	$1,384,051
055	Mine Equipment	0	$0	$0	$0	$0	$0	$0
080	Rope Con	228,323	$40,952,664	$3,079,049	$7,745,818	$0	$2,561,377	$54,338,907
081	Rope Con To Tailings Storage	15,376	$1,658,665	$44,894	$189,639	$0	$83,367	$1,976,565
130	Primary Crushing	77,260	$2,876,983	$805,152	$655,301	$0	$243,685	$4,581,120
140	Stockpile/Reclaim/SAG Feed	131,805	$2,806,489	$2,020,032	$1,128,161	$0	$506,858	$6,461,541
401	Flotation	324,423	$14,430,598	$6,028,793	$3,954,393	$0	$1,823,293	$26,237,076
501	Concentrate Filtering and Load Out	77,608	$4,399,128	$839,243	$807,894	$0	$789,928	$6,836,193
601	Water Systems	48,547	$647,874	$661,649	$470,719	$0	$305,206	$2,085,448
621	Tailing to Rope-Con	91,977	$3,866,120	$989,796	$1,024,947	$0	$301,286	$6,182,148
701	Electrical Distribution & Substation	143,532	$3,221,978	$1,569,045	$1,946,141	$0	$330,722	$7,067,886
801	Reagents	14,566	$827,120	$138,296	$175,431	$0	$44,574	$1,185,421
940	ELG Portal Ancillaries	922	$0	$642	$8,217	$0	$18,168	$27,026
950	San Migues Portal Ancillaries	6,044	$0	$3,415	$42,419	$0	$107,785	$153,619
955	Permanent Camp Expansions	65,346	$0	$207,832	$494,278	$0	$297,788	$999,898
	Freight		$7,585,822	$1,663,892	$0	$0	$374,283	$9,623,996
	IMMEX		$2,275,747	$499,168	$0	$0	$224,570	$2,999,484
	Subtotal DIRECT COST	**1,292,095**	**$85,719,786**	**$18,801,980**	**$19,534,107**	**$0**	**$8,084,506**	**$132,140,379**

NOTES:

1 Indirect Field Costs are allocated as follows: Mobilization at 1% of Direct Cost,
field payroll burden and overhead (included in labor); field supervision, field supervisory burden, and
support (included in labor); and the estimated contractor field
overhead cost (included in labor & unit rates). Camp and busing costs are included at $3.00 per hour
(excludes mining equipment assembly contractor & maintenance & operation personnel).
2 Contractors' fee included in labor rate or unit cost.
3 Management & Accounting included at .75% of Total Constructed Cost w/o Mine Equip.
4 Engineering included at 6.5% of Total Constructed Cost w/o Mine Equip.
5 Project services included at 1% of Total Constructed Cost w/o Mine Equip.
6 Project control included at 0.75% of Total Constructed Cost w/o Mine Equip.
7 Construction Management included at 6% of Total Constructed Cost w/o Mine Equip.
8 Supervision of Specialty Construction included at 1% of Total Constructed Cost w/o Mine Equip
9 Vendor representatives are included at 0.3% of Plant Equipment Costs w/o Mine Equip.
10 Construction Commissioning Spare parts are included at 0.5% of equipment costs w/o Mine Equip.
Capital Spare Parts included at: 2% of Plant Equipment w/o Mine Equip or Rope Con, Rope Con at 1.5%.
11 Contingency included as calculated = 25.0%
12 Added Owners Cost allocated by Owner for land acquisition, permitting and
environmental studies, owner's project administrative costs,
mine development cost, and mine equipment cost, and operator
training cost, and all other Owner's Costs are excluded from the estimate.
Owner's cost are excluded from this estimate.
13 All costs are in secone quarter 2015 dollars with no escalation added.
14 Total Project Cost is projected to be accurate within the range of -25% to +25%.

Note: Construction Manhours do not include subcontract hours.

Indirect labor hours are approximately 15% of total direct labor hours. The costs for indirect
labor hours as well as any Contractor profit are captured in the direct hours labor rate.
The following exchange rates from May 15, 2015 were used:

Euros per US Dollar	0.8696
Mexican Pesos per US Dollar	15.00
Canadian Dollars per US Dollar	1.1576
Australian Dollars per US Dollar	1.2112
Chinese Yuans per US Dollar	6.18
Japanese Yens per US Dollar	118.6

IVA is not included in this estimate.

TOTAL DIRECT FIELD COST	$132,140,379
TOTAL DIRECT FIELD COST w/o Mine Equipment	$132,140,379
Mobilization	$1,321,404
Camp & Busing Costs	$3,876,285
Construction Power	$132,140
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST w/o Mine Equip	**$137,470,208**
MANAGEMENT & ACCOUNTING (3)	$1,031,027
ENGINEERING (4)	$6,374,596
PROJECT SERVICES (5)	$1,374,702
PROJECT CONTROL (6)	$1,031,027
CONSTRUCTION MANAGEMENT (7)	$8,248,212
EPCM FEE Fixed	$902,978
EPCM FEE At Risk	$902,978
EPCM Construction Trailers	$274,940
Supervision of Specialty Construction (8)	$857,198
Temporary Construction Facilities	$687,351
Precommissioning	$257,159
VENDOR'S COMMISSIONING (9)	$257,159
CONSTRUCTION COMMISSIONING SPARES (10)	$428,599
Capital Spares (10)	$1,517,398
TOTAL CONTRACTED COST	**$161,615,533**
CONTINGENCY - Total Contracted w/o Mining (11)	$40,403,883
CONTINGENCY - Mining (AMC)	$0
TOTAL CONTRACTED COST With Contingency	**$202,019,417**
Mining Cost (055)	$0
OWNER'S COST Excluding Working Capital (12)	$0
First Fills	$1,813,320
ESCALATION (Excluded)(13)	$0
TOTAL CAPITAL COST (14)	**$203,832,737**

24.21.1.3 Underground Capital Costs (AMC Estimate)

The initial capital cost for underground is estimated at $278 M over the first four years. Sustaining capital amounts to $109M over the life-of-operation, for a total of $387M. A summary of the estimated underground initial capital and sustaining capital costs is shown in Table 24-43 and Table 24-44.

Table 24-43: Summary of Underground Initial Capital Costs

Initial Capital	Units	Qty.	Cost ($M)
Development			
Ramps and lateral	meter	19,048	34.9
Ventilation raises	meter	1,410	8.4
Passes	meter	590	2.6
Contractor development	meter	20,190	62.2
Diamond drilling	meter	66,940	10.5
Auxillary Ventilation	lot	1	0.3
Main dewatering	ea	2	2.5
Underground shops	ea	2	2.9
Underground services	lot	1	0.8
Electrical distribution	lot	1	4.8
Mining support	lot	1	2.3
Materials handling*	lot	1	6.9
Paste backfill plant	ea	1	11.0
Mobile equipment	lot	1	39.7
Water Control Structures	ea	2	4.1
Main Ventilation	lot	1	3.9
Total			197.7
EPCM	lot	1	16.1
Owners cost	lot	1	13.0
Contingency	lot	1	51.2
Total underground			**278.0**

* RopeCon included in surface infrastructure

Table 24-44: Summary of Underground Sustaining Capital Costs

Sustaining Capital	Units	Qty.	Cost ($M)
Development			
Ramps and lateral	meter	26,040	47.9
Ventilation raises	meter	2,890	11.6
Passes	meter	940	7.2
Ramps and lateral (Contractor)	meter	0	0.0
Diamond drilling (included in operating)	meter	0	0.0
Auxillary Ventilation	lot	1	0.3
Main dewatering	ea	1	0.3
Underground shops	ea	1	1.7
Underground services	lot	1	0.0
Electrical distribution	lot	1	2.8
Mining support	lot	1	0.3
Materials handling*	lot	1	2.7
Mobile equipment	lot	1	32.1
Main Ventilation	lot	1	2.3
Total			**109.1**

* RopeCon included in surface infrastructure

24.21.1.3.1 EPCM, Owners Cost and Contingency

EPCM and Owner's costs have been estimated at 8% and 6.5% of the project cost respectively. Contingency is estimated at 23% of the total underground cost. Table 24-45 shows the contingency applied to each capital area.

Table 24-45: Capital Contingency

Description	%
Development	25
Ventilation fans	30
Main dewatering	30
Underground shops	30
Underground services	30
Electrical distribution	30
Mining support	30
Materials handling	35
Paste backfill plant	35
Mobile equipment	10

24.21.1.3.2 Mine Development Capital Cost

A total of 71,110 meters of capital waste development is estimated over the life-of-operation at a cost of $176.3M. The Initial Capital cost for development is estimated at $108.1M. A summary of the total meters and costs are shown in Table 24-46. Unit cost for each development type is provided in Table 24-47. Unit costs were estimated based on first principles and include budget prices from Mexican and North American suppliers of consumables. Equipment operating and maintenance costs were provided by AMC and based on recent studies.

Table 24-46: Underground Capital Development Costs

Underground Capital	Units	Initial Capital		Sustaining		Total	
		Quantity	Cost ($M)	Quantity	Cost ($M)	Quantity	Cost ($M)
Development							
Ramps and lateral	meter	19,050	34.9	26,040	47.7	45,090	82.6
Ventilation raises	meter	1,410	8.7	2,890	16.8	4,300	25.5
Passes	meter	590	2.3	940	3.7	1,530	9.7
Ramps and lateral (Contractor)	meter	20,190	62.2	0	0.0	20,190	62.2
Total	**meter**	**41,240**	**108.1**	**29,870**	**68.2**	**71,110**	**176.3**

Table 24-47: Unit Cost for Capital Development

Development Type	Unit Cost ($/meter)
5.5m x 6.5m access by contractor	3,286
5m x 5m ramps and lateral by contractor	2,971
5m x 5m ramps and lateral by company	1,830
Raiseboring by contractor	6,300
Alimak raising by contractor	3,900

24.21.1.3.3 Mobile Equipment Costs

The mobile fleet selected shown in Table 24-48 is typical of an LHOS and C&F operation. The total cost for mobile equipment is estimated at $69.8M over the life-of-operation. The quantity of equipment is based on productivities and benchmark data provided by AMC. The budget prices were obtained from equipment manufacturers and from recent studies conducted by AMC.

Table 24-48: Mobile Equipment Fleet

Mobile Equipment	Initial		Sustaining		Sustaining		Total ($M)
	Qty	Cost ($M)	Qty (new)	Cost ($M)	Qty (refurb.)	Cost ($M)	
Two boom jumbo drill	6	6.3	3	3.1	4	2.1	11.5
Longhole production drill	3	3.4	2	2.3	4	2.3	8.0
Slot raise production drill	2	2.2	0	-	2	1.1	3.4
LHD 14 tonne	6	5.9	4	3.9	8	3.9	13.7
Pneumatic ANFO loader	3	1.5	0	-	1	0.3	1.8
Haulage truck 42 tonne	6	5.8	3	2.9	7	3.4	12.0
LHD 18 tonne	1	1.3	0	-	0	-	1.3
Bolter	3	3.1	0	-	0	-	3.1
Cable bolter	1	1.3	0	-	1	0.7	2.0
Personnel carrier	4	1.3	0	-	2	0.3	1.7
Scissor lift truck	5	2.3	0	-	3	0.7	3.0
Lubrication truck	2	0.8	0	-	1	0.2	1.0
Boom truck	2	0.7	0	-	2	0.3	1.0
Personnel vehicle	9	0.9	16	1.5	1	0.0	2.4
Shotcrete sprayer	2	1.2	0	-	1	0.3	1.5
Front end loader	0	-	1	0.3	0	-	0.3
Transmixer	1	0.4	0	-	1	0.2	0.6
Forklift	4	1.0	0	-	0	-	1.0
Motor grader	2	0.4	0	-	2	0.2	0.6
Total	**62**	**39.7**	**29**	**14.1**	**40**	**16.0**	**69.8**

24.21.1.3.4 Fixed Plant and Infrastructure

The total estimated cost for underground fixed plant and infrastructure is $49.9M. Project capital is $39.5M and sustaining capital amounts to $10.4M. A cost breakdown is shown in Table 24-49. Table 24-50 shows the estimated cost for material handling fixed equipment.

Table 24-49: Fixed Plant and Initial and Sustaining Capital

Infrastructure	Units	Project		Sustaining		Total	
		Quantity	Cost ($M)	Quantity	Cost ($M)	Quantity	Cost ($M)
Auxiliary ventilation	lot	1	0.3	1	0.3	2	0.6
Main dewatering	ea	2	2.5	1	0.3	3	2.8
Underground shops	ea	2	2.9	1	1.7	3	4.6
Underground services	lot	1	0.8	1	0.0	2	0.8
Electrical distribution	lot	1	4.8	1	2.8	2	7.6
Mining support	lot	1	2.3	1	0.3	2	2.6
Materials handling*	lot	1	6.9	1	2.7	2	9.6
Paste backfill plant	ea	1	11.0	1	0.0	2	11.0
Main ventilation	lot	1	3.9	1	2.3	2	6.2
Water Control Structure	ea	2	4.1	0	0	2	4.1
Total underground			**39.5**		**10.4**		**49.9**

* RopeCon included in surface infrastructure

Table 24-50: Materials Handling Equipment Costs

Materials Handling Fixed Equipment	Project		Sustaining		Sustaining		Total ($M)
	Quantity	Cost ($M)	Quantity (new)	Cost ($M)	Quantity (refurbished)	Cost	
Materials handling*							
Grizzly and rockbreaker	4	1.3	0	0	0	0	1.3
Truck chute	2	1.3	2	1.3	0	0	2.6
Apron feeder	2	0.6	1	0.3	0	0	0.9
Scalpers	10	0.6	19	1.1	0	0	1.7

24.21.1.4 ELG Open Pit Mining Capital

ELG Mine capital requirements presented in Section 21 to meet the ELG base case production schedule is considered sufficient for the alternate ELG production schedule developed for the Media Luna PEA, since annual ROM and waste mining quantities are the same in the two schedules.

The alternate ELG Mine plan developed for the Media Luna PEA differs from the base case plan in that ELG plant feed from low grade stockpiles extends for six years after open pit mining is complete. Low grade stockpile rehandle during this period is estimated to require two wheel loaders, three haulage trucks and associated support equipment (bulldozer, grader, water truck, etc.). These units are available from previous open pit mining and, based on analysis of cumulative operating hours, no additional replacement equipment is expected to be required.

In summary, it is estimated that on an incremental basis no additional ELG open pit mine capital is required for the alternate ELG Mine plan developed for the Media Luna PEA.

24.21.2 Operating & Maintenance Costs

24.21.2.1 Combined ML-ELG Project Operating Cost

An operating cost estimate was assembled for the mining and process design elements of ML. This effort includes operating cost estimates for the general and administrative (G&A) costs, process plant costs (completed by M3) and mining costs (completed by AMC for underground and SRK for surface). Costs illustrated in this section of the report are solely for the Combined ML-ELG Project and are in addition to costs listed in Section 21, however, due to the combined nature of the proposed project, some inherent crossover is present, notably in G&A and the process plant. Table 24-51 illustrates these project costs.

Table 24-51: Combined ML-ELG Project PEA Operating Cost per Tonne Summary (Typical Year* 2026)

ML Operation Costs (Delta to ELG)	cost per tonne ML feed ($/t)
Process Plant Operating & Maintenance Cost	$19.79
Open Pit Mining**	$1.19
Underground Mining	$26.93
General and Administrative	$1.30
TOTAL	**$49.21**

* Table 24-50 represents a typical cost per year using year 2026.
** Open pit mining cost changes only with rehandle of stockpiled material during 2025 to 2031

This section addresses the following costs:

- Surface and Process Plant Operating Cost
- General and Administrative Costs
- Open Pit Mining Costs

- Underground Mining Costs

24.21.2.1.1 Basis of Estimate

Power costs were based on the Comisión Federal de Electricidad (CFE) billing formula for the current contract for the ELG Mine. Power consumption was based on the equipment list connected kW, discounted for operating time per day and anticipated operating load level. The overall power rate is assumed to be $0.112 per kWh going forward.

Diesel fuel costs were estimated at $0.80/L.

24.21.2.1.2 Surface and Process Plant Operating Costs (M3 Estimate)

The operating and maintenance costs for the Combined ML-ELG Project were estimated and summarized by areas of the plant. They are shown in Table 24-52. Cost areas are shown grouped under processing operations, and the supporting facilities. These operating costs were determined annually for the life of the mine based on the total amount of material processed and type. The life of mine unit cost per total ore tonne for the process plant is $17.91. Table 24-56 shows the detailed operating costs.

24.21.2.1.3 Surface and Process Plant Operating Cost

Table 24-52: Typical Year (Year 12-2026) Operating Costs by Process Area

ELG	2,520,000 tonnes processed	
Media Luna	2,520,000 tonnes processed	
	Annual Cost - $M	**$/tonne material Processed**
Processing Operations		
Crushing and Ore Storage	$2.88	$0.57
Grinding	$28.02	$5.56
Leaching	$26.44	$5.25
Carbon Handling & Refinery	$1.30	$0.25
Filtered Tailings	$17.81	$3.53
Ancillaries	$2.31	$0.46
Crushing & Ore Storage (Media Luna)	$1.13	$0.23
Flotation/Leaching (Media Luna)	$7.65	$1.52
Concentrate Thickening (Media Luna)	$1.51	$0.30
Ancillary Services (Media Luna)	$0.98	$0.19
Subtotal Processing	**$90.03**	**$17.86**
Supporting Facilities		
Laboratory	$1.28	$0.25
General and Administrative	$22.09	$4.38
Subtotal Supporting Facilities	**$23.37**	**$4.63**
Total Processing and Support Facilities Cost	**$113.40**	**$22.43**

24.21.2.1.3.1 Process Labor & Fringes

Process labor costs were derived from a staffing plan and based on current ELG Mine labor rates. Labor rates and fringe benefits for employees include all applicable social security benefits as well as all applicable payroll taxes. The staffing plan shows 118 ELG employees and an additional 41 employees to account for the addition of ML production. i.e. flotation cicuit operators.

24.21.2.1.3.2 Reagents

Consumption rates were determined from the metallurgical test data or industry practice. Budgetary quotations were received for the supply of reagents, these quotations were from local sources when available, with an allowance for freight to site. For reagents that were similar between the ELG Mine and ML Project, the contract price from the ELG operating budget were used.

Reagents for the ML Project are shown in Table 24-53.

Table 24-53: Reagent Consumption Rates and Unit Prices for ML Project

Reagents	kg/t ML resource	$/kg
Sodium Hydroxide	3.000	$0.33
MIBC	0.100	$3.85
ORFOM MC47 Promoter	0.010	$3.97
Antiscalant	0.005	$2.70

24.21.2.1.3.3 Maintenance Wear Parts and Consumables

The only additional liner wear part identified for the ML Project would be the liners in the new primary crusher to be constructed as the ML mineralized material would be processed through the ELG grinding circuit. Consumption rates and unit prices for the new primary crusher liners are shown in Table 24-54. Grinding medium was assumed the same as the ELG plan.

Table 24-54: Liner Consumption Rates and Unit Prices

	kg/tonne ore	$/kg
Primary crusher - liners	0.008	$9.87

An allowance was made to cover the cost of maintenance of all items not specifically identified and the cost of maintenance of the facilities. The allowance was calculated using the direct capital cost of equipment times a percentage for each area.

24.21.2.1.3.4 Process Supplies and Services

Allowances were provided in process plant for outside consultants, outside contractors, vehicle maintenance, and miscellaneous supplies. The allowances were estimated using M3's information from other operations and projects.

24.21.2.1.4 General and Administration

General and administration costs include labor and fringe benefits for the administrative personnel, human resources, safety and environmental and accounting. Also included are land owner's cost, office supplies, communications, insurance, employee transportation (including bussing while onsite as well as travel for non-local labor) and camp, and other expenses in the administrative area. Table 24-55 shows a typical incremental increase in these costs for Year 2026. Table 24-56 illustrates theses costs as part of the Combined ML-ELG Project whole.

Table 24-55: ML Incremental General and Administration Costs (Year 12-2026)

General & Administrative Cost	ML	ML-ELG Total
Labor & Fringes	$589,007	$4,721,373
Property & Business Interruption Insurance	$800,000	$3,600,000
Accounting, Legal & Tax	$0	$386,466
Administrative	$0	$435,871
Building Lease & Maintenance	$0	$36,323
Catering Service	$800,000	$2,003,911
Charge Back to Corporate	$0	-$159,357
Community Relations Projects	$0	$600,000
Contractors & Consultants	$301,950	$1,216,950
Drilling	$0	$0
Employee Related	$0	$0
Fuel Oil and Lubricants	$0	$36,323
Materials & Supplies	$0	$36,323
Land Ownership	$0	$5,775,000
Sampling	$0	$0
Travel Expenses	$50,000	$250,000
Vehicles	$61,008	$245,882
Transportation from Camp	$500,000	$1,350,000
Camp Operation Cost	$0	$90,000
Yearly Cost for Meals per Non-local Personnel	$223,200	$644,400
Yearly Travel Cost for Site to Home for Non-local Personnel	$184,250	$821,250
Total General & Administrative Cost	$3,509,416	$22,090,712

Labor costs were estimated on a staff of 159. (This includes the 16 employees for the environmental department.) All other G&A costs were developed as allowances based on M3's information from other operations and other projects.

Laboratory cost estimates are based on labor and fringe benefits, power, reagents, assay consumables, and supplies and services. The labor costs for the laboratory is based on a staff of 16. All other laboratory costs were developed as allowances based on M3's information from other operations and other projects.

The environmental department costs estimates are based on labor and fringe benefits, outside consultants and contractors, and supplies and services. The labor cost for the environmental department is based on a staff of 16. All other environmental department costs were developed as allowances based on M3's information from other operations and other projects.

Table 24-56: Detailed Operating Costs

Torex Gold Resources Inc. - ELG Project
Process Plant Cost Summary

	Total LOM		2015		2016		2017	
			Year 1		Year 2		Year 3	
ELG	47,949,832		Tonnes	214,200	-	4,075,400	-	5,040,000
Media Luna	30,963,715			-	-	-	-	-
	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing and Ore Storage								
Operating Labor and Fringes	$2,936,292	$0.04	$29,011	$0.14	$173,590	$0.04	$173,590	$0.03
Power	$6,911,430	$0.09	$37,010	$0.17	$624,200	$0.15	$637,206	$0.13
Grinding Media & Wear Parts	$3,685,424	$0.05	$16,463	$0.08	$313,235	$0.08	$387,374	$0.08
Maintenance Parts & Services	$22,394,409	$0.28	$71,446	$0.33	$1,155,438	$0.28	$1,428,917	$0.28
Maintenance Labor and Fringes	$3,714,262	$0.05	$36,705	$0.17	$219,626	$0.05	$219,626	$0.04
Supplies & Services	$4,102,845	$0.05	$49,397	$0.23	$350,020	$0.09	$398,250	$0.08
Subtotal Crushing Plant	$43,744,663	$0.55	$240,032	$1.12	$2,836,110	$0.70	$3,244,963	$0.64
Grinding								
Operating Labor and Fringes	$4,619,078	$0.06	$45,637	$0.21	$273,075	$0.07	$273,075	$0.05
Power	$255,267,075	$3.23	$692,855	$3.23	$13,182,357	$3.23	$16,302,468	$3.23
Grinding Media & Wear Parts	$134,538,101	$1.70	$392,437	$1.83	$7,466,563	$1.83	$9,233,812	$1.83
Maintenance Parts & Services	$25,688,267	$0.33	$81,959	$0.38	$1,325,464	$0.33	$1,639,186	$0.33
Maintenance Labor and Fringes	$4,260,591	$0.05	$42,106	$0.20	$251,944	$0.06	$251,944	$0.05
Supplies and Services	$17,514,015	$0.22	$101,077	$0.47	$957,703	$0.23	$1,102,959	$0.22
Subtotal Grinding	$441,887,127	$5.60	$1,356,071	$6.33	$23,457,106	$5.76	$28,803,444	$5.71
Leaching								
Operating Labor and Fringes	$4,619,078	$0.06	$45,637	$0.21	$273,075	$0.07	$273,075	$0.05
Power	$34,963,864	$0.44	$94,872	$0.44	$1,805,049	$0.44	$2,232,283	$0.44
Reagents	$346,300,716	$4.39	$815,933	$3.81	$15,524,054	$3.81	$19,198,418	$3.81
Grinding Media & Wear Parts	$0	$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$12,468,644	$0.16	$41,652	$0.19	$642,981	$0.16	$795,167	$0.16
Maintenance Labor and Fringes	$2,067,629	$0.03	$20,425	$0.10	$122,218	$0.03	$122,218	$0.02
Supplies and Services	$1,236,329	$0.02	$19,241	$0.09	$77,000	$0.02	$77,000	$0.02
Subtotal Flotation	$401,656,259	$5.09	$1,037,760	$4.84	$18,444,377	$4.53	$22,698,161	$4.50
Carbon Handling & Refinery								
Operating Labor and Fringes	$2,943,749	$0.04	$29,085	$0.14	$174,031	$0.04	$174,031	$0.03
Power	$4,919,282	$0.06	$13,320	$0.06	$253,431	$0.06	$313,415	$0.06
Reagents	0	$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$5,052,874	$0.06	$16,858	$0.08	$260,243	$0.06	$321,840	$0.06
Maintenance Labor and Fringes	$837,814	$0.01	$8,267	$0.04	$49,467	$0.01	$49,467	$0.01
Supplies and Services	$8,044,095	$0.10	$361,054	$1.69	$415,760	$0.10	$415,760	$0.08
Subtotal Carbon Handling & Refinery	$21,797,813	$0.28	$428,584	$2.00	$1,152,932	$0.28	$1,274,513	$0.25
Filtered Tailings								
Operating Labor and Fringes	$9,904,125	$0.13	$97,854	$0.46	$585,521	$0.14	$585,521	$0.12
Power	$95,092,627	$1.21	$258,083	$1.20	$4,910,330	$1.20	$6,072,549	$1.20
Reagents	0	$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$20,825,229	$0.26	$69,590	$0.32	$1,074,275	$0.26	$1,328,543	$0.26
Maintenance Labor and Fringes	$3,453,468	$0.04	$34,126	$0.16	$204,198	$0.05	$204,198	$0.04
Supplies and Services	$166,542,076	$2.11	$848,425	$3.96	$11,876,630	$2.91	$14,257,400	$2.83
Subtotal Filtered Tailings	$295,817,525	$3.75	$1,308,079	$6.11	$18,650,954	$4.58	$22,448,211	$4.45
Ancillary Services								
Operating Labor and Fringes	$5,786,488	$0.07	$57,171	$0.27	$342,091	$0.08	$342,091	$0.07
Power	$21,979,813	$0.28	$59,563	$0.28	$1,133,263	$0.28	$1,401,493	$0.28
Maintenance Parts & Services	$6,083,823	$0.08	$21,838	$0.10	$313,373	$0.08	$387,544	$0.08
Maintenance Labor and Fringes	$1,008,529	$0.01	$9,955	$0.05	$59,566	$0.01	$59,566	$0.01
Supplies and Services	$1,138,819	$0.01	$52,695	$0.25	$68,000	$0.02	$68,000	$0.01
Subtotal Ancillary Services	$35,997,472	$0.46	$201,222	$0.94	$1,916,292	$0.47	$2,258,694	$0.45
Crushing & Ore Storage (Media Luna)								
Operating Labor and Fringes	$1,446,048	$0.02	$0	$0.00	$0	$0.00	$0	$0.00
Power	$3,941,840	$0.05	$0	$0.00	$0	$0.00	$0	$0.00
Grinding Media & Wear Parts	$2,538,514	$0.03	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Parts & Services	$3,666,279	$0.05	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Labor and Fringes	$1,017,642	$0.01	$0	$0.00	$0	$0.00	$0	$0.00
Supplies and Services	$1,413,027	$0.02	$0	$0.00	$0	$0.00	$0	$0.00
Subtotal Crushing & Ore Storage (Media Luna)	$14,023,350	$0.18	$0	$0.00	$0	$0.00	$0	$0.00
Flotation/Leaching (Media Luna)								
Operating Labor and Fringes	$2,169,072	$0.03	$0	$0.00	$0	$0.00	$0	$0.00
Power	$35,003,176	$0.44	$0	$0.00	$0	$0.00	$0	$0.00
Reagents	$44,222,378	$0.56	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Parts & Services	$9,308,853	$0.12	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Labor and Fringes	$2,583,840	$0.03	$0	$0.00	$0	$0.00	$0	$0.00
Supplies and Services	$860,103	$0.01	$0	$0.00	$0	$0.00	$0	$0.00
Subtotal Flotation/Leaching (Media Luna)	$94,147,422	$1.19	$0	$0.00	$0	$0.00	$0	$0.00
Concentrate Thickening (Media Luna)								
Operating Labor and Fringes	$3,412,165	$0.04	$0	$0.00	$0	$0.00	$0	$0.00
Power	$4,344,623	$0.06	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Parts & Services	$3,255,707	$0.04	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Labor and Fringes	$903,680	$0.01	$0	$0.00	$0	$0.00	$0	$0.00
Supplies and Services	$6,744,649	$0.09	$0	$0.00	$0	$0.00	$0	$0.00
Subtotal Concentrate Thickening (Media Luna)	$18,660,823	$0.24	$0	$0.00	$0	$0.00	$0	$0.00
Ancillary Services (Media Luna)								
Operating Labor and Fringes	$0	$0.00		$0.00		$0.00		$0.00
Power	$4,594,438	$0.06	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Parts & Services	$5,215,978	$0.07	$0	$0.00	$0	$0.00	$0	$0.00
Maintenance Labor and Fringes	$1,447,789	$0.02	$0	$0.00	$0	$0.00	$0	$0.00
Supplies and Services	$860,103	$0.01	$0	$0.00	$0	$0.00	$0	$0.00
Subtotal Ancillary Services (Media Luna)	$12,118,309	$0.15	$0	$0.00	$0	$0.00	$0	$0.00
Total Process Plant	$1,379,850,763	$17.49	$4,571,749	$21.34	$66,457,772	$16.31	$80,727,987	$16.02
Manpower	$59,131,340	$0.75	$455,979	$2.13	$2,728,402	$0.67	$2,728,402	$0.54
Power	$467,018,167	$5.92	$1,155,704	$5.40	$21,908,631	$5.38	$26,959,414	$5.35
Reagents	$390,523,093	$4.95	$815,933	$3.81	$15,524,054	$3.81	$19,198,418	$3.81
Grinding Media & Wear Parts	$140,762,039	$1.78	$408,900	$1.91	$7,779,798	$1.91	$9,621,186	$1.91
Maintenance Parts & Services	$113,960,063	$1.44	$303,343	$1.42	$4,771,774	$1.17	$5,901,198	$1.17
Supplies & Services	$208,456,060	$2.64	$1,431,889	$6.68	$13,745,113	$3.37	$16,319,369	$3.24
Total Process Plant	$1,379,850,763	$17.49	$4,571,749	$21.34	$66,457,772	$16.31	$80,727,987	$16.02

	2018		2019		2020		2021		2022		2023		2024	
	Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10	
ELG	-	5,040,000	-	5,040,000	-	2,893,800	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000
Media Luna	-	-	-	-	-	2,146,200	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000
	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing and Ore Storage														
Operating Labor and Fringes	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03
Power	$641,377	$0.13	$637,901	$0.13	$348,841	$0.07	$299,830	$0.06	$301,568	$0.06	$313,736	$0.06	$313,736	$0.06
Grinding Media & Wear Parts	$387,374	$0.08	$387,374	$0.08	$222,417	$0.04	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04
Maintenance Parts & Services	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28
Maintenance Labor and Fringes	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04
Supplies & Services	$398,250	$0.08	$398,250	$0.08	$245,695	$0.05	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04
Subtotal Crushing Plant	$3,249,135	$0.64	$3,245,658	$0.64	$2,639,087	$0.52	$2,534,775	$0.50	$2,536,513	$0.50	$2,548,681	$0.51	$2,548,681	$0.51
Grinding														
Operating Labor and Fringes	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05
Power	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23
Grinding Media & Wear Parts	$9,233,812	$1.83	$9,233,812	$1.83	$8,537,916	$1.69	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,713	$1.67
Maintenance Parts & Services	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33
Maintenance Labor and Fringes	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05
Supplies and Services	$1,102,959	$0.22	$1,102,959	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22
Subtotal Grinding	$28,803,444	$5.71	$28,803,444	$5.71	$28,118,089	$5.58	$27,996,886	$5.55	$27,996,886	$5.55	$27,996,886	$5.55	$27,996,886	$5.55
Leaching														
Operating Labor and Fringes	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05
Power	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44
Reagents	$19,198,418	$3.81	$19,198,418	$3.81	$22,366,210	$4.44	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,938	$4.55
Grinding Media & Wear Parts		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16
Maintenance Labor and Fringes	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02
Supplies and Services	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02
Subtotal Flotation	$22,698,161	$4.50	$22,698,161	$4.50	$25,865,952	$5.13	$26,417,681	$5.24	$26,417,681	$5.24	$26,417,681	$5.24	$26,417,681	$5.24
Carbon Handling & Refinery														
Operating Labor and Fringes	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03
Power	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06
Reagents		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06
Maintenance Labor and Fringes	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01
Supplies and Services	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08
Subtotal Carbon Handling & Refinery	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25
Filtered Tailings														
Operating Labor and Fringes	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12
Power	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20
Reagents		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26
Maintenance Labor and Fringes	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04
Supplies and Services	$14,257,400	$2.83	$14,257,400	$2.83	$10,286,930	$2.04	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,400	$1.90
Subtotal Filtered Tailings	$22,448,211	$4.45	$22,448,211	$4.45	$18,477,741	$3.67	$17,786,211	$3.53	$17,786,211	$3.53	$17,786,211	$3.53	$17,786,211	$3.53
Ancillary Services														
Operating Labor and Fringes	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07
Power	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28
Maintenance Parts & Services	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08
Maintenance Labor and Fringes	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01
Supplies and Services	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01
Subtotal Ancillary Services	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45
Crushing & Ore Storage (Media Luna)														
Operating Labor and Fringes	$0	$0.00	$0	$0.00	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02
Power	$0	$0.00	$0	$0.00	$273,222	$0.05	$320,809	$0.06	$320,809	$0.06	$320,809	$0.06	$320,809	$0.06
Grinding Media & Wear Parts	$0	$0.00	$0	$0.00	$175,953	$0.03	$206,598	$0.04	$206,598	$0.04	$206,598	$0.04	$206,598	$0.04
Maintenance Parts & Services	$0	$0.00	$0	$0.00	$254,122	$0.05	$298,382	$0.06	$298,382	$0.06	$298,382	$0.06	$298,382	$0.06
Maintenance Labor and Fringes	$0	$0.00	$0	$0.00	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02
Supplies and Services	$0	$0.00	$0	$0.00	$97,942	$0.02	$115,000	$0.02	$115,000	$0.02	$115,000	$0.02	$115,000	$0.02
Subtotal Crushing & Ore Storage (Media Luna)	$0	$0.00	$0	$0.00	$994,501	$0.20	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,051	$0.23
Flotation/Leaching (Media Luna)														
Operating Labor and Fringes	$0	$0.00	$0	$0.00	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03
Power	$0	$0.00	$0	$0.00	$2,426,189	$0.48	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,754	$0.57
Reagents	$0	$0.00	$0	$0.00	$3,065,203	$0.61	$3,599,064	$0.71	$3,599,064	$0.71	$3,599,064	$0.71	$3,599,064	$0.71
Maintenance Parts & Services	$0	$0.00	$0	$0.00	$645,228	$0.13	$757,606	$0.15	$757,606	$0.15	$757,606	$0.15	$757,606	$0.15
Maintenance Labor and Fringes	$0	$0.00	$0	$0.00	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04
Supplies and Services	$0	$0.00	$0	$0.00	$59,617	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01
Subtotal Flotation/Leaching (Media Luna)	$0	$0.00	$0	$0.00	$6,569,074	$1.30	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,262	$1.52
Concentrate Thickening (Media Luna)														
Operating Labor and Fringes	$0	$0.00	$0	$0.00	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05
Power	$0	$0.00	$0	$0.00	$301,141	$0.06	$353,590	$0.07	$353,590	$0.07	$353,590	$0.07	$353,590	$0.07
Maintenance Parts & Services	$0	$0.00	$0	$0.00	$225,664	$0.04	$264,968	$0.05	$264,968	$0.05	$264,968	$0.05	$264,968	$0.05
Maintenance Labor and Fringes	$0	$0.00	$0	$0.00	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01
Supplies and Services	$0	$0.00	$0	$0.00	$467,494	$0.09	$548,917	$0.11	$548,917	$0.11	$548,917	$0.11	$548,917	$0.11
Subtotal Concentrate Thickening (Media Luna)	$0	$0.00	$0	$0.00	$1,332,851	$0.26	$1,506,027	$0.30	$1,506,027	$0.30	$1,506,027	$0.30	$1,506,027	$0.30
Ancillary Services (Media Luna)														
Operating Labor and Fringes		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Power	$0	$0.00	$0	$0.00	$318,456	$0.06	$373,921	$0.07	$373,921	$0.07	$373,921	$0.07	$373,921	$0.07
Maintenance Parts & Services	$0	$0.00	$0	$0.00	$361,537	$0.07	$424,505	$0.08	$424,505	$0.08	$424,505	$0.08	$424,505	$0.08
Maintenance Labor and Fringes	$0	$0.00	$0	$0.00	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02
Supplies and Services	$0	$0.00	$0	$0.00	$59,617	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01
Subtotal Ancillary Services (Media Luna)	$0	$0.00	$0	$0.00	$853,180	$0.17	$981,997	$0.19	$981,997	$0.19	$981,997	$0.19	$981,997	$0.19
Total Process Plant	$80,732,159	$16.02	$80,728,682	$16.02	$88,383,684	$17.54	$89,539,098	$17.77	$89,540,836	$17.77	$89,553,004	$17.77	$89,553,004	$17.77
Manpower	$2,728,402	$0.54	$2,728,402	$0.54	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74
Power	$26,963,586	$5.35	$26,960,110	$5.35	$29,990,058	$5.95	$30,519,112	$6.06	$30,520,850	$6.06	$30,533,018	$6.06	$30,533,018	$6.06
Reagents	$19,198,418	$3.81	$19,198,418	$3.81	$25,431,412	$5.05	$26,517,002	$5.26	$26,517,002	$5.26	$26,517,002	$5.26	$26,517,002	$5.26
Grinding Media & Wear Parts	$9,621,186	$1.91	$9,621,186	$1.91	$8,936,287	$1.77	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,999	$1.75
Maintenance Parts & Services	$5,901,198	$1.17	$5,901,198	$1.17	$7,387,749	$1.47	$7,646,659	$1.52	$7,646,659	$1.52	$7,646,659	$1.52	$7,646,659	$1.52
Supplies & Services	$16,319,369	$3.24	$16,319,369	$3.24	$12,891,554	$2.56	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,702	$2.44
Total Process Plant	$80,732,159	$16.02	$80,728,682	$16.02	$88,383,684	$17.54	$89,539,098	$17.77	$89,540,836	$17.77	$89,553,004	$17.77	$89,553,004	$17.77

	2025		2026		2027		2028		2029		2030		2031		2032	
	Year 11		Year 12		Year 13		Year 14		Year 15		Year 16		Year 17		Year 18	
ELG	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000	-	446,432	-	-
Media Luna	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000	-	2,520,000	-	2,519,922	-	2,433,058	-	1,184,535
	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing and Ore Storage																
Operating Labor and Fringes	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.03	$173,590	$0.06	$129,836	$0.11
Power	$297,744	$0.06	$639,492	$0.13	$435,413	$0.09	$435,413	$0.09	$435,413	$0.09	$435,413	$0.09	$77,136	$0.03	$0	$0.00
Grinding Media & Wear Parts	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04	$193,687	$0.04	$34,313	$0.01	$0	$0.00
Maintenance Parts & Services	$1,428,917	$0.28	$1,439,417	$0.29	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,917	$0.28	$1,428,895	$0.28	$816,379	$0.28	$335,834	$0.28
Maintenance Labor and Fringes	$219,626	$0.04	$218,903	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.04	$219,626	$0.08	$164,268	$0.14
Supplies & Services	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04	$219,125	$0.04	$71,733	$0.02	$0	$0.00
Subtotal Crushing Plant	$2,532,689	$0.50	$2,884,214	$0.57	$2,670,358	$0.53	$2,670,358	$0.53	$2,670,358	$0.53	$2,670,336	$0.53	$1,392,777	$0.48	$629,938	$0.53
Grinding																
Operating Labor and Fringes	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.09	$204,245	$0.17
Power	$16,302,468	$3.23	$16,314,468	$3.24	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,468	$3.23	$16,302,215	$3.23	$9,314,048	$3.23	$3,831,515	$3.23
Grinding Media & Wear Parts	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,713	$1.67	$8,416,595	$1.67	$4,486,622	$1.56	$1,786,112	$1.51
Maintenance Parts & Services	$1,639,186	$0.33	$1,649,686	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,186	$0.33	$1,639,161	$0.33	$936,512	$0.33	$385,252	$0.33
Maintenance Labor and Fringes	$251,944	$0.05	$250,880	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.05	$251,944	$0.09	$188,441	$0.16
Supplies and Services	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,500	$0.22	$1,113,483	$0.22	$636,173	$0.22	$261,702	$0.22
Subtotal Grinding	$27,996,886	$5.55	$28,018,322	$5.56	$27,996,886	$5.55	$27,996,886	$5.55	$27,996,886	$5.55	$27,996,473	$5.55	$15,898,374	$5.52	$6,657,268	$5.62
Leaching																
Operating Labor and Fringes	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.05	$273,075	$0.09	$204,245	$0.17
Power	$2,232,283	$0.44	$2,244,283	$0.45	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,283	$0.44	$2,232,249	$0.44	$1,275,365	$0.44	$524,646	$0.44
Reagents	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,938	$4.55	$22,917,526	$4.55	$14,559,778	$5.06	$6,260,514	$5.29
Grinding Media & Wear Parts		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$795,167	$0.16	$805,667	$0.16	$795,167	$0.16	$795,167	$0.16	$795,167	$0.16	$795,155	$0.16	$454,301	$0.16	$186,885	$0.16
Maintenance Labor and Fringes	$122,218	$0.02	$122,524	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.02	$122,218	$0.04	$91,412	$0.08
Supplies and Services	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$77,000	$0.02	$76,999	$0.02	$43,992	$0.02	$18,097	$0.02
Subtotal Flotation	$26,417,681	$5.24	$26,440,487	$5.25	$26,417,681	$5.24	$26,417,681	$5.24	$26,417,681	$5.24	$26,417,221	$5.24	$16,728,729	$5.81	$7,285,800	$6.15
Carbon Handling & Refinery																
Operating Labor and Fringes	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.03	$174,031	$0.06	$130,166	$0.11
Power	$313,415	$0.06	$325,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,415	$0.06	$313,410	$0.06	$179,063	$0.06	$73,661	$0.06
Reagents		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$321,840	$0.06	$332,340	$0.07	$321,840	$0.06	$321,840	$0.06	$321,840	$0.06	$321,835	$0.06	$183,876	$0.06	$75,641	$0.06
Maintenance Labor and Fringes	$49,467	$0.01	$50,541	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.01	$49,467	$0.02	$36,999	$0.03
Supplies and Services	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,760	$0.08	$415,759	$0.08	$388,325	$0.13	$366,801	$0.31
Subtotal Carbon Handling & Refinery	$1,274,513	$0.25	$1,298,087	$0.26	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,513	$0.25	$1,274,502	$0.25	$974,762	$0.34	$683,268	$0.58
Filtered Tailings																
Operating Labor and Fringes	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.12	$585,521	$0.20	$437,937	$0.37
Power	$6,072,549	$1.20	$6,084,549	$1.21	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,549	$1.20	$6,072,455	$1.20	$3,469,414	$1.20	$1,427,211	$1.20
Reagents		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Maintenance Parts & Services	$1,328,543	$0.26	$1,339,043	$0.27	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,543	$0.26	$1,328,523	$0.26	$759,033	$0.26	$312,243	$0.26
Maintenance Labor and Fringes	$204,198	$0.04	$203,638	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.04	$204,198	$0.07	$152,729	$0.13
Supplies and Services	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,400	$1.90	$9,595,324	$1.90	$3,644,486	$1.27	$1,159,481	$0.98
Subtotal Filtered Tailings	$17,786,211	$3.53	$17,808,151	$3.53	$17,786,211	$3.53	$17,786,211	$3.53	$17,786,211	$3.53	$17,786,020	$3.53	$8,662,653	$3.01	$3,489,602	$2.95
Ancillary Services																
Operating Labor and Fringes	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.07	$342,091	$0.12	$255,865	$0.22
Power	$1,401,493	$0.28	$1,437,493	$0.29	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,493	$0.28	$1,401,472	$0.28	$800,712	$0.28	$329,388	$0.28
Maintenance Parts & Services	$387,544	$0.08	$398,044	$0.08	$387,544	$0.08	$387,544	$0.08	$387,544	$0.08	$387,538	$0.08	$221,415	$0.08	$91,083	$0.08
Maintenance Labor and Fringes	$59,566	$0.01	$60,534	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.01	$59,566	$0.02	$44,552	$0.04
Supplies and Services	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$68,000	$0.01	$61,141	$0.02	$4,983	$0.00
Subtotal Ancillary Services	$2,258,694	$0.45	$2,306,162	$0.46	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,694	$0.45	$2,258,666	$0.45	$1,484,924	$0.52	$725,871	$0.61
Crushing & Ore Storage (Media Luna)																
Operating Labor and Fringes	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.02	$113,434	$0.04	$84,842	$0.07
Power	$320,809	$0.06	$320,809	$0.06	$320,809	$0.06	$320,809	$0.06	$320,809	$0.06	$320,799	$0.06	$309,741	$0.11	$150,797	$0.13
Grinding Media & Wear Parts	$206,598	$0.04	$206,598	$0.04	$206,598	$0.04	$206,598	$0.04	$206,598	$0.04	$206,592	$0.04	$199,471	$0.07	$97,112	$0.08
Maintenance Parts & Services	$298,382	$0.06	$298,382	$0.06	$298,382	$0.06	$298,382	$0.06	$298,382	$0.06	$298,373	$0.06	$288,088	$0.10	$140,256	$0.12
Maintenance Labor and Fringes	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.02	$79,828	$0.03	$59,707	$0.05
Supplies and Services	$115,000	$0.02	$115,000	$0.02	$115,000	$0.02	$115,000	$0.02	$115,000	$0.02	$114,996	$0.02	$111,032	$0.04	$54,056	$0.05
Subtotal Crushing & Ore Storage (Media Luna)	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,051	$0.23	$1,134,022	$0.23	$1,101,594	$0.38	$586,771	$0.50
Flotation/Leaching (Media Luna)																
Operating Labor and Fringes	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.03	$170,151	$0.06	$127,263	$0.11
Power	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,754	$0.57	$2,848,666	$0.57	$2,750,470	$0.96	$1,339,066	$1.13
Reagents	$3,599,064	$0.71	$3,599,064	$0.71	$3,599,064	$0.71	$3,599,064	$0.71	$3,599,064	$0.71	$3,598,952	$0.71	$3,474,894	$1.21	$1,691,752	$1.43
Maintenance Parts & Services	$757,606	$0.15	$757,606	$0.15	$757,606	$0.15	$757,606	$0.15	$757,606	$0.15	$757,583	$0.15	$731,468	$0.25	$356,115	$0.30
Maintenance Labor and Fringes	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.04	$202,687	$0.07	$151,599	$0.13
Supplies and Services	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$69,998	$0.01	$67,585	$0.02	$32,904	$0.03
Subtotal Flotation/Leaching (Media Luna)	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,262	$1.52	$7,648,036	$1.52	$7,397,255	$2.57	$3,698,700	$3.12
Concentrate Thickening (Media Luna)																
Operating Labor and Fringes	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.05	$267,664	$0.09	$200,198	$0.17
Power	$353,590	$0.07	$353,590	$0.07	$353,590	$0.07	$353,590	$0.07	$353,590	$0.07	$353,579	$0.07	$341,391	$0.12	$166,206	$0.14
Maintenance Parts & Services	$264,968	$0.05	$264,968	$0.05	$264,968	$0.05	$264,968	$0.05	$264,968	$0.05	$264,959	$0.05	$255,826	$0.09	$124,549	$0.11
Maintenance Labor and Fringes	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.01	$70,888	$0.02	$53,021	$0.04
Supplies and Services	$548,917	$0.11	$548,917	$0.11	$548,917	$0.11	$548,917	$0.11	$548,917	$0.11	$548,900	$0.11	$529,979	$0.18	$258,020	$0.22
Subtotal Concentrate Thickening (Media Luna)	$1,506,027	$0.30	$1,506,027	$0.30	$1,506,027	$0.30	$1,506,027	$0.30	$1,506,027	$0.30	$1,505,990	$0.30	$1,465,748	$0.51	$801,994	$0.68
Ancillary Services (Media Luna)																
Operating Labor and Fringes		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00		$0.00
Power	$373,921	$0.07	$373,921	$0.07	$373,921	$0.07	$373,921	$0.07	$373,921	$0.07	$373,909	$0.07	$361,021	$0.13	$175,763	$0.15
Maintenance Parts & Services	$424,505	$0.08	$424,505	$0.08	$424,505	$0.08	$424,505	$0.08	$424,505	$0.08	$424,492	$0.08	$409,860	$0.14	$199,540	$0.17
Maintenance Labor and Fringes	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.02	$113,570	$0.04	$84,944	$0.07
Supplies and Services	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$70,000	$0.01	$69,998	$0.01	$67,585	$0.02	$32,904	$0.03
Subtotal Ancillary Services (Media Luna)	$981,997	$0.19	$981,997	$0.19	$981,997	$0.19	$981,997	$0.19	$981,997	$0.19	$981,970	$0.19	$952,036	$0.33	$493,151	$0.42
Total Process Plant	$89,537,012	$17.77	$90,025,761	$17.86	$89,674,681	$17.79	$89,674,681	$17.79	$89,674,681	$17.79	$89,673,238	$17.79	$56,058,851	$19.47	$25,052,362	$21.15
Manpower	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$0.74	$3,746,624	$1.30	$2,802,269	$2.37
Power	$30,517,026	$6.05	$30,942,775	$6.14	$30,654,695	$6.08	$30,654,695	$6.08	$30,654,695	$6.08	$30,654,167	$6.08	$18,878,359	$6.56	$8,018,255	$6.77
Reagents	$26,517,002	$5.26	$26,517,002	$5.26	$26,517,002	$5.26	$26,517,002	$5.26	$26,517,002	$5.26	$26,516,478	$5.26	$18,034,672	$6.26	$7,952,266	$6.71
Grinding Media & Wear Parts	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,999	$1.75	$8,816,875	$1.75	$4,720,406	$1.64	$1,883,225	$1.59
Maintenance Parts & Services	$7,646,659	$1.52	$7,709,659	$1.53	$7,646,659	$1.52	$7,646,659	$1.52	$7,646,659	$1.52	$7,646,514	$1.52	$5,056,758	$1.76	$2,207,399	$1.86
Supplies & Services	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,702	$2.44	$12,292,581	$2.44	$5,622,032	$1.95	$2,188,948	$1.85
Total Process Plant	$89,537,012	$17.77	$90,025,761	$17.86	$89,674,681	$17.79	$89,674,681	$17.79	$89,674,681	$17.79	$89,673,238	$17.79	$56,058,851	$19.47	$25,052,362	$21.15

24.21.2.2 ELG Open Pit Mining Operating Costs (estimated by SRK)

The ELG Mine operating cost estimates presented in Section 21 to meet the ELG base case production schedule for the period 2016 to 2025 are considered applicable for the alternate ELG production schedule developed for the Media Luna PEA, since annual ROM and waste mining quantities are unchanged. The operating cost impact of minor differences in annual ROM rehandle quantities during this period is considered negligible. On an incremental basis it is estimated that no additional ELG open pit mine operating costs would be incurred during the period 2016 to 2025 for the alternate ELG Mine plan developed for the Media Luna PEA.

The alternate ELG Mine plan developed for the Media Luna PEA differs from the base case plan in that ELG plant feed sourced from low grade stockpiles would be extended for six years after open pit mining is complete. The estimated ELG operating costs that would be incurred for ROM rehandle from stockpiles to processing plant during the period 2026 -2031 are summarized in Table 24-57.

Table 24-57: ELG Stockpile Rehandle Operating Cost

	Units	2026	2027	2028	2029	2030	2031	Total
ROM rehandle, stockpile to plant								
High grade ROM rehandle	Kt	15	-	-	-	-	-	15
Low grade ROM rehandle	Kt	2,505	2,520	2,520	2,520	2,520	446	13,032
Total feed from stockpile	Kt	2,520	2,520	2,520	2,520	2,520	446	13,046
Total rehandle costs, by function								
Load	$000	684	684	684	684	684	188	3,606
Haul	$000	951	952	952	952	952	169	4,927
Roads & Dumps	$000	641	641	641	641	641	290	3,496
Support	$000	306	305	305	305	305	140	1,668
Mine General	$000	409	409	409	409	409	153	2,197
Total Cost	$000	2,990	2,991	2,991	2,991	2,991	940	15,893
Unit rehandle costs, by function								
Load	$/t feed	0.27	0.27	0.27	0.27	0.27	0.42	0.28
Haul	$/t feed	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Roads & Dumps	$/t feed	0.25	0.25	0.25	0.25	0.25	0.65	0.27
Support	$/t feed	0.12	0.12	0.12	0.12	0.12	0.31	0.13
Mine General	$/t feed	0.16	0.16	0.16	0.16	0.16	0.34	0.17
Total unit cost	$/t feed	1.19	1.19	1.19	1.19	1.19	2.11	1.22

24.21.2.3 Underground Mining Operating Cost (estimated by AMC)

24.21.2.3.1 Summary of Operating Costs

Underground operating costs are inclusive of labor, supervision, maintenance, equipment and consumables for the Owner's fleet of mobile haulage and support equipment fleet as well as fixed plant equipment such as ventilation, dewatering and backfill. The total underground operating cost is estimated at $848.6M. A listing of the direct underground operating cost totals and cost per tonne is summarized in Table 24-58. Total underground cost per tonne excluding G & A is $27.41 per tonne. An overall breakdown of labor, materials and equipment is provided in Table 24-59.

Key mine operating cost parameters include:

- Mine operating costs extend from the start of 2020 to end of 2032, (the end of the Project period, to the end of the project life).
- Underground mine operation is based on two shifts per day, 12 hours/shift.
- Labor rates are estimated using current labor rates at the ELG Mine with the addition of an "underground premium" and are based on three operating crews on a 20 day on-10 day off rotation.
- Maintenance of all underground equipment (mobile and fix plant) is by company crews.

Table 24-58: Direct Underground Operating Cost Summary

	Tonnes (M)	Cost ($M)	Cost per tonne ($)
LHOS			
Stoping			
Labor	20.5	7.8	0.38
Materials	20.5	56.0	2.73
Equipment	20.5	61.6	3.00
CAF			
Stoping			
Labor	10.4	22.4	2.15
Materials	10.4	64.0	6.15
Equipment	10.4	88.8	8.54
Total Stoping (prorated)	**31.0**	**300.6**	**9.70**
Haulage	31.0	46.0	1.48
Mine services	31.0	8.1	0.26
Diamond drilling	31.0	33.4	1.08
Paste backfill	31.0	85.5	2.76
Development	31.0	95.8	3.09
Maintenance	31.0	105.2	3.39
Utilities	31.0	141.2	4.55
Mine staff	31.0	32.8	1.06
Total*	**31.0**	**848.6**	**27.41**

*Total based on prorated stoping cost.

Table 24-59: Labor, Materials, and Equipment Percentage

	Cost ($M)	%
Labor	**148.3**	17%
Materials	**473.3**	56%
Equipment	**227.0**	27%
Total	**848.6**	

24.21.2.3.2 Labor Cost

Labor costs are estimated based on Torex's current experience at the ELG Mine with an estimated cost increase for underground work.

24.22 ECONOMIC ANALYSIS

The economic evaluation for the Media Luna Project was completed by developing a financial model for a conceptual mine plan for the ML Project - ELG Mine as described in section 24 of this report. The economic results for the ELG LOM (presented in section 22) were then subtracted from the financial results of this conceptual mine plan to give financial results for the ML Project. This approach demonstrates the incremental benefit of the ML Project to Torex.

Key Points

- ELG Mine has an after tax internal Rate of Return (RR) of 15.7% with an NPV of $605 million at a discount factor of 5% and a cumulative undiscounted cash-flow of $1,036 million. (see section 22 for details)
- The combined ML Project-ELG Mine Plan yields an after tax IRR of 18.3% with an NPV of $1,252 million at a discount factor of 5% and a cumulative undiscounted cash-flow of $2,438 million.
- Netting the ELG Mine economic results from the combined ML Project-ELG Mine, shows the ML Project to have an after tax IRR of 24.6%, an NPV of $729 Million and a cumulative undiscounted cash-flow of $1,402 million.
- Base case metal prices assumed within the PEA are $1,200/oz gold, $20.00/oz silver and $3.00/lb copper
- The ML Project demonstrates positive economic indicators at a 20% reduction in metal prices used in the Base Case – yielding an after tax IRR of 16.1%, an NPV of $360 million at a discount factor of 5% and a cumulative undiscounted cash-flow of $778 million. ($960/oz gold, 16.00/oz silver and $2.40/lb copper)

24.22.1 Introduction

This section presents the results of the financial evaluation of the conceptual ML Project-ELG Mine Plan and the subsequent results for the ML Project. These results are presented in the form of Net Present Value (NPV) (at various discount factors), payback period (time in years to recapture the initial capital investment), and the Internal Rate of Return (IRR) first for the ML Project-ELG Mine plan and secondly for the ML Project (ML Project-ELG Mine Plan net of ELG LOM plan financial results).

For the ML Project-ELG Mine plan annual cash flow projections were estimated over the life of the mine based on estimates of capital expenditures, production cost and sales revenue. The sales revenue are based on the production of a copper/gold/silver concentrate and gold doré for the ML Project-ELG Mine plan. The estimates of capital expenditures and site production costs have been developed specifically for the new aspects required for mining and recovery of metal from the ML resource presented in earlier section 24.21 of this report. For the ELG Mine use was made of the LOM plan presented in the previous sections of this report other than those changes described in section 24.16.

24.22.2 Mine Production Statistics

Mine production is reported as ore and waste for ELG and mineralized material for Media Luna for the combined mining operation. The annual production figures were obtained from the mine plan as reported earlier in section 24.16.

The life of mine ore and waste quantities and ore grade for ELG along with the Media Luna mineralized material tonnes and grade are presented in Table 24-60.

Table 24-60: ELG Life of Mine Ore, Waste Quantities, and Media Luna Mineralized Material

	Tonnes	Copper Grade	Gold Grade	Silver Grade
	(kt)	(%)	(g/t)	(g/t)
ELG Ore	47,560		2.70	4.38
Media Luna Mineralized Material	30,964	1.03	2.56	27.44
ELG Waste	274,388		-	-

24.22.3 Plant Production Statistics

The design basis for the process plant producing gold doré is 14,000 tonnes per day at a 92% mill availability. The design basis for the Media Luna flotation plant is 7,000 tonnes per day at 92% mill availability. The life of mine recoveries and the payable metal production are shown in Table 24-61.

Table 24-61: Life of Combined ML-ELG Project Recoveries and Payable Metal Production*

	Recoveries			Payable Metals Production			
	Copper	Gold	Silver	Copper (klbs)	Gold (kozs)	Silver (kozs)	Gold EQ (kozs)
Gold Doré	-	-	-	-	-	-	-
ELG		87.3%	32.4%		3,17	2,165	3,653
Media Luna		28.0%	7.0%		714	1,902	746
Copper Concentrate	-	-	-	-	-	-	-
Media Luna	90.0%	60.0%	82.0%	603,523	1,493	20,156	3,338

*The gold and silver recoveries for the ML-ELG project plan are slightly different than those included in the ELG LOM due to processing of different grades within the two plans.

24.22.4 Smelter Treatment Factors

A copper and gold concentrate is planned to be produced and would shipped from the site to an offsite smelter. Terms would be negotiated at the time of agreement. For the financial model, Table 24-62 shows the assumed smelter charges.

Table 24-62: Smelter Treatment Factors

Copper/Gold Concentrate	
Payable Copper (%)	96.5%
Minimum Deduction (%)	1%
Payable Gold (%) if over 1 gms/dmt	97.5%
Payable Silver (%) if over 30 gms/dmt	90.0%
Gms/troy oz	
Treatment Charges ($/dmt)	$80.00
Quality Premium ($/dmt)	$5.00
Refining Charge – Au ($/payable oz)	$6.00
Refining Charge – Ag ($/payable oz)	$0.50
Refining Charge – Cu ($/payable lb)	$0.085
Penalties ($/dmt)	-
Transportation ($/wmt)	$117.48

24.22.5 Refinery Return Factors

A gold and silver doré would be shipped from the site to the refining company. Refining treatment charges were assumed to be the same as those currently in place for the ELG Mine.

24.22.6 Capital Expenditure

24.22.6.1 Initial Capital

The base case financial indicators have been determined with 100% equity financing of the initial capital. Any acquisition cost or expenditures prior to start of the full project period have been treated as "sunk" cost and have not been included in the analysis.

The total initial capital for the ELG and Media Luna projects includes new construction, mine development, pre-production, owner's cost and contingency. Capital cost for the ELG Mine was taken as the same as that determined for the ELG LOM presented in the other sections of this report. Table 24-63 presents the initial capital.

Table 24-63: Initial Capital – In Millions

	ELG	Media Luna	Total
Mining Equipment/Infrastructure	156.5	146.4	302.9
Mine Underground Development		118.6	118.6
Process Plant	530.0	203.8	733.8
Owner's Cost	113.5	13.0	126.5
Pre-production revenues	-34.0		-34.0
Total	**766.0**	**481.8**	**1,247.8**

24.22.7 Sustaining Capital

A schedule of capital cost expenditures during the production period was estimated and included in the financial analysis under the category of sustaining capital. The total life of mine sustaining capital is estimated to be $207.3 million with $98.3 million for ELG (same as ELG LOM) and $109.0 for ML Project (ML Project includes mine development of $68.2 million). This sustaining capital would be expended during a 15 year period.

24.22.8 Working Capital

A 25 day delay of receipt of revenue from sales is used for accounts receivables. A delay of payment for accounts payable of 30 days is also incorporated into the financial model. In addition, working capital allowance of $6.8 million for plant consumable inventory is estimated in year -1 and year 1. All the working capital is recaptured at the end of the mine life and the final value of these accounts is $0.

24.22.9 Salvage Value

A $20.6 million allowance for salvage value has been included in the cash flow analysis. Salvage value is 10% of the purchase price of equipment.

24.22.10 Revenue

Annual revenue is determined by applying estimated metal prices to the annual payable metal estimated for each operating year. Sales prices have been applied to all life of mine production without escalation or hedging. The revenue is the gross value of payable metals sold before treatment charges and transportation charges. Metal sales prices used in the evaluation are as follows:

Table 24-64: Life of Mine Metal Prices

Copper	$3.00
Gold	$1,200.00
Silver	$20.00

24.22.11 Operating Cost

The average Cash Operating Cost over the life of the mine for the ML-ELG Mine plan is estimated to be $45.92 per metric tonne of processed material, excluding the cost of the capitalized pre-stripping and mine development cost. Cash Operating Cost includes mine operations, process plant operations, general administrative cost, smelting and refining charges and shipping charges. Table 24-65 shows the estimated operating cost for the ML-ELG Mine plan by area per metric tonne of processed material as compared to the ELG Mine plan.

Table 24-65: Operating Cost

	ELG Mine Plan	ML-ELG Mine Plan
Operating Cost	**$/tonne milled**	**$/tonne milled**
Mine	$13.70	$19.18
Process Plant	$16.04	$17.67
General Administration	$4.13	$4.77
Smelting/Refining Treatment	$0.21	$4.30
Total Operating Cost	**$34.08**	**$45.92**

24.22.12 Total Cash Cost

The average Total Cash Cost over the life of the mine for the ML-ELG Mine plan is estimated to be $50.08 per metric tonne of processed material. Total Cash Cost is the Total Cash Operating Cost plus royalties, salvage value, reclamation and closure costs.

24.22.13 Royalty

A royalty payment is based on 2.5% of the gross metal sales starting the first year of production. The estimated royalty payments are $231.2 million.

24.22.14 Reclamation & Closure

An allowance of $117.4 million for the cost of reclamation and closure of the ML Project and ELG Mine has been included in the cash flow projection.

24.22.15 Depreciation

Depreciation was calculated using the straight line method using a 10 year life. The depreciation includes a beginning balance of $2.9 million for assets acquired before the analysis. The last year of production is the catch-up year if the assets are not fully depreciated by that time.

24.22.16 Taxation

24.22.16.1 Mining Royalties

Production cost include two mining royalty taxes:

- A 7.5% royalty tax has been applied to include from mining activities. The tax is calculated on a base of earnings before interest, taxes, depreciation and amortization (i.e. EBITDA). It is estimated to be $387.8 million.
- A 0.5% royalty tax of $37.2 million based on the revenues from precious metals.

24.22.17 Corporate Income Tax

The ML Project is evaluated with a 30% corporate tax based taxable income from the operations. A loss carry forward of $60.4 million and other deductions for expenditures of $144.7 million were included in the tax calculation.

Corporate income taxes paid are estimated to be $969.9 million.

24.22.18 Project Financing

It is assumed that the ML Project would be all equity financed.

24.22.19 Net Income After Tax

Net Income after Tax amounts to $2.4 billion.

24.22.20 NPV and IRR

The economic analysis indicates that the ELG and Media Luna Project has an Internal Rate of Return (IRR) of 18.3% with a payback period of 6.9 years after taxes.

The economic analysis indicates that the Medial Luna portion of the project has an Internal Rate of Return of 24.6% with a payback period of 3.7 years after taxes. These indicators were calculated by taking the after tax cash flow from the ELG Mine and Medial Luna Project and subtracting the after tax cash flow from the updated ELG Mine plan resulting in the incremental cash flow for Media Luna.

Table 24-66: ML Project Incremental NPV and IRR

After Tax IRR	24.6%
After Tax NPV @ 5%	US$729 M
After Tax NPV @ 8%	US$488 M
Cumulative Undiscounted Cash Flow	US$1,402 M
CAPEX Payback	3.7 years
Mine Life	13 years
Average Cash Cost per Gold Equivalent Ounce	US$571
Average AISC per Gold Equivalent Ounce	US$636

24.22.21 Sensitivities

Table 24-67 below compares the ML Project base case financial indicators with the financial indicators for other cases when the metal sales price, the amount of capital expenditures, the operating cost, and material grade are varied from the base case. This was accomplished by changing these variables in both the ML Project-ELG Mine plan and the ELG LOM mine plan and subtracting the ELG LOM mine plan from the ML Project-ELG Mine plan to give the ML Project financial indicators at these variables. From the sensitivity analysis in Table 24-67 and Figure 24-37, it can be seen that the ML Project is the most sensitive to material grade and metal prices.

Table 24-67: Sensitivity Analysis ($M) – After Taxes

	Undiscounted Cash Flow 0%	Net Present Value @ 5%	Net Present Value @ 8%	IRR %	Payback (yrs)
Base Case	$1,402	$729	$488	24.6%	3.7
Metal Prices +10%	$1,711	$911	$623	28.1%	2.6
Metal Prices -10%	$1,092	$547	$352	20.8%	4.7
Metal Prices -20%	$778	$361	$211	16.1%	5.4
Initial Capital +20%	$1,262	$613	$384	19.2%	5.1
Initial Capital +10%	$1,332	$671	$436	21.7%	4.5
Initial Capital -10%	$1,471	$787	$540	28.2%	2.6
Initial Capital -20%	$1,541	$845	$592	32.6%	2.0
Operating Cost +20%	$1,686	$560	$616	28.5%	2.6
Operating Cost +10%	$1,260	$644	$552	22.7%	4.3
Operating Cost -10%	$1,544	$814	$552	26.5%	2.9
Operating Cost -20%	$1,686	$898	$616	28.5%	2.6
Material Grade +20%	$1,979	$1,067	$740	30.9%	2.3
Material Grade +10%	$1,690	$898	$614	27.9%	2.7
Material Grade -10%	$1,113	$560	$362	21.1%	4.6
Material Grade -20%	$821	$386	$230	16.7%	5.3
Recovery +5.0%	$1,546	$814	$551	26.3%	2.9
Recovery +2.5%	$1,473	$771	$519	25.4%	3.1
Recovery -2.5%	$1,329	$686	$456	23.7%	4.1
Recovery -5%	$1,257	$644	$424	22.8%	4.2

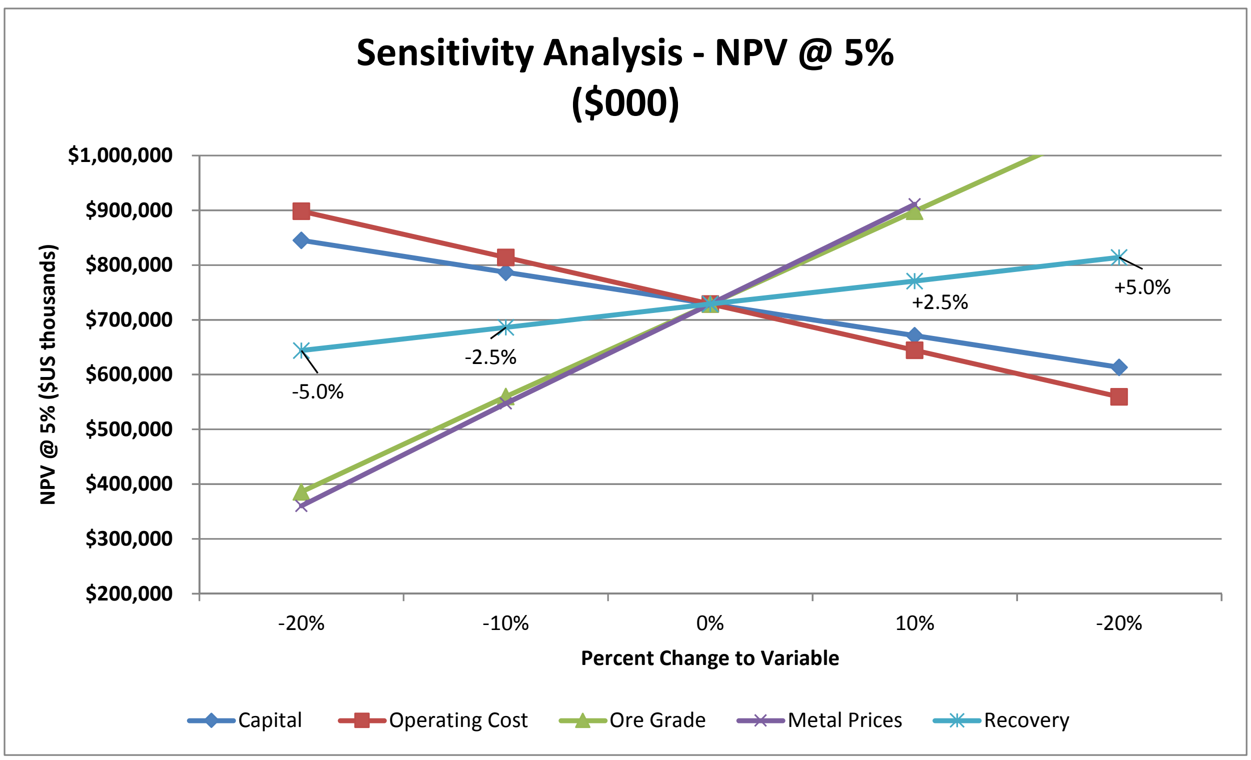


Figure 24-37: Sensitivity Analysis – NPV @ 5% - After Taxes ($000)

Table 24-68: Combined ML Project-ELG Mine Plan

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ELG & Media Luna	Total	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Mining Operations																								
ELG																								
Ore																								
Beginning Inventory (kt)	47,560	47,560	47,560	47,560	47,560	47,560	46,027	42,665	37,605	33,267	28,451	23,033	17,700	13,262	7,130	2,043	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Mined (kt)	47,560	-	-	-	-	1,533	3,362	5,060	4,339	4,816	5,418	5,333	4,437	6,132	5,087	2,043	-	-	-	-	-	-	-	-
Ending Inventory (kt)	-	47,560	47,560	47,560	47,560	46,027	42,665	37,605	33,267	28,451	23,033	17,700	13,262	7,130	2,043	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Gold Grade (g/t)	2.701	-	-	-	-	2.787	2.285	2.691	2.285	2.242	2.373	2.397	2.811	3.759	2.921	3.010	-	-	-	-	-	-	-	-
Silver Grade (g/t)	4.376	-	-	-	-	5.076	5.673	7.099	6.792	3.187	3.662	3.043	3.327	4.453	2.965	3.584	-	-	-	-	-	-	-	-
Contained Gold (kozs)	4,130	-	-	-	-	137	247	438	319	347	413	411	401	741	478	198	-	-	-	-	-	-	-	-
Contained Silver (kozs)	6,692	-	-	-	-	250	613	1,155	947	493	638	522	475	878	485	235	-	-	-	-	-	-	-	-
Media Luna																								
Ore																								
Beginning Inventory (kt)	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	28,818	26,298	23,778	21,258	18,738	16,218	13,698	11,178	8,658	6,138	3,618	1,185	0
Mined (kt)	30,964	-	-	-	-	-	-	-	-	-	2,146	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,433	1,185	-
Ending Inventory (kt)	-	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	30,964	28,818	26,298	23,778	21,258	18,738	16,218	13,698	11,178	8,658	6,138	3,618	1,185	0	0
Copper Grade (%)	1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	1.06%	1.06%	1.01%	0.95%	1.32%	1.30%	1.14%	1.02%	0.90%	0.77%	0.80%	0.90%	0.00%
Gold Grade (g/t)	2.563	-	-	-	-	-	-	-	-	-	4.120	3.351	2.729	2.511	2.506	2.348	2.112	2.026	2.028	2.216	2.510	2.626	2.374	-
Silver Grade (g/t)	27.435	-	-	-	-	-	-	-	-	-	26.471	26.526	25.420	26.867	28.658	34.670	34.969	31.491	28.452	25.449	20.636	21.262	23.153	-
Contained Copper (klbs)	699,737	-	-	-	-	-	-	-	-	-	47,542	59,103	59,011	56,292	52,800	73,423	72,493	63,317	56,930	49,724	42,877	42,827	23,397	-
Contained Gold (kozs)	2,552	-	-	-	-	-	-	-	-	-	284	271	221	203	203	190	171	164	164	180	203	205	90	-
Contained Silver (kozs)	27,311	-	-	-	-	-	-	-	-	-	1,827	2,149	2,059	2,177	2,322	2,809	2,833	2,551	2,305	2,062	1,672	1,663	882	-
Waste																								
Beginning Inventory(kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mined (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Inventory (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Material Mined (kt)	30,964	-	-	-	-	-	-	-	-	-	2,146	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,433	1,185	-
Process Plant Operations																								
ELG																								
Beginning Ore Inventory (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mined Ore to Concentrator (kt)	47,950	-	-	-	-	214	4,075	5,040	5,040	5,040	2,894	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	446	-	-
Mined Ore - Processed (kt)	47,950	-	-	-	-	214	4,075	5,040	5,040	5,040	2,894	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	446	-	-
Ending Ore Inventory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold Grade (g/t)	2.690	-	-	-	-	2.402	2.411	2.670	2.286	2.247	3.098	3.662	3.901	5.094	4.419	4.668	1.442	1.422	1.422	1.422	1.422	1.422	-	-
Silver Grade (g/t)	4.357	-	-	-	-	4.426	5.474	7.047	6.499	3.240	4.516	4.192	4.258	5.563	3.709	5.151	2.339	2.323	2.323	2.323	2.323	2.323	-	-
Contained Gold (kozs)	4,148	-	-	-	-	17	316	433	370	364	288	297	316	413	358	378	117	115	115	115	115	20	-	-
Contained Silver (kozs)	6,716	-	-	-	-	30	717	1,142	1,053	525	420	340	345	451	300	417	190	188	188	188	188	33	-	-
Recovery Gold (%)	87.3%	0.0%	0.0%	0.0%	0.0%	58.4%	87.1%	88.9%	87.4%	85.8%	87.1%	88.2%	87.8%	88.8%	88.0%	87.4%	85.7%	85.6%	85.6%	85.6%	85.6%	85.6%	0.0%	0.0%
Recovery Silver (%)	32.4%	0.0%	0.0%	0.0%	0.0%	15.9%	33.9%	34.1%	32.6%	30.9%	31.4%	32.0%	31.3%	31.7%	31.2%	30.9%	32.7%	32.7%	32.7%	32.7%	32.7%	32.7%	0.0%	0.0%
Recovered Gold (kozs)	3,620	-	-	-	-	10	275	385	324	312	251	262	277	367	315	331	100	99	99	99	99	17	-	-
Recovered Silver (kozs)	2,176	-	-	-	-	5	243	389	343	162	132	109	108	143	94	129	62	62	62	62	62	11	-	-
Media Luna																								
Beginning Ore Inventory (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mined Ore to Concentrator (kt)	30,964	-	-	-	-	-	-	-	-	-	2,146	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,433	1,185	-
Mined Ore - Processed (kt)	30,964	-	-	-	-	-	-	-	-	-	2,146	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,520	2,433	1,185	-
Ending Ore Inventory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper Grade (%)	1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	1.06%	1.06%	1.01%	0.95%	1.32%	1.30%	1.14%	1.02%	0.90%	0.77%	0.80%	0.90%	0.00%
Gold Grade (g/t)	2.563	-	-	-	-	-	-	-	-	-	4.120	3.351	2.729	2.511	2.506	2.348	2.112	2.026	2.028	2.216	2.510	2.626	2.374	-
Silver Grade (g/t)	27.435	-	-	-	-	-	-	-	-	-	26.471	26.526	25.420	26.867	28.658	34.670	34.969	31.491	28.452	25.449	20.636	21.262	23.153	-
Contained Copper (klbs)	699,737	-	-	-	-	-	-	-	-	-	47,542	59,103	59,011	56,292	52,800	73,423	72,493	63,317	56,930	49,724	42,877	42,827	23,397	-
Contained Gold (kozs)	2,552	-	-	-	-	-	-	-	-	-	284	271	221	203	203	190	171	164	164	180	203	205	90	-
Contained Silver (kozs)	27,311	-	-	-	-	-	-	-	-	-	1,827	2,149	2,059	2,177	2,322	2,809	2,833	2,551	2,305	2,062	1,672	1,663	882	-
Bullion Recovery																								
Recovery Gold (%)	28.0%	0.0%	0.0%	0.0%	0.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%
Recovery Silver (%)	7.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Recovered Gold (kozs)	714	-	-	-	-	-	-	-	-	-	80	76	62	57	57	53	48	46	46	50	57	58	25	-
Recovered Silver (kozs)	1,912	-	-	-	-	-	-	-	-	-	128	150	144	152	163	197	198	179	161	144	117	116	62	-
Copper Concentrate Recovery																								
Recovery Copper (%)	90.0%	0.0%	0.0%	0.0%	0.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Recovery Gold (%)	60.0%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Recovery Silver (%)	82.0%	0.0%	0.0%	0.0%	0.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%	82.0%
Copper Concentrate (kt)	1,190	-	-	-	-	-	-	-	-	-	81	101	100	96	90	125	123	108	97	85	73	73	40	-
Copper Concentrate Grade (%)	24.0%	0.0%	0.0%	0.0%	0.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%
Recovered Copper (klbs)	629,764	-	-	-	-	-	-	-	-	-	42,788	53,193	53,110	50,663	47,520	66,081	65,244	56,986	51,237	44,751	38,589	38,545	21,058	-
Recovered Gold (kozs)	1,531	-	-	-	-	-	-	-	-	-	171	163	133	122	122	114	103	98	99	108	122	123	54	-
Recovered Silver (kozs)	22,395	-	-	-	-	-	-	-	-	-	1,498	1,762	1,689	1,785	1,904	2,303	2,323	2,092	1,890	1,691	1,371	1,364	723	-
Payable Metals																								
Bullion Payable Metal																								
Payable Gold (kozs)	4,331	-	-	-	-	10	275	384	323	312	330	337	339	423	371	384	148	145	145	149	156	75	25	-
Payable Silver (kozs)	4,067	-	-	-	-	5	242	387	341	161	259	258	251	294	255	324	259	239	222	205	178	127	61	-
Copper Concentrate Payable Metal																								
Payable Copper (klbs)	603,523	-	-	-	-	-	-	-	-	-	41,005	50,977	50,897	48,552	45,540	63,327	62,525	54,611	49,102	42,887	36,981	36,939	20,180	-
Payable Gold (kozs)	1,493	-	-	-	-	-	-	-	-	-	166	159	129	119	119	111	100	96	96	105	119	120	53	-
Payable Silver (kozs)	20,156	-	-	-	-	-	-	-	-	-	1,348	1,586	1,520	1,606	1,714	2,073	2,091	1,883	1,701	1,522	1,234	1,227	651	-
ML Only Payable Metal																								
Au											250	239	194	179	179	167	150	144	144	158	179	181	80	
Ag											1,617	1,903	1,824	1,928	2,056	2,488	2,509	2,259	2,041	1,826	1,481	1,473	781	
Cu											41,005	50,977	50,897	48,552	45,540	63,327	62,525	54,611	49,102	42,887	36,981	36,939	20,180	
ELG Only Payables																								
Au	3,617					10	275	384	323	312	251	261	277	366	315	330	100	99	99	99	99	17	-	
Ag	2,165					5	242	387	341	161	131	108	108	142	93	128	62	61	61	61	61	11	-	
Au Eq	3,653					10	279	391	329	315	253	263	279	369	316	332	101	100	100	100	100	18	-	
ML Only Payables																								
Au	714					-	-	-	-	-	80	76	62	57	57	53	48	46	46	50	57	57	25	
Ag	1,902					-	-	-	-	-	127	150	143	152	162	196	197	178	161	144	116	116	61	
Au Eq	746					-	-	-	-	-	82	78	64	59	59	56	51	49	49	53	59	59	26	
Cu	603,523					-	-	-	-	-	41,005	50,977	50,897	48,552	45,540	63,327	62,525	54,611	49,102	42,887	36,981	36,939	20,180	
Au	1,493					-	-	-	-	-	166	159	129	119	119	111	100	96	96	105	119	120	53	
Ag	20,156					-	-	-	-	-	1,348	1,586	1,520	1,606	1,714	2,073	2,091	1,883	1,701	1,522	1,234	1,227	651	
Au Eq	3,338					-	-	-	-	-	291	313	282	267	261	304	291	264	247	238	232	233	114	
Total Au Eq	4,083					-	-	-	-	-	373	391	346	327	321	361	342	313	296	290	291	292	141	

ELG & Media Luna	Total	2011 -4	2012 -3	2013 -2	2014 -1	2015 1	2016 2	2017 3	2018 4	2019 5	2020 6	2021 7	2022 8	2023 9	2024 10	2025 11	2026 12	2027 13	2028 14	2029 15	2030 16	2031 17	2032 18	2033 19
Income Statement ($000)																								
Metal Prices						$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Copper ($/lb)	$ 3.00			$ -	$ -	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00	$ 3.00
Gold ($/oz)	$ 1,200.00			$ -	$ -	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00
Silver ($/oz)	$ 20.00			$ -	$ -	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00	$ 20.00
Revenues																								
Bullion																								
Gold Revenue ($ 000)	$ 5,162,410					$ -	$ 307,018	$ 461,110	$ 387,982	$ 374,424	$ 396,366	$ 404,847	$ 406,891	$ 507,798	$ 445,759	$ 460,254	$ 177,504	$ 173,452	$ 173,498	$ 178,612	$ 186,613	$ 89,928	$ 30,355	$ -
Silver Revenue ($ 000)	$ 80,932					$ -	$ 4,522	$ 7,748	$ 6,826	$ 3,226	$ 5,172	$ 5,160	$ 5,021	$ 5,872	$ 5,100	$ 6,477	$ 5,180	$ 4,779	$ 4,436	$ 4,097	$ 3,554	$ 2,534	$ 1,228	$ -
Copper Concentrate																								
Copper Revenue ($ 000)	$ 1,810,570					$ -	$ -	$ -	$ -	$ -	$ 123,015	$ 152,930	$ 152,691	$ 145,655	$ 136,619	$ 189,982	$ 187,576	$ 163,833	$ 147,307	$ 128,661	$ 110,944	$ 110,816	$ 60,540	$ -
Gold Revenue ($ 000)	$ 1,791,330					$ -	$ -	$ -	$ -	$ -	$ 199,562	$ 190,585	$ 155,230	$ 142,810	$ 142,504	$ 133,548	$ 120,094	$ 115,233	$ 115,330	$ 126,022	$ 142,751	$ 144,193	$ 63,468	$ -
Silver Revenue ($ 000)	$ 403,114					$ -	$ -	$ -	$ -	$ -	$ 26,960	$ 31,722	$ 30,398	$ 32,129	$ 34,271	$ 41,461	$ 41,818	$ 37,659	$ 34,024	$ 30,434	$ 24,677	$ 24,549	$ 13,015	$ -
Total Revenues	$ 9,248,357			$ -	$ -	$ -	$ 311,539	$ 468,858	$ 394,809	$ 377,650	$ 751,074	$ 785,243	$ 750,231	$ 834,263	$ 764,252	$ 831,722	$ 532,171	$ 494,957	$ 474,596	$ 467,826	$ 468,539	$ 372,020	$ 168,606	$ -
Operating Cost																								
ELG Mining	$ 664,616					$ -	$ 50,649	$ 80,696	$ 70,026	$ 69,322	$ 69,886	$ 72,719	$ 78,804	$ 76,313	$ 57,093	$ 23,215	$ 2,990	$ 2,991	$ 2,991	$ 2,991	$ 2,991	$ 940	$ -	$ -
Media Luna Mining	$ 848,584					$ -	$ -	$ -	$ -	$ -	$ 66,939	$ 66,401	$ 71,121	$ 69,953	$ 67,193	$ 70,692	$ 67,870	$ 65,884	$ 62,142	$ 64,597	$ 72,221	$ 67,402	$ 36,169	$ -
Media Luna Development	$ 186,763					$ -	$ 19,963	$ 32,814	$ 33,043	$ 32,783	$ 6,713	$ 12,195	$ 8,859	$ 5,941	$ 12,396	$ 6,261	$ 8,182	$ 7,613	$ -	$ -	$ -	$ -	$ -	$ -
Process Plant	$ 1,394,730					$ -	$ 60,114	$ 80,728	$ 80,732	$ 80,729	$ 88,384	$ 92,602	$ 91,838	$ 91,850	$ 91,850	$ 94,896	$ 90,026	$ 89,675	$ 93,399	$ 91,537	$ 91,536	$ 57,921	$ 26,915	$ -
General Administration	$ 376,696					$ (0)	$ 17,173	$ 20,411	$ 20,244	$ 20,097	$ 23,528	$ 23,359	$ 23,359	$ 23,359	$ 23,359	$ 23,359	$ 23,371	$ 23,359	$ 23,359	$ 23,359	$ 23,359	$ 23,358	$ 18,277	$ -
Treatment & Refining Charges																								
Dore'																								
Treatment Charges	$ 3,181					$ 0	$ 184	$ 294	$ 253	$ 180	$ 224	$ 227	$ 225	$ 273	$ 239	$ 270	$ 155	$ 146	$ 140	$ 135	$ 127	$ 77	$ 33	$ -
Gold Refining Charges	$ -					$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Silver Refining Charges	$ -					$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Transportation	$ 9,670					$ 0	$ 558	$ 894	$ 770	$ 548	$ 682	$ 689	$ 683	$ 830	$ 725	$ 819	$ 472	$ 444	$ 425	$ 410	$ 386	$ 234	$ 101	$ -
Insurance	$ 2,775					$ -	$ 93	$ 141	$ 118	$ 113	$ 225	$ 236	$ 225	$ 250	$ 229	$ 250	$ 160	$ 148	$ 142	$ 140	$ 141	$ 112	$ 51	$ -
Copper Concentrate																								
Treatment Charges	$ 95,219					$ -	$ -	$ -	$ -	$ -	$ 6,469	$ 8,043	$ 8,030	$ 7,660	$ 7,185	$ 9,991	$ 9,865	$ 8,616	$ 7,747	$ 6,766	$ 5,835	$ 5,828	$ 3,184	$ -
Quality Premium Charges	$ 5,951					$ -	$ -	$ -	$ -	$ -	$ 404	$ 503	$ 502	$ 479	$ 449	$ 624	$ 617	$ 539	$ 484	$ 423	$ 365	$ 364	$ 199	$ -
Gold Refining Charges	$ 8,957					$ -	$ -	$ -	$ -	$ -	$ 998	$ 953	$ 776	$ 714	$ 713	$ 668	$ 600	$ 576	$ 577	$ 630	$ 714	$ 721	$ 317	$ -
Silver Refining Charges	$ 11,198					$ -	$ -	$ -	$ -	$ -	$ 749	$ 881	$ 844	$ 892	$ 952	$ 1,152	$ 1,162	$ 1,046	$ 945	$ 845	$ 685	$ 682	$ 362	$ -
Copper Refining Charges	$ 51,299					$ -	$ -	$ -	$ -	$ -	$ 3,485	$ 4,333	$ 4,326	$ 4,127	$ 3,871	$ 5,383	$ 5,315	$ 4,642	$ 4,174	$ 3,645	$ 3,143	$ 3,140	$ 1,715	$ -
Penalties	$ -																							
Transportation	$ 151,015					$ -	$ -	$ -	$ -	$ -	$ 10,260	$ 12,755	$ 12,736	$ 12,149	$ 11,395	$ 15,846	$ 15,645	$ 13,665	$ 12,287	$ 10,731	$ 9,254	$ 9,243	$ 5,050	$ -
Total Operating Cost	$ 3,810,654			-	-	0	148,735	215,978	205,187	203,772	278,947	295,896	302,330	294,791	277,649	253,425	226,428	219,345	208,811	206,211	210,756	170,022	92,372	-
Royalty	$ 231,209				$ -	$ -	$ 7,788	$ 11,721	$ 9,870	$ 9,441	$ 18,777	$ 19,631	$ 18,756	$ 20,857	$ 19,106	$ 20,793	$ 13,304	$ 12,374	$ 11,865	$ 11,696	$ 11,713	$ 9,300	$ 4,215	$ -
Salvage Value	$ (20,648)				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (20,648)	$ -
Reclamation & Closure	$ 117,424				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 56,850	$ 60,574
Total Production Cost	$ 4,138,639		$ -	$ -	$ -	$ 0	$ 156,523	$ 227,699	$ 215,057	$ 213,213	$ 297,724	$ 315,527	$ 321,086	$ 315,647	$ 296,755	$ 274,219	$ 239,733	$ 231,719	$ 220,676	$ 217,907	$ 222,470	$ 179,322	$ 132,789	$ 60,574
Operating Income	$ 5,109,717		$ -	$ -	$ -	$ (0)	$ 155,016	$ 241,159	$ 179,751	$ 164,437	$ 453,350	$ 469,716	$ 429,146	$ 518,616	$ 467,497	$ 557,504	$ 292,438	$ 263,238	$ 253,920	$ 249,919	$ 246,069	$ 192,698	$ 35,817	$ (60,574)
Initial Capital Depreciation	$ 1,132,067					$ -	$ 76,886	$ 76,886	$ 76,886	$ 76,886	$ 113,207	$ 113,207	$ 113,207	$ 113,207	$ 113,207	$ 113,207	$ 36,320	$ 36,320	$ 36,320	$ 36,320	$ -	$ -	$ -	$ -
Sustaining Capital Depreciation	$ 140,503					$ -	$ 6,288	$ 7,915	$ 8,239	$ 9,219	$ 11,303	$ 11,487	$ 12,369	$ 12,532	$ 12,958	$ 13,297	$ 7,152	$ 5,661	$ 5,797	$ 4,831	$ 2,747	$ 2,563	$ 6,145	$ -
Total Depreciation	$ 1,272,570		$ -	$ -	$ -	$ -	$ 83,174	$ 84,801	$ 85,125	$ 86,105	$ 124,510	$ 124,694	$ 125,576	$ 125,738	$ 126,165	$ 126,504	$ 43,473	$ 41,981	$ 42,118	$ 41,152	$ 2,747	$ 2,563	$ 6,145	$ -
Net Income After Depreciation	$ 3,837,147	$ -	$ -	$ -	$ -	$ (0)	$ 71,842	$ 156,358	$ 94,626	$ 78,331	$ 328,841	$ 345,022	$ 303,570	$ 392,878	$ 341,333	$ 431,000	$ 248,966	$ 221,257	$ 211,802	$ 208,767	$ 243,322	$ 190,134	$ 29,672	$ (60,574)
Mining Royalty	$ 387,772					$ -	$ -	$ 11,626	$ 18,087	$ 13,481	$ 12,333	$ 34,001	$ 35,229	$ 32,186	$ 38,896	$ 35,062	$ 41,813	$ 21,933	$ 19,743	$ 19,044	$ 18,744	$ 18,455	$ 14,452	$ 2,686
Gold & Silver Royalty	$ 37,189					$ -	$ -	$ 1,558	$ 2,344	$ 1,974	$ 1,888	$ 3,140	$ 3,162	$ 2,988	$ 3,443	$ 3,138	$ 3,209	$ 1,723	$ 1,656	$ 1,636	$ 1,696	$ 1,788	$ 1,306	$ 540
Net Income after Royalties	$ 3,412,187					$ (0)	$ 71,842	$ 143,174	$ 74,195	$ 62,876	$ 314,620	$ 307,881	$ 265,180	$ 357,704	$ 298,994	$ 392,799	$ 203,944	$ 197,601	$ 190,403	$ 188,087	$ 222,882	$ 169,891	$ 13,914	$ (63,801)
Income Taxes	$ 969,998					-	-	22,100	17,917	14,521	90,044	88,022	75,212	102,969	85,356	117,840	61,183	59,280	57,121	56,426	66,865	50,967	4,174	-
Net Income After Taxes	$ 2,442,188		-	-	-	(0)	71,842	121,075	56,278	48,355	224,576	219,858	189,968	254,735	213,637	274,960	142,761	138,321	133,282	131,661	156,017	118,924	9,740	(63,801)
Cash Flow																								
Operating Income after Depreciation	$ 3,412,187	$ -	$ -	$ -	$ -	$ (0)	$ 71,842	$ 143,174	$ 74,195	$ 62,876	$ 314,620	$ 307,881	$ 265,180	$ 357,704	$ 298,994	$ 392,799	$ 203,944	$ 197,601	$ 190,403	$ 188,087	$ 222,882	$ 169,891	$ 13,914	$ (63,801)
Add Back Depreciation	$ 1,272,570	$ -	$ -	$ -	$ -	$ -	$ 83,174	$ 84,801	$ 85,125	$ 86,105	$ 124,510	$ 124,694	$ 125,576	$ 125,738	$ 126,165	$ 126,504	$ 43,473	$ 41,981	$ 42,118	$ 41,152	$ 2,747	$ 2,563	$ 6,145	$ -
Add Mine Development	$ 186,763	$ -	$ -	$ -	$ -	$ -	$ 19,963	$ 32,814	$ 33,043	$ 32,783	$ 6,713	$ 12,195	$ 8,859	$ 5,941	$ 12,396	$ 6,261	$ 8,182	$ 7,613	$ -	$ -	$ -	$ -	$ -	$ -
Working Capital																								
Account Recievable (25 days)	$ -	$ -	$ -	$ -	$ -	$ -	$ (21,338)	$ (10,775)	$ 5,072	$ 1,175	$ (25,577)	$ (2,340)	$ 2,398	$ (5,756)	$ 4,795	$ (4,621)	$ 20,517	$ 2,549	$ 1,395	$ 464	$ (49)	$ 6,611	$ 13,932	$ 11,548
Accounts Payable (30 days)	$ -	$ -	$ -	$ -	$ -	$ 0	$ 12,225	$ 5,527	$ (887)	$ (116)	$ 6,179	$ 1,393	$ 529	$ (620)	$ (1,409)	$ (1,991)	$ (2,219)	$ (582)	$ (866)	$ (214)	$ 374	$ (3,348)	$ (6,382)	$ (7,592)
Inventory - Parts, Supplies	$ (6,786)	$ -	$ -	$ -	$ -	$ (4,750)	$ (2,036)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Working Capital	$ (6,786)	$ -	$ -	$ -	$ -	$ (4,750)	$ (11,149)	$ (5,248)	$ 4,185	$ 1,059	$ (19,398)	$ (947)	$ 2,927	$ (6,375)	$ 3,386	$ (6,612)	$ 18,298	$ 1,967	$ 529	$ 250	$ 325	$ 3,263	$ 7,550	$ 3,956
Capital Expenditures																								
Initial Capital																								
ELG																								
Mine	$ 156,529	$ -	$ -	$ 13,640	$ 81,774	$ 51,909	$ 9,206	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Process Plant	$ 529,940	$ -	$ -	$ -	$ 235,783	$ 280,753	$ 13,403	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Owners Cost	$ 113,531	$ -	$ -	$ 22,684	$ 27,119	$ 42,724	$ 21,004	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pre-production Revenues	$ (34,032)					$ (11,372)	$ (22,660)																	
ML																								
Mine	$ 146,377	$ -	$ -	$ -	$ -	$ -	$ 35,410	$ 33,895	$ 40,768	$ 36,303	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mine Development	$ 118,602	$ -	$ -	$ -	$ -	$ -	$ 19,963	$ 32,814	$ 33,043	$ 32,783														
Process Plant	$ 203,833	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,503	$ 56,666	$ 141,664	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Owner's Cost	$ 12,995	$ -	$ -	$ -	$ -	$ -	$ 3,249	$ 3,249	$ 3,249	$ 3,249	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Sustaining Capital																								
ELG																								
Mine	$ 70,901	$ -	$ -	$ -	$ -	$ -	$ 34,168	$ 16,266	$ 3,244	$ 9,800	$ 6,742	$ 321	$ 359	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Process Plant	$ 28,712	$ -	$ -	$ -	$ -	$ -	$ 28,712	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
ML																								
Mine	$ 40,891	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,099	$ 1,517	$ 8,463	$ 1,625	$ 4,262	$ 3,392	$ 1,429	$ 1,353	$ 4,611	$ 140	$ -	$ -	$ -	$ -
Mine Development	$ 68,160										$ 6,713	$ 12,195	$ 8,859	$ 5,941	$ 12,396	$ 6,261	$ 8,182	$ 7,613	$ -	$ -	$ -	$ -	$ -	$ -
Process Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 1,456,439	$ -	$ -	$ 36,324	$ 344,676	$ 364,015	$ 142,455	$ 91,728	$ 136,970	$ 223,798	$ 27,554	$ 14,033	$ 17,682	$ 7,566	$ 16,658	$ 9,653	$ 9,611	$ 8,966	$ 4,611	$ 140	$ -	$ -	$ -	$ -
Cash Flow before Taxes	$ 3,408,295	$ -	$ -	$ (36,324)	$ (344,676)	$ (368,765)	$ 21,374	$ 163,813	$ 59,578	$ (40,975)	$ 398,890	$ 429,789	$ 384,860	$ 475,443	$ 424,282	$ 509,299	$ 264,286	$ 240,196	$ 228,439	$ 229,349	$ 225,954	$ 175,717	$ 27,609	$ (59,845)
Cummulative Cash Flow before Taxes		$ -	$ -	$ (36,324)	$ (381,000)	$ (749,765)	$ (728,390)	$ (564,577)	$ (504,999)	$ (545,974)	$ (147,084)	$ 282,705	$ 667,565	$ 1,143,008	$ 1,567,290	$ 2,076,589	$ 2,340,875	$ 2,581,071	$ 2,809,510	$ 3,038,859	$ 3,264,813	$ 3,440,531	$ 3,468,140	$ 3,408,295
						1.0	1.0	1.0	1.0	1.0	1.0	0.3	-	-	-	-	-							
Taxes																								
Income Taxes	$ 969,998	$ -	$ -	$ -	$ -	$ -	$ -	$ 22,100	$ 17,917	$ 14,521	$ 90,044	$ 88,022	$ 75,212	$ 102,969	$ 85,356	$ 117,840	$ 61,183	$ 59,280	$ 57,121	$ 56,426	$ 66,865	$ 50,967	$ 4,174	$ -
Cash Flow after Taxes	$ 2,438,297	$ -	$ -	$ (36,324)	$ (344,676)	$ (368,765)	$ 21,374	$ 141,713	$ 41,661	$ (55,496)	$ 308,846	$ 341,767	$ 309,648	$ 372,473	$ 338,926	$ 391,459	$ 203,102	$ 180,916	$ 171,318	$ 172,923	$ 159,089	$ 124,750	$ 23,435	$ (59,845)
Cummulative Cash Flow after Taxes		$ -	$ -	$ (36,324)	$ (381,000)	$ (749,765)	$ (728,390)	$ (586,677)	$ (545,015)	$ (600,512)	$ (291,666)	$ 50,101	$ 359,749	$ 732,222	$ 1,071,148	$ 1,462,608	$ 1,665,710	$ 1,846,626	$ 2,017,944	$ 2,190,867	$ 2,349,957	$ 2,474,707	$ 2,498,142	$ 2,438,297

Economic Indicators before Taxes			Prior
NPV @ 0%	0%	$ 3,408,295	$ 3,408,142
NPV @ 5%	5%	$ 1,842,124	$ 1,842,050
NPV @ 10%	8%	$ 1,254,523	$ 956,618
IRR		22.2%	22.2%
Payback	Years	6.3	6.3
Economic Indicators after Taxes			
NPV @ 0%	0%	$ 2,438,297	$ 2,438,196
NPV @ 5%	5%	$ 1,252,485	$ 1,252,417
NPV @ 10%	8%	$ 805,937	$ 579,201
IRR		18.3%	18.3%
Payback	Years	6.9	6.9

24.23 ADJACENT PROPERTIES

Please refer to Section 23 of this Report.

24.24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data.

24.25 INTERPRETATION AND CONCLUSIONS

Following are the interpretation and conclusion from the ML Project PEA.

24.25.1 Conclusions

24.25.1.1 M3 Engineering & Technology

This PEA of the ML Project indicates that the ML Project has potentially positive economics at $1,200/ounce Au, $20/ounce Ag and $3.00/lb Cu. The base case NPV (5%) is approximately $729 million with an IRR of 24.6% and a payback period of 3.7 years. The PEA is preliminary in nature. It includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results set forth in the PEA would be realized. Mineral resources that are not mineral reserves do not demonstrate economic viability.

The ML Project is located in an area with moderate climate, workable topography and regional work force that has experience in construction and operations of mining projects. The current ELG Mine has developed significant infrastructure which the ML Project can utilize. The permitting process in Mexico is relatively straightforward and it would be expected that a reasonable permitting schedule is achievable.

Capital and operating costs (to a PEA level of detail) were developed for the ML Project utilizing current contract pricing from the ELG Mine construction, Torex supply contracts and labor rates for the ELG Mine, budgetary equipment quotations, as well as M3 in house data and material quantity take-offs.

The metallurgical testwork conducted on composite samples from the Media Luna (ML) Deposit showed that the optimal recovery process was a copper/gold flotation to produce a Cu/Au concentrate followed by agitated cyanide leaching of the flotation tails to recover additional gold and silver. The selected process route was found to be compatible with the existing ELG grinding, cyanide leaching and tailing disposal circuits and would make use of the same facilities if the ML Project advanced.

24.25.1.2 Amec Foster Wheeler M&M

The interpretations and conclusions of the Amec Foster Wheeler M&M QPs in relation to the Property history, exploration, geology and mineralization, drilling, sample preparation and analytical data, adequacy of QA/QC and sample security, data verification and Mineral Resource estimation are included in Section 25.2 of this Report.

24.25.1.3 SRK

The ELG mining schedule developed for the PEA in terms of pit design, pit sequencing and annual ore and waste mining quantities is identical to the base case ELG LOM plan and SRK's conclusions related to the base case plan in Section 26 of this report are also applicable to the alternate mine plan developed for the PEA.

The ELG plant feed schedule developed for the PEA differs from the base case after 2019. ELG plant feed after 2019 would be reduced from 5 Mt/a to 2.5 Mt/a in order to provide processing capacity for Media Luna feed. The ELG plant feed reduction is achieved by preferentially feeding the process plant with 2.5 Mt/a of higher grade ore mined and stockpiling the residual lower grade ore mined until the pits are depleted in 2025. The stockpiled lower grade ore would then rehandled to the process plant at 2.5 Mt/a until the stockpiles are depleted in 2031.

24.25.1.4 AMC Mining Consultants (Canada) Ltd.

24.25.1.4.1 Underground Conceptual Mine Design

The mine design concepts and equipment proposed have been tested and proven in many mines globally. The application of LHOS and C&F mining methods are established and well understood in the mining industry, and appear to be well suited to the deposit. Mining rates and productivities are consistent with similar operations in North America. The production rate of 7,000 tonnes per day appears to be obtainable based on the current level of understanding of the deposit.

24.25.1.4.2 Underground Capital and Operating Costs

Underground capital and operating costs have been estimated using common methods in the mining industry. All costs have been estimated based on supplier budget prices, Torex's current experience in Mexico or from AMC's database of recent studies. The conceptual mine design including main accesses, sublevels, stope accesses and ventilation system were modeled in three dimensions to provide development quantities and timeline for the estimates. Fixed plant and mobile equipment cost estimates are current budget prices obtained from manufacturers and suppliers. Capital and Operating costs are reasonable and appear to be comparable to similar operations in Mexico.

24.25.1.5 Golder

Based on Golder's understanding of the ML Project and the proposed transportation to, and processing of ML material at the ELG Mine, it is Golder's opinion that by incorporating design elements and mitigation measures to avoid or reduce the environmental and social impacts, the ML Project (which includes expansion/modification to the ELG process plant) is practical and achievable from an environmental and social perspective.

24.25.2 Risks

24.25.2.1 M3 Engineering & Technology

- The metallurgical testing program has followed industry accepted practices and is believed to be technically sound and representative for the deposit, although there can be no guarantee that all mineralogical assemblages have been tested. In addition, results obtained by testing mineralized material samples may not always be representative of results obtained from production scale processing of the whole mineralized material deposit.
- Location of process plant facilities are based on assumed good foundation material which needs to be verified in further studies.

24.25.2.2 Waste Management Facilities (Amec Foster Wheeler)

- A risk for the development of a tailings dry stack in the Guajes pits exists and for the waste rock dumps on the south side of the Balsas River. The risk for the GPTDS relates to seepage water quality through La Amarilla fault and the potential concentration of arsenic from the tailings above natural background levels. A potential consequence is the requirement of a low permeability baseliner for the GPTDS that would have cost and long term liability. The risk is lower for the waste rock dumps, but in the event of problematic drainage quality it would be managed by a collect and treat system until removal of the WRDs. To address these issues additional studies have been recommended (Section 24.26). The recommended water quality studies would integrate with baseline surface and groundwater quality data.

- The timing related to completing mining the Guajes open pit is considered a risk. If the pit is not mined out when the storage area is required, it may lead to mineralization in the Guajes pit being sterilized, or the requirement to develop an alternative tailings storage location.
- During more detailed design phases, if the geotechnical investigations reveal the foundation conditions at the WRD locations to be different than currently assumed, remedial measures for improving the foundation conditions would be required. This may include removal of incompetent overburden material from the WRD footprint.
- If the tailings lag time to the onset of net acidity is too short, alternate waste management alternatives, which may include water treatment, would need to be considered. Additional studies are recommended.
- Water management at the GPTDS related to the La Amarilla fault and the diversion of the upstream watersheds on mining benches are dependent on further investigations and as constructed pit layout. Additional civil works beyond currently envisaged may be required.

24.25.2.3 Underground Workings (Amec Foster Wheeler)

- The access tunnels have some local potential to gain significant groundwater, either directly from the Balsas River, or where they intersect faults on the north side of the Balsas River (e.g. La Amarilla Fault). Potential mitigation could include deeper or different tunnel placement or implementation of engineering measures.
- On closure of the underground mine workings, the groundwater levels would recover and there is a risk that the recovery level may be above the mine access points. If this occurs there is potential impact of outflows to the environment;
- There is a potential for PAG rock to be present in stopes and development tunnels close to mineralized zones leading to possible degraded water quality. Should this occur, management in the form of interception and water treatment or sealing and flooding of the mine workings prior to onset of ARD would be required.

24.25.2.4 SRK

- Separating ELG ore mined after 2019 into high grade and low grade components is contingent on the ability to selectively mine ore within various cut-off grade ranges. There is a risk that the preliminary allowances for intermixing of high grade and low grade components incorporated in the PEA mine plan may be insufficient. Further study is required.
- There are limited locations to stockpile low grade ore in the vicinity of the El Limón pit due to terrain constraints. Stockpiling the low grade ore on El Limón waste dump platforms as proposed may be risky since waste dump settlement over time may make subsequent stockpile rehandle difficult or impractical. It may be necessary to crush low grade El Limón ore mined, transport the crushed ore via the ore conveyor to the plantsite, and rehandle the crushed ore to potential long term stockpile locations near the plantsite or Guajes pit, which would increase overall costs.

24.25.2.5 AMC Mining Consultants (Canada) Ltd.

24.25.2.5.1 Underground Conceptual Mine Design

- No significant geotechnical risk was identified given the current level of analysis and understanding of the deposit. Encountering extensive areas of poor ground conditions during Initial Capital mine development would appear to be the most significant risk to the project schedule.
- Hydrogeological data are limited. Uncertainties would correspond to risks such as higher than anticipated ground water inflow, excavation instability and suitable treatment for discharge.

24.25.2.5.2 Underground Capital and Operating Costs.

- Capital and Operating Cost increasing. Contingencies have been applied to the Initial Capital, however a provision for escalation has not been included in the Operating Costs.

24.25.2.6 Golder

- Characterization of ML waste rock and tailings is required in order to predict potential impacts to receiving environment.
- Incremental risk of impacts to surface and groundwater from the addition of ML waste rock and tailings to ELG disposal facilities. Additional studies would be conducted to evaluate these effects.

24.25.3 Opportunities

24.25.3.1 M3 Engineering & Technology

- Combining ML flotation tails with ELG oxide ore would make the overall feed to the leaching circuit less sulfidic thereby reducing the deleterious effect of sulfide ores in cyanidation and the acid generating tendency that the high sulfide containing ML flotation tails would have had if it were disposed separately .
- Testwork planned to modify flowsheet and reagent suite has the potential to improve overall gold and copper recoveries as well as copper concentrate grade.
- Review the access to the Media Luna deposit with the improvement of surface roads on the south side of the river instead of the development of the proposed Media Luna Main Access Tunnel in the conceptual plan.

24.25.3.2 Amec Foster Wheeler

The following opportunities may be discovered once future studies have been completed:

- The GPTDS has the potential for capacity expansion, should additional ore reserves be discovered;
- Future geochemical characterization may determine that Media Luna tailings are potentially non-acid generating (non-PAG) which would eliminate the need for a low permeability cover; and
- The required compaction efforts at the GPTDS may be reduced based on stability analysis.

24.25.3.3 AMC Mining Consultants (Canada) Ltd.

24.25.3.3.1 Underground Conceptual Mine Design

- Potential opportunity exists to increase the annual production rate above 7,000 tonnes per day. Optimization of the grade, sublevel interval and extraction sequence may be opportunities to improve the mine design and reduce quantities of ramp and lateral development.
- Potential use of the North RopeCon drift for exploration of lower resources below El Limón Pit.

24.25.3.3.2 Underground Capital and Operating Costs.

- Opportunities may exist to reduce capital cost by increasing efficiency of the material handling system underground and reducing the capital and operating development.

24.25.3.4 Golder

- The footprint associated with ML Project is relatively small compared to the ELG Mine. This along with the concept of processing of the ML material and disposal of the ML tailings at the ELG Mine would minimize the potential environmental and social impacts.
- The Community Relations Team (CRT) has established excellent relationships with the neighboring communities and is well prepared to engage and communicate with the local stakeholders on the proposed modifications to the ELG Mine and ML Project and any potential effects and mitigation associated with ML Project.
- The use of tunnels and conveyor systems that would transport personnel, equipment and minerized material to ELG Mine would minimize the surface bio-physical, environmental and social impacts associated with ML Project resulting in an overall net positive benefit.

24.26 RECOMMENDATIONS

For information on Recommendations for the ELG Mine please refer to section 26 of this report. The following recommendations are related to the ML Project PEA.

24.26.1 M3 Recommendations

M3 notes that the economic results of the PEA for the ML Project using the assumptions presented in this Report, are positive and the ML Project proceed to a pre-feasibility study at a cost of approximately $2.5 million. Some additional recommendations with regards to metallurgical testing are as follows.

24.26.1.1 Metallurgical Testing

- Use the simplified flowsheet with only copper/gold flotation followed by agitated cyanide leaching of flotation tails.
- Conduct Cu-Au flotation tests with depressants that remove arsenic and other impurities in the Cu-Au concentrates especially for the EPO samples.
- Conduct comprehensive comminution tests including JKTech full drop-weight, semi-autogenous (SAG) mill Comminution (SMC), Bond ball mill work index (BWi), Bond rod mill work index (RWi), Bond abrasion work index (Ai), and Bond crusher index (CWi) to ascertain the suitability of the Media Luna material for the ELG grinding circuit.

The recommended metallurgical testing would comprise of flotation tests to find reagents that would depress impurities without depressing gold and find routes that would improve cyanide leaching results of the flotation tails. These tests are expected to cost less than $250,000 excluding sample selection. The comprehensive comminution testing on the ten samples selected for testing would cost $200,000 excluding sample selection which would be done by the mining/exploration department. The total cost of the recommended testwork would be less than $500,000.

24.26.2 Amec Foster Wheeler M&M Recommendations: Develop Infill and Step-Out Drill Program ML Project

The recommended drill program for the ML Project is to support potential conversion of Inferred Mineral Resources to higher confidence categories such that more detailed engineering studies can be conducted, and was developed assuming a 30 m drill spacing would be required to support an Indicated classification and a 15 m spacing to support a Measured classification. The program comprises approximately 140,000 m of core drilling at an estimated $150/m drilling costs for HQ core and $115/m for NQ core, and $85/m for sampling, assaying, and labor costs. Depending on whether NQ or HQ core is drilled, the program costs are estimated to range from approximately $21 M for an all-HQ program to $16.1 M for an all NQ-program. This estimate is based on an assumption of underground drilling. The cost for the underground development has not been included.

24.26.3 AMC Recommendations: Underground Mining Recommendations

- Conduct trade-off studies to investigate:
  - Alternative portal locations
  - High speed development methods
  - Use of conventional conveying system underground versus the RopeCon.
  - Trade-off studies conducted at a cost of approximately $30,000
- The geotechnical step plan for moving forward toward initial production at Media Luna has been recommended as follows:
  - Conduct geotechnical logging training for Media Luna personnel.

- o Conduct full geotechnical logging of all future diamond drill core beginning at least 100m above the resource to end of the hole
- o Conduct oriented core [or equivalent video or acoustic logging] of selected holes
- o Obtain intact core samples for laboratory uniaxial compressive strength [UCS] testing.
- o Conduct preliminary [3D elastic] numerical modelling of early mine plans to evaluate mine induced stress around critical infrastructure, pillars, etc. Modelling should include any known major fault structures.
- o For a pre-fesibility study, the estimated cost for geotechnical input to mine design is approximately $200,000

- Rheological testing would be required to assess the suitability of the filtered tailings for use in the cemented paste-backfill system. Cost for study would be within PFS Study.
- Undertake a study to examine the proposed materials handling system focusing on waste movement for backfill underground and minimizing the requirement for backhaul of surface waste stockpiles. The study would cost approximately $30,000.
- The proposed North RopeCon tunnel is located in close proximity to reserves at the bottom of the El Limón Pit as well as resources below the current El Limón pit design. AMC recommends that a study be conducted to examine the possibility of mining this portion of the reserve/resource more efficiently from underground. Scoping level study would cost approximately $20,000.
- A hydrogeological drilling and testing program was recommended to Torex to determine more accurately the groundwater levels, potentiometric surfaces, groundwater chemistry, and hydraulic conductivities of the principal geological units. This hydrogeological work is expected to be completed in 2016. Cost ~ $1,000,000.
- It is recommended that an analysis be undertaken to determine the most efficient and cost effective means to advance the project development and convert the Inferred Mineral Resources to higher confidence categories. The diamond drilling program recommended by Amec Foster Wheeler would be conducted underground from diamond drill platforms. The underground development required for this program would cost approximately $20M-$30M. Section 24.16.5 of the PEA suggests a program for undertaking the definition drilling program.

24.26.4 Amec Foster Wheeler Recommendations

The following items should be included in future studies:

- Additional geochemical characterization of the Media Luna tailings and waste rock;
- Hydrogeological field investigation of the underground mine site and access tunnels;
- Groundwater assessment and predictions using a numerical groundwater model of the underground mine and access tunnels, including assessment of inflows, water table drawdown and recovery;
- Assessment of water quality evolution for the underground workings during operations and post-closure
- Water quality predictions from WRDs during operations;
- Groundwater assessment including water quality model and numerical groundwater model for the disposal of tailings in the GPTDS.
- Assessment of water quality leaving the Guajes open pit through La Amarilla fault and dilution at the Balsas River.
- Geotechnical investigation in the area of the GPTDS and WRD toes.

These studies would be carried out in the next stage of the design. The cost of these studies is estimated to be approximately $ 1.3 million.

24.26.5 Golder Recommendations

- Modeling to predict potential ambient air quality concentrations, noise and vibration impacts from the ML Deposit activities.
- Assess the effects of the Deposit's mining activities, such as dewatering, the waste dump area and ore stockpile, the use of the Guajes Pit as tailings disposal on the groundwater regime that ultimately discharges to near tributaries that feed into the Balsas River, which in turn feeds into the Presa el Caracol.
- These studies would be carried out in the next stage of the design. The cost of these studies is estimated to be approximately $ 800,000.

24.26.6 SRK Recommendations

The following items should be included in future studies:

- For subsequent studies that involve ELG ore separation into grade "bins", SRK recommends that an in-depth analysis of ELG Mineralization geological continuity at various cut-off grades be carried out and an assessment made of the potential to selectively mine ore within various cut-off grade ranges.
- Additional costs for stockpiling and subsequent rehandle of low grade ore should be included in marginal economic cut-off grade estimation. The impact of the cut-off grade increase on low grade ROM tonnages and grades should be incorporated in future mine plans.

24.27 REFERENCES

The Qualified Persons have used the allowance under Instruction (4) to the Form NI43-101F1 whereby disclosure included under one heading is not required to be repeated under another heading, and have compiled all references used in collating this Report in Section 27.

25 INTERPRETATION AND CONCLUSIONS

This section shows the major interpretations and conclusions and reached by the main participants in this study excluding those from section 24. Interpretation and Conclusions for the ML PEA can be found in section 24.25.

25.1 CONCLUSIONS BY M3

The results of the financial model, which is presented in Section 22 of this report, shows that under current market conditions and following the assumptions and considerations noted in the body of the Study, the ELG Mine is economically feasible. The main parameters are shown in Table 25-1.

Table 25-1: Base Case Financial Model Results ($ in thousands) – After Taxes

Parameter	Value
Undiscounted Cash Flow 0%	$1,036,508
Net Present Value @ 5%	$605,013
Net Present Value @ 10%	$305,573
IRR %	15.7%
Payback (yrs)	5.0

25.2 CONCLUSIONS BY AMEC FOSTER WHEELER M&M

In the opinion of the Amec Foster Wheeler M&M QPs:

- The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization in the El Limón and Guajes areas is sufficient to support estimation of Mineral Resources and Mineral Reserves. The geological knowledge of the area is also considered sufficiently acceptable to reliably inform mine planning for open pit operations.
- The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization in the Media Luna area can support declaration of Mineral Resources.
- Prospects are at an earlier stage of exploration than El Limón, Guajes and Media Luna and the lithologies, structural and alteration controls on mineralization are currently insufficiently understood to support estimation of Mineral Resources. The prospects retain exploration potential and represent upside potential for the Property.
- The exploration programs completed to date are appropriate to the style of the deposits and prospects within the Property.
- The quantity and quality of the logging, geotechnical, collar and down-hole survey data collected in the exploration and infill drill programs at El Limón Guajes and at Media Luna are sufficient to support Mineral Resource estimation for gold–silver mineralization at El Limón Guajes, and copper, gold and silver mineralization at Media Luna.
- Sample preparation and analytical methods have varied slightly by drill program. The procedures are in line with industry-standard methods at the time the work was completed.
- The QA/QC program results do not indicate any problems with the analytical programs, therefore the analyses from the core and RC drilling are suitable for inclusion in Mineral Resource estimation. Channel sampling performed by Torex is acceptable for use in Mineral Resource estimation.
- The data verification programs undertaken on the data collected from the Morelos Property adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

- Mineral Resources were estimated assuming open pit mining methods for the El Limón and Guajes deposits, and assuming underground mining methods for the Media Luna deposit.
- Risk factors that could potentially affect the Mineral Resources estimates include the assumptions used to generate the conceptual data for consideration of reasonable prospects of eventual economic extraction including long-term commodity price assumptions, long-term exchange rate assumptions, assumed mining methods, changes in local interpretations of mineralization geometry and continuity of mineralization zones, geotechnical and hydrogeological assumptions, metallurgical testwork and mining and metallurgical recovery assumptions, operating and capital cost assumptions. Estimates of insitu bulk density are presently based on samples taken from core drilling. Determination of density based on larger-scale excavations or production may reveal densities that are different than those currently estimated for the deposit. Additional risks may arise from delays or other issues in reaching required agreements with local communities, maintenance of the political and social license to operate, and changes in assumptions regarding current and future permitting requirements.
- Planned head grades delivered to the mill from the pit may be at risk if grade control is poorly implemented by mining operations. Blasthole drill hole spacing, orientation of blasting and mining should take into consideration practices that would minimize dilution. Blast hole and RC drilling should be assayed and logged to standards already in place for exploration data.
- Torex should develop reconciliation protocols that include comparing short-range models using the blasthole data to the long-range model, and both long and short range models to mill.
- Torex should investigate MineSight or other commercially-available ore control dispatch systems to ensure proper truck routing.

25.3 CONCLUSIONS BY SRK

Open pit mining of the ELG deposit is considered appropriate. The ultimate pits designed contain sufficient ore to support a 14,000 tpd processing facility. By late 2016 both Guajes and El Limón pits are expected to be fully developed to large ore benches, which is required in order to meet the target plant feed rate.

Project characteristics that have the largest impact on mine design and mine planning include the steep terrain, the significant elevation differences within the mining area, the presence of the village of La Fundición downhill from the El Limón pit, relatively competent bedrock, and poorly defined ore-waste contacts. These characteristics are being addressed as follows:

- The upper benches of the Guajes and El Limón ultimate pits are planned to be mined by bulldozer, in order to avoid extremely difficult haul road construction to high elevations on the steep ridges. Guajes bulldozer mining is now complete and conventional truck-loader mining is in progress on lower benches.
- An El Limón crusher and ore conveyor is planned to avoid long downhill loaded ore hauls from the El Limón main pit exit to the plant site 400 m below. The nearby El Limón Phase NN pit is being mined in the pre-production period before the ore conveyor is operational to avoid a long production "tail" that would result if mining was postponed until after the conveyor was taken out of service late in the mine life (as was planned in the 2012 feasibility study). Mining the pit early in the schedule also provides additional ore during the process plant ramp up period and provides alternative service road access to the El Limón crusher area throughout the mine life. Phase NN pit mining is currently ahead of plan.
- It is planned that El Limón main pit pre-production mining will commence after the La Fundición village relocation, since the El Limón haul road and pit development may impact on the village. Due to its location it was possible to construct the El Limón access road prior to village relocation and this road was completed in the first half of 2015. Village relocation is currently forecast to be complete in the second half of 2015 – a little later than planned but considered manageable. El Limón ore feed is scheduled to commence in 2016 Q2, once the El Limón crusher and ore conveyor are operational and the El Limón ore haul road to the crusher is developed.

- Testwork indicates that below the surface weathered zone ELG rock is generally quite hard, which led to the selection of hammer rather than rotary blasthole drilling and a slightly higher than typical explosives powder factor. The competent bedrock also facilities relatively steep highwall slopes in most areas.
- MML is in the process of establishing a site specific ore grade control procedure to manage the inherent variability of skarn deposits at the ELG Mine. This includes preparation of a grade control block model informed by blasthole sampling and/or reverse circulation in-fill drilling, and field investigations to directly compare core hole assays with various methods of blasthole sampling and assaying.

Ore and waste haulage cycle times are generally favorable, with typically relatively short hauling distances to crushers and waste dump platforms expected. Mine waste dumps are generally located adjacent to the pits, to minimize hauling requirements. An exception is the buttress dump located at the toe of the El Limón dumps that will be developed with Guajes waste rock. Guajes waste rock disposal also includes development of a waste rock cover on the completed south and west faces of the dry stack tailings to facilitate tailings closure. Waste dumping platforms are laid out to facilitate dump resloping at mine closure. At some locations progressive resloping of completed dumps during mine operation is planned.

It is planned that pit production equipment will be maintained by equipment suppliers until the end of 2017, which helps minimize initial owner workforce recruiting requirements thereby facilitating bringing the mine to an operational level.

25.4 CONCLUSIONS BY AMEC FOSTER WHEELER

Based on the designs of the waste management and site water management system there are no flaws or unresolvable issues anticipated.

25.5 CONCLUSIONS BY GOLDER

Based on the detailed assessment of the ELG Mine, no severe environmental or social consequences are anticipated. There will be measurable effects, both beneficial and adverse. Strategies and management plans have been developed and will be implemented to avoid, minimize, mitigate or offset adverse effects to the extent feasible.

25.6 RISKS

According to the study QPs, the ELG Mine carries the following risks:

25.6.1 Waste Management Facilities (Amec Foster Wheeler)

The most significant risk with respect to the design of the waste management facilities relates to the concentration of arsenic expected from the tailings and the waste rock dumps relative to natural background. The potential consequences are the requirement of a treatment or collect and treatment system that would have cost and long term liability. To address this issue the following work is underway:

- Continued laboratory testing of waste rock and tailings humidity cells collecting longer term data.
- Small scale field lysimeters to provide a better indication of leaching in field conditions versus laboratory conditions.
- Construction of larger test pads to further assess expected waste rock drainage quality at the field scale.
- Development of a site water quality model supported by the field and laboratory data.
- Development of trigger concentrations based on site monitoring data that will action additional work as required (e.g. further studies/modelling effort, or refinement of water treatment design requirements to allow implementation).

25.6.2 Mineral Reserves and Mining

25.6.2.1 Pit Geotechnical

- Failure to achieve and maintain design slope angles. If operational slope angles are slightly flatter than design angles over several benches the result is significantly less ore available at the bottom of a mining phase than anticipated.
- The potential for large voids to be encountered in the El Limón northeast pit wall presents risk primarily to the project schedule and budget as any large voids encountered will require delineation and backfilling.

25.6.2.2 Mineral Reserves and Mining

- There is a risk of flyrock affecting the El Limón crusher and rope conveyor, since these facilities are located close to the mining area, which would cause El Limón plant feed disruptions. A blasting specialist retained by Torex during preparation of the 2012 Feasibility Study expected that the incidence of flyrock should be minimal provided his recommended drilling and blasting parameters are followed. Recommendations included the use of small blastholes to minimize flyrock and also the need for test blasts to demonstrate blast round performance at a location remote from the crusher and rope conveyor.
- There is a risk that more grade control in-fill drilling, and more sampling and assaying than allowed for in the mine plan will be needed if potentially mineralized areas cannot be visually recognized in the open pits.
- There is a risk that plant feed head grades may be lower than predicted, since reported ore mining grades to date are lower than that predicted for the areas mined. It is noted that reported grades are based on blasthole sampling and assaying, which is under investigation by MML.

25.6.3 Metallurgy (M3)

- Due to the level and quality of study employed, there are no notable risks remaining with regards to metallurgy or metallurgical testing.

25.6.4 Environmental

- M3 did not find risks associated with the climate data.

25.6.5 Schedule

- The potential for significantly large voids in the marble at the El Limón crushing building was realized. Multiple geotechnical evaluations were conducted and minor modifications were made to foundation systems. Earthwork Stabilization is almost complete with foundation installation commencing in April 2015. This area is still a focus for construction completion in order to achieve full production capacity.

25.6.6 Operating Cost

- The mining industry is very active in Mexico and the market for trained personnel is getting very competitive. There is a potential for the local market to see higher competition between employers in order to retain employees. This could potentially drive up the operating cost.

25.7 OPPORTUNITIES

The QPs of the study believe that the ELG Mine has the following opportunities, as noted in their areas of expertise:

25.7.1 Amec Foster Wheeler M&M

- Gold and silver mineralization is currently open-ended along strike and down dip at El Limón Deep and exploration potential remains in these areas. Additional regional exploration opportunities exist, for example at the Media Luna deposit, and these targets are being actively explored and/or drill tested.
- During the mining operation some or all of the Inferred mineralization contained in the open pits may be able to be converted to higher confidence mineral resource categories and eventually to Mineral Reserves; this material represents upside potential for the open pit operation.

25.7.2 Environmental

- Existing environmental studies and extensive knowledge of the site allows for a cost effective assessment of additional incremental studies required to evaluate any additional potential impacts associated with modifications to the ELG Mine.

25.7.3 Metallurgy

- The metallurgy and associated tests have been used to select the most efficient process available given currently available processing technology. No further opportunities for improvement or additional testwork remain.

25.7.4 Operating Costs

- Mine operating costs represent a significant portion of the total operating cost according to the financial model. There is an opportunity for improvement during detailed mine planning and costing for annual mine budgeting purposes.

26 RECOMMENDATIONS

26.1 RECOMMENDATIONS BY M3

26.1.1 Metallurgy

Metallurgy has been completed in a sufficiently comprehensive manner to the satisfaction of M3. There are no further recommendations for tests.

26.1.2 Overall Project

The construction of the Overall ELG Mine is 73% complete (at the end of June 2015) and expected to have first gold production in fourth quarter 2015. Based on the economic analysis, M3 believes that the ELG Mine is viable and should continue through construction completion, start-up and operation.

26.2 RECOMMENDATIONS BY AMEC FOSTER WHEELER M&M

The work program recommendations provided by Amec Foster Wheeler M&M are designed to support potential upgrade of Inferred Mineral Resources to a higher classification, and further evaluate outlying exploration targets.

26.2.1 Develop Infill and Step-Out Drill Program ELG Mine

Torex should drill additional step-out holes around DPV-07, TMP-1296, TMP-1315 to confirm continuity and increase the confidence of the deep, high-grade gold intercepts at these depths. Assuming a total drilling cost, including assays, of $200/m, Amec Foster Wheeler M&M has estimated that approximately 6,000 m of drilling, in 12 drill holes, may be required. Estimated cost: $1.2 M. This estimate is based on an assumption of surface drilling; if the areas can be accessed from the rope conveyor tunnel suggested in the PEA, the program costs may be reduced.

26.2.2 Resource Models

The assay database should be reviewed to identify which composites used in the resource model are flagged as "mineralized", and to identify composites in contact with mineralization-grade composites. Samples within such composites that have not been fire assayed should then be fire assayed regardless of their aqua regia gold grade. Estimated cost: $25,000–$40,000.

26.2.3 Exploration

Key aims of the program are to continue exploration efforts on previously-identified outlying prospects and exploration of outlying unexplored or lightly-explored target areas based on reconnaissance knowledge and generation of new targets through further geological work. Two drill holes (800 m) are planned to test the Victoria magnetic target at an estimated cost of $400,000.

26.3 RECOMMENDATIONS BY AMEC FOSTER WHEELER

26.3.1 Geochemistry

The following studies which are ongoing in the current mine plan should be continued. The cost of these studies is included in the mine plan.

- Continued laboratory testing of waste rock and tailings humidity cells collecting longer term data.
- Construction of larger test pads to further assess expected waste rock drainage quality at the field scale.

- Development of a site water quality model supported by the field and laboratory data.
- Completion of a generic design for “pond specific” water treatment for arsenic since this is envisioned as the most likely water treatment requirement during operations (should water treatment be required).
- Development of trigger concentrations based on site monitoring data that will action additional work as required (e.g. further studies/modelling effort, or refinement of site specific water treatment design requirements to allow implementation in a timely manner).

26.4 RECOMMENDATIONS BY SRK

SRK recommendations for future work are summarized below. Where not specified it is believed the recommendations can be implemented by MML technical services staff at no additional cost.

26.4.1 Geotechnical

Benches cut particularly in the Guajes Pit highwall should be mapped and evaluated with particular attention to the identification and characterization of any persistent La Amarilla parallel structures.

The potential for significantly large voids in the El Limón northeast pit wall should be further evaluated based on the existing resource drill hole database and mapping of new excavations to estimate what percentage of the marble/limestone materials may have been dissolved, thereby creating voids. Depending on the results of this evaluation, additional drilling and cavity surveying may be required to further identify and delineate potential large voids. Geophysical methods including DC resistivity, ground penetrating radar and reverse seismic profiling may also be necessary prior to and/or during operation. If additional drilling and cavity surveys are deemed necessary, then contractor support may be required at an estimated cost of $0.1 M.

26.4.2 Mining

Pit optimization analysis on the El Limón deposit indicates the potential for a larger open pit. Potentially minable but high strip ratio resources at depth were excluded from the mine plan. It is recommended that an alternate deeper El Limón pit design be evaluated once the extent of the mineral resources at depth are better defined by exploration drilling and mineral resource modelling. A mine plan analysis shows that a decision on final El Limón depth is required by 2016 Q2 when the final highwall crest is being established. The analysis also shows that the decision date can be postponed until early 2018 if about 230 kt of extra waste rock at the El Limón pit crest is mined in 2016.

SRK supports MML’s initiatives to develop site specific ELG Mine grade control procedures, including comparisons of reported mining based on the grade control model versus resource model estimates, current field investigations of core drill hole sampling and assaying compared to various methods of blasthole sampling and assaying, the planned in-fill drilling program in the Guajes pit, and the planned acquisition of a reverse circulation drill for long term in-fill and grade control drilling. It is recommended that full reconciliations of actual plant feed and gold production versus mine plan predictions commence on an ongoing basis once the process plant is operational in late 2015, in order to refine the grade control block model, the resource block model, and mining dilution and loss parameters.

The final unit cost estimates and gold price forecast in this study indicate that a 0.1 g/t Au increase in marginal economic cut-off grades is warranted. It is recommended that the option of utilizing a higher plant feed cut-off grade early in the mine life and stockpiling lower grade ore for later processing also be assessed. The assessment should include an analysis of the impact to ore selectivity, waste stripping, mining equipment requirements, mining costs, and revenue. A preliminary analysis of ELG ore mined after 2019 done for the Media Luna PEA indicated that there are economic advantages to this mode of operation.

A current life of mine plan is essential for a dynamic mining operation. It is recommended that the ELG life of mine plan be updated annually to reflect current unit cost estimates and long term gold price forecasts, mining progress and reconciliation findings, resource model refinements and pit design revisions, and other mine planning issues and opportunities that arise.

26.5 RECOMMENDATIONS BY GOLDER

Golder does not recommend any additional studies associated with ELG Mine.

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APPENDIX A: FEASIBILITY STUDY CONTRIBUTORS AND PROFESSIONAL QUALIFICATIONS

CERTIFICATE OF QUALIFIED PERSON

I, Daniel H. Neff, P.E., am employed as President by M3 Engineering & Technology Corporation.

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico" that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "technical report").

I am a Registered Professional Engineer in the State of Arizona (No. 11804 and 13848). I graduated from the University of Arizona and received a Bachelor of Science degree in Civil Engineering in 1973 and a Master of Science degree in Civil Engineering in 1981.

I have practiced civil and structural engineering and project management for 41 years. I have worked for engineering consulting companies for 12 years and for M3 Engineering & Technology Corporation for 29 years.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Morelos Property between 02 to 04 April 2012 and between 24 to 27 February 2015.

I am responsible for Sections 1, 2, 3, 4, 5, 18.1-18.6, 18.9, 21.1, 21.2, 21.4.1, 21.4.3, 21.4.4, 22, 25.1, 26.1, and 27 of the technical report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43–101.

I have prior involvement with the property that is subject of the Technical Report. I was a contributing author of a previous technical report on the subject property entitled, "Morelos Gold Project, Feasibility Study, Guerrero, Mexico" dated effective 4 September 2012 and issued 1 October 2012.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 03 September 2015

(Signed) (Sealed) "*Daniel H. Neff*"
Daniel H. Neff, P.E.

CERTIFICATE OF QUALIFIED PERSON

I, Robert Davidson, P.E., am employed as a Mechanical Engineer/Project Manager with M3 Engineering & Technology Corp., 2051 W Sunset Rd. Suite 101, Tucson, AZ 85704, USA.

This certificate applies to the technical report titled Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "technical report").

I am a Registered Professional Engineer in good standing in the following jurisdictions, California, USA (No. 34311) and Nevada, USA (No. 19984). I am also a member in good standing with the Society of Mining, Metallurgy and Exploration. I graduated from the University of Arizona and received a Bachelor of Science degree in Mechanical Engineering in 2005.

I have practiced my profession for 10 years since graduation. I have been directly involved in the development of the infrastructure, capital cost, operating cost, and financial modelling for the project.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Morelos Property on 18 November 2014.

I am responsible for 24.1, 24.2, 24.3, 24.4, 24.5, 24.18, 24.21, 24.22, 24.24 and those portions of interpretations and conclusions, recommendations, and references that pertain to these sections of the technical report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the engineering of the El Limón Guajes Mine construction before starting work on the Media Luna Project PEA and technical report.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 3 September 2015

(Signed) (Sealed) "*Robert Davidson*"
Robert Davidson, P.E.

CERTIFICATE OF QUALIFIED PERSON

I, Thomas L. Drielick., P.E., am employed as Sr. Vice President by M3 Engineering & Technology Corporation.

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico" that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "technical report").

I am a Registered Professional Engineer in the State of Arizona (No. 22958) and State of Michigan (No. 6201055633). I am a member in good standing of the Society of Mining, Metallurgy and Exploration, Inc. I graduated from Michigan Technological University and received a Bachelor of Science degree in Metallurgical Engineering in 1970. I am also a graduate of Southern Illinois University and received an M.B.A degree in 1973.

I have practiced metallurgical and mineral processing engineering and project management for 45. I have worked for mining and exploration companies for 20 years and for M3 Engineering & Technology Corporation for 25 years.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have not visited the Morelos Property.

I am responsible for Sections 13, 17, 19, 24.13, 24.17, 24.19 and those portions of the summary, conclusions, recommendations, and references that pertain to these sections of the technical report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43–101.

I have prior involvement with the property that is subject of the Technical Report. I was a contributing author of a previous technical report on the subject property entitled, "Morelos Gold Project, Feasibility Study, Guerrero, Mexico" dated effective 4 September 2012 and issued 1 October 2012.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 03 September 2015

(Signed) (Sealed) "*Thomas L. Drielick*"
Thomas L. Drielick, P.E.

SRK Consulting (Canada) Inc.
1300, 151 Yonge Street
Toronto, Ontario, Canada
M5C 2W7

CERTIFICATE OF QUALIFIED PERSON

I, Brian H. Connolly, P.Eng., am employed as a Principal Mining Engineer with SRK Consulting (Canada) Inc.

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico", with an effective date of August 17, 2015 (the "technical report").

I am registered as a professional engineer with Professional Engineers Ontario (Registration # 905452203). I graduated with a Bachelor of Applied Science degree in Mineral Engineering from the University of British Columbia in 1973. I have practiced my profession continuously since 1973.

My work has involved mine engineering and technical services management at operating mines for 18 years and consulting on open pit projects since 1995.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Morelos property most recently between November 17th and 19th, 2014.

I am responsible for Sections 15, 16.1, 16.7-16.15, 21.3, 21.4.2, 24.16.2, 24.21.1.4, 24.21.2.2, and those portions of the Summary, Interpretations and Conclusions, and Recommendations that pertain to these sections of the technical report.

I am independent of Torex Gold Resources Inc. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Morelos property since 2010. I was the Qualified Person for mineral reserve estimates and open pit mine planning for the 2012 Feasibility Study.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: September 3rd, 2015

"Signed and sealed"

Brian H. Connolly, P.Eng.
Principal Mining Engineer

amec
foster
wheeler

CERTIFICATE OF QUALIFIED PERSON

I, Edward J.C. Orbock III, SME Registered Member (RM SME), am employed as a Geology Manager with Amec Foster Wheeler E&C Services Inc. (Amec Foster Wheeler).

This certificate applies to the technical report entitled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico" that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "Technical Report").

I am a Registered Member of the Society of Mining, Metallurgy and Exploration (# 4038771).

I graduated from the University of Nevada with a Master of Science in Economic Geology degree in 1992. I have practiced my profession from 1981 through 2001 and continuously since 2005 and have been involved in mining operations in Nevada and California and preparation of scoping, pre-feasibility, and feasibility level studies for projects in USA, Canada, Mexico, Central Africa, and Peru.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects ("NI 43–101").

I visited the Morelos Property on September 1 to 3, 2009 and again on March 1 to 3, 2011.

I am responsible for Sections 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.31.2, 1.32.2, 2.1, 2.4, 3, 6, 7.1, 7.2, 7.3, 7.4.1.1, 7.4.1.3, 7.5, 7.6.1 (El Limon only), 7.7, 7.8, 7.9, 8, 9, 10, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6.1, 11.6.2, 11.7.1 (El Limon only), 11.8, 11.9, 11.10, 12, 14.1, 14.2, 14.3.1 (El Limon only), 14.4.1 (El Limon only), 14.5.1, 14.6.1, 14.7.1(El Limon only), 14.7.2, 14.8.1, 14.9.1, 14.10.1, 14.11.1 (El Limon only), 14.12.1 (El Limon only), 14.13 (El Limon only), 14.14, 14.15, 23, 25.2, 25.7.1, 26.2, and 27 of the Technical Report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Morelos Property since 2009 during the preparation of a mineral resource estimate and subsequent completion of a technical report, and was a subsequent co-author on the following technical reports:

Orbock, E., Long, S., Hertel, M., Kozak, A., 2009: Gleichen Resources Ltd. Morelos Gold Project, Guerrero, Mexico NI 43-101 Technical Report: effective date 06 October, 2009.

Neff, D., Orbock, E., Drielick, T., 2011: Torex Gold Resources Inc. Morelos Gold Project Guerrero, Mexico NI 43-101 Technical Report – Underground and Open Pit Resources: effective date 22 October 2010.

Neff, D., Drielick, T., Orbock, E., Hertel, M., 2012: Torex Gold Resources Inc. Morelos Gold Project Guajes and El Limon Open Pit Deposits Updated Mineral Resource Statement Form 43-101F1 Technical Report Guerrero, Mexico: effective date 13 June 2012

Neff, D.H., Drielick, T.L., Orbock, E.J.C., Hertel, M., Connolly, B., Susi, B., Levy, M., Habbu, P. and Ugorets, V., 2012: Morelos Gold Project, 43 -101 Technical Report Feasibility Study, Guerrero, Mexico: technical report prepared by M3 Engineering and Technology Corporation, Amec Foster Wheeler E&C Services Inc, SRK Consulting Inc. and Golder Associates Inc. for Torex, effective date 4 September 2012

I have read NI 43–101, and the portions of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: 3 September, 2015

"Signed and stamped"

Edward J.C. Orbock III, RM SME

Amec Foster Wheeler
951 Matley Lane, Suite 110
Reno, NV 89502
Tel: (775) 331-2375
Fax: (775) 331-4153

CERTIFICATE OF QUALIFIED PERSON

I, Mark P Hertel, SME Registered Member, am employed as a Principal Geologist with Amec Foster Wheeler E&C Services Inc. (Amec Foster Wheeler).

This certificate applies to the technical report entitled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico" that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "Technical Report").

I am a Registered Member of the Society of Mining, Metallurgy and Exploration (# 4046984).

I graduated from Southern Illinois University, Carbondale, Illinois in 1978 with a B.S. degree in Geology and from Metropolitan State College, Denver Colorado, in 1987 with a B.S. degree in Mathematics. I have practiced my profession continuously since 1988 and have been involved in mining operations in Nevada and Arizona. I have been directly involved in exploration, resource and reserve estimation, geologic modeling and mine planning for a variety of commodities including uranium, oil, copper, cobalt, gold, silver and industrial minerals.

I visited the Morelos Property on 1 to 3 March, 2011, and from 7 to 10 April, 2013 and again from 8 to 10 September 2014.

I am responsible for Sections 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.31.2, 1.32.2, 2.1, 2.4, 3, 6, 7.1, 7.2, 7.3, 7.4.1.2, 7.4.2, 7.4.3, 7.5, 7.6.1 (Guajes only), 7.6.2, 7.7, 7.8, 7.9, 8, 9, 10, 11, 12, 14.1, 14.2, 14.3.1 (Guajes only), 14.3.2, 14.3.3, 14.4.1 (Guajes only), 14.4.2, 14.4.3, 14.5.2, 14.5.3, 14.5.4, 14.6.2, 14.6.3, 14.6.4, 14.7.1, 14.7.3, 14.7.4, 14.7.5, 14.8.2, 14.8.3, 14.8.4, 14.9.2, 14.9.3, 14.9.4, 14.10.2, 14.10.3, 14.10.4, 14.11.1 (Guajes only), 14.11.2, 14.12.1 (Guajes only), 14.12.2, 14.13 (El Limon Sur, Media Luna and Guajes), 14.14, 14.15, 23, 24.1.4, 24.1.5, 24.1.6, 24.1.7, 24.1.8, 24.1.9, 24.1.10, 24.3, 24.6, 24.7, 24.8, 24.9, 24.10, 24.11, 24.12, 24.14, 24.23, 24.25.1.2, 24.26.2, 24.27, 25.2, 25.7.1, 26.2, and 27 of the Technical Report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43-101.

I have been involved with the Morelos Property since 2009 during the preparation of a mineral resource estimate and subsequent completion of a technical report, and was a subsequent co-author on the following technical reports:

Orbock, E., Long, S., Hertel, M., Kozak, A., 2009: Gleichen Resources Ltd. Morelos Gold Project, Guerrero, Mexico NI 43-101 Technical Report: effective date 06 October, 2009.

Neff, D., Orbock, E., Drielick, T., 2011: Torex Gold Resources Inc. Morelos Gold Project Guerrero, Mexico NI 43-101 Technical Report – Underground and Open Pit Resources: effective date 22 October 2010.

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Neff, D., Drielick, T., Orbock, E., Hertel, M., 2012: Torex Gold Resources Inc. Morelos Gold Project Guajes and El Limon Open Pit Deposits Updated Mineral Resource Statement Form 43-101F1 Technical Report Guerrero, Mexico: effective date 13 June 2012

Neff, D.H., Drielick, T.L., Orbock, E.J.C., Hertel, M., Connolly, B., Susi, B., Levy, M., Habbu, P. and Ugorets, V., 2012: Morelos Gold Project, 43 -101 Technical Report Feasibility Study, Guerrero, Mexico: technical report prepared by M3 Engineering and Technology Corporation, Amec Foster Wheeler E&C Services Inc, SRK Consulting Inc. and Golder Associates Inc. for Torex, effective date 4 September 2012

Hertel, M., and Rust, J., 2013: Media Luna Gold–Copper Project, Guerrero State, Mexico, NI 43-101 Technical Report: technical report prepared by Amec Foster Wheeler E&C Services Inc for Torex, effective date 13 September 2013

I have read NI 43–101, and the portions of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading.

Dated: 3 September, 2015

"Signed and stamped"

Mark Hertel, RM SME

CERTIFICATE OF QUALIFIED PERSON

I, Benny Susi, P.E., am employed as a Principal and Practice Leader with Golder Associates Inc. Gainesville, Florida.

This certificate applies to the technical report titled Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico that has an effective date of August 17, 2015 and a filing date of September 3, 2015 (the "technical report").

I am a registered professional Engineer in the State of Florida (No. 35042). I am a member of the American Society of Civil Engineers and a member of International Association Impact Assessors. I graduated from the University of Florida with a Bachelor of Science Degree in Civil Engineering in 1977 and a Master of Engineering Degree in Civil Engineering in 1979.

I have practiced my profession for 38 years since graduation. I have been directly involved in engineering, environmental consulting and environmental impact assessments during my entire career.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Morelos Property between *August 7 through 9, 2012*.

I am responsible for Sections 20 and 24.20 *and those portions of the summary, conclusions, recommendations and references that pertain to these sections* of the technical report.

I am independent of Torex Gold Resources, Inc. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Morelos Property from 2010 to the present. I have conducted a site gap study to evaluate and plan the environmental and social studies conducted by Golder in 2010 as well as a contributing author for the Environmental and Social Impact Assessment, Resettlement Action Plan and as the Qualified Person for the Environmental and Social Sections of the Technical Report for the Morelos Property.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: September 3, 2015

(Signed) (Sealed)

Benny Susi, P.E. Environmental QP

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Gainesville, FL 32607 USA
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Tel: 303.985.1333
Fax: 303.985.9947

CERTIFICATE OF QUALIFIED PERSON

I, Michael E Levy, P.E., P.G., am employed as a Principal Geotechnical Engineer with SRK Consulting Inc.

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico", with an effective date of August 17, 2015 (the "technical report").

I am a registered Professional Engineer in the states of Colorado (#40268) and California (#70578) and a registered Professional Geologist in the state of Wyoming (#3550). I received a bachelor's degree (B.Sc.) in Geology from the University of Iowa in 1998 and a Master of Science degree (M.Sc.) in Civil-Geotechnical Engineering from the University of Colorado in 2004. I am a current member of the International Society for Rock Mechanics (ISRM) and the American Society of Civil Engineers (ASCE).

I have practiced my profession continuously for 17 years. I have been involved in numerous geotechnical investigations and designs specializing in advanced analyses and design of soil and rock slopes.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the El Limon – Guajes mine most recently between August 5 and 7, 2015.

I am responsible for preparation of sections 16.2, 16.3, 25.6.2.1, 26.4.1 of the technical report and those portions of the summary, interpretations and conclusions, recommendations and references that pertain to these sections of the technical report.

I am independent of Torex Gold Resources Inc. as independence is described by Section 1.5 of the NI 43-101.

I have been involved with geotechnical engineering of excavation slopes at the El Limon-Guajes mine since 2010 and was the Qualified Person for pit slopes and mine access road excavations for the 2012 Feasibility Study.

I have read the NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: September 3, 2015

(Signed and sealed) "*Michael E. Levy*"

Michael E. Levy, P.E., P.G.

CERTIFICATE OF QUALIFIED PERSON

I, Prabhat Habbu M.Tech, P.Eng., am employed as an Associate Geotechnical Engineer with Amec Foster Wheeler Environment & Infrastructure, A Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler).

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico" that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "technical report").

I am a Professional Engineer (P. Eng.) registered with the Professional Engineers Ontario, (licence number 100112130). I graduated from the Indian Institute of Technology, with a Master of Technology degree in 1990.

I have practiced my profession for over 25 years. I have been directly involved in the geotechnical design of tailings dry stack, mine waste rock dumps, site water management pond dams and spillways and geotechnical investigations for the site water and mine waste management facilities.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the Morelos Property between 13 to 16 September 2011, 28 to 30 April 2014, 15 to 18 September 2014, 08 to 11 December 2014 and 04 to 06 May 2015.

I am responsible for Sections 1.26, 1.31.3, 1.32.3, 2.1, 3, 16.4, 16.6, 18.7, 18.8, 24.1.15.2, 24.18.14, 24.18.15, 24.25.2.2, 24.25.2.3, 24.25.3.2, 24.26.4, 24.27, 25.4, 25.6.1, 26.3.1 and Section 27 of the technical report.

I am independent of Torex Gold Resources Ltd. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Morelos Property from May 2011 to date. This involvement pertains to the geotechnical design aspects of the site water and mine waste management facilities for the Morelos Property.

I have previously co-authored a technical report on the Morelos Property as follows:

Neff, D.H., Drielick, T.L., Orbock, E.J.C., Hertel, M., Connolly, B., Susi, B., Levy, M., Habbu, P. and Ugorets, V., 2012: Morelos Gold Project, 43 -101 Technical Report Feasibility Study, Guerrero, Mexico: technical report prepared by M3 Engineering and Technology Corporation, Amec Foster Wheeler E&C Services Inc, SRK Consulting Inc. and Golder Associates Inc. for Torex, effective date 4 September 2012

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 3 September 2015

"Signed and sealed"

Prabhat Habbu P.Eng.

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80235

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CERTIFICATE OF QUALIFIED PERSON

I, Vladimir Ugorets, Ph.D.do hereby certify that:

1. I am a Principal Hydrogeologist of:

   SRK Consulting (U.S.), Inc.
   1125 17th Street, Suite 600
   Denver, CO, USA, 80202

2. This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limón Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico", with an effective date of August 17, 2015 (the "technical report").

3. I graduated with a degree as a Mining Engineer Hydrogeologist from the Moscow Geological Prospecting Institute (former USSR) in 1978. In addition, I obtained a Ph.D in Hydrogeology in 1984 from the Moscow Geological Prospecting Institute. I am a QP member (01416QP) of the Mining and Metallurgical Society of America (SME) with special expertise in Geology. I have worked as a Hydrogeologist for a total of 36 years since my graduation from university. My relevant experience includes planning field hydrogeological studies and analyzing their results for numerous mining projects, conducting numerical groundwater and solute transport modeling, and, optimizing wellfields for groundwater extraction.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have not visited the Morelos Property.

6. I am responsible for preparation of the hydrogeology part in Section 16.5 and those portions of the references that pertain to that section.

7. I am independent of Torex Gold Resources Inc. as independence is described by Section 1.5 of the NI 43-101.

8. I have not had prior involvement with the Morelos project that is the subject of the Technical Report.

9. I have read NI 43-101 and the sections of the Technical Report I am responsible for have been prepared in compliance with that instrument and form.

10. As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: September 3, 2015

"Signed and sealed"

Vladimir I. Ugorets, Ph.D., MMSAQP

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AMC CONSULTANTS

CERTIFICATE OF QUALIFIED PERSON

I, James Joseph Monaghan P. Eng. (ON), am employed as a Principal Mining Engineer with AMC Mining Consultants (Canada) Ltd.

This certificate applies to the technical report titled "Morelos Property, NI 43-101 Technical Report, El Limon Guajes Mine Plan, and Media Luna Preliminary Economic Assessment, Guerrero State, Mexico", that has an effective date of 17 August 2015 and a filing date of 3 September 2015 (the "technical report").

I am a member of Professional Engineers Ontario #100028961. I graduated from Laurentian University with a B. Eng (Mining) in 1984.

I have practiced my profession for 31 years since graduation. I have been directly involved in underground mining of bulk and narrow vein gold and base metal mineral deposits for 28 years.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I visited the Morelos Property on 18 November 2014.

I am responsible for the underground mining content of sections 24.1, 24.15, 24.16.1, 24.16.3, 24.16.4, 24.21 and those portions of the summary, interpretations and conclusions, recommendations, and references that pertain to these sections.

I am independent of Torex Gold Resources, Inc., as independence is described by Section 1.5 of NI 43-101.

I have not had prior involvement with the property that is the subject of the Technical Report.

I have read NI 43-101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 03 September 2015

"Signed and sealed"

Jim Monaghan, P.Eng.
Principal Mining Engineer