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Prepared by:

Daniel H. Neff, P.E
Thomas L. Drielick, P.E.
Edward J.C. Orbock III, SME Registered Member
Mark Hertel, SME Registered Member
Brian Connolly, P.Eng.
Benny Susi, P.E.
Michael Levy, P.E., P.G.
Prabhat Habbu, P.Eng.
Vladimir Ugorets, MMSAQP

REVISION R0

Prepared For:

Torex Gold Resources Inc.

M3 Engineering & Technology Corporation ● 2051 West Sunset Road, Tucson, AZ 85704 ● 520.293.1488

IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 ("NI 43-101") Feasibility Study Technical Report for Torex Gold Resources Inc. ("Torex") by the following Authors:

- M3 Engineering & Technology Corporation ("M3")
- AMEC E&C Services Inc. ("AMEC E&C")
- AMEC Environment & Infrastructure a division of AMEC Americas Ltd.("AMEC E&I")
- SRK Consulting (Canada) Inc. ("SRK Canada")
- SRK Consulting (U.S.) Inc. ("SRK U.S.")
- Golder Associates Inc. ("Golder")

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MORELOS GOLD PROJECT
43-101 TECHNICAL REPORT
FEASIBILITY STUDY GUERRERO, MEXICO

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1 SUMMARY

1.1 EXECUTIVE SUMMARY – PROJECT INTRODUCTION

Torex Gold Resources Inc. ("Torex") is a single asset company that is committed to advancing the asset into an operating gold mine. This feasibility study for the asset, the Morelos Gold Project ("the Project"), represents another significant milestone along that development path.

The Project is a 29,000 ha mineral claim in the Mexican State of Guerrero, approximately 200 kilometers southwest of Mexico City. The project is located in the Guerrero Gold Belt and the entire 29,000 ha mineral claim is considered to have significant exploration potential. This feasibility study is Torex's first development on the property and it utilizes a land package of approximately 1,900 ha, or about $1/15^{th}$ of the total mineral claim area.

The project plan calls for the development of two independent open pits to extract 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 has been designed for a throughput rate of 14,000 tonnes per day ("t/d"). There will be a two year ramp up period before the pits can deliver the full 14,000 t/d. This will be followed by 8.5 years of full production with production falling off sharply over the remaining four years (this four year period at the end of mine life is referred to as the 'tail'). The production, in doré bars, for the first ten years of mine life is projected to average 337,000 ounces per year of gold, and 211,000 ounces per year of silver. For the period beyond the first ten years, efforts will be made to extend production through exploration activities by upgrading ounces currently categorized as inferred and to make new discoveries on the land package.

1.2 EXECUTIVE SUMMARY – KEY PROJECT METRICS

Table 1-1 summarizes the key metrics from the feasibility study. Unless noted otherwise, the currency used in the Technical Report is U.S. dollars.

Table 1-1: Projected Financial Metrics for the Project

After tax IRR	24.2%
Payback	3.6 years
Project NPV at a 5% discount rate	$900M
Project CAPEX (The total spent prior to commercial production, at the end of Q3/2015, minus net revenue earned ($123M) prior to declaring commercial production)	$552M
Project cash consumption in 2013	$284M
Project cash consumption in 2014	$282M
Project cash consumption in 2015 (The total spent minus net revenue earned for the period in 2015 ($123M US) prior to declaring commercial production)	($14M)
Sustaining CAPEX (Starts at the beginning of Q4/2015 once commercial production has been declared)	$86M
Average OPEX, with Ag credits (After the declaration of commercial production and without the production 'tail' at the end of mine life - including the 2.5% royalty payable to the government)	$421 / oz
Average OPEX without the Ag credits (After the declaration of commercial production and without the production 'tail' at the end of mine life - including the 2.5% royalty payable to the government)	$435 / oz
Mining cost per tonne (After the declaration of commercial production and without the production 'tail' at the end of mine life)	$1.90 / tonne
Mining cost per tonne to the mill (((Strip ratio 5.4) + 1) X $1.90) (After the declaration of commercial production and without the production 'tail' at the end of mine life)	$12.16 / tonne
Milling cost per tonne (After the declaration of commercial production and without the production 'tail' at the end of mine life)	$14.19 / tonne
G&A per tonne (After the declaration of commercial production and without the production 'tail' at the end of mine life - including land lease payments)	$2.92 / tonne
Contingency	12% of direct costs $57M
Rope conveyor and crusher CAPEX	$37M
Filtered tailings CAPEX	$78M
Initial Mine equipment CAPEX	$94M
Metal Prices used - $ / oz 2015 2016 2017 2018 and beyond	 Au $1,500/oz Ag $27.75/oz Au $1,407/oz Ag $25.00/oz Au $1,315/oz Ag $25.00/oz Au $1,250/oz Ag $22.00/oz
Exchange Rate	1US$ = 13 Mexican Pesos

Table 1-2: Projected Operational Metrics for the Project

Construction start	Q2 / 2013
First production	Q1 / 2015
Production in 2015	128 koz Au / 110 koz Ag
Production in 2016	246 koz Au / 267 koz Ag
Average Production 2017- 2024 (Without the tail)	375 koz Au / 217 koz Ag
Mine life (Without the tail)	10.5 years
Reserve tonnes **Average reserve grade Au**	48,766,000 2.61 g / t
Average reserve grade Ag	4.35 g / t
Reserve ounces Au	4,090,000
Reserve ounces Ag	6,813,000
Cut-off grade Au (Weighted average of ore types)	0.6 g / t
Total ore tonnes mined (Includes tonnes prior to commercial production)	48,766,000
Total waste tonnes mined (Includes tonnes prior to commercial production)	272,399,000
Average strip ratio (Including tonnes mined prior to commercial production)	5.6:1
El Limón overall pit wall angle	51 degrees
Guajes overall pit wall angle	51 degrees high wall 35 degrees low wall
Average mill throughput	14,000 t/d at 90% availability
Average mill Au recovery	87.4%
Average mill Ag recovery	32.7%
Average bond work index	17.5
Grind specification	80% passing 60 microns

1.3 EXECUTIVE SUMMARY – DISCUSSION OF KEY PROCESSING DECISIONS

As a general statement, this feasibility study describes the 'how' of the processes that Torex has chosen to transform the Morelos Gold Project 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 the previous table. 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 Project, 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.

1.3.1 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 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 Project 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 project 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 project 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 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 Project 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 Project 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.

1.3.2 Key 'What If' Critical Issues

1. What if there are ruins of archaeological significance inside the footprint of the Project?

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 Project?

   Action – Flora and Fauna survey undertaken on the Project 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 $30 million.

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 Canadian 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.

1.4 SCOPE

This report was prepared as a Feasibility Study Report for Torex by the following Authors:

- M3 Engineering & Technology Corporation ("M3")
- AMEC E&C Services Inc. ("AMEC E&C")
- AMEC Environment & Infrastructure a division of AMEC Americas Ltd.("AMEC E&I")
- SRK Consulting (Canada) Inc. ("SRK Canada")
- SRK Consulting (U.S.) Inc. ("SRK U.S.")
- Golder Associates Inc. ("Golder")

These Authors were commissioned by Torex to jointly provide a technical report for the Project located in Guerrero, Mexico. The Project comprises the Guajes and El Limón gold deposits. This report, entitled, "Morelos Gold Project, Feasibility Study, Guerrero, Mexico" (the "Technical Report") is written to support the future development of the Project using open pit mining methods. All geological information in this report is inclusive up to and including 11 June 2012. See Section 2.4 for a listing of effective dates. Unless noted otherwise, the currency used in the Technical Report is U.S. dollars.

1.5 PROPERTY

The Project is 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, and is accessed by narrow, paved highway from Iguala. The deposits are accessed from Nuevo Balsas via a 5 km single-lane gravel road.

The Project is 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.

1.6 OWNERSHIP

The Project 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 project 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 Project in the State of Guerrero, Mexico. MML and Torex are used interchangeably.

1.7 MINERAL TENURE

The Project consists of seven mineral concessions, covering a total area of approximately 29,006 ha. All concessions were granted for a duration of 50 years. All licenses are held in the name of MML.

1.8 SURFACE RIGHTS AND LAND USE

At the effective date of this report, Torex signed long-term lease agreements on approximately 1,830 hectares of land covering the Morelos deposit. In addition to these long-term lease agreements, Torex has an access agreement in place to facilitate exploration outside of the known resource area.

1.9 HISTORY & EXPLORATION

Recent exploration efforts began in 1998 when MML acquired the property. In the first year of exploration, work comprised data review, regional geological mapping, rock chip collection and silt sampling. During 1999, additional regional-scale reconnaissance work was undertaken, consisting of additional geochemical sampling and mapping. By 2000, the El Limón and Media Luna oxide mineralization had been discovered. A trenching program was followed up by reverse circulation (RC) drilling, totaling 1,888 m.

During 2001 and 2002, drilling and testing continued, comprising 11,088 m in 2001, and 4,265 m in 2002. A total of 20 line kilometers of IP survey were completed, outlining a number of highs. Mineralization characterization studies to support metallurgical test work were initiated. During 2003, a total of 3,781 m of core drilling focused on El Limón and Guajes West areas, and the El Limón Sur oxide zone was discovered.

Shallower mineralization in the vicinity of the Guajes West skarn, the Limón Sur oxide zone and the Azcala, La Amarilla and El Naranjo targets were the target of some 10,111 m of core drilling in 2004. Additional metallurgical test work was undertaken on the drill core, and the mineral resource estimate was updated.

A total of 22,580 m of drilling was completed in 2006 over the El Limón East, Los Mangos, and La Amarilla areas. Detailed mapping and rock and soil sampling continued at the El Querenque and Azcala areas, with encouraging results from soil sampling obtained at El Querenque. In 2007, drilling comprising 33,603 m was undertaken at the El Limón East, Los Mangos, and La Amarilla areas. Mineral resource estimates were again updated. Additional drilling in 2008 (10,544 m) was undertaken at the Guajes and Guajes West zones, Los Mangos and El Querenque.

1.10 GEOLOGY AND MINERALIZATION

The Project is situated in the Nukay district of the Morelos–Guerrero Basin of southern Mexico.

The deposits are inside the Mesozoic carbonate-rich Morelos Platform, which has, in the Project area, been intruded by Paleocene granodiorite stocks. Sedimentary rocks within the Morelos

Platform include basal crystalline limestones and dolomites of the Morelos Formation, silty limestones and sandstones of the Cuautla Formation, and upper platformal to flysch-like successions of intercalated sandstones, siltstones, and lesser shales of the Mezcala Formation. An intrusive stock complex, oriented northwest–southeast, intrudes the carbonate rocks. The dominant intrusive composition is granodiorite, although some quartz monzonites, monzonites, and diorites have been identified, in addition to minor, late andesitic dykes. 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. The contact of the intrusive with the sedimentary rocks at El Limón, although irregular, is generally quite steep and almost perpendicular to bedding. 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 oxide 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. 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.

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.

In the opinion of the QP who is responsible for Section 7 of the report, the mineralization style and setting of the deposits is sufficiently well understood to support Mineral Resource and Mineral Reserve estimation.

1.11 DRILLING

Drilling used within this Technical Report was completed between 1997 and 2012. Drilling under Torex was undertaken by a number of contractors, including Major Drilling Group International Inc., G4 Drilling, Ltd., Boart Longyear, Moles and Colima. AMEC has no information on the type of drill rigs employed. A database cutoff date of 6 April 2012 resulted in holes up to TMP-1430 being included, for a total of 1,202 drill holes (197,980 m) and 43 channels (4,162 m). Drill data is summarized in Section 10 of this report. Exploration and development drilling is ongoing.

1.12 SAMPLE PREPARATION AND ANALYSIS

Sample preparation and analytical laboratories used during the exploration programs on the Project include the independent laboratories ALS Chemex and Laboratorio Geologico Minero ("Lacme", an ACME subsidiary), and Teck's Global Discovery Laboratory ("GDL"). During the 2000–2001 programs, ALS Chemex analyzed the resulting samples. The QA/QC program for the first two drill campaigns relied on the internal quality control of ALS Chemex.

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"). 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.

Drill and trench samples from the 2002 through 2004 programs were sent to the Lacme sample preparation facility and then to GDL for assay.

At the beginning of the 2006 program, a sample preparation laboratory was established in Nuevo Balsas, and run by an independent contractor. The Nuevo Balsas preparation laboratory was also used for the 2006–2008 campaigns. Samples were prepared and then shipped to GDL where the analytical methodology was the same as that used for the 2002–2004 programs.

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.

From 2010 to 2012, Torex utilizes a QA/QC program of inserting 5% CRMs and 5% blanks to control assay quality for its drilling campaigns. AMEC also reviewed the Torex duplicate data and found there to be significant sampling variability in the quarter core and pulp duplicate results. The poor precision levels 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. A very slight improvement might be achieved by increasing the fire assay mass from 30 to 50 g.

1.13 DATA VERIFICATION

During an audit of the Project to support mineral resource estimation in 2005, AMEC reviewed the geological database and QA/QC for the Project. AMEC reviewed core sampling and logging procedures and trench and road-cut sampling procedures at site and considered that the practices employed by Teck conformed to industry-standard practices.

In AMEC's opinion, the digital database in 2005 was representative of the available project exploration data and was sufficiently free from error to support mineral resource estimation.

AMEC reviewed logging and sampling practices and visually inspected mineralized intervals. In general, AMEC found logging practices to meet industry standards, and that drill logs were well collected and representative of the core inspected.

AMEC reviewed analytical accuracy data from the quality control programs and found that the ALS Chemex and GDL gold assays are of acceptable accuracy.

At AMEC's recommendation, Teck submitted some of the 2000–2001 drill samples for check assays to Acme Laboratories in Vancouver. With the exception of three samples, the checks verified the original sample values.

AMEC reviewed analytical accuracy data from the quality control programs and found that the ALS Chemex and GDL gold assays are of acceptable accuracy to support mineral resource estimation.

AMEC was provided with a Microsoft Access® database containing all drilling information on the Morelos property. AMEC found the drill assay data acceptable to use in mineral resource estimation. After review, and in AMEC's opinion, the digital database is representative of the available project exploration data and is sufficiently free from significant errors so as to support mineral resource estimation.

AMEC verified samples from Guajes and El Limón to confirm the presence of gold mineralization. Assay values confirmed the presence of gold mineralization at the project.

AMEC conducted a series of audits on the Project's 2009 database covering data transfer errors, on assays, logged lithologies, collar and down-hole surveys against original source documents. AMEC found the database to accurately represent the drilling information and acceptable to support mineral resource estimation.

In April 2012, AMEC performed a series of audits on the Project information added to the database since the previous AMEC audit in 2009. AMEC's final audit finds the database to accurately represent the drilling information and be acceptable to support mineral resource estimation.

1.14 RESOURCES AND RESERVES

1.14.1 Mineral Resources

The Project mineral resource estimates were prepared using 3-D models in the commercial mine planning software MineSight® with reference to the Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards (2010) and CIM Best Practice Guidelines (2003) for preparing mineral resource and mineral reserve estimates.

The mineral resource estimate was interpolated with the assumption that the likely mining method would be open pit mining. A mine block size (selective mining unit or SMU) of 7 m x 7 m x 7 m was selected. A lithology model was created using a combination of deterministic and probabilistic modeling methods using Ordinary Kriging. Gold and silver grades were interpolated into mine blocks based on lithology and mineralization domains.

Mineral resources were constrained inside a $1,400 per ounce gold and $26 per ounce silver open pit shell constructed by AMEC using the commercial mine programming software NPVS Datamine®.

The El Limón mineral resource estimate and lithology model was prepared by Edward J. C. Orbock III, RM SME of AMEC. The Guajes mineral resource estimate and lithology model was prepared by Mark Hertel, RM SME., also of AMEC.

Mineral Resources were reported on 18 June 2012 for the Project, based on open pit mining methods. Results are shown in Table 1-3.

Table 1-3: Morelos Open Pit Mineral Resource Statement – Effective date 11 June 2012

Deposit	Resource Category	Tonnes (Mt)	Gold Grade (g/t)	Gold Ounces (000's)	Silver Grade (g/t)	Silver Ounces (000's)
El Limón	Measured	6.1	3.29	641	4.08	795
	Indicated	26.0	2.97	2,477	6.34	5,292
	Sub Total M&I	32.1	3.03	3,117	5.91	6,086
Guajes	Measured	4.3	3.11	431	3.86	535
	Indicated	17.4	2.25	1,258	3.11	1,736
	Sub-total M&I	21.7	2.42	1,689	3.26	2,270
	Total M&I	53.7	2.78	4,806	4.84	8,357
El Limón	Inferred	8.3	2.0	542	4.7	1,250
Guajes	Inferred	2.5	1.0	77	1.7	135
	Total Inferred	10.7	1.8	619	4.0	1,385

Notes to accompany Mineral Resource table:
1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Measured and Indicated Mineral Resources are inclusive of Mineral Reserves.
3. Mineral Resources are reported above a 0.5 g/t Au cut-off grade.
4. Mineral Resources are reported as undiluted; gold grades are contained grades.
5. Mineral Resources are reported within a conceptual open pit shell.
6. Mineral Resources were developed in accordance with CIM (2010) guidelines.
7. Mineral Resources are reported using a long-term gold price of $1,400/oz and silver price of $26/oz.
8. Mining costs used are estimated at $1.65 per tonne and processing costs are estimated at $11.51 per tonne. General and administrative costs were estimated at $0.98 per tonne.
9. Gold recoveries are dependent on grade and rock type and have a weighted average recovery of 87.33%.
10. Silver metallurgical recoveries by rock type show a weighted average of 33%.
11. Assumed pit slope angles range from 32° to 51°.
12. Totals may be different due to rounding of numbers.
13. QP for El Limón is Edward J. C. Orbock III, RM SME and QP for Guajes is Mark Hertel, RM SME.

1.14.2 Mineral Reserves

Project proven and probable mineral reserves are summarized in Table 1-4.

Table 1-4: Morelos Mineral Reserve Statement – effective date 28 August 2012

Deposit	Reserve Category	Tonnes (millions)	Gold grade (g/t)	Contained Gold (millions oz)	Silver grade (g/t)	Contained Silver (millions oz)
El Limón	Proven	6.3	2.94	0.59	3.67	0.74
	Probable	23.6	2.66	2.01	5.39	4.09
	Sub-total P&P	29.8	2.72	2.61	5.03	4.83
Guajes	Proven	4.3	2.93	0.40	3.68	0.50
	Probable	14.7	2.29	1.08	3.14	1.48
	Sub-total P&P	18.9	2.44	1.48	3.27	1.99
Total	Proven	10.5	2.93	0.99	3.67	1.24
	Probable	38.2	2.52	3.10	4.53	5.57
	Total P&P	48.8	2.61	4.09	4.35	6.81

Notes to accompany Mineral Reserve Table

1. Mineral reserves are reported based on open pit mining within designed pits above a 0.5 g/t recovered Au cut-off grade, and incorporate estimates of dilution and mining losses. The cut-off grade on an in-situ grade basis varies by ore type and averages approximately 0.60 g/t Au. The cut-off grade and pit designs are considered appropriate for long term metal prices of $1250/oz gold and $22/oz silver.
2. Mineral reserves are founded on, and are included within, Morelos mineral resource estimates with an effective date of 11 June 2012.
3. A legal opinion states that Minera Media Luna, S.A. de C.V. (a wholly owned subsidiary of Torex) has mineral rights to the concessions encompassing the El Limón and Guajes deposits, however surface rights within the project area have not yet all been secured.
4. Mineral reserves were developed in accordance with CIM (2010) guidelines.
5. Numbers may not add due to rounding.
6. QP for mineral reserve estimate is Brian Connolly, P.Eng.

1.15 MINING

It is planned that the Guajes and El Limón deposits will be mined by 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.

The village of La Fundición must be relocated in order to mine the El Limón deposit. Relocation is scheduled to be completed by the end of 2014 and prior to this date no road construction or mining activity is planned on the El Limón north ridge above the village. Initial ore for the processing plant will come from the Guajes deposit.

This feasibility study 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.

1.15.1 Mine Roads

The steep and irregular terrain which the mine access road will traverse necessitates lengthy alignments 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. Depending on the road location, recommended cut slope interramp angles range from 49° to 54° and incorporate preshear drilling. Confirmation of actual conditions along the alignments during construction and, especially, mapping of the geotechnical characteristics of the materials exposed during the initial road cuts will be necessary. Mine roads include:

- Dozer trails, to access initial high elevation mining areas and the top of road cuts;
- Roads connecting the plant site with the Guajes pit, located on gentle terrain;
- The El Limón access road, located on the south facing slope of the El Limón ridge;
- El Limón ore and waste haul roads located on the north facing slope of the ridge;
- El Limón north ridge access/haul road.

1.15.2 Pit and Waste Dump Design

The ultimate and phase pits are designed with bench heights of 7 m and berms at 21 m intervals ("triple benched") or at 14 m intervals (i.e. "double benched") to achieve recommended interramp slopes that range from 55° for highwalls to 38° for Guajes walls located in La Amarilla footwall rock. Geotechnical berms are incorporated on highwalls without ramps, which reduce maximum overall highwall slopes from 55° to about 51°.

The Guajes deposit will be mined utilizing a series of phase pits. It is planned that the three high ridges will be mined as dozer phase pits to avoid extremely difficult truck haul road construction to high elevations on the ridges. Rock will be drilled and blasted and dozed downhill to lower elevations and then shaped into in-pit haulage roads for subsequent lower elevation truck-shovel mining. The dozed rock will eventually be rehandled into trucks for hauling to the waste dump during mining of the lower elevation truck-shovel phase pits.

The El Limón deposit will also be mined utilizing a series of phase pits. The first phase pit to be developed is a small dozer pit that mines the upper benches of the El Limón east ridge. The rest of the El Limon main pit will be mined by truck-shovel methods with ore haulage to the El Limón crusher/conveyor. The final El Limón phase pit, located on the El Limón north ridge adjacent to the conveyor, is planned to be mined at the end of the mine life after the conveyor is taken out of service, with ore and waste hauled downhill to the plant site and a nearby Guajes waste dump.

Waste rock dumps will be developed by end dumping from platforms located at the dump crest elevation. Flow-through drains will be constructed in areas of groundwater seeps to ensure the water drains freely. Surface water drainage from all of the dumps will be collected in surface water management ponds. Safe dumping procedures have been developed and will be utilized during mine operation. At closure the waste rock dump slopes will be re-graded to 2H:1V for long-term stability and safety.

El Limón waste rock will be disposed in a large dump located north of the ultimate pit. Guajes rock will be disposed of in four waste dumps at the perimeter of the Guajes ultimate pit. The final Guajes dump is located adjacent to the filtered tailings stockpile. It has been designed to cover the west and south faces of the filtered tailings stockpile to facilitate closure at the end of the mine life.

1.15.3 Mining Quantities

Mineral reserves and plant feed estimates are founded only on measured and indicated mineral resources. Inferred resources are included within waste rock stripping quantities. The economic cut-off grade is estimated at 0.50 g/t RAu (i.e. recovered gold grade) based on a gold price of $1250/oz. Cut-off grades on an in situ resource grade basis vary by ore type and average approximately 0.60 g/t Au.

Run-of-Mine ("ROM") ore quantities within the designed pits total 48.8 Mt at grades of 2.61 g/t Au and 4.35 g/t Ag with a strip ratio averaging 5.6:1. The ROM ore quantities incorporate 5% mining losses, and 15% dilution at a grade of 0.13 g/t Au and 1.6 g/t Ag. In pit road construction by dozers and the planned dozer mining of high elevation waste results in waste rehandle on lower benches totalling about 5% of total stripping.

Pit optimization analyses identified additional potentially economic measured and indicated mineral resources in the El Limón Sur deposit, and at depth in the El Limon deposit, which were excluded from the feasibility study pit designs and reserve estimates partially because this mineralization is not fully defined (exploration is ongoing).

1.15.4 Production Schedule

The objective of the production schedule is to achieve a target plant feed rate 14,000 tpd as soon as possible, given an April 1, 2013 construction start and La Fundición village relocation by Jan 1, 2015. Project activities planned prior to April 1, 2013 include dozer trail development (as part of ongoing exploration program and budget), recruitment of key mining supervisory and technical staff, ordering of initial mining equipment, and establishing road construction and equipment maintenance contracts.

The general sequence of Guajes development includes development of dozer trails to provide access to the pit crest, dozer pit mining at high elevations followed by truck-shovel pit mining at lower elevations.

The general sequence of El Limón development includes: development of the access road dozer trail followed by El Limón access road construction in 2013-2014 prior to village relocation; ore and waste haul road development on the El Limón north facing slope starting Jan 1, 2015 after village relocation; and El Limon phase pit mining.

The dozer pits are scheduled based on the planned drilling and dozing equipment assigned to the pit and expected equipment productivity. Although mining rates in terms of tonnage drilled and dozed per period are relatively low, pit sinking rates in terms of benches mined per period are high, since the dozer pits occupy small footprints but extend over many benches. The high dozer pit sinking rates scheduled will require close operational supervision in order to be achieved.

Truck-shovel pit mining on larger benches has been scheduled at a maximum rate of two benches per quarter, which is considered achievable considering the drill-blast-load-haul sequence. Ore and waste hauling averages approximately 100,000 tpd over the period mid-2016 to 2021.

Plant feed is expected to commence in January 2015 at low feed rates utilizing Guajes ore. El Limón plant feed is scheduled to commence in January 2016 when the ore haul road to the El Limón crusher is complete. Processing at 14,000 tpd is expected to begin in the fourth quarter of 2016, utilizing ore from both Guajes and El Limón.

The production schedule includes a four year period at low mining and processing rates at the end of the mine life. This long "tail" is principally the result of scheduling El Limon north ridge ore mining after the main El Limon pit is depleted and the ore conveyor is taken out of service. The north ridge ore is located adjacent to the conveyor and is expected to impact conveyor operation.

1.15.5 Open Pit Operation

Mining is planned 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. An exception is the initial preproduction development in the dozer phase pits. It is expected that initial high elevation dozing will commence on a single 12-hr daylight shift, and expand to continuous 24 hour drilling/dozing after two to three months when the bench working areas get larger.

In general mining by the owner's workforce is planned. Activities expected to be performed by contractors include dozer trail construction, access and haul road development, blasting services by an explosives vendor, and production equipment maintenance by an equipment supplier during the period 2013-2017.

In the first quarter of 2013 (prior to the start of construction and preproduction mining) 19 staff employees will assist with employee recruiting, equipment ordering, and establishing road construction and equipment maintenance contracts.

Mine workforce requirements, excluding contractor personnel increase steadily as mining activity and equipment fleet sizes increase, to approximately 230 employees in 2017. After 2017 production equipment maintenance by the owner's employees is planned and the mine workforce requirement increases to over 300 employees.

Because of relatively high rock strength hammer drilling rather than rotary drilling is planned. Feasibility study planned production drilling equipment includes 152 mm drills and 114 mm drills. The larger diameter drill was selected to drill about 75% of Morelos rock. The drill fleet peaks at seven 152 mm units and five 114 mm units.

The smaller drills were chosen for much of the ore blasting and to allow for small diameter drilling near the El Limon crusher/conveyor facilities, which are in close proximity to the pit. The drill model selected is capable of drilling smaller holes, and pending the results of test blasts, it is recommended that the drill-blast parameters provided by a blasting consultant (which included 100mm blastholes) be utilized in the vicinity of the El Limon crusher/conveyor in order to minimize flyrock.

Feasibility study blasting estimates are based on an average powder factor of 0.35 kg/t utilizing 70% anfo 30% emulsion explosives.

It is planned that in pit rock loading will be done principally by a fleet of four 10 m^3 hydraulic shovels and two 15 m^3 hydraulic shovels. Two 11.5 m^3 wheeled loaders are included to provide backup for the shovels, load some of the ore, do limited ore rehandle at the crushers, and perform miscellaneous out-of-pit loading.

Haulage trucks in the 90-t size range are planned. Haulage truck requirements are estimated to peak at 23 units in 2017.

Dozing requirements will be performed by a fleet of three 433 kW tracked bulldozers and four 306 kW tracked bulldozers. It is planned that these units will be acquired in 2013, since they are needed in the Guajes dozer pits. After dozer pit mining is complete the units will be utilized in the truck-shovel pits and on the waste dumps. One wheeled dozer is also included in equipment requirements.

Support equipment includes three road graders and three 45,000 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. Due to terrain limitations an El Limón fuel storage facility is not planned however a 45,000 L El Limón fuel truck is included in equipment requirements.

Equipment acquisitions over the mine life also include replacement equipment. Replacement production units include one 152 mm drill, one 10 m^3 hydraulic shovel, one 433 kW bulldozer, and two 306 kW bulldozers.

1.15.6 Grade Control and Pit Dewatering

The ore-waste contacts are not well defined and there are no geologic marker horizons that can be reliably followed to locate the ore. It is planned that production blastholes will be sampled and assayed for grade control purposes.

Groundwater inflow and surface runoff based on average annual precipitation is predicted to be low. Pumping capacity has been sized to evacuate the 1:10 year return period 24 hour storm event in about 48 hours, Pit groundwater and runoff will be discharged at the pit crests and collected in sumps and settling ponds located downstream of the pits.

Many of the phase pit mining benches are 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 occurs completely below surrounding topography and where an in-pit pumping is required is the Guajes starter truck-shovel pit in 2014. The main El Limon dewatering system is expected to be established in 2022. In total 6 dewatering pumps are included in Morelos equipment requirements.

1.16 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 versa 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.

1.17 METAL RECOVERIES

The grade versus recoveries study gave an overall gold recovery of 87.4% and a silver recovery of 32.7%.

1.18 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

See Section 13 for specific quantities and holding requirements.

1.19 POWER

Electrical power supply for the Project 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 project area. Power at 13.2 kV for the water well field and camp will be supplied from the CFE substation in Mezcala. Torex has been given assurance from CFE that power is available from both of these sources to meet the needs of the project.

1.20 WATER

Water supply for the Project (Mine, Mill and Camp) will come from a well field developed near the village of Atzcala approximately 18 km east of the project site. 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 project are estimated at 1.7 million cubic meters per year (200 m^3/hr) assuring access for expansion at the current site or within the concessions.

1.21 FACILITIES & PROCESSING EQUIPMENT

The process plant designed for the Project 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.

1.22 ENVIRONMENTAL & PERMITTING CONSIDERATIONS

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 use applications were submitted and accepted by Mexican regulatory authorities. Permission to drill water wells has been granted by the Mexican national water commission ("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 Sections 4.7 and 20 of this report.

The application to the Mexican Authority for the construction permit will be submitted September 2012.

1.23 ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Based on the existing environmental and social data collected, ongoing baseline data programs, and Golder's understanding of the Project component as defined in this Feasibility Study pertaining to feasibility level design of the mine, waste dumps, tailings facility, and ancillary operations, our opinion is that the Project, while incorporating design elements and mitigation measures to avoid or reduce environmental impacts, is feasible from an environmental perspective. Golder Associates Ltd. (Golder) has been engaged by MML to complete a full Environmental and Social Impact Assessment (ESIA) on the Project. Section 20 of this report describes this work.

1.24 ENVIRONMENTAL MODELS

Three-dimensional block modeling of the environmental variables (As, Ca, Fe, Mg, and S) was performed using the commercial mine planning software, MineSight®. This modeling built upon the 7m x 7m x 7m block model of lithology and gold domains that are described in Section 14.

Table 1-5 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 1-5: 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

1.25 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 selecting dry stack storage. In addition, the use of filtered tailings improves water recycling, is conducive for progressive closure, and has some advantages with respect to stability for the Project. Tailings dry stacks have been used at many other mining projects for similar benefits.

The 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.

1.26 OPERATING COST

The operating and maintenance costs for the Morelos operations are summarized by areas of the plant. 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. The life of mine unit cost per total ore tonne is $29.97. The table below shows a typical year of operations.

Table 1-6: Typical Year (Year 4 – 2018) Operating Costs by Area

	Ore Tonnes	5,040,000
	Mined Tonnes	37,334,500
	Annual Cost - $	$/tonne ore Processsed
Mining Operations		
Drill	$11,733,506	$2.33
Blast	$15,554,591	$3.09
Load	$11,392,014	$2.26
Haul	$16,381,861	$3.25
Roads & Dumps	$6,587,189	$1.31
Support	$2,013,012	$0.40
Mine General	$3,453,852	$0.69
Subtotal Mining	**$67,116,024**	**$13.32**
Processing Operations		
Crushing and Ore Storage	$3,152,996	$0.63
Grinding	$27,462,991	$5.45
Leaching	$21,205,323	$4.21
Carbon Handling & Refinery	$1,309,596	$0.26
Filtered Tailings	$14,296,143	$2.84
Ancillaries	$1,940,512	$0.39
Subtotal Processing	**$69,367,561**	**$13.76**
Supporting Facilities		
Laboratory	$579,911	$0.12
Environmental Department	$493,666	$0.10
General and Administrative	$13,075,662	$2.59
Subtotal Supporting Facilities	**$14,149,239**	**$2.81**
Total Mine Site Operating Cost	**$150,632,824**	**$29.89**

1.27 CAPITAL COST

The capital costs examine two cases. The only difference in the two cases is in the infrastructure utilized to treat runoff water due to the presence of cyanide in tailings and arsenic in waste rock:

1) **Base Case** – the base case assumes that cyanide from the tailing dry stack and arsenic will not exceed environmental regulations. These contaminants will settle into the sedimentation ponds and will not pose a risk to the environment.
2) **Alternate Case** – this case assumes that testing will show an excess of contaminants that will require additional piping from the sedimentation ponds, pumping, and treatment before the water can safely exit the system.
3) **Sustaining Capital** – In addition, sustaining capital was estimated.

The key results of the capital cost estimates are as follows:

Table 1-7: Capital Direct, Indirect and Total Costs

Case	Direct Costs	Indirect Costs	Total Costs
Base Case	$455,904,015	$177,286,375	$633,190,390
Alternate Case	$477,973,706	$185,207,033	$663,180,739
Sustaining Capital	$10,541,856	$4,446,248	$14,988,104

1.28 ECONOMIC ANALYSIS

The economic analysis indicates that the project has an Internal Rate of Return (IRR) of 24.2% with a payback period of 3.6 years after taxes. The table 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.

Table 1-8: Sensitivity Analysis ($ in thousands) – After Taxes

	Undiscounted Cash Flow 0%	Net Present Value @ 5%	Net Present Value @ 10%	IRR %	Payback (yrs)
Base Case	$1,558,437	$900,016	$499,541	24.2%	3.6
Metal Prices +15%	$2,043,433	$1,224,429	$725,529	29.4%	3.0
Metal Prices +10%	$1,881,768	$1,116,291	$650,200	27.7%	3.2
Metal Prices -10%	$1,235,107	$682,903	$347,614	20.4%	4.2
Metal Prices -15%	$1,073,441	$574,262	$271,522	18.3%	4.5
Initial Capital +15%	$1,481,674	$825,457	$427,747	21.0%	4.0
Initial Capital +10%	$1,507,262	$850,366	$451,764	22.0%	3.9
Initial Capital -10%	$1,609,612	$949,239	$546,672	26.7%	3.3
Initial Capital -15%	$1,635,200	$973,850	$570,237	28.2%	3.1
Operating Cost +15%	$1,402,259	$795,077	$426,156	22.4%	3.9
Operating Cost +10%	$1,454,319	$830,113	$450,703	23.0%	3.8
Operating Cost -10%	$1,662,556	$969,763	$548,143	25.4%	3.4
Operating Cost -15%	$1,714,615	$1,004,636	$572,443	25.9%	3.4
Ore Grade +15%	$2,042,177	$1,223,583	$724,936	29.4%	3.0
Ore Grade +10%	$1,880,930	$1,115,727	$649,804	27.7%	3.2
Ore Grade -10%	$1,235,944	$683,470	$348,014	20.4%	4.2
Ore Grade -15%	$1,074,697	$575,112	$272,122	18.3%	4.5
Gold Recovery +5%	$1,718,020	$1,006,700	$573,816	26.0%	3.4
Gold Recovery +2.5%	$1,638,229	$953,358	$536,678	25.1%	3.5
Gold Recovery -2.5%	$1,478,646	$846,596	$462,286	23.3%	3.7
Gold Recovery -5%	$1,398,854	$793,007	$424,775	22.4%	3.9
Royalty +2%	$1,492,113	$855,495	$468,423	23.5%	3.7
Royalty +4%	$1,425,789	$810,806	$437,049	22.7%	3.8
Royalty +6%	$1,359,464	$766,116	$405,676	21.9%	3.9
Royalty +8%	$1,293,140	$721,426	$374,303	21.1%	4.1

1.29 PROJECT SCHEDULE

The main points of the schedule are as follows:

- Financing for the project is projected to be in place prior to the end of the first quarter of 2013.
- Permit approvals are anticipated early in the second quarter of 2013. Plant construction would commence immediately thereafter.

- Exploration access roads for the mine development are planned to be started during the fourth quarter of 2012 with dozer trails to the top of the Guajes pit completed by April 2013 to allow mine pre-stripping by MML to begin with in-house personnel (MML is a wholly owned subsidiary of Torex and is the operator of the Project). The mine development haul roads will be contracted out to at least two road contractors. Using multiple contractors will facilitate meeting schedule and allow flexibility. The mine planning will be a combination of internal MML personnel and independent consultants.
- Pre-stripping of the El Limón pit will begin in the first quarter of 2015 after completion of the south side access road and relocation of the villages of La Fundición and El Limón by the end of 2014.
- Detailed engineering is scheduled to start at the beginning of the fourth quarter of 2012 to allow for the placing of orders for the long lead time equipment. The long lead time equipment is expected to include the grinding mills, transformers, and crushers. An EPCM (Engineering, Procurement, and Construction Management) company will provide the detailed engineering for the process plant and infrastructure.
- The east service road construction is planned to start in the fourth quarter of 2012, followed by the camp and power lines as access becomes available. The process plant construction will start once permits are received in the second quarter of 2013. The process plant construction will begin with the main access road and earthwork at the plant site to develop rough grading of areas for mine maintenance, construction trailers, and construction laydown.
- Construction and initial mine maintenance power will be provided by diesel generators, with change over to permanent power as soon as it is available.
- Water will be delivered by truck until the Azcala wellfield pipeline is commissioned.
- Process plant construction will be scheduled to accommodate major equipment deliveries. Ancillary buildings at the process plant will be prioritized to complete the truck maintenance facility and the laboratory first. Startup of the process plant is scheduled for the beginning of 2015.

1.30 CONCLUSIONS AND RECOMMENDATIONS

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 Project is economically feasible. The main parameters are as follows.

Table 1-9: Base Case Financial Model Results ($ in thousands) – After Taxes

Parameter	Value
Undiscounted Cash Flow 0%	$1,558,437
Net Present Value @ 5%	$900,016
Net Present Value @ 10%	$499,541
IRR %	24.2%
Payback (yrs)	3.6

Based on the economic analysis, M3 believes that since the Project is viable, the Project should proceed to detailed engineering, procurement and construction. Torex should continue with environmental permitting and project financing efforts.

AMEC considers that there are sufficient data available for Torex to proceed with programs designed to upgrade Inferred Resources to a higher classification and further evaluate outlying exploration targets.

Approximately 117 drill holes totaling 26,000 m is proposed to in-fill areas of Inferred mineralization and test areas that have not been adequately closed-off by drilling at El Limon, Guajes, and El Limon Sur. Estimated cost for drilling and assaying is $5.3 M

Drilling of previously-identified outlying prospects and lightly-explored target areas for 2012 consists of 110 planned drill holes, totaling 51,600 m. Drilling for 2012 is planned for Media Luna, La Fe, Los Pichones, Naranjo, Pacifico, El Cristo, and Corona. Estimated drilling and assaying cost is $10.3 M.

2 INTRODUCTION

The following Authors were commissioned in 2011 by Torex Gold Resources, Inc. ("Torex") to provide a Feasibility Study for the Project for the 14,000 MTPD processing case:

- M3 Engineering & Technology Corporation ("M3")
- AMEC E&C Services Inc. ("AMEC E&C")
- AMEC Environment & Infrastructure a division of AMEC Americas Ltd.("AMEC E&I")
- SRK Consulting (Canada) Inc. ("SRK Canada")
- SRK Consulting (U.S.) Inc. ("SRK U.S.")
- Golder Associates Inc. ("Golder")

Torex's contact information is as follows:

Torex Gold Resources, Inc.
145 King St. West, Suite 1502
Toronto, ON
Canada M5H 1J8
Tel: (647) 260 1500
Fax: (416) 640 2011

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 the mineral resource is 11 June 2012. The effective date of the mineral reserve is 28 August 2012. The effective date of the report is 4th September, 2012. The issue date of this report is 01st October, 2012. The Qualified Persons responsible for this report are:

- Daniel H. Neff, P.E., Principal Author
  M3 Engineering & Technology Corporation
- Thomas L. Drielick, P.E., Principal Metallurgist
  M3 Engineering & Technology Corporation
- Edward J.C. Orbock III, SME Registered Member, Principal Geologist
  AMEC E&C Services Inc.
- Mark Hertel, SME Registered Member, Principal Geologist
  AMEC E&C Services Inc.
- Brian Connolly, P. Eng., Principal Mining Engineer
  SRK Consulting (Canada) Inc.
- Benny Susi, P.E.
  Golder Associates Inc.
- Michael Levy, P.E., P.G.
  SRK Consulting (U.S.) Inc.

- Prabhat Habbu, M. Tech, P.Eng., Senior Geotechnical Engineer
  AMEC E&I
- Vladimir Ugorets, MMSAQP
  SRK Consulting (U.S.) Inc.

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	2 to 4 April 2012	Sections 1, 2, 3, 4, 5, 18, 19, 21, 22, 24, 25, 26, and 27.
Thomas L. Drielick	No site visit	Sections 1.12, 13, 17 and those portions of the conclusions, references, and recommendations that pertain to these sections No site visit is required as Thomas is signed for only the metallurgical portion of the report.
Edward J.C. Orbock III	September 1 to 3, 2009 March 1 to 3, 2011	Sections 6, 7, 8, 9, 10, 11, 12, 14.1, 14.2 14.3 14.5, 14.6, 14.7, 14.8, 14.9, 14.10 23, 24.2, 25.2, 26.2, 27. and those portions of the conclusions, references, and recommendations that pertain to these sections
Mark Hertel	1 to 3 March 2011	Sections 14.4, 14.7, 14.8. and those portions of the conclusions, references, and recommendations that pertain to these sections
Brian Connolly	5 to 6 May 2010	Sections 15 16 and those portions of the conclusions, references, and recommendations that pertain to these sections
Benny Susi	Aug 7 to Aug 9th 2012	Section 20 and those portions of the conclusions, references, and recommendations that pertain to that section.
Michael Levy	4 to 5 April 2012	The mining geotechnical parts of Section 16 and those portions of the conclusions, references, and recommendations that pertain to that section.
Prabhat Habbu	13 to 16 September 2011	The non-mining geotechnical parts of Section 16 and 18 and those portions of the conclusions, references, and recommendations that pertain to these sections.
Vladimir Ugorets	No site visit	The hydrogeology parts of Section 16, 18 and 20 and those portions of the conclusions, references, and recommendations that pertain to these sections.

2.1 PURPOSE AND BASIS OF REPORT

This NI 43-101 Technical Report documents the results of a feasibility study. 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 Environment & Infrastructure a division of AMEC Americas Ltd.	AMEC E&I
AMEC E&C Services Inc.	AMEC E&C
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
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
degrees	°
degrees Celsius	°C
Economically Active Population	EAP
Energy Secretariat	NUCL
Environmental and Social Management System	ESMS
Environmental Impact Study	EIS
Environmental Management Plan	EMP
Equator Principles	EPs
Feasibility Study	FS
Federal Electricity Commission	CFE
Global Discovery Laboratory	GDL
Global Positioning System	GPS
Gold	Au
Golder Associates	Golder
grams per tonne	g/t
Greenhouse Gases	GHG
Gross Domestic Product	GDP
Hazard Quotient	HQ
Health Secretariat	SSA
hectare	ha
Human Development Index	HDI
Informed Consultation and Participation	ICP
Instituto Nacional de Estadística y Geografía	INEGI

Full Name	Abbreviation
International Finance Corporation	IFC
Iron	Fe
kilogram	kg
kilometer	km
kilotonnes	kt
Labor Secretariat	STPS
Labour Party	PT
Licencia Ambiental Unica	LAU
Local Study Area	LSA
M3 Engineering and Technology Corp.	M3
Manifestación De Impacto Ambiental (or Environmetnal Impact Statement)	MIA
Mean Sea Level	MSL
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
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 Population Council	CONAPO
National Water Commission	CNA
Neutralization Potential Ratios	NPRs
Normas Oficiales Mexicanas	NOMS
North American Free Trade	NAFTA
ordinary kriging	OK
Particulate Matter	PM
parts per billion	ppb
parts per million	ppm
Party of Democratic Revolution	PRD
Performance Standard	IFC PS
Performance Standards	PS
Potentially Acid Generating	PAG
potentially acid-generating	PAG
Pre-Feasibility study	PFS
Procuraduría Federal de Protección de Ambiente	PROFEPA
Purchasing Power Parity	PPP
Qualified Person	QP
Quality Assurance and Quality Control	QA/QC
Region of Importance for Conservation of Birds	AICAS
Regional Study Area	RSA
Resettlement Action Plan	RAP
Reverse Circulation	RC

Full Name	Abbreviation
Rock Quality Designations	RQD
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
Tailing Dry Stack	TDS
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
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 4th September 2012. There were no material changes to the information on the project 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 drill hole completed to be included in resource estimation is 14 March 2012.
- Date of last supply of exploration drill hole information is 13 June 2012. The exploration program is ongoing.
- The drill hole database assay close-off date is 6 April 2012.
- Effective date of the Guajes Mineral Resource estimate is 11 June 2012.

- Effective date of the El Limón Mineral Resource estimate is 11 June 2012.
- Effective date of Mineral Reserve estimate is 28 August 2012.
- Date of land tenure legal opinion is 20 August 2012.
- Date of surface rights legal opinion is 5 September 2012.
- Date of issue for this report is 01st October 2012.

3 RELIANCE ON OTHER EXPERTS

The 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, 2012a. 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., 20 August 2012.

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 current surface and water rights:

- Sánchez-Mejorada, Velasco y Ribé Abogados, 2012b. 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., 5 September 2012.

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 deposit 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 1,925 hectares that are required for the mining and processing operations, 95% are owned by ejidos and 5% are owned by a private landowner who has not yet been located.
- 30 year land leases for the surface rights for the project land that falls on the Ejido land have been secured. (With minor administrative issues being processed to secure title to a limited number of individually held parcelas).
- The private land with the non-located owner may be expropriated as per Mexican law.

4.2 LOCATION

The Project is located in Guerrero State, Mexico, approximately 200 km south-southwest of Mexico City. The location of the project 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 project area is 18.0075 N, 99.7443 W.

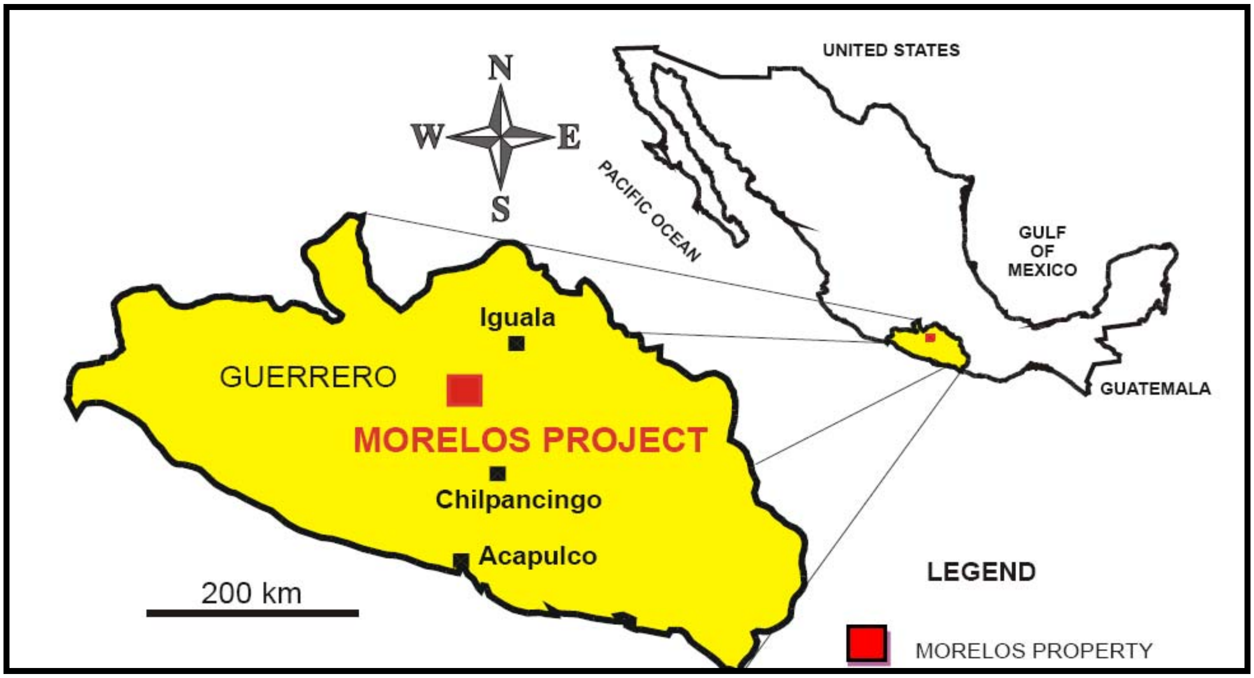


Figure 4-1: Site Location Map

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

Figure 4-2 shows local communities near the Project. The red 'box' identifies the 29,000 ha of the project area.

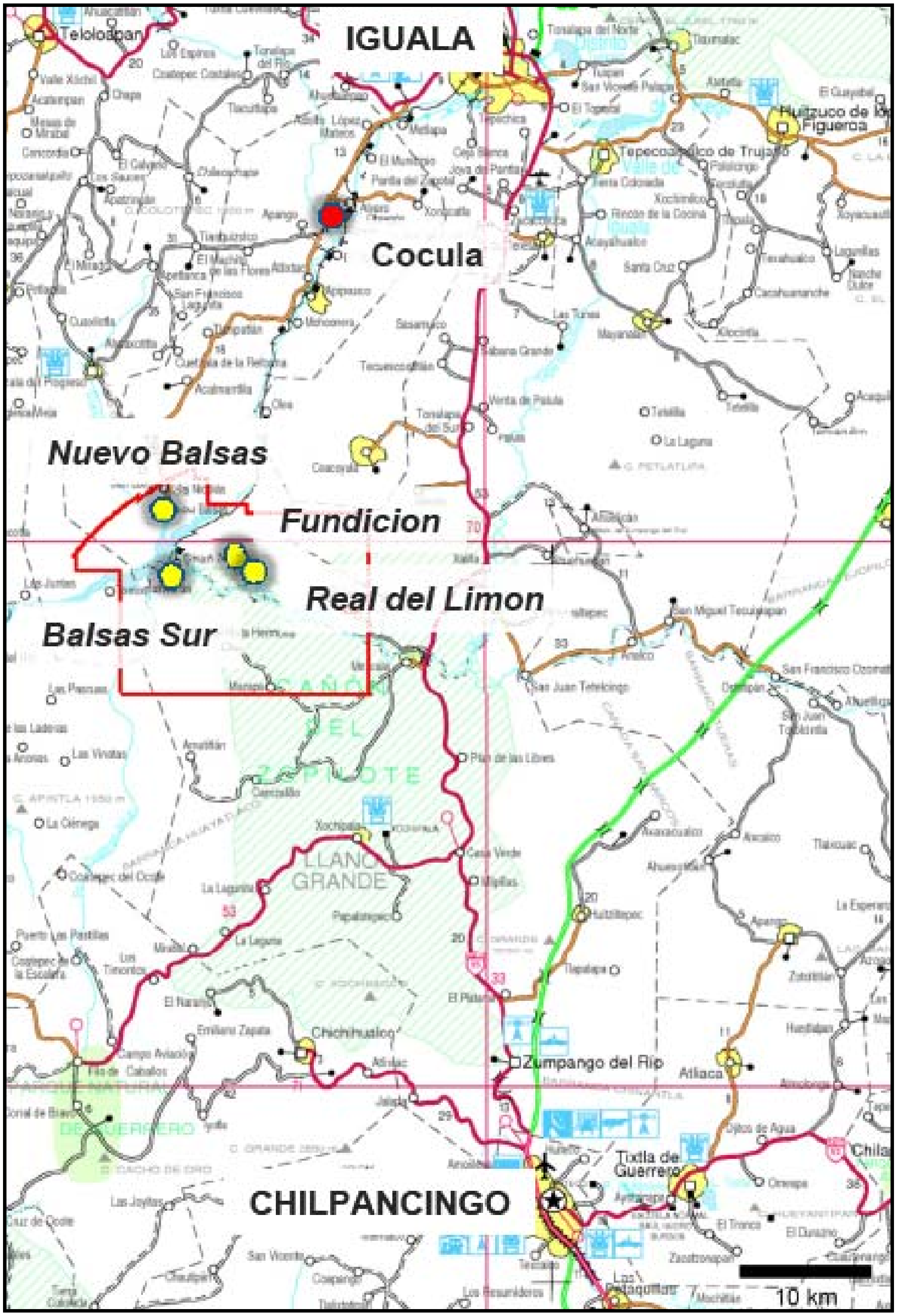


Figure 4-2: Local Communities and Infrastructure

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

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 2 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, El Palmar, and Apaxtla 2 concessions.
- On November 15, 2003 the concession titled Apaxtla 2 was obtained by MML in a transfer of mining assets agreement with Compania 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 Project 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 Project 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 1,922 ha of land required for the mining and processing operations, 1,231.7 ha is owned by the Rio Balsas Ejido and 602.6 ha is owned by the Real del Limón Ejido. 88 ha at the southern end of the mining area are held by an individual who has yet to be located.

Torex has secured surface rights to land for the direct development of the Project through the signing of long-term lease agreements with the Rio Balsas and Real del Limón Ejidos and with the members of such Ejidos. These agreements cover approximately 1,834 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 Rio Balsas 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 1,834 hectares of land, including two common land lease agreements, one human settlement area agreement and 133 individually owned parcel agreements. There are 5 individually 'owned' parcels at the Rio Balsas and Real del Limón Ejidos, representing approximately 34 ha (2% of land required) for which work is underway to resolve certain administrative issues, such as succession rights and absentee ownership; following which agreements on these small parcels can be finalized and executed.

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. 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. A detailed resettlement planning is currently underway.

For the remaining 88 ha, owned by a private land owner, work is underway to contact this owner or their heirs. If this is not successful then the intention is to apply for expropriation of the land.

The proceeds from such an expropriation would be held in trust until such time as the former owner has been contacted.

The land required for the eastern service road is owned by four Ejidos, which are Valerio Trujano, Atzcala, Real del Limón and Rio Balsas. Preliminary negotiations have been held regarding this land and now that the road design is finalized the negotiations can be completed.

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 Rio Balsas Ejido involving approximately 600 hectares of the area covered in the Rio Balsas land access agreement. Although there was a recent court decision in favor of the Rio Balsas Ejido that indicates that the Rio Balsas Ejido has legal title and possession of the land, the case has been appealed by a third party. If the appeal is ruled against the Rio Balsas 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 Project.

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

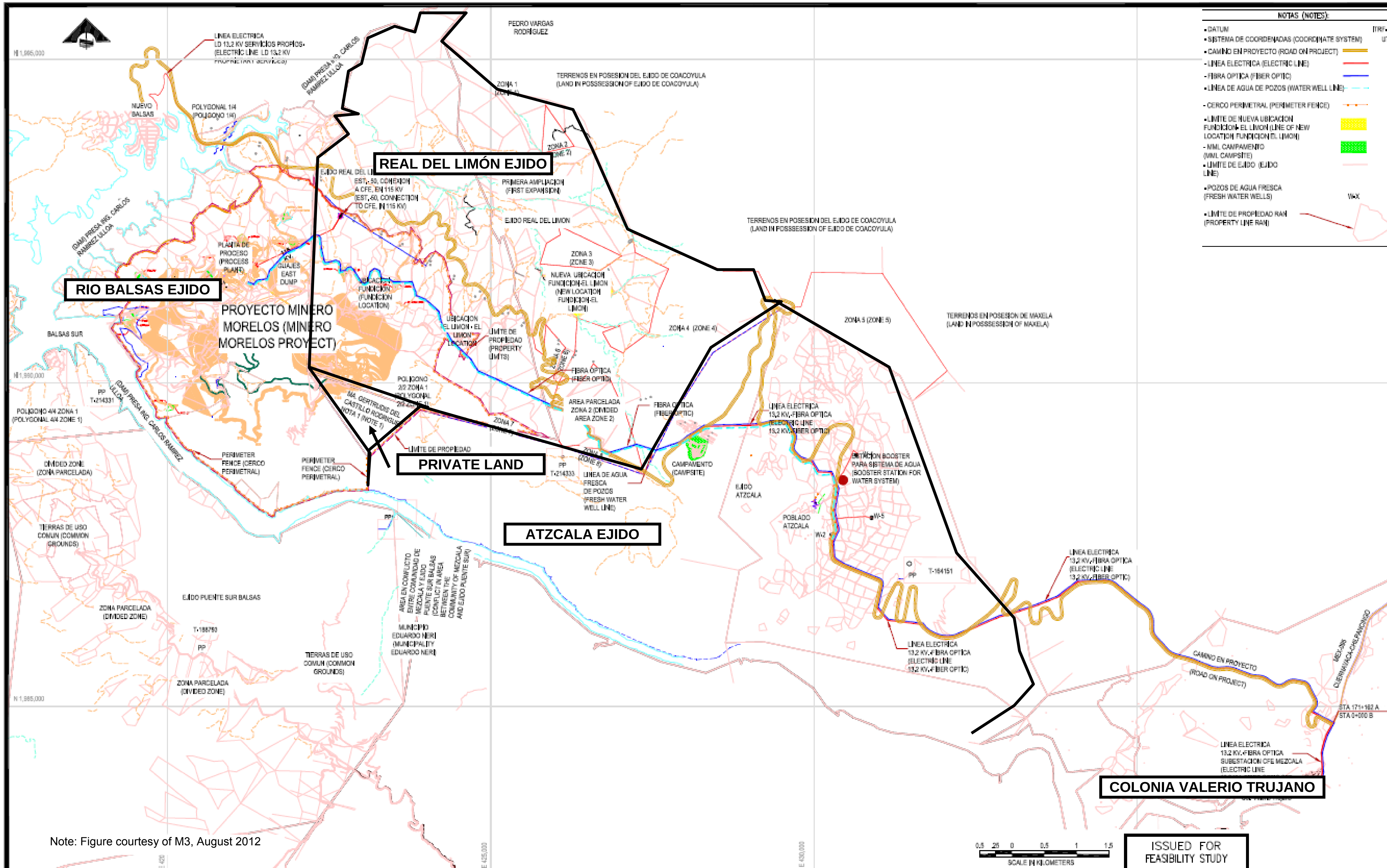


Figure 4-3: Project General Area Layout Showing Current Ownership

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 Project area as illustrated in Figure 4-4.

Table 4-1: Mineral Tenure Summary Table

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**

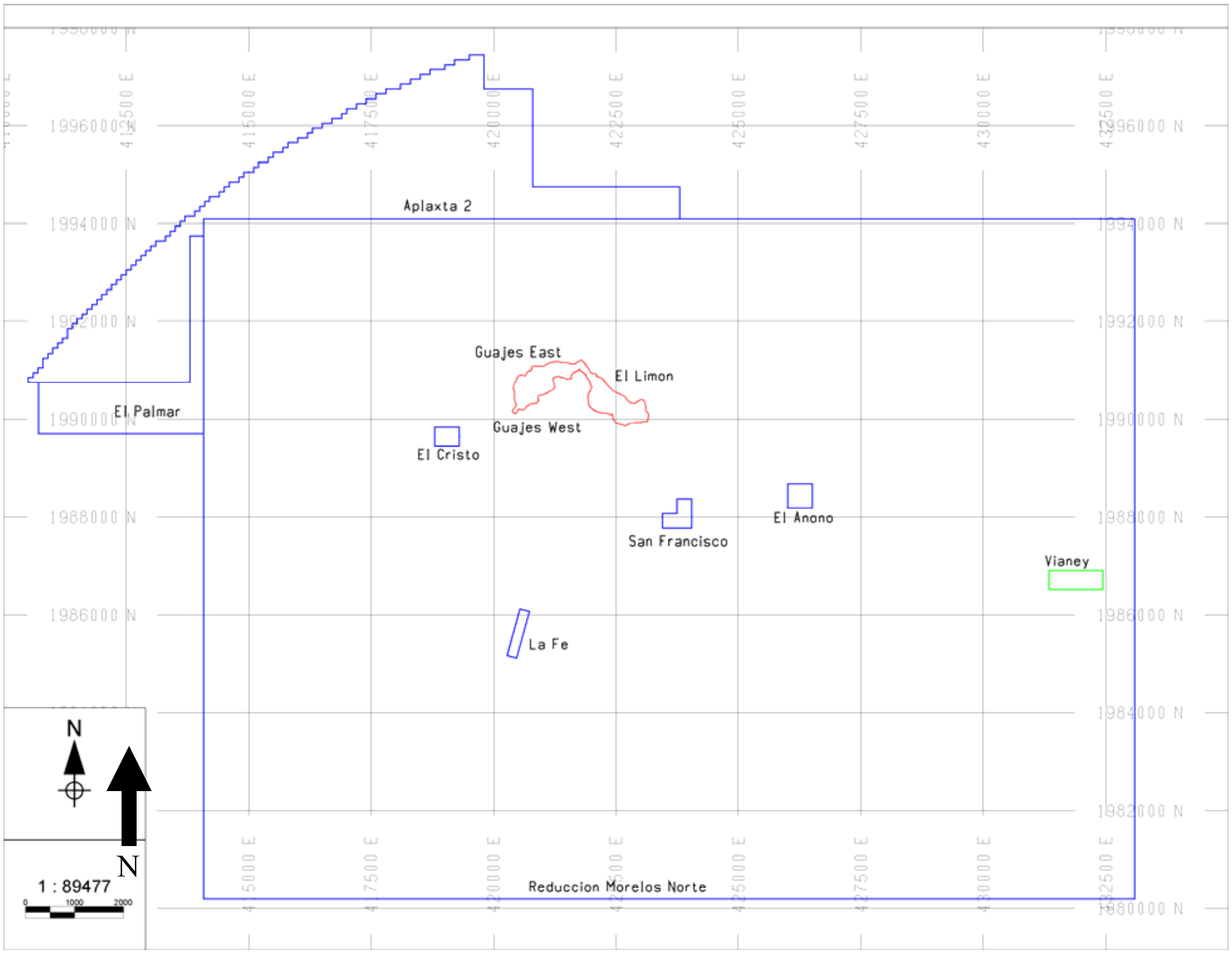


Figure 4-4: Tenure Map

Note: Figure is from AMEC, August 2012. Blue outlines indicate tenure outlines of licenses held by Torex; red outlines are the approximate dimensions 2012 Mineral Reserve pit, green outline is a small tenement named Vianey that is held by third parties, and is not part of the Project.

4.5.2 Duty Payments

Duty payments for 2012 were made for all mining concessions as seen in Table 4-2.

Table 4-2: 2012 Duty Summary Table

Mining Concession	Years since Grant made	Amount Paid (Pesos)
La Fe	22	2,495
El Cristo	11	2,495
El Palmar	11	53,580
El Anono	11	3,119
San Francisco	11	3,368
Apaxtla 2	10	160,413
Reducción Morelos Norte	7	930,971

As per Mexican requirements for grant of tenure, the concessions comprising the project 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 project 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 Mine Development

The permitting process requires that the following documents be submitted for assessment of the suitability of the project:

- **MIA (Environmental Impact Manifest).** Includes a comprehensive review of the significant and potential environmental and social impacts associated with all phases of the project, and describes the measures for avoiding/mitigating these environmental impacts.
  - Status – submitted September 5th 2012.
  - Approvals have previously been obtained for MIA's for the exploration work
- **ER (Environmental Risk Assessment).** The Environmental Risk Assessment ("ER") is complementary study to the MIA that specifically addresses risks identified in the MIA
  - Status – submitted September 5th 2012.

- **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 - in preparation to be submitted 4th quarter 2012.
    - Approvals have previously been obtained for ETJ for the exploration program
- **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 project has entered production.
    - Status - in preparation
- **Explosives Permit** required from Secretaría de la Defensa Nacional (SEDENA)
    - Status - in preparation
- **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 project is located within a registered archaeological zone under the jurisdiction of the INAH. Authorization from INAH is to develop the Morelos Project is required.
    - Status - A field review was completed by INAH on the project 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. Said activates have been completed and the approval/positive resolution to proceed with development is anticipated to be forthcoming

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

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 project area
- Located in relatively well serviced region of Guerrero State
- Close proximity to existing Mining Operation
- Close proximity to major transportation routes (highway and port facilities)
- Project is located near centers for supply of material and workers
- Electrical power available with high voltage lines crossing project area
- Water supply secured for project

5.2 EXISTING ACCESS, INFRASTRUCTURE AND LOCAL RESOURCES

Access to the site is good, with the project being within a 4.5 hour drive of Mexico City. Current access is via paved road to the village of Nuevo Balsas then via 5 km of single-lane gravel road. The project is also within 25 km of Mexican highway I-95 which runs from Mexico City to the port of Acapulco. Development of the Project includes construction of a 2 lane road from Highway I-95 to Nuevo Balsas with a length of 42 km. Development of this road provides a second and improved means of access to site. It is along this new road that materials and supplies will travel during construction and operation of the project.

The nearest port to the project is at Acapulco which is approximately 200 km south of the project via the new road and highway I-95. Development of this road also provide 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 project 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 project site via existing roads and Chilpancingo will be ~100 km south of the project via the new road and highway I-95. Both these communities have well established services and will provide access to a large work force.

Power is also readily available for the project with existing high power transmission lines within 2 km of the proposed plant site. CFE, the Mexican power authority, has confirmed there is sufficient power available to meet the needs of the project.

Process water for the project 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.

Current site communications consist of internet, cellular and land based telephones. Project development will include upgrades to the land based communication systems.

5.3 CLIMATE

The project 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 project 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 Project are planned to occur on a year-round basis.

5.4 PHYSICAL GEOGRAPHY

The region is characterized by large limestone mountains divided by wide valleys (Figure 5-1). The slopes of the hills vary from flattened (5%–10%) to very steep slopes (50%). Within the project 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.

5.5 TERRAIN

The region is characterized by large limestone mountains divided by wide valleys (Figure 5-1). The slopes of the hills vary from flattened (5%–10%) to very steep slopes (50%). Within the project area, relief ranges from 470 msl to 1,540 msl.

Figure 5-1: Project Physiography

Note: Figure courtesy of Torex, sourced from Teck, 2009.

5.6 LAND TENURE

Torex has gained sufficient land tenure, via long-term lease agreement, for the construction and operation of a mining plant to exploit the two deposits containing the reserve described within this technical report. This land covered by the agreements contains sites for mining operation, process plant, tailings storage area as well as mine waste disposal areas, which are identified within the feasibility study. (See Section 4.5 for additional detail on project land tenure.)

6 HISTORY

The key points of this section include the following:

- Between 1998 and 2008 the Teck/MMC/Goldcorp joint venture drilled approximately 100,000 meters on the Project
- Torex became the 100% owner of the Project in February of 2010.
- Between 2010 and 2012 Torex added approximately 100,000 additional meters of core drilling to the Project drill inventory
- Using the Teck JV drill data, two 43-101 compliment mineral resources were commissioned by Torex:
    - The first was an open pit mineral resource estimate for the El Limón and Guajes deposits
    - The second was an underground mineral resource estimate for the El Limón deposit
- Using the Teck JV drill data and the Torex drill data, a third resource statement was issued with an effective date of June 11, 2012. This is an open pit mineral resource estimate for the El Limón and Guajes deposits and is the mineral resource estimate used for this Feasibility Study.

For additional information on ownership, see Section 4.3. For additional information on drilling used in resource estimates see Section 10.

6.1 WORK BY PREVIOUS OWNERS

Information on work performed by previous owners of the property is presented below:

In 1995, the former Morelos Mineral Reserve, created in 1983, was divided into a northern and southern portion, and portions allocated to mining companies through lottery. The MMC/Teck joint venture vehicle MML submitted the winning bid for the Morelos Norte license in mid-1998.

In 1998, exploration work started with data review, regional geological mapping, rock chip collection and silt sampling. During 1999, additional regional-scale reconnaissance work was undertaken, consisting of additional geochemical sampling and mapping. By 2000, the El Limón and Media Luna oxide mineralization had been discovered. A trenching program was followed up by RC drilling, totaling 1,888 m.

During 2001, additional drilling, comprising 11,088 m, intersected skarn-hosted gold mineralization at El Limón and Guajes East. A test induced polarization ("IP") geophysical program was started in order to identify the areas of sulphide mineralization. Road building, geological mapping at more detailed scales, and additional rock chip sampling was also completed.

From 2002 onward, core drilling methods were used. A program of 4,265 m of core drilling was focused on the El Limón North Oxide and Guajes East prospects during 2002. The same program intersected the blind Guajes West skarn. A first-pass mineral resource estimate was undertaken by Teck personnel, based on the RC drilling. A total of 20 line kilometers of IP survey were completed, outlining a number of highs. Mineralization characterization studies to support metallurgical test work were initiated.

During 2003, a total of 3,781 m of core drilling focused on El Limón and Guajes West areas, and the El Limón Sur oxide zone was discovered.

During 2004, shallower mineralization in the vicinity of the Guajes West skarn, the El Limón Sur oxide zone and the Azcala, La Amarilla and El Naranjo prospects were the target of some 10,111 m of core drilling in 2004. Additional metallurgical test work was undertaken on the drill core, and the mineral resource estimate was updated.

During 2006, a total of 22,580 m of drilling was completed over the El Limón East, Los Mangos, and La Amarilla areas. Detailed mapping and rock and soil sampling continued at the El Querenque and Azcala areas, with encouraging results from soil sampling obtained at El Querenque.

In 2007, drilling comprising 33,603 m was undertaken at the El Limón East, Los Mangos, and La Amarilla areas. Mineral resource estimates were again updated. Additional drilling in 2008 (10,544 m) was undertaken at the Guajes and Guajes West zones, Los Mangos and El Querenque.

In 2007/2008 engineering work to support a pre-feasibility study was started. 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, at about the time of the world financial crisis.

6.2 TOREX RESOURCES OWNERSHIP

Since acquiring the Project, Torex has undertaken and continues to carry out work on the project. This work is focused on the known resource (El Limón and Guajes deposits) the subject of this report and on exploration work outside of the resource area described in Section 9.

6.2.1 Work on the El Limón and Guajes resource

Torex had three mineral resource estimates prepared by AMEC E&C, for the El Limón and Guajes deposits. The most recent resource statement, effective date June 11, 2012, and including all drill information up to April 6, 2012, was used in this Study. The first resource estimate was completed by AMEC E&C at the request of Gleichen (the former name of Torex) to support the purchase of the Project. This estimate covered the El Limón, Guajes East and Guajes West deposits based on the drilling completed up to and including 2008 and considered mining of the 2 deposits via open pit mining methods.

A second estimate was completed by AMEC E&C which declared a mineral resource for the El Limón deposit that was amenable to underground mining methods. This resource was requested by Torex to enable a review of exploitation of the El Limón deposit via underground mining methods. This resource estimate uses all drilling completed up to and including 2008. Subsequent to this report, Torex made the decision to proceed with work focused on recovery of the deposits utilizing open pit mining methods.

Torex has now completed the feasibility work on the Project which is the topic of this report.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 KEY POINTS

The key points of this section are:

- The host rocks in the region are primarily carbonate limestone and dolomites called the Morelos Formation, which are overlain by silicate shale, called the Mezcala Formation. The transition zone between these formations is a called the Cuatula Formation.
- Approximately 66 million years ago, granodiorite bodies intruded through the host rocks and created mineralized skarns. These skarns tend to form along the contact between the intrusive rocks and the carbonate rich units of the Morelos Formation.
- There are also NW and NE structural controls which influence the placement of the deposits.
- The El Limón gold-silver skarn deposit trends to the NW and the skarn is formed at the stratigraphic level of the Cuatula Formation, adjacent to the intrusive.
- The Guajes gold-silver skarn deposit trends to the NE and the skarn is formed at the stratigraphic level of the Cuatula Formation, adjacent to the northern edge of the intrusive rocks.
- The region has been intruded by a series of these granodiorites, or similar intrusives.

7.2 REGIONAL GEOLOGY

The Project is situated in the Nukay district of the Morelos–Guerrero Basin of southern Mexico (Figure 7-1).

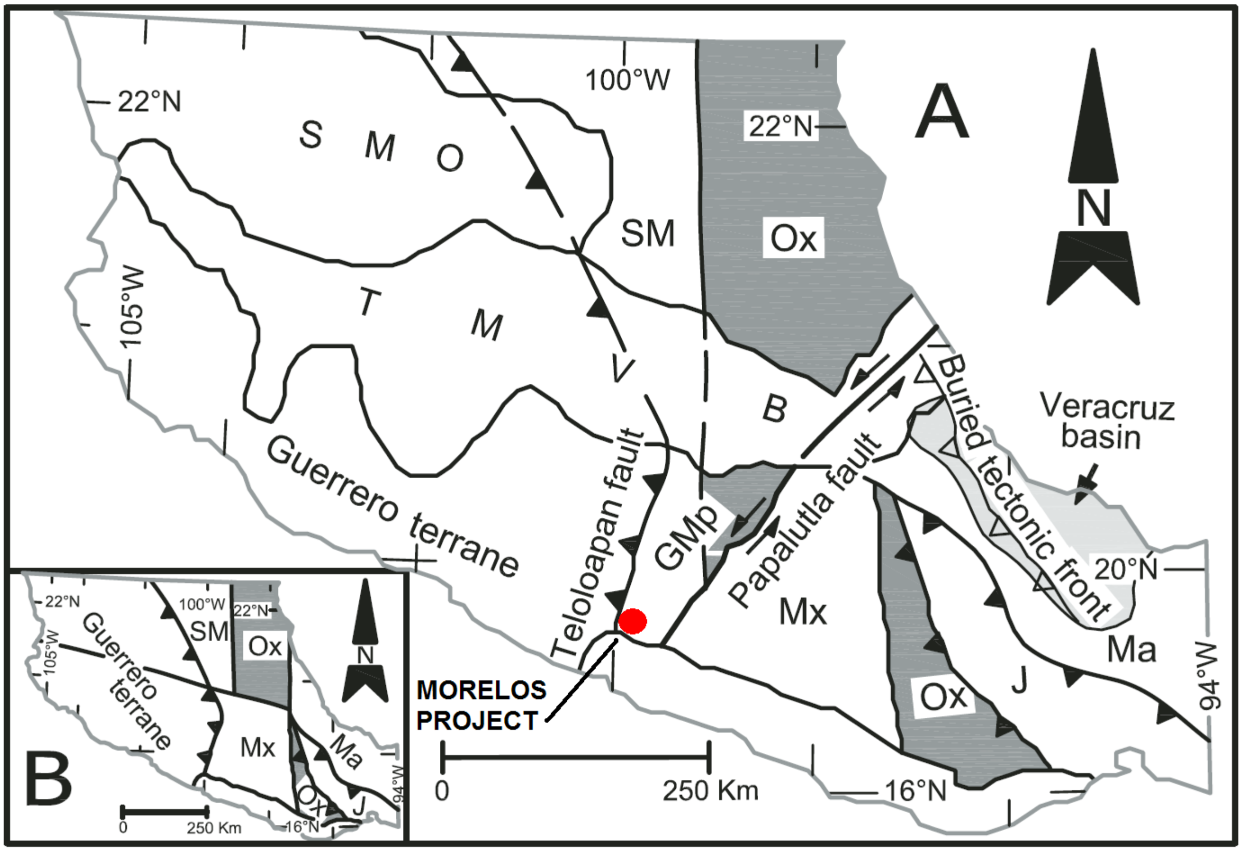


Figure 7-1: Tectonic Map of South-Central Mexico

Key: GMp—Guerrero-Morelos platform. Terranes: J—Juárez; Ma—Maya; Mx—Mixteca; Ox—Oaxaca; SM—Sierra Madre. Overlap volcanic provinces: SMO—Sierra Madre Occidental; TMVB—Transmexican Volcanic Belt. Figure from Silva-Romo, 2008. Red dot indicating approximate location of the Project added by AMEC.

a) The roughly circular basin is occupied by a thick sequence of Mesozoic platform carbonate rocks successively comprising the Morelos, Cuautla, and Mezcala Formations, and has been intruded by a number of early Tertiary-age granitoid bodies. The basin is underlain by Precambrian and Palaeozoic 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 Laramide time (80–45 Ma). The project 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 sulphide 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 sulphide belt. Both belts are approximately 30 kilometers wide and over 100 km long, from northwest to southeast.

7.3 LOCAL GEOLOGY

a) The Morelos Formation comprises fossiliferous medium- to thickly-bedded finely-crystalline limestones and dolomites. The lower contact is not exposed within the project, 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 project and is found altered to marble outboard of the skarn zones, in addition to hosting small jasperoid occurrences.

   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 platformal 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 on the west part of the project. 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. At the El Limón deposit, hornfelsed sedimentary rocks form the hanging wall and acted as a seal during the process of skarn development. The Mezcala Formation has been eroded away in most of the eastern part of the project.

b) An intrusive stock complex, oriented northwest–southeast, intrudes the carbonate sedimentary rocks (Figure 7-2 and Figure 7-3). The dominant intrusive composition is granodioritic, although some quartz monzonites, monzonites, 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. Argon dating returned age dates of approximately 66 Ma (M3 Mexicana, 2008).

Similar ages were noted for the granodiorite intrusions occurring at Nukay/Los Filos of 64.99±0.35 Ma and 63.39±0.20 Ma. Skarn-hosted gold mineralization is developed along the contacts of the intrusive rocks and the enclosing carbonate-rich sedimentary rocks (see Figure 7-3).

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

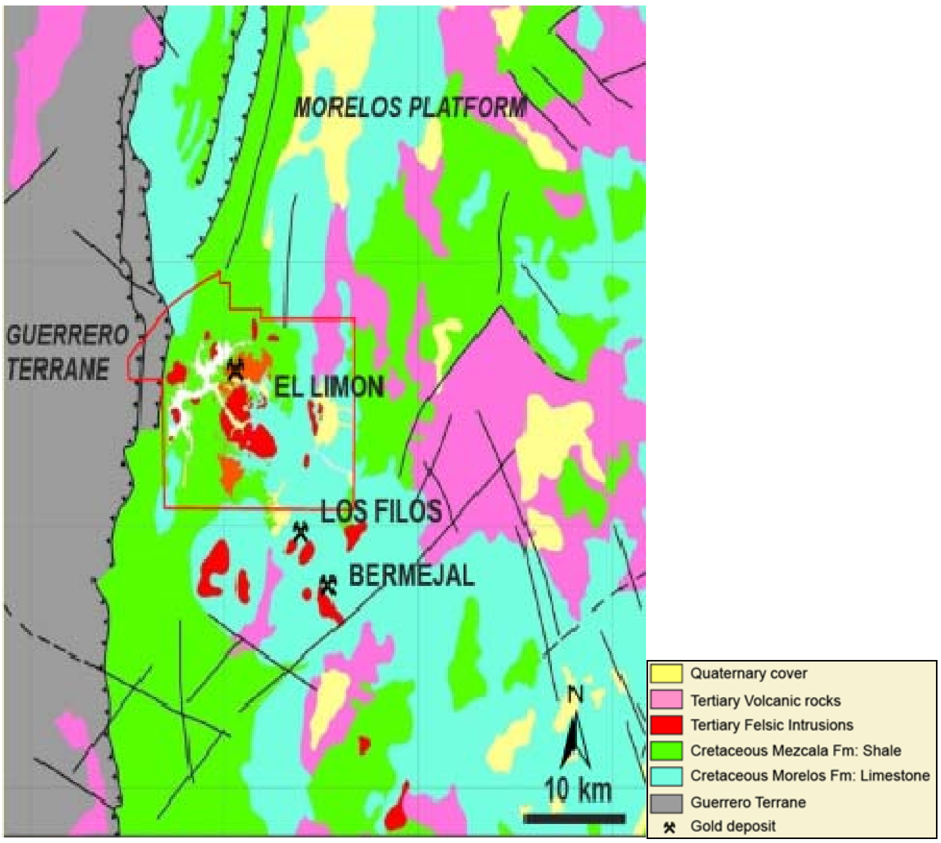


Figure 7-2: Regional Geologic Map

Note: Figure courtesy Torex, and sourced from Teck, 2009. The Los Filos and Bermejal deposits are outside the project boundary.

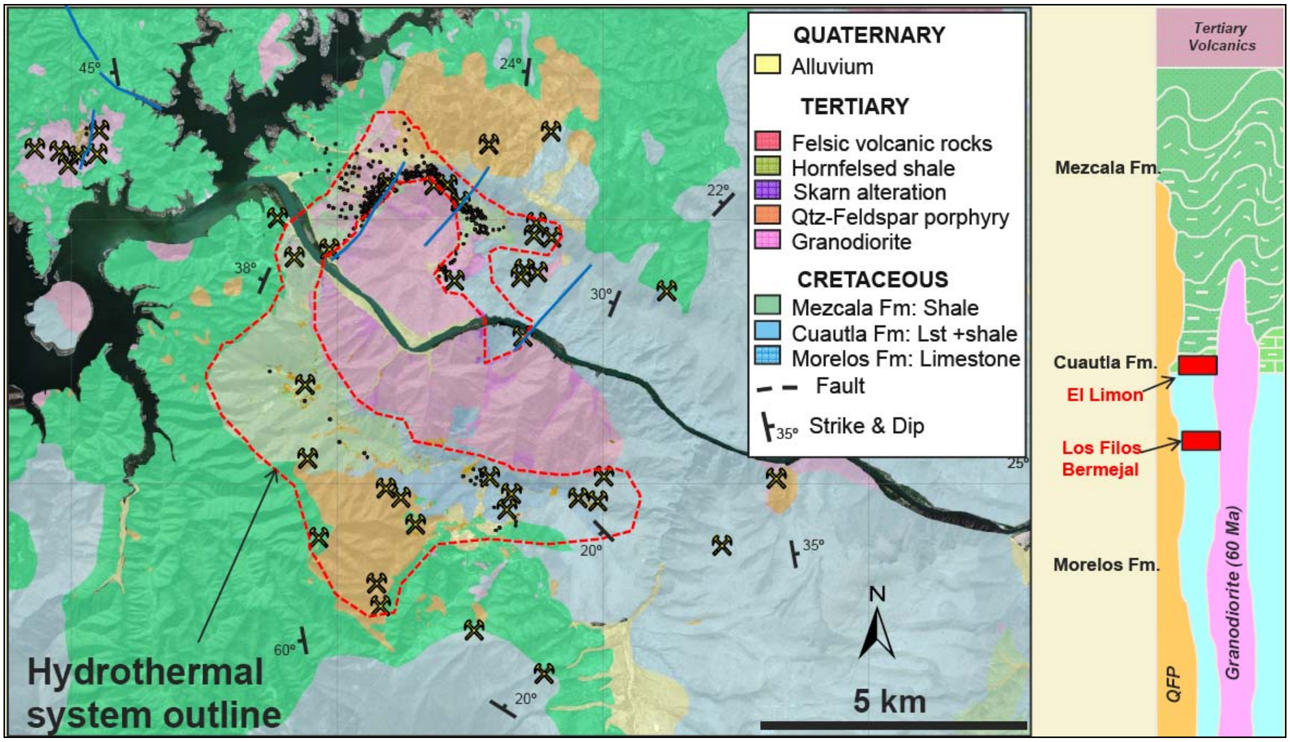


Figure 7-3: Project Geological Map Showing Geology in El Limón and Guajes Areas

Note: Figure courtesy Torex, sourced from Teck, 2009. Crossed picks indicate artisanal workings.

7.4 PROJECT GEOLOGY

Since exploration commenced in the project area in the 1990s, two major gold deposits, El Limón, and Guajes, have been discovered, together with a number of smaller prospects and exploration targets. El Limón has been sub-divided into El Limón Norte Oxide, El Limón Main and El Limón Sur. Guajes is sub-divided into Guajes East and Guajes West, Figure 7-4.

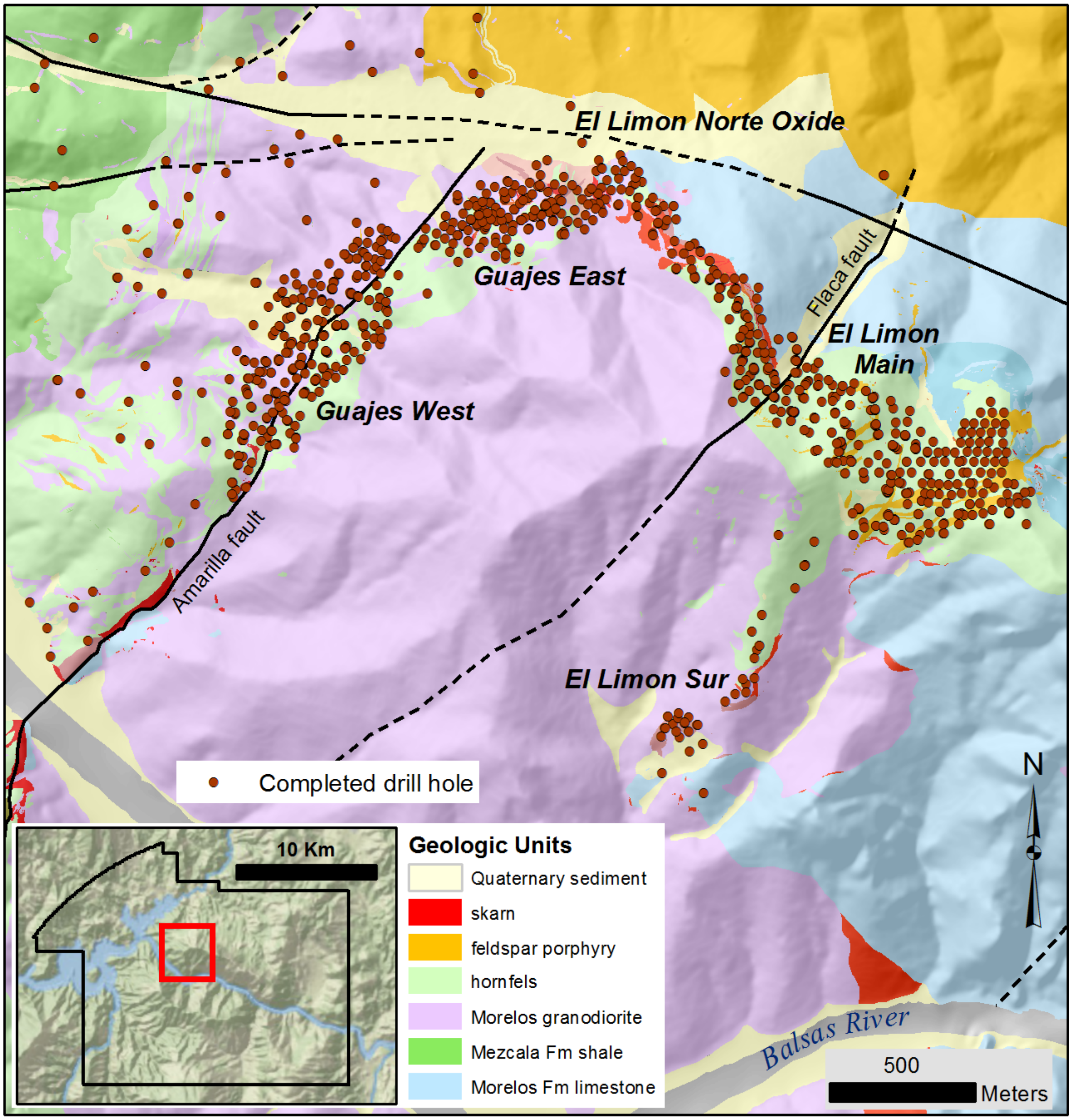


Figure 7-4: Deposit Location Map

Note: Figure courtesy of Torex, May 2012.

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 granodioritic stock (refer to Figure 7-4). 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 Au-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 granodioritic 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 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 (see Figure 7-4) 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. Skarns 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.

A cross-section through the main part of El Limón is shown in Figure 7-5 and a long section through the northeast portion in Figure 7-6.

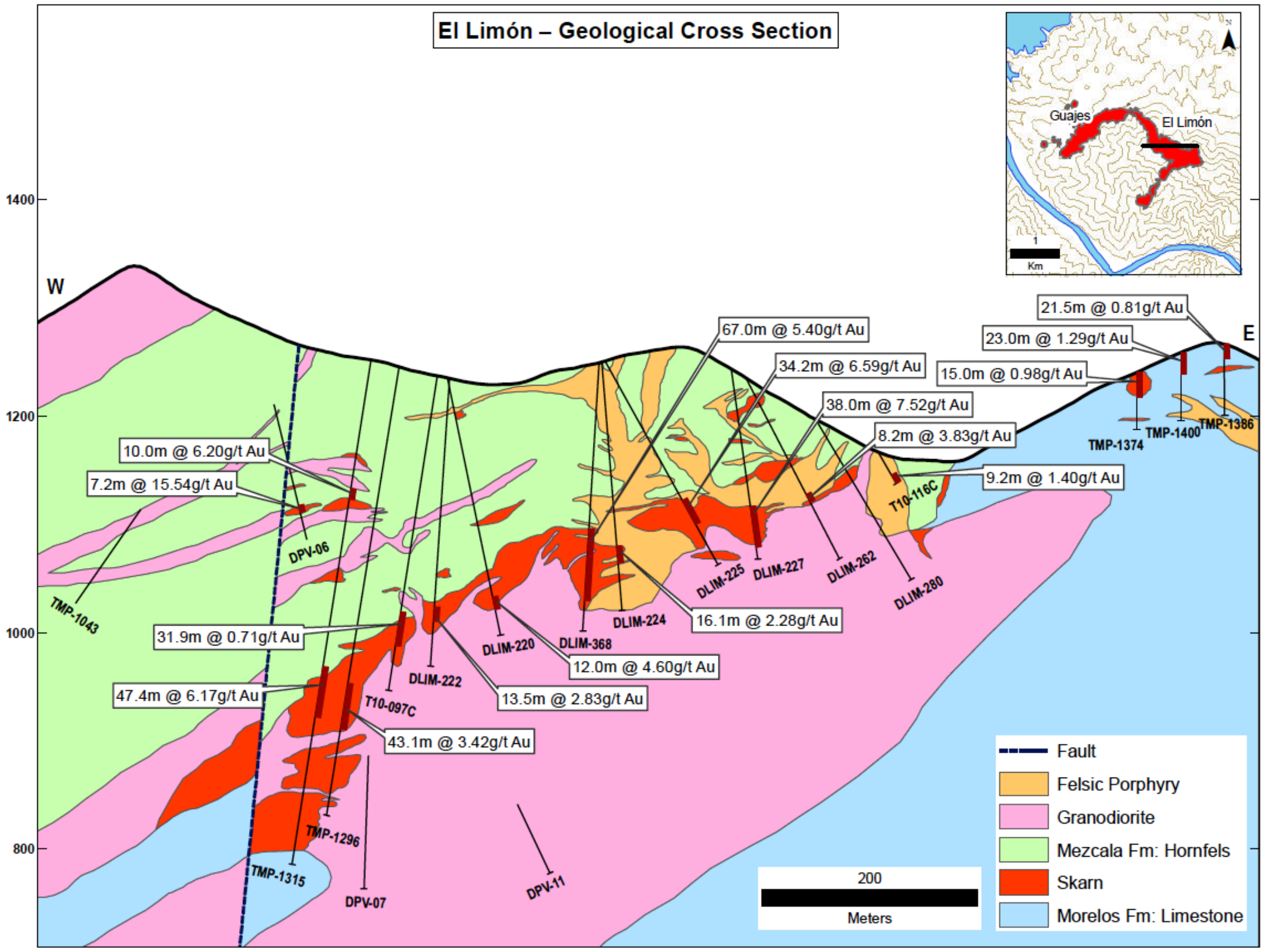


Figure 7-5: Cross Section, El Limón. Drill Intercepts Not Orthogonal to the Dip Angle of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012.

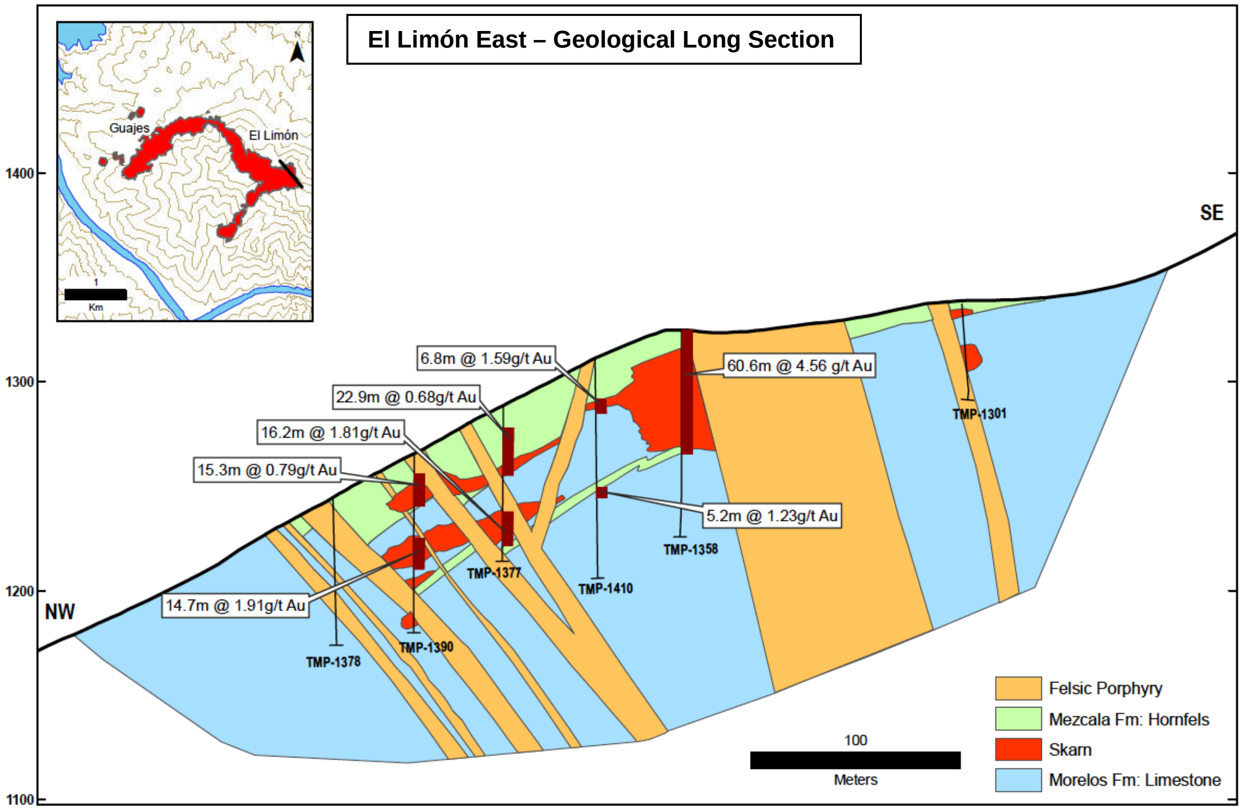


Figure 7-6: Long Section through NE Portion of El Limón. Drill Intercepts Not Orthogonal to the Dip of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012.

7.4.1.2 El Limón Sur Oxide

The El Limón Sur Oxide Zone occurs approximately 1 km south of the main El Limón skarn deposit and appears to be an oxidized remnant of skarn that crops out on a steep ridge extending down the mountain towards the Balsas River. The zone is strongly oxidized and has been largely eroded so that only the roots of the skarn system remain as a small, near-surface oxide deposit (Figure 7-7). Drilling and surface mapping has defined a zone of mineralization approximately 100 m by 200 m and with a maximum thickness of 100 m. This is an occurrence mainly of endoskarn and minor exoskarn emplaced at the contact between the intrusive and the host rocks represented by the marble and hornfels.

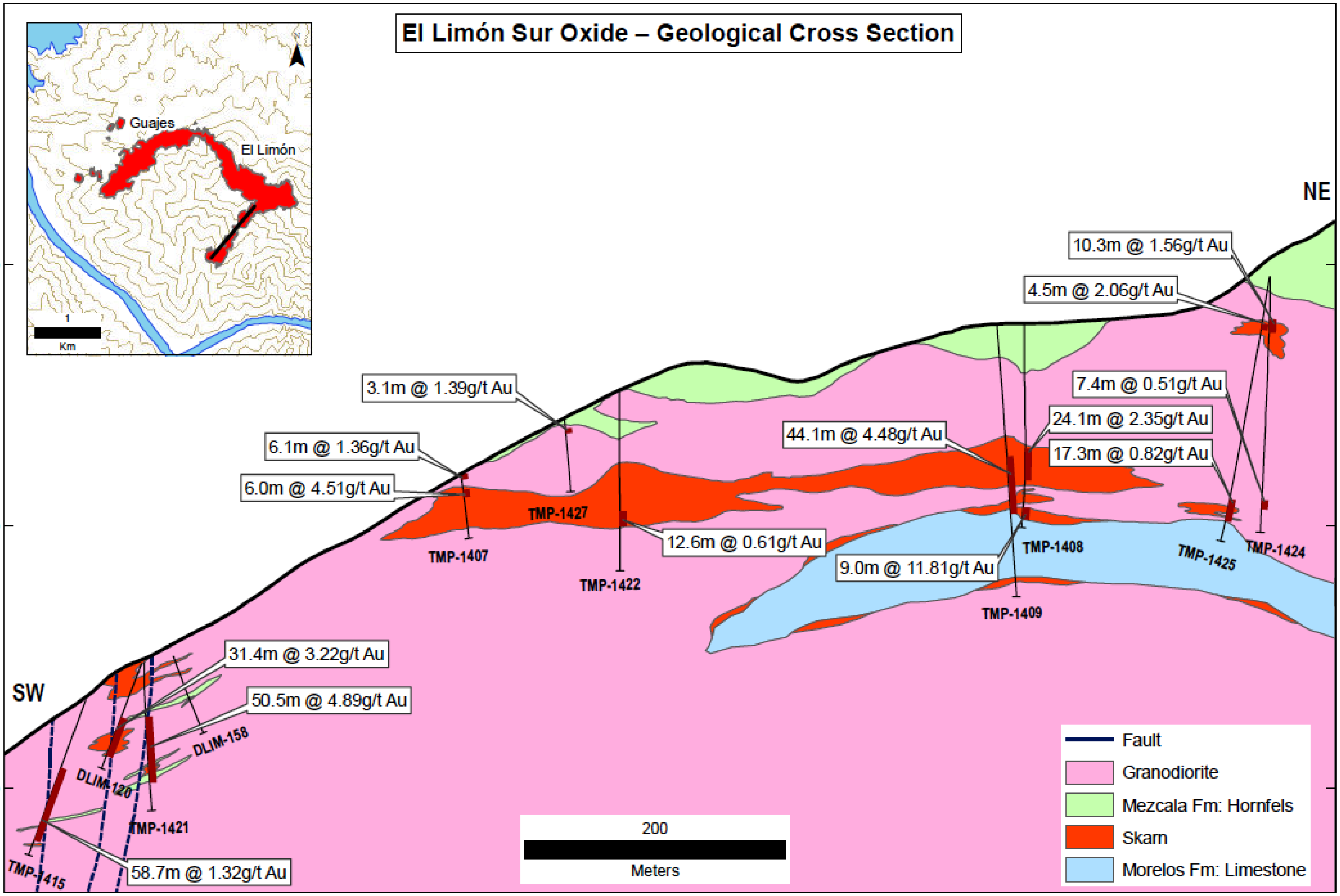


Figure 7-7: Cross-Section, El Limón Sur Oxide. Drill Intercepts Not Orthogonal to the Dip of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012.

7.4.1.3 El Limón Norte Oxide

The skarn at El Limón Norte Oxide outcrops and 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. See Figure 7-8.

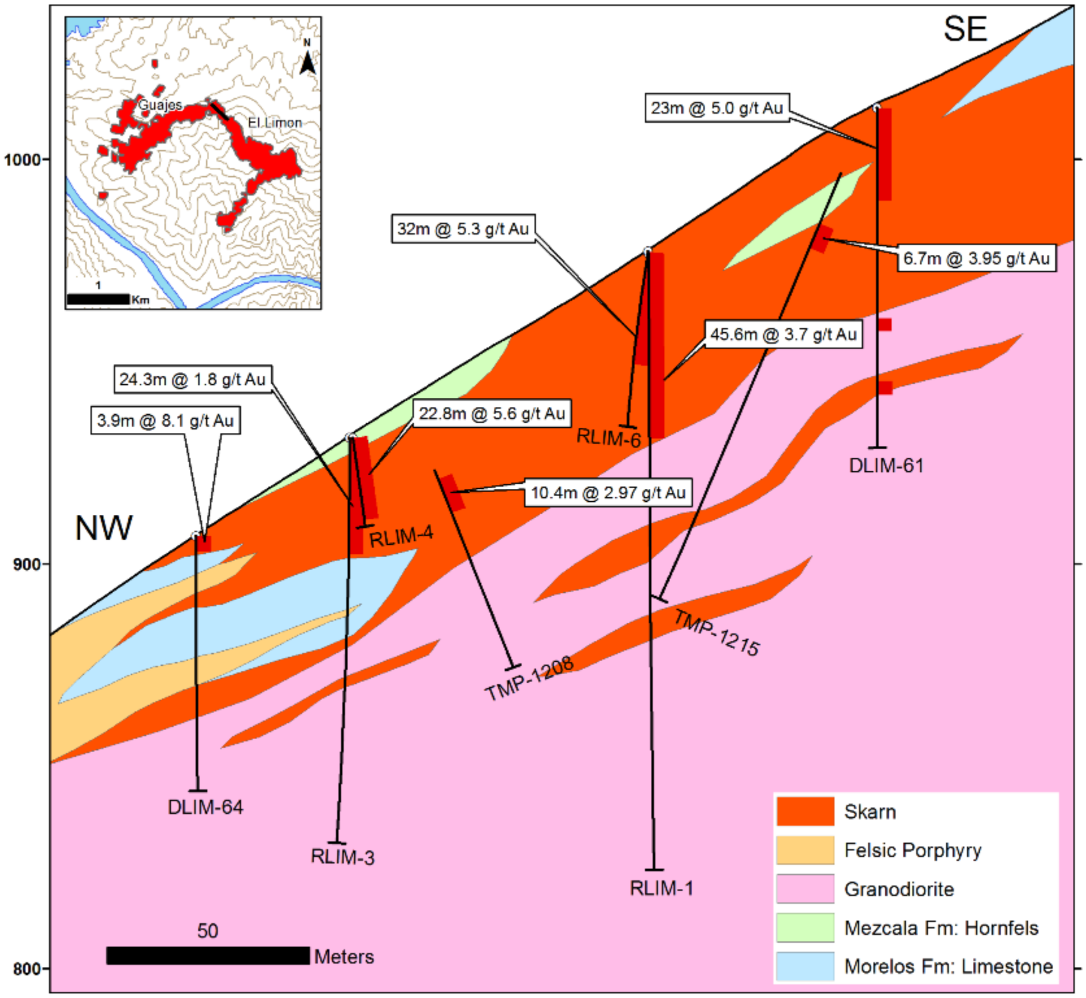


Figure 7-8: Cross-Section, El Limón Norte Oxide. Drill Intercepts Not Orthogonal to the Dip of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012.

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 intrusive.

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 (Figure 7-9).

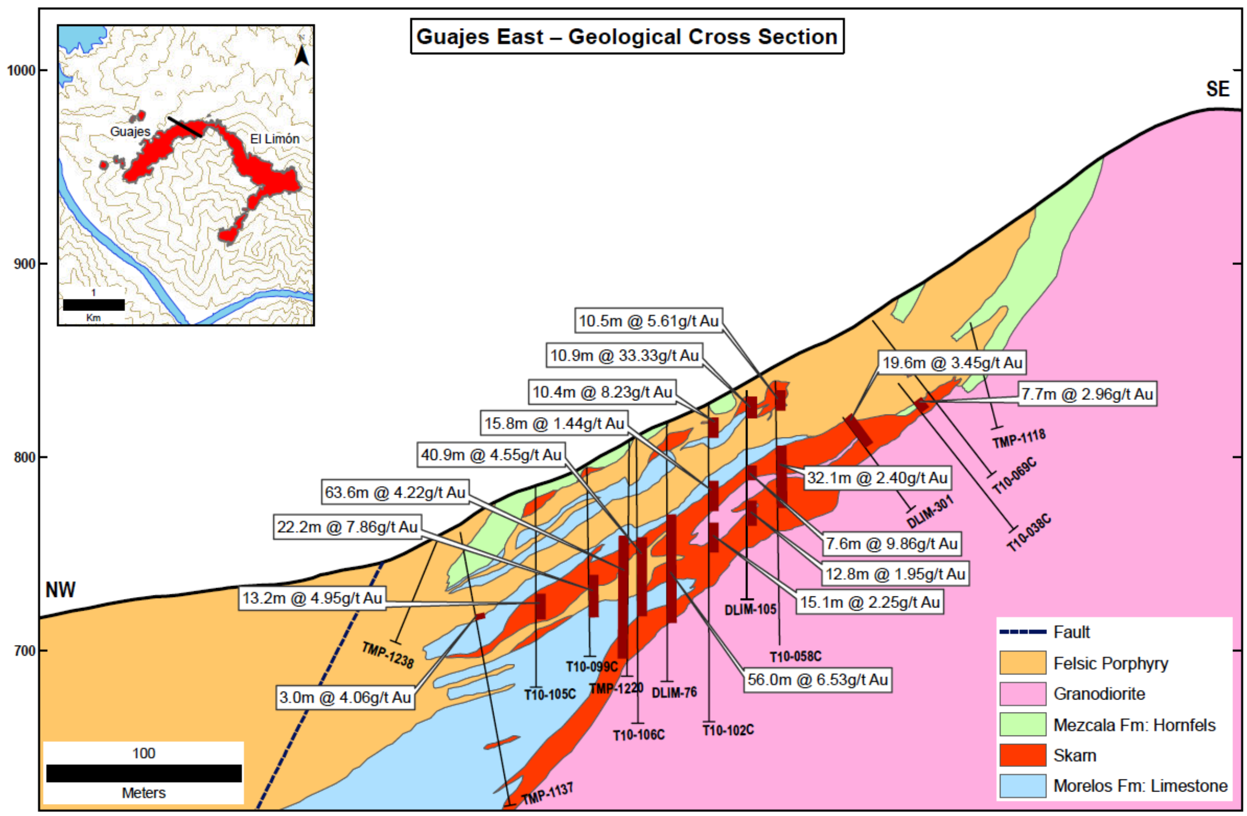


Figure 7-9: Cross-Section, Guajes East. Drill Intercepts Not Orthogonal to the Dip of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012.

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.

There is a quartz–feldspar porphyry sill that has been strongly altered to kaolinite, sericite, pyrite and carbonate with some brecciated and silicified portions. The sill 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. A cross-section through the deposit is included as Figure 7-10.

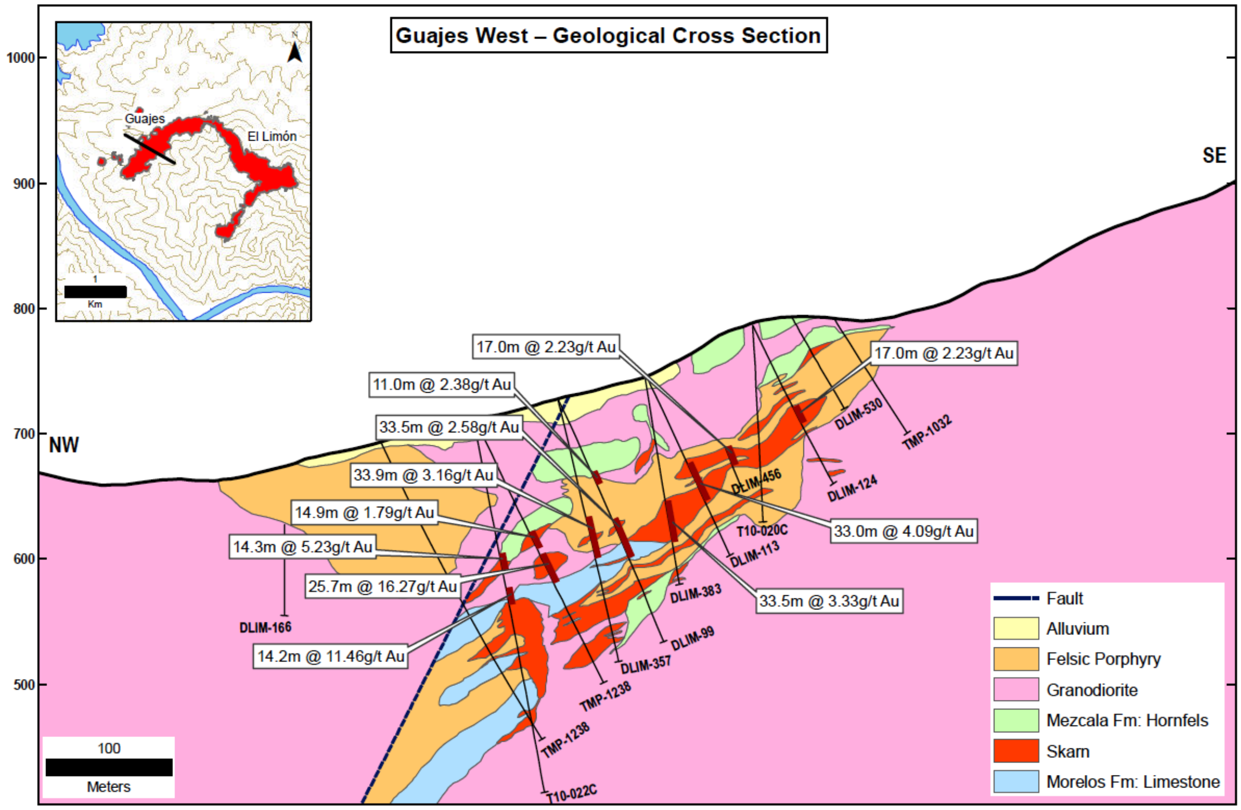


Figure 7-10: Cross-Section, Guajes West. Drill Intercepts Not Orthogonal to the Dip of the Skarn are Longer than True Thickness

Note: Figure courtesy of Torex, May 2012

7.5 MINERALIZATION

7.5.1 Skarn Types

7.5.1.1 Endoskarn

Endoskarns 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.

7.5.1.2 Exoskarn

Excluding relatively fine-grained hornfelsed rocks, the exoskarns 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-associated sulphides 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.

7.5.1.3 Retroskarn

As noted above, the retroskarn is a calcite ± clay ± oxide-altered pre-existing skarn. The precursor skarn comprised garnet ± salitic (Fe-rich) to hedenbergitic (still more Fe-rich) pyroxenes. During site visits by Torex personnel, a type of strongly-oxidized skarn was noted in drill core that consistently runs very high gold grades and is recognizable even in surface outcrops in the area of the El Limón 'oxide zone'. This unit has also been logged during Teck’s work as “retroskarn”.

7.5.1.4 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).

7.5.1.5 Mineralization

The El Limón skarn has a high pyroxene to garnet ratio. The pyroxene is typically dark green, very fine-grained, and is more abundant towards the contact with the hanging wall hornfels. In contrast, garnet abundance increases towards the intrusion and its contact with the footwall marble. Petrographic observations suggest that pyroxene is calcium-rich with some iron; garnet is typically grossularite with lesser almandine (McLeod, 2004). Magnetite is very rare and has been observed in pods only very locally in one or two core holes in the Guajes area.

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 (Teck Resources, 2008).

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

7.6 COMMENTS ON SECTION 7

In the opinion of AMEC E&C, the mineralization style and setting of the deposits is sufficiently well understood to support Mineral Resource and Mineral Reserve estimation.

8 DEPOSIT TYPES

8.1 KEY POINTS

The main takeaway of this analysis is as follows:

- Mineralization identified within the project to date is typical of intrusion-related gold skarn deposits.

8.2 DESCRIPTION OF DEPOSIT TYPES

Gold skarns typically form in orogenic belts at convergent plate margins are related to plutonism associated with the development of oceanic island arcs or back arcs (Ray, 1998).

Mineralization frequently displays strong stratigraphic and structural controls. Deposits can form along sill–dyke intersections, sill–fault contacts, bedding–fault intersections, fold axes, and permeable faults or tension zones. In the pyroxene-rich and epidote-rich types, mineralization commonly develops in the more distal portions of the alteration envelopes. In some districts, specific suites of reduced, Fe-rich intrusions can be spatially related to Au-skarn mineralization. Mineralization in the garnet-rich Au skarns tends to lie more proximal to the intrusions.

Deposits range from irregular lenses and veins to tabular or stratiform orebodies with lengths ranging up to many hundreds of meters. Mineral and metal zoning is common in the skarn envelope. Gold is frequently present as micrometer-sized inclusions in sulphides, or at sulphide grain boundaries. Mineralization in pyroxene-rich and garnet-rich skarns tends to have low Cu:Au (<2000:1), Zn:Au (<100:1) and Ag/Au (<1:1) ratios.

The deposits of the project area are considered to be examples of calcic-type skarns. All of the deposits are genetically related to the El Limón granodiorite, and the hydrothermal system that accompanied granitoid emplacement. 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. Both types replace intrusive rocks (endoskarn) and hornfels (exoskarn). Common sulphides include pyrrhotite, pyrite, chalcopyrite, arsenopyrite, and trace sphalerite, molybdenite, galena, and bismuth minerals. Gold mineralization is found primarily within the main skarn zones, and oxide zones, although low-grade gold values have also been obtained from hornfels zones with calcite–biotite–chlorite–sulphide veins.

Skarns develop in sedimentary carbonate rocks, calcareous clastic rocks, volcaniclastic rocks or (rarely) volcanic flows. They are commonly related to high to intermediate-level stocks, sills, and dykes of gabbro, diorite, quartz diorite, or granodiorite composition. Skarns are classified as calcic or magnesian types; the calcic subtype is further subdivided into pyroxene, epidote, or garnet-rich members. These contrasting mineral assemblages reflect differences in the host rock lithologies as well as the oxidation and sulphidation conditions in which the skarns developed (Ray, 1998):

- Pyroxene-rich Au skarns typically contain a sulphide mineral assemblage comprising native gold ± pyrrhotite ± arsenopyrite ± chalcopyrite ± tellurides ± bismuthinite ± cobaltite ± native bismuth ± pyrite ± sphalerite ± maldonite. They generally have a high sulphide content and high pyrrhotite:pyrite ratios. Mineral and metal zoning is common in the skarn envelope. Extensive exoskarns form, generally with high pyroxene:garnet ratios. Prograde minerals include diopsidic to hedenbergitic clinopyroxene, K-feldspar, Fe-rich biotite, low Mn grandite (grossular–andradite) garnet, wollastonite, and vesuvianite. Other less common minerals include rutile, axinite, and sphene. Late or retrograde minerals include epidote, chlorite, clinozoisite, vesuvianite, scapolite, tremolite–actinolite, sericite, and prehnite.

- Garnet-rich Au skarns can contain native gold ± chalcopyrite ± pyrite ± arsenopyrite ± sphalerite ± magnetite ± hematite ± pyrrhotite ± galena ± tellurides ± bismuthinite. They generally have a low to moderate sulphide content and low pyrrhotite:pyrite ratios. The garnet-rich Au skarns typically develop an extensive exoskarn, generally with low pyroxene:garnet ratios. Prograde minerals include low Mn grandite garnet, K-feldspar, wollastonite, diopsidic clinopyroxene, epidote, vesuvianite, sphene, and apatite. Late or retrograde minerals include epidote, chlorite, clinozoisite, vesuvianite, tremolite-actinolite, sericite, dolomite, siderite and prehnite.

- Epidote-rich Au skarns often contain native gold ± chalcopyrite ± pyrite ± arsenopyrite ± hematite ± magnetite ± pyrrhotite ± galena ± sphalerite ± tellurides. They generally have a moderate to high sulphide content with low pyrrhotite:pyrite ratios. Abundant epidote and lesser chlorite, tremolite-actinolite, quartz, K-feldspar, garnet, vesuvianite, biotite, clinopyroxene, and late carbonate form in the exoskarn.

8.3 COMMENTS ON SECTION 8

In the opinion of the AMEC QP, a skarn deposit type is an appropriate model the project and for development of Mineral Resource and Mineral Reserve estimates.

9 EXPLORATION

9.1 KEY POINTS

The key points of this section are:

- A broad range of exploration techniques have been utilized at the project over a period of more than a decade. These include magnetic surveys, IP surveys, stream sediment sampling, rock chip and soil sampling, trenching, detailed surface mapping, channel sampling, RC drilling, and core drilling.
- The first two deposits found, El Limón and Guajes, are effectively non-magnetic.
- Exploration focus has now shifted to magnetic targets.
- The first of these magnetic targets to be drilled, Media Luna, has intersected a magnetite skarn at the contact between the intrusive and sedimentary rocks. This magnetite skarn has returned very encouraging gold, silver and copper assay results. Drilling at Media Luna is currently ongoing.
- The 2012 exploration drill program will continue to focus on the Media Luna target and other magnetic targets in close proximity to Media Luna.

9.2 BACKGROUND

Prior to the acquisition of the Project by Torex, Teck completed extensive exploration activities on the project that included regional and detail mapping, rock, silt and soil sampling, trenching, RC and diamond drilling, ground IP geophysical surveys, aeromagnetic survey, mineralization characterization studies and metallurgical testing of samples from Guajes East, Guajes West, El Limón and El Limón Sur. Petrographic studies and density measurements on the different lithologies were also conducted. In addition, historic small-scale mining activity had been undertaken by artisanal miners in some areas of the project.

Programs completed by previous companies are discussed in Section 6 of this report. Since commencing work in March 2010, Torex has carried out a variety of exploration activities at Morelos including geologic mapping, rock (chip and channel) sampling, and diamond drilling, as well as review of historic project data. Based on a recent review of historical data and results obtained by Torex, an exploration strategy and exploration plan for the known resource as well as targets outside of the resource area was developed.

9.3 SURVEY

The coordinate system now used for all data collection and surveying at the Project is the Universal Transverse Mercator (“UTM”) system Zone 14 North and WGS 84 datum.

9.4 GEOLOGIC MAPPING

Detailed mapping at a scale of 1:5000 has been completed by Torex personnel at the Naranjo and Media Luna targets (Figure 9-1). Additional detailed mapping was completed by consultants at the south end of Naranjo, La Fe, Guajes South, and Pacifico targets, and in the southeast part of the Limón deposit. This mapping has been incorporated into the district map initially prepared by Teck.

9.5 GEOCHEMICAL SAMPLING

Torex carried out channel sampling programs outside of the resource area, Media Luna and El Cristo 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 meters. The number of samples does not include the work done at Limón South. As Limón South was included in the mineral resource estimate, these channel samples are discussed in Section 10 of this report.

9.6 ANALYSIS OF EXISTING GEOPHYSICAL DATA

Data from the 200 m line-spacing aeromagnetic survey flown by Teck was reprocessed to create a 3-D magnetic susceptibility model for the project area. This model was recently re-evaluated to locate drill targets in the Media Luna, Todos Santos, Pacifico, Corona, and Limón South/Fortuna areas.

9.7 GEOTECHNICAL STUDIES

Work completed for the feasibility study includes drilling about 2,200 meters of diamond drilling in 10 diamond drill holes as part of the hydrology investigation. Seven diamond holes were drilled in the area of the proposed pit design to provide geotechnical data to assist with mine design.

9.8 OTHER TARGET AREAS

A review of all exploration targets within the Morelos property was recently completed and resulted in prioritization of 12 targets, most of which have been previously recognized. These include Media Luna, Fortuna, Todos Santos South, Pacifico, Corona, Querenque, Tecate, Azcala, El Olvido, La Fe, Najanjo SW and El Cristo (Figure 9-1).

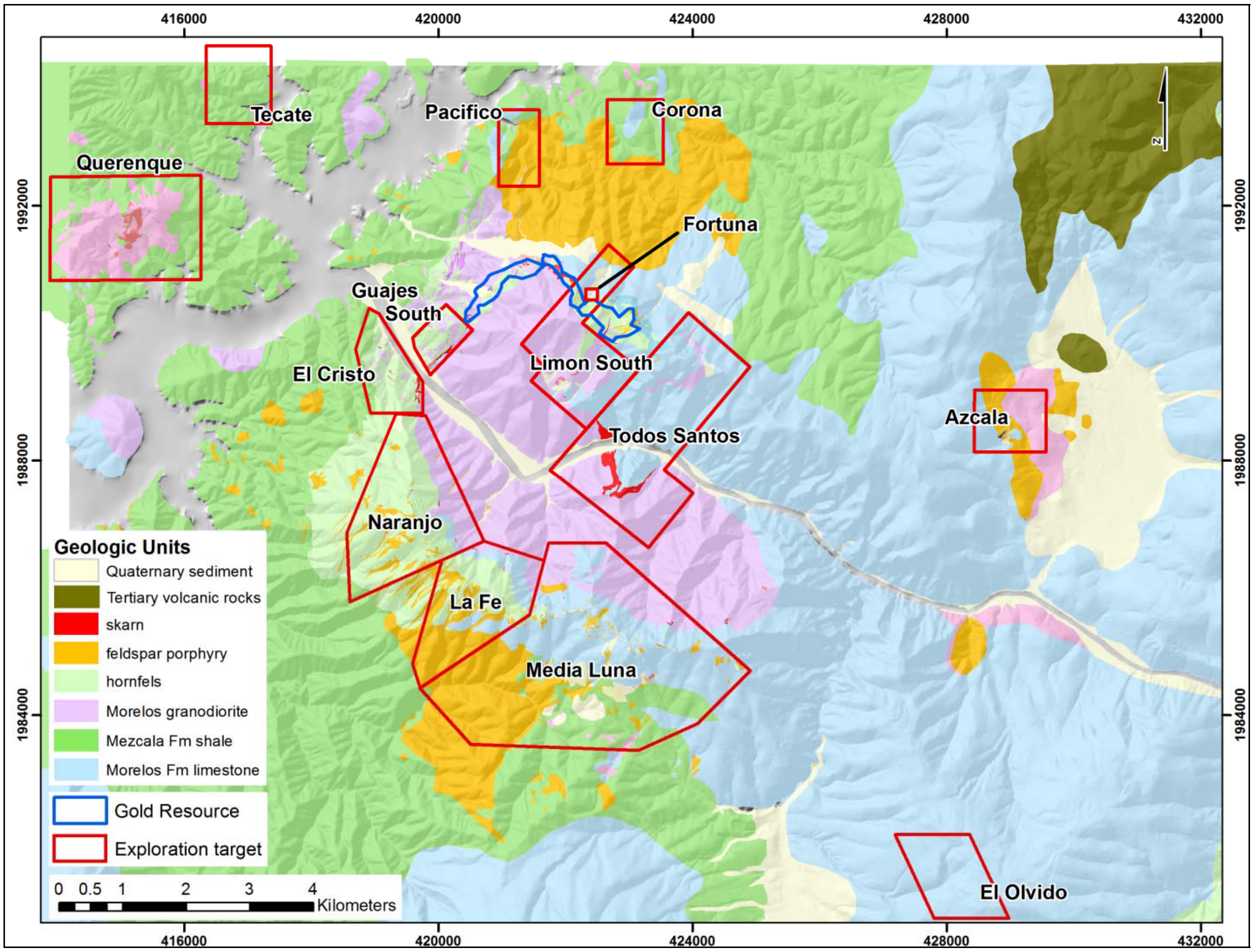


Figure 9-1: Morelos Revised Exploration Targets Shown on District-Scale Geologic Map

Note: Figure courtesy of Torex, May 2012.

Media Luna: The Media Luna prospect is located on the southern margin of the El Limón granodiorite stock, approximately 5 kilometers south of the El Limón gold deposit. Geologically, the area is characterized by a structurally complex sequence of Morelos Formation limestones and Mezcala Formation sediments. The El Limón stock borders the sedimentary package at the north end of the prospect and dips to the south-southwest beneath the sediments. The prospect area is defined by a sharp and intense magnetic high anomaly of approximately 3 km x 1.5 km dimension. Within the magnetic high and along the main Media Luna topographic ridge, several fault and fracture zones occur with variable silicification, iron-oxides and local high-grade gold values from surface sampling.

Initial drilling on Media Luna prospect by Torex has identified gold mineralization over a 900 meter strike length. Torex has released the assay data on the first 16 holes drilled into the Media Luna target. Table 9-2 summarizes the results available to date. Figure 9-3 shows the surface projection of where the drill hole intersected the skarn at the contact between the intrusive and the Morelos Formation.

The Media Luna mineralization is hosted by a massive iron and sulphide skarn situated at the main intrusive-sediment contact. The skarn has a mineralized thickness of between 4 to 21 meters, with the higher grade portions of the gold, silver, and copper mineralization being 4 to 7 meters in thickness.

Table 9-1 list the drill hole coordinates and surveys and Table 9-2 shows selected mineralized results from the Media Luna drilling. Figure 9-2 through Figure 9-4 show the Media Luna prospect in greater detail.

Table 9-1: Media Luna Drill Hole Collar Coordinates and Surveys

HoleID	Easting (m)	Northing (m)	Elevation (m)	Azimuth (degree)	Dip (degree)	Depth (m)
ML-01	423212.2	1984572.5	1282.6	275	-62	466.5
ML-02	422926.5	1984763.3	1475.7	0	-90	696
ML-03	423591.1	1985039.2	1582.675	0	-90	372
ML-04	423592.11	1985037.8	1583.83	290	-45	594.5
ML-06	422844.3	1985260.1	1531.6	320	-70	507
ML-07	422807.6	1985302.9	1536.9	320	-55	414
ML-08	422725.3	1984664.5	1353.7	90	-62	578
ML-12	422889.46	1984855.8	1513.8	0	-90	570
ML-15	422869.22	1985215.1	1536.122		-90	417.8
ML-36	422902.41	1984366.1	1273.825	30	-65	513
ML-39	423090.5	1984296.6	1250.938	0	-90	527.5
ML-45	423213.01	1984572.4	1282.637	0	-90	500
ML-46A	422724.52	1984665.2	1353.748		-90	599.8
ML-48	423056.3	1984366.7	1284.53	0	-90	524
ML-75	423595.49	1985036.8	1584.08	150	-75	639
ML-77	423212.85	1984572.1	1282.567	105	-60	499.3

Table 9-2: Torex Drilling Results – Media Luna Target (information current as at 19-Aug-12)

Drill-Hole	Dip	Total Length (m)	Intersection	From (m)	To (m)	Core Length (m)	Estimated True Thickness (m)	Au g/t	Ag g/t	Cu %	Au equiv (*) g/t
ML-01	-62	466.5		406.3	416.36	10.06	10.06	3.31	31.2	1.35	5.91
			including	408.64	413.46	4.82	4.82	6.13	58.7	2.4	10.81
ML-02	-90	696		500.9	516.7	15.8	13.68	2.05	12.1	0.55	3.1
			including	503.05	507.43	4.38	3.79	4.27	9.3	0.78	5.61
ML-03	-90.0	372.0		321.00	325.73	4.73	4.55	0.04	9.16	0.17	0.46
ML-04	-45.0	594.5		463.27	476.00	12.73	6.92	4.31	8.12	0.43	5.11
			including	469.90	476.00	6.10	3.32	7.34	10.51	0.60	8.43
				525.80	541.19	15.39	8.27	5.65	43.80	1.25	8.34
			including	525.80	527.72	1.92	1.03	33.57	4.53	0.03	33.69
			and	535.66	541.19	5.53	2.97	3.84	118.71	3.45	11.21
ML-06	-70	507		282.43	286.47	4.04	3.8	0.2	3.9	0.46	0.96
ML-07	-55	414		328.18	342.57	14.39	11.79	2.19	24.2	0.85	3.91
			including	334.36	338.37	4.01	3.28	4.91	44.3	1.38	7.8
ML-08	-62	578		514.54	536.12	21.58	18.69	2.39	8.9	0.57	3.41
			including	514.54	521.6	7.06	6.11	6.56	9.9	1.15	8.47
ML-12	-90.0	570.0		498.35	499.10	0.75	0.52	0.05	1.55	0.23	0.42
ML-15	-90.0	417.8		137.29	142.59	5.30	4.17	1.30	40.01	0.00	2.04
				351.92	363.68	11.76	9.26	2.61	7.36	0.53	3.54
			including	356.27	363.68	7.41	5.84	2.58	11.15	0.84	4.04
ML-36	-65.0	513.0		337.00	340.65	3.65	3.09	0.93	107.31	2.64	6.87
				415.24	419.24	4.00	3.36	0.28	5.72	0.14	0.60
ML-39	-90.0	527.5		446.10	449.26	3.16	2.80	0.08	5.54	0.11	0.35
ML-45	-90.0	500.0		297.75	298.54	0.79	0.70	0.24	8.53	0.20	0.70
ML-46A	-90.0	599.8		39.38	42.51	3.13	2.30	0.19	29.00	0.02	0.75
				521.72	529.43	7.71	5.34	4.59	5.90	0.12	4.88
			including	521.72	525.55	3.83	2.63	8.00	8.34	0.09	8.29
				548.97	592.83	43.86	30.15	0.65	66.71	2.02	4.91
ML-48	-90.0	524.0		443.33	450.49	7.16	4.91	0.40	12.10	0.36	1.16
			including	443.33	444.50	1.17	0.80	1.30	22.63	0.76	2.86
ML-75	-75.0	639.0		354.37	362.75	8.38	6.69	0.55	50.32	1.29	3.41
			including	357.70	362.75	5.05	4.03	0.75	75.86	1.96	5.09
				389.37	395.60	6.23	4.94	0.95	8.27	0.32	1.59
				467.42	471.80	4.38	3.46	2.07	7.40	0.14	2.42
				482.17	486.94	4.77	3.70	0.94	18.77	0.40	1.89
				519.31	523.68	4.37	3.39	0.51	7.73	0.20	0.95
ML-77	-60.0	499.3		351.00	353.62	2.62	1.56	0.63	11.06	0.30	1.29
				357.95	360.00	2.05	1.22	2.44	58.76	1.60	5.93
				382.18	391.80	9.62	5.59	1.35	10.82	0.49	2.29
			including	386.95	390.49	3.54	2.06	1.95	10.32	0.64	3.10

*The gold equivalent grade, including copper and silver values, is based on 100% metal recoveries. The gold grade equivalent calculation used is as follows:

Au g/t (EQ) = 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 - $1,600/oz, Copper - $3.50/lb, Silver - $29.59/oz

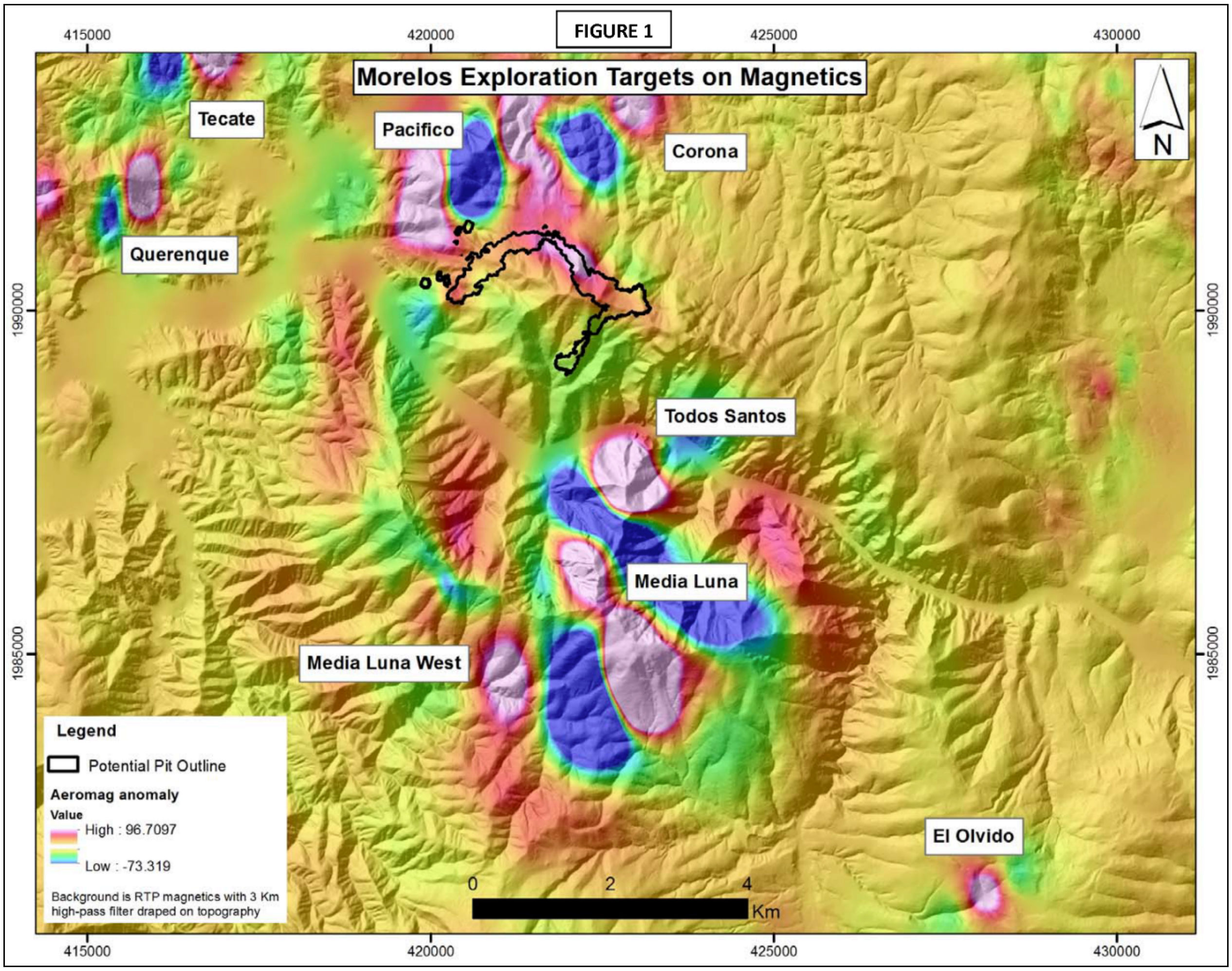


Figure 9-2: Morelos Exploration Targets on Magnetics

Note: Figure courtesy of Torex, June 2012.

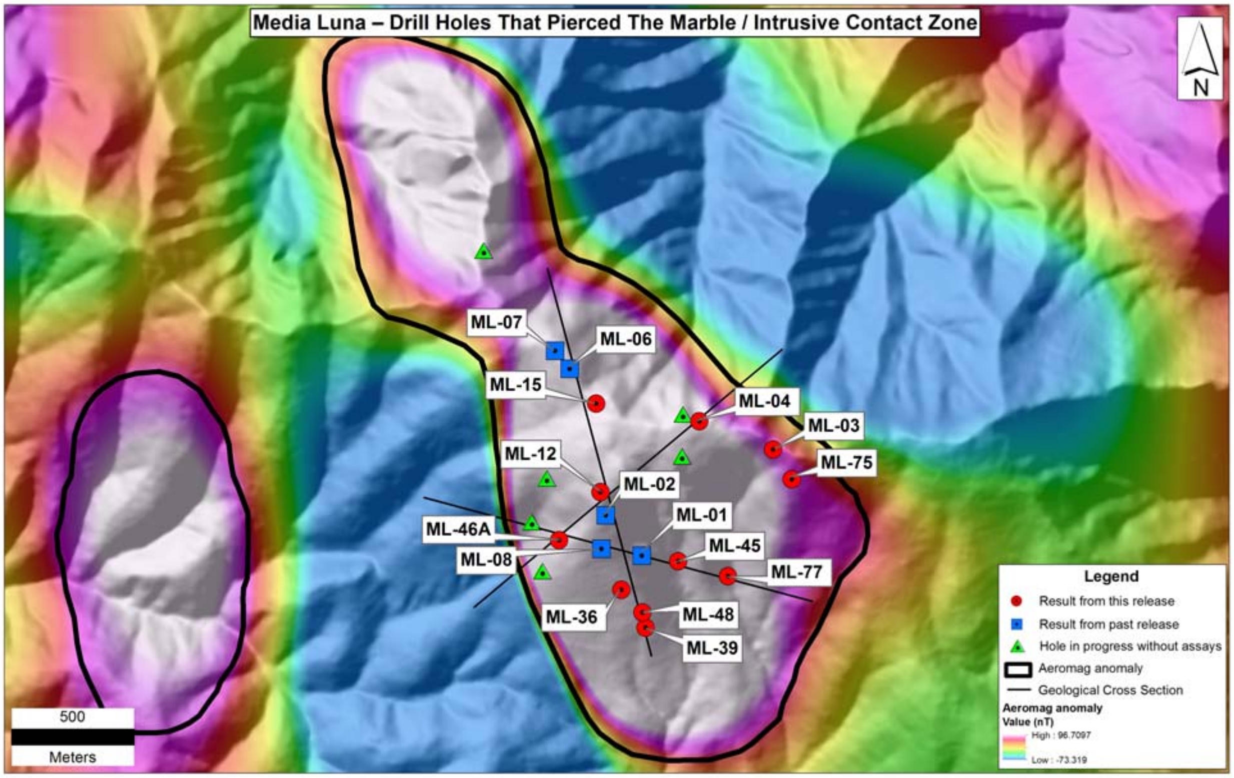


Figure 9-3: Media Luna Exploration Drilling – August 2012

Note: Figure courtesy of Torex, August 2012.

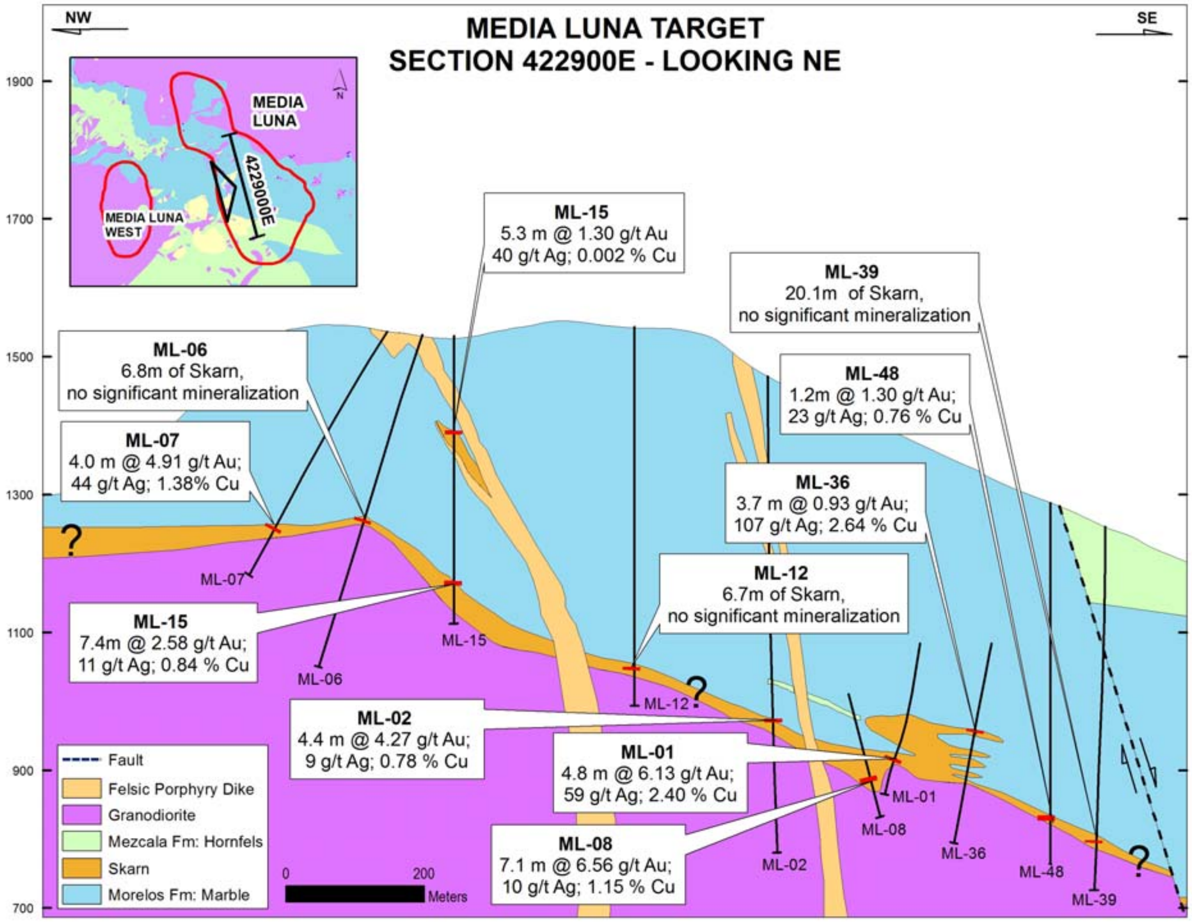


Figure 9-4: Geological Sectional View Looking Northeast of Media Luna with Drill Holes.

Note: Figure courtesy of Torex, August 2012. Refer to Table 9-2 for true versus drilled thickness.

Fortuna: The target is based on an anomaly beneath the El Limón deposit that is recognized in the 3-D magnetic susceptibility model.

Todos Santos: A poorly-studied area with significant outcropping skarn present and gold values in rock samples along a northeast-trending structure intersecting the skarn. There is also an intense magnetic high similar to Media Luna in the southern half of the target. No follow up work has been done to date.

Pacifico: Located 1.5 km north of El Limón and defined by the presence of a strong magnetic anomaly near an intrusion-limestone contact. 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. The hole has significant hornfels at depth with local sulphides, including arsenopyrite and pyrrhotite. Two geologic traverses across the target were made in early 2012, no additional work has been done since.

Corona: Defined by the presence of a strong magnetic high north of El Limón. Morelos Formation limestone is mapped in the center of the area but there has been no geochemical sampling or detailed mapping. No follow-up work has been done to date.

Querenque: Previous work by Teck indicates the area comprises hornfelsed Mezcala Formation with minor skarn and granodiorite intrusive similar to El Limón. Teck drilled 3 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.

Azcala: An area of silicified limestone and hydrothermal breccia with gold up to 3.5 g/t in rock chip samples reported by Teck. Teck drilled 3 holes with minor gold intersections at shallow depth. 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 southern property boundary. No work has been carried out on the target by Torex.

La Fe: The target comprises a complex package of hornfelsed Mezcala Formation cut by numerous sills and dikes of variable composition. The contact zone between granodiorite and sedimentary rocks is poorly understood. There are historic workings with gold mineralization in steeply dipping structural zones adjacent to argillic-altered dikes and sills. Minimal work has been conducted by Torex with work completed consisting of two geological reconnaissance traverses.

Naranjo: Exploration work including mapping and drilling has been completed at Naranjo, with preliminary data available. Results are being validated through check assays and geological interpretation.

El Cristo: Results to date are disappointing but need to be validated through follow-up drilling and testing the remaining part of the target area.

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 this feasibility study, 93% were from diamond drill holes, 5% were from RC holes, and 2% were from channel samples.
- 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 from the depth of the targets areas.

10.2 DRILLING SUMMARY

Drilling for this feasibility study was completed between 1997 and 2012. At the time of publication a significant exploration program continues and is being expanded. A database cutoff date of 6 April 2012 for the resource estimate resulted in holes up to TMP-1430 being included, for a total of 1202 drill holes (197,980 m) and 43 channels (4,162 m). Drill data are summarized in Table 10-1. Drill hole locations are shown in Figure 10-1 to Figure 10-3. From this database, the drill data encompassing El Limón and Guajes was used to support the mineral resource estimate. In 2011, channel samples were re-sampled, and in some cases lengthened, to improve the knowledge of the extent of surface mineralization. AMEC considers these channel samples suitable for inclusion in the Mineral Resource and Mineral Reserve estimate.

Further drilling, completed by Torex after the April 6th database cutoff date, fell outside of the resource area, and was mainly located south of the river.

Table 10-1: Drill Hole Summary Table

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 All Data	Total All Lengths
2000	0	0	17	2,028.4	0	0	17	2,028.4
2001	7	1,647.8	44	7,928.7	0	0	51	9,576.5
2002	53	7,720.3	0	0	0	0	53	7,720.3
2003	28	3,778.6	0	0	0	0	28	3,778.6
2004	53	8,031.1	0	0	0	0	53	8,031.1
2006	133	22,740.1	0	0	0	0	133	22,740.1
2007	199	33,325.1	0	0	0	0	199	33,325.1
2008	71	10,544.5	0	0	0	0	71	10,544.5
2010	139	30,966.7	0	0	0	0	139	30,966.7
2011	365	59,695.6	0	0	43	4,162.2	408	63,857.8
2012	80	8,602.6	0	0	0	0	80	8,602.6
Unknown (pre-2008)	13	970.4	0	0	0	0	13	970.4
Total	*1,141*	*188,022.8*	*61*	*9,957.1*	*43*	*4,162.2*	*1245*	*202,142.1*

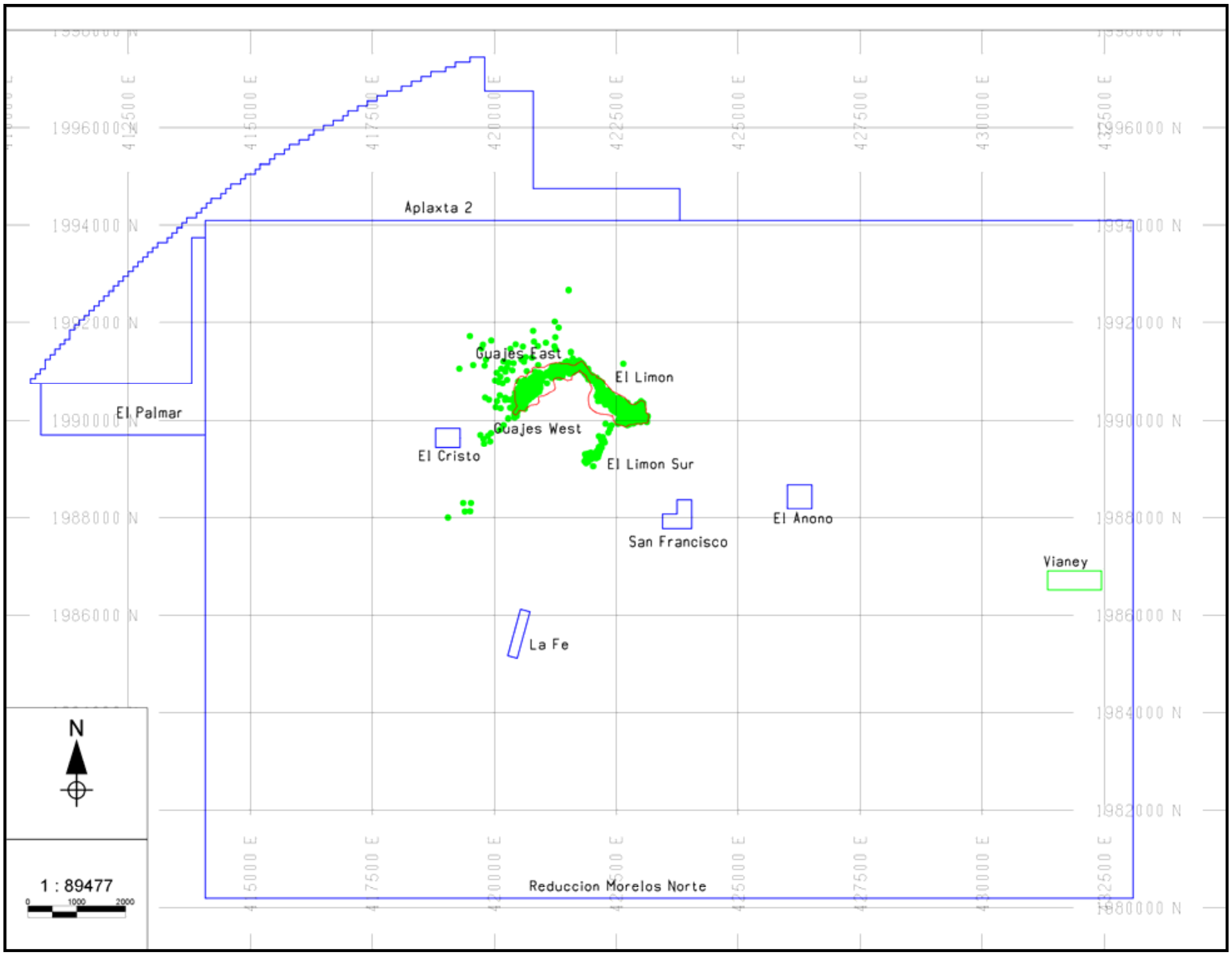


Figure 10-1: Drill Hole Location Map Within Property Boundary

Note: color codes on map are: blue = RC drill hole and green = core drill hole, red outline = 2012 Mineral Reserve pit, blue outline = claim blocks held by Torex, green outline = claim bock not held by Torex
Figure courtesy of AMEC, Aug 2012.

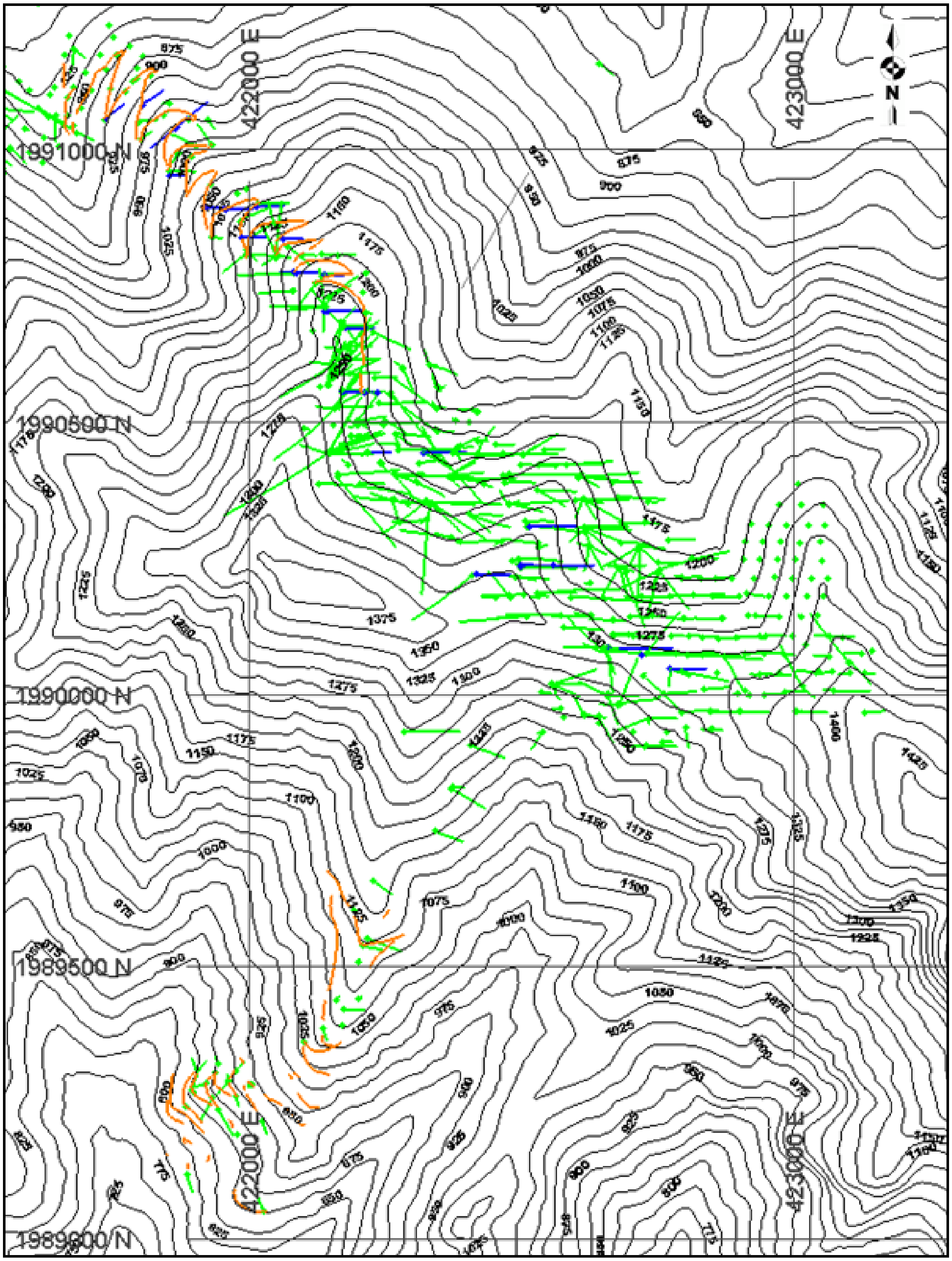


Figure 10-2: Drill Hole and Channel Sample Location Map, El Limón

Note: color codes on map are: orange = channel, blue = RC drill hole and green = core drill hole
Note: Figure courtesy of AMEC, May 2012.

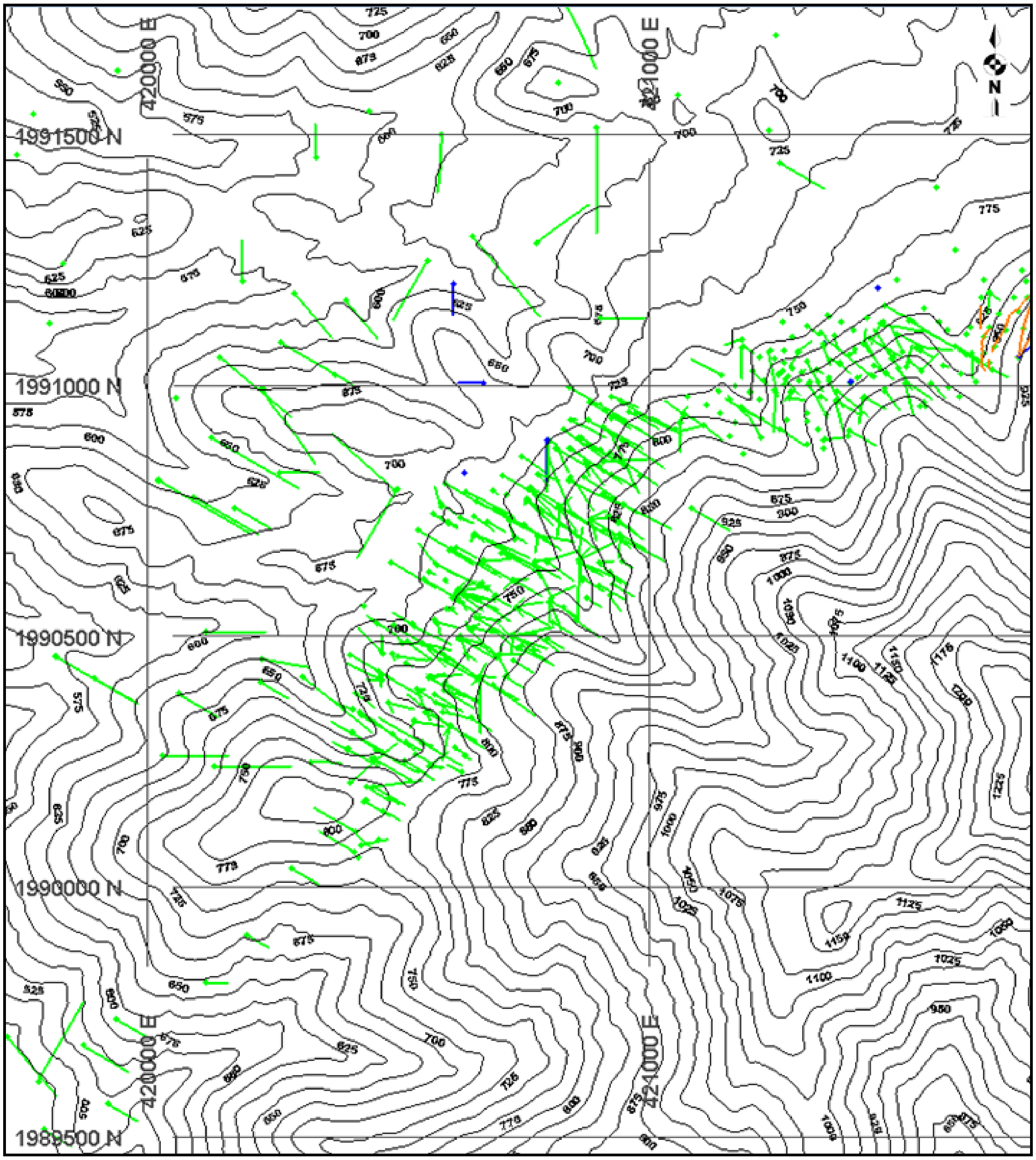


Figure 10-3: Drill Hole Location Map, Guajes

Note: color codes on map are: orange = channel, blue = RC drill hole and green = core drill hole
Note: Figure courtesy of AMEC, May 2012.

10.3 DRILL CONTRACTORS

Drilling under Torex was undertaken by a number of contractors, including Major Drilling, G4 Drilling, Boart Longyear, Moles and Colima. AMEC E&C has no information on the type of drill rigs employed.

10.4 DRILL METHODS

10.4.1 RC Drilling

All RC drilling was performed dry unless water injection became necessary to stabilize the hole. Some RC drilling was performed as pre-collars for core drill holes.

Sample recoveries were not recorded for RC holes.

10.4.2 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.

Any break in the core made during removal from the barrel was marked with a “color line”. When breakage of the core was required to fill the box, 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.

10.4.3 Channel Samples

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. The results of the channel sampling is broadly consistent with existing geological mapping and geochemical grab sampling results generated to date, and further validates continuity of gold mineralization at surface in skarn, breccias, intrusive, hornfels and other lithologies.

A total of 1,179 samples were taken at El Limón Norte Oxide and 818 samples were collected at El Limón Sur. 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.

Prior to sampling, the area was inspected and sample intervals marked for extraction. A Husqvarna K750 Rock hand saw was used to place the vertical cuts along the face of the wall and chisels were used to extract the samples. Channels already marked were cut on their borders and then material extracted and deposited on to a clean piece of plastic placed below the area to be sampled. The chipped out material was collected off the plastic and then transferred to plastic sample bags for analysis. Aluminum tags, painted markings and color flags were left at the sample sites. Figure 10-4 shows an example of channel sampling being carried out on the project.

Figure 10-4: Example of Channel Sampling

Note: Figure courtesy of Torex, May 2012.

Lithology data was collected at each sample site. Sample locations were recorded using handheld GPS Garmin GPSMAP 60CSx. All samples were delivered to the SGS laboratory in Durango City, Mexico, where they were dried and split. The pulps were then analyzed at SGS in Durango.

10.5 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. Rock quality designations (RQD) and recovery percentages were also recorded. Intervals for measuring recovery generally did not correspond to assay intervals.

Fifty-four holes had lithology relogged during 2012, before the cutoff date for the April 6th 2012 database. Relogging generally focused on drill holes drilled during 2011 and 2012 whose lithologic interpretation did not fit well with nearby holes. All drill cores are photographed.

10.6 COLLAR SURVEYS

Drill hole collars were initially surveyed using differential GPS. During consolidation of the data for modeling in 2005–2006, a 3.8 m bias between the collar elevations and the contour mapping was found. In 2006, a Total station survey was used to pull in new control from known control points. The collar elevations of the old holes were then resurveyed using the Total station. All subsequent 2006–2008 drill holes were surveyed using the Total station instrument. The existing contour mapping was also adjusted to correct for an error that was identified in one of the geodetic survey monuments used to produce the contour mapping.

Additional re-surveying of collars for 244 holes was performed in 2012 using differential GPS. These were performed on the majority of drilling performed in 2010-2012 (TMP and DPV holes)

10.7 DOWNHOLE SURVEYS

Several different down hole survey techniques and devices have been used to measure down hole azimuth and dip (Table 10-2). During the 2006 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).

Table 10-2: Downhole Survey Instrumentation used by Year

Year	Instrument
2000	Sperry Sun
2001	Tropari, acid tube
2002	Acid tube
2003	Acid tube
2004	Acid tube
2006	Reflex and minor acid tube
2007	Reflex and minor acid tube
2008	Reflex and minor acid tube
2010	Reflex
2011	Reflex
2012	Reflex

Drill holes from the 2007–2008 drill period 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. The azimuth recorded at drill collar was used at the down hole survey location.

AMEC reviewed azimuth deviations from Reflex® instrument measurements in low magnetic 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 RC AND CORE RECOVERY

Poor RC recovery was noted when drilling through fault zones. The RC drilling was discontinued on the El Limón and Guajes zones in 2002 and has only been used as an exploration tool on other targets since.

Core recovery is recorded and is generally 99% to 100% with the exception of minor faulted and oxide zones. Recovery data were not available for all core holes, most notably in older Teck drill holes.

10.9 DEPOSIT DRILLING

Drill spacing across the deposits that have mineral resources estimated is at about 35 m x 35 m in areas with close-spaced drilling, widening to about 60 m x 60 m in the areas that are less well drilled. Drill spacing is wider again in the areas outside the conceptual pit outlines used to constrain mineral resources.

Drill hole orientations range from 0º to 345º, and were illustrated in Figure 10-2 and Figure 10-3 for El Limón and Guajes, respectively. Dips are typically 70º. Hole depths range from 3.05 m to 672.6 m and average 165 m.

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 Project have been drilled obliquely to the skarn mineralization.

Example drill intercepts for El Limón and Guajes are summarized in Table 10-3, 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.

Table 10-3: Selected Drill Hole Intercept Summary – El Limón, Guajes East and West Deposits

Deposit	Hole ID	From (m)	To (m)	Drill Intercept Interval (m)	Gold Grade (Au g/t)	Silver Grade (Ag g/t)
El Limón	DLIM-281	30.5	56.0	25.5	1.28	10.6
		83.2	152.3	69.1	5.57	7.2
	incl.	111.0	118.0	7.0	17.87	17.8
	incl.	149.0	149.9	0.9	30.53	8.5
		199.5	209.0	9.5	4.10	6.8
	TMP-1396	0	31.93	31.93	3.05	13.9
	incl.	13.7	16.4	2.7	5.32	10.6
		44.63	47.96	3.33	0.98	4.5
Guajes East	T10-106C	4.5	6.6	2.1	1.22	4
		26	27.5	1.5	0.53	1
		53.1	91.0	37.9	4.87	21.1
	incl.	55.16	60.96	5.8	20.71	6.5
		119	122	3.0	0.83	1
	DLIM-520	8.8	10.0	1.2	1.38	2.6
		58.0	96.7	38.7	3.56	17.1
	incl.	77.8	79.2	1.4	19.33	133.7
Guajes West	TMP-1196	74.86	153.4	78.54	6.05	3.7
	incl.	92.38	99.0	6.62	16.25	7.8
	incl.	120.7	124.4	3.7	25.21	6.5
	DLIM-483	84.0	107.0	23.0	1.72	0.8

Note: Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths

10.10 COMMENTS ON SECTION 10

The AMEC QP is of the opinion that:

- Core logging meets industry standards for gold and silver exploration.
- Collar surveys have been performed using industry-standard instrumentation.
- When available, recovery data from core drill programs are acceptable.
- Any future RC drilling recoveries should be logged.
- The down hole surveying methods prior to 2006 to be out of date. 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.

- Surveying of future drill holes should be conducted using a non-magnetic survey tool such as a gyro or the Maxibor tool. 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 E&C is of the opinion that the missing downhole surveys do not degrade the level of confidence in the location of mineralization, for this level of study. However, all deep drill holes in the future should be appropriately surveyed.
- Drilling is normally perpendicular to the strike of the mineralization at Guajes East and West and a combination of perpendicular and non-orthogonal at El Limón. Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths.
- Drill orientations at El Limón and Guajes are 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.
- Surface channel samples were collected with sufficient volume, equal to or greater than core drilling, and with due care given to collect a representative sample, that they are suitable for use in mineral resource and mineral reserve estimation.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 KEY POINTS

The AMEC E&C QP is of the opinion that the quality of the gold and silver analytical data is sufficiently reliable to support Mineral Resource and Mineral Reserve estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards as follows:

- Sample preparation and analysis for samples that support Mineral Resource and Mineral Reserve estimation has followed a similar procedure since 2001. The preparation and assay procedures are in line with industry-standard methods for gold deposits.

- The exploration database accurately reflects the original records.

- 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.

11.2 RESPONSIBILITIES

From project inception to the end of Teck's drilling programs in 2008, Teck staff members were responsible for the following:

- Sample collection,
- Core splitting,
- Delivery of samples to the analytical laboratory,
- Sample storage, and
- Sample security.

From 2006 to 2009, Teck personnel were also responsible for sample preparation, specific gravity determination, and sample analysis. Teck at the time was project operator.

From 2010 to May 2012, Torex personnel were responsible for the following:

- Sample collection,
- Core splitting,
- Delivery of samples to the analytical laboratory,
- Sample storage, and
- Sample security.

At no time has Torex been responsible for sample preparation (beyond core splitting), specific gravity determination, or sample analysis. These tasks have been completed by independent commercial laboratories throughout Torex's tenure as project operator.

11.3 ANALYTICAL LABORATORIES

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

ALS Chemex 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 is 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 the Teck-owned Global Discovery Laboratory (GDL), in Vancouver, Canada. GDL was not an accredited laboratory at the time the analyses were performed.

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

Torex drill samples were sent to the SGS laboratory in Nuevo Balsas, Guerrero, Mexico, where the samples were dried, crushed, and pulverized. Prepared sample pulps were then sent to the SGS laboratory in Durango, Mexico for analysis. The SGS laboratory in Durango is ISO 17025 accredited, and is independent of Torex.

11.4 SAMPLE PREPARATION AND ANALYSIS

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. This quality of crushing is likely a limiting factor on the precision of gold results for this type of gold deposit.

The pulverized pulp sample was analyzed by ALS Chemex for gold using a 1 AT (Assay Ton, approximately 30 g of sample) fire assay with an atomic absorption (AA) finish. Samples returning assays greater than 10 g/t Au were assayed again using a 1 AT gravimetric fire assay. Silver, arsenic, copper, and 31 additional elements were determined by aqua regia digestion 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 was pulverized to 95% passing 150 mesh.

The pulverized pulp samples were sent to GDL for assay. GDL assayed all samples for gold by 5 g (very rarely 10 g) aqua regia AA finish (10 ppb lower detection limit). Samples returning greater than 200 ppb Au were re-assayed using 1 AT fire assay AA. Gold assays greater than 10 g/t Au by fire assay AA were assayed again by 1 AT gravimetric fire assay. Silver, As, Ca, Fe, Mg, and 23 additional elements were determined by aqua regia ICP-AES. This very small sample mass is likely to produce highly imprecise gold results and has an increased probability of missing gold occurrences.

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 reassayed by 1 AT fire assay AA. This step mitigates most of the underweight initial assaying.

At the beginning of the 2006 program, a preparation laboratory was established in Nuevo Balsas. This preparation laboratory was set up by Teck, but was operated by a contractor independent of Teck, 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.

Torex drill samples 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 microns. Samples were then dispatched to the SGS laboratory in Durango, Mexico, and assayed for gold by 30 g fire assay 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 30g gravimetric fire assay.

11.5 QUALITY ASSURANCE/QUALITY CONTROL PROGRAMS

11.5.1 Teck Drilling Programs

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'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).

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.

11.5.1.1 Certified Reference Materials

From 2002 to 2004, two CRMs sourced from WCM Minerals of Burnaby, British Columbia, Canada were inserted into submissions at the site. The insertion rate was approximately five percent and the position was randomized. AMEC reviewed the data from these submissions and found that the GDL gold assays from these campaigns are of acceptable accuracy.

Two different CRMs were prepared in 2006 from matrix-matched material taken from the property and processed as CRMs by CDN Resource Laboratory. CDN Resource Laboratory, based in Vancouver, British Columbia, is a reputable maker of CRMs.

11.5.1.2 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 (10%) of the 462 gold assays of blank samples reported values greater than the detection limit (10 ppb). Teck reassayed select blank samples and found that there is 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 (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 the project site. This blank material has shown good performance.

11.5.1.3 Duplicates

AMEC reviewed the 2002 to 2004 pulp duplicate programs and found that the precision of GDL gold assays is marginal, but acceptable for a gold skarn deposit with coarse gold. Ninety percent of pulp duplicate assays agree within 30 percent or less.

AMEC reviewed the 2002 to 2004 quarter core duplicate data and found there to be significant sampling variability. Average gold assays for the duplicate datasets were comparable but the relative difference (pair difference/pair mean) observed for a large proportion of individual pairs was large. AMEC considers the quarter-core duplicates at Morelos to have poor sampling precision. This is indicative of a “nugget effect” that cannot be easily remedied, except by collecting larger sample masses (e.g. larger diameter core, or RC drilling which may introduce other sampling problems).

From 2006, core, coarse crush, and pulp duplicates were used to determine the assay precision at the various stages of sample preparation. A core or field duplicate, which consisted of the second half of the core, was inserted randomly for each 20 samples. The coarse crush duplicate, which consisted of a second 500 g split of the coarse reject material, was inserted by the preparation laboratory every 20^{th} sample. The pulp duplicates were the laboratory replicate analysis as reported by GDL as internal QA/QC.

11.5.1.4 Check Assays

The QA/QC program for the first two Teck drill campaigns relied on the internal quality control of ALS Chemex. Upon AMEC's recommendation, Teck submitted 139 intervals from the mineralized zones to Acme in Vancouver, Canada for check assays. The 10 standards, 10 blanks and 10 duplicates submitted with the check samples all passed QA/QC. 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 two and eight per cent.

11.5.2 Torex Drilling Campaigns

Torex utilizes a program of CRMs, blanks and duplicates to control assay quality for its drilling campaigns. In 2012, Torex also completed a check assay program, designed primarily to determine the accuracy of the SGS silver assays.

11.5.2.1 Certified Reference Materials

Torex uses nine different CRMs to monitor gold assay accuracy. All CRMs were sourced from CDN Resource Laboratories in Langley, British Columbia, Canada. The CRMs cover the expected grade range, from 0.3 to 5.3 g/t. CRMs are inserted at a rate of 1 per 20 project samples.

AMEC evaluated 2,749 CRMs assayed by SGS from 2010 to March 2012 and found no significant bias in the SGS gold assays.

11.5.2.2 Blanks

Blanks are inserted at a rate of 1 each for every 20 project samples. 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.

11.5.2.3 Duplicates

AMEC reviewed the Torex duplicate data and found there to be significant sampling variability in the quarter core and pulp duplicate results. AMEC considers assay precision to be acceptable for field duplicates where 90% of the duplicate pairs display less than ±30% absolute relative difference (ARD), calculated as the absolute value of the pair difference in grade, divided by the pair's mean grade. The calculated precision of the quarter core duplicate pairs was 95% ARD, and the precision of the pulp duplicate pairs was 75% ARD (both precision estimates at the 90th percentile).

These poor precision levels 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. A very slight improvement might be achieved by increasing the fire assay mass from 30 to 50 g. The possibility of large gold particles in many samples indicates that gravity extraction may be an effective part of the ore processing for this project.

11.5.2.4 Check Assays

A total of 300 assay intervals were submitted for gold check assay, and 1,027 assay intervals were submitted for silver check assay at Acme in Vancouver, Canada. The mean of the SGS gold assays was 2.50 g/t compared to a mean of 2.53 g/t for the Acme gold assays. The mean of the SGS silver assays was 2.98 g/t compared to a mean of 3.26 g/t for the Acme silver assays. No significant bias was observed in the original SGS gold and silver assays.

11.6 DATABASES

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'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.

11.7 SAMPLE SECURITY

Sample security was 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.

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.

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. Bagged core is delivered to the sample preparation facility by MML staff. The sample dispatch facility is always attended or locked.

11.8 SAMPLE STORAGE

Coarse rejects and pulps from the 2003 through 2008 programs are all stored at a secured warehouse in Nuevo Balsas.

Drill core is stored in wooden core boxes on steel racks in the buildings adjacent to the core logging and cutting facilities. The core boxes are racked in numerical sequence by drill hole number and depth.

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.

The assay pulps were returned from Vancouver from time to time. GDL stored all pulp samples by job and sample number for approximately one year. Upon returning them to Nuevo Balsas, the pulps were stored in cardboard boxes in the coarse rejects storage building. Stored coarse rejects and pulps are in good condition.

Torex maintains this program, storing drill core, coarse rejects, and pulps in a secured warehouse in Nuevo Balsas.

12 DATA VERIFICATION

12.1 KEY POINTS

AMEC performed a number of verification checks in support of the mineral resource estimate. The process of data verification for the project was performed by AMEC E&C and third-party consultants employed by Teck Cominco. The AMEC E&C QP considers that a reasonable level of verification has been completed, and that no material issues would have been left unidentified from the programs undertaken.

The data verification programs undertaken on the data collected from the project 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.

12.2 AMEC 2005

During an audit of the project to support mineral resource estimation in 2005, AMEC reviewed the geological database. Approximately 10% of the drill holes at Morelos were checked. AMEC compared logged lithologies, collar and down-hole surveys and assays in the digital database against original source documents. A total of 13 drill holes from the El Limón area and six from the Guajes area were reviewed. Gold, silver, arsenic, and copper assays in the database were checked against the original paper assay certificates. Lithological logging in the database was checked against the original paper lithology logs. Collar and down-hole surveys in the database were checked against the surveys recorded on the drill logs. In AMEC's opinion, the digital database at the time was representative of the available project exploration data and was sufficiently free from error to support mineral resource estimation.

At site, AMEC also selected five drill holes at random to review logging and sampling practices and to visually inspect mineralized intervals. Two holes were selected from Guajes and three from El Limón. In general, AMEC found logging practices to meet industry standards, and that drill logs were well collected and representative of the core inspected.

12.3 M3 MEXICANA, 2008

Teck Cominco used built-in checks in the acQuire® database to monitor analytical results. The checks identified any CRM or blank failures. CRM failures were considered to be any value that fell outside three standard deviations or any two consecutive standards in a laboratory job that fell outside two standard deviations. If a standard failed, the laboratory was required to repeat the fire assays for all samples between the previous acceptable CRM assay to the following acceptable CRM assay.

Fifteen (1.5%) of the 999 CRMs inserted over the period May 2006 to May 2007 failed. These failed CRMs and the associated primary samples were re-assayed and subsequently passed. This frequency is consistent with the described control limits.

From June 2006 to May 2007, 13 (1.5%) blanks returned values above detection limit. In the three highest cases, the failure occurred immediately after samples which contained greater than 10 g/t Au indicating contamination in the preparation stage. In each case, an investigation was carried out at the preparation laboratory and the laboratory was directed to take greater care in cleaning the pulverizes between samples.

Core, coarse crush and pulp duplicates data for the period May 2006 to May 2007 were reviewed. The core duplicates showed a wide scatter, reflecting the inherent geological variability associated with a gold skarn deposit. The coarse crush duplicates showed somewhat less scatter. The laboratory repeats or pulp duplicates showed reasonable reproducibility.

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

12.4 AMEC 2009

Torex provided AMEC with a Microsoft Access® database containing all drilling information on the Morelos property.

AMEC checked the Torex database by requesting the assay laboratory load assay certificates directly to an ftp site provided by AMEC. From the 63,543 assay intervals in the Torex database, AMEC selected 2,309 intervals at random and compared certificate values to the database values. Of the 2,309 values checked, by relating the database assay table to a certificate assay table in Access®, only four intervals were found with errors. AMEC found the assay data acceptable to use for resource estimation.

Approximately 10% of the drill hole logs drilled at Morelos since 2005 were checked for data transfer errors. AMEC compared logged lithologies and collar and down-hole surveys in the digital database against original source documents. Forty two core drill holes were selected, 23 from the El Limón area and 19 from the Guajes area.

Lithological logging in the database was checked against electronic scans of the original paper lithology logs. Collar and down-hole surveys in the database were checked against the surveys recorded on the drill logs.

In AMEC's opinion, the digital database as reviewed at the time was representative of the available project exploration data and is sufficiently free from significant error to support mineral resource estimation.

AMEC noted that there was more than a 3% disagreement as to type of skarn on the original drill log when compared to what skarn type is recorded in the digital database. For grade interpolation, AMEC grouped all skarn types into a single domain and therefore this discrepancy does not have a material impact on mineral resource estimation.

At site, AMEC also selected ten drill holes at random to review logging and sampling practices and to visually inspect mineralized intervals. Five holes were selected from Guajes and five from El Limón. AMEC found logging practices meet industry standards, and that drill logs are sufficiently complete and generally representative of the core inspected. Three minor lithology calls were noted to be inaccurate but are not significant to mineral resource estimation.

12.4.1 Independent Verification of Mineralization

AMEC selected seven quarter-core sample intervals from half core and collected three chip samples from mineralized outcrop (one from Guajes and two from El Limón) to confirm the presence of gold mineralization. Upon collection, samples were under the custody of Mr. Orbock, who personally delivered the samples to ALS-Chemex's laboratory facilities in Sparks, Nevada. The samples were fire assayed with an atomic absorption or gravimetric finish.

Assay results are listed in Table 12-1. AMEC considers quarter-core duplicates in a gold skarn deposit to have poorer sampling precision when compared with half core, and that significant variability in assay grades should be expected. The level of agreement obtained in Table 12-1 is on par with that observed for the field duplicates (re-sawn quarter core) that were routinely included in drill sample submissions. The AMEC values confirm the presence of gold mineralization at the project, and confirm that high gold grades can be expected.

Table 12-1: AMEC's Check on the Presence of Gold Mineralization

Sample ID	From	To	AMEC 2009 g/t Au	Teck Assay Database g/t Au
DLIM-186	112.3	113.5	26.10	41.03
DLIM-227	166.5	168.0	1.74	1.38
DLIM-283	28.0	29.5	5.25	5.84
DLIM-336	110.5	112.0	23.80	21.70
DLIM-357	107.5	109.1	1.24	1.48
DLIM-391	231.6	232.4	6.25	6.00
DLIM-427	131.0	132.5	11.15	8.26
El Limón Oxide A	outcrop		2.99	
El Limón Oxide B	outcrop		1.61	
Guajes West Skarn	outcrop		0.15	

12.5 AMEC E&C 2012

In April 2012, AMEC E&C performed an audit of the Project information added to the database since the previous AMEC E&C audit in 2009. 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 on the Project in 2010, 2011, and 2012, including all T10, DPV, and TMP series drill holes through TMP-1430. 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 56 drill holes were selected randomly for the audit, and the original records were requested of Torex for these drill holes. The effective date of the drilling data used for the resource estimates was 6 April 2012, and AMEC E&C used the 6 April 2012 version of the database for its audit.

AMEC E&C initially found a high incidence of data-entry errors in the collar locations and assays, and therefore Torex rebuilt the collar and assay information from the original documentation.

AMEC E&C's audit of the rebuilt database found very few data-entry errors and therefore finds the database to accurately represent the drilling information and be acceptable to support resource estimation. Out of a total of 168 drill hole collar location values (easting, northing, and elevation values for 56 drill holes) checked, no data-entry errors were found. From the 280 downhole survey values checked, only four errors were found, for an error-rate of 0.5%. Three errors were found in the 688 lithology records checked, for an error-rate of 0.1%. And of the 11,486 assay values checked, only two errors were found for an error-rate of 0.02%.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

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 87.4% for Au and 32.7% for Ag.
- Recovery is increased with finer grind. The recoveries noted are at 80% passing 60 microns.
- Bond work index weighted average is 17.46 kWh/t with the highest being 25.8 kWh/t for Hornfels ore type, which represents 20.6% of the ore. The lowest is 8.6 kWh/t for Marble ore type, which represents 1.9% 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/ton
Skarn	31	23,482	48.15%	15.7	14.3
Retrograde skarn	32	7,860	16.12%	13	11.9
Oxide	33	229	0.47%	13.4	12.1
Breccia	34	1,203	2.47%	18.6	16.9
Intrusive	36	3,500	7.18%	18.2	16.5
Hornfels	37	10,030	20.57%	25.8	23.4
Overburden	38	45	0.09%	13.4	12.1
Marble	39	916	1.88%	8.6	7.8
Vein Material	40	7	0.02%	25.8	23.4
Massive Sulphides	41	152	0.31%	16.1	14.6
Gouge/Fault Material	42	1,342	2.75%	15.7	14.3
Total/Average		**48,766**	**100%**	**17.46**	**15.87**

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 tests 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 87.4%.

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 in samples having experienced significant oxidation or weathering while in storage.

The metallurgical test programs have been completed by independent commercial metallurgical laboratories. Recent work has been on the 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 Project.

11. METCON Research, Inc., Tucson, Arizona, August, 2011 Morelos Project, Metallurgical Study on Composite Samples.

12. METCON Research, Inc., Tucson, Arizona, December, 2011 Morelos Project, 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

	Work Index
Composite Sample	**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 Project 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 80^{th} to 90^{th} 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 Project 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 Project. 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

Tag #	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.

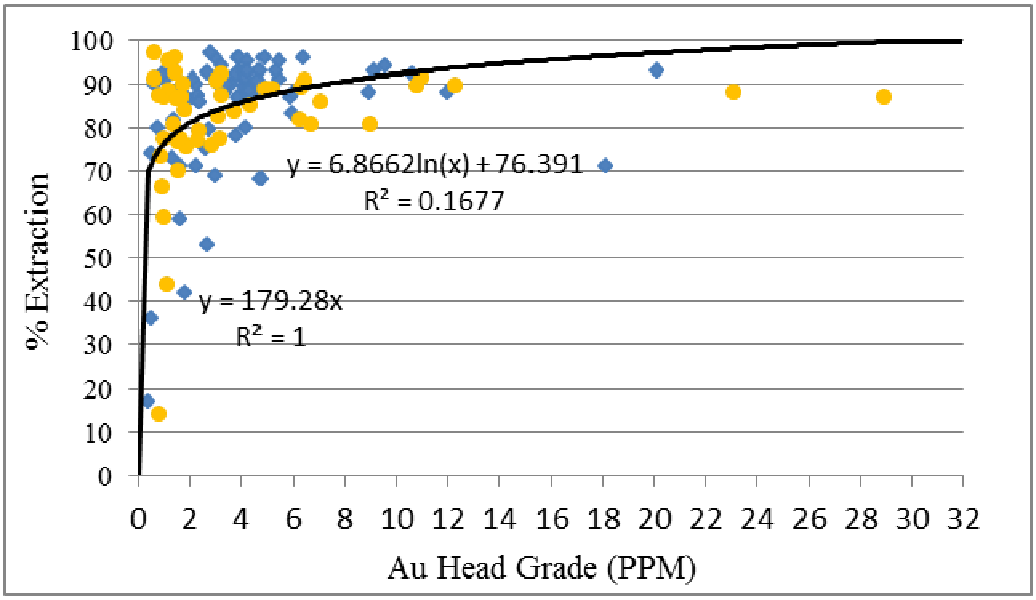


Figure 13-1: Au Head Assay Grade vs. Indicated Extraction Overall

Note: Figure courtesy of M3.

Information from the Morelos Production Schedule 20 Version 1 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) (+Gouge)	24.82	51.0%
Retrograde (skarn)(+Massive Sulfides)	8.01	16.4%
Oxides (Oxide + Marblel)	1.15	2.4%
Breccia	1.20	2.5%
Hornfels (+Vein Material)	10.04	20.6%
Intrusive	3.50	7.2%
Total	48.72	100.0%

Ore grade versus percent gold extraction graphs were developed for the six ore types identified and extraction equations predicting recoveries at given ore grades were 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 87.40%.

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

Ore Type	Average Au grade ppm	Extraction Equation	Extraction %
Prograde (Skarn)(+Gouge)	2.93	y= 2.2771*ln(x) + 87.057	89.48
Retrograde (skarn) (+Mass Sulfides)	3.55	y= 5.4671*ln(x) + 77.314	84.24
Oxides (Oxide + Marble)	2.78	y= 3.1185*ln(x) + 82.235	85.42
Breccia	3.43	y= 15.453*ln(x) + 48.282	67.33
Hornfels (+Vein Material)	1.42	y= 90	90
Intrusive	1.61	y= 1.3912*ln(x) + 82.376	83.04
Total	**2.61**	Weighted Average on Contained Gold =	**87.40**

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	33.1%
Prograde (Skarn)	33.7%
Retrograde (Skarn)	27.5%
Oxides (Oxide + Overburden + Marble)	47.4%
Breccia	21.5%
Hornfels	32.2%
Porphyry + Endoskarn + Intrusive (Argillic Intrusive + Intrusive)	39.6%

13.5 SOLID-LIQUID SEPARATION TESTS

Solids-Liquid separation (SLS) tests were conducted on three (3) CIP materials for the Project. 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. Decant 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. 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/m^3)	Sizing Basis(1) (m^3/MT) dry solids	Recess Plate Depth (mm)	Chamber Spec. (Len./Vol./Area) ($mm/m^3/m^2$)	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 QPs are of the opinion that the Mineral Resources for the Project, which have been estimated using reverse circulation drill data, core drill data and channel sampling data, have been performed to industry best practices, and conform to the requirements of CIM (2010).

Mineral resources are 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.

Mineral resources are 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.

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 was within 22 m. Drill hole spacing for Measured Resources would broadly correspond to a 20 m x 20 m grid.

14.2 INTRODUCTION

The Morelos mineral resource estimates were prepared using 3-D models in the commercial mine planning software MineSight® with reference to the Canadian Institute of Mining Metallurgy and Petroleum (CIM) Definition Standards (24 June 2011) and CIM Best Practice Guidelines for preparing mineral resources and mineral reserves.

Morelos's mineral resource was interpolated with a focus toward open pit mining. A mine block size of 7 m x 7 m x 7 m was selected. A lithology model was created using a combination of deterministic and probabilistic modeling methods using Ordinary Kriging. Gold and silver grades were interpolated into mine blocks based on lithology and mineralization domains.

Mineral resources for Morelos were constrained inside a $1,400 per ounce gold and $26 per ounce silver open pit shell constructed by AMEC E&C using the commercial mine programming software NPVS Datamine®.

The El Limon mineral resource estimate and lithology model was prepared by Edward J. C. Orbock III, RM SME, Principal Geologist (AMEC E&C, Reno). The Guajes mineral resource estimate and lithology model was prepared by Mark Hertel, RM SME., Principal Geologist, (AMEC E&C, Phoenix).

14.3 DATABASE

Torex provided AMEC with Microsoft Excel® spreadsheets containing all drilling information on the Morelos property. AMEC imported the collar downhole survey, lithological, and assay data into MineSight® 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's re-audit on the rebuilt 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.

The Morelos 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 other for the El Limon deposits, North, El Limon, and South as shown in Figure 14-1.

14.3.1 Core Recovery

AMEC compared core recovery against grade and determined that grade was not dependent on the percent of core recovered above 30%. There are 1,229 assay intervals with less than 30% core recovery and were not used in the development of the composite file and not used in gold and silver grade interpolation.

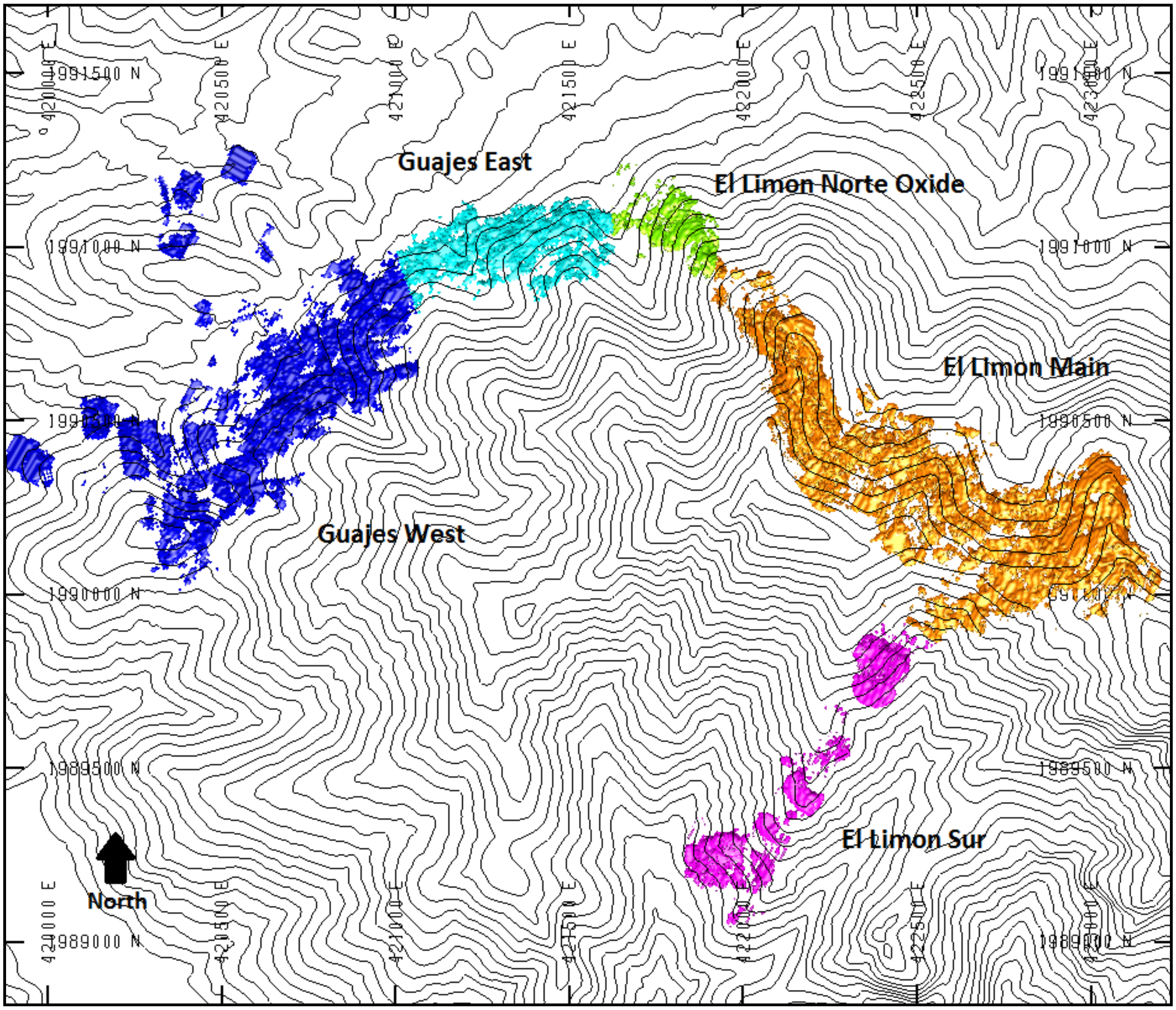


Figure 14-1: Plan View showing Mineralized Deposits

Note: Figure courtesy of AMEC, May 2012.

14.3.2 Density

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 14-1, 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 database, as well as lithology updates made by AMEC to the 3.5 m composites.

Table 14-1: Mean Specific Gravity Assigned to Morelos Block Model by Lithology Type

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

14.4 MORELOS GRADE CAPPING AND RESTRICTIONS

The mineral industry employs top-cutting (also called capping) or various forms of "outlier" restriction to prevent unreasonable over-projection of very high grades during mineral resource modeling. This procedure is very subjective, and there is no standard. It is left for the Qualified Person to judge.

AMEC 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 performed a metal at risk analysis using AMEC's in-house FORTAN programs riskhi2a.exe and gtcomp.exe to determine that approximately 4% to 6% of the gold metal is at risk.

14.5 EL LIMON MINERAL RESOURCES

14.5.1 Geological Model

AMEC 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 eleven rock types grouped into four lithology domains as listed in Table 14-2.

Table 14-2: Primary El Limon Lithological Codes and Total Meters

Lithology Type	Lithology Group	Model Code	Total Length of all Intercepts in Lithology (m)
Skarn	Skarn Group	31	9,367
Retrograde Skarn	Skarn Group	32	4,176
Oxide	Skarn Group	33	325
Breccia	Skarn Group	34	2,039
Intrusive	Intrusive Group	36	32,011
Hornfels	Sedimentary Group	37	29,931
Overburden	Overburden Group	38	315
Marble	Sedimentary Group	39	8,159
Vein	Skarn Group	40	7
Massive Sulphide	Skarn Group	41	95
Fault Gouge	Skarn Group	42	1791

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 to West cross sections and 39 North to South long sections spaced 35 m apart. Sections were rectified on 88 mid-benches at seven meter spacing. El Limón Norte was modeled on 34 cross sections along an azimuth of N30^{o}E and 19 long sections along an azimuth of N120^{o}E spaced 35 m apart. Sections were rectified on 95 mid-benches at seven meter 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.

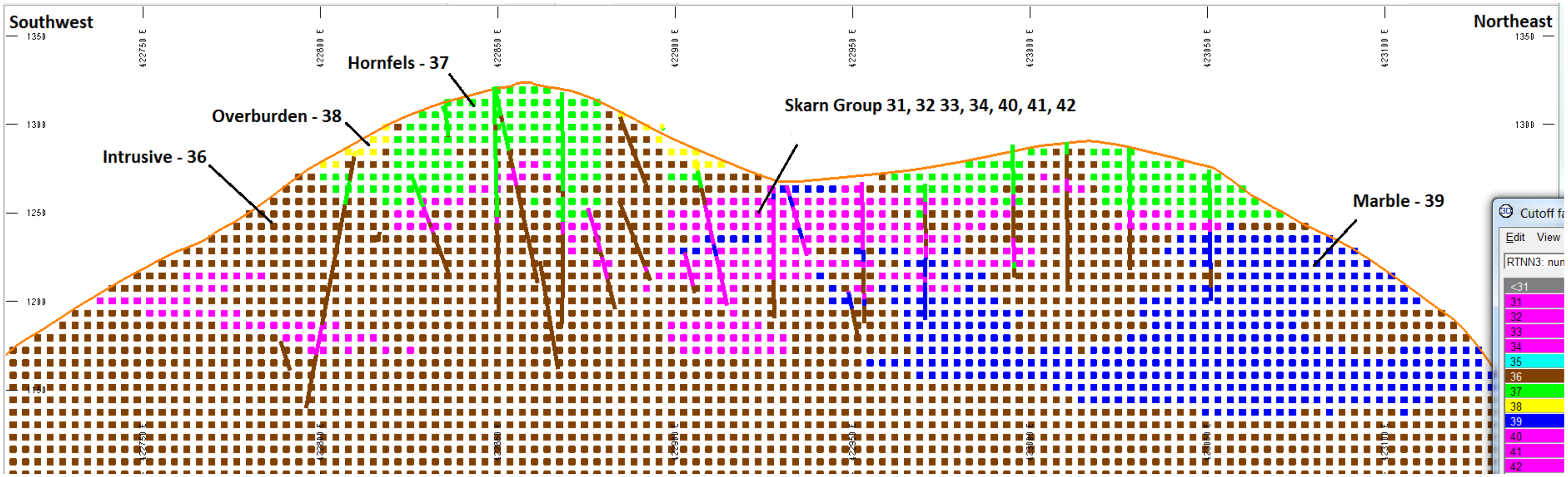
14.5.2 Lithological Assignments

For the skarn domain and outside of skarn domain, lithology types were assigned to a block using a probabilistic method. AMEC 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. Figure 14-2 is a typical cross section at the southern end of El Limon displaying block and drill hole lithology.

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.



Note: 50 m spacing between elevation tick marks, figure courtesy of AMEC, May 2012

Figure 14-2: Typical Indicator Lithology Cross Section at the Southern End of the El Limon Deposit, showing Mine Blocks and Drill Holes, looking Northwest

14.5.3 Structural Domains

Four structural domains were established at El Limon to aid variography (Figure 14-3). El Limon 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 N40°E with the skarn mineralization to the north szone3 showing a preferred strike orientation of N50°W and dipping -60° to -70°SW. Skarn mineralization south of La Flaca Fault (szone2) appears to have been down dropped by approximately 100 m and has a preferred strike orientation N30°E and dipping -18°NW. El Limon Sur was assigned to szone4, which has the same mineralized orientation as szone2.

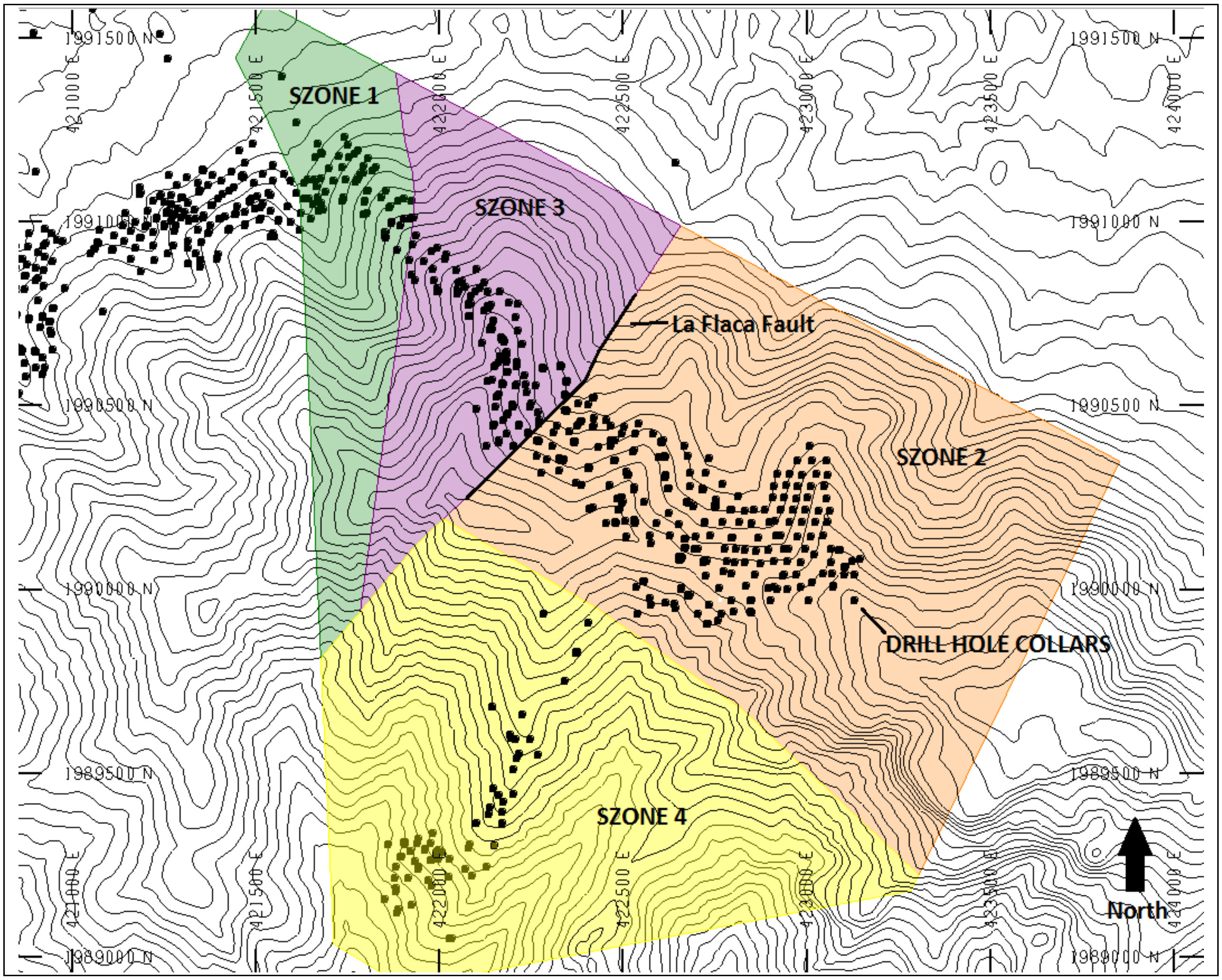


Figure 14-3: Plan View of El Limon Structural Domains (Szones) with Drill Hole Collar Locations

Note: Figure courtesy of AMEC, May 2012.

14.5.4 Mineralized Domains

AMEC 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) or exponential (Exp) models to fit experimental correlograms.

AMEC used probability assigned constrained kriging (PACK) to estimate the probability that a block would be interpolated with mineralized or non-mineralized gold composites. PACK was designed to define economic envelopes around mineralized domains statistically that are generally difficult to outline and delineate using the more traditional and labor-intensive methods such as wireframing. Probabilistic envelopes are first generated using indicators to define the limits of the economic mineralization and then the envelopes are used in the resource estimation to confine the mineralized composites from smearing grade into non-mineralized domains and vice versa restrict non-mineralized composites from diluting the grade in mineralized domains. The PACK method was selected in part due to its advantage of easily being updated with changing economic parameters, new data, and/or new geological interpretations.

14.5.5 Grade Capping and Restrictions

El Limon 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 mineralized skarn group within the skarn domain which were capped at 80 g/t.

14.5.6 Composites

The El Limon resource model was constructed from 564 core holes, 33 reverse circulation 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® mining software version v7.0-4 (build 52681-304). AMEC 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.

14.5.7 Exploratory Data Analysis (EDA)

14.5.7.1 Univariate Composite Statistics

Exploratory data analysis ("EDA") was conducted using composites to determine the appropriate estimation parameters based on mineralization and lihology types. Descriptive statistics (as listed in Table 14-3) such as boxplots, histograms, and cumulative probability plots were completed for gold composites tagged as "MIN" (mineralized) and unmineralized gold composites.

Table 14-3: El Limon Descriptive Statistics for Gold Composites

Area/Variable	Model Code	No.	Mean	Min	Max	Std. Dev.	Coeff. Of Variation
ALL COMPOSITES							
Skarn	31	2697	2.129	0.000	161.176	5.715	2.684
Retro Skarn	32	1199	2.090	0.000	62.927	4.624	2.213
Oxide	33	94	2.756	0.000	31.023	5.056	1.835
Breccia	34	590	1.714	0.000	80.778	5.444	3.177
Intrusive	36	9258	0.162	0.000	56.216	1.018	6.266
Hornfels	37	8705	0.373	0.000	75.682	1.567	4.196
Marble	39	2357	0.124	0.000	23.154	0.752	6.075
Vein	40	2	0.633	0.017	1.248	0.633	1.376
Massive Sulphide	41	27	1.774	0.003	9.069	2.841	1.601
Fault Gouge	42	552	1.454	0.000	73.866	5.214	3.587
NON-MINERALIZED COMPOSITES							
Skarn	31	1446	0.156	0.000	3.205	0.182	1.165
Retro Skarn	32	618	0.160	0.000	1.727	0.176	1.102
Oxide	33	33	0.176	0.000	0.800	0.173	0.986
Breccia	34	347	0.164	0.000	2.618	0.233	1.418
Intrusive	36	8667	0.045	0.000	1.274	0.091	2.031
Hornfels	37	7402	0.121	0.000	4.708	0.140	1.165
Marble	39	2223	0.030	0.000	0.889	0.078	2.598
Vein	40	1	0.017	0.017	0.017	-	0.000
Massive Sulphide	41	15	0.218	0.003	0.497	0.166	0.763
Fault Gouge	42	359	0.119	0.000	3.483	0.220	1.843
MINERALIZED COMPOSITES							
Skarn	31	1251	4.410	0.031	161.176	7.790	1.767
Retro Skarn	32	581	4.143	0.034	62.927	5.995	1.447
Oxide	33	61	4.152	0.107	31.023	5.829	1.404
Breccia	34	243	3.926	0.086	80.778	7.982	2.033
Intrusive	36	591	1.890	0.003	56.216	3.596	1.903
Hornfels	37	1303	1.810	0.000	75.682	3.724	2.057
Marble	39	134	1.682	0.002	23.154	2.707	1.609
Vein	40	1	1.248	1.248	1.248	-	0.000
Massive Sulphide	41	12	3.720	0.534	9.069	3.406	0.916
Fault Gouge	42	1251	4.410	0.031	161.176	7.790	1.767

14.5.7.2 Contact Analysis

To determine whether composites should be used across lithological boundaries during gold estimation, AMEC constructed contact plots for all the different combinations of lithological boundaries. A contact profile is a plot of the average grade as a function of distance from the contact. For example the grade profile can be plotted on an X-Y graph with grade plotted on the Y-axis and distance from the contact plotted on the X-axis. The contact is located mid-way along the X-axis so that the profile from one domain can be plotted to the left of the contact while the profile from a second domain can be plotted to the right of the contact.

Hard contacts are generally justified if there is a substantial grade difference between the domains. During grade interpolation, composites are not shared across hard contact boundaries.

Soft contacts are justified between domains if the grade difference is minor or if the grades at the boundary are nearly identical. Domains identified as having soft contacts were allowed to share composites during grade interpolation

Results from the El Limon contact profiles showed that both hard and soft contacts exist. To implement the handling of composites used across lithological boundaries, AMEC 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.

14.5.8 Gold Variography

AMEC 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 noted that nuggets for some gold domains were elevated. AMEC 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.

14.5.9 Estimation of Gold and Silver Grades

Gold grades in the skarn intrusive and sedimentary group domains were estimated using a three-pass estimation method by Ordinary Kriging. 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.

14.5.10 Block Model Validation

14.5.10.1 Nearest-Neighbor Block Model

AMEC constructed a gold NN model to compare to the kriged block model to check for global and local bias. Assays were composited to 7 m down the hole, honoring mineralized tags from the 3.5 m composite file. The NN model used the same block size of 7 m x 7 m x 7 m. NN grade interpolation also honored the outlier grade restrictions as applied to the OK gold model.

14.5.10.2 Global Bias

AMEC checked the gold model for global bias by comparing the means of the kriged model with means from the NN model. The NN model theoretically produces an unbiased estimate of average value at a zero cut-off grade. A relative percentage value of less than 5% difference between the means is an acceptable result and indicates good correlation between the two models. The skarn lithology group kriged gold estimates are within the 5% limit and indicate a good correlation with the NN model. The sediment and intrusive lithology group are within the lower limits of -5% at -2.8% and -0.4% respectively. AMEC is of the opinion that kriged gold grade at El Limon are globally unbiased.

14.5.10.3 Visual Inspection

Cross sections were viewed on screen by lithologies comparing blocks to drill holes and matched reasonably well. Gold grades from the kriged and NN blocks were compared to the composite grades and the comparisons also looked reasonable. Figure 14-4 presents an example cross-section through El Limon Main just northwest of the La Flaca fault.

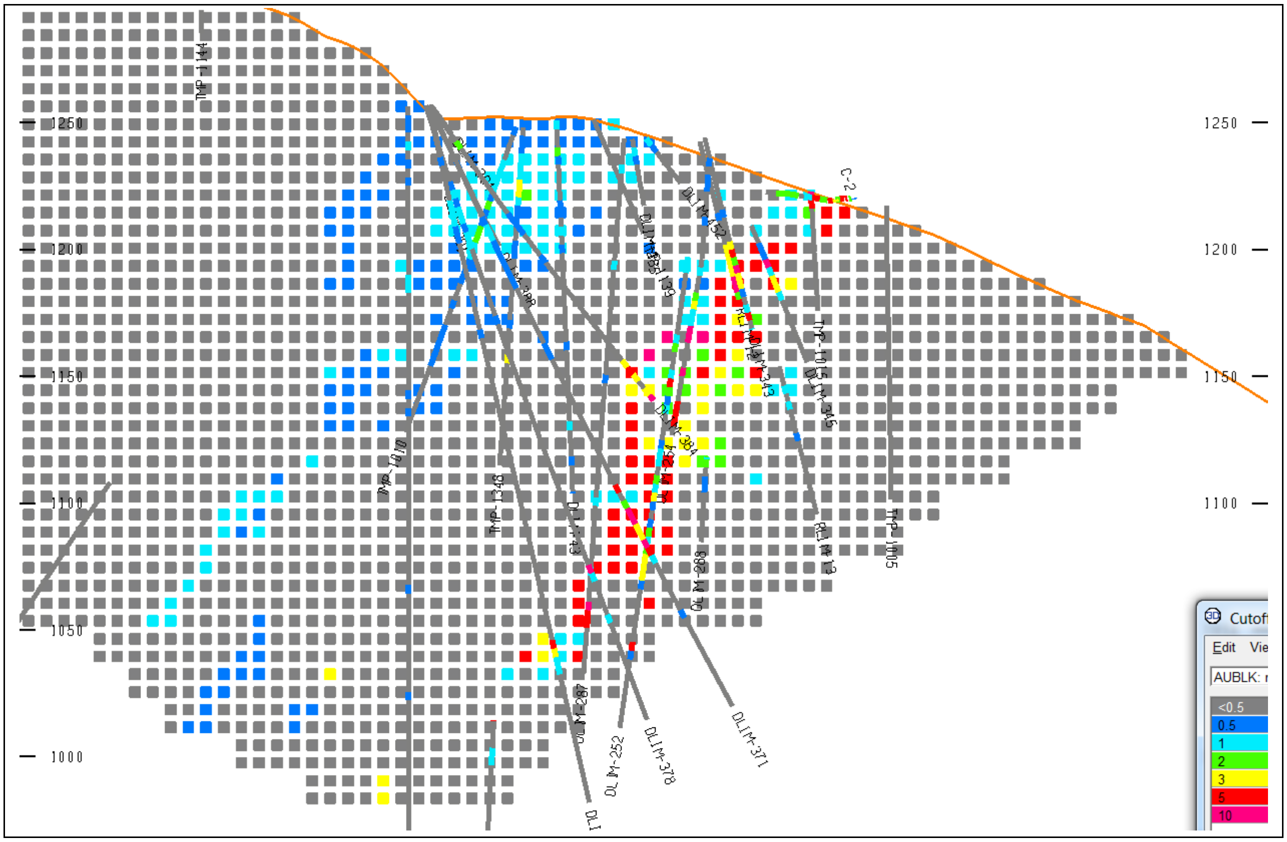


Figure 14-4: Cross Section through Middle of El Limon Main showing Au Composite and Block Grades – Looking Northwest. Displayed Model Blocks are the Extent of the Mineral Resource Pit.

Note: Figure courtesy of AMEC, May 2012.

14.5.10.4 Swath Plots

Swath plot validation was performed with an in-house AMEC program *swath2.exe* that permits a visual comparison of local bias between the kriged and NN estimates. The program separates the block model into user defined orthogonal slices (swaths) along easting, northing, and elevation axis and calculates the average grade for each swath.

AMEC reviewed swath plots by domain and determined that gold grades from kriged blocks compared well with NN blocks, matching peaks and valleys and comparable well to composite grades where there is increasing number of composites. AMEC concludes that the estimation appears to be locally unbiased.

14.5.10.5 Change of Support

The degree of smoothing in the block model estimates were evaluated using the discrete Gaussian or Hermitian polynomial change of support (Herco) method (Journel and Huijbregts, 1978). The Herco validation was performed with the AMEC Fortran programs HERCO04D.exe and GTCOMP.exe. The block size or standard mining unit (SMU) tested were 7 x 7 x 7 meters and 14 x 14 x7 meters 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.

14.6 GUAJES MINERAL RESOURCES

14.6.1 Composites

A standard 3.5 m length was used for all assay composites. Composites were assigned majority logged lithology. Composites with lithology logged as undefined were back-tagged from the lithology interpolated mine block they intersected.

14.6.2 Exploratory Data Analysis, Domain Definition

14.6.2.1 Basic Statistics

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. Based on the evaluation of the exploratory data analysis (EDA) work, AMEC created three geology domains from the composite data. The domains were selected on similar mean grade and sample distributions of rock coded composites. AMEC created a high geologic domain by grouping; skarn, retrograde skarn, oxide, sulphide, gouge, and breccia rock-coded composites; a medium geologic domain by grouping hornfels, marble, and vein composites; and a low geologic domain with intrusive coded composites.

EDA was then performed on the resulting three geology domains and internal and external to the skarn envelope. From this work AMEC 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 high grade skarn envelope domain. The indicator and subsequent grade estimation were determined by respecting high coefficient of variations (CV = standard deviation/mean) of the composites by rock code and domain.

AMEC used the three skarn envelope domains, skarn envelope high, skarn envelope low, and outside envelope, along with the three geological domains, high, medium, and low, for grade estimation domaining. Summary statistics for the domains are shown in Table 14-4.

Table 14-4: Au Composite Estimation Domain Summary Statistics

Au Composites Within Skarn Envelope, High Grade Domain							
Rock/Geo. Domain	**Model Code**	**No.**	**Mean**	**Min**	**Max**	**Std. Dev.**	**Coeff. Of Var**
Skarn	31	1256	3.016	0.002	149.131	7.091	2.351
Retrograde Skarn	32	397	3.715	0.003	92.369	7.813	2.103
Oxide	33	6	3.029	0.299	8.508	2.911	0.961
Breccia	34	229	3.059	0.003	50.726	6.797	2.222
Intrusive	36	190	0.214	0.001	0.961	0.211	0.985
Hornfels	37	20	1.470	0.003	6.731	1.912	1.301
Marble	39	41	1.556	0.003	14.123	3.146	2.022
Vein	40	2	1.015	0.032	1.998	0.983	0.968
Sulphide	41	15	3.781	0.188	24.133	5.891	1.558
Gouge	42	29	2.718	0.037	15.538	3.822	1.406
Rock Types Grouped For Estimation Geologic Domains							
High	31,32,33,34,41,42	1932	3.167	0.002	149.131	7.170	2.264
Medium	37,39,40	63	1.511	0.003	14.123	2.761	1.827
Low	36	190	0.214	0.001	0.961	0.211	0.985
Au Composites Within Skarn Envelope, Low Grade Domain							
Rock/Geo. Domain	**Model Code**	**No.**	**Mean**	**Min**	**Max**	**Std. Dev.**	**Coeff. Of Var**
Skarn	31	2506	0.237	0.001	30.842	1.379	5.817
Retrograde Skarn	32	544	0.284	0.002	16.646	1.251	4.405
Oxide	33	9	0.084	0.003	0.298	0.111	1.321
Breccia	34	399	0.259	0.003	7.265	0.711	2.746
Intrusive	36	975	0.046	0.001	0.963	0.089	1.934
Hornfels	37	132	0.322	0.003	20.515	1.811	5.624
Overburden	38	2	0.064	0.026	0.102	0.038	0.594
Marble	39	85	0.091	0.003	1.334	0.200	2.201
Vein	40	2	0.082	0.058	0.106	0.024	0.293
Sulphide	41	18	0.521	0.018	3.839	1.048	2.011
Gouge	42	40	0.778	0.003	25.726	4.126	5.303
Rock Types Grouped For Estimation Geologic Domains							
High	31,32,34,37,41,42	3664	0.255	0.001	30.842	1.375	5.392
Medium	33,38,39,40	99	0.089	0.002	1.334	0.190	2.130
Low	36	979	0.046	0.001	0.963	0.089	1.929
Au Composites Outside Skarn Envelope Low Grade Domain							
Rock/Geo. Domain	**Model Code**	**No.**	**Mean**	**Min**	**Max**	**Std. Dev.**	**Coeff. Of Var**
Skarn	31	256	0.45	0.003	7.99	1.016	2.257
Retrograde Skarn	32	100	0.517	0.003	9.868	1.223	2.366
Oxide	33	2	0.01	0.002	0.019	0.008	0.81
Breccia	34	232	0.234	0.003	5.131	0.495	2.116
Intrusive	36	11441	0.082	0.001	8.846	0.238	2.908
Hornfels	37	3890	0.176	0.001	140.888	2.315	13.152
Overburden	38	106	0.135	0.001	1.406	0.240	1.781
Marble	39	888	0.081	0.001	8.601	0.463	5.719
Vein	40	3	0.168	0.095	0.282	0.082	0.486
Sulphide	41	17	0.623	0.01	2.574	0.892	1.432
Gouge	42	558	0.193	0.001	7.44	0.535	2.772
Rock Types Grouped For Estimation Geologic Domains							
High	31,32,34,41	605	0.4	0.003	9.868	0.989	2.472
Medium	37,38,40,42	4575	0.178	0.001	140.888	2.142	12.034
Low	33,36,39	12331	0.081	0.001	8.846	0.236	2.908

14.6.2.2 Contact Analysis

AMEC constructed contact profiles to analyze the grade behavior at the lithological boundaries. From the contact plots it was determined that hard boundaries would be used between the three geological domains and also the three skarn envelope domains.

14.6.3 Variography

AMEC used commercially-available Sage2001® software to construct down-the-hole and directional correlograms for the selected indicators and estimation domains.

14.6.4 Density

AMEC used the SG values with low and high outliers removed as listed in Table 14-1. AMEC 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.

14.6.5 Guajes Grade Capping and Restrictions

Gold capping/outlier restriction at Guajes was based on inside or outside of skarn domain and mineralized or un-mineralized. Capping/outlier restriction removed approximately 3.2% of the expected gold metal.

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

14.6.6 Grade Estimation and Model Validation

14.6.6.1 Estimation Plan

AMEC 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. For gold and silver block grade estimation, AMEC used a maximum of 20 composites, minimum of 2, and a maximum of 3 from any single drill hole for the first pass. For the second pass a maximum of 20 composites, minimum of 4, and a maximum of 3 from any single drill hole. The third and final pass used a maximum of 12 composites, minimum of 6, and a maximum of 3 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.

Detailed visual inspection was completed by AMEC 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.

Figure 14-5 is a long section of the Guajes block model, Guajes deposit Au g/t, looking to the northwest, showing block Au grade in grams per tonne, composites, and the economic cone used to show reasonable prospects for economic extraction by open pit mining.

Figure 14-6 is a long section of the Guajes block model; Guajes deposit Ag g/t, looking to the northwest. This section shows the block Ag grade in grams per tonne, composites, and the economic cone used to show reasonable prospects for economic extraction by open pit mining.

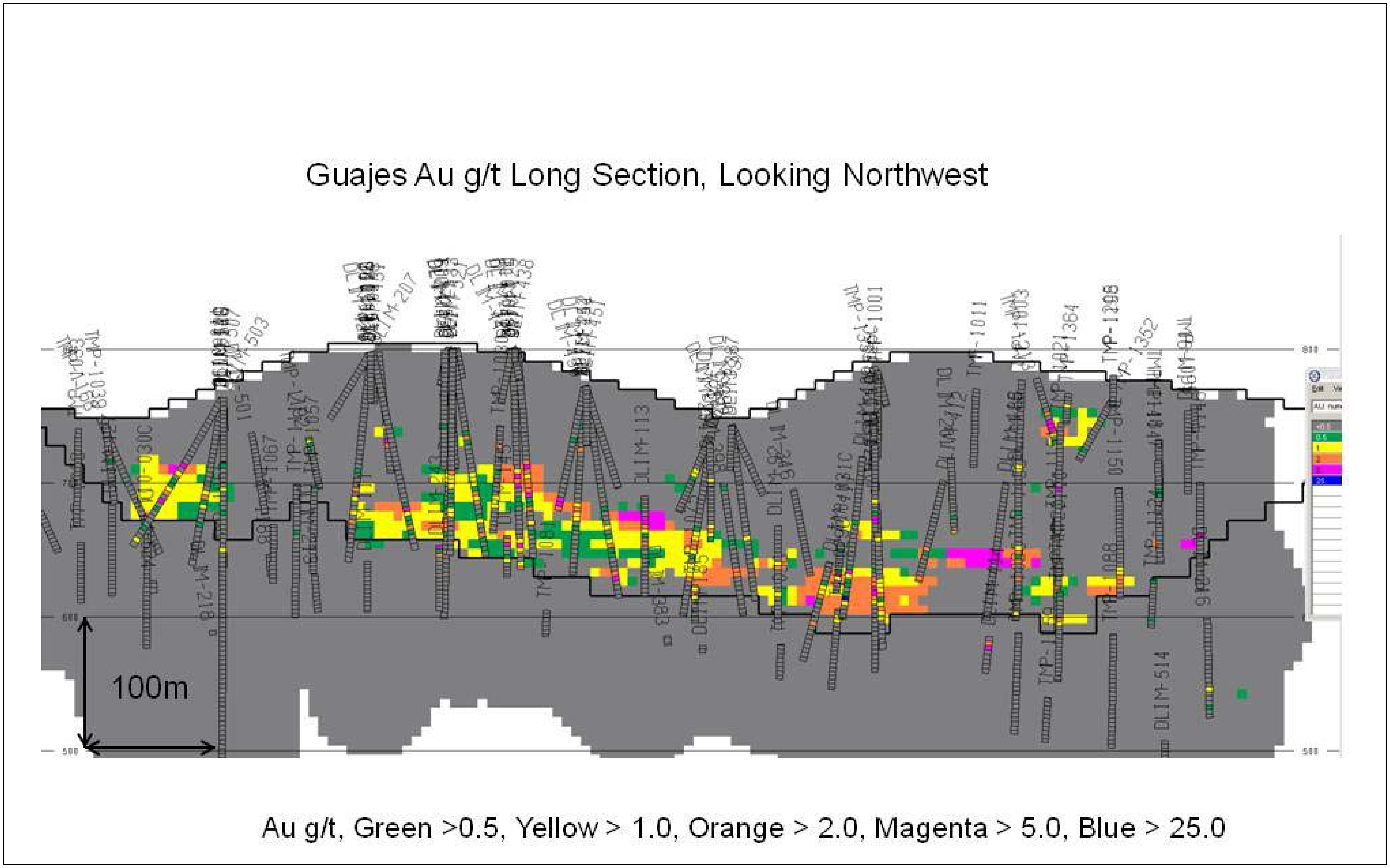


Figure 14-5: Guajes Deposit Au g/t Long Section

Note: Figure courtesy of AMEC, May 2012

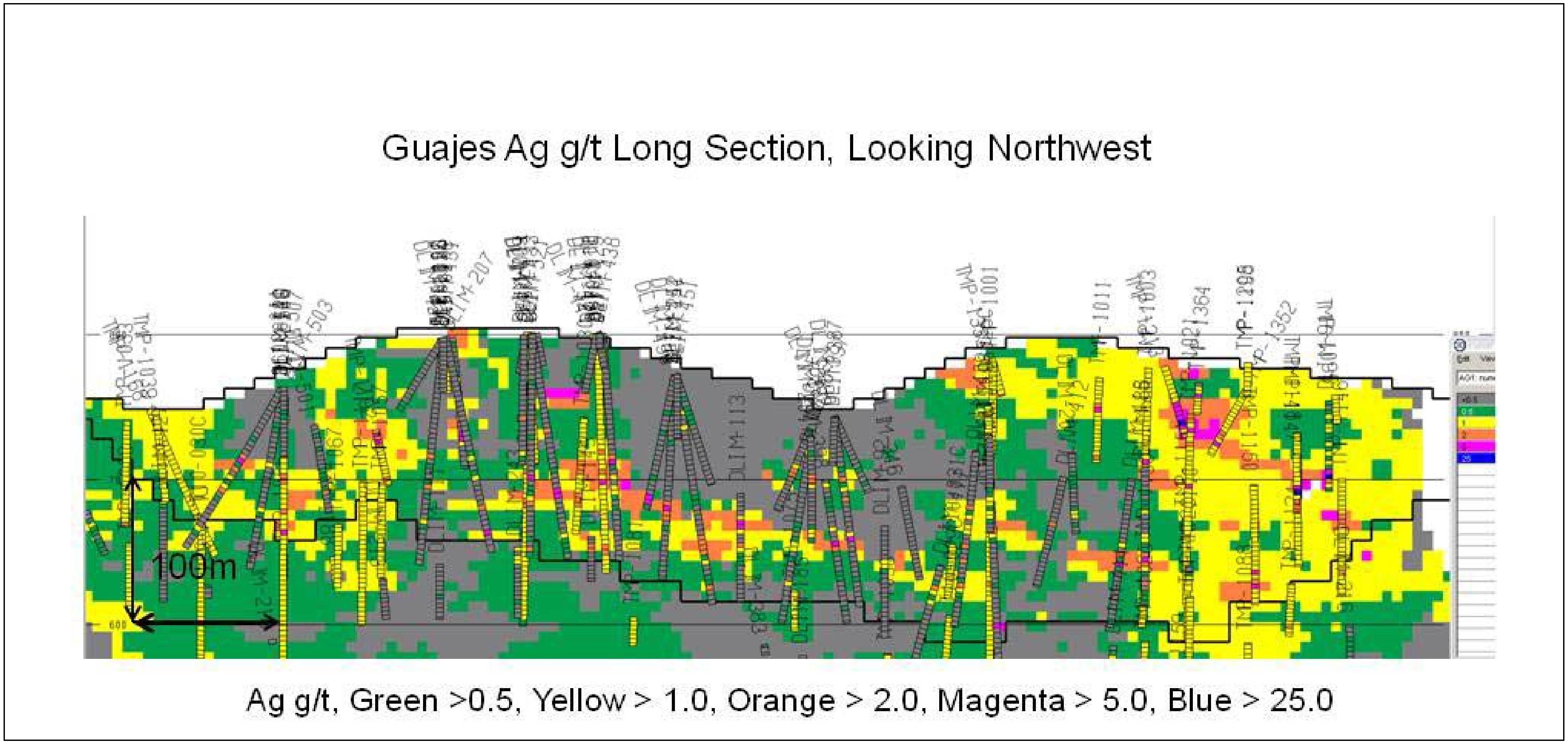


Figure 14-6: Guajes Deposit Ag g/t Long Section

Note: Figure courtesy of AMEC, May 2012

AMEC 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 -1.9%. The skarn domain shows a relative percent difference of gold grades of 1.5%. Silver mean grades show a relative percent difference of -1.1% between the kriged and NN blocks for all domains and for the skarn domain a relative percent difference of 0.6%. Swath plots and change of support (HERCO) on the gold model were also produced and show reasonable results.

14.7 RESOURCE CLASSIFICATION, MORELOS

AMEC visually reviewed the continuity of resource blocks with gold grades equal to or greater than the base case cut-off of 0.5 g/t Au in section and plan. AMEC concluded that the resource model showed good grade and geologic continuity in areas with 20 m drill spacing, and adequate continuity for grade interpolation and open-pit mine planning along strike and dip in areas with drill hole spacing of 36 m.

AMEC removed one of the twin holes from consideration prior to distance calculations to the three closest drill holes to a mine block.

14.7.1 Confidence Limits

Geostatistics provides an assortment of tools to establish confidence levels on resource estimates. The simplest of these methods involves evaluation of estimation variances for large blocks. This method gives an estimate of global confidence or confidence over large areas. The method is not dependent on the local data.

14.7.2 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.

14.7.3 Indicated Drill Hole Grid Spacing

AMEC calculated the confidence limits for determining the appropriate drill grid spacing for declaration of Indicated Mineral Resources. AMEC 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.

14.7.4 Measured Drill Hole Grid Spacing

AMEC calculated the confidence limits for determining appropriate drill grid spacing for Measured Mineral Resources. AMEC 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 was within 22 m. Drill hole spacing for Measured Resources would broadly correspond to a 20 m x 20 m grid.

14.8 ASSESSMENT OF REASONABLE PROSPECTS FOR ECONOMIC EXTRACTION

To assess reasonable prospects of economic extraction Morelos Mineral Resource was confined within a Lerchs-Grossman 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 $1,400/oz and a silver price of $26/oz. No additional dilution or mining losses were considered within the pit shell.

Torex has been working on items relating to environmental, permitting, legal, title, taxation, socio-economic, and other items and in AMEC's opinion have not identified any issues that would materially affect the mineral resources.

14.8.1 Mining Costs

Mining costs for ore and waste is $1.65/tonne and were developed by SRK using first principle and worked from the ground up (refer to Sections 15 and 16 of this report).

14.8.2 Pit Slope Angle Analysis

Pit slope angles were developed by SRK for the El Limon and Guajes open pits. Slope designed was based on oriented core drilling and laboratory strength testing of a total of 11 geotechnical coreholes drilled to interest 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 Limon 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 50 degrees are recommended for the majority of El Limon and the Guajes highwall. The La Amarilla hanging wall zone at Guajes is recommended to have a maximum interramp angle of 38 degrees.

14.8.3 Processing, General and Administrative Costs

A preliminary estimate for process and general & administrative costs was provided to Torex for the purposes of defining mineral resources. The costs provided to Torex by M3 were $11.51/t for mineral processing and $0.98/t for General and Administration costs (ore only). These cost estimates are based on preliminary and ongoing design work for conventional CIL/CIP milling and preliminary general administration commonly in use. General & Administration costs do not include land ownership.

AMEC 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 14-5 is likely to support economic extraction. 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.

Table 14-5: Parameters Used to Establish Open Pit Mineral Resource Cut-off Grade

Item	Unit	Amount
Gold price	$/oz	1,400
Silver price	$/oz	26
Average Au process recovery	%	87.33
Average Ag process recovery	%	33.1
Ore mining cost	$/t	1.65
Waste mining cost	$/t	1.65
Processing cost	$/t	11.51
G&A cost	$/t	0.98
Cut-off grade	g/t Au	Variable

14.9 MINERAL RESOURCE STATEMENT

Mr. Orbock is the QP for the mineral resource estimate at El Limon and Mr. Hertel is the QP for mineral resource estimate at Guajes. Mineral resources are reported as undiluted. Mineral Resources are inclusive of Mineral Reserves. AMEC cautions that mineral resources are not mineral reserves until they have demonstrated economic viability by at least a pre-feasibility study.

Mineral Resources as reported on the 18th June, 2012 for the Project, based on open pit mining methods, is summarized in Table 14-6. Mineral Resources are reported using a cut-off of 0.5 g/t Au and have an effective date of 11 June, 2012.

Table 14-6: Morelos Open Pit Mineral Resource Statement – Effective Date 11 June 2012

Deposit	Resource Category	Tonnes (Mt)	Gold Grade (g/t)	Gold Ounces (000's)	Silver Grade (g/t)	Silver Ounces (000's)
El Limon	Measured	6.1	3.29	641	4.08	795
	Indicated	26.0	2.97	2,477	6.34	5,292
	Sub Total M&I	32.1	3.03	3,117	5.91	6,086
Guajes	Measured	4.3	3.11	431	3.86	535
	Indicated	17.4	2.25	1,258	3.11	1,736
	Sub-total M&I	21.7	2.42	1,689	3.26	2,270
	Total M&I	53.7	2.78	4,806	4.84	8,357
El Limon	Inferred	8.3	2.0	542	4.7	1,250
Guajes	Inferred	2.5	1.0	77	1.7	135
	Total Inferred	10.7	1.8	619	4.0	1,385

Notes to accompany Mineral Resource table

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. Mineral Resources are reported above a 0.5 g/t Au cut-off grade.
3. Mineral Resources are reported as undiluted; gold grades are contained grades.
4. Mineral Resources are reported within a conceptual open pit shell.
5. Mineral Resources were developed in accordance with CIM (2010) guidelines.
6. Mineral Resources are reported using a long-term gold price of $1,400/oz and silver price of $26/oz.
7. Mining costs used is $1.65 per tonne and processing costs at $11.51 per tonne. General and administrative costs were estimated at US0.98$ per tonne.
8. Gold recoveries are dependent on grade and rock type and have a weighted average recovery of 87.33%.
9. Silver metallurgical recoveries by rock type show a weighted average of 33%.
10. Assumed pit slope angles range from 32° to 51°.
11. Totals may be different due to rounding of numbers.
12. QP for El Limon is Edward J. C. Orbock III, RM SME and QP for Guajes is Mark Hertel, RM SME.

14.10 COMMENTS ON SECTION 14

The QPs are of the opinion that the Mineral Resources for the Project, which have been estimated using reverse circulation drill data, core drill data and channel sampling data, have been performed to industry best practices, and conform to the requirements of CIM (2010).

Factors which may affect the Mineral Resource estimate as presented in this report include variations in commodity price and exchange rate assumptions; changes to the assumptions used to generate the conceptual pit shell that constrains the mineral resources, including mining, processing, and other costs, pit slope angles, metallurgical recoveries; and assumptions that all required permits and approvals can be obtained to support mine construction and operation.

15 MINERAL RESERVE ESTIMATES

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 mined."*

The Project's mineral reserves are founded on, and are part of the mineral resources effective 11 June 2012 presented in Section 14 of this feasibility study. The reserves are reported based on open pit mining within the designed pits presented in Section 16.9 and include 15% dilution and 5% mining losses.

The reserves are reported above a cut-off grade of 0.50 g/t recovered Au, which is considered appropriate based on a long term gold price of $1250/oz Au. The equivalent in situ gold cut-off grade varies due to variable process recovery by ore type. Cut-offs on an in-situ gold grade basis range from 0.55 g/t Au for hornfels to 1.07 g/t Au for breccia and average approximately 0.60 g/t Au. 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 16.11 of this study.

Process recoveries are variable by ore type and head grade and are estimated to average 87.4% for gold and 32.7% for silver as presented in Section 13.4 of this feasibility study.

Morelos project proven and probable mineral reserves are summarized in Table 15-1. The independent qualified person as defined by the NI 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. A legal opinion states that MML has El Limón and Guajes mineral rights but not all project area surface rights. Possible delays in acquiring the remaining surface rights have the potential to delay project development.

The mineral reserves were reconciled with mineral resource estimates. Contained gold in the reserves is approximately 15% less than contained gold in the measured and indicated mineral resources. Approximately 1% of the difference in contained gold is attributed to the higher cut-off grade utilized to define reserves and approximately 4% is due to incorporation of mining losses and dilution in reserve estimates. The remaining 10% is gold contained in measured and 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.

Table 15-1: Morelos Mineral Reserve Statement – effective date 28 August 2012

Deposit	Reserve Category	Tonnes (millions)	Gold grade (g/t)	Contained Gold (millions oz)	Silver grade (g/t)	Contained Silver (millions oz)
El Limón	Proven	6.3	2.94	0.59	3.67	0.74
	Probable	23.6	2.66	2.01	5.39	4.09
	Sub-total P&P	29.8	2.72	2.61	5.03	4.83
Guajes	Proven	4.3	2.93	0.40	3.68	0.50
	Probable	14.7	2.29	1.08	3.14	1.48
	Sub-total P&P	18.9	2.44	1.48	3.27	1.99
Total	Proven	10.5	2.93	0.99	3.67	1.24
	Probable	38.2	2.52	3.10	4.53	5.57
	Total P&P	48.8	2.61	4.09	4.35	6.81

Notes to accompany Mineral Reserve Table:

1. Mineral reserves are reported based on open pit mining within designed pits above a 0.5 g/t recovered Au cut-off grade, and incorporate estimates of dilution and mining losses. The cut-off grade on an in-situ grade basis varies by ore type and averages approximately 0.60 g/t Au. The cut-off grade and pit designs are considered appropriate for long term metal prices of $1250/oz gold and $22/oz silver.
2. Mineral reserves are founded on, and are included within, Morelos mineral resource estimates with an effective date of 11 June 2012.
3. A legal opinion states that Minera Media Luna, S.A. de C.V. (a wholly owned subsidiary of Torex) has mineral rights to the concessions encompassing the El Limón and Guajes deposits, however surface rights within the project area have not yet all been secured.
4. Mineral reserves were developed in accordance with CIM (2010) guidelines.
5. Numbers may not add due to rounding.
6. QP for mineral reserve estimate is Brian Connolly, P.Eng.

16 MINING METHODS

16.1 INTRODUCTION

It is planned that the Morelos 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 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.

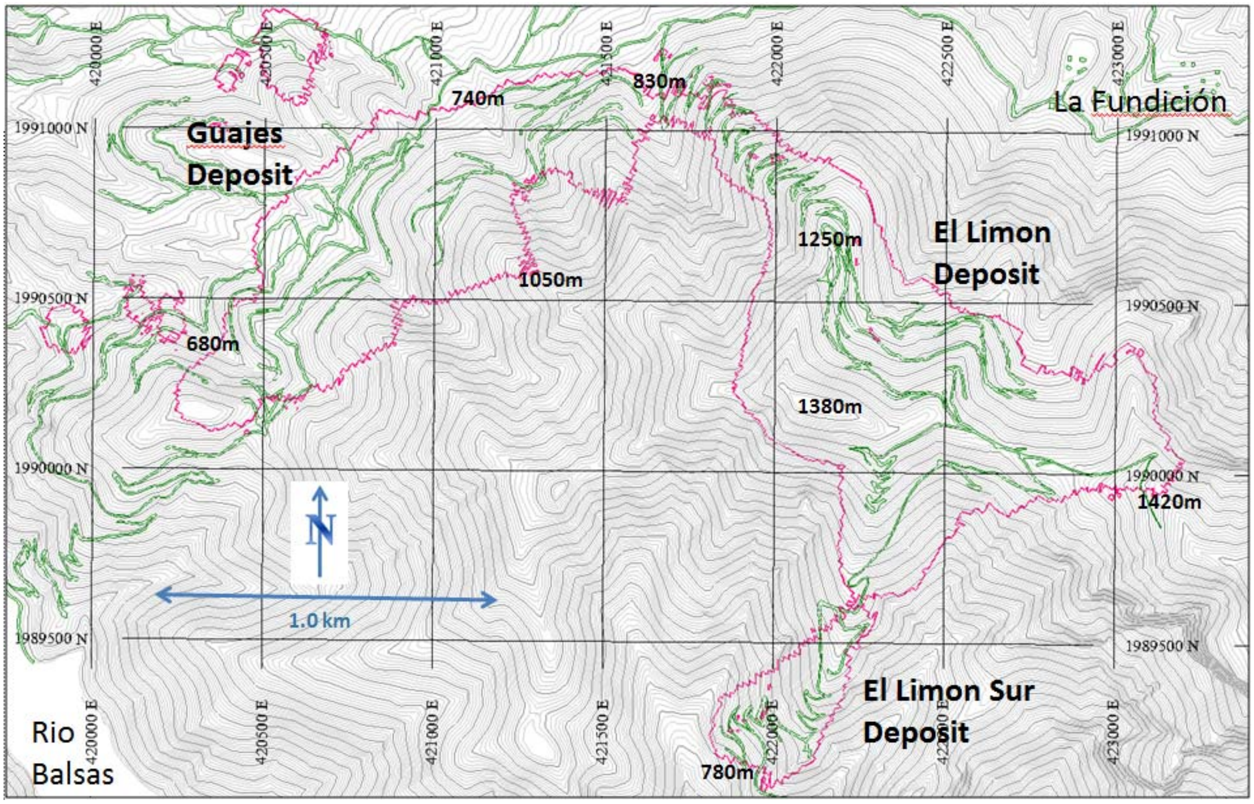


Figure 16-1: Morelos Deposit Terrain

Map: Showing 5 & 25m contours, exploration roads, and outlines of the resource estimate conceptual pits. Figure courtesy of SRK Canada, August 2012.

The village of La Fundición is located in close proximity and downhill from the El Limon deposit as illustrated in in Figure 16-1, and the village must be relocated to allow El Limon open pit mining to proceed. Village relocation is scheduled to be completed by the end of 2014 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 feasibility study incorporates conveying of crushed El Limón ore to the process plant.

16.2 PIT SLOPE GEOTECHNICAL EVALUATION

The following information summarizes the findings of the SRK report "Feasibility-level Geotechnical Pit Slope Evaluation, Morelos Gold Project, Guerrero, Mexico."

16.2.1 Geotechnical Characterization

A field data collection program was designed and carried out for the project with the primary objective of 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 available.

Results of the data collections programs indicate very competent rock conditions over much of the El Limón and Guajes open pit areas. In particular, the intrusives, hornfels and skarns anticipated to comprise the highwalls (SE wall at Guajes and SW wall at El Limón) are all quite competent with average unconfined compressive strength (UCS) values typically ranging between 150 to 200 MPa and rock mass rating (RMR) values of approximately 75 to 85 according to Bienawski (1989).

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. The marble appears to be host to numerous karst voids, assumed to be solution caverns of various shapes and sizes. 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 rope conveyor loading pad, will be underlain by marble. While the potential for large voids does present risk to project schedule and budget, SRK feels that their presence does not adversely impact the feasibility of the project.

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 engineering lithology materials that will comprise the final El Limón northeast pit wall. To the south of La Flaca Fault, the eastern edge of the zone roughly parallels the final pit wall, indicating that localized areas of the weaker rock mass will likely remain in final pit walls, thereby potentially producing localized bench sloughing which, although present, is not anticipated to significantly impact overall slope stability. Slope design recommendations have been adjusted to account for this.

16.2.2 Slope Stability Analyses

To optimize the slope design at the Morelos Gold Project, 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 end of mining groundwater surface exported from the SRK (2012) hydrogeologic model. The highly competent materials of the El Limón and Guajes highwalls 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 strength. Resulting probabilities of failure are considered acceptable for their respective areas.

Slope kinematics were 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 steep dip angle of the primary structures at Morelos, no sectors were identified as high risk.

16.2.3 Pit Slope Design Recommendations

Pit slope design recommendations for the final feasibility 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*

*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 75º 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 75º bench face angle is improved rockfall control based on the anticipation that the 75º 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 requirements that will be required to achieve this design.

16.2.4 Recommendations for Additional Geotechnical Work

The potential for significantly large voids in the marble should be further evaluated based on the existing resource borehole database to estimate what percentage of the marble 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 and ground penetrating radar may also be necessary prior to and/or during operation.

Although no direct evidence of such has been identified to date, benches cut in the Guajes pit highwall should be mapped and evaluated with particular attention to the identification and, if identified, the characterization of any La Amarilla parallel structures with sufficient extent to potentially create large-scale failure surfaces in the pit wall.

16.3 RECOMMENDED ACCESS ROAD CONFIGURATIONS

The steep and irregular terrain which the mine access road 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 access road routing and construction mandated that a sub-study, as described in this section, be conducted to evaluate the issue. The access roads considered during this sub-study include:

- The south access road from Guajes to the top of El Limón;
- The access road from El Limón to the rope convey loading station; and,
- The southeast El Limón pit wall access.

For evaluation, the road alignments were subdivided into sectors of similar geography and anticipated geotechnical characteristics, as shown on Figure 16-2.

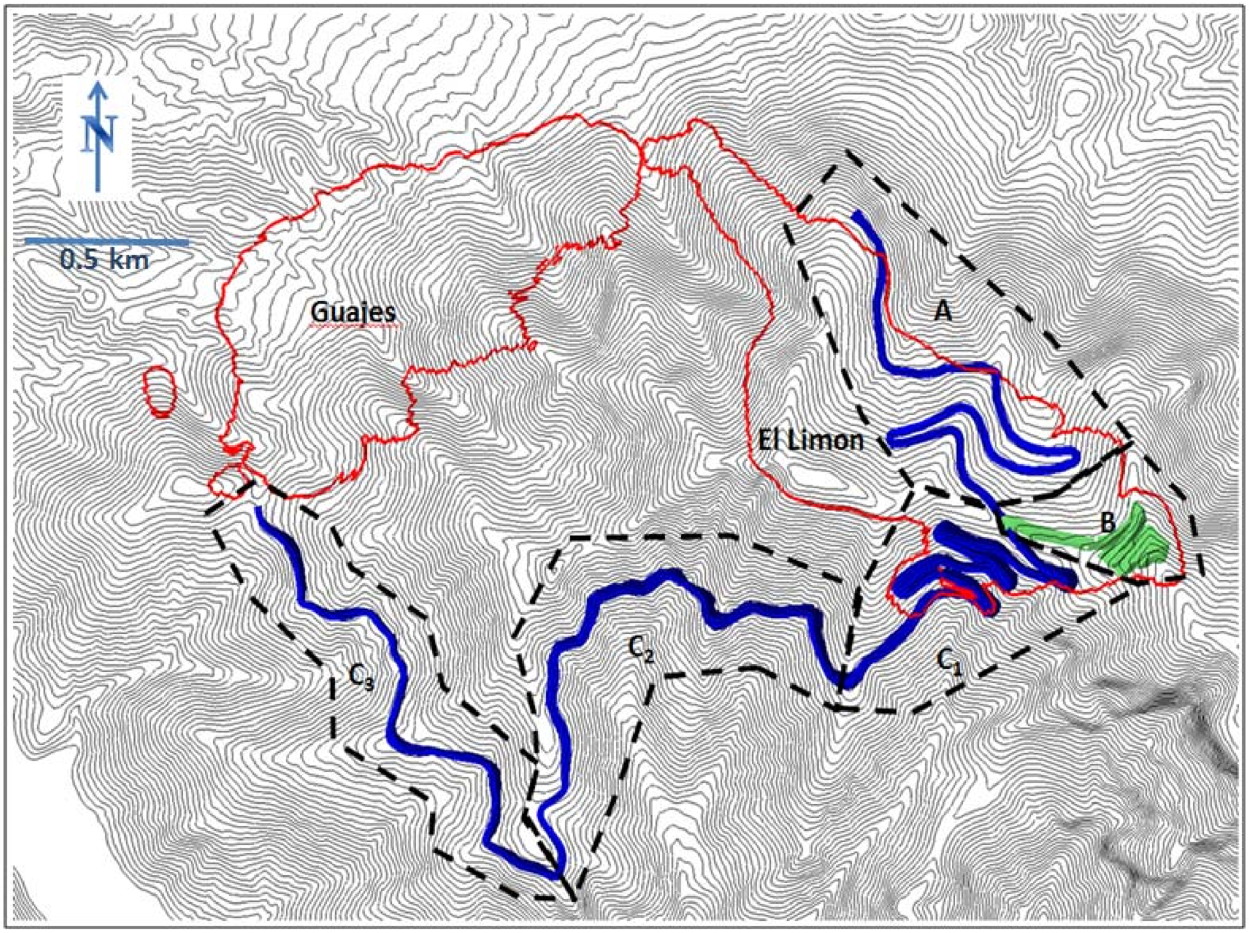


Figure 16-2: Access Road Sectors

Figure courtesy of SRK U.S., August 2012.

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, the construction of access 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 characteristics of the materials exposed during the initial road cuts will be necessary.

Table 16-2: Access Road Design Recommendations

Road Cut Slope Angle Recommendations						
Road Sector		A	B	C1	C2	C3
Weathered rock depth	m	15	10	7	-	7
Weathered rock bench face angle	deg	45	50	50	-	50
Fresh bedrock bench face angle	deg	78	78	75	78	70
Catch bench width	m	7.3	7.3	7.3	7.3	7.3
Catch bench height/interval	m	14	14	14	14	14
Interramp slope angle (fresh rock)	deg	54	54	52	54	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 installation of mesh and/or application of shotcrete.

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, includes bench face angles of 70 to 78 degrees and 7.3 m wide catch benches located at 14 m vertical intervals. Bench face angles in the upper weathered materials should be reduced to 45 to 50 degrees. 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 C2 is considered aggressive; however, based on observations of current El Limón road cuts, existing geological mapping of the area and the current understanding of geologic structure at the site, 78 degrees with pre-shear is not believed to be unrealistic for those areas. In addition, with the incorporation of 7.3 m catch berms every 14 m, minor raveling or small-scale bench instabilities are expected to be tolerable.

16.4 WASTE ROCK DUMP GEOTECHNICAL ASPECTS

AMEC E&I 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.

Geotechnical investigations have been carried out near the toe of all WRD locations which included boreholes and test pits. In general the foundation conditions are conducive to this type of waste rock dump construction. 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 are 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. These ponds will settle solids and provide discrete monitoring locations. Additional information on these ponds is described in Section 18.8.3 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 Morelos project were evaluated by SRK based on 3-D numerical groundwater flow modeling completed in 2012 (SRK, 2012b) by using the MODFLOW-SURFACT finite-difference code and Visual MODFLOW interface. This model was developed based on hydrogeological data collected during 2011 and 2012 field programs, and calibrated to measured water levels in 44 monitoring wells/test holes. "Schedule 18" of Torex's pit plans for the Lower Guajes, Upper Guajes and El Limón open pits with ultimate pit bottom elevations of 528 msl, 675 msl, and 962 msl, respectively were incorporated into the groundwater model. Excavation of the pits was simulated based on three phases of excavation for each pit, yearly pit bottom elevation for each phase, and assumption of 16 years of mine life.

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:

- Lower Guajes Pit: 210 m^3/d;
- Upper Guajes Pit: 40 m^3/d; and
- El Limón Pit: 80 m^3/d.

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).

16.6 PIT HYDROLOGY

The contributions from surface runoff into the open pits for average year precipitation are estimated to be 570 m^3/day and 550 m^3/day for Guajes and El Limon open pits respectively. 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

66,000 m^3 for each of the Guajes and El Limon open pits. The design pump capacities required at each of Guajes and El Limon open pits are 1,375 m^3/hour.

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 show the depth and general shape of the economic mining area, although the shell itself is quite irregular since it is based on mining entire resource blocks.

Input revenue assumptions are frequently factored (referred to as a revenue factor or "RF") to create a series of nested pit shells that are analyzed on a present value and an 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 feasibility study is based on metal prices of US$1,200/oz gold and US$20.50/oz silver, with values only applied to measured and indicated mineral resources. Inferred mineral resources are considered waste rock.

Process recovery of gold is expected to vary by ore type and by head grade. As described in Section 13, six gold grade-recovery formulas (for six ore types) and a single silver grade-recovery formula were generated for the purpose of forecasting gold and silver process recoveries.

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 and cut-off 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 (gpt) x process recovery (%), were generated and exported to Whittle for pit optimization purposes.

Input parameters for Morelos pit optimization are summarized in Table 16-3. 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

Parameter	Units	Gold	Silver[1]
Price	US$/oz	1200	20.5
Payable	%	99.5%	99.0%
Refining	US$/oz	2.00	1.5
Royalty	%	2.5%	2.50%
Value of recovered metal [2]	US$/oz	1162	18.33
Value of recovered metal [2]	US$/g	37.37	0.59
Preliminary Operating Cost Estimates			
Ore mining	$/t mined	1.65	
Waste mining	$/t mined	1.65	
Processing	$/t feed	12.71	
G&A	$/t feed	1.56	
Land (surface rights lease payments)	$/t feed	1.59	
Cut-off Grade, in-situ [3]	g/t RAu [3]	0.48	
Ore density	t/m^3	3.00	
Waste density	t/m^3	2.74	
Dilution (prelim estimate)	% in situ	12%	
Mining loss	%	5%	
Overall Pit Slopes (with allowances for ramps)	deg	by sectors	
Weathered rock	deg	33-45	
Bedrock	deg	33-49	

[1] Silver treated as byproduct credit.

[2] Pit Optimization performed on recovered metal, with process recoveries incorporated in mine planning block model

[3] Cut-off grade on a "recovered gold grade" basis, i.e. Au grade gpt x process recovery %.

16.7.2 Pit Optimization Results

An initial pit optimization run was conducted on the entire Morelos deposit. To guide pit design pit optimization analyses were conducted separately for the Guajes and El Limón deposits. The results of these analyses are described below.

16.7.2.1 Overall Project

A series of pit shells were developed based on the entire project measured and indicated mineral resources. Pit shell A20-30, generated using a revenue factor 0.78 and illustrated in Figure 16-3, was selected as optimum based on preliminary incremental and present value analysis.

Shell A20-30 is smaller than the conceptual pit optimization shell utilized for resource reporting since Shell A20-30 is based on a lower gold price and value is not applied to inferred resources.

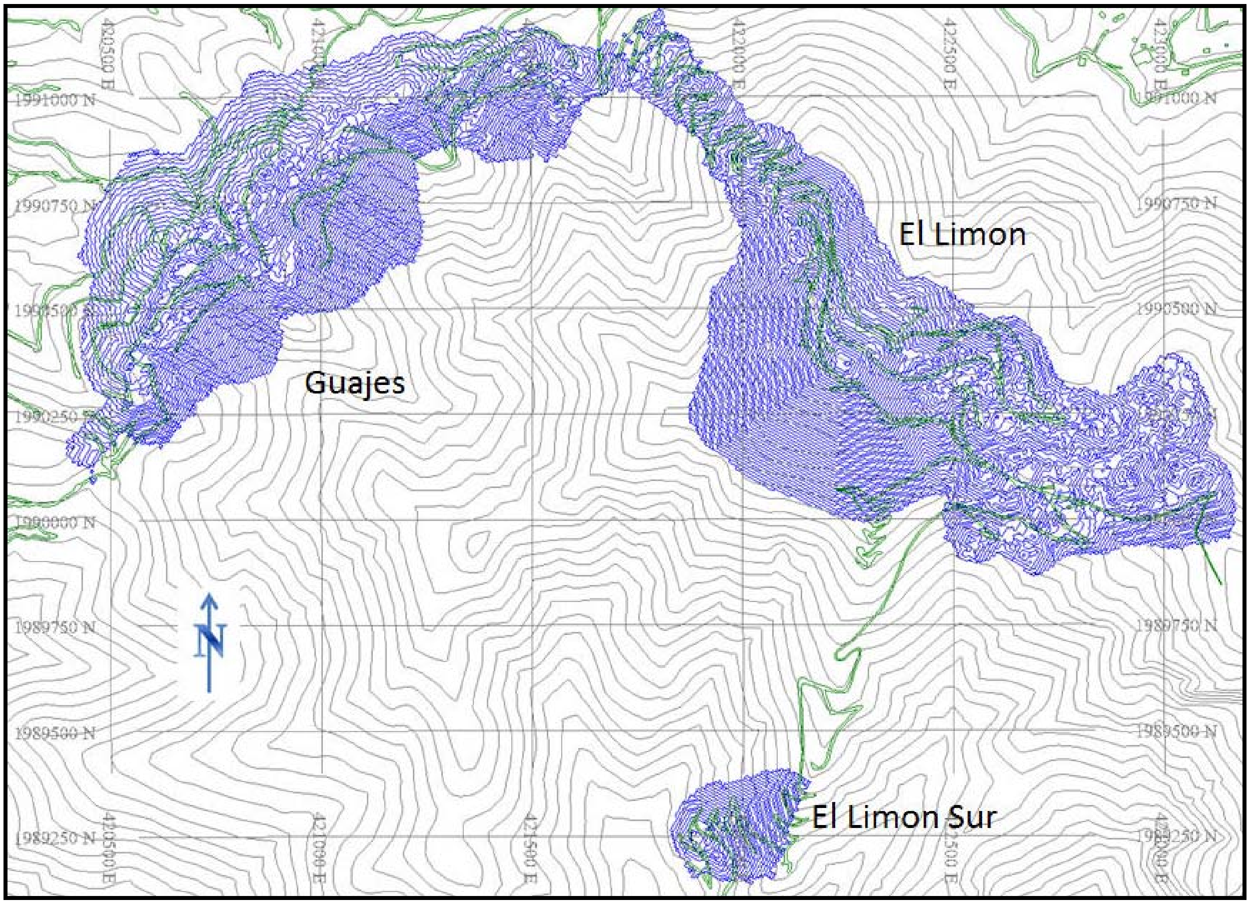


Figure 16-3: Morelos Overall Pit Optimization Shell A20-30

Figure courtesy of SRK Canada, August 2012.

It can be seen that Pit Shell A20-30 includes a portion of the El Limón Sur deposit. It was decided to exclude the El Limón Sur deposit from the feasibility study since the extent of this deposit is not yet fully defined (exploration is ongoing). Geotechnical parameters for this potential mining area are also not yet available.

16.7.2.2 Guajes Deposit

Guajes deposit pit optimization results are presented graphically in Figure 16-4. Based on incremental and present value analysis pit shell A14-30, generated using an RF of 0.78, was selected to guide Guajes deposit pit design.

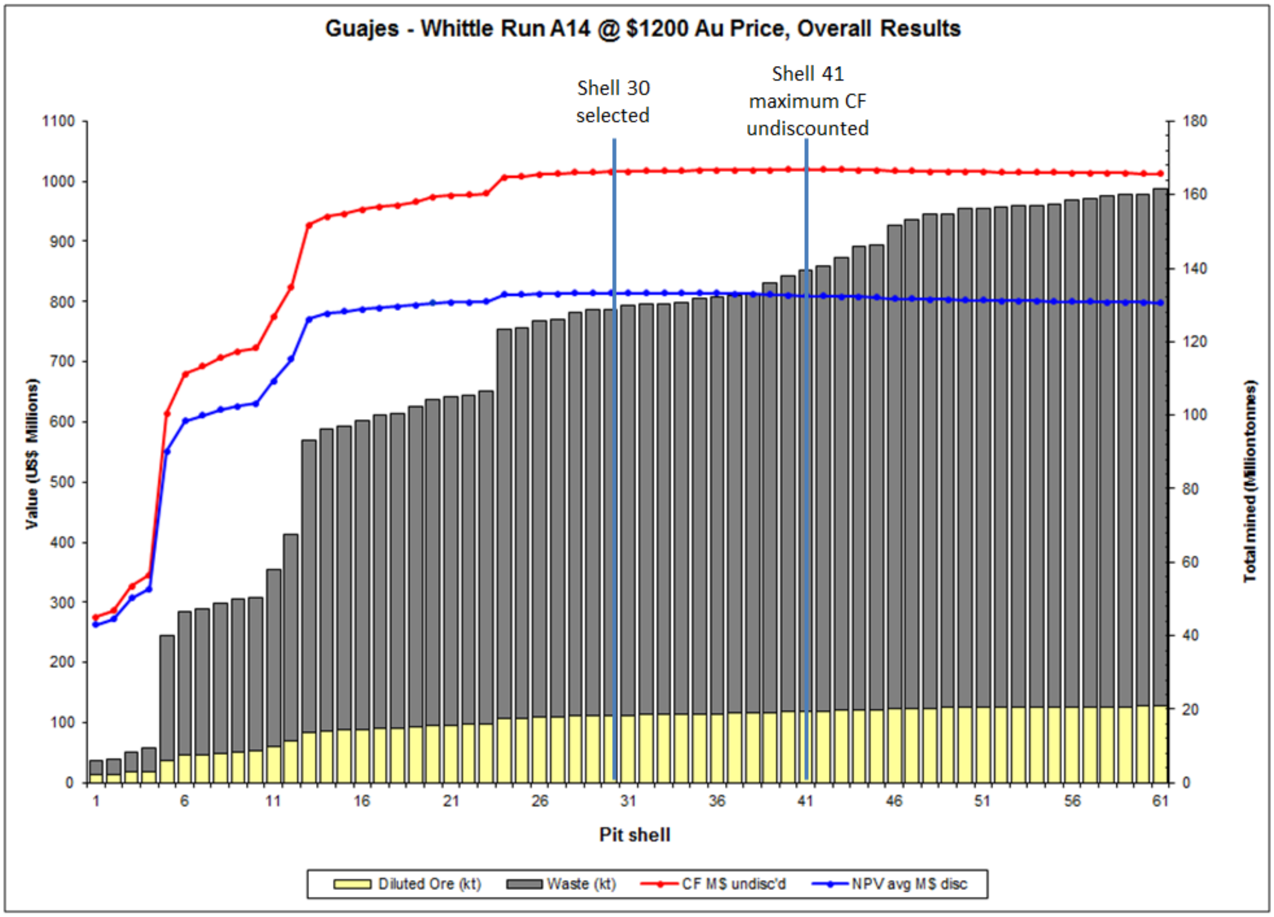


Figure 16-4: Guajes Pit Optimization Results

Figure courtesy of SRK Canada, August 2012.

16.7.2.3 El Limón Deposit

El Limón deposit pit optimization results are presented graphically in Figure 16-5. Based on incremental and present value analysis pit shell A18-31 (generated using a RF of 0.80) appeared suitable to guide El Limón pit design; however, the graph reveals a pronounced step increase in pit quantities beyond Shell A18-22 (generated using a RF of 0.62). The difference between pit shells A18-22 and A18-31 is principally the depth of main El Limón deposit mining. Pit shell A18-22 includes potentially economic resources to the 952 m elevation whereas Pit Shell A18-31 includes potentially economic resources to approximately the 900 m elevation.

A mine planning trade-off analysis that included alternate pit designs and production schedules indicated that utilizing the larger pit shell would result in higher life-of-mine gold production and net cash flow, but the project discounted net cash flow and IRR would be reduced. Two other factors were also considered in the analysis: the resource at depth requires further definition and the incremental strip ratio for the additional material is very high. It was decided to design the El Limón ultimate pit guided by the smaller shell, A18-22, as the base case in the feasibility study.

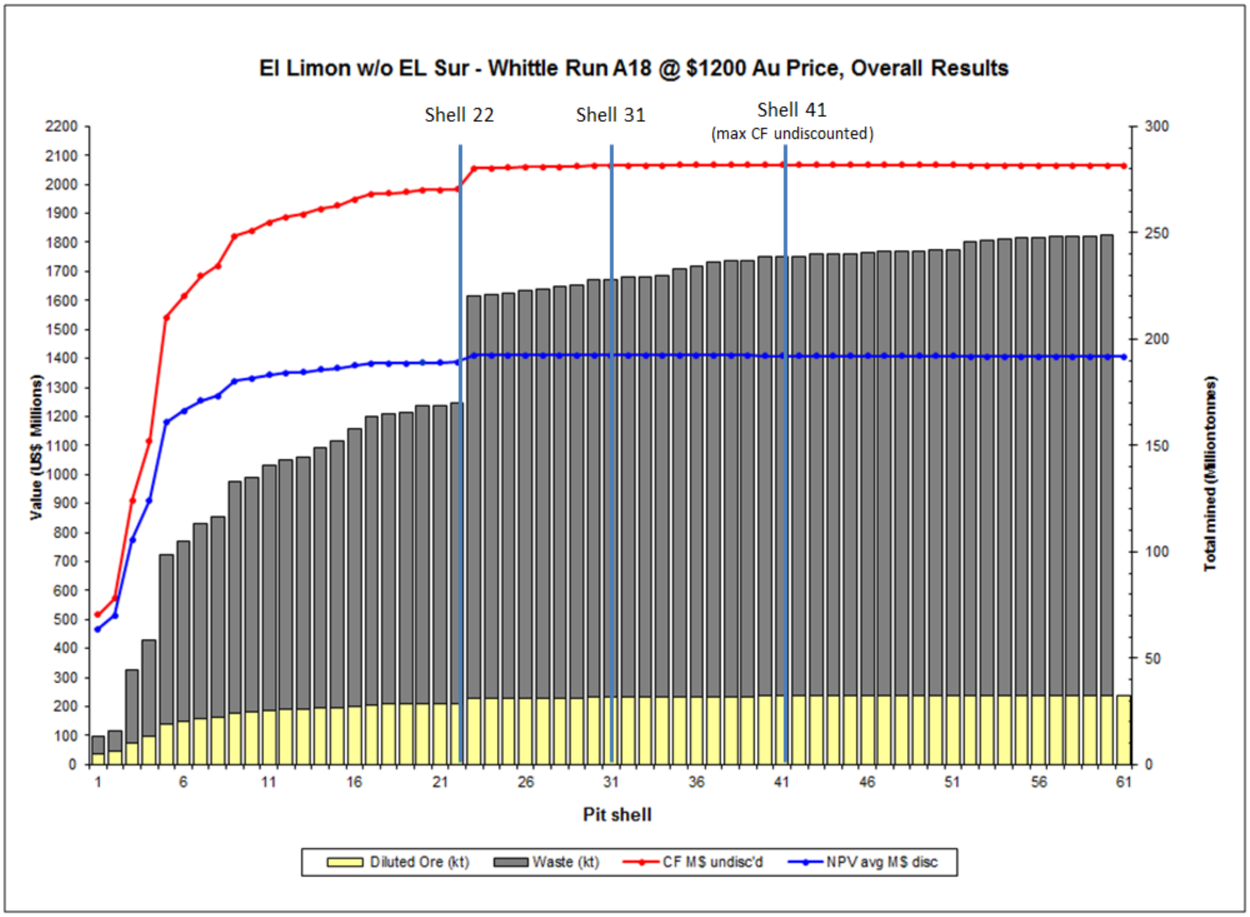


Figure 16-5: El Limón Pit Optimization Results
Figure courtesy of SRK Canada, August 2012

16.7.2.4 Selected Pit Optimizations Shells

The optimum pit shells selected to guide Guajes and El Limón ultimate pit design, i.e. Guajes Pit Shell A14-30 and El Limón Pit Shell A18-22, are illustrated in Figure 16-6. Pit shell A20-30, illustrated in Figure 16-3, was utilized to guide ultimate pit design in the area where the two deposits are in close proximity.

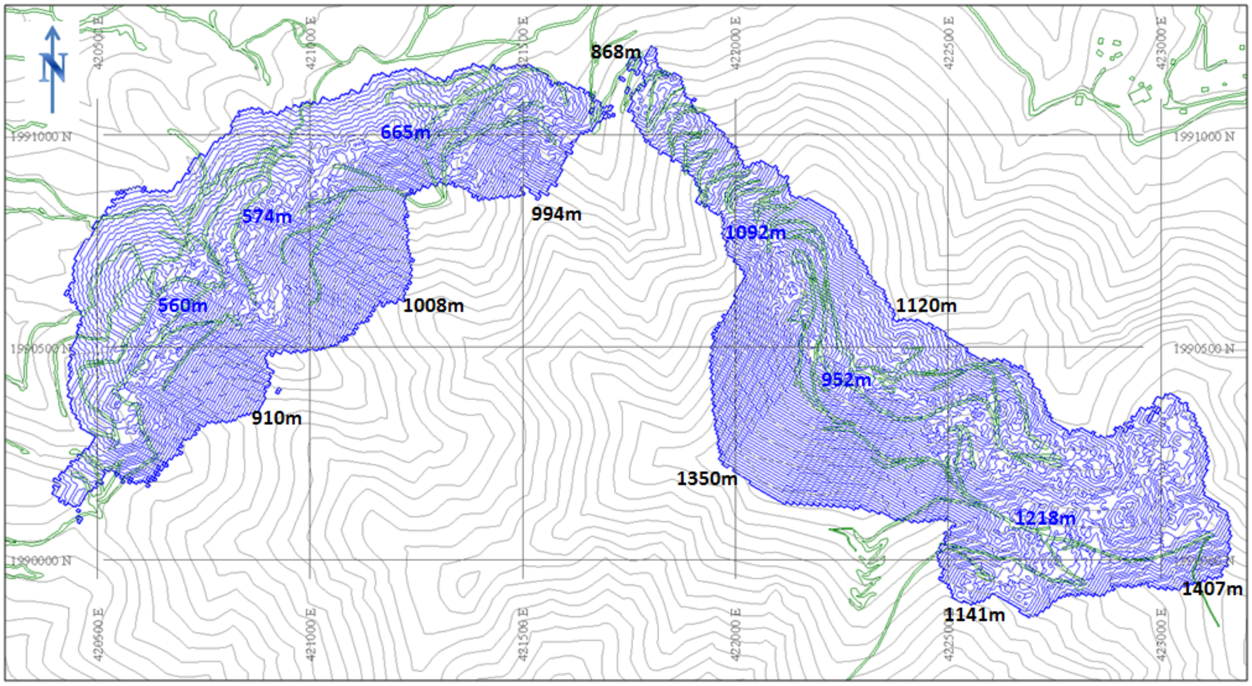


Figure 16-6: Guajes and El Limón Selected Pit Shells

Figure courtesy of SRK Canada, August 2012.

16.8 MINE ROAD LAYOUT

Morelos haul roads are 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 trucks. The haul roads have been designed with 8% gradient 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 Morelos pit access roads will be challenging. The road layouts presented in this study are considered adequate for feasibility study purposes. Final designs should incorporate run-out ramps at appropriate locations including switchbacks. The layout of the mine roads is shown in Figure 16-7.

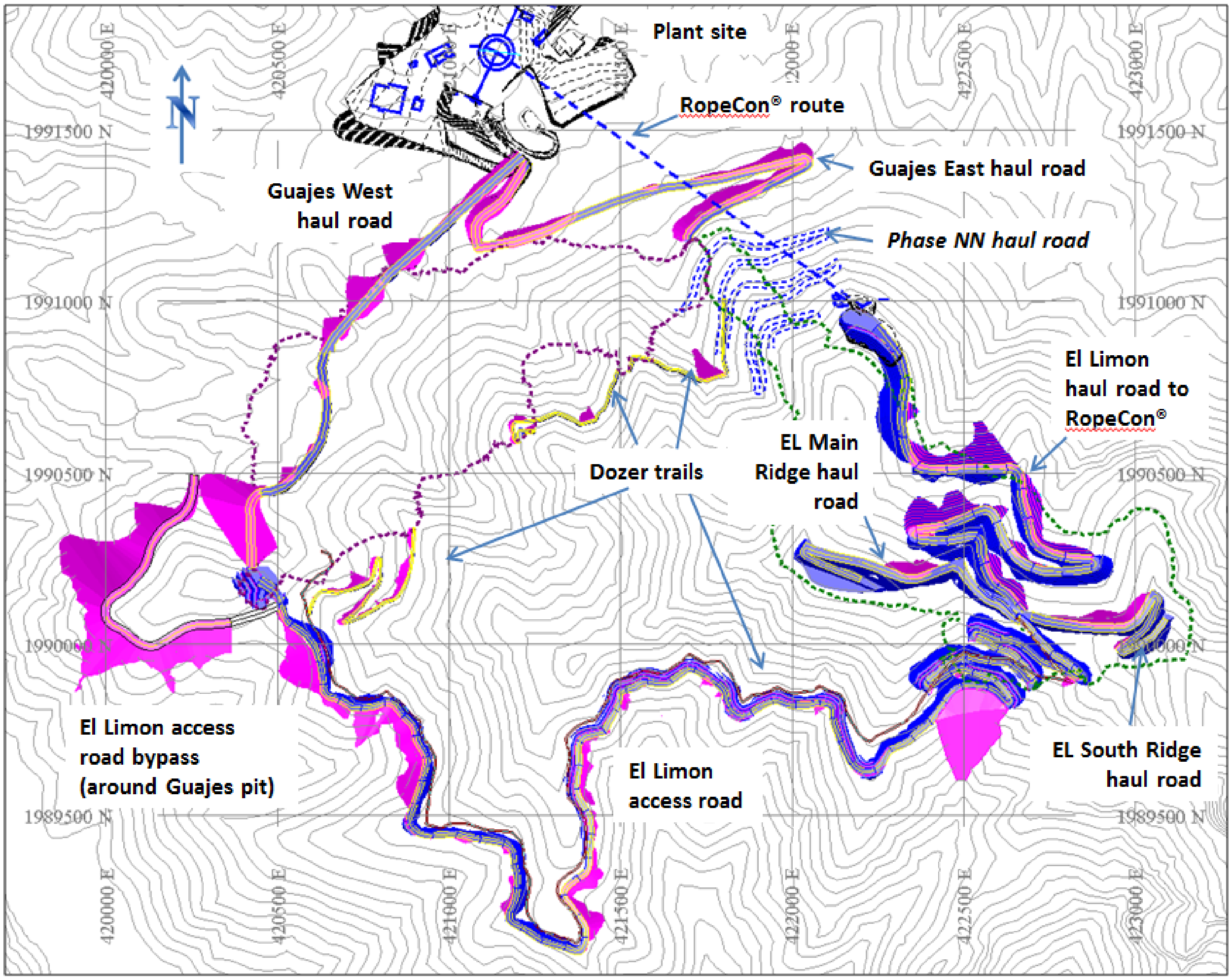


Figure 16-7: Mine Road Layout

Figure courtesy of SRK Canada, August 2012.

Mine roads illustrated in Figure 16-7 include:

- Dozer trails, to facilitate bulldozers and drill access to initial high elevation mining areas and to the top of cuts for haul road and access road development. These include dozer access trails to the top mining elevations on the Guajes east, central, and west ridges. These dozer trails are designed at 8 m width, to facilitate access by large 433 kW, 5 m wide bulldozers required in the mining areas. A 5 m wide dozer access trail is also included at the top of cut for the El Limón access road. In several areas the dozer trails traverse exceptionally steep terrain with natural slopes in the order of 45 degrees or more, and developing even a narrow trail will be challenging. In these areas it is expected that 4 or 5 m wide initial pilot trails constructed utilizing horizontally drilled blastholes may be required;
- Plant site roads, located on gentle terrain to connect initial Guajes truck-shovel mining areas with the process plant and truck shop. These roads will be built using cut-fill techniques or with rockfill mined from an initial Guajes starter pit;

- El Limón access road, located on the south facing slopes to the south of the El Limón deposit. This road terminates at the El Limón ridge "saddle" location at 1298 m elevation and is scheduled to be constructed in 2013 and 2014, prior to La Fundición village relocation. Due to the steep terrain the road is designed almost entirely in cut, producing relatively high cut slopes that will require benches and berms. To minimize cut slope heights, pre-shearing to achieve 78 degree bench face angles is incorporated in the design. During mine operation the access road segment traversing the Guajes pit will be replaced with a pit bypass section connecting to the Guajes west waste dump;
- El Limón main ridge and south ridge haul roads, constructed from the "saddle" upper terminus of the access road;
- El Limón ore haulage road, built from the "saddle" upper terminus of the access road to the El Limón crusher and RopeCon® location at 1120 m elevation. This road, 25 m in width at 8% gradient, will be utilized for both El Limón ore haul and waste haul;
- El Limón Phase NN haul road, planned to be constructed late in mine life in order to mine El Limón north ridge ore after RopeCon® conveyor removal. This road includes multiple switchbacks developed almost entirely in cut with extensive use of pre-shearing.

Features of the dozer trails and mine roads are summarized in Table 16-4.

Table 16-4: Features of Mine Roads

ROAD/TRAIL	Width m	Length m	Start elev, m	End elev, m	Rise m	Gradient % (max)	Switchbacks #	Cut KBCM	Fill KLCM
Phase GA dozer trail	8	560	951	1001	50	12%	2	25	32
Phase GB dozer trail	8	600	971	1004	33	12%	2	19	5
Phase GC dozer trail	8	930	805	917	112	12%	0	18	10
El Limon access road dozer trail	5	4,655	769	1304	535	15%	1	44	0
El Limon access road*	18	5,615	770	1298	528	10%	5	1,725	191
El Limon east ridge haul road	25/18	790	1298	1358	60	8%	2	165	33
El Limon main ridge haul road	25	910	1298	1365	67	8%	1	474	19
El Limon ore haul road (to RopeCon®)	25	2,285	1298	1120	178	8%	2	909	267
Guajes Phase GD road to plantsite	25	825	700	710	10	2%	-	12	390
Guajes Phase GE road to plantsite	25	1,760	840	710	130	8%	2	103	272
El Limon NN pit haul road*	15	3,038	1078	855	223	8%	5	945	12

* design includes extensive use of pre-shearing

The topographical surface utilized for mine planning was generated from 5 m contour data gathered in 2007. Project site mapping derived from satellite photos with 1 m contour intervals is available but the contours appear to be excessively smoothened so were not utilized for mine planning. SRK understands that an aerial survey and mapping to generate new 1 m contours data is underway. SRK is of the opinion that, in view of the steep terrain, topography derived from the 5 m contour data is satisfactory for pit quantity and reserve estimation. Topography based on a tighter contour interval would be particularly beneficial for road design, and it is recommended that road designs be reviewed and revised if necessary when the new topographical data is available.

16.9 PIT DESIGN

The ultimate and phase pits were designed using MineSight® mining software based on pit slope geotechnical criteria. The geotechnical slope domains were coded into the mine planning block model utilized for pit design so that the geotechnical criteria could be followed on a block-by block basis. A bench height of 7 m matching the vertical dimension of the resource blocks was utilized. In most areas pit walls are designed with berms 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 have been designed with berms at 14 m intervals, whereas pit walls to the east of the fault (i.e. the higher pit walls) are designed with berms at 21 m intervals.

All pits have been designed with 7 m operating bench heights. For pits with catch benches at 21 m intervals it may be possible in some higher elevation areas to mine waste rock on 10.5 m high benches, which is more cost effective and may facilitate high pit sinking rates in terms of vertical meters per year. This is considered a project opportunity that has not been incorporated into the base case mine plan. To maximize ore selectivity and minimize dilution it is expected that ore will be mined only on 7 m benches.

In-pit haulage ramps 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 ramps have been narrowed to 18 m, which is suitable for single lane traffic by the 90-tonne class haulage trucks contemplated.

Pit design parameters are summarized in Table 16-5.

Table 16-5: Pit Design Parameters

Parameter	Unit	Guajes pit		El Limon pit	
		Highwall	W of fault	Main pit	NN Pit
Bench height	m	7	7	7	7
Bench face angle	deg	75	58	65-75	70
Berm vertical interval	m	21	14	21	14
Berm width	m	9.0	9.2	9.0-9.8	8
Inter-ramp slope angle	deg	55	38	47-55	47
Highwall geotech berm width	m	25		25	
Highwall geotech berm vertical interval	m	126		126	
Two way ramp width	m	25		25	
Single lane ramp width (near pit bottom)	m	18		18	
Maximum in-pit ramp gradient	%	10		10	
Max overall slope (with ramps & geotech berms)	deg	50		50	

16.9.1 Guajes Pit Design

The Guajes deposit will be mined utilizing a series of phase pits guided in general by pit shell A14-30 illustrated in Figure 16-6.

It is planned that the three high ridges will be mined as dozer pits, to avoid extremely difficult truck haul road construction to high elevations on the ridges. Rock will be drilled and blasted and dozed downhill to lower elevations and then shaped into in-pit haulage roads for subsequent lower elevation truck-shovel 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 three dozer phase pits, i.e. Phases GA, GB and GC, are illustrated in Figure 16-8. The highwall layouts for the three dozer pits include 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.

Also shown in Figure 16-8 is an initial Guajes starter pit, Phase GD, which is planned to be mined by truck and shovel early in the mine life. The pit has been designed with berms at 14 m intervals since virtually the entire pit is located to the west of the La Amarilla fault. Phase pit GD contains virtually no ore but will serve as an in-pit source of rockfill for road construction. The pit will also serve as an equipment operation training site for new mine employees.

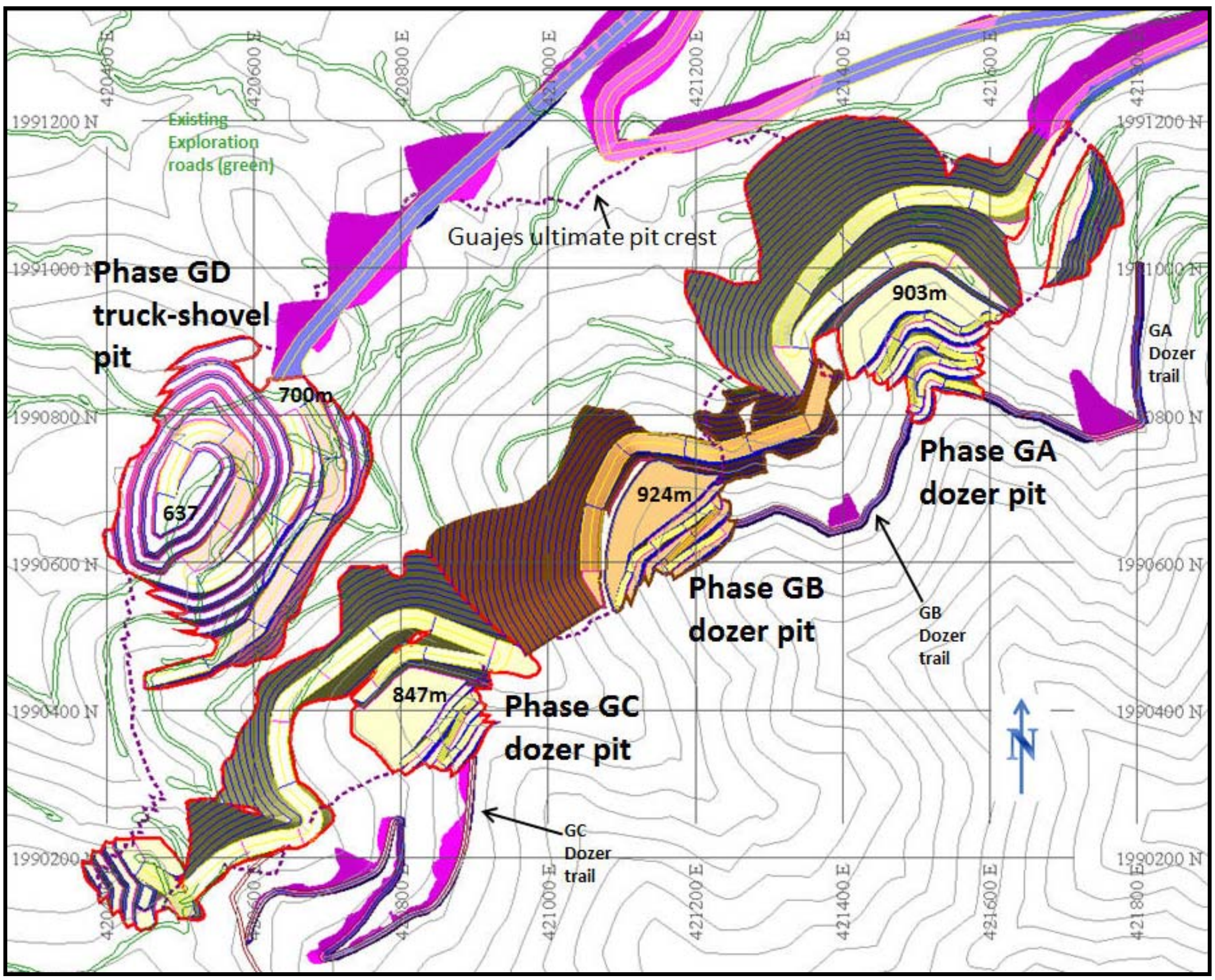


Figure 16-8: Guajes Phase Pits GA, GB, GC, and GD

Figure courtesy of SRK Canada, August 2012.

The Guajes East truck-shovel phase pit, referred to as Phase GE, is the source of the initial ore feed at plant start-up. Mining of this pit can commence once the Phase GA dozer pit is completed (including haul roads at lower elevations developed in fill). Guajes Phase GE (Guajes East) pit design is illustrated in Figure 16-9. A haulage ramp is incorporated in the pit highwall to facilitate mining of the adjacent Guajes West pit.

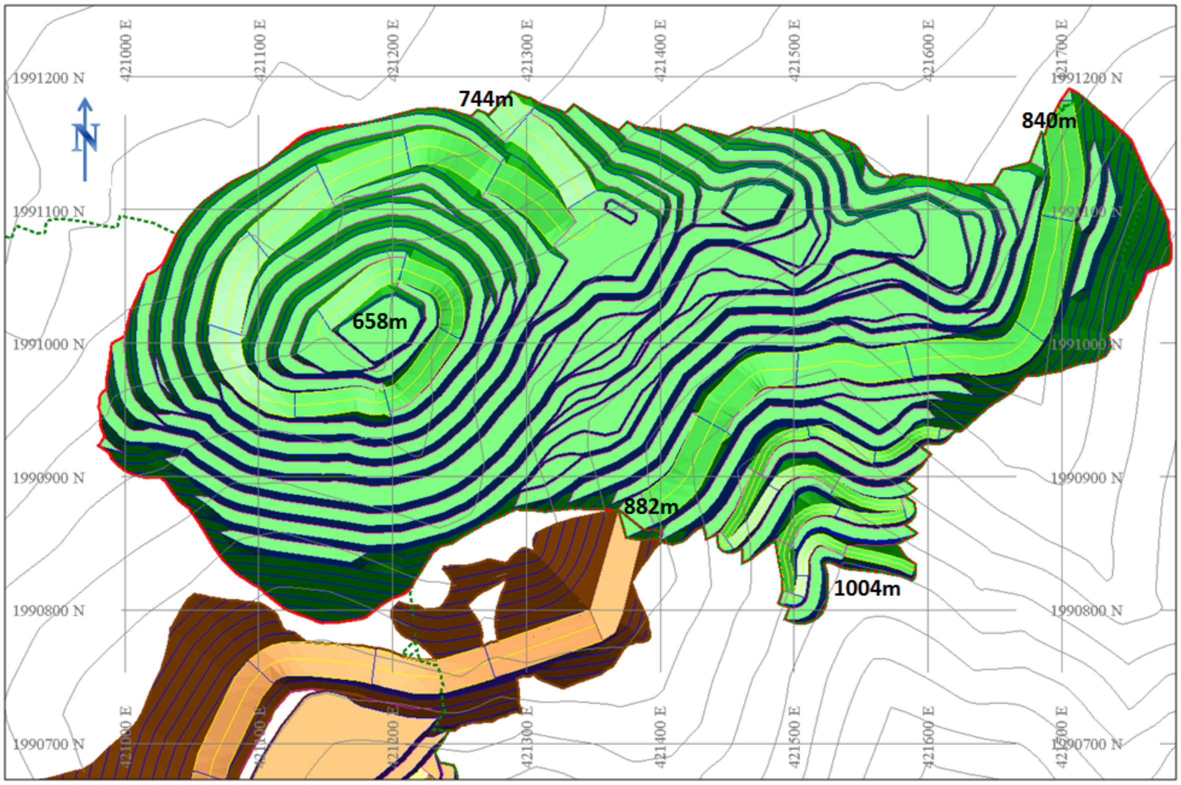


Figure 16-9: Guajes Phase GE (Guajes East)

Figure courtesy of SRK Canada, August 2012.

When the Phase GB dozer pit is completed Guajes West (i.e. Phase GW) truck-shovel pit mining can 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 road developed as part of Phase GC. The Phase GW pit design is illustrated in Figure 16-10. The pit encompasses the Guajes starter truck-shovel pit, Phase GD.

The final Guajes Phase pit, Phase GX, which mines out the lower elevation ore located between Guajes East and Guajes West, is illustrated in Figure 16-11. The Guajes ultimate pit, which is a combination of all Guajes phase pits, is illustrated in Figure 16-12.

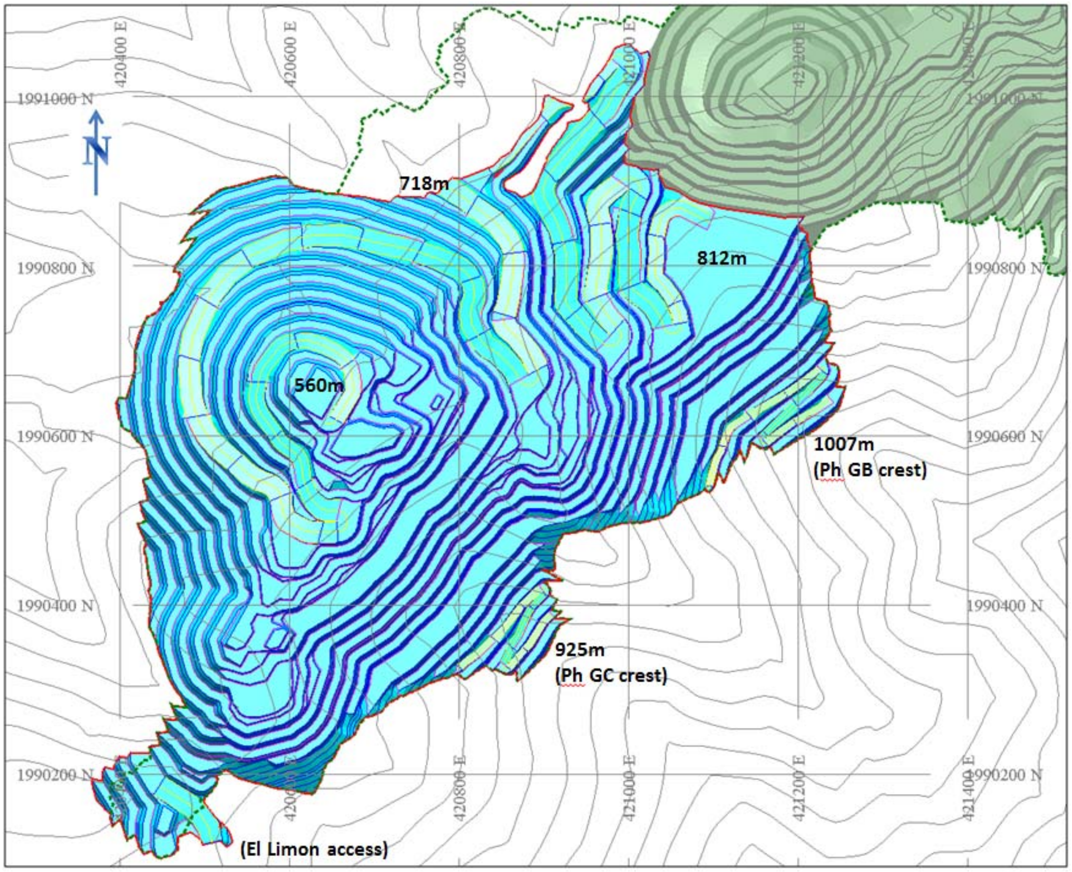


Figure 16-10: Guajes Phase GW (Guajes West)

Figure courtesy of SRK Canada, August 2012.

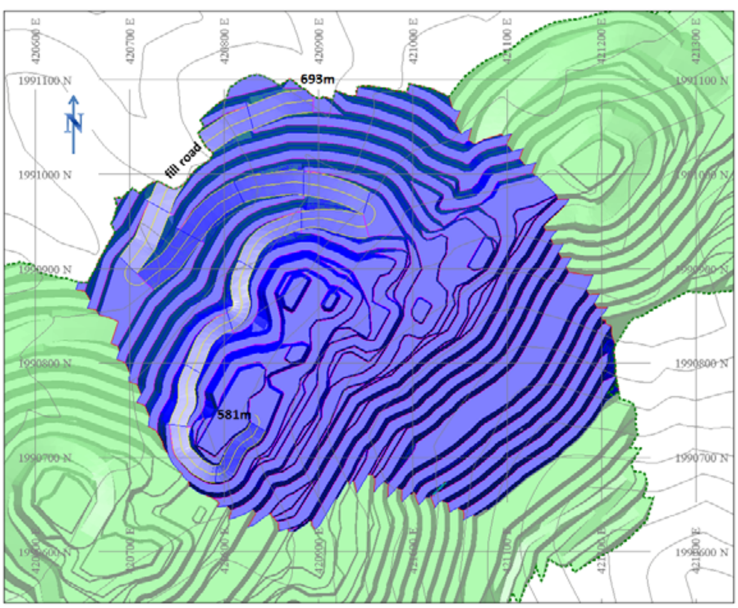


Figure 16-11: Guajes Phase GX (Guajes final phase)

Figure courtesy of SRK Canada, August 2012.

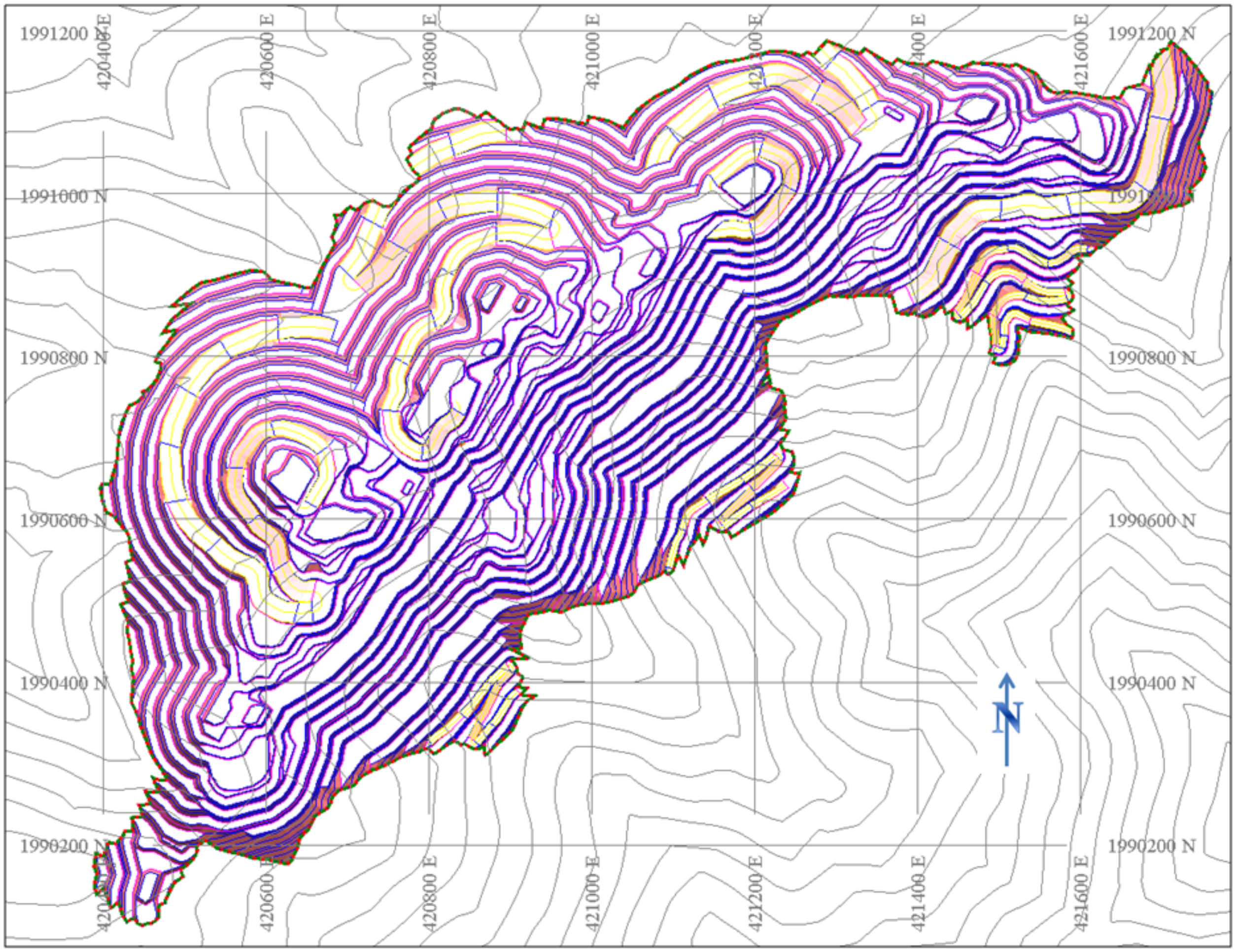


Figure 16-12: Guajes Ultimate Pit

Figure courtesy of SRK Canada, August 2012.

16.9.2 El Limón Pit Design

El Limón roads are shown in Figure 16-13. El Limón mining will commence after the access road ("Road A") 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 include waste haul roads to the east and main ridges ("Road B" and "Road C"), and the ore haul road to the El Limon crusher and conveyor ("Road D").

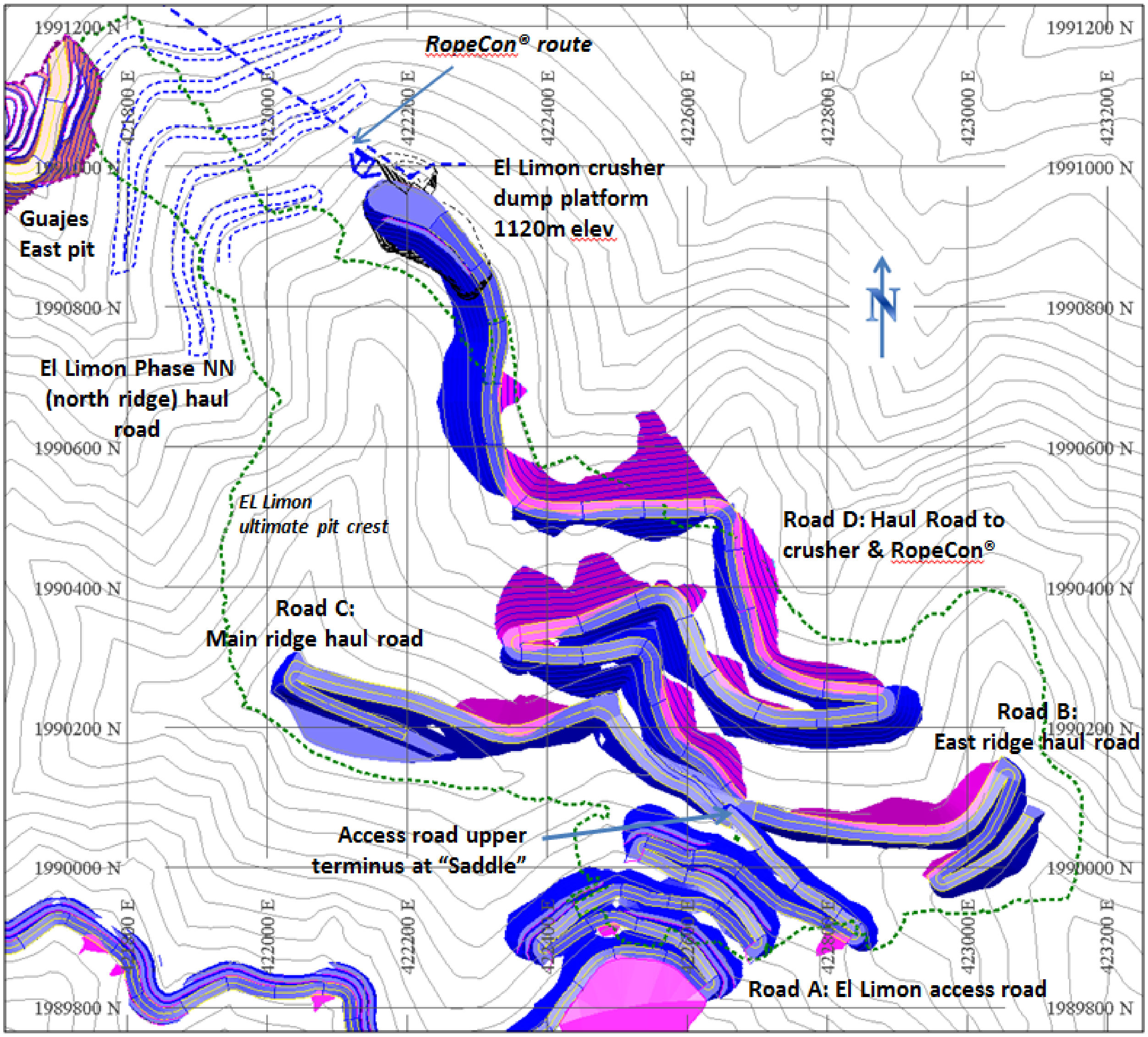


Figure 16-13: El Limón Haul Roads

Figure courtesy of SRK Canada, August 2012.

El Limón pit designs for the feasibility study are guided by pit optimization shell A18-22 shown in Figure 16-6. The first phase pit to be developed is the small dozer pit Phase EA shown in Figure 16-14. 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 Limon dump site to the northeast and no subsequent Phase EA waste rehandle is expected to be required.

The first El Limón truck shovel pit is Phase EB located below Phase EA on the east ridge. Phase EB is illustrated in Figure 16-15.

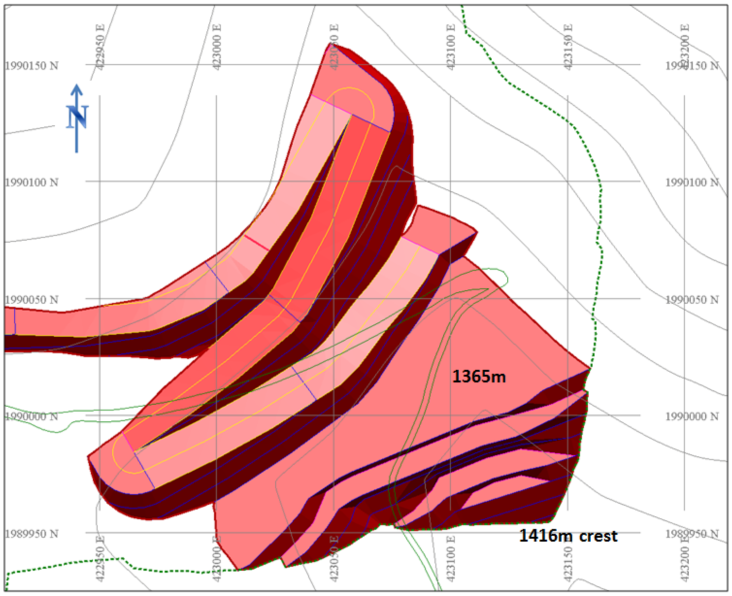


Figure 16-14: El Limón Phase EA Dozer Pit

Figure courtesy of SRK Canada, August 2012.

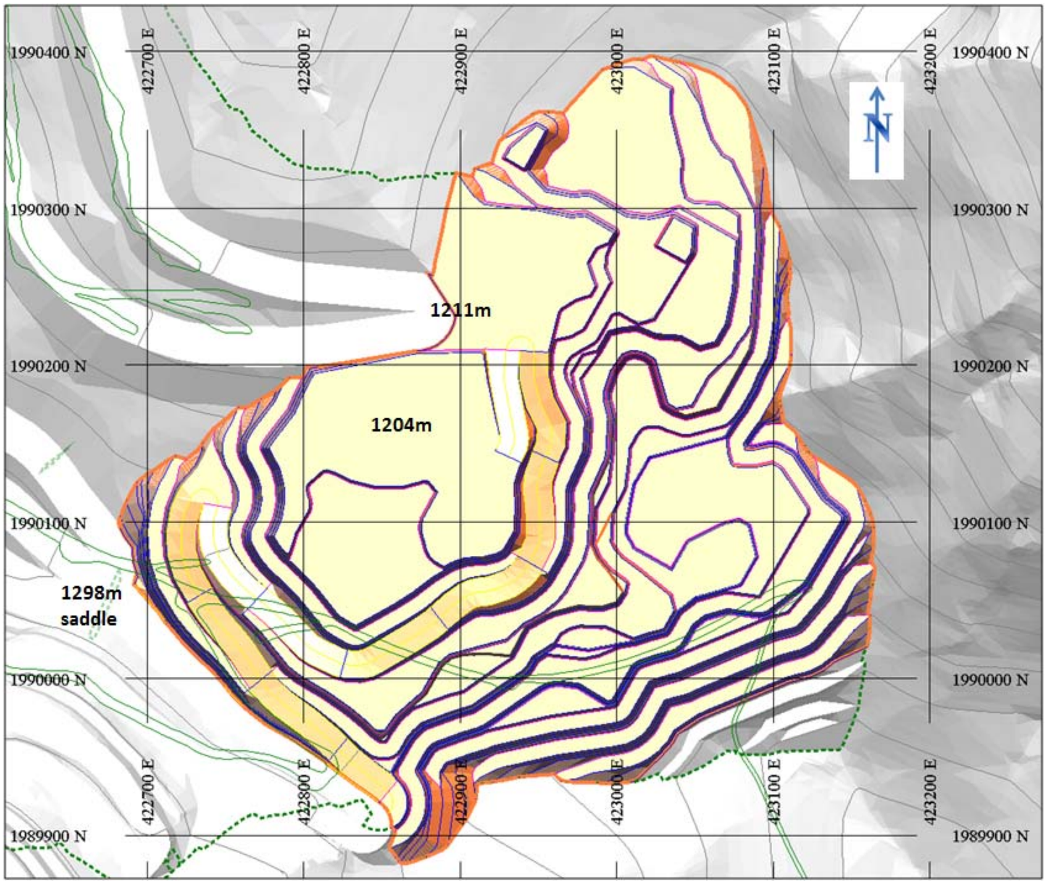


Figure 16-15: El Limón Phase EB

Figure courtesy of SRK Canada, August 2012.

The next El Limón truck-shovel phase pit is Phase EC, which mines the main ridge to an interim highwall. Phase Pit EC is shown in Figure 16-16. The design includes a haulage ramp is 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 16-17.

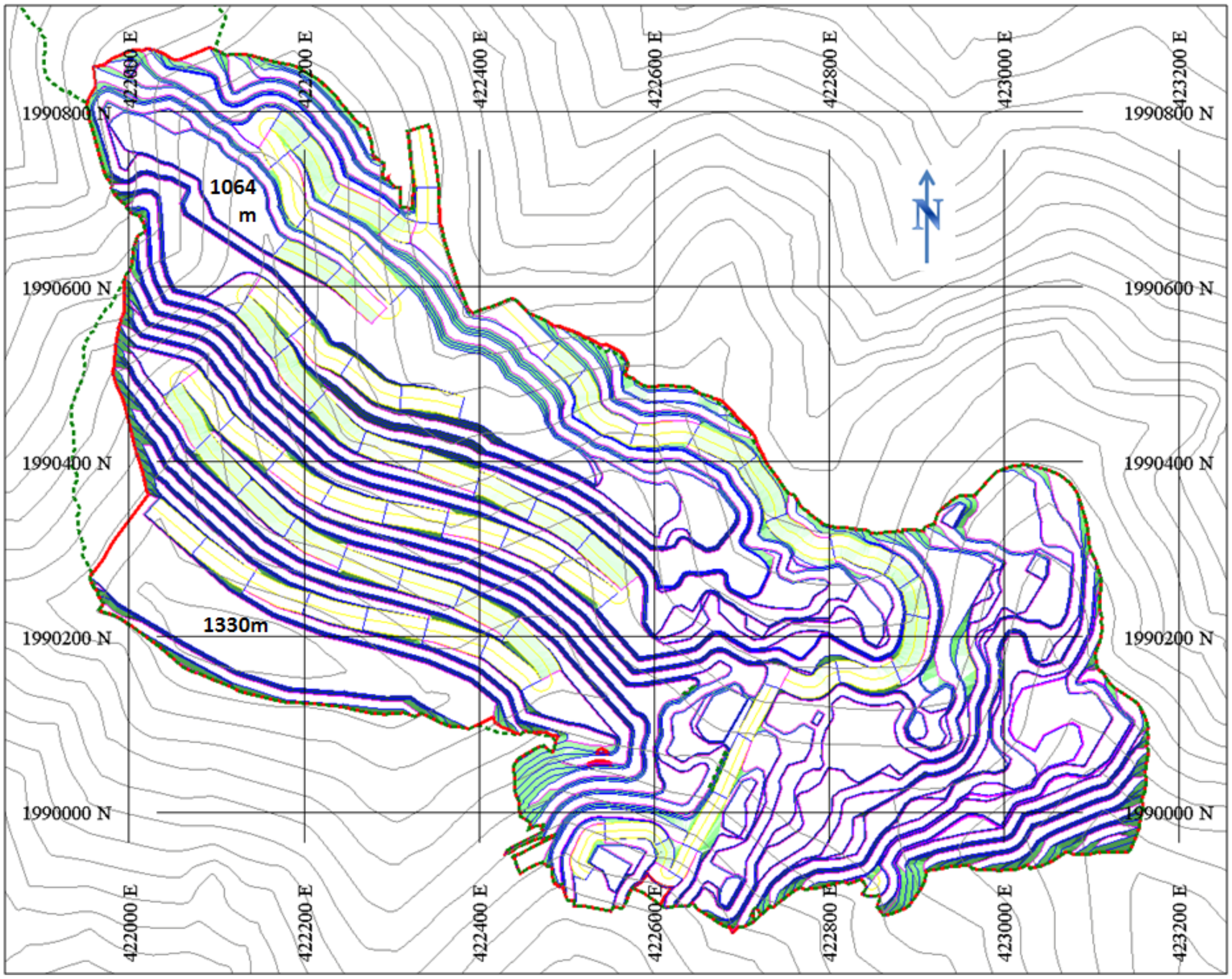


Figure 16-16: El Limón Phase EC

Figure courtesy of SRK Canada, August 2012.

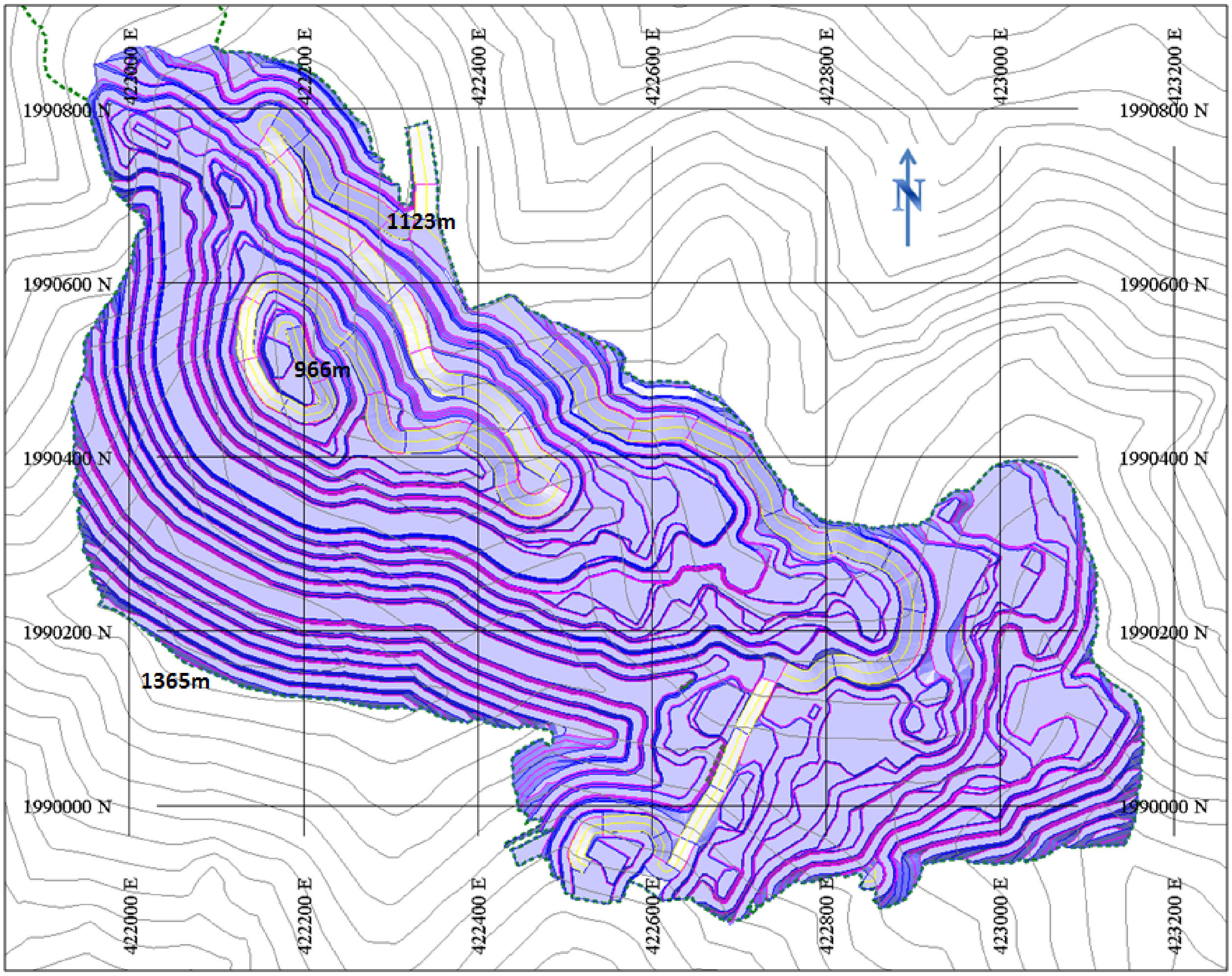


Figure 16-17: El Limón Phase ED

Figure courtesy of SRK Canada, August 2012.

The final El Limón phase is the small NN pit located on the north ridge. This pit is located adjacent to the RopeCon® conveyor. It is planned to mine this pit at the end of the mine life after removal of the conveyor, which will require construction of a haulage road up to the 1078 m elevation on the north ridge. Ore and waste will be hauled downhill to the Guajes crusher and Guajes East waste dump. The El Limón NN phase pit is illustrated in Figure 16-18. SRK understands Torex is planning to undertake further mine design for the north ridge area with the goal of moving the mining of NN pit mineralization forward in the mine plan to eliminate the current production "tail".

The El Limón ultimate pit, which is a combination of all El Limón phase pits, is shown in Figure 16-19.

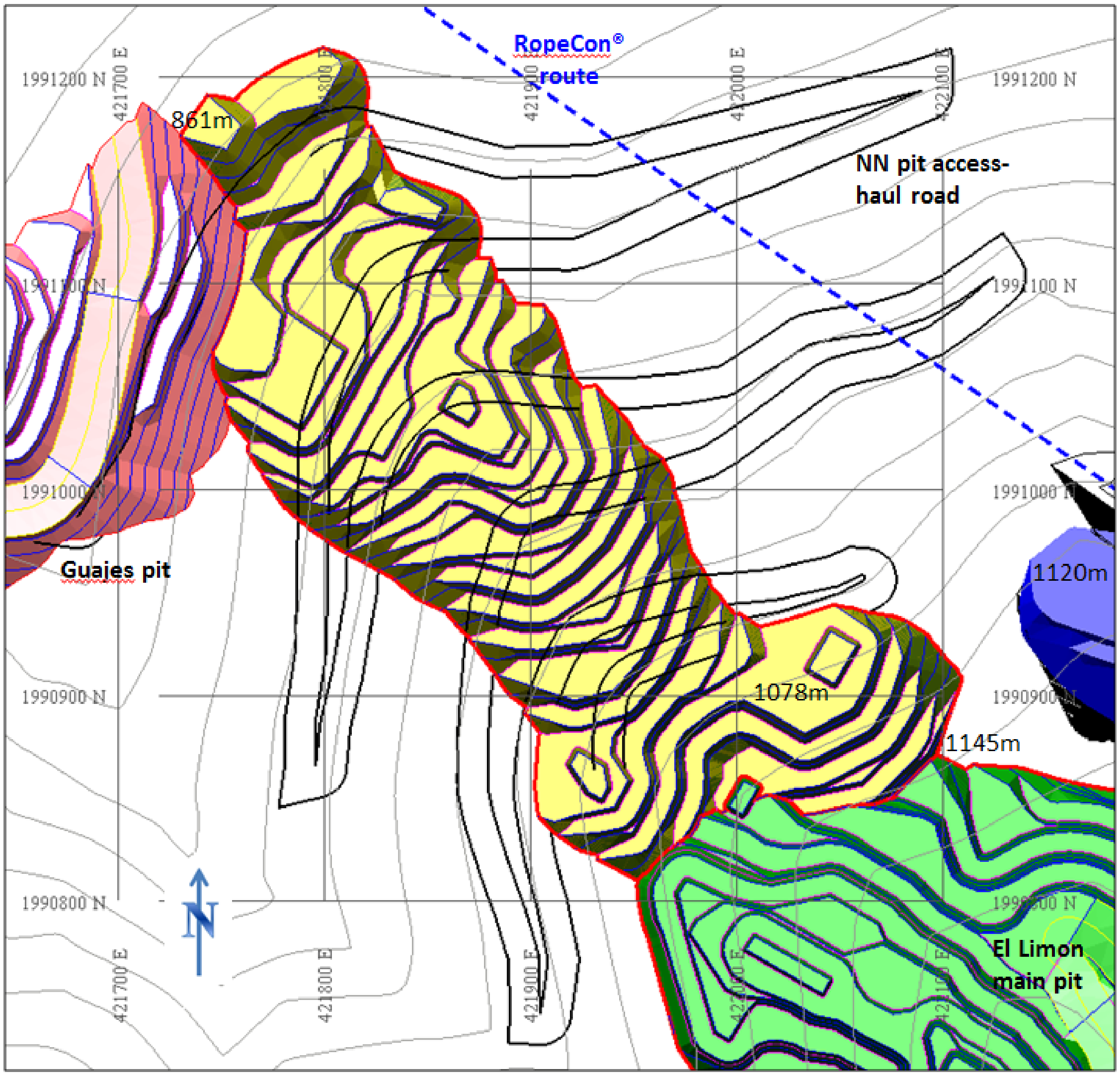


Figure 16-18: El Limón Phase NN

Figure courtesy of SRK Canada, August 2012.

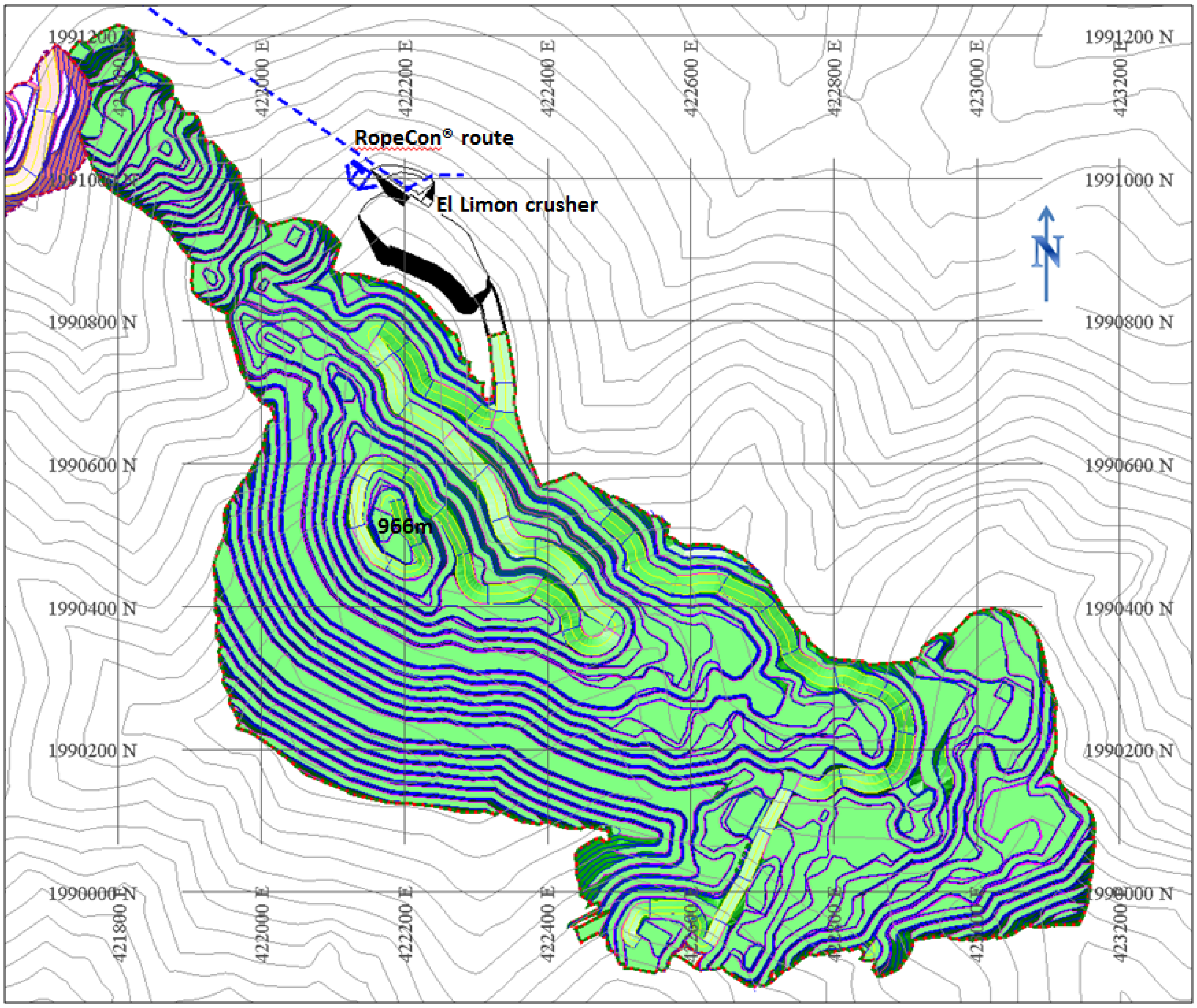


Figure 16-19: El Limón Ultimate Pit

Figure courtesy of SRK Canada, August 2012.

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, pit waste disposal requirements, and access road and facility layout, with geotechnical guidance provided by AMEC E&I. Waste dumps, with ultimate dump platform elevations, are shown (in cyan) on Figure 16-20. The Guajes North dump is located adjacent to the filtered tailings stockpile. It has been designed to cover the west and south faces of the filtered tailings to facilitate closure at the end of the mine life.

Figure 16-20 also shows access and haul road rockfill (in orange), including the approximate deposition location of rock excavated (i.e. dozed) from steep terrain road segments developed entirely in cut.

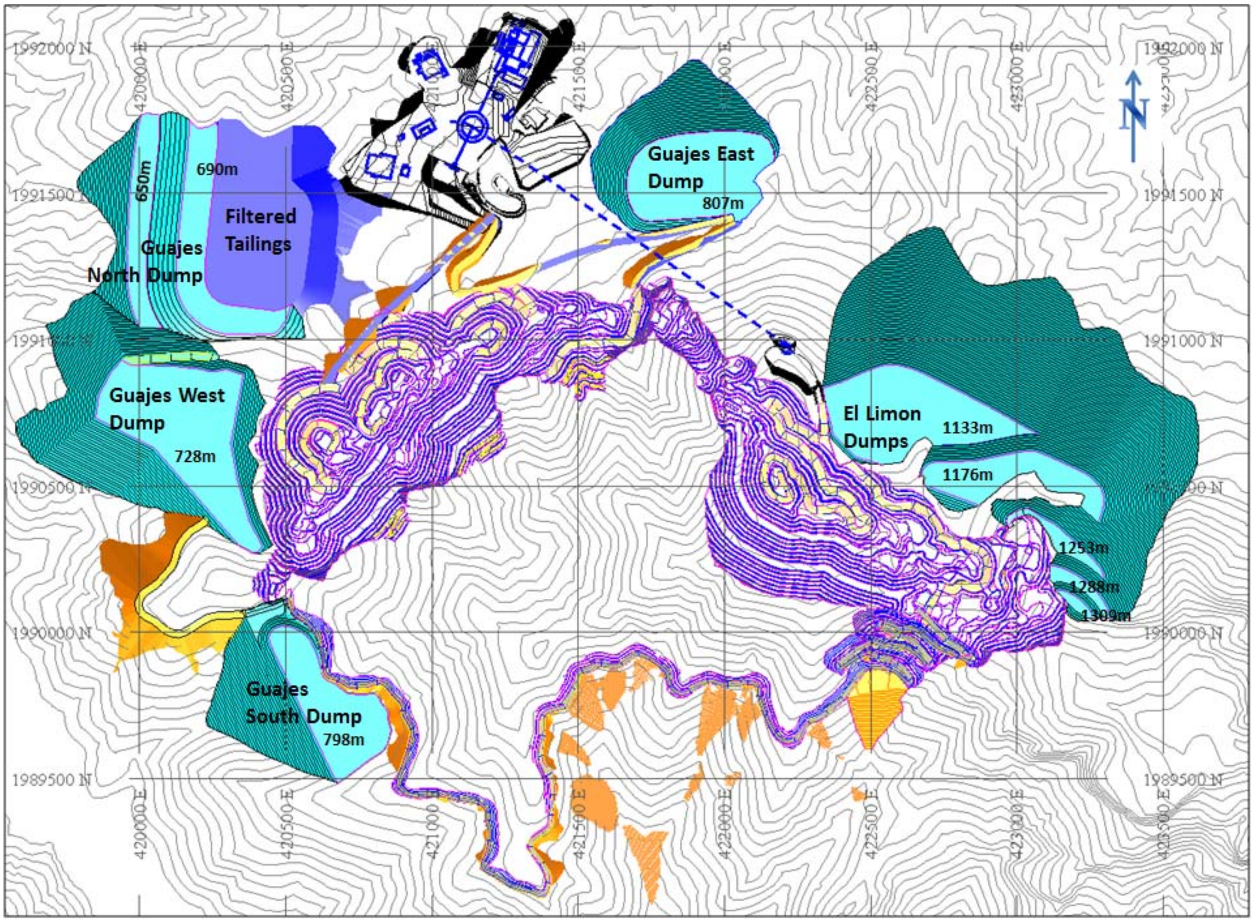


Figure 16-20: Morelos Waste Dumps
Figure courtesy of SRK Canada, August 2012.

A relatively minor revision to the Guajes East dump is recommended during the next stage of project engineering. The dump footprint should be reduced on the west side in order to avoid dumping in two watersheds, thereby facilitating runoff water management. Dump capacity can be maintained by raising the dump crest to approximately the 825 m elevation.

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 mine planning. Model items provided 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 7x7x7m 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 parameters by sector, 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. Table 13-11 shows the rock types included within each of six ore types and the grade-recovery equations by ore type utilized to estimate process recovery.

In the feasibility study mineral reserves 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 from blasthole assaying. SRK estimated a dilution amount of 1 m at the contact between ore and waste. Based on analysis of ore (i.e. measured and indicated mineralization greater than 0.5 g/t recovered gold grade) 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 percent 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 3.4% 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 Morelos project. Estimates from previous preliminary studies on the project were utilized to derive the cut-off grade. Feasibility study metal prices and cost estimates were utilized to verify the cut-off grade selected. The derived cut-off grade and estimate methodology are shown in Table 16-6. Note that cut-off is based only on gold grades. Silver is a minor contributor to revenue compared to gold and was excluded from cut-off grade derivation.

The economic cut-off grade is estimated at 0.50 g/t RAu (i.e. recovered gold grade) as shown in Table 16-6. On an in situ resource grade basis the economic cut-off grade varies with ore type due to a variable process recovery. Cut-off grades on an in situ resource grade basis by ore type are shown in Table 16-7.

Table 16-6: Cut-off Grade Estimate

		Initial estimates of prices & costs	FS estimate prices & costs
Long Term Gold Price	$/oz	1,200	1,250
Payable	%	99.5%	99.5%
Refining	$/oz	2.00	2.20
Au value in dore	$/oz	1,192	1242
Royalty	%	2.5%	2.5%
Value of recovered Au	$/oz	1162	1211
Value of recovered Au	**$/g**	**37.37**	**38.92**
Operating Costs			
Ore mining	$/t	$1.65	$1.90
Waste mining	$/t	$1.65	$1.90
Processing	$/t feed	$12.71	$14.32
G&A including land lease	$/t feed	$3.15	$3.09
Dilution in plant feed	%	13.0%	13.0%
Mining loss	%	5%	5%
Internal or marginal Cut-off Grade (COG)			
Additional ore (vs waste) mining	$/t	0.00	0.00
Processing	$/t	12.71	14.32
G&A	$/t	3.15	3.09
Extra ore cost (vs. waste)	**$/t**	**15.86**	**17.41**
COG, RAu (recovered Au) in feed*	g/t RAu	0.424	0.447
Dilution, % in situ	%	15.0%	15.0%
Dilution grade	g/t RAu	0.10	0.10
COG, RAu in situ	g/t RAu	0.473	0.499
COG, RAu in situ rounded	**g/t RAu**	**0.50**	**0.50**

** Extra ore cost ($/t) ÷ value of recovered gold ($/g) = cut-off grade (g/t)*

Table 16-7: Cut-off Grade by Ore Type

	Ore type:		Prograde (Skarn)	Retrograde (skarn)	Oxides+ Marble	Breccia	Intrusive	Hornfels
1	Gold Price	$/oz	1,250	1,250	1,250	1,250	1,250	1,250
2	Payable	%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
3	Refining	$/oz	2.00	2.20	2.20	2.20	2.20	2.20
4	Au value in dore	$/oz	1,242	1242	1242	1242	1242	1242
5	Royalty	%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
6	Value of recovered Au	$/oz	1211	1211	1211	1211	1211	1211
7	Value of recovered Au	$/g RAu	38.93	38.92	38.92	38.92	38.92	38.92
8	Process Recovery from below	%	85.6%	74.5%	80.4%	47.4%	81.5%	90.0%
9	**Value of Au in plant feed**	**$/g Au**	**33.31**	**29.00**	**31.29**	**18.44**	**31.73**	**35.03**
	Internal or marginal Cut-off Grade (COG)							
10	Additional ore (vs waste) mining	$/t	0.00	0.00	0.00	0.00	0.00	0.00
11	Processing	$/t	14.32	14.32	14.32	14.32	14.32	14.32
12	G&A	$/t	3.09	3.09	3.09	3.09	3.09	3.09
13	**Extra ore cost (from table above)**	**$/t**	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**	**17.41**
14	COG, Au in feed*	g/t Au	0.52	0.60	0.56	0.94	0.55	0.50
15	**Process recovery of marginal grade feed****	**%**	**85.6%**	**74.5%**	**80.4%**	**47.4%**	**81.5%**	**90.0%**
16	Dilution, % in situ	%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
17	Dilution grade	g/t Au	0.13	0.13	0.13	0.13	0.13	0.13
18	**COG, Au in situ (before rounding)**	**g/t Au**	**0.58**	**0.67**	**0.62**	**1.07**	**0.61**	**0.55**
19	Check: COG RAu before rounding***	g/t RAu	0.50	0.50	0.50	0.51	0.50	0.50

** Extra ore cost ($/t) ÷ value of gold in plant feed ($/g) = plant feed cut-off grade (g/t Au)*

*** Process recovery on line 15 is derived by applying grade-recovery formulas by ore type to the marginal head grades shown on line 14*

**** Check on g/t RAu COG utilized for reserve reporting: COG g/t Au x estimated process recovery % = COG g/t RAu*

16.11.4 Mining Quantities

In the feasibility study 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.

Mining quantities are defined as material below 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 16.9.

Mining quantities are summarized by phase pit and road project in Table 16-8. Run-of-Mine ("ROM") ore quantities total 48.8 Mt at grades of 2.61 g/t Au and 4.35 g/t Ag with a strip ratio averaging 5.6:1.

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 103 kt of above cut-off mineralization within pit limits is considered non-recoverable and is excluded from Run-of-Mine ("ROM") ore quantities in Table 16-8.

Table 16-8: Mining Quantity Estimates

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)	Dozer Rehandle (kt)	Trk-Svl Rehandle (kt)	Total Dozed (kt)	Total Hauled (kt)
Phase GA -Doz	-	-	-	-	-	1,899	1,899	n/a	1,899	1,602	-	3,501	-
Phase GB -Doz	-	-	-	-	-	1,378	1,378	n/a	1,378	842	-	2,219	-
Phase GC -Doz	31	0.97	1.08	9	0.91	1,711	1,720	55.7	1,751	1,343	-	3,064	31
Phase GD	5	0.67	1.29	27	0.82	6,143	6,170	n/a	6,175	-	88	88	6,175
Phase GE	6,151	2.80	5.05	96	1.60	19,021	19,117	3.1	25,268	-	1,952	-	27,220
Phase GW	8,997	2.35	2.60	10	1.64	61,734	61,744	6.9	70,742	-	3,063	-	73,805
Phase GX	3,742	2.05	1.94	107	0.71	29,207	29,314	7.8	33,056	-	422	-	33,478
Guajes Total	18,927	2.44	3.27	249	1.11	121,093	121,342	6.4	140,269	3,787	5,524	8,872	140,708
Road A	-	-	-	-	-	1,123	1,123	n/a	1,123	-	-	1,123	-
Road B	-	-	-	-	-	436	436	n/a	436	-	-	436	-
Road C	-	-	-	-	-	1,197	1,197	n/a	1,197	-	-	1,197	-
Road D	25	2.09	13.59	-	-	1,591	1,591	63.3	1,616	-	-	1,591	25
Phase EA -Doz	-	-	-	-	-	390	390	n/a	390	-	-	390	-
Phase EB	6,881	2.02	8.14	510	2.07	11,395	11,905	1.7	18,787	-	436	-	19,223
Phase EC	14,990	2.68	4.13	850	1.51	82,397	83,248	5.6	98,238	-	2,519	-	100,757
Phase ED	6,843	3.46	3.71	671	1.44	48,106	48,778	7.1	55,620	-	-	-	55,620
Phase NN	1,099	3.03	5.91	31	1.65	2,358	2,389	2.2	3,489	-	-	510	2,979
El Limon Total	29,839	2.72	5.03	2,063	1.63	148,994	151,057	5.1	180,896	-	2,956	5,247	178,605
Grand Total	48,766	2.61	4.35	2,312	1.57	270,087	272,399	5.6	321,165	3,787	8,480	14,119	319,313

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 has the advantage of not requiring haul road construction to the high elevation benches but has the disadvantage that rehandle is required when the dozed rock remains within the ultimate pit limits. It is expected that a significant portion of the dozed rock from upper benches will have to be rehandled by dozers on lower benches in the dozer pits and subsequently rehandled by truck to the waste dumps during mining of the truck-shovel phase pits below. Similarly, in-pit roads are planned to be constructed with dozers, and much of the dozed material must eventually be rehandled by truck to the waste dumps. Table 16-8 includes estimates of dozer and truck-shovel rehandle quantities by phase pit.

The mining quantities in Table 16-8 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 7% higher strip ratio. 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 slopes.

16.12 PRODUCTION SCHEDULE

Principal production schedule parameters include:

- **Target plant feed rate 14,000 tpd, to be achieved as soon as possible.**
  Preliminary mine plan analysis at processing rates ranging from 9,500 tpd to 14,000 tpd showed that these process rates are possible once the two deposits, 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. The time required to reach full production is lengthy due to the steep terrain, ore distribution, and other mining constraints. The production schedule for this feasibility study is based on a target plant feed rate of 14000 tpd (i.e. 5040 kt/a), combined with high mining rates in terms of vertical advance or pit sinking rates in order to minimize the preproduction duration. SRK considered the pit sinking rates utilized challenging but achievable with close operational supervision;

- **Start of construction Apr 1, 2013.**
  All on-ground activities to commence at this point, with the exception of the dozer trails to access pit and road development locations. Torex has informed SRK that it is planning to complete the required dozer trails prior to April 1, 2013 as part of its ongoing exploration program (and exploration budget). Other project activities prior to April 1, 2013 include recruitment of key mining supervisory and technical staff, ordering of initial mining equipment, and initiating road construction contracts;

- **La Fundicion village relocation by Jan 1, 2015.**
  El Limón in-pit development is delayed until 2015 since development will impact on the village. It is expected that the El Limón access road planned on the south facing slopes over the ridge from the village can be constructed before village relocation (one of the principal reasons this pit access route was selected) and is scheduled to be constructed 2013-2014. Guajes pit development is not constrained by the village so commences in 2013 and is the initial source of feed at plant start-up.

General sequence of Guajes preproduction development:

1) Construct Guajes dozer trails so that Guajes preproduction mining can commence;

2) Commence mining the high priority Guajes east ridge dozer pit, Phase GA, on Apr 1, 2013;

3) Commence mining Phase GB and GC dozer pits at three month intervals after Phase GA, i.e. July 1, 2013 and Oct 1, 2013, respectively;

4) Commence mining the Phase GD truck-shovel starter pit in April 2013;

5) Commence mining the Phase GE (Guajes East) and Phase GW (Guajes West) truck-shovel pit mining immediately after completion of the east and central ridge dozer pits. These two pits are the principal source of Guajes plant feed;

6) Commence the final Guajes phase pit, Phase GX, in 2020.

General sequence of El Limón development:

1) Construct the El Limón access road dozer trail to provide access to the top of the proposed access road cut. It is tentatively estimated that it may require 6 months to complete so should begin by Oct 1, 2012;

2) Construct the El Limón access road. Work is scheduled over the 21 month period April 1, 2013 to Dec 31, 2014. The upper switchback segment of the road to the El Limón ridge "saddle" location is within the El Limón pit limits and excavation quantities for this segment are included within pit production quantities;

3) Commence development on the north facing slope Jan 1, 2015 after village relocation. In the first quarter of 2015 this involves: Phase EA dozer pit mining to ultimate pit limits on the east ridge; waste haul road development from the saddle to the east and main ridges; commencement of construction of the ore haul road from the saddle to the crusher/conveyor (expected to require approximately one year to complete);

4) Commence El Limón east ridge truck-shovel pit mining (Phase EB) April 1, 2015. The upper benches mined in 2015 consist mainly of waste rock. It is planned that the minimal ore encountered will be stockpiled until the ore haul road is ready in early 2016;

5) Commence mining of the El Limón main ridge (Phase EC) January 1, 2016. This phase pit will contribute to El Limón feed starting in mid-year. El Limón main ridge pushback to ultimate pit limits (Phase ED) will be mined from 2020 to 2025;

6) The final El Limón phase pit, Phase NN located on the El Limón north ridge or "nose" in close proximity to the conveyor, is planned to be mined late in the mine life after the conveyor is taken out of service. A haulage road on the north ridge to the 1078 m elevation will be required in order to access the ore and remaining waste rock. SRK understands that Torex is planning to commission additional mining studies of the north ridge area with the goal of advancing the mining of this ore and thereby reducing the length of the production "tail" in the current schedule.

Truck-shovel pit mining has been scheduled at a maximum rate of two benches per quarter, which is considered achievable considering the drill-blast-load-haul sequence.

The dozer pits are scheduled based on the planned drilling and dozing equipment assigned to the pit and expected equipment productivity. The mining quantities scheduled by period in each dozer pit are relatively small however pit sinking rates are up to 7 benches per quarter, since the dozer pits have a small footprint but extend over many benches. The high dozer pit sinking rates scheduled will require close operational supervision in order to be achieved.

The phase pit mining sequence described above is illustrated in Figure 16-21. The figure also shows the operating bench elevation at the end of each year in each phase pit.

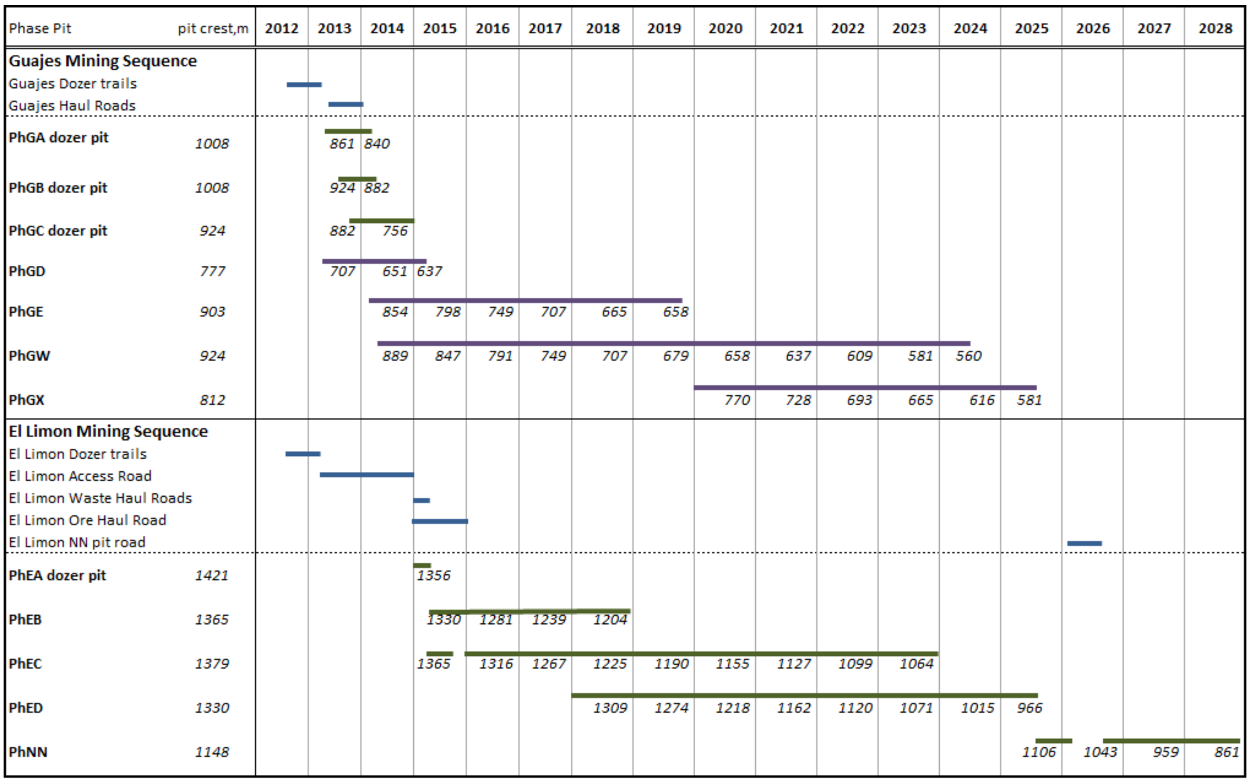


Figure 16-21: Phase Pit Mining Sequence
Figure courtesy of SRK Canada, August 2012

Planned ore and waste mined annually from each phase pit is summarized in Table 16-9. Overall mining rates (including rehandle) by period are shown in Figure 16-22.

The overall production schedule is summarized in Table 16-10. Plant feed is expected to commence in January 2015 at low feed rates utilizing Guajes East ore. Processing at 14,000 tpd is expected to begin in the fourth quarter of 2016, utilizing ore from both Guajes and El Limón.

Table 16-9: Mining Schedule by Phase Pit

Phase Pit	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total mined (ore plus primary waste) by phase pit by year, kt																	
PhGA dozer pit	1,899	1,880	19														
PhGB dozer pit	1,378	1,136	242														
PhGC dozer pit	1,751	258	1,493														
PhGD	6,175	1,252	4,565	359													
PhGE	25,268		2,675	6,775	7,424	6,195	2,156	43									
PhGW	70,742		1,143	3,136	10,666	11,155	15,340	9,878	6,563	5,231	4,962	2,237	431				
PhGX	33,056								2,615	5,232	7,599	7,788	8,225	1,597			
EL Access Road (in-pit)	1,123		1,123														
EL East Ridge Rd	436			436													
EL Main Ridge Rd	1,197			1,197													
EL Ore haul Road	1,616			1,616													
PhEA dozer pit	390			390													
PhEB	18,787			1,052	7,113	7,197	3,424										
PhEC	98,238			179	4,023	9,716	14,709	22,801	17,821	15,320	9,663	4,006					
PhED	55,620						1,705	3,806	9,119	10,396	9,217	10,604	9,296	1,478			
PhNN	3,489													214	821	1,291	1,162
Total Mined	**321,165**	**4,525**	**11,261**	**15,139**	**29,226**	**34,264**	**37,334**	**36,529**	**36,118**	**36,179**	**31,441**	**24,635**	**17,952**	**3,289**	**821**	**1,291**	**1,162**
Ore mined by phase pit by year, kt																	
PhGC dozer pit	31		31														
PhGD	5		5														
PhGE	6,151		226	2,024	1,667	1,501	715	17									
PhGW	8,997					187	1,170	1,668	1,795	1,625	1,506	779	268				
PhGX	3,742									160	219	954	1,791	618			
EL Ore haul Road	25			25													
PhEB	6,881			76	1,916	3,469	1,420										
PhEC	14,990				73	36	1,573	3,518	3,114	3,151	2,410	1,115					
PhED	6,843								146	107	805	2,276	2,907	602			
PhNN	1,099														116	411	572
Total Ore Mined	**48,766**	**-**	**262**	**2,125**	**3,656**	**5,193**	**4,879**	**5,204**	**5,055**	**5,043**	**4,940**	**5,124**	**4,966**	**1,220**	**116**	**411**	**572**

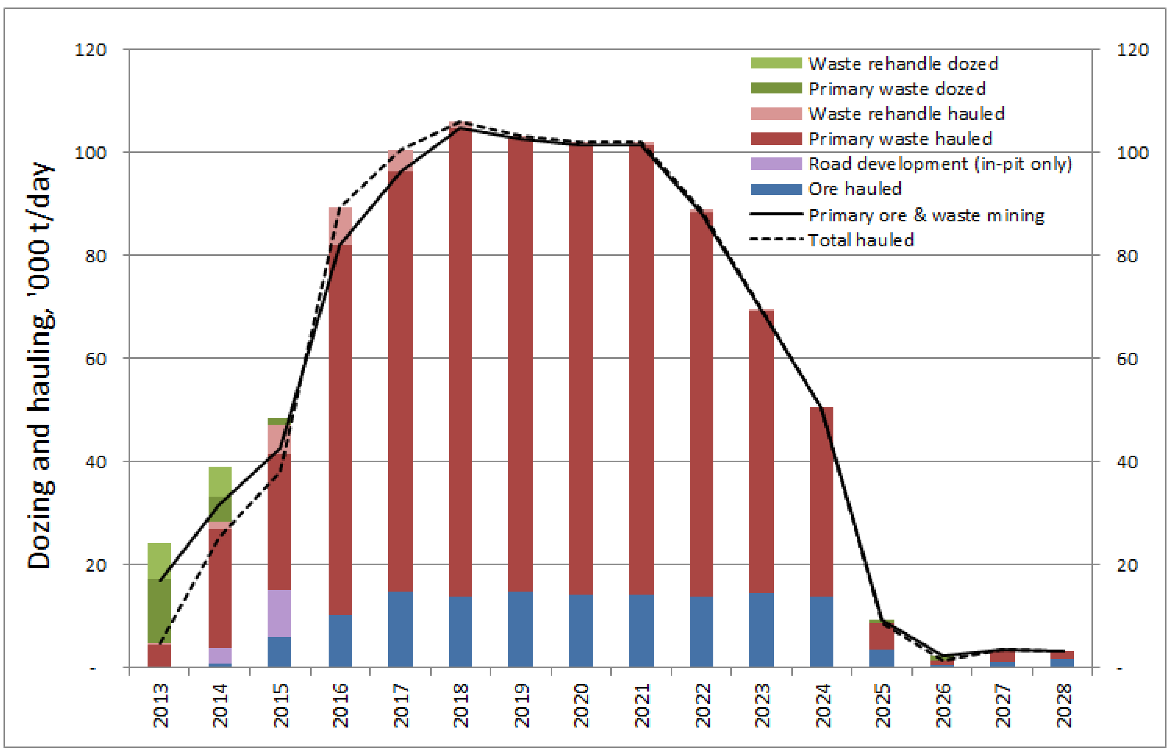


Figure 16-22: Mining Rates
Figure courtesy of SRK Canada, August 2012.

Table 16-10: Production Schedule

			Preproduction <	> Operation																	
Year		TOTAL	2012	2013	2014	2015 Q1-3	2015 Q4	2016 Q1-3	2016 Q4	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Approximate Road Construction Timetable																					
Dozer trails - Guajes & El Limon access road																					
Guajes Haul Roads, Phases GE and GW to plantsite																					
El Limon Access Road																					
El Limon Waste Haul Roads, East and Main Ridges																					
El Limon Ore Haul Road, to RopeCon																					
El Limon NN pit access-haul road																					
Pit Production																					
Ore mined	kt	48,766		0	262	1,196	929	2,412	1,243	5,193	4,879	5,204	5,055	5,043	4,940	5,124	4,966	1,220	116	411	572
Au grade	g/t	2.61		0.00	1.43	2.27	1.86	2.04	2.89	2.34	2.23	2.33	2.44	2.33	3.10	3.48	2.95	2.90	2.76	3.95	2.42
Ag grade	g/t	4.35		0.00	2.51	5.06	4.58	6.12	7.76	6.28	5.53	3.69	3.47	3.07	3.77	3.97	3.21	2.76	6.31	8.05	4.30
Measured portion of ore mined	%	22%		0%	32%	32%	26%	20%	18%	12%	15%	25%	29%	28%	19%	19%	23%	17%	7%	33%	32%
Total Waste mined	kt	272,399		4,525	10,998	10,151	2,863	18,555	7,016	29,071	32,456	31,325	31,062	31,136	26,500	19,511	12,986	2,069	705	881	590
Inferred mineralization	*kt*	2,312		0	53	31	13	213	181	269	117	318	404	149	290	180	62	2	7	6	19
Au	*g/t*	*1.57*		0.00	1.50	1.48	1.13	1.84	1.79	1.78	1.22	1.62	1.62	1.22	1.33	1.17	2.67	0.75	1.69	2.19	1.47
Other Waste	kt	270,087		4,525	10,945	10,120	2,850	18,342	6,835	28,802	32,339	31,008	30,658	30,986	26,211	19,331	12,924	2,067	698	875	571
Total Prod'n Mined	kt	321,165		4,525	11,261	11,347	3,792	20,967	8,259	34,264	37,334	36,529	36,118	36,179	31,441	24,635	17,952	3,289	821	1,291	1,162
Strip Ratio	W/O	5.6		n/a	41.9	8.5	3.1	7.7	5.6	5.6	6.7	6.0	6.1	6.2	5.4	3.8	2.6	1.7	6.1	2.1	1.0
Waste rehandle by Dozer	kt	3,787		1,795	1,992	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Dozed (incl in-pit roads)	kt	14,119		5,156	4,839	3,509	105	0	0	0	0	0	0	0	0	0	0	214	296	0	0
Waste rehandle by truck	*kt*	8,480		88	614	1,741	336	2,187	419	1,592	425	285	188	200	293	112	0	0	0	0	0
Total Hauled	kt	319,313		1,252	9,028	9,579	4,023	23,154	8,679	35,856	37,759	36,814	36,305	36,379	31,733	24,747	17,952	3,075	526	1,291	1,162
Waste Rock Destination																					
- to EA dump (capacity 15,300 kt)	kt	15,205		0	0	1,352	518	7,394	2,127	3,772	43	0	0	0	0	0	0	0	0	0	0
- to EB dump (capacity 57,700 kt)	kt	56,816		0	0	0	0	0	661	10,187	17,194	22,511	6,265	0	0	0	0	0	0	0	0
- to EC dump (capacity 76,900 kt)	kt	75,255		0	0	0	0	0	0	0	0	863	17,602	22,640	15,666	11,219	6,389	876	0	0	0
- to GE dump (capacity 26,600 kt)	kt	25,417		0	4,206	5,783	1,346	4,750	1,320	4,695	1,440	26	0	0	0	0	0	0	409	881	560
- to GS dump (capacity 22,700 kt)	kt	22,276		0	0	1,280	1,229	8,598	3,328	7,842	0	0	0	0	0	0	0	0	0	0	0
- to GW dump (capacity 58,000 kt)	kt	56,960		1,252	4,559	359	0	0	0	4,168	14,204	8,211	0	3,726	9,224	6,946	4,076	236	0	0	0
- to GN dump (capacity 19,300 kt)	kt	18,979		0	0	0	0	0	0	0	0	0	7,383	4,970	1,903	1,458	2,521	743	0	0	0
Total to Waste Dumps	kt	270,908		1,252	8,766	8,774	3,094	20,741	7,435	30,663	32,880	31,610	31,250	31,336	26,793	19,624	12,986	1,855	409	881	560
ROM Stockpile																					
ROM Stpl, end of period	kt			0	262	79	108	30	13	166	5	168	183	187	87	170	96	3	119	8	0
Au grade	g/t			0.00	1.43	2.19	2.10	2.32	2.89	2.05	2.23	2.33	2.44	2.33	3.10	3.48	2.95	2.90	2.77	3.95	2.41
Ag grade	g/t			0.00	2.51	5.13	4.99	6.75	7.76	5.80	5.53	3.69	3.47	3.07	3.77	3.97	3.21	2.76	6.23	8.05	4.31
Plant Feed										14000 tpd for 8.25 years											
Process rate	tpd	10420				5111	10000	9222	14000	14000	14000	14000	14000	14000	14000	14000	14000	3650	0	1450	1611
Process days	days	4,680				270	90	270	90	360	360	360	360	360	360	360	360	360	0	360	360
Feed to Crusher	kt	48,766				1,380	900	2,490	1,260	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	1,314	0	522	580
Au grade	g/t	2.61				2.11	1.86	2.04	2.88	2.36	2.223	2.33	2.43	2.34	3.07	3.47	2.97	2.90	0.00	3.68	2.44
Ag grade	g/t	4.35				4.57	4.58	6.07	7.73	6.30	5.538	3.69	3.48	3.08	3.74	3.96	3.23	2.79	0.00	7.64	4.35
Measured portion of feed	%	22%				32%	26%	21%	18%	12%	15%	25%	29%	28%	19%	19%	23%	17%	0%	27%	32%

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. An exception is the initial preproduction development in the dozer phase pits. It is expected that initial high elevation dozing will commence on a single 12-hr daylight shift, and expand to continuous 24 hour drilling/dozing after two to three months when the bench working areas get larger.

Mining and maintenance activities planned to be performed by contractors include:

- Dozer trail construction;
- Access and haul road development;
- Blasting services by an explosives vendor under a full down-hole service explosives supply contract;
- Production equipment maintenance during the first five years of mining (i.e. 2013 to 2017) by a major equipment supplier under a maintenance and repair contract ("MARC"). After 2018 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 meetings and occasional weather delays, 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 Limon 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 Limon 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 90-95% for the hydraulic shovels and trucks, to 80% for drills. The two wheeled loaders (one per mining area) are backup loading units that will incur low use of availability.

16.13.2 Drilling and Blasting

The El Limon crusher and the RopeCon® conveyor will be located on the El Limon ridge, in close proximity to the active mining area, i.e. approximately 120 m from the El Limon main pit limits. Torex commissioned a blasting consultant to prepare a Blasting Study in order to assess the impact of blasting on the facilities (i.e. flyrock and vibration) and to 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 expects that the incidence of flyrock should be minimal provided that the blasting study drilling and blasting recommendations are followed, and should flyrock occur the distance it could be expected to fly would not affect the Rope Conveyor, according to the consultant. The study recommends that small blastholes be utilized to maximize flyrock prevention. The recommendation also involves test blasts to demonstrate blast round performance at a location remote from the Rope Conveyor.

Because of the relatively high rock uniaxial compressive strength, estimated to average 130 MPa, hammer drilling rather than rotary drilling is planned. The feasibility study planned drilling equipment includes 152 mm drills and 114 mm drills. The larger diameter drill was selected to drill most of Morelos rock. The smaller drills were chosen to allow for small diameter drilling near the RopeCon® facilities and for much of the ore blasting. The smaller diameter drilling is expected to help maximize ore selectivity, since blastholes will be more closely spaced and grade control will be based on blasthole sample assaying.

The 152 mm drill is expected to be a downhole hammer drill. The 114 mm drill selected is the tophammer hydraulic drill but a downhole hammer drill is also a viable alternative. Over the mine life 75% of Morelos rock is planned to be drilled by 152 mm drills and 25% by smaller drills. The drill fleet peaks at seven 152 mm units and five 114 mm units.

Feasibility study blasting estimates are based on an average powder factor of 0.35 kg/t utilizing 70% anfo 30% emulsion explosives. The powder factor, slightly higher than typical of open pit operations, was chosen due to the high rock compressive strength.

General minesite drilling-blasting parameters are summarized in Table 16-11. The smaller drill selected is capable of drilling holes down to 89 mm in diameter, and, pending the results of test blasts, it is recommended that 100 mm blastholes using the specific drill-blast parameters provided in the blasting study be utilized in the vicinity of the RopeCon® to minimize flyrock.

Table 16-11: General Drilling-Blasting Parameters

Parameter	Unit	114 mm drill	152 mm drill
Burden	m	2.6	3.4
Spacing	m	2.9	3.9
Bench height	m	7.0	7.0
Hole depth	m	7.8	8.0
Rock density, average	t/m3	2.74	2.74
Drill yield	t/blasthole	142	254
Drill yield	t/m drilled	18	32
% Anfo	%	70%	70%
Explosives powder factor, average	kg/t	0.35	0.35
Stemming collar	m	2.6	2.7
Drill productivity*	m/op hr	39	25
Additional drilling**	%	10%	10%
Drill productivity, including additional drilling	t/op hr	643	735

** including allowance for operating delays (blasts, fueling, changing pattern, bits etc)*

*** for pre-split and buffer rows, fill-in holes, and redrills*

16.13.3 Loading

It is planned that in pit rock loading will be principally done with hydraulic shovels. Due to the small working bench areas on the upper benches of the truck-shovel pits, the initial hydraulic units to be acquired are of the 10 m^3 size range. The mine plan includes a total of four 10 m^3 hydraulic shovels. It is planned that later in the mine life (i.e. 2016) when larger pit benches are being mined two larger hydraulic shovels in the 15 m^3 size range will be acquired.

Two 11.5 m^3 wheeled loaders are included in the mine plan (i.e. one in each pit area) to provide backup for the shovels, load about 30-40% of the ore, do limited ore rehandle at the crushers, and perform miscellaneous out-of-pit loading.

Loading unit productivity (loading 90 t haul trucks) is estimated at 1535 t/ophr for the 15 m^3 hydraulic shovels, 1044 t/ophr for the 10 m^3 hydraulic shovels, and 945 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-t size haulage trucks in the mine plan. Truck payload is estimated at 87 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 1.4 km and the ore haul distances average 1.8 km over the mine life. Haulage truck productivities are similar for the two mining areas and average approximately 300 t/ophr. Haulage truck requirements are estimated to peak at 23 units in 2017.

16.13.5 Dozing

Dozing requirements will be performed by a fleet of three 433 kW tracked bulldozers and four 306 kW tracked bulldozers. It is planned that these units will be acquired in 2013, since they are needed in the Guajes dozer pits at the start of preproduction development. SRK notes that experienced dozer operators will be required in the dozer pits, since the terrain is steep and high mining rates are planned. After dozer pit mining is complete the units will be utilized in the truck-shovel pits and on the waste dumps.

One rubber-tired dozer unit is 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 three 45,000 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 MARC maintenance contractor will provide maintenance service vehicles. It is planned that a maintenance truck be acquired in 2018, when production equipment maintenance by the owner's workforce commences.

16.13.7 Grade Control

Blastholes 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 80,000 blasthole sample assays will be required annually.

It is expected that initially most rock drilled in the truck-shovel phase pits will be sampling and assayed, but over time, as geological knowledge is gained, pit geologists will optimize grade control practices by recognizing potentially mineralized areas where blasthole sampling and assaying is warranted and avoiding the cost of sampling in areas that are likely barren.

Criteria for sampling will likely include rocktype. It is expected that most blastholes drilled in skarns, breccia, oxides, massive sulphides, fault gouge and vein material will be sampled, since about half of this rock is above cut-off grade, representing 70% of ore tonnage and 83% of contained gold.

For hornfels, intrusives, and marble rocktypes additional sampling criteria is needed (such as the presence of fracture zones and quartz veining) since only 6% of the total quantity of these rocktypes mined is expected to be above cut-off grade. This 6% represents 30% of ore tonnage (17% of contained gold).

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 is 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 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 occurs completely below surrounding topography and where an in-pit pumping is required is Guajes Phase GD in 2014. Phase GE (Guajes East) will require an in-pit pumping system in 2017 and Phase GW in 2021. The main El Limon dewatering system is expected to be established in 2022 when Phase EC pit mining reaches the 1127 m bench.

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 5 operating pumps plus one spare pump are included in Morelos equipment 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 16-12. Equipment will be acquired in the period before it is needed in service at the mine. Acquisitions include replacement equipment. Replacement production units include one 152 mm drill, one 10 m^3 hydraulic shovel, one 433 kW bulldozer, and two 306 kW bulldozers. Other replacement equipment includes light towers and mine pickup trucks.

Table 16-12: Pit Equipment Acquisitions

Unit	Number of Units		
	Initial Requirements*	Additions & Replacements**	Total LoM Acquisitions
Major Production Equipment			
Production Drill, 114mm	1	3	4
Production Drill, 152mm	4	4	8
Hyd. Shovel, 15m3	0	2	2
Hyd. Shovel, 10m3	3	2	5
FEL 11.5 m3	1	1	2
Haul Truck 90 t	9	14	23
Track Bulldozer 5.3m blade, 433kW	3	1	4
Track Bulldozer, 4.6m blade, 306kW	4	2	6
Wheel Bulldozer, 330kW	1	-	1
Grader, 4.3m blade	2	1	3
Water truck, 45000L	2	1	3
Support Mobile Equipment			
Ancilliary Units	30	16	46
Dewatering Pumps 447kW	1	5	6
Total	**61**	**52**	**113**

** Initial requirements to 2015 Q4 (i.e. preproduction period)*

*** Additions & Replacements after 2015 Q3 (i.e. during mine operation as sustaining capital)*

16.15 OPEN PIT PERSONNEL

Mine workforce requirements are summarized in Table 16-3. Estimates exclude contractor personnel, which principally consists of the blasting contractor and MARC maintenance contractor. MARC 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 shown in Table 16-3.

Mine workforce estimates include 19 staff employees in the first quarter of 2013 (prior to the start of construction and preproduction mining planned for April 1, 2013) to assist with employee recruiting, equipment ordering, and establishing road construction and MARC contracts.

The mine operations workforce estimates include some trainee equipment operators. In addition it is assumed employees will participate in on/off job training for about 2% of their working time. SRK notes that Guajes dozer pit mining, scheduled at high mining rates beginning in April 2013, will occur on small operating benches located on very steep terrain. For safety reasons and to achieve the high bulldozer productivity required, SRK recommends that very experienced bulldozer operators be utilized in the dozer pits.

Table 16-13: Pit Workforce

Period	2013 Q1	2013 Q2-Q4	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Staff Manpower																	
Operations Supervision	7	10	11	17	17	17	17	17	17	17	17	17	14	11	6	6	6
Maintenance Supervision	4	5	5	5	5	5	11	11	11	11	11	11	11	11	6	6	6
Technical Services	8	14	17	20	22	22	22	22	22	22	22	22	22	16	10	10	10
Sub-total	19	29	33	42	44	44	50	50	50	50	50	50	47	38	22	22	22
Mine Operations																	
Drillers	0	6	10	12	30	35	39	38	37	37	32	25	18	4	1	2	2
Blasting (excl contractors)	0	1	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2
Shovel/Loader Operators	0	3	5	7	15	17	17	17	17	17	15	13	9	2	1	1	1
Truck Drivers	0	5	14	21	46	60	60	54	57	53	49	42	37	7	2	5	4
Support Equipment Operators	0	9	19	23	28	29	28	27	27	27	26	25	21	10	6	5	5
Dump Attendants, Trainees, Laborers	0	9	16	17	21	20	25	24	24	23	23	22	21	13	4	4	4
Sub-total	0	32	67	82	143	165	172	163	165	160	148	130	110	39	16	19	17
Mine Maintenance																	
Mechanics, Welders	0	0	1	1	1	1	86	82	82	81	71	57	46	12	4	5	4
Fuel/lube/tire service	0	5	9	12	12	12	12	12	12	12	12	12	12	4	4	4	4
Trainees, Laborers	0	2	2	1	2	2	7	7	7	7	7	6	5	2	2	2	2
Sub-total	0	2	3	2	3	3	93	89	89	88	78	63	51	14	6	7	6
Total Mine	**19**	**68**	**112**	**138**	**202**	**224**	**315**	**302**	**304**	**298**	**276**	**243**	**208**	**91**	**44**	**48**	**45**

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 Project 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.

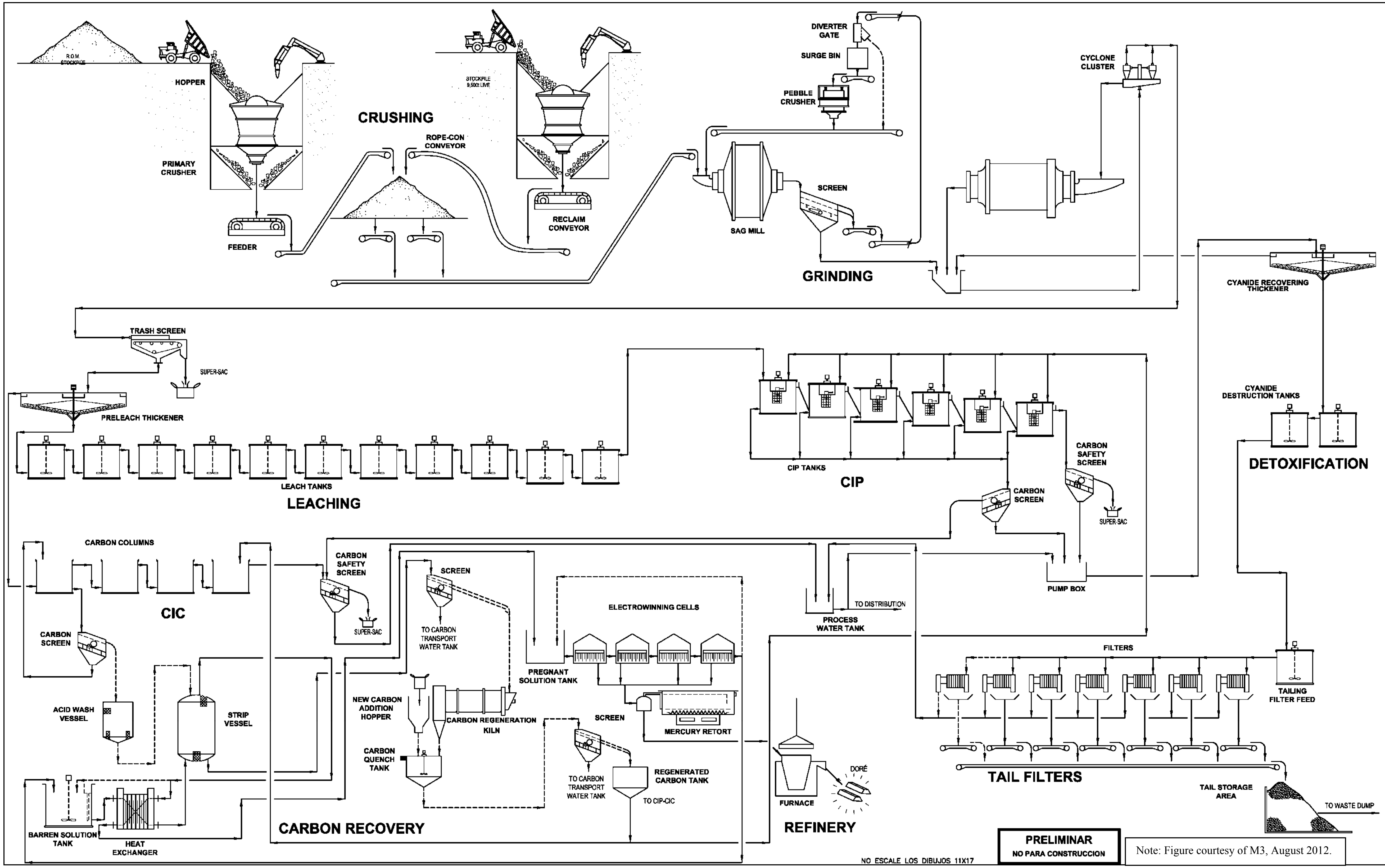
17.1.2 Process Overview

The following items summarize the process operations required to extract gold and silver from the Project 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.



Note: Figure courtesy of M3, August 2012.

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 1.167 m by 1.803 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 1.524 m wide by 6 m long apron feeder that will feed a 1.219 m wide by 162 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 1.524 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 217 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 an 8.5-meter diameter by 4.3-meter (effective grinding length) long SAG mill with a 5,500-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 7.9 m diameter by 11 m (effective grinding length) long ball mill with an 11,931-kilowatt motor 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 15.93 m diameter by 19.818 m high tanks. Each tank will have a slurry level of 19.0-meter resulting in a working volume of 3,790 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 10.1 m diameter by 10.5 m high tanks. Each tank will have a slurry level of 10.1 m resulting in a working volume of 800 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 Project, 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 54 million tonnes of tailing which is projected at the end of the project 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 a 1.5 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 weekly 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 600^{o}C-700^{o}C 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 Project 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 0.5 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 contacted 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 tonne.

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 Project 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 Project 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	2.61
Mineralized Grade, silver, g/t, average	4.35
Gold Recovery, percent	87.4
Silver Recovery, percent	32.7
Gold Production, grams per day, average	31,936

(5,040,000 / 360) x 2.61x87.4%	
Silver Production, grams per day, average	19,914
(5,040,000 / 360) x 4.35x33%	

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	TBD
	Primary Crusher Discharge Hopper	
	Number	2
	Pocket Capacity, tonnes	TBD
Primary Crusher		
	Number	2
	Type	Gyratory
	Size, mm	1,168 x 1,803
Primary Crusher Discharge Feeder		
	Number	2
	Type	Apron
	Drive	Hydraulic, variable speed
	Turndown	50%
	Size, width x length, mm x m	
	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	1304
Vertical fall, m	402
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	-885**

**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	8.5
Effective grinding length, meters	4.3
Mill Speed, % critical speed	75
Mill Motor, kilowatt	5,500
Mode of Operation	Closed circuit
Horsepower Calculation:	
Ore Bond Work Index	17.0
Feed Size, 80% passing, µm	150,000
Product Size, 80% passing, µm	2000
Calculated kW/t, Sag mill pinion	7.93
Kilowatts required at 648.8 t /h	5145
Circuit Operating Characteristics:	
Mill feed slurry, % solids	70
Mill circulating load, %	300
Ball top size, mm	127

SAG Mill Discharge Screen

Type	Double Deck Vibrating
Number	1
Screen Size:	
Width, meters	3.0
Length, meters	7.0

	Deck material	Polyurethane
	Screen opening size, mm	9.5
Pebble Crusher		
	Type	Cone
	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	TBD
Pebble Crusher Feeder		
	Number	1
	Type	Belt
	Drive Hydraulic	Variable Speed
	Capacity Range, tph	180-300
	Size, Width x Length, m x m	0.914 x 3
	Capacity, Flow Sheet Design, tph	242
Secondary Grinding-Ball Mill		
	Number	1
	Mill Size:	
	Diameter inside shell, meters	7.9
	Effective grinding length, meters	11.0
	Mill Speed, % critical speed	75
	Mill Motor, kilowatts	11,931
	Mode of Operation	Closed circuit
	Ball Mill, Bond Work Index	17
	Feed Size, 80% passing, µm	2000
	Product Size, 80% passing, µm	60
	Calculated kW/t, ball mill pinion	17.08
	Kilowatts required at 648.8 t/h	11,082
	Circuit Operating Characteristics:	
	Mill feed slurry, % solids	75
	Mill circulating load, %	300
	Ball top size, inches	2
Hydrocyclones		
	Model/Size	Krebs, gMAX20
	Number Operating	11
	Number Standby	1
	Feed Pressure, psig	10
	Feed, % solids, design	55

Overflow, % solids, design	30.5
Underflow, % solids, design	75
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	30.5
Thickener Underflow:	
Slurry, % solids w/w, design	50

Carbon in Column

Type	Open Top
Number	4
Size:	
Diameter, meters	3.69
Height, meters	3.1
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	15.93
Height	19.37
Freeboard	1
Mode of operation	Series
Residence time, hours, total	48
Residence time, hours, each	5.33
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	2.35
Residence time, min., each	17.6
Operating Characteristics:	
Slurry, % solids w/w, design	50
Carbon:	
Carbon size, mesh	6. X 12
Carbon concentration in CIP tank slurry, g/L	25

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 Recovery 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, mesh	50
	Screen opening, type	Slotted
Tailing Detoxification Tank		
	Type	flat top w/agitator
	Number	2
	Tank Size, meters:	
	Diameter	9.4
	Height	9.7
	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	15,556
	Maximum, dt/d	23,334

	Flow Sheet Design, m^3/d, slurry	17,779
Feed		
	Solids, Specific Gravity	3.20
	Slurry, % Solids	54
	80% Passing, Microns	60
Filter Cake		
	Moisture, % w/w	13.3
	Bulk Density, lb. /ft^3	80

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	0.5%
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	0.05

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	5.0
HCI 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	0.44

18 PROJECT INFRASTRUCTURE

This section discusses the infrastructure not directly related to processing. 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 and relocated villages).
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).

All of this infrastructure, and the processing plants, need to be based upon a solid foundation. The geo-technical considerations for those foundations are discussed in this section as well.

The key points of this section are:

- The source of water will be three wells that are located 18 km from the site. These wells have been drilled, the water quantities confirmed, and the permits for the water have been received.
- Power is available from a 115 kV transmission line that is located 2 km from the plant site within the land package boundary. A switching station will be built at that location to allow connection to the transmission line. A short power line will be built from the switching station to the on-site power substation.
- A 42.5 km road, the east service road, will be built to connect the plant site to highway 95. This will give quality access from the plant site to the Port of Acapulco, which is a potential access point for major pieces of equipment. Infrastructure to bring fiber optic communications to the site, as well as water to the site, will for the most part, follow the east service roadway. Power lines to supply the well site will 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, the roadway has been routed away from the Balsas River.
- A permanent camp for company personnel will be constructed adjacent to the east service road, approximately 7 km from the plant site (straight line).
- The villages of La Fundición and El Limón will be relocated to a new site called El Potrerillo. The new town site is approximately 5 km from the plant site (straight line) and is connected to the east service road by a short spur road.
- Service facilities (such as maintenance facilities, explosives magazines, administration facilities, etc.) have been included in the design.
- The plant site is completely fenced at the perimeter of the property and there is an access control guard house located at the perimeter where the plant road meets the east service road. There is a second internal fence that protects the process plant area. Access through

this fence is controlled by a second 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.
- The waste rock is not expected to produce acid rock drainage, hence there is no infrastructure planned to manage acid rock drainage. (A large proportion of the waste rock is marble / limestone which are expected to neutralize the sulphide bearing rocks.) There is a potential risk that the water that percolates through the waste rock will absorb arsenic in 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 monitored. Mitigation efforts will be taken in the future if the trend points toward a need.
- Water management infrastructure has been planned for. 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 issues have been studied from the perspective of ensuring adequate foundations for the infrastructure elements. The rock is generally competent below the weathered rock near surface, and that that weathered rock is generally a thin layer. The mill, which would be the building with the largest foundation risk, is located on a ‘hill cut’ site. Cutting down this hill to get a ‘flat spot’ large enough for the mill will cut well below the weathered rock into the bedrock. Further testing will be done to confirm that there are no karst structures in the bedrock.

Figure 18-1 provides the relative location of infrastructure described in this section.

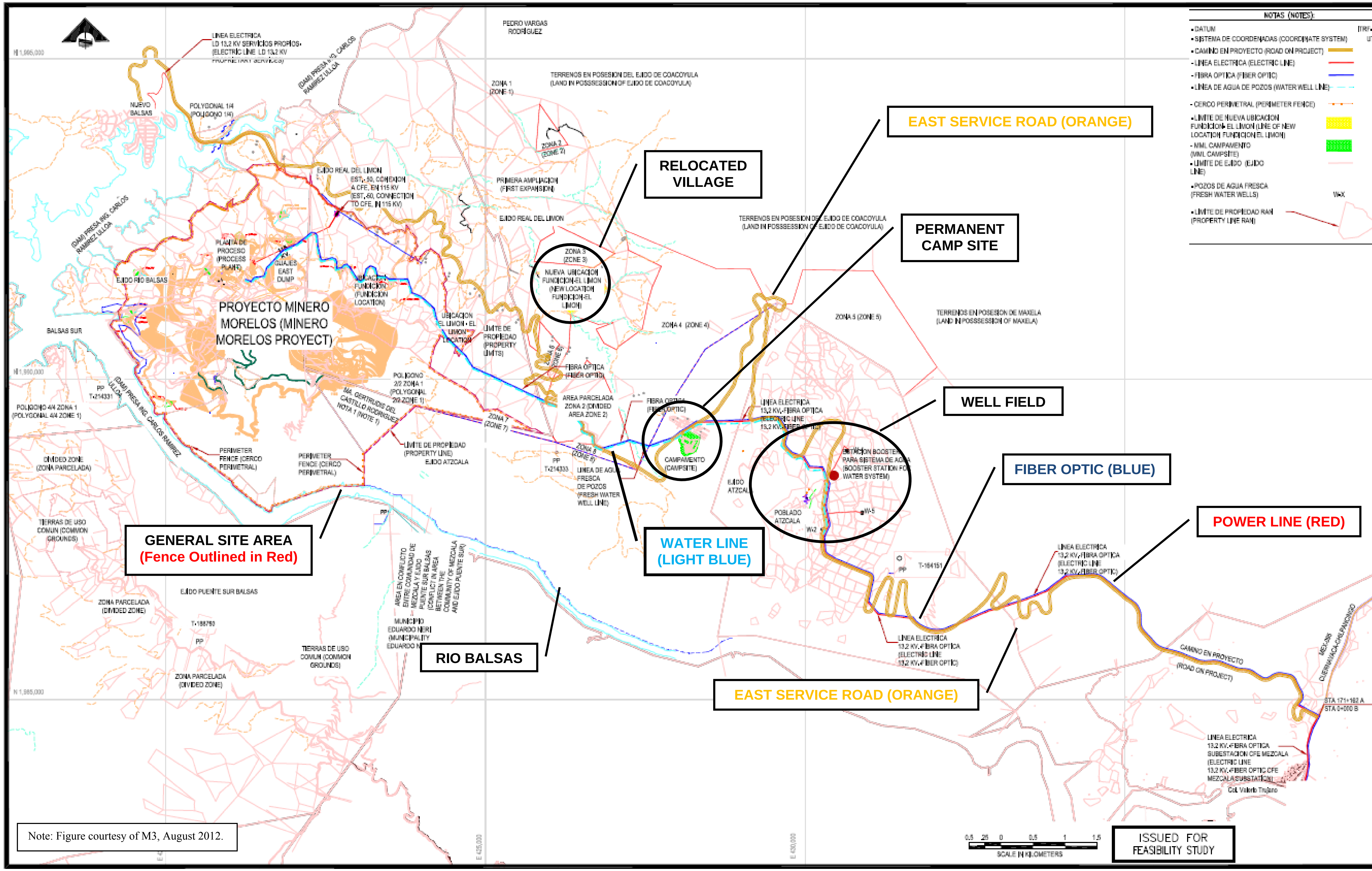


Figure 18-1: Project Site Infrastructure Layout

18.1 GENERAL SITE AREA

The following section describes the general site layout of the project area. The General Site Area is designed with two security areas. The site has a fence around the entire project area with a controlled entrance at the East Service Road, and a second secure area, which is located at the Administration building and covers direct access to the process plant and mine. Figure 18-2 provides a view of the main project area, identifying the main project facilities.

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 entrance to the project 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 is 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 project 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 #6 on Figure 18-2.

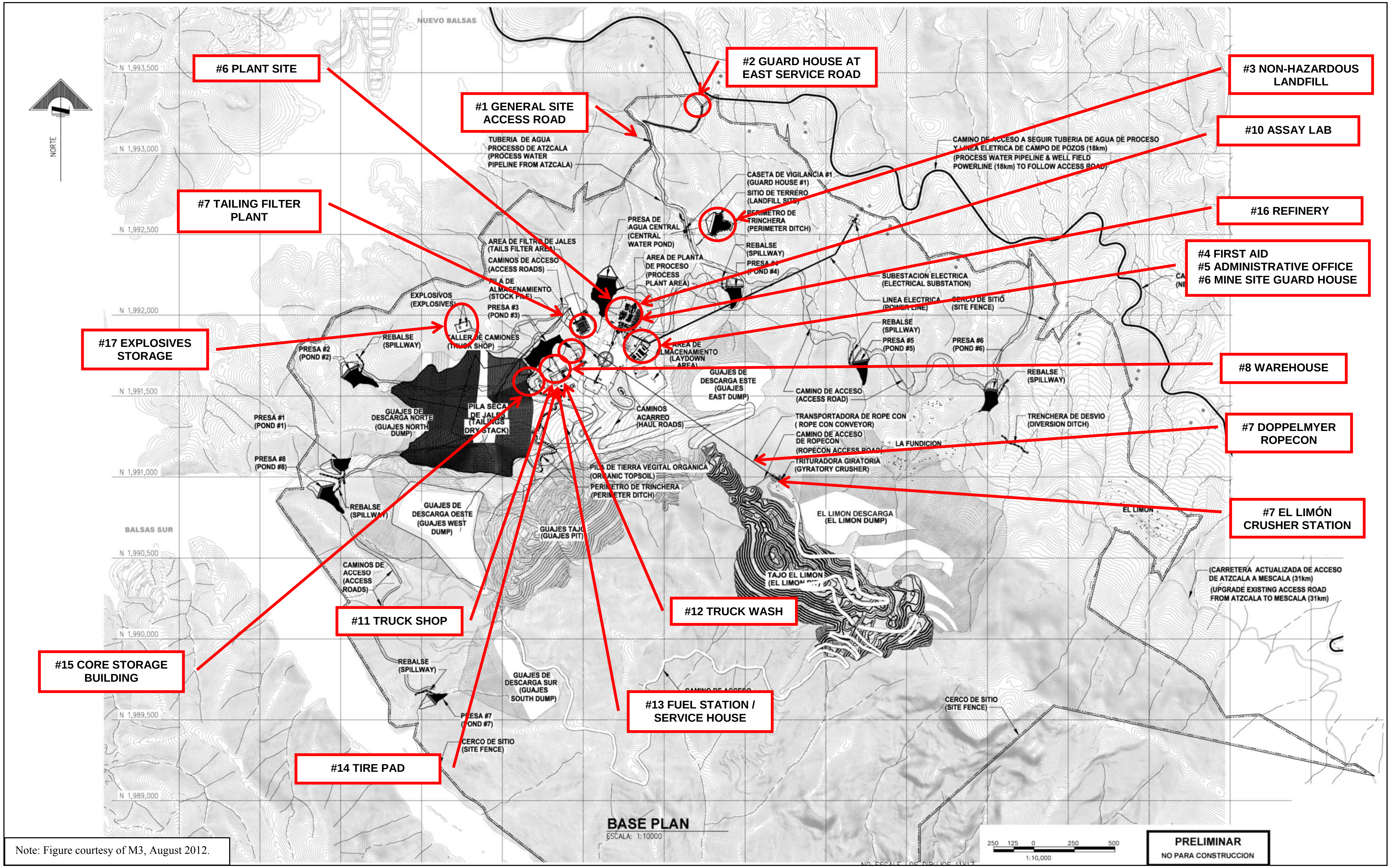


Figure 18-2: Mine Site Layout

18.2 OFF-SITE INFRASTRUCTURE – WELLS AND SWITCHING STATION

18.2.1 Water Wells

Water supply for the Project (Mine, Mill and Camp) will come from a well field developed near the village of Atzcala approximately 11 km east of the project site and will 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 project are estimated at 1.7 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 will be 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 project water needs. The three wells will be outfitted with well pumps to feed a booster station storage tank. This provides redundant capacity for the wells and well pumps.

18.2.2 Switching Station

Power will be supplied to the plant site at 115 kV from a transmission line that is within 2 km of the plant site. A switching station will be required at the base of the 115 kV line, followed by a 2 km transmission line to a substation located at the project site. The switching station will be powered by a new 5.4 km 13 kV power line from Nuevo Balsas.

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 project 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 project. The three well pumps will discharge into a 100,000 gallon (378,500 liters) water tank near the well heads. The water is then pumped from the tank by one 600 HP booster pump into a 305 mm (12 inch) steel pipeline to the plant. The first 500 meters of pipe is 12 mm (1/2”) wall thickness for the design pressure. Average flow rate to the plant will require one pump. A second standby pump will be installed at the tank. One hundred percent of the process water feed rate can be achieved with one pump running.

The section of the pipeline from the Camp to the plant site will use 305 mm (12 inch) Schedule 40 steel pipe. The profile of the line goes over a high point at the Camp and then flows by gravity to the plant fresh water tank. The booster station and well pumps will be controlled by radio signal 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 668,000 liters (180,000 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. The design potable water consumption is 100,000 liters (26,400 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.

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 Project Power Supply

Electrical power supply for the Morelos project 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 project area. Power at 13.2 kV for the water well field and camp will be supplied from the CFE substation in Mezcala. Torex has been given assurance from CFE that power is available from both these source to meet the needs of the project.

18.3.2.1 Plant and Mine Power

Power will be supplied to the plant site at 115 kV from a transmission line that is within 2 km of the plant site. A switching station will be required at the base of the 115 kV line, followed by a 2 km transmission line to a substation located at the project site. The switching station will be powered by a new 5.4 km 13 kV power line from Nuevo Balsas.

The connected load for the facility is estimated at 28 MVA with a demand of 22 MVA. Two 50/66 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 line run along the RopCon 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 will be via a 34.5 kV overhead line that parallels the east access road from Mezcala. This power line has an estimated load of 3.3 MVA.

18.3.3 East Service Road

The Project area is currently 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 have shown that there is not a viable bypass route around Cocula, based on these evaluations and the added benefits of having two access routes to the Project the decision was made to develop access to the east to provide a connection to the Mexican Federal Highway 95. This road will be developed by upgrading and realigning the existing access road to the project from Nuevo Balsas, upgrading and realigning an unimproved road from La Fundición to Atzcala, and upgrading and realigning the current road which connects Atzcala to Highway 95. By undertaking this work, the project gains an improved transportation route to the project area for both construction and operating material while also opening the project up to a larger area for workers and supplies. This access road is referred to as the East Service Road.

The East Service road will be approximately 42.5 km in length and will be constructed to the Mexican Federal SCT type "B". Travel way width is 7 meters with a maximum grade of 8%. The road will be paved where it travels through populated areas (which includes Atzcala and the camp area). The crown of the road (shoulder to shoulder) is 9 meters in width.

As the road will be the primary supply route for the site and therefore will be the main transport route for cyanide the road has been designed to minimize the potential for accidents involving water. This was done by moving the route away from the Rio Balsas and minimizing crossing of water coarse crossing. The Service road will also provide access the Permanent Camp and the well field at Atzcala. The water supply pipeline along with power to the Camp will parallel this access road. Design 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 planned for the Project has been designed with this in mind.

It is proposed to provide an integrated data networking and telecommunication system. The anticipated bandwidth required is between 6 and 10 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 will be a 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 will be 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 will use 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, two personal computers in the instrument shop, and one or more personal computer in the administration office. If access to the system is required in other areas such as the laboratory, it can be added. The remote systems such as fresh water pumps and seepage pond water pumps will be controlled from the main control room using a radio communication system.

A supervisory expert system will not be 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 design 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.

18.4.1.1 General

The permanent camp site is located on (9) hectares of common land which has been leased from the Atzacala Ejido. The camp is located approximately 13 kilometers east of the mine site via the East Service Road, approximately 8 km (in a direct line) from the plant site. The camp includes the following site infrastructure:

1. Electrical distribution
2. Communication
3. Domestic water
4. Fire water
5. Sewage treatment plant
6. Storm drainage
7. Security fence

18.4.1.2 Overall Camp Site Layout

The proposed 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 intent is 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 is to organize the buildings around a central gathering, recreation, and public core, with a separate housing wing for more privacy. Tying the public core and the housing wing together is a covered breezeway at the recreation and cafeteria buildings. Perpendicular to the axis of the breezeway is the check-in office building and the recreation soccer field.

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/bbq 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 to serve the building. 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 m by 20 m and provides seating for 144 people at one time. This complex also includes a chef offices, additional storage area, and mechanical spaces.

18.4.1.4.4 Utility Building

The utility building incorporates a laundry facility with an office 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 design 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 El Limón is required. The following sections describe this aspect of the project.

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 project. Work is currently under way on finalizing a location and urban design of the new village. This relocation is being completed under the International Financial Corporation standards. Potential sites for relocation are being assessed with a site selection to be made by the end of 3rd quarter of 2012. Currently work is focused on a new site referred to as El Potrerillo, for design and costing purposes within the feasibility this site has been used.

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.

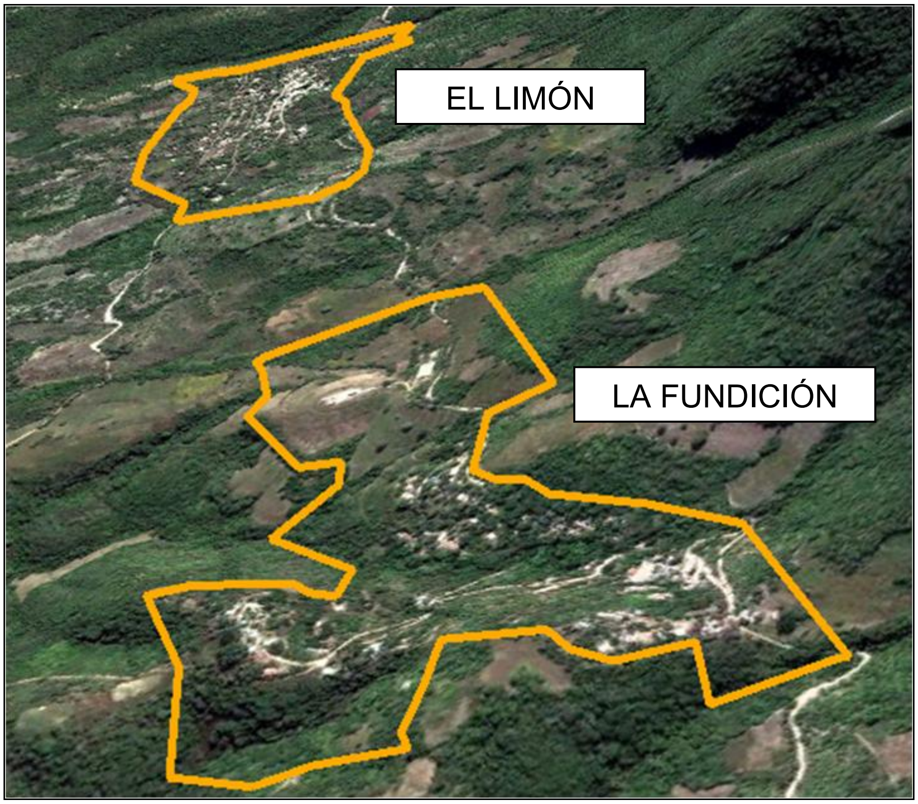


Figure 18-3: Existing Settlements – La Fundición & El Limón (Looking East)

Note: Figure courtesy of M3, August 2012.

The project scope of work is to relocate 142 homes along with all community building and infrastructure. According to onsite investigations the most optimal site for the new village is the El Potrerillo. This location has favorable topographic conditions and the acceptance of the residence of La Fundición and Real del Limón settlements. The El Potrerillo site is located east of the mine site approximately 5 km from the plant site and covers 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.

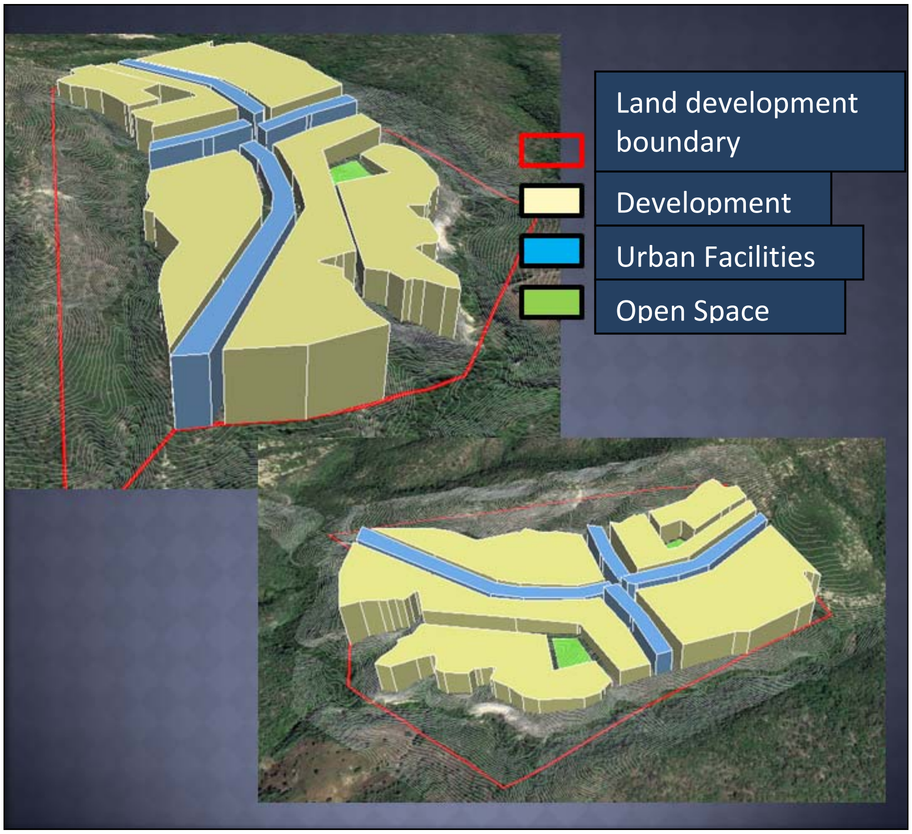


Figure 18-4: Urban Design Concept for the New Village at El Potrerillo Site

Note: Figure courtesy of M3, August 2012.

18.4.2.3 Village Access Road

The access road to the new village is similar in design to the East Service Road. The 5 kilometer (approximately) road will be connected to the East Service Road and will provide access to the community members to both Nuevo Balsas (west) and east to the village of Valerio Trujano on highway I-95. Detailed design of the village road will be finalized once a site is selected.

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 designs providing at a minimum the same area and amenities of the existing homes in both communities. The proposed home sizes are 70, 80 and 90 m^2. Each homeowner will provide input to home type, yard and amenities. One of the needs of the community members is to maintain their own separate and unique identities as they exist today.

The existing homes on El Limón and La Fundición have adobe walls and metal panel roof. The proposed new homes are designed with concrete block walls and concrete slab and 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 is assumed to come from Zona La Culebra. Other options are being studied to determine the most feasible and reliable source. Two well pumps feed a booster tank that is then pumped to a separate tank adjacent to the fresh water tank.

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 top all the homes, schools, churches, offices, etc.

18.4.2.7 Sewage Treatment and Sewage Treatment System

In the current design, each resident has a separate sewage system that includes a septic tank and leach field. All community buildings shall connect to a public sewage treatment plant and underground distribution piping.

18.4.2.8 Relocated Village Electrical Supply

Electrical power is supplied to the Potrerillo Site at 13.8 kV from a transmission line that is approximately 5 km from the existing power line. A switch station is required, but CFE may elect to reroute the line so that the switching station is not required. This option is still under review and consideration.

The projected total connected load to the new village is estimated at 1.5 MVA.

All electrical distribution shall be overhead providing service to all homes, community building and street lighting as required. This design is yet to be determined.

18.5 ON-SITE INFRASTRUCTURE – NON-PROCESS BUILDINGS

18.5.1 First Aid Clinic (see #4 on Figure 18-2)

Approximately 5 km along the general site access road is located a second controlled entrance to the project area and a first aid clinic.

The first aid clinic is located at the main entrance to the project this allows for direct access to the project site as well as off site. A 24 m by 13 m 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 47.5 m by 17.7 m metal building located at the entry point of the project 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 #8 on Figure 18-2)

The warehouse is central located between the plant site and truck shop. The facility is a 32.5 m by 18.6 m metal building with 5.5 m 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 (1,320 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 primary crusher.

18.5.5 Assay Lab (see #10 on Figure 18-2)

The assay laboratory includes offices for staff members, metallurgical labs and other support spaces within a 50 m by 26 m metal building. It is located just west of the process plant providing easy access to the process plant for mill samples as well as vehicle access from the mine for mine samples.

The lab includes space for sample preparation, fire assay, storage, wet and environmental lab complete with all equipment and ventilation equipment. At the other end and separated from the lab environment are personnel space 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 #11 on Figure 18-2)

The truck shop (7,800 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 3,960 m^2 and consists of bays for the mine fleet, small vehicles, oil and lube storage, and a tool room. The mine fleet shop has 10 drive-through bays which are services with two 40-ton overhead bridge cranes. These bays are sized for the largest piece of equipment which may operate at Morelos, 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. Space has also been allocated for 2 small vehicle bays, oil and lube tank storage space, and tool room. 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 #12 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 #13 on Figure 18-2)

The fuel station design for Morelos consists of a fuel storage area, a dispensing facility and a service house. Only diesel will be stored at Morelos. 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.

The (4) 120 cubic meter and (1) 80 cubic meter capacity double containment tanks are placed on a concrete pad. 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”.

18.5.9 Tire Pad (see #14 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 #15 on Figure 18-2)

The core storage building is 76.5 m by 54.0 m metal building utilized for long term core sample storage. The building has a 5.5 m 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 (see #17 on Figure 18-2)

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 storage silos and the bulk emulsion storage silo. To accommodate these facilities, a building area of 180 m^2 has been identified to the west of the plant site.

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 some 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 #2 on Figure 18-2)

Located at the start of 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 design 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 Mine Site Guard House (see #6 on Figure 18-2)

Located in the middle of the property at the entrance of the mine site, this second guard house provides a security checkpoint before entering the mine site.

18.6.4 Refinery (see #16 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 E&I was contracted to complete the hydrology component of the Morelos Feasibility study. The complete assessment for the site hydrology is presented in the AMEC E&I Report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project-Report No. RP-113911-1000-002" (AMEC 2012b). The main water management components at the Project 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 18-5. As the Morelos Mill is designed to be a closed circuit for water the main consumption of water is for 1) plant make up water from the loss of water to the tailings (minimum as it is dry stack tails), 2) domestic use and 3) water for dust control in the mine and plant area. The main water requiring management is surface run-off from rain events. The central point for water management is the Central Water Pond (CWP). 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:

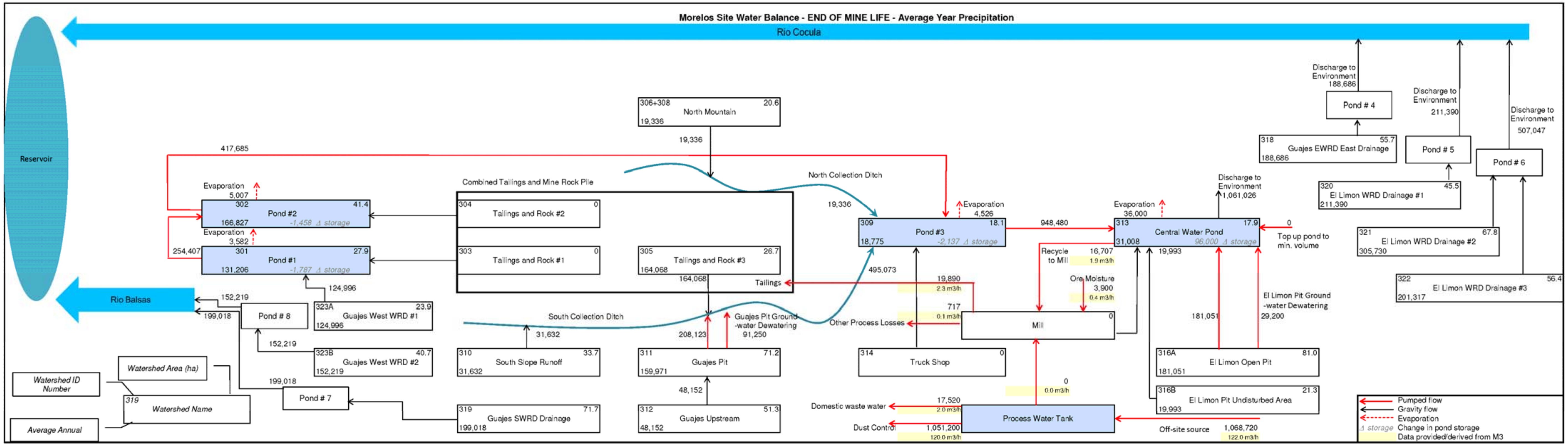
- Evaporation;
- Water recycled to the mill for processing;

- 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 18-5 for the end of 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	75	60.7	81%
Average	75	71.5	95%
Wet	75	74.2	99%



Note: all units in m3/year except as noted

Figure 18-5: Site Water Balance

Note: Figure courtesy of AMEC E&I August, 2012

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 Morelos Mill is a closed system there is no release of plant water. The focus of the Morelos water management system is maximizes recycling and minimizes the potential impact to the environment of run-off from rain events.

The general water management plan diverts as much 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 Morelos Project. For additional detail on this study please see AMEC E&I report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project- Report No. RP-113911-1000-002" (AMEC 2012b).

18.7.2.1 Pit Dewatering System

The open pits will require dewatering from surface runoff and seepage. The design concept is to use diesel sump pumps in collection ponds in the pit. The collection sumps are to be provided at approximately 60 meter vertical lifts which allows for use of HDPE pipes.

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. Based on hydrological analyses, pumps with a capacity of about 1,375 m^3/hr each are required to evacuate the volume of water from the Guajes and El Limón open pits.

A series of collection ponds will be provided during the pit mining phase. Additional diesel pumps will be purchased as the pits become deeper. The Guajes pit water will discharge into the TDS east toe perimeter drainage ditch that drains to the Pond 3. Water from the El Limón open pit will be directly pumped to the CWP.

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. The critical duration is assumed to be 30 days, 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 Rio Balsas. Pond 3 spillway discharges into the CWP. The CWP will discharge to the reservoir.

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 4 to 8 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 4, 5 and 6 discharge into existing natural creeks flowing north towards Rio Cocula, whereas Pond 7 and 8 spillways discharge towards Rio Balsas.

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

18.8 ON-SITE INFRASTRUCTURE – WASTE STORAGE

18.8.1 Non-hazardous Landfill (see #3 on Figure 18-2)

A landfill site has been included within the feasibility project for non-hazardous waste (i.e. wood and domestic garbage) within the project boundary. MML is currently looking at the opportunity of developing a landfill site jointly with the community of Nuevo Balsas for use by both the community and the mine. The landfill would be constructed by MML but operated by the town. If an agreement is reached, the non-hazardous solid waste would be managed at the community landfill site and the mine landfill site would not be constructed.

The proposed landfill site, included in the project, is located northeast of the plant site. The site will be 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 to contain a total volume of 25,000 m^3 including the final cover volume. An HDPE geomembrane 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 AMEC E&I report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project - Report No. RP-113911-1000-002" (AMEC 2012b).

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 this project 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 48.8 million tonnes which allows for approximately 18% 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 E&I report "Mine Waste Management and Site Water Management Feasibility Designs Morelos Gold Project - Report No. RP-113911-1000-002" (AMEC 2012b).

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: 5.6×10^{-6} to 2.7×10^{-5} cm/s ($k_h/k_v = 4$ (assumed))
- Effective shear strength: Cohesion =0 kPa and $\phi' = 35.9^\circ$ 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.

18.8.2.1.1 Geotechnical Conditions

A geotechnical investigation program was carried out in 2006 and 2011/2012 to characterize the surface and sub-surface conditions at the Project site. The 2006 program focussed 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. Additional information on this program is provided in Mine Waste Management and Site Water Management Feasibility Designs (AMEC 2012b). All of the 19 boreholes drilled are equipped with piezometers to allow groundwater level measurements.

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 50m 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. Precautions will be required 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 Project 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 Project 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 project.

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 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 West WRD at the end of mine life.

A typical cross-section of the TDS is shown on Figure 18-6.

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 1A in south valley to EL 610 m;
- Stage 1B in north valley to EL 610 m;
- Stage 2 to EL 625 m;
- Stage 3 to EL 650 m;
- Stage 4 to EL 67 5m; and,
- Stage 5 to final crest elevation EL 725 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 18-7 shows the water management strategy during second year (Stage 1B) 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 18-8.

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 18-7). Water from the CWP will be utilized for mill operations and the excess will be decanted through the overflow spillway.

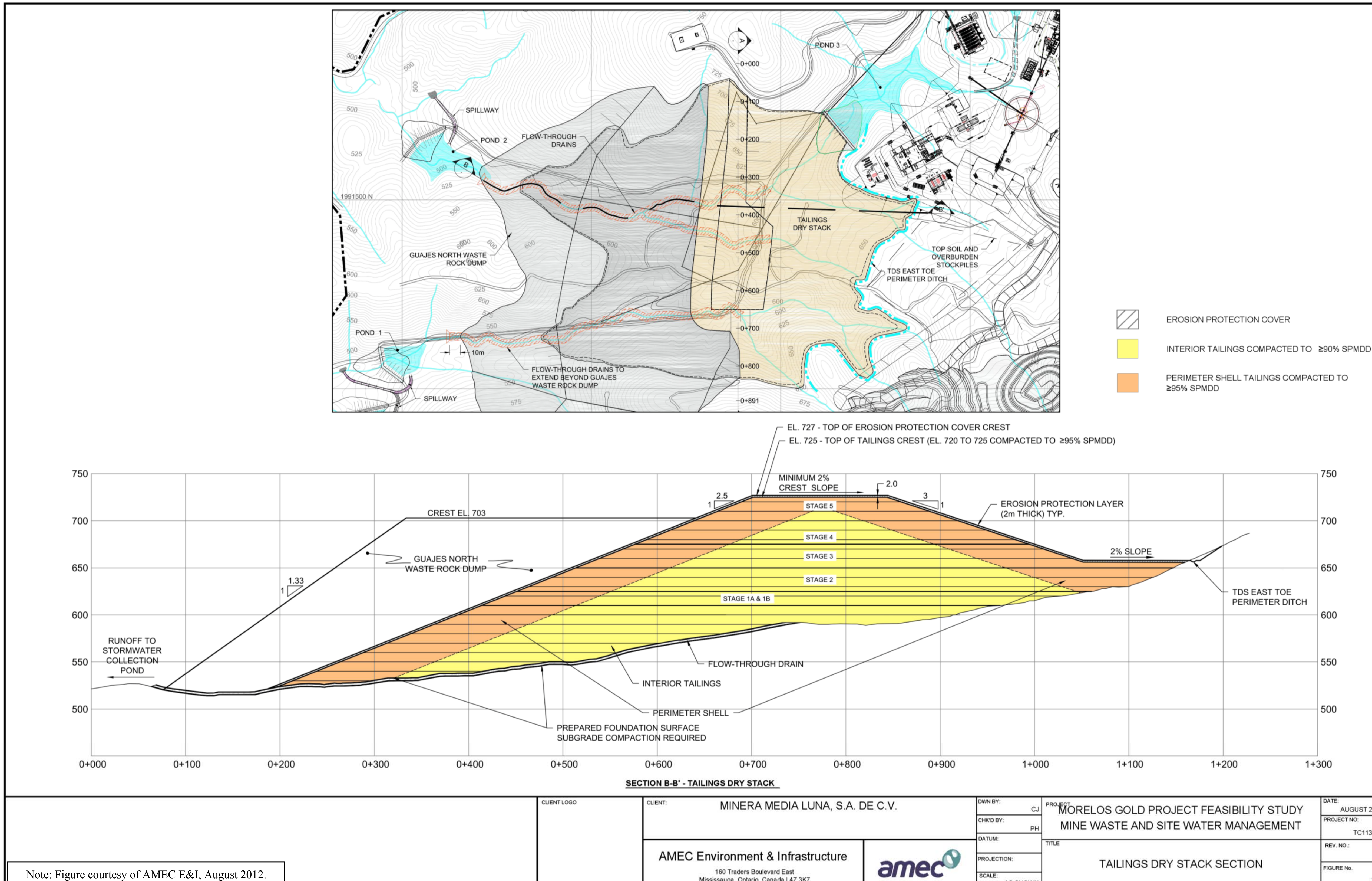


Figure 18-6: Tailings Dry Stack Section

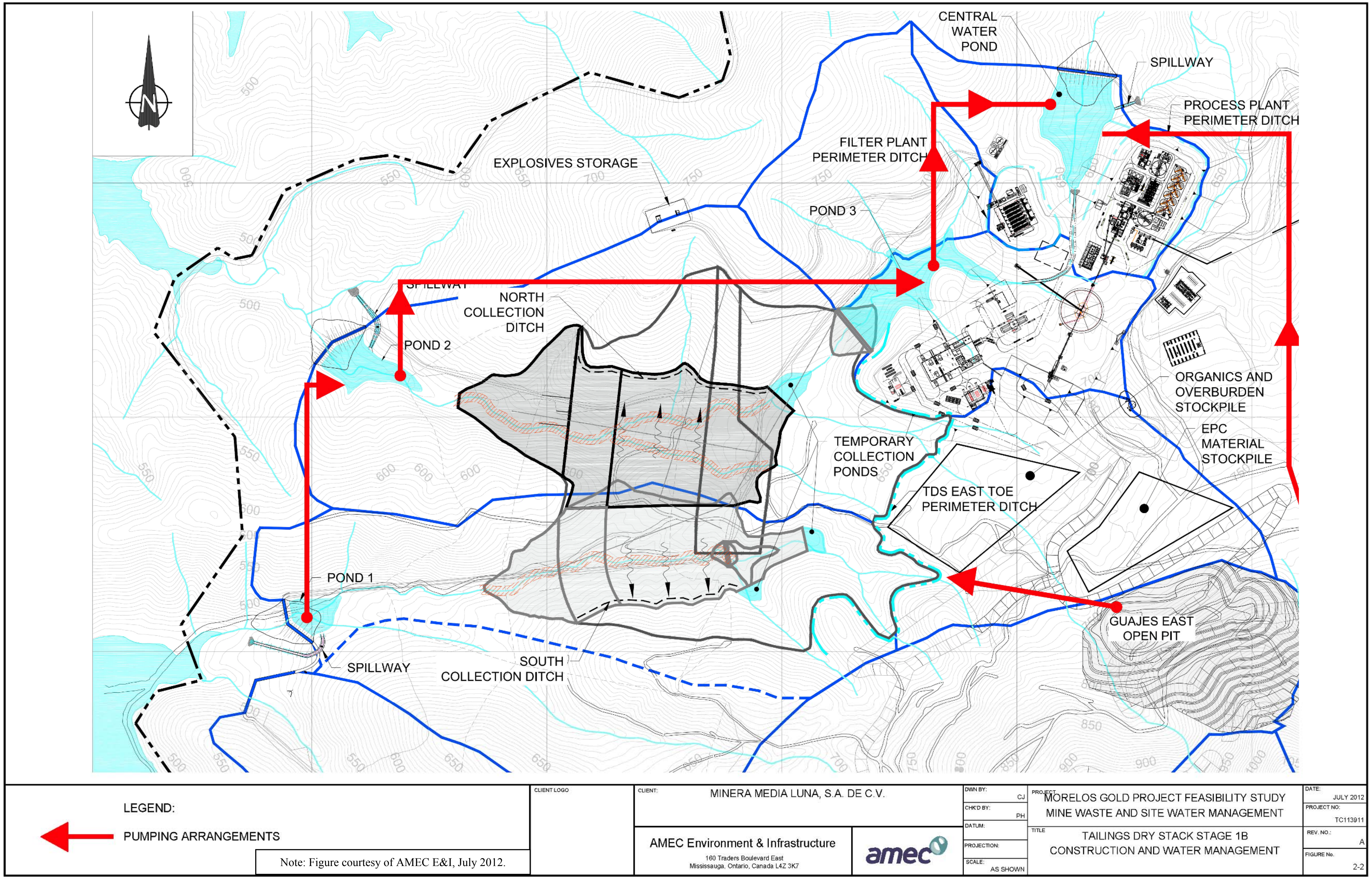
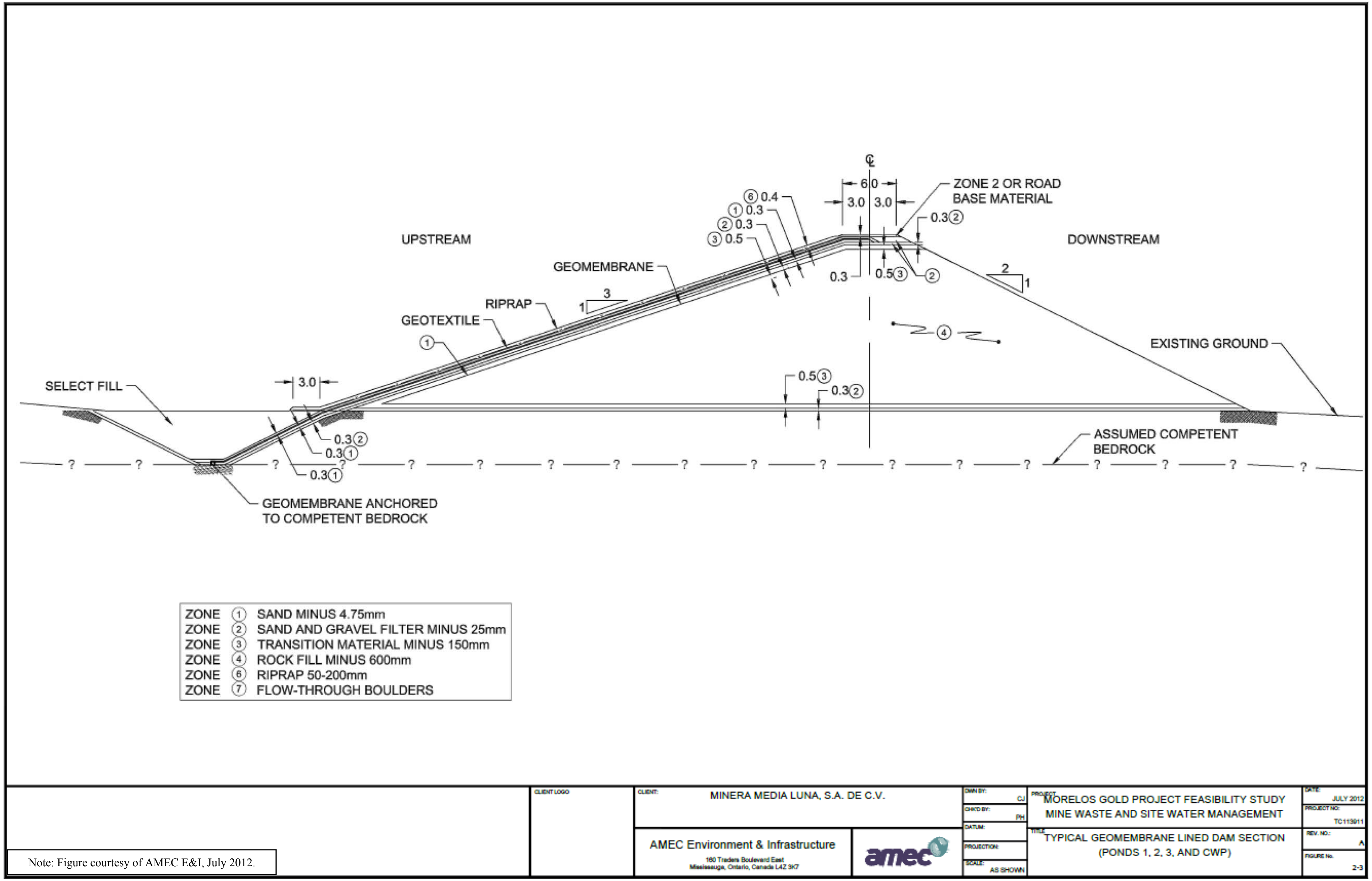


Figure 18-7: Tailings Dry Stack Stage 1B – Construction and Water Management



Note: Figure courtesy of AMEC E&I, July 2012.

Figure 18-8: 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), 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 2012b) 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 2012b). A summary of this work is presented below.

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, located north of the El Limón open pit, will be developed with four crest platforms.

18.8.3.2.2 Guajes East Waste Rock Dump

The Guajes East WRD will be formed northeast of the Guajes open pit by end dumping .

18.8.3.2.3 Guajes South Waste Rock Dump

Waste rock from the southern parts of the Guajes open pit will be end dumped along the southern slopes forming the Guajes South WRD.

18.8.3.2.4 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.

18.8.3.3 Waste Rock Dump Stability

18.8.3.3.1 Geotechnical Investigations

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 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.

18.8.3.3.3 Waste Rock Dump Stability after Closure

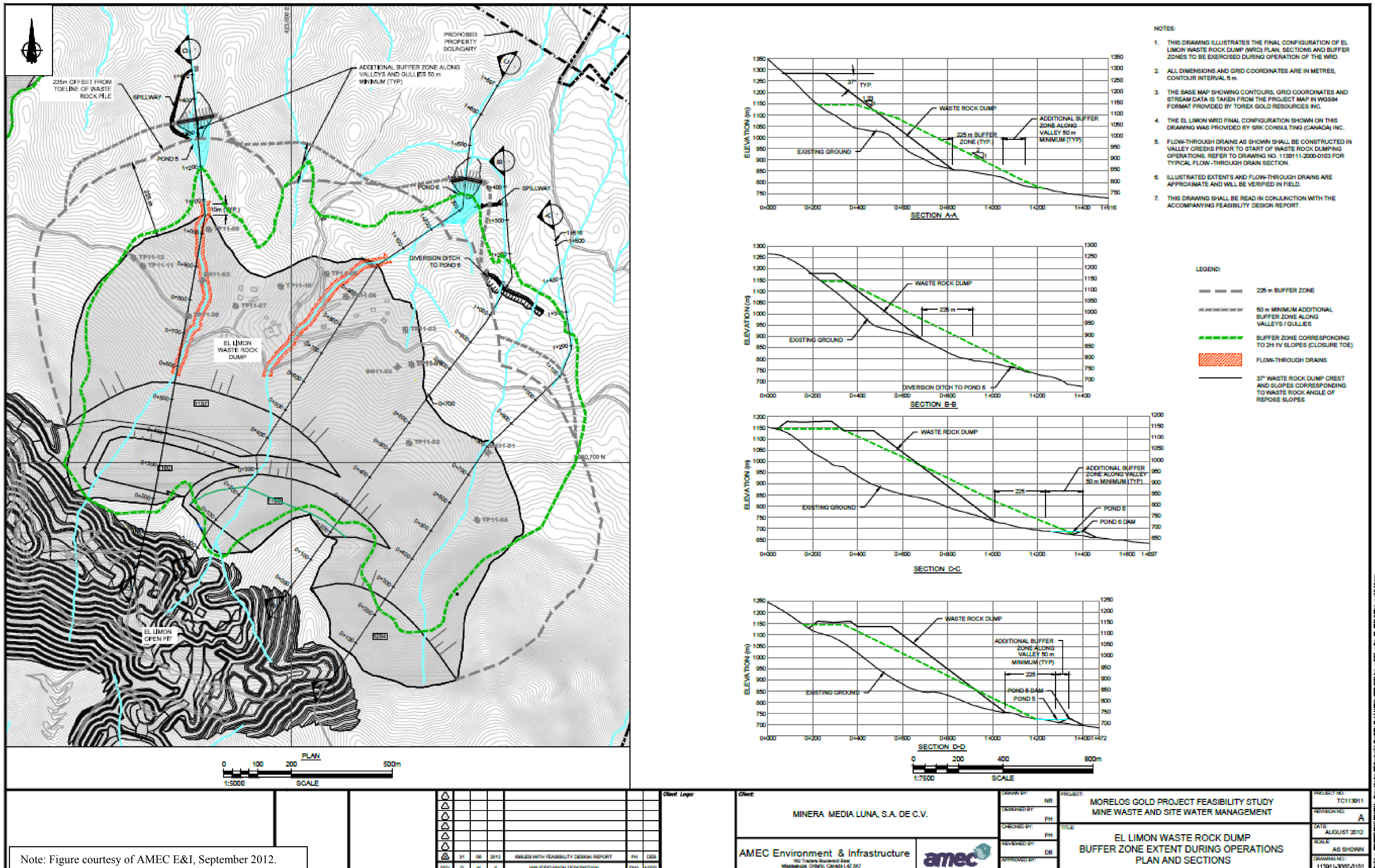
After closure the WRDs will be reconfigured to 2H:1V slopes. This slope provides a long term static factor of safety of 1.5.

18.8.3.3.4 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 18-9.



Note: Figure courtesy of AMEC E&I, September 2012.

Figure 18-9: 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 though both surface and subsurface (drilling) in two campaigns, one completed in 2006 and another completed in 2012. Results of this investigation and subsequent analysis identified no areas of concern.

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 m over most of the area but generally appeared to increase to over 2 m on the east and south sides of the general plant area. Some local pockets existed where the overburden was greater than 5 m in thickness. The overburden was mainly residual soil, consisting of angular to subangular 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 m thick, of organics at the ground surface.

The depth to fresh or slightly weathered bedrock over the general plant site area varied between 5 m and 38 m although generally was either 5 to 7 m or greater than 20 m. 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 m).

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 m 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 project facilities to more accurately define subsurface conditions prior to construction.

The plant site will be 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 will be undertaken (SRK, 2012a). The top 5 meters is weaker and more fractured than the rock at depth and must be removed.

A 25 meter vertical wall is planned to be excavated, with the crusher structure constructed against the vertical wall. The development of this wall will require the use of immediate rock support (shotcrete and bolts) as well as permanent support once completed. This will be possible using either of the following methods:

1. Rock bolting and shotcrete are utilized to stabilize the rock face, or

2. Excavate the rock at a stable slope angle and then backfill between the crusher structure and the sloped rock face.

The final decision on this will be made during the detailed engineering phase; for costing purposes, the construction of the vertical wall has been carried. Additional geotechnical investigation will be completed prior to this decision.

19 MARKET STUDIES AND CONTRACTS

19.1 OWNERSHIP

Torex through its MML owns 100% of the Project.

19.2 GOLD AND SILVER MARKETING

Torex will produce and sell a gold and silver doré to generate revenue for the Project. The doré will be sold to a refinery for separation into gold and silver bullion. The doré produced by the Project can be considered high grade with no impurities that would affect its acceptance by refineries. Torex is of the opinion that sales contracts that may be entered into with refiners are expected to be typical of and consistent with standard industry practice and are similar to contracts for the supply of doré elsewhere in the world. Torex expect the bullion to be sold on the spot market, by marketing experts retained by Torex. Gold and silver sales are expected to be at the precious metal spot prices fixed by the London Metals Exchange (LME).

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 EXECUTIVE SUMMARY

MML has engaged Golder Ltd. (Golder) to prepare the environmental and social section of the Technical Report for the Project in accordance with NI 43-101**.** The intent of this section is to provide the reader with current environmental and social data and information on the Project based on available data to date, and to address the known or perceived environmental and social-economic issues associated with the Project at the current stage of development. Golder is continuing the ongoing baseline data collection studies in order to complete a full Environmental and Social Impact Assessment (ESIA) on the Project, planned to be completed in the third quarter of 2013.

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

- No social or environmental issues have been identified that will impact construction and operation of the project utilizing current design.
- Baseline data to support permitting has been completed.
- Supplemental data is currently being gathered to provide additional baseline information to support the completion of a full ESIA compliant to International Finance Corporation (IFC) standards.
- The potential impacts on groundwater and surface water have been identified and control plans have been established, including:
  - Tailings samples analyzed by AMEC E&I (2012) were classified as non-potentially acid generating (non-PAG). However, tailings samples analyzed during previous geochemical testing (SRK, 2008) were classified as PAG. Additional geochemical testing is ongoing to further evaluate the potential for tailings to generate acid.
  - 77% of the waste rock samples were classified as non-PAG and it is expected that seepage water from the waste rock will be neutral (AMEC E&I 2012).
  - Arsenic is naturally occurring within the region; impacts from the project on groundwater may be at or below naturally-occurring levels.
  - Further assessment of the leaching of arsenic and other constituents from waste rock and tailings is ongoing, as characterization studies were not conclusive. A pump and treat mitigation process has been designed, and will be installed if arsenic levels exceed IFC standards.
- Baseline flora and fauna studies have not identified any species that will have a significant impact on the constructability of the project.

- 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.

- Most project areas have been surveyed by archaeologists from INAH and no critical cultural heritage resources have been identified. Consistent with Mexican law and IFC Performance Standards, potential impacts to replicable cultural heritage resources identified in surveyed portions of the project area have been mitigated by INAH.

20.2 ACRONYMS INDEX

CWP	Central Water Pond
EHS	Environmental, Health, and Safety (General & Mining Specific Guidelines)
EMP	Environmental Management Plan
ESIA	Environemtal and Social Impact Assessment
ESMS	Environmental and Social Management System
ETJ	Estudio Tecnico Justificativo (Technical Justification Study)
IFC PS	Performance Standard
IFC	International Finance Corporation
INAH	Instituto Nacional de Antropolgía e Historia
IUCN	International Union for Conservation of Nature and Natural Resources
MIA[1]	Manifestación De Impacto Ambiental (Mexican Impact Assessment)
NI	National Instrument
NOMS	Normas Oficiales Mexicanas
NPR	Neutralization Potential Ratio
RAP	Resettlement Action Plan
SEMARNAT	Secretaría de Medio Ambiente y Recursos Naturales (Secretariat of the Environment)
SEP	Stakeholder Engagement Plan
SOPC	Substance(s) of Potential Concern
TDS	Total Dissolved Solids
TSS	Total Suspended Solids

20.3 INTRODUCTION

MML, a wholly owned Mexican subsidiary of Torex Gold Resources Ltd., is exploring and planning the development of the Project. The Project is located in Guerrero State, Mexico, approximately 200 km south–southwest of Mexico City, 60 km southwest of Iguala and 18 km northwest of Mezcala. The closest villages to the Project site, Nuevo Balsas, Real del Limón and La Fundición, make up a small agricultural-based community accessed by narrow, paved highway from Iguala with a population of approximately 700 people. The Project consists of three gold-enriched skarn deposits, El Limon, Guajes East, and Guajes West, which are accessed from Nuevo Balsas via a 5 km single-lane gravel road. The area also includes a number of other smaller prospects.

MML has engaged Golder Associates Ltd. (Golder) to prepare this portion of the Technical Report for the Project in accordance with 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 issues associated with the Project at the current stage of development. This Section 20 summarizes the environmental studies that have been conducted to date, as well as the ongoing baseline data collection studies that are planned or underway in order to complete an Environmental and Social Impact Assessment (ESIA) and any known environmental issues that could impact the development of the Project. 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 Project, and the environmental design basis that will be used for monitoring compliance.

Discussion related to the regulatory framework and permitting process, reclamation and closure and stakeholder Project consultation is also provided based on documents and records produced during Golder's evaluation, or from ongoing studies being conducted by Golder to support an ESIA.

In an effort to consider the full mine life in the assessment, the effects summarized in this Section 20 consider the three phases of the Project: 1) construction, 2) operation and closure, and 3) post closure.

Various environmental and social studies related to the Project were conducted between 2007 and 2012. Since 2011, the environmental and social management activities have been conducted to a standard that will support an IFC-compliant ESIA.

Based on the existing environmental and social data collected, ongoing baseline data programs, and Golder's understanding of the Project components as defined in this Techncial Report pertaining to feasibility-level design, it is our opinion that the Project, while incorporating design elements and mitigation measures to avoid or reduce environmental and social impacts, is feasible from an environmental and social perspective.

20.4 REGULATORY, LEGAL AND POLICY FRAMEWORK

20.4.1 International Policy Framework

20.4.1.1 Environmental Regulations

Environmental work to be completed for the Project will satisfy Mexican legislative requirements as well as comply with the standards that are consistent with international financial institutions and International Finance Corporation (IFC) requirements. Specifically the Equator Principles and the IFC Performance Standards (PS).

20.5 PERMITTING STATUS, SCHEDULE AND PROCESS

20.5.1 Existing and Required Permits and Rights

The main environmental permits required in Mexico is the *Resolución de Impacto Ambiental* for Construction and Operation (RIA) and the Change in Land Use Permit (CUS) which are issued by *Secretaría de Medio Ambiente y Recursos Naturales* (Secretariat of the Environment [SEMARNAT]). Four primary documents must be submitted for approval and issue of this permit:

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 to be submitted once construction has been completed.

To date, MIAs and the ETJ have been completed, or are in the process of being completed and/or approved by SEMARNAT for the exploration phases of the Morelos Mine, Balsas South, roads connecting Nuevo Balsas and Valerio Trujano, the power line, and the expansion of Balsas South.

Also currently under preparation are various studies and plans related to an ESIA, which is being prepared in accordance to IFC General and Mining Sector Environmental, Health, and Safety (EHS) Guidelines. The ESIA will include the Environmental Management Plans (EMPs), a cultural heritage assessment, the Resettlement Action Plan (RAP) and closure planning.

20.6 PHYSICAL, ECOLOGICAL AND SOCIOECONOMIC SETTING

The subsections under this Section 20.6 present a summary of the environmental and social setting for each environmental discipline of the Project, as well as key findings, likely impacts, and corresponding mitigation measures.

20.6.1 Physical Environment

20.6.1.1 Regional Climate and Local Meteorology

The Project 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.

Regional climate, temperature and precipitation normals data (1970 through 2000) were obtained from seven weather stations that are within a 50 km radius of the Project. These stations are operated by *Servicio Meteorologico Nacional*, Mexico's National Weather Service. In addition, meteorological data collected at Nuevo Balsas between August 2006 and May 2007 will be augmented with data from two meteorological stations recently installed at the Project site in April and May 2012.

The average daily temperatures in the region as measured at the various weather stations range from 23.0 up to 28.9°C. The daily maximum temperatures range from a high of 37.0 down to 28.7°C. The daily minimum temperatures range from 18.5 to 21.4°C. Generally the stations located at the higher elevations have lower temperatures.

Annual precipitation ranges from 645.0 to 920.1 mm. At the three weather stations where evaporation normals were available, the evaporation far exceeds the amount of rainfall. Average wind speeds at Nuevo Balsas meteorological station for the period from August 2006 through May 2007 (Teck 2009) were relatively low (<3 m/s) throughout the monitoring period. The most predominant wind direction appears to be from the north-northeast, followed by winds from the southwest, the west-southwest and the northeast.

A more extensive and current set of meteorological data are being collected at two on-site stations. These stations were installed in April and May of 2012 and will collect readings every 10 minutes at the site. These readings will be used to generate detailed climatology data.

There is a limited amount of historical air quality data available and thus an air quality monitoring program, to be implemented as part of the baseline studies for the ESIA, will collect data on primary air quality contaminants being considered for the Project. Similarly, a noise and vibration campaign has been developed to assess existing levels in the vicinity of the Project Site, monitoring for which will be conducted at nearby communities and at the re-settlement area.

Project air, noise and vibration emissions will be estimated and modelled to obtain predicted ambient air quality concentrations and noise and vibration levels. It is expected that project mitigation measures can be designed such that air quality, noise and vibration levels will meet Mexican Standards and IFC Guidelines during all phases of the Project.

20.6.1.2 Geology and Geomorphology

The ore deposit at the Project site is a skarn deposit. Skarn-hosted gold mineralization is developed along the contacts of the intrusive rocks and the enclosing carbonate-rich sedimentary rocks. The geological setting and mineralization are described in detail in Sections 7 and 8.

20.6.1.3 Water Resources

The Project 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.

Baseline water quality conditions in both surface water and groundwater appear to exhibit concentrations which are in excess of the applicable regulatory standards. These baseline conditions will be important in the selection of appropriate engineering controls during mine development under base case and contingency scenarios in order to mitigate potential future impacts to surface water and groundwater.

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 total suspended solids (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).

Under the contingency plan, which would be enacted in the event that runoff and seepage from the waste rock dumps exceeds relevant water quality guidelines for release, seepage and runoff from all waste rock dumps and tailings dry stack would be collected in stormwater ponds and pumped to the CWP for reuse as mine water. 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.

20.6.1.4 Groundwater Hydrogeology

Hydrogeologic investigations conducted in the Project area to date indicate that the bedrock has relatively low permeability. SRK (2012) has interpreted the hydraulic conductivity of the bedrock in the low land area (i.e., north of the low land boundary depicted on Figure 2 of SRK [2012]) to be in the order of $3.0x10^{-2}$ m/d. The hydraulic conductivity of the bedrock below a depth of 50 m across the entire Project area is interpreted to be $7.0x10^{-4}$ m/d. However, geologic mapping and drilling at the Project have identified a number of faults, which play an important role in defining the groundwater flow regime. One fault, La Amarilla, has been identified in the Guajes pit area as transmissive (hydraulic conductivity of 0.35 m/d, fault zone width of 36 m, and the depth of the transmisssive part of the fault of 200 m). La Amarilla fault trends northeast-southwest and is interpreted to extend from the banks of the Rio Balsas 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).

Analytical modelling completed by SRK (2012) has estimated the groundwater flow south towards Presa El Caracol reservoir along La Amarilla fault (from Lower Guajes pit-lake) to be 130 m^3/d. Estimates of flow along La Flaca fault (El Limón) south towards the reservoir are estimated.

Characterization of the faults is still ongoing, and these flow estimates will be further refined during the ESIA.

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 the Project. To the east of the Project 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.

20.6.1.5 Surface Water 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 Rio Balsas to the south and west of the Project 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 Rio Balsas. Water elevations in Rio Balsas and Rio Cocula are controlled by the hydroelectric dam (El Caracol Dam) approximately 20 km downstream of the Project. There are numerous smaller tributaries in the immediate study area that transfer water from the immediate Project area to Rio Cocula and Rio Balsas. Many of these tributaries only contain water during the wet season.

To adequately characterize existing water quality for a study area, data has been and will continue to be collected during the ESIA over temporal and spatial scales and from drainages at the mine that could potentially be affected by the development. The baseline program will also collect baseline data from a “reference” area that is outside the influence of the potential development.

Surface water quality is also influenced by sediment quality and thus evaluation of sediment quality will 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 Project site, sediment samples will be collected during the ESIA from depositional areas within watersheds that could potentially be affected by the Project. 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.

Samples from permanent and ephemeral waterbodies were collected in the study area between 2006 and 2008 by Clifton Associates (HAC 2011). Baseline samples were collected from the Rio Balsas and Rio Cocula in February 2012. The available surface water quality data indicated the following:

- Permanent surface water bodies at the Project have high conductivity, alkalinity, hardness and total dissolved solids (TDS). Surface water pH is neutral to slightly basic, with pH in some surface waters above aquatic life guidelines. In addition, TDS are above guidelines for agricultural use in most samples. Alkalinity, TDS, TSS, and turbidity are higher in the ephemeral streams as compared to the permanent water bodies. All major ions are detected in surface water samples, but the predominant ions include calcium, bicarbonate and sulphate. Mean concentrations of most ions are higher in the permanent water bodies compared to the ephemeral water bodies.

- Available nutrient data suggest that the permanent and ephemeral water bodies are eutrophic.

- A variety of metals have been analyzed in both the 2012 baseline samples, and in the earlier sampling program conducted by Clifton & Associates (HAC 2011); however, the results differ. In the 2012 samples, only concentrations of lead were above the Mexican standards for aquatic life. The earlier results (HAC 2011) suggest that concentrations in excess of the Mexican standards for aquatic life were recorded for aluminum, arsenic (ephemeral streams only), cadmium, total chromium, copper, lead, zinc and total cyanide. The earlier results also showed values in excess of the Mexican agricultural standards for aluminum (permanent water bodies only), arsenic (ephemeral streams only), cadmium, total chromium (ephemeral streams only), copper (ephemeral streams only), iron, lead (ephemeral streams only), zinc (ephemeral streams only), and total cyanide. Both mean and maximum concentrations are higher in the ephemeral streams than permanent water bodies for all but aluminum. Although the metal levels measured in surface water exceed the Mexican standards for aquatic life, fish and aquatic invertebrates are still inhabiting local waters.

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. Existing data for the Project area indicates that aluminum, arsenic, cadmium, chromium, copper, iron, lead, zinc and cyanide, and possibly other constituents exceed various established guidelines. These guideline exceedences need to be interpreted with respect to relevant site-specific and toxicological information, as generic water quality guidelines are not intended to be site-specific. Baseline water quality data currently being collected by Golder will be used to develop appropriate site-specific water quality objectives.

20.6.1.6 Groundwater Quality

Groundwater samples were collected in March and April 2012 from the monitoring wells installed as part of the hydrogeologic investigation being conducted by SRK; the groundwater samples exhibited elevated concentrations of selected metals, including arsenic, chromium, iron, manganese, mercury, nickel, lead and selenium. Notably, arsenic was detected at concentrations exceeding the applicable Mexican drinking water standards (Secretaria de Salud 1994a, NOM-127-SSA1-1994) in all of the samples collected. Furthermore, the most frequent exceedances were observed in samples collected from well SRK-12-WMP03, which is located in the Guajes Pit. These samples are considered most representative of groundwater quality within the La Amarilla fault and may indicate that the future groundwater quality may remain elevated, with respect to applicable regulatory standards, as a result of these elevated background concentrations.

As discussed above, the faults that intersect both the Guajes and El Limón pits potentially play an important role in transmitting groundwater towards the Rio Balsas and Presa El Caracol.

A groundwater arsenic loading study for La Amarilla fault under pre-mining conditions for the Morelos Project has been completed. Golder's Technical Memorandum 12-1353-0007 (1300 DOC0072 Rev 1) describing this work is contained in Appendix A (Golder 2012a). The loading study utilized analytical data from sampling events conducted in March and July 2012 to evaluate pre-mining conditions. Using the average maximum concentration observed at well SRK-WMP-03 during the March and July 2012 sampling events yields a pre-mining loading estimate of 0.19 kg/d. Utilizing an average groundwater concentration for those wells within the catchment area of the Guajes pit results in a pre-mining loading estimate of 0.08 kg/d.

Ongoing groundwater investigations, including drilling, sampling and modeling are being undertaken to refine the understanding of the groundwater quality and the potential discharge of groundwater to the reservoir.

Groundwater quality within the carbonate rocks to the east is of poor quality from a consumptive use standpoint. Total hardness, TDS, sulphates, fluorides and iron exceed the applicable drinking water standards. Discussion on the impacts this has on the Project will be discussed in the ESIA.

20.6.1.7 Geochemistry

The purpose of a geochemical assessment is to identify the potential for mine materials to become acid generating or leach metals so that appropriate waste management strategies, water management strategies and contingencies can be developed for the Project.

Mining of El Limón and Guajes open pits is expected to produce approximately 272 Mt of waste rock and 49 Mt of dry stacked tailings over a 13-year mine life. In total 645 waste rock samples and 25 tailings samples have been characterized as part of three geochemical characterization studies. Compared to the Mexican Regulation PROY-NOM-157_SEMARNAT-2009, approximately 77% of the waste samples had neutralization potential ratios (NPR) characterized as non-acid generating. A comparison of the carbonate NPR to the Mexican Regulation NOM-141-SEMARNAT-2003 NPR threshold (1.2) indicates that pilot plant tailings samples are also potentially acid generating. Leach testing of waste rock and tailings indicates several parameters (including arsenic, iron, cadmium, chromium, copper, mercury, nickel and zinc) have the potential to be mobilized from the tailings or the waste rock. A detailed site water quality evaluation is ongoing to evaluate the geochemical characterization results in the context of the site mine waste and water management strategies.

Currently MML proposes to store tailings in a dry stack facility, and waste rock in four storage facilities: Guajes West, Guajes South, Guajes East and El Limón waste rock dumps. Runoff and seepage from the tailings dry stack and water from pit dewatering will be collected and pumped to a CWP for reuse as mine water (AMEC, 2012d). Excess water from the CWP will be treated, if required, before release to the environment. Under the base case plan, drainage from the waste rock dumps will be collected in sedimentation ponds to allow reduction in TSS and monitoring of the water quality; water in the sedimentation ponds will evaporate or be discharged to natural streams if the water quality is acceptable. If water quality monitoring indicates that drainage from the waste rock facilities is not suitable for discharge, a contingency is in place to pump the water to the CWP.

The results of the geochemical assessment are currently being evaluated in the context of the site waste and water management strategies to predict any potential surface and/or groundwater quality impacts resulting from the Project. In addition, Golder understands that MML will be initiating a field cell testing program to understand the geochemical behavior of mine waste materials under ambient conditions.

20.6.1.8 Soils

20.6.1.8.1 Soil Characterization of the Project Area

Soils in the Project area have developed on steep dissected terrain with physical limitations to soil capability for agriculture, grazing and vegetation growth. Soil will be altered and impacted during the construction, operations and closure/post-closure phases of the Project, the predicted alterations and impacts of which are summarized as:

- A loss of soil resources;
- Changes in soil quality; and
- Changes to landforms.

Although soil will be affected by the Project, mitigation measures can be taken during each phase to minimize the impacts. These measures include:

- Limiting vegetation clearing.
- Implementing a soil erosion plan that identifies areas that are at risk for erosion.
- Keeping disturbed areas to a minimum.
- Temporary stockpiling of soils (some of which could be used during reclamation).

- Reclaiming disturbed areas during mine operations and closure.

20.6.2 Biological Environment

Existing information (HAC 2011) on the current biological setting (vegetation, terrestrial wildlife and aquatic life) for the Project area is summarized below. ESIA baseline and studies are ongoing to assess the potential impacts (if any) from the Project to plants, terrestrial wildlife, aquatic life, and humans in the Project, local and regional study areas. Further analysis of the Project's biodiversity, local and regional study areas will be conducted when vegetation and wildlife (mammals, amphibians and reptiles) mapping/inventories are completed and the distribution of plant and wildlife communities is established as part of the ESIA baseline assessment. As well, the distribution of various species in particular plant and wildlife communities and/or habitats will be determined in order to establish biodiversity rankings.

Vegetation and Wildlife

Baseline vegetation and wildlife studies have not identified any species that will have a significant impact on the constructability of the Project. A summary of the findings are as follows:

- Twenty-eight species of mammals, 84 species of birds, 20 species of reptiles, 4 species of amphibians and 4 species of fish were identified in the Project area. Of the 28 species of mammals, one species of bat (*Leptonycteris curasoae)*, has an International Union for Conservation of Nature and Natural Resources (IUCN) designation as 'vulnerable.' None of the other species of mammals have a special conservation status. No endemic species have been identified.

- None of the 84 species of birds have a special conservation status. Six species of Mexican endemics (Howell and Webb 1995) were identified: West-Mexican chachalaca (*Ortalis poliocephala*), banded quail (*Philortyx fasciatus*), dusky hummingbird (*Cynanthus sordidus*), golden-cheeked woodpecker (*Melanerpes chrysogenys*), black-chested sparrow (*Aimophila humeralis*) and the orange-breasted bunting (*Passerina leclancherii*).

- None of the 20 species of reptiles or amphibians identified in the Project area have special conservation status.

- Identified plants in the Project area include 114 species, 70 of which are trees, 24 are shrubs and 20 are herbaceous. Three species have special conservation status: capire (*Sideroxylon capiri*) and tlamiyahua amapa (*Tabebuia impetiginosa*) are designated as 'threatened' and palo de rosa (*Dalbergia granadillo*) is designated as in 'danger of extinction' by SEMARNAT (2010). It is not known how many plant species are considered endemic, but the three with special conservation status are identified as non-endemic species.

The vegetation and wildlife environment may be altered and impacted during the construction, operations and closure/post-closure phases of the Project. Activities during construction (e.g., site clearing, surface stripping, and construction of mine facilities, roads and tailings storage areas), operations (e.g., mining, waste rock disposal, tailings production and leaks and spills) and closure/post-closure (e.g., site preparation, soil replacement, reclamation and re-vegetation) can have direct and indirect effects to vegetation, wildlife and wildlife habitat.

The predicted alterations, impacts and mitigation measures specific to the vegetation and wildlife environment from each of these phases will be further defined in the ESIA. Mitigation measures or management plans will be required to avoid or minimize impacts to plant species or plant communities of conservation concern, including those that provide habitat for wildlife species.

Biological Environment

The biological environment may be altered and impacted during the construction, operations and closure/post-closure phases of the Project. A summary of the predicted alterations and impacts to the biological environment from each of these phases includes:

- Loss of intermittent stream habitat through clearing of ground underneath the Project footprint.
- Loss of natural changes in habitat due to altered hydrology.
- Direct mortality during construction.
- Increased sedimentation associated with intense, erosive rainfalls experienced at the Project site during the wet season.
- Increased fish harvest due to increased population and improved access.
- Changes in fish health.

Since most disturbances of aquatic systems are expected to occur in the intermittent tributaries, the potential impacts are considered to be of low magnitude. Mitigation measures or management plans will be required to avoid or minimize impacts to aquatic systems.

20.6.3 Social Environment

MML has a high functioning Community Relations Team (CRT) that is actively engaged with local stakeholders. The CRT has good working relationships with Project-affected populations in the local study area, has kept records of stakeholder engagement and has developed working procedures for recording and responding to grievances, petitions and general communications. The process for negotiating land agreements with the *ejidatarios* — both for the common land and individual plots — have been transparent and participatory. Surveys of elderly residents and other vulnerable groups are providing information for understanding complex impacts and ensuring participation from disadvantaged and vulnerable stakeholders in consultation activities.

MML, with the support of sub-consultants, has gathered social baseline data on regional and local populations, economy, education, health, infrastructure and service, land and resource use.

Further data collection will be implemented in Q3-Q4 2012; the baseline will be finalized and used to assess potential socioeconomic effects, as well as develop, implement and monitor a social management plan in support of the ESIA. Potential Project effects of local employment and business generation; maintenance of agriculture, fishing and livestock activity and production; water resource management; and in-migration and maintenance of community services, health and security will be addressed through Project design and mitigation/benefit enhancement measures in accordance with national and international standards and best practices.

The land requirements of the Project will result in the loss of agricultural plots, communal areas used for natural resource collection and livestock grazing and the relocation of the villages of La Fundición and Real del Limón. MML has been actively engaging with the *ejido*, *ejidatarios* and these communities to identify the potential economic and social impacts of the Project and the village relocation; in consultation with these stakeholders, MML is developing measures to address those effects. In addition to the negotiations conducted for the land leasing agreements, MML is involved in or planning on-going consultations to discuss the selection of a preferred destination site, conceptual designs for the new villages and compensation for lost assets. MML, with the support of specialist sub-consultants, have conducted asset surveys for every affected household in the two communities to be resettled and has commenced assessments of several destination sites proposed by the *ejido* Real del Limón. Supplementary baseline data will be collected to provide additional information to enable MML to make a further assessment of the specific socioeconomic impacts of resettlement on these communities. A RAP will be developed that describes the processes and actions that MML will take to avoid hardship to the households that will be economically and physically displaced and to enhance the benefits of households' relocation.

The Mexican government agency responsible for cultural heritage resources is the Instituto Nacional de Antropolgía e Historia (INAH). From October to December 2007, INAH archaeologists conducted a heritage resource inventory of the Project area and identified 77 sites of interest. Of the 77 sites, 31 are situated in the Project area footprint; INAH completed salvage excavations at these locations in 2012. Apart from construction monitoring by INAH archaeologists, no further archaeological work is required for these 31 locations. INAH's work was undertaken by competent professionals using internationally-recognized good practice for the field-based study and documentation of archaeological sites.

A number of Project area locations, including the communities of Real del Limón and La Fundición, still require assessment by INAH, the results of which will be reported in the forthcoming ESIA. Similarly, the assessment of the Project area for palaeontological resources by qualified professionals, and addressing the need for consultation with Affected Communities with respect to cultural heritage resources in the Project area will both be undertaken as part of the ESIA.

MML does not propose to use cultural heritage resources for commercial purposes.

20.6.4 Risk Assessment

20.6.4.1 Aquatic Health

The aquatic health assessment will evaluate the potential for the Project to result in adverse effects to aquatic life via predicted changes to surface water quality. The aquatic health assessment will evaluate substances of potential concern (SOPC) such as arsenic and other metals in waste rocks, TSS and Nitrates by comparing predicted concentrations of water quality constituents and their potential pathways to evaluate potential impacts on receptors such as periphyton, benthic invertebrates, fish, and amphibians.

20.6.4.2 Human and Terrestrial Wildlife Health and Risk Assessment

The human and terrestrial wildlife health and risk assessment will evaluate the potential for the proposed Project to result in adverse effects to human and terrestrial wildlife health via predicted changes to soil, surface water and air (human only) quality. SOPC will be identified by comparing predicted concentrations of surface water, groundwater, soil and air quality to relevant and available numerical guideline values.

20.7 ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

MML will establish an Environmental and Social Management System (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 Project-specific policy that defines the environmental and social objectives and principles will be established to guide the Project to achieve environmental and social compliance through a process of continuous evaluation.

20.7.1 Environmental Management Plan

The ESMS includes the development of an over-arching 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 Project. This team will be responsible for updating and implementing the specific environmental plans and providing training to MML personnel as well as contractors.

The EMP outlines and recommends policies, standards, guidelines, procedures and processes to be used by the Project management team and contractors, and defines roles and responsibilities during the various phases of the Project.

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 Project 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 PS 8 (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 Project phases, as required. The objective of the EMS 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, Project teams and contractors that includes verification and corrective management consistent with the objectives of the Project.
- Foster employee involvement in order to promote ownership and commitment to the Project 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 practice.
- Minimize and/or manage negative impacts on the environment.
- Communicate benefits arising from the Project 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.

20.7.2 Social and Community Relations Management

20.7.2.1 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 Project as described below:

- Management of in-migration and pollution effects.
- Management measures to support economic benefits.
- Effects on services and infrastructure.
- Effects on community health and safety.
- Mine closure effects.

20.7.2.2 Community Relations Management

MML's eight-person CRT for the Project 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 labour disagreements and similar community matters.

20.8 RECLAMATION AND CLOSURE

20.8.1 Objectives

The purpose of the mine closure plan is to describe mitigating actions for potential impacts to environmental resources in the Project area caused by Project development and operations. The main objectives of the closure plan are:

- To minimize and mitigate long-term Project impacts;
- To remove, to the extent practical, mine- and mill-related structures;
- To make landforms stable;
- To restore, to the extent practical, the original land use;
- To progressively rehabilitate;
- To monitor the water quality until suitable for discharge to the environment;

- To monitor the impact of mining and the effectiveness of reclamation after mine closure until suitable for the proposed end land use; and
- To return the land for use by the local community as practical.

These objectives consider the following areas for closure and rehabilitation:

- Land use;
- Mill 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 Project. This Section 20.8 presents a summary of the closure activities.

20.8.2 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.

20.8.3 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.

20.8.4 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 project 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.

20.8.5 Decommissioning of the Mill 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. Building foundations will be demolished, covered or removed from the site as per Mexican and IFC regulatory requirements applicable at the time of closure. Power lines feeding electricity to the mill will be decommissioned and removed. The mill site will be graded to promote surface water drainage and will be revegetated. The central water pond will be removed and the sediments placed in the tailings dry stack.

20.8.6 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 a final 2H:1V. Placement of vegetative cover on the crest will depend on the availability of organic materials.

Ponds associated with the waste rock dumps (Ponds 4, 5, 6, 7 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 will be used during the revegetation effort or placed on top waste rock dumps, tailings dry stack or in open pits at time of closure.

20.8.7 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 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 spill way ditch to direct runoff towards the north.

20.8.8 Landfill

The landfill will contain onlynon-hazardous waste and will be closed in accordance with applicable regulations at the time of closure. In general, this is expected to include a low permeability HDPE geomembrane cover including topsoil to allow for revegetation.

20.8.9 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 modeling.

A 2 m high boulder fence will be constructed around the open pits, where practical, to reduce the potential physical hazards.

20.8.10 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.

20.9 STAKEHOLDER CONSULTATION AND INFORMATION DISSEMINATION

MML is required to provide stakeholders with relevant information on: 1) the purpose, nature, and scale of the Project; 2) the duration of proposed Project activities; 3) any risks to and potential impacts on such communities and relevant mitigation measures; 4) the envisaged stakeholder engagement process; and 5) the grievance mechanism. This is accomplished through the release of summary information to Project stakeholders on relevant aspects of the Project. Under the IFC process, the following documents should be publically disclosed:

- A Project description and non-technical summary, in Spanish;
- The ESIA Terms of Reference/Scope of Work, in original language with Spanish translation as required;
- A non-technical summary of the ESIA findings, in Spanish; and

- The draft ESIA, in original language with Spanish translation as required.

- Information on the Project grievance mechanism must also be provided to stakeholders. Such information can be in a written form or presented orally.

Stakeholder consultation is understood as a two-way exchange of information, where the questions, concerns and considerations advanced by stakeholders are as important as the Project-related information provided by MML. For this reason, public consultation activities are always documented and best efforts are made to respond to reasonable enquiries for additional information, balancing the need for transparency with the need to protect confidential information. This approach to consultation is more comprehensive than current requirements under Mexican legislation.

Formal public consultation during the process of identifying and evaluating the impacts and risks of the Project (the ESIA phase), takes place at two points:

- During scoping and prior to finalization of the Terms of Reference for environmental and social assessment of the Project; and

- When the results of the draft ESIA of the Project are available.

Plans for, and outcomes to, public consultation at each of these points are enclosed in the Appendix to the SEP (Golder 2012b).

21 CAPITAL AND OPERATING COSTS

21.1 BASIS OF CAPITAL COST ESTIMATE

21.1.1 General Condition Parameters

The general condition parameters are as follows:

1. At the time of this estimate, engineering was less than 20% complete. Documents available to the estimators included the following:

a) Design Criteria	(Yes)
b) Equipment List	(Yes)
c) Equipment Specifications	(No)
d) Construction Specifications	(Partial)
e) Flowsheets	(Yes)
f) P&IDs	(Yes)
g) General Arrangements	(Yes)
h) Architectural Drawings	(Yes)
i) Civil Drawings	(Yes)
j) Concrete Drawings	(No)
k) Structural Steel Drawings	(No)
l) Mechanical Drawings	(No)
m) Electrical Schematics	(Yes)
n) Electrical Physicals	(No)
o) Instrumentation Schematics	(No)
p) Instrument Log	(No)
q) Pipeline Schedule	(No)
r) Valve List	(No)
s) Cable and Conduit Schedule	(No)

2. All costs are in 3rd quarter 2012 dollars.

3. Labor rates are based on prevailing (merit or union) shop wages. Craft labor has been estimated at the following overall average rates:

Table 21-1: Labor Crew Rates

Labor Crew Type	Base Rate (US $/hr)*	Overtime	Indirect Cost Incl. Supervision	Other Indirect Costs	Total Rate (US $/Hr)
Structural Excavation	12.20	Included	Included	Included	12.20
Concrete Forming	7.62	Included	Included	Included	7.62
Concrete Placing	7.62	Included	Included	Included	7.62
Reinforcing Steel	7.62	Included	Included	Included	7.62
Structural Steel	12.20	Included	Included	Included	12.20
Equipment Installation	22.86	Included	Included	Included	22.86
Piping	22.86	Included	Included	Included	22.86
Electrical / Instrumentation	12.20	Included	Included	Included	12.20
Instrumentation	12.20	Included	Included	Included	12.20

*Base rate includes all other costs.

4. Summary Page Other Costs are allocated as follows:

   - Mobilization listed below the Area Direct Costs at $1,644,255.
   - Camp and busing listed below the Area Direct Costs at $10,088,415.
   - The following items are included in the unit and hourly rates:
     - Field payroll burden, Overtime, Overhead.
     - Small tools and expendables.
     - Field supervision, field supervisory burden, and support.
     - Contractor field overhead costs.
   - Owner Costs are listed based on data provided by Torex.

5. The estimate assumes that the project will be awarded to a mid-sized construction company or M3 Engineering as a construction manager with appropriate subcontractors and that only one mobilization will be required; i.e., there will be a continuity of construction activity once the project has begun.

6. Several fixed lump-sum subcontracts are anticipated (e.g., civil/concrete, structural steel, mechanical and electrical).

7. Sanitary facilities will be provided by Contractor. Any existing facilities are for Owner's or other general use will not be available to construction personnel.

8. No allowance has been made for fire protection during construction. Owner will provide security services, access to construction water and telephone lines for the Contractors. The Contractors will provide their own communication system, equipment and radio frequencies. 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.

9. Owner will **not** supply any construction equipment (such as forklifts and crane for unloading or water trucks for dust suppression) to the project.

10. Construction site will be available to the Contractors 24 hours per day Monday through Sunday.

11. 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 other reasons.

12. Contractors can have trailers and laydown yards near the construction site. Construction personnel can park their construction vehicles in designated areas near the construction site. Personal vehicles will be parked near the contractor designated gate and personnel bused to the site by the Contractors.

13. The CM-selected Contractor is responsible for all receiving of materials and equipment. Any such items that have been received prior to construction or inadvertently by Owner, must be loaded and transported to the construction site by the Contractors responsible for installation of the equipment. In general, Owner personnel will not receive shipments.

16. Contractors shall be responsible for security of received material including supply and preparation of fenced areas.

21.1.2 Material Takeoff and Field Labor

17. Material unit prices for the project were developed using cost information gained through contacts with local regional suppliers, information from recently constructed projects and M3 in-house data.

18. Civil work quantities of general excavation, grading and backfill were taken off the site plot plan, general arrangement drawings and existing grading plans. Additional allowance has been made for structural excavation; i.e., 200% of neat. For rough grading, 125% of neat quantities has been used.

19. Allowance has been made for structural over-excavations for foundations.

20. Demolition costs have been estimated based on specific tasks; e.g., known items requiring removal.

21. Concrete quantities were developed from general arrangement and/or concrete drawings and experience with similar projects. An allowance has been made for lean concrete.

22. Building architectural costs are based on material takeoffs for new construction and allowances for refurbishing and modification of existing buildings.

23. Structural steel quantities were developed from the general arrangement drawings and experience with similar installations. Quantities include allowances for miscellaneous steel including base plates, bracing, bolts and gussets.

24. 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 experience with similar installations.

25. General piping quantities were factored based on experience with similar installations. In addition, allowances have been made for the following specific systems:

    a) Well field and water supply pipeline.
    b) Plant area fire protection system.

26. Electrical takeoffs were performed using experience with similar installations. An allowance has been made for duct bank concrete.

27. Instrumentation allowance was based on experience with similar installations.

28. Construction equipment costs were estimated according to the tasks performed and the crew hours involved. Construction equipment is included as a direct cost.

21.1.3 Indirect Costs

29. Freight has been included as 10% of equipment and material cost in the estimate.

30. Spares:

Capital Spares Allowance at 2% of Plant Equipment includes:

- Capital spare parts are assigned Equipment Tag numbers and are itemized in the Project Equipment List. In the Financial Model they are treated as part of the EPCM/C part of the project. Capital spares are long delivery items that are typically manufactured at the same time as the original equipment to reduce cost and are typically subject to rotational use in the project. Capital Spares are purchased or quoted at the time the PO is prepared for the original equipment. Examples of capital spares include: a second gyratory crusher main shaft assembly, installed standby pumps/screens, etc.

- Spares which are procured to satisfy the requirements of the insurance underwriters and to mitigate risk to the project for critical long lead time components in the event of catastrophic failure. The items typically are warehoused for emergency replacement and in some/most instances will not be used during the LOM operation. Examples of insurance spares include: sections of stator/rotor components for the gearless drive motors, specialized gearbox assemblies for conveyors, redundant transformers, etc.

Start up and Commissioning Spares Allowance at 0.5% of Plant Equipment includes:

- Start-up or Commissioning Spares are those that are on hand during start-up and commissioning of the equipment and have a high probability of being used during this phase. In the Financial Model they are assumed to be completely voided and are not credited to inventory. They are treated as part of the EPCM/C part of the project and are purchased on the same PO as the equipment itself. Examples of start-up spares include: flushing components, filters, fusible links, etc.

- Operating or Consignment Spares are not included as part of the cap-ex estimate unless specifically noted.

31. Vendor representatives' costs during fabrication and construction are included in the general allowance listed on the summary page unless the PM separately requests that an additional amount be added to the line item for specific process equipment item in the estimate details.

32. EPCM indirect costs have been assumed as follows:

– Management & accounting	0.75% Total Constructed Cost
– Engineering	6.5% Total Constructed Cost
– Project services	1.0% Total Constructed Cost
– Project control	0.75% Total Constructed Cost
– Construction management	6.0% Total Constructed Cost
– EPCM fixed fee	5.0% Other EPCM costs
– EPCM Fee at Risk	5.0% Other EPCM costs

33. The engineering and procurement included is based on the proposed activities for the current scope of work. An allowance has been made for field engineering.

34. For the tabulation of this estimate, supervisory field labor costs (above foreman level) are included in the direct field cost labor rates. These hours are approximately 15% of direct field hours beyond the hours listed in direct labor.

35. The contingency included in this estimate is for the Scope of Work items as defined. It is not for items outside the present Scope of Work.

36. The contingency is calculated at a percentage of the total contracted cost including commissioning and spare parts.

37. Costs are included for plant acceptance and initiation of operations as per the following:

    a) Mechanical completion – by Contractor
    b) Commissioning – by Contractor
    c) Initial fills – by Owner
    d) Startup – Contractor and Owner
    e) Demonstration test – by Owner

38. Taxes include the following:

    a) Payroll Taxes
    b) Gross Receipts Taxes (Sales and Use Taxes)

39. No escalation is included.

40. The accuracy of this estimate is assumed to be in the range of 15% plus 10% minus; i.e., the cost could be 10% lower to 15% higher than the estimate to the estimate total. Accuracy is an issue separate from contingency.

21.1.4 Exclusions

41. Excluded from the estimate are the following legal, financial and permitting items:

    a) Legal fees
    b) Finance and interest charges
    c) Depreciation and depletion allowances
    d) Environmental permits
    e) Performance bond
    f) Builders risk insurance

42. Excluded from the estimate are the following Owner Costs:

    a) Pre-operations expense
    b) Land acquisition
    c) Water rights acquisition
    d) Owners project management
    e) Hiring and relocation
    f) Legal
    g) Public relations
    h) Sunk costs prior to this estimate
    i) Mine development
    j) Mine equipment
    k) Mobile and shop equipment
    l) Office equipment
    m) Communication systems
    n) Allowance for further expansion

o) Any propane tanks

43. Excluded from the estimate are the following specialty items:

a) Credits for further expansion accommodations
b) Salvage values of existing equipment not reused

21.1.5 Project Specific Interfaces and Conditions

44. The estimate will be subtotaled for each areas:

45. Safety signage and road markings will be authorized by Owner Safety Department under contracts and purchase orders.

46. Reuse of existing equipment available to the project from other Owner properties has been assumed as follows:

Equipment salvage operation.........................Project Cost
Equipment capital cost..................................No Cost to Project
Equipment installation cost...........................Project Cost

47. Package sewage treatment system has been estimated for sanitary facilities.

48. Truck scale is included.

49. An unmanned guard house will have automated gates.

50. Fencing includes the following:

a) Chain link fences 100 feet to each side of automated gates.
b) Chain link fence around substations and secure areas.
c) Barb wire fence, at property line, by owner.

51. Fire protection system shall include the following:

a) Fire water tank and diesel fire water pump.
b) Fire protection pipe loop around plant with fire hydrants.
c) Fire sprinklers where required in occupied buildings.

52. Fuel supply, storage, and containment systems are included.

53. No allowance has been made for lost operations time.

54. Water system interfaces are as follows:

a) Three wells have been developed at Atzcala.
b) Well pumps and piping to a booster tank and pump.

c) Booster tank and pump with overland pipeline to process plant water storage tank and Central Water Pond.
d) Recycle of process water.

21.2 CAPITAL COST TABULATION

The capital costs examine two cases. The only difference in the two cases is in the infrastructure utilized to treat runoff water due to the presence of cyanide in tailings and arsenic in waste rock:

1) **Base Case** – the base case assumes that cyanide from the tailing dry stack and arsenic from the waste rock dumps will not exceed environmental regulations. These contaminants will settle into the sedimentation ponds and will not pose a risk to the environment.
2) **Alternate Case** – this case assumes that testing will show an excess of contaminants that will require additional piping from the sedimentation ponds, pumping, and treatment before the water can safely exit the system.
3) **Sustaining Capital** – In addition, sustaining capital was estimated.

The key results of the capital cost estimates are as follows:

Table 21-2: Capital Direct, Indirect and Total Costs

Case	Direct Costs	Indirect Costs	Total Costs
Base Case	$455,904,015	$177,286,375	$633,190,390
Alternate Case	$477,973,706	$185,207,033	$663,180,739
Sustaining Capital	$10,541,856	$4,446,248	$14,988,104

Table 21-3 shows the capital cost summary table for the base case. The alternate case is shown in Table 21-4. Table 21-5 summarizes sustaining capital costs.

Table 21-3: Project Base Case Capital Cost Estimate

Torex Gold Resources. Inc. — SUMMARY
PRELIMINARY ESTIMATE - BASE CASE
TOTAL PROJECT COST SUMMARY SHEET
Morelos Project - M3 PN 110063

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	DIRECT COST							
000	General Site	330,999	$1,762,242	$3,672,958	$4,901,569	$0	$8,074,786	$18,411,556
050	Full Open Pit Mining (SRK)	33,979	$45,587,000	$37,682	$414,404	$81,465,978	$0	$127,505,063
060	Mine Waste Management (AMEC)	406,600	$180,000	$11,616,606	$5,204,820	$0	$4,063,975	$21,065,401
100	Primary Crushing	199,733	$5,336,631	$5,535,093	$2,500,692	$0	$975,525	$14,347,940
110	Primary Crushing at Rope Conveyor	146,111	$18,990,533	$2,304,656	$1,796,272	$0	$1,217,163	$24,308,623
200	Grinding & Classification	324,270	$28,070,877	$8,110,243	$5,416,652	$0	$1,942,871	$43,540,642
300	Leaching & CIP	296,793	$25,685,774	$8,493,418	$4,908,300	$0	$1,895,288	$40,982,779
400	Carbon Handling, Generation, Electrowinning & Refiner	80,949	$6,430,149	$1,584,778	$1,292,576	$0	$439,195	$9,746,698
500	Reagents	41,920	$1,170,668	$729,900	$620,372	$0	$200,258	$2,721,198
600	Filtered Tailings	480,090	$30,357,188	$10,315,512	$6,790,784	$0	$3,626,020	$51,089,505
650	Process Water Systems (including well field)	117,493	$2,528,735	$5,914,383	$2,079,564	$0	$690,426	$11,213,108
700	Main Substation	306,260	$5,768,865	$2,648,148	$3,741,169	$0	$1,873,194	$14,031,376
750	Power Transmission Lines	5,454	$0	$5,056,897	$66,515	$0	$30,254	$5,153,666
900	Ancillaries	404,600	$1,452,186	$14,797,436	$5,280,022	$0	$1,031,172	$22,560,816
910	Assay Laboratory	6,805	$367,600	$115,121	$101,754	$0	$31,817	$616,292
920	Permanent Camp	180,750	$320,957	$8,884,190	$2,422,379	$0	$506,513	$12,134,040
	Freight		$17,400,940	$9,031,702		$0	$1,329,923	$27,762,565
	IMMEX		$5,220,282	$2,694,511		$0	$797,954	$8,712,746
	Subtotal DIRECT COST	3,362,805	$196,630,627	$101,543,234	$47,537,843	$81,465,978	$28,726,334	$455,904,015

TOTAL DIRECT FIELD COST	$455,904,000
Total Without Mining	$328,851,022
Mobilization	$1,644,255
Camp & Busing Costs	$10,088,415
Construction Power	$328,851
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST	$340,912,543
MANAGEMENT & ACCOUNTING (3)	$2,556,844
ENGINEERING (4)	$22,159,315
PROJECT SERVICES (5)	$3,409,125
PROJECT CONTROL (6)	$2,556,844
CONSTRUCTION MANAGEMENT (7)	$20,454,753
EPCM FEE Fixed	$2,556,844
EPCM FEE At Risk	$2,556,844
EPCM Construction Trailers	$681,825
Supervision of Specialty Construction	$1,966,306
Temporary Construction Facilities	$1,704,563
Precommissioning	$589,892
VENDOR'S COMMISSIONING (8)	$589,892
CONSTRUCTION COMMISSIONING SPARES (9)	$983,153
Capital Spares (9)(14)	$4,432,613
TOTAL CONTRACTED COST	$408,111,357
CONTINGENCY (10)	56,567,100
TOTAL CONTRACTED COST With Contingency	$464,678,456
Mining Cost	$127,052,978
OWNER'S COST Excluding Working Capital (11)	41,458,956
ESCALATION (Excluded)(12)	0
TOTAL CAPITAL COST (13)	$633,190,390

NOTES:
1 Indirect Field Costs are allocated as follows: Mobilization at 0.5% 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.
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 Vendor representatives are included at 0.3% of Plant Equipment Costs.
9 Construction Commissioning Spare parts are included at 0.5% of equipment purchase costs. Capital Spare Parts included at 2% of Plant Equipment.
10 Contingency included as calculated.
11 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.
12 All costs are in second quarter 2012 dollars with no escalation added.
13 Total Project Cost is projected to be accurate within the range of -15% to +25%.
14 Initial reagents and consumables are included in working capital spare parts at $500,000.
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 were used

Mexican Pesos per US Dollar	13.00
US Dollar per Euro	1.32

IVA is not included in this estimate.

Table 21-4: Project Alternate Case Capital Cost Estimate

Torex Gold Resources. Inc. SUMMARY
PRELIMINARY ESTIMATE - ALTERNATE CASE
TOTAL PROJECT COST SUMMARY SHEET
Morelos Project - M3 PN 110063

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	DIRECT COST							
000	General Site	330,999	$1,762,242	$3,672,958	$4,901,569	$0	$8,074,786	$18,411,556
050	Full Open Pit Mining (SRK)	33,979	$45,587,000	$37,682	$414,404	$81,465,978	$0	$127,505,063
060	Mine Waste Management (AMEC) - Alternate	436,515	$270,000	$12,842,420	$5,781,040	$0	$4,262,824	$23,156,284
100	Primary Crushing	199,733	$5,336,631	$5,535,093	$2,500,692	$0	$975,525	$14,347,940
110	Primary Crushing at Rope Conveyor	146,111	$18,990,533	$2,304,656	$1,796,272	$0	$1,217,163	$24,308,623
200	Grinding & Classification	324,270	$28,070,877	$8,110,243	$5,416,652	$0	$1,942,871	$43,540,642
300	Leaching & CIP	296,793	$25,685,774	$8,493,418	$4,908,300	$0	$1,895,288	$40,982,779
400	Carbon Handling, Generation, Electrowinning & Refiner	80,949	$6,430,149	$1,584,778	$1,292,576	$0	$439,195	$9,746,698
500	Reagents	41,920	$1,170,668	$729,900	$620,372	$0	$200,258	$2,721,198
600	Filtered Tailings	480,090	$30,357,188	$10,315,512	$6,790,784	$0	$3,626,020	$51,089,505
650	Process Water Systems - Alternate (including well field)	161,415	$18,642,105	$6,129,126	$2,983,429	$0	$1,095,251	$28,849,911
700	Main Substation	306,260	$5,768,865	$2,648,148	$3,741,169	$0	$1,873,194	$14,031,376
750	Power Transmission Lines	5,454	$0	$5,056,897	$66,515	$0	$30,254	$5,153,666
900	Ancillaries	404,600	$1,452,186	$14,797,436	$5,280,022	$0	$1,031,172	$22,560,816
910	Assay Laboratory	6,805	$367,600	$115,121	$101,754	$0	$31,817	$616,292
920	Permanent Camp	180,750	$320,957	$8,884,190	$2,422,379	$0	$506,513	$12,134,040
	Freight		$19,021,277	$9,175,758		$0	$1,360,107	$29,557,142
	IMMEX		$5,706,383	$2,737,727		$0	$816,064	$9,260,175
	Subtotal DIRECT COST	3,436,642	$214,940,435	$103,171,064	$49,017,928	$81,465,978	$29,378,301	$477,973,706

NOTES:

1 Indirect Field Costs are allocated as follows: Mobilization at 0.5% 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.
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 Vendor representatives are included at 0.3% of Plant Equipment Costs.
9 Construction Commissioning Spare parts are included at 0.5% of equipment purchase costs. Capital Spare Parts included at 2% of Plant Equipment.
10 Contingency included as calculated.
11 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.
12 All costs are in second quarter 2012 dollars with no escalation added.
13 Total Project Cost is projected to be accurate within the range of -15% to +25%.
14 Initial reagents and consumables are included in working capital spare parts at $500,000.

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 were used

Mexican Pesos per US Dollar	13.00
US Dollar per Euro	1.32

IVA is not included in this estimate.

TOTAL DIRECT FIELD COST	$477,973,700
Total Without Mining	$350,920,722
Mobilization	$1,754,604
Camp & Busing Costs	$10,309,926
Construction Power	$350,921
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST	$363,336,173
MANAGEMENT & ACCOUNTING (3)	$2,725,021
ENGINEERING (4)	$23,616,851
PROJECT SERVICES (5)	$3,633,362
PROJECT CONTROL (6)	$2,725,021
CONSTRUCTION MANAGEMENT (7)	$21,800,170
EPCM FEE Fixed	$2,725,021
EPCM FEE At Risk	$2,725,021
EPCM Construction Trailers	$726,672
Supervision of Specialty Construction	$2,149,404
Temporary Construction Facilities	$1,816,681
Precommissioning	$644,821
VENDOR'S COMMISSIONING (8)	$644,821
CONSTRUCTION COMMISSIONING SPARES (9)	$1,074,702
Capital Spares (9)(14)	$4,798,809
TOTAL CONTRACTED COST	$435,142,552
CONTINGENCY (10)	59,526,253
TOTAL CONTRACTED COST With Contingency	$494,668,805
Mining Cost	$127,052,978
OWNER'S COST Excluding Working Capital (11)	41,458,956
ESCALATION (Excluded)(12)	0
TOTAL CAPITAL COST (13)	$663,180,739

Table 21-5: Project Sustaining Capital Cost Estimate

Torex Gold Resources. Inc.
PRELIMINARY ESTIMATE - SUSTAINING CAPITAL
TOTAL PROJECT COST SUMMARY SHEET
Morelos Project - M3 PN 110063

SUMMARY

Plant Area	Description	Man-hours	Plant Equipment	Material	Labor	Subcontract	Construction Equipment	Total
	DIRECT COST							
000	General Site	40,997	$0	$1,000,000	$500,000	$0	$500,000	$2,000,000
050	Full Open Pit Mining (SRK)							
060	Mine Waste Management (AMEC) - Alternate	54,918	$60,000	$2,145,423	$675,817	$0	$262,802	$3,144,042
100	Primary Crushing							
110	Primary Crushing at Rope Conveyor							
200	Grinding & Classification							
300	Leaching & CIP							
400	Carbon Handling, Generation, Electrowinning & Refinery							
500	Reagents							
600	Filtered Tailings							
650	Process Water Systems - Alternate (including well field)							
700	Main Substation							
750	Power Transmission Lines							
900	Ancillaries	41,237	$0	$1,777,848	$540,343	$0	$72,094	$2,390,284
910	Assay Laboratory							
920	Permanent Camp	33,813	$0	$1,560,767	$461,308	$0	$62,906	$2,084,981
	Freight		$6,000	$648,404		$0	$44,890	$699,294
	IMMEX		$1,800	$194,521		$0	$26,934	$223,255
	Subtotal DIRECT COST	170,966	$67,800	$7,326,963	$2,177,468	$0	$969,626	$10,541,856

NOTES:

1 Indirect Field Costs are allocated as follows: Mobilization at 0.5% 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.
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 Vendor representatives are included at 0.3% of Plant Equipment Costs.
9 Construction Commissioning Spare parts are included at 0.5% of equipment purchase costs. Capital Spare Parts included at 2% of Plant Equipment.
10 Contingency included at 15% of Total Contracted Cost.
11 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.
12 All costs are in second quarter 2012 dollars with no escalation added.
13 Total Project Cost is projected to be accurate within the range of -15% to +25%.
14 Initial reagents and consumables are not included.

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 were used

Mexican Pesos per US Dollar	13.00
US Dollar per Euro	1.32

IVA is not included in this estimate.

TOTAL DIRECT FIELD COST	$10,541,900
Total Without Mining	$10,541,900
Mobilization	$52,710
Camp & Busing Costs	$512,898
Construction Power	$10,542
FEE - CONTRACTOR (2)	In Direct Cost
TOTAL CONSTRUCTED COST	$11,118,050
MANAGEMENT & ACCOUNTING (3)	$83,385
ENGINEERING (4)	$722,673
PROJECT SERVICES (5)	$111,180
PROJECT CONTROL (6)	$83,385
CONSTRUCTION MANAGEMENT (7)	$667,083
EPCM FEE Fixed	$83,385
EPCM FEE At Risk	$83,385
EPCM Construction Trailers	$22,236
Supervision of Specialty Construction	$678
Temporary Construction Facilities	$55,590
Precommissioning	$203
VENDOR'S COMMISSIONING (8)	$203
CONSTRUCTION COMMISSIONING SPARES (9)	$339
Capital Spares (9)(14)	$1,356
TOTAL CONTRACTED COST	$13,033,134
CONTINGENCY (10)	1,954,970
TOTAL CONTRACTED COST With Contingency	$14,988,104
Mining Cost	$0
OWNER'S COST Excluding Working Capital (11)	
ESCALATION (Excluded)(12)	0
TOTAL CAPITAL COST (13)	$14,988,104

21.3 MINE CAPITAL COSTS

Basis of mine capital cost estimate:

- Mine equipment fleet requirements are presented in Section 16. Torex retained a mining equipment procurement specialist to provide input on equipment unit prices. The specialist's database unit prices for major production equipment were utilized in mine capital cost estimates. Budget quotations were solicited from two equipment suppliers. The database prices utilized fall between these quotations.

- Smaller equipment unit prices are sourced from SRK data on other projects and from industry cost reference guides.
- It is planned that for the first 5 years (i.e. 2013-2017) major production equipment maintenance will be provided by equipment suppliers under a maintenance and repair contract ("MARC"). Beyond 2017 owner maintenance is planned. Parts inventories and maintenance service vehicles are assumed provided by the MARC contractor. These items are included as in sustaining capital requirements when owner maintenance begins in late 2017.
- It is proposed that mine access and haul roads be constructed by contractor. Road construction costs have been estimated in-house by SRK. Access and haul road layouts based on a superseded mine plan were provide to Mexican construction companies for the purposes of obtaining budget quotations and estimates of construction time duration. Although these quotations are now superseded they are useful for benchmarking purposes.
- Mine capital costs exclude the dozer and drill trails that must be constructed prior to April 1, 2013 in order to access the mining area and roads construction sites and begin preproduction development. SRK understands that the cost of these dozer trails will be charged to Torex's exploration budget.
- Mine equipment costs exclude crane, ambulance and fire truck. These units are included in process plant costs.
- Mine capital costs exclude explosive storage facilities, and bulk explosives trucks. These items will 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 project infrastructure capital.
- Mine capital costs exclude import duties and VAT.

Mine Capital Costs are summarized in Table 21-7.

Table 21-6: Mine Capital Cost Summary

	Mine Preproduction Capital ($M)				Mine Sustaining Capital ($M)										Grand
	2013	2014	2015 Q1-3	**Total**	2015 Q4	2016	2017	2018	2019	2020	2021	2022	2026	**Total**	Total
Major Production Equipment															
Drills	4.0	-	0.6	**4.7**	1.6	2.3	1.0	1.0	-	-	-	-	-	**5.9**	10.6
Loading Units	5.7	3.0	3.0	**11.6**	6.9	4.7	3.0	3.0	-	-	-	-	-	**17.5**	29.2
Haul Trucks	6.1	3.1	4.6	**13.8**	6.1	10.7	4.6	-	-	-	-	-	-	**21.4**	35.2
Bulldozers	7.8	1.0	-	**8.8**	-	-	-	-	2.3	1.0	-	-	-	**3.2**	12.0
Graders & Water trucks	1.4	1.4	-	**2.7**	0.4	0.9	-	-	-	-	-	-	-	**1.4**	4.1
Subtotal	25.0	8.4	8.2	**41.6**	15.1	18.6	8.6	4.0	2.3	1.0	-	-	-	**49.5**	91.1
Other Mine Equipment	2.4	0.5	1.1	**4.0**	1.1	0.1	0.8	2.2	0.0	-	0.8	0.1	-	**5.1**	9.1
Access and Haul Road Construction	5.9	6.6	10.2	**22.7**	1.7	-	-	-	-	-	-	-	9.7	**11.4**	34.1
Preproduction stripping	10.5	25.4	22.9	**58.8**	-	-	-	-	-	-	-	-	-	-	58.8
Subtotal, before contingency	43.8	40.9	42.4	**127.1**	17.8	18.8	9.4	6.2	2.3	1.0	0.8	0.1	9.7	**66.0**	193.1
Contingency	3.6	4.3	4.8	**12.8**	1.1	0.9	0.5	0.4	0.1	0.0	0.0	0.0	1.9	**5.1**	17.9
Mine Total Capital	47.4	45.2	47.3	**139.8**	19.0	19.7	9.9	6.6	2.4	1.0	0.8	0.1	11.6	**71.1**	211.0

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 Morelos operations are summarized by areas of the plant, and shown in Table 21-7. 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. The life of mine unit cost per total ore tonne is $29.97. The table below shows a typical year of operations.

Table 21-7: Typical Year (Year 4 – 2018) Operating Costs by Area

	Ore Tonnes	5,040,000
	Mined Tonnes	37,334,500
	Annual Cost - $	$/tonne ore Processsed
Mining Operations		
Drill	$11,733,506	$2.33
Blast	$15,554,591	$3.09
Load	$11,392,014	$2.26
Haul	$16,381,861	$3.25
Roads & Dumps	$6,587,189	$1.31
Support	$2,013,012	$0.40
Mine General	$3,453,852	$0.69
Subtotal Mining	**$67,116,024**	**$13.32**
Processing Operations		
Crushing and Ore Storage	$3,152,996	$0.63
Grinding	$27,462,991	$5.45
Leaching	$21,205,323	$4.21
Carbon Handling & Refinery	$1,309,596	$0.26
Filtered Tailings	$14,296,143	$2.84
Ancillaries	$1,940,512	$0.39
Subtotal Processing	**$69,367,561**	**$13.76**
Supporting Facilities		
Laboratory	$579,911	$0.12
Environmental Department	$493,666	$0.10
General and Administrative	$13,075,662	$2.59
Subtotal Supporting Facilities	**$14,149,239**	**$2.81**
Total Mine Site Operating Cost	**$150,632,824**	**$29.89**

Table 21-8 shows the labor rates that were used in the study.

Table 21-8: Labor Rates – Year 4 (2018)

		Pay Level	Annual Salary US$/Yr	Number of Personnel	Annual Direct Salary	Annual Indirect Salary	Overtime 2X Straight Time	Overtime 3X Straight Time	Total Annual Salary Paid	Occupational Risk Ins.	Sickness & Maternity	Disability	Guarderias Child Day Care	INFONAVIT Housing Fund	ISPT	SAR Retirement Fund	Education Fund	Payroll Tax	Total Benefits	Salary & Benefits per Employee	Salary and Benefits per Crew	% stay in Camp	Total Number in Camp	Travel Allowance	Total Salaries, Benefits & Travel
							374 Hrs	711 Hrs		8.75%	5.67%	8.79%	1.00%	5.00%	7.79%	2.00%	1.00%	2.00%						$16,200	
Mine Operations																									
Staff Manpower																									
Mine Manager	Salary	L3 High	$121,059	1	$121,059	$9,784	N/A	N/A	$130,843	$11,449	$7,419	$11,501	$1,308	$6,542	$10,193	$2,617	$1,308	$2,617	$54,954	$185,797	$185,797	100%	1	$16,200	$201,997
Administrative Assistant	Salary	L1 High	$13,160	1	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$20,198	0%	0	$0	$20,198
Opns General Foreman	Salary	L2 Med	$31,513	1	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$48,365	100%	1	$16,200	$64,565
Opns Clerk	Salary	L1 Med	$9,368	1	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$14,378	0%	0	$0	$14,378
Drill/Blast Foreman	SalaryOT	L2 Low	$19,688	1	$19,688	$1,591	$5,929	$16,906	$44,114	$3,860	$2,501	$3,878	$441	$2,206	$3,436	$882	$441	$882	$18,528	$62,642	$62,642	100%	1	$16,200	$78,842
Training Supervisor	Salary	L2 Low	$19,688	1	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$30,216	0%	0	$0	$30,216
Equipment Trainers	Salary	L1 High	$13,160	2	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$40,395	50%	1	$16,200	$56,595
Operations Foreman	SalaryOT	L2 Low	$19,688	6	$19,688	$1,591	$5,929	$16,906	$44,114	$3,860	$2,501	$3,878	$441	$2,206	$3,436	$882	$441	$882	$18,528	$62,642	$375,850	50%	3	$48,600	$424,450
Dispatcher	SalaryOT	L2 Low	$19,688	3	$19,688	$1,591	$5,929	$16,906	$44,114	$3,860	$2,501	$3,878	$441	$2,206	$3,436	$882	$441	$882	$18,528	$62,642	$187,925	33%	1	$16,038	$203,963
Mtnce General Foreman	Salary	L2 Low	$19,688	2	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$60,433	100%	2	$32,400	$92,833
Mtnce Clerk	Salary	L1 Med	$9,368	1	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$14,378	0%	0	$0	$14,378
Mtnce Shovel-Drill Foreman	SalaryOT	L2 Low	$19,688	3	$19,688	$1,591	$5,929	$16,906	$44,114	$3,860	$2,501	$3,878	$441	$2,206	$3,436	$882	$441	$882	$18,528	$62,642	$187,925	0%	0	$0	$187,925
Mtnce Shop Foreman	Salary	L2 Low	$19,688	3	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$90,649	67%	2	$32,400	$123,049
Mtnce Planner	Salary	L1 High	$13,160	2	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$40,395	33%	1	$10,692	$51,087
Chief Engineer	Salary	L3 Med	$86,471	1	$86,471	$6,989	N/A	N/A	$93,460	$8,178	$5,299	$8,215	$935	$4,673	$7,281	$1,869	$935	$1,869	$39,253	$132,713	$132,713	100%	1	$16,200	$148,913
Eng Clerk	Salary	L1 High	$13,160	1	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$20,198	0%	0	$0	$20,198
Mine Engineer	Salary	L2 Med	$31,513	4	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$193,460	50%	2	$32,400	$225,860
Surveyors/Eng Technicians	Salary	L1 High	$13,160	6	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$121,185	50%	3	$48,600	$169,785
Geologist	Salary	L2 Low	$19,688	4	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$120,866	50%	2	$32,400	$153,266
Geol & Grade Control Technicians	Salary	L1 High	$13,160	6	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$121,185	50%	3	$48,600	$169,785
Sub-total				**50**																					**$2,452,282**
Operations Manpower																									
Drilling	Hourly	L1 High	$13,160	39	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$1,632,984	15%	6	$94,770	$1,727,754
Blasting (+contractors)	Hourly	L1 High	$13,160	3	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$125,614	33%	1	$16,038	$141,652
Loading	Hourly	L1 High	$13,160	17	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$711,813	15%	3	$41,310	$753,123
Hauling	Hourly	L1 High	$13,160	60	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$2,512,283	25%	15	$243,000	$2,755,283
Roads & Dumps Equip Operators	Hourly	L1 High	$13,160	28	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$1,172,399	21%	6	$94,349	$1,266,747
Dump Attendants	Hourly	L1 Med	$9,368	6	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$178,838	33%	2	$32,076	$210,914
Laborers/Support Equip	Hourly	L1 Low	$5,735	8	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$145,977	0%	0	$0	$145,977
Trainee Operators	Hourly	L1 Low	$5,735	9	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$164,224	0%	0	$0	$164,224
Vacation, absentee relief	Hourly	L1 Med	$9,368	2	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$59,613	25%	1	$8,100	$67,713
Sub-total				**172**																					**$7,233,387**
Maintenance Labor																									
Tradesmen field service (incl vac relief)	Hourly	L1 High	$13,160	63	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$2,637,897	67%	42	$680,399	$3,318,296
Tradesmen-repair/overhaul (incl vac relief)	Hourly	L1 High	$13,160	22	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$921,170	50%	11	$178,200	$1,099,370
Fuel/lube/tires	Hourly	L1 Med	$9,368	12	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$357,676	33%	4	$64,152	$421,828
Shop/Dry Mtnce	Hourly	L1 Low	$5,735	2	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$36,494	0%	0	$0	$36,494
Helpers/Trainees	Hourly	L1 Low	$5,735	5	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$91,236	0%	0	$0	$91,236
Vacation, absentee relief	Hourly	L1 Med	$9,368	1	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$29,806	0%	0	$0	$29,806
Sub-total				**105**																					**$4,997,030**
Total Mine				**327**																	**Total in Camp**		**114**		**$14,682,700**
G and A																									
General & Administrative																									
General Manager	Salary	L4 Low	$251,953	1	$251,953	$20,363	N/A	N/A	$272,316	$23,828	$15,440	$23,937	$2,723	$13,616	$21,213	$5,446	$2,723	$5,446	$114,373	$386,689	$386,689	100%	1	$16,200	$402,889
Assistant Genral Manager	Salary	L3 Med	$86,471	1	$86,471	$6,989	N/A	N/A	$93,460	$8,178	$5,299	$8,215	$935	$4,673	$7,281	$1,869	$935	$1,869	$39,253	$132,713	$132,713	100%	1	$16,200	$148,913
Administration Assistant	Salary	L1 Med	$9,368	2	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$28,755	0%	0	$0	$28,755
Receptionist	Salary	L1 Med	$9,368	1	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$14,378	0%	0	$0	$14,378
Accounting																									
Accounting Manager	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Senior Accountant	Salary	L2 Low	$19,688	2	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$60,433	100%	2	$32,400	$92,833
IT Technician	Salary	L2 Low	$19,688	2	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$60,433	50%	1	$16,200	$76,633
Payroll Clerk	Salary	L1 Med	$9,368	2	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$28,755	50%	1	$16,200	$44,955
Accounts Clerk	Salary	L1 Med	$9,368	4	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$57,511	50%	2	$32,400	$89,911
Purchasing																									
Purchasing Manager	Salary	L2 Med	$31,513	1	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$48,365	100%	1	$16,200	$64,565
Purchasing Agent	Salary	L1 High	$13,160	4	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$80,790	50%	2	$32,400	$113,190
Warehouseman	Hourly	L1 Med	$9,368	4	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$119,225	0%	0	$0	$119,225
Administration Assistant	Salary	L1 Med	$9,368	2	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$28,755	0%	0	$0	$28,755
Human Resources																									
HR Manager	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Administration Assistant	Salary	L1 Med	$9,368	2	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$28,755	50%	1	$16,200	$44,955
Community Relation Manager	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Community Relation Officer	Salary	L2 Low	$19,688	2	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$60,433	50%	1	$16,200	$76,633
Safety, Environmental & Security																									
Safety Manager	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Safety Trainer	Salary	L1 High	$13,160	2	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$40,395	50%	1	$16,200	$56,595
Doctor	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Paramedic	Salary	L2 Low	$19,688	4	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$120,866	50%	2	$32,400	$153,266
Environmental Manger	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Environmental Engineer	Salary	L2 Med	$31,513	1	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$48,365	100%	1	$16,200	$64,565
Environmental Technician	Salary	L1 High	$13,160	4	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$80,790	50%	2	$32,400	$113,190
Security Manager	Salary	L2 Med	$31,513	1	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$48,365	100%	1	$16,200	$64,565
Security Officer	Hourly	L1 Med	$9,368	16	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$476,901	100%	16	$259,200	$736,101
Janitor/Laundry	Hourly	L1 Low	$5,735	4	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$72,989	0%	0	$0	$72,989
G and A Total				**68**																	**Total in Camp**		**42**	**680400**	**$3,111,328**

		Pay Level	Annual Salary US$/Yr	Number of Personnel	Annual Direct Salary	Annual Indirect Salary	Overtime 2X Straight Time	Overtime 3X Straight Time	Total Annual Salary Paid	Occupational Risk Ins.	Sickness & Maternity	Disability	Guarderias Child Day Care	INFONAVIT Housing Fund	ISPT	SAR Retirement Fund	Education Fund	Payroll Tax	Total Benefits	Salary & Benefits per Employee	Salary and Benefits per Crew	% stay in Camp	Total Number in Camp	Travel Allowance	Total Salaries, Benefits & Travel
Mill and Lab																									
Mill operations																									
Mill Manager	Salary	L3 High	$121,059	1	$121,059	$9,784	N/A	N/A	$130,843	$11,449	$7,419	$11,501	$1,308	$6,542	$10,193	$2,617	$1,308	$2,617	$54,954	$185,797	$185,797	100%	1	$16,200	$201,997
Administrative Assistant	Salary	L1 High	$13,160	2	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$40,395	0%	0	$0	$40,395
General Foreman	Salary	L2 Med	$31,513	1	$31,513	$2,547	N/A	N/A	$34,060	$2,980	$1,931	$2,994	$341	$1,703	$2,653	$681	$341	$681	$14,305	$48,365	$48,365	100%	1	$16,200	$64,565
Maintenance Foreman	Salary	L2 Low	$19,688	1	$19,688	$1,591	N/A	N/A	$21,279	$1,862	$1,207	$1,870	$213	$1,064	$1,658	$426	$213	$426	$8,937	$30,216	$30,216	100%	1	$16,200	$46,416
Shift Foreman	SalaryOT	L2 Low	$19,688	3	$19,688	$1,591	$5,929	$16,906	$44,114	$3,860	$2,501	$3,878	$441	$2,206	$3,436	$882	$441	$882	$18,528	$62,642	$187,925	33%	1	$16,038	$203,963
Trainer	Salary	L1 High	$13,160	2	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$40,395	0%	0	$0	$40,395
Mill Operations																									
Control Room Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Crusher Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Crusher Helper	Hourly	L1 Low	$5,735	3	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$54,741	0%	0	$0	$54,741
Grinding Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Grinding Helper	Hourly	L1 Low	$5,735	3	$5,735	$464	$1,727	$4,925	$12,850	$1,124	$729	$1,130	$129	$643	$1,001	$257	$129	$257	$5,397	$18,247	$54,741	0%	0	$0	$54,741
Leaching & CIP Operator	Hourly	L1 Med	$9,368	6	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$178,838	33%	2	$32,076	$210,914
Carbon Handling Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Reagent Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Refining Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	66%	2	$32,076	$121,495
Tailing & Water System Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Loader Operator	Hourly	L1 Med	$9,368	3	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$89,419	33%	1	$16,038	$105,457
Tail Haulage Operator	Hourly	L1 Med	$9,368	12	$9,368	$757	$2,821	$8,044	$20,990	$1,837	$1,190	$1,845	$210	$1,050	$1,635	$420	$210	$420	$8,816	$29,806	$357,676	33%	4	$64,152	$421,828
Maintenance Labor																									
Electrical/Instrument Technician	Hourly	L1 High	$13,160	10	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$418,714	70%	7	$113,400	$532,114
Mechanical Technician	Hourly	L1 High	$13,160	32	$13,160	$1,064	$3,963	$11,300	$29,487	$2,580	$1,672	$2,592	$295	$1,474	$2,297	$590	$295	$590	$12,384	$41,871	$1,339,884	50%	16	$259,200	$1,599,084
Assay Lab																									
Technical Labor																									
Chief Metallurgist	Salary	L3 Low	$61,765	1	$61,765	$4,992	N/A	N/A	$66,757	$5,841	$3,785	$5,868	$668	$3,338	$5,200	$1,335	$668	$1,335	$28,038	$94,795	$94,795	100%	1	$16,200	$110,995
Mill Metallurgist	Salary	L2 High	$44,118	2	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$135,422	100%	2	$32,400	$167,822
Chemist	Salary	L2 High	$44,118	1	$44,118	$3,566	N/A	N/A	$47,684	$4,172	$2,704	$4,191	$477	$2,384	$3,715	$954	$477	$954	$20,027	$67,711	$67,711	100%	1	$16,200	$83,911
Laboratory Technician	Salary	L1 High	$13,160	4	$13,160	$1,064	N/A	N/A	$14,224	$1,245	$806	$1,250	$142	$711	$1,108	$284	$142	$284	$5,974	$20,198	$80,790	50%	2	$32,400	$113,190
Sample Preparation Technician	Salary	L1 Med	$9,368	4	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$57,511	0%	0	$0	$57,511
Data Technician	Salary	L1 Med	$9,368	2	$9,368	$757	N/A	N/A	$10,125	$886	$574	$890	$101	$506	$789	$203	$101	$203	$4,253	$14,378	$28,755	50%	1	$16,200	$44,955
Total Mill and Lab				**114**																		**Total in Camp**	**49**		**$4,909,232**
Total Work Force				**509**																		**Total in Camp**	**205**		

21.4.2 Mine Operating Costs

Key mine operating cost parameters include:

- Mine operating costs extend from October 1, 2015 to the end of the mine life in 2028. Mining costs incurred prior to this are included in mine capital costs as preproduction mining.
- Continuous 24 hour per day mining operation for 356 days per year
- Labor rates provided by Torex are based on three operating crews on a 20 day on-10 day off rotation. Hourly employees will incur considerable overtime under this schedule and overtime allowances are included within labor rates. The labor rates also assume a portion of the workforce will live in camp. Labor rates include a travel allowance for camp occupants. Camp costs (catering, etc) are excluded from labor rates and mining cost estimates. SRK understands camp operating costs and bussing for local employees is included in G&A cost estimates.
- MARC maintenance of production equipment planned for 2013-2017. MARC unit maintenance costs ($/operating hour) has been estimated by Torex's mining equipment procurement specialist. Owner maintenance of production equipment is planned for 2018 to end of mine life.
- Drilling utilizing 152mm and 114mm drills. Drill consumables estimated at $1.16/m for 114m holes and $2.29/m for 152mm holes
- Blasting at an explosive powder factor of 0.35 kg/t using 70% anfo-30% emulsion explosives. Explosives supplied under full service contract with explosives supplier. Explosives prices: $0.795/kg Anfo; $1.185/kg emulsion. Accessories are estimated at $13.61/bllasthole. Monthly service charge $32,500/month.
- Diesel fuel included in mine operating costs at $0.80/L
- No blasthole assaying costs are included in mine operating costs. Blasthole assaying will be done at the process plant laboratory. SRK understands that the process plant laboratory operating costs are adequate to handle mine sample assaying.
- No VAT or import duties are included in mining costs.

Mine operating costs are summarized in Table 21-9. Mine operating costs average $1.95/t mined over the mine life. Mining rates are quite low after 2024, which results in high unit mining costs in the latter years of mine operation. Mine operating costs average $1.90/t mined excluding this 2025-2028 production "tail".

Table 21-9: Morelos Mining Costs

		Pre-production Mining Cost - CAPEX				Mine Operating Costs														
Period (US$)		*2013*	*2014*	*2015 Q1-3*	*Total PPN*	2015 Q4	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	**Total Opex**
Pit Ore & Waste Mined	Mt	*4.5*	*11.3*	*11.3*	*27.1*	3.8	29.2	34.3	37.3	36.5	36.1	36.2	31.4	24.6	18.0	3.3	0.8	1.3	1.2	**294.0**
Pit Ore Mined, kt	Mt	*0.0*	*0.3*	*1.2*	*1.5*	0.9	3.7	5.2	4.9	5.2	5.1	5.0	4.9	5.1	5.0	1.2	0.1	0.4	0.6	**47.3**
Pit Strip Ratio, t:t	W:O	*n/a*	*42*	*8.5*	*17.6*	3.1	7.0	5.6	6.7	6.0	6.1	6.2	5.4	3.8	2.6	1.7	6.1	2.1	1.0	**5.2**
Pit Ore Feed, kt	Mt	*0.0*	*0.0*	*1.4*	*1.4*	0.9	3.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	1.3	0.0	0.5	0.6	**47.4**
Total Mining Costs, by function																				
Drill	$M	*1.6*	*3.6*	*2.9*	*8.0*	1.3	9.7	11.4	11.7	11.5	11.3	11.3	9.9	7.7	5.6	1.1	0.3	0.4	0.4	**93.5**
Blast	$M	*2.1*	*4.5*	*3.6*	*10.1*	1.6	12.3	14.3	15.6	15.2	15.0	15.1	13.2	10.4	7.6	2.0	0.7	0.9	0.9	**124.6**
Load	$M	*1.1*	*3.0*	*3.0*	*7.1*	1.3	10.4	11.7	11.4	11.1	11.0	11.0	9.2	6.8	5.1	1.1	0.2	0.4	0.4	**91.2**
Haul	$M	*1.1*	*4.9*	*5.0*	*11.0*	2.1	15.8	20.5	16.4	14.8	15.5	14.4	13.3	11.5	10.0	2.0	0.5	1.0	0.8	**138.6**
Roads & Dumps	$M	*2.0*	*5.5*	*4.9*	*12.4*	1.8	8.0	8.1	6.6	6.4	6.5	6.3	6.2	5.9	5.1	2.3	1.2	0.9	0.9	**66.2**
Support	$M	*0.5*	*1.0*	*0.9*	*2.3*	0.3	1.6	1.8	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.0	0.5	0.5	0.5	**19.7**
Mine General	$M	*2.0*	*3.0*	*2.7*	*7.7*	0.9	4.2	4.3	3.5	3.4	3.5	3.4	3.4	3.4	3.1	2.8	1.7	1.6	1.6	**40.9**
Total	$M	*10.5*	*25.4*	*22.9*	*58.8*	9.3	61.9	72.2	67.1	64.5	64.8	63.6	57.0	47.6	38.3	12.3	5.1	5.8	5.4	**574.7**
Unit Mining Costs, by function																				
Drill	$/t mined	*0.35*	*0.32*	*0.25*	*0.30*	0.34	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.34	0.32	0.32	0.32	**0.32**
Blast	$/t mined	*0.45*	*0.40*	*0.32*	*0.37*	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.60	0.88	0.70	0.74	**0.42**
Load	$/t mined	*0.25*	*0.27*	*0.26*	*0.26*	0.33	0.35	0.34	0.31	0.30	0.30	0.30	0.29	0.28	0.28	0.33	0.27	0.34	0.35	**0.31**
Haul	$/t mined	*0.25*	*0.43*	*0.44*	*0.41*	0.56	0.54	0.60	0.44	0.40	0.43	0.40	0.42	0.47	0.56	0.61	0.57	0.77	0.65	**0.47**
Roads & Dumps	$/t mined	*0.45*	*0.49*	*0.43*	*0.46*	0.48	0.27	0.24	0.18	0.17	0.18	0.18	0.20	0.24	0.28	0.70	1.51	0.73	0.79	**0.23**
Support	$/t mined	*0.10*	*0.09*	*0.08*	*0.09*	0.08	0.05	0.05	0.05	0.06	0.06	0.05	0.06	0.07	0.10	0.32	0.59	0.41	0.42	**0.07**
Mine General	$/t mined	*0.45*	*0.27*	*0.24*	*0.28*	0.25	0.14	0.13	0.09	0.09	0.10	0.10	0.11	0.14	0.18	0.84	2.07	1.21	1.34	**0.14**
Average	$/t mined	*2.32*	*2.25*	*2.02*	*2.17*	2.44	2.12	2.11	1.80	1.76	1.79	1.76	1.81	1.93	2.13	3.73	6.21	4.48	4.61	**1.95**
Unit Mining Costs, by component																				
Labor	$/t mined	*0.55*	*0.42*	*0.38*	*0.42*	0.43	0.30	0.29	0.40	0.39	0.40	0.39	0.41	0.46	0.54	1.28	2.67	1.84	1.94	**0.42**
Drill supplies	$/t mined	*0.08*	*0.07*	*0.06*	*0.07*	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.08	0.08	0.08	**0.08**
Explosives	$/t mined	*0.39*	*0.35*	*0.28*	*0.32*	0.38	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	0.43	0.39	0.39	0.39	**0.40**
Tires	$/t mined	*0.05*	*0.08*	*0.08*	*0.07*	0.10	0.09	0.10	0.09	0.08	0.09	0.08	0.09	0.10	0.12	0.16	0.18	0.19	0.18	**0.09**
Fuel	$/t mined	*0.42*	*0.48*	*0.45*	*0.45*	0.54	0.48	0.49	0.46	0.44	0.46	0.44	0.46	0.48	0.54	0.86	1.13	0.88	0.86	**0.48**
Lube	$/t mined	*0.08*	*0.09*	*0.08*	*0.08*	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.09	0.10	0.14	0.19	0.16	0.16	**0.09**
GEC	$/t mined	*0.07*	*0.07*	*0.06*	*0.07*	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.10	0.18	0.10	0.10	**0.05**
Repair parts	$/t mined	*0.00*	*0.00*	*0.00*	*0.00*	0.00	0.00	0.00	0.17	0.16	0.17	0.16	0.16	0.17	0.18	0.26	0.30	0.25	0.24	**0.13**
MARC	$/t mined	*0.48*	*0.56*	*0.52*	*0.53*	0.63	0.56	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.13**
Supplies, Services, Other	$/t mined	*0.20*	*0.14*	*0.11*	*0.14*	0.11	0.06	0.06	0.08	0.08	0.08	0.08	0.08	0.10	0.11	0.43	1.10	0.60	0.66	**0.09**
Average	$/t mined	*2.32*	*2.25*	*2.02*	*2.17*	2.44	2.12	2.11	1.80	1.76	1.79	1.76	1.81	1.93	2.13	3.73	6.21	4.48	4.61	**1.95**
Avg, Ore Prod'n	$/t ore	*0.00*	*96.63*	*19.16*	*40.28*	9.98	16.93	13.90	13.76	12.39	12.81	12.60	11.55	9.29	7.71	10.07	43.86	14.09	9.36	**12.15**
Avg, Ore Feed	$/t feed	*0.00*	*0.00*	*16.60*	*42.58*	10.30	16.51	14.32	13.32	12.79	12.85	12.61	11.32	9.44	7.59	9.35	0.00	11.09	9.24	**12.13**

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 prevailing daily or annual labor rates in the area. Labor rates and fringe benefits for employees include all applicable social security benefits as well as all applicable payroll taxes. The staffing plan shows 114 employees. The staffing plan summary and gross annual labor costs are shown in at the end this section.

21.4.3.2 Electrical Power

Power costs were based on the Comision Federal de Electricidad (CFE) billing formula for in effect August, 2012, 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 $0.105 per kWh. A detail list of equipment and power consumption and a summary of the power cost and consumption are shown the end of this section.

21.4.3.3 Reagents

Consumption rates were determined from the metallurgical test data or industry practice. Budget quotations were received for reagents supplied from local sources where available with an allowance for freight to site.

Reagents for the process plants are shown below:

Table 21-10: Reagent Consumption Rates and Unit Prices

Reagents	kg/tonne ore	$/kg
Lime	2.000	$0.13
Sodium Cyanide	0.943	$2.40
Sodium Hydroxide	0.125	$0.33
Copper Sulfate	0.050	$3.20
Sodium Meta-bisulfite	0.440	$0.71
Hydrochloric Acid	0.100	$0.40
Flocculant	0.050	$3.64
Antiscalant	0.012	$2.70
Carbon	0.050	$2.49

Consumption rates were determined from the metallurgical test data or industry practice. Budget quotations were received for reagents supplied from local sources where available with an allowance for freight to site.

A summary of process reagent consumption and costs are included at the end of this section.

21.4.3.4 Maintenance Wear Parts and Consumables

Grinding media consumption and wear items (liners) were based on industry practice for the crusher and grinding operations. These consumption rates and unit prices are shown below.

Table 21-11: Grinding Media & Liner Consumption Rates and Unit Prices

	kg/tonne ore	$/kg
SAG Mill - grinding balls	0.525	$1.05
Ball Mill - grinding balls	0.930	$1.29
Primary Crusher - liners	0.008	$4.27
SAG Mill - liners	0.050	$4.90
Ball Mill - liners	0.033	$4.27
Pebble Crusher - liners	0.003	$4.27

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.

The detail of the calculation of process plant maintenance labor cost is shown in the labor table at the end of this section.

21.4.3.5 Process Supplies & 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. The process supplies and services are summarized in at the end of this section.

21.4.4 General Administration

The operating cost for the General 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 68. (This includes the 6 employees for the environmental department.) The costs are detailed at the end of this section. All other G&A costs were developed as allowances based on M3's information from other operations and other projects and detailed at the end of this section.

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 14 are detailed in the process plant labor table. 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 laboratory costs are summarized in at the end of this section. The labor cost for the environmental department is based on a staff of 6 and are detailed in the General Administration labor table. All other environmental department costs were developed as allowances based on M3's information from other operations and other projects.

21.5 OPERATING COST TABULATION

The following tables show operating costs in a more detailed fashion.

Torex Gold Resources Inc. - Morelos Project
Operating Cost

	LOM		Year 1		Year 2		Year 3	
	Ore Tonnes	48,765,881		2,280,000		3,750,000		5,040,000
	Mined Tonnes	294,032,083		3,791,559		29,226,301		34,263,505
	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined
Mining Operations								
Drill	$93,477,327	$0.32	$1,270,497	$0.34	$9,689,648	$0.33	$11,394,775	$0.33
Blast	$124,641,442	$0.42	$1,581,007	$0.42	$12,301,689	$0.42	$14,304,838	$0.42
Load	$91,173,401	$0.31	$1,250,868	$0.33	$10,371,104	$0.35	$11,681,926	$0.34
Haul	$138,609,253	$0.47	$2,109,993	$0.56	$15,820,714	$0.54	$20,535,244	$0.60
Roads & Dumps	$66,220,689	$0.23	$1,808,318	$0.48	$7,976,748	$0.27	$8,125,248	$0.24
Support	$19,702,351	$0.07	$297,665	$0.08	$1,575,933	$0.05	$1,804,862	$0.05
Mine General	$38,993,305	$0.13	$825,395	$0.22	$3,362,778	$0.12	$3,388,578	$0.10
Subtotal Mining	**$572,817,767**	**$1.95**	$9,143,743	$2.41	$61,098,614	$2.09	$71,235,472	$2.08
	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	$31,130,661	$0.64	$1,739,158	$0.76	$2,561,717	$0.68	$3,298,289	$0.65
Grinding	$267,163,822	$5.48	$12,827,276	$5.63	$20,612,274	$5.50	$27,462,991	$5.45
Leaching	$205,960,840	$4.22	$9,813,579	$4.30	$15,872,531	$4.23	$21,205,323	$4.21
Carbon Handling & Refinery	$13,929,456	$0.29	$885,142	$0.39	$1,107,284	$0.30	$1,309,596	$0.26
Filtered Tailings	$166,922,421	$3.42	$10,325,934	$4.53	$12,582,142	$3.36	$14,167,354	$2.81
Backfill Plant	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00
Ancillaries	$20,475,991	$0.42	$1,059,730	$0.46	$1,522,045	$0.41	$1,940,512	$0.39
Subtotal Processing	**$705,583,191**	**$14.47**	$36,650,819	$16.07	$54,257,994	$14.47	$69,384,065	$13.77
Supporting Facilities								
Laboratory	$6,327,790	$0.13	$459,329	$0.20	$520,394	$0.14	$579,911	$0.12
Environmental Department	$6,043,253	$0.12	$493,666	$0.22	$493,666	$0.13	$493,666	$0.10
General and Administrative	$170,940,144	$3.51	$13,508,474	$5.92	$13,220,537	$3.53	$13,494,349	$2.68
Subtotal Supporting Facilities	**$183,311,187**	**$3.76**	$14,461,469	$6.34	$14,234,597	$3.80	$14,567,926	$2.89
Total Mine Site Operating Cost	**$1,461,712,145**	**$29.97**	$60,256,031	$26.43	$129,591,205	$34.56	$155,187,464	$30.79

	Year 4		Year 5		Year 6		Year 7		Year 8	
Ore Tonnes		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
Mined Tonnes		37,334,500		36,528,972		36,117,544		36,178,997		31,440,676
	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined	Annual Cost - $	$/tonne Mined
Mining Operations										
Drill	$11,733,506	$0.31	$11,459,094	$0.31	$11,318,936	$0.31	$11,339,871	$0.31	$9,866,410	$0.31
Blast	$15,554,591	$0.42	$15,203,068	$0.42	$15,023,525	$0.42	$15,050,343	$0.42	$13,163,383	$0.42
Load	$11,392,014	$0.31	$11,140,766	$0.30	$11,003,593	$0.30	$11,028,017	$0.30	$9,244,061	$0.29
Haul	$16,381,861	$0.44	$14,790,726	$0.40	$15,531,914	$0.43	$14,421,895	$0.40	$13,254,026	$0.42
Roads & Dumps	$6,587,189	$0.18	$6,379,287	$0.17	$6,453,625	$0.18	$6,336,985	$0.18	$6,152,599	$0.20
Support	$2,013,012	$0.05	$2,028,035	$0.06	$1,990,465	$0.06	$1,943,952	$0.05	$1,927,093	$0.06
Mine General	$3,453,852	$0.09	$3,449,952	$0.09	$3,450,552	$0.10	$3,448,752	$0.10	$3,442,152	$0.11
Subtotal Mining	$67,116,024	$1.80	$64,450,928	$1.76	$64,772,611	$1.79	$63,569,815	$1.76	$57,049,725	$1.81
	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	$3,152,996	$0.63	$3,061,945	$0.61	$3,083,270	$0.61	$3,061,341	$0.61	$3,072,274	$0.61
Grinding	$27,462,991	$5.45	$27,462,991	$5.45	$27,462,991	$5.45	$27,462,991	$5.45	$27,462,991	$5.45
Leaching	$21,205,323	$4.21	$21,205,323	$4.21	$21,205,323	$4.21	$21,205,323	$4.21	$21,205,323	$4.21
Carbon Handling & Refinery	$1,309,596	$0.26	$1,309,596	$0.26	$1,309,596	$0.26	$1,309,596	$0.26	$1,309,596	$0.26
Filtered Tailings	$14,296,143	$2.84	$16,809,763	$3.34	$16,809,763	$3.34	$16,809,763	$3.34	$18,334,946	$3.64
Backfill Plant	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00
Ancillaries	$1,940,512	$0.39	$1,940,512	$0.39	$1,940,512	$0.39	$1,940,512	$0.39	$1,940,512	$0.39
Subtotal Processing	$69,367,561	$13.76	$71,790,130	$14.24	$71,811,455	$14.25	$71,789,525	$14.24	$73,325,642	$14.55
Supporting Facilities										
Laboratory	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12
Environmental Department	$493,666	$0.10	$493,666	$0.10	$493,666	$0.10	$493,666	$0.10	$493,666	$0.10
General and Administrative	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59
Subtotal Supporting Facilities	$14,149,239	$2.81	$14,149,239	$2.81	$14,149,239	$2.81	$14,149,239	$2.81	$14,149,239	$2.81
Total Mine Site Operating Cost	$150,632,824	$29.89	$150,390,297	$29.84	$150,733,305	$29.91	$149,508,579	$29.66	$144,524,606	$28.68

	Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Ore Tonnes		5,040,000		5,040,000		1,314,000		-		522,000		579,881
Mined Tonnes		24,634,796		17,951,511		3,288,886		821,463		1,291,409		1,161,964
	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	$7,688,613	$0.31	$5,552,579	$0.31	$1,120,395	$0.34	$261,628	$0.32	$411,301	$0.32	$370,074	$0.32
Blast	$10,374,163	$0.42	$7,638,443	$0.43	$1,962,996	$0.60	$722,879	$0.88	$905,395	$0.70	$855,122	$0.74
Load	$6,822,212	$0.28	$5,086,292	$0.28	$1,076,463	$0.33	$222,309	$0.27	$444,085	$0.34	$409,691	$0.35
Haul	$11,543,510	$0.47	$9,987,192	$0.56	$2,012,024	$0.61	$465,150	$0.57	$996,090	$0.77	$758,913	$0.65
Roads & Dumps	$5,881,893	$0.24	$5,104,536	$0.28	$2,302,535	$0.70	$1,242,113	$1.51	$948,772	$0.73	$920,841	$0.79
Support	$1,840,620	$0.07	$1,749,196	$0.10	$1,037,302	$0.32	$484,268	$0.59	$524,459	$0.41	$485,490	$0.42
Mine General	$3,432,252	$0.14	$3,147,728	$0.18	$2,771,858	$0.84	$1,704,251	$2.07	$1,558,051	$1.21	$1,557,151	$1.34
Subtotal Mining	$47,583,264	$1.93	$38,265,966	$2.13	$12,283,573	$3.73	$5,102,597	$6.21	$5,788,153	$4.48	$5,357,282	$4.61
	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	$3,071,879	$0.61	$3,070,264	$0.61	$925,458	$0.70	$234,353	$0.00	$362,482	$0.69	$435,234	$0.75
Grinding	$27,462,991	$5.45	$27,462,991	$5.45	$7,658,265	$5.83	$185,274	$0.00	$2,938,189	$5.63	$3,238,614	$5.58
Leaching	$21,205,323	$4.21	$21,205,323	$4.21	$5,787,876	$4.40	$138,677	$0.00	$2,236,043	$4.28	$2,469,546	$4.26
Carbon Handling & Refinery	$1,309,596	$0.26	$1,309,596	$0.26	$718,523	$0.55	$107,137	$0.00	$314,113	$0.60	$320,489	$0.55
Filtered Tailings	$18,334,946	$3.64	$18,833,155	$3.74	$5,253,763	$4.00	$162,214	$0.00	$1,999,669	$3.83	$2,202,867	$3.80
Backfill Plant	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00	$0	$0.00
Ancillaries	$1,940,512	$0.39	$1,940,512	$0.39	$720,190	$0.55	$491,505	$0.00	$572,164	$1.10	$586,264	$1.01
Subtotal Processing	$73,325,247	$14.55	$73,821,841	$14.65	$21,064,076	$16.03	$1,319,160	$0.00	$8,422,660	$16.14	$9,253,015	$15.96
Supporting Facilities												
Laboratory	$579,911	$0.12	$579,911	$0.12	$227,387	$0.17	$153,112	$0.00	$159,990	$0.31	$168,288	$0.29
Environmental Department	$493,666	$0.10	$493,666	$0.10	$437,071	$0.33	$223,174	$0.00	$223,174	$0.43	$223,174	$0.38
General and Administrative	$13,075,662	$2.59	$13,075,662	$2.59	$11,736,808	$8.93	$9,150,115	$0.00	$9,150,115	$17.53	$9,150,115	$15.78
Subtotal Supporting Facilities	$14,149,239	$2.81	$14,149,239	$2.81	$12,401,266	$9.44	$9,526,401	$0.00	$9,533,279	$18.26	$9,541,577	$16.45
Total Mine Site Operating Cost	$135,057,750	$26.80	$126,237,047	$25.05	$45,748,914	$34.82	$15,948,158	$0.00	$23,744,092	$45.49	$24,151,874	$41.65

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Mine	$0.60	$2.09	$2.08	$1.80	$1.76	$1.79	$1.76	$1.81	$1.93	$2.13	$3.73	$6.21	$4.48	$4.61
Process Plant	$16.07	$14.47	$13.77	$13.76	$14.24	$14.25	$14.24	$14.55	$14.55	$14.65	$16.03	$1,319.16	$16.14	$15.96
G&A	$6.34	$3.80	$2.89	$2.81	$2.81	$2.81	$2.81	$2.81	$2.81	$2.81	$9.44	$9,526.40	$18.26	$16.45

15,139,027

Torex Gold Resources Inc. - Morelos Project

Operating Cost - Process Plant Cost Summary

	Total LOM		Year 1 - Pre-production		Year 1 - Operating		Year 1		Year 2	
	48,765,881			1,380,000		900,000	Tonnes	2,280,000		3,750,000
	Annual Cost - $	$/ton ore Processed					Annual Cost - $	$/ton ore Processed	Annual Cost - $	$/ton ore Processed
Crushing and Ore Storage										
Operating Labor and Fringes	$2,069,552	$0.04	$96,720	$0.07	$32,594	$0.04	$129,314	$0.06	$160,203	0.0427
Power	$5,065,991	$0.10	$239,787	$0.17	$80,807	$0.09	$320,595	$0.14	$527,294	0.1406
Grinding Media & Wear Parts	$1,834,265	$0.04	$60,484	$0.04	$20,383	$0.02	$80,867	$0.04	$133,005	0.0355
Maintenance Parts & Services	$12,281,568	$0.25	$429,112	$0.31	$144,609	$0.16	$573,722	$0.25	$943,621	0.2516
Maintenance Labor and Fringes	$5,736,240	$0.12	$280,038	$0.20	$94,372	$0.10	$374,410	$0.16	$463,844	0.1237
Supplies & Services	$4,143,044	$0.08	$194,653	$0.14	$65,597	$0.07	$260,250	$0.11	$333,750	0.0890
Subtotal Crushing Plant	$31,130,661	$0.64	$1,300,795	$0.94	$438,363	$0.49	$1,739,158	$0.76	$2,561,717	0.6831
Grinding										
Operating Labor and Fringes	$3,431,916	$0.07	$160,390	$0.12	$54,051	$0.06	$214,441	$0.09	$265,663	0.0708
Power	$126,663,707	$2.60	$4,428,938	$3.21	$1,492,536	$1.66	$5,921,474	$2.60	$9,739,266	2.5971
Grinding Media & Wear Parts	$104,877,583	$2.15	$3,667,509	$2.66	$1,235,937	$1.37	$4,903,447	$2.15	$8,064,879	2.1506
Maintenance Parts & Services	$14,254,565	$0.29	$498,107	$0.36	$167,860	$0.19	$665,967	$0.29	$1,095,341	0.2921
Maintenance Labor and Fringes	$6,658,538	$0.14	$325,064	$0.24	$109,545	$0.12	$434,610	$0.19	$538,423	0.1436
Supplies and Services	$11,277,512	$0.23	$514,092	$0.37	$173,247	$0.19	$687,339	$0.30	$908,702	0.2423
Subtotal Grinding	$267,163,822	$5.48	$9,594,100	$6.95	$3,233,177	$3.59	$12,827,276	$5.63	$20,612,274	5.4966
Leaching										
Operating Labor and Fringes	$3,986,459	$0.08	$191,009	$0.14	$64,369	$0.07	$255,379	$0.11	$316,380	0.0844
Power	$20,892,040	$0.43	$730,163	$0.53	$246,062	$0.27	$976,225	$0.43	$1,605,634	0.4282
Reagents	$166,572,056	$3.42	$5,824,930	$4.22	$1,962,980	$2.18	$7,787,910	$3.42	$12,809,063	3.4158
Grinding Media & Wear Parts	$0	$0.00	$0	$0.00	$0	$0.00		$0.00		-
Maintenance Parts & Services	$9,291,012	$0.19	$324,534	$0.24	$109,367	$0.12	$433,901	$0.19	$713,653	0.1903
Maintenance Labor and Fringes	$4,338,273	$0.09	$211,791	$0.15	$71,373	$0.08	$283,164	$0.12	$350,802	0.0935
Supplies and Services	$881,000	$0.02	$57,592	$0.04	$19,408	$0.02	$77,000	$0.03	$77,000	0.0205
Subtotal Flotation	$205,960,840	$4.22	$7,340,019	$5.32	$2,473,560	$2.75	$9,813,579	$4.30	$15,872,531	4.2327
Carbon Handling & Refinery										
Operating Labor and Fringes	$2,931,919	$0.06	$137,023	$0.10	$46,176	$0.05	$183,199	$0.08	$226,959	0.0605
Power	$3,128,339	$0.06	$108,977	$0.08	$36,725	$0.04	$145,701	$0.06	$239,640	0.0639
Reagents	0	$0.00	$0	$0.00	$0	$0.00		$0.00		-
Maintenance Parts & Services	$2,266,382	$0.05	$78,887	$0.06	$26,585	$0.03	$105,472	$0.05	$173,473	0.0463
Maintenance Labor and Fringes	$1,054,536	$0.02	$51,482	$0.04	$17,349	$0.02	$68,831	$0.03	$85,272	0.0227
Supplies and Services	$4,548,280	$0.09	$285,670	$0.21	$96,270	$0.11	$381,940	$0.17	$381,940	0.1019
Subtotal Carbon Handling & Refinery	$13,929,456	$0.29	$662,038	$0.48	$223,104	$0.25	$885,142	$0.39	$1,107,284	0.2953
Filtered Tailings										
Operating Labor and Fringes	$7,872,283	$0.16	$382,019	$0.28	$128,739	$0.14	$510,758	$0.22	$632,760	0.1687
Power	$33,561,491	$0.69	$1,173,207	$0.85	$395,366	$0.44	$1,568,573	$0.69	$2,579,890	0.6880
Reagents	0	$0.00	$0	$0.00	$0	$0.00		$0.00		-
Maintenance Parts & Services	$7,515,508	$0.15	$262,446	$0.19	$88,443	$0.10	$350,889	$0.15	$577,120	0.1539
Maintenance Labor and Fringes	$3,508,295	$0.07	$171,272	$0.12	$57,718	$0.06	$228,990	$0.10	$283,688	0.0757
Supplies and Services	$114,464,844	$2.35	$5,734,290	$4.16	$1,932,435	$2.15	$7,666,724	$3.36	$8,508,684	2.2690
Subtotal Filtered Tailings	$166,922,421	$3.42	$7,723,233	$5.60	$2,602,701	$2.89	$10,325,934	$4.53	$12,582,142	3.3552
Ancillary Services										
Operating Labor and Fringes	$6,479,100	$0.13	$263,807	$0.19	$88,902	$0.10	$352,709	$0.15	$436,959	0.1165
Power	$9,174,964	$0.19	$319,584	$0.23	$107,699	$0.12	$427,283	$0.19	$702,768	0.1874
Maintenance Parts & Services	$2,750,898	$0.06	$95,830	$0.07	$32,294	$0.04	$128,125	$0.06	$210,731	0.0562
Maintenance Labor and Fringes	$1,281,028	$0.03	$62,539	$0.05	$21,075	$0.02	$83,614	$0.04	$103,587	0.0276
Supplies and Services	$790,000	$0.02	$50,860	$0.04	$17,140	$0.02	$68,000	$0.03	$68,000	0.0181
Subtotal Ancillary Services	$20,475,991	$0.42	$792,620	$0.57	267,110	$0.30	$1,059,730	$0.46	$1,522,045	0.4059
Total Process Plant	$705,583,191	$14.47	$27,412,805	$19.86	$9,238,015	$10.26	$36,650,819	$16.07	$54,257,994	$14.47

	Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
		5,040,000		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
Crushing and Ore Storage												
Operating Labor and Fringes	$191,092	0.0379	$191,092	0.0379	$191,092	0.0379	$191,092	0.0379	$191,092	0.0379	$191,092	0.0379
Power	$708,683	0.1406	$563,390	0.1118	$472,339	0.0937	$493,664	0.0979	$471,735	0.0936	$482,668	0.0958
Grinding Media & Wear Parts	$178,759	0.0355	$178,759	0.0355	$178,759	0.0355	$178,759	0.0355	$178,759	0.0355	$178,759	0.0355
Maintenance Parts & Services	$1,268,227	0.2516	$1,268,227	0.2516	$1,268,227	0.2516	$1,268,227	0.2516	$1,268,227	0.2516	$1,268,227	0.2516
Maintenance Labor and Fringes	$553,278	0.1098	$553,278	0.1098	$553,278	0.1098	$553,278	0.1098	$553,278	0.1098	$553,278	0.1098
Supplies & Services	$398,250	0.0790	$398,250	0.0790	$398,250	0.0790	$398,250	0.0790	$398,250	0.0790	$398,250	0.0790
Subtotal Crushing Plant	$3,298,289	0.6544	$3,152,996	0.6256	$3,061,945	0.6075	$3,083,270	0.6118	$3,061,341	0.6074	$3,072,274	0.6096
Grinding												
Operating Labor and Fringes	$316,886	0.0629	$316,886	0.0629	$316,886	0.0629	$316,886	0.0629	$316,886	0.0629	$316,886	0.0629
Power	$13,089,574	2.5971	$13,089,574	2.5971	$13,089,574	2.5971	$13,089,574	2.5971	$13,089,574	2.5971	$13,089,574	2.5971
Grinding Media & Wear Parts	$10,839,198	2.1506	$10,839,198	2.1506	$10,839,198	2.1506	$10,839,198	2.1506	$10,839,198	2.1506	$10,839,198	2.1506
Maintenance Parts & Services	$1,472,138	0.2921	$1,472,138	0.2921	$1,472,138	0.2921	$1,472,138	0.2921	$1,472,138	0.2921	$1,472,138	0.2921
Maintenance Labor and Fringes	$642,237	0.1274	$642,237	0.1274	$642,237	0.1274	$642,237	0.1274	$642,237	0.1274	$642,237	0.1274
Supplies and Services	$1,102,959	0.2188	$1,102,959	0.2188	$1,102,959	0.2188	$1,102,959	0.2188	$1,102,959	0.2188	$1,102,959	0.2188
Subtotal Grinding	$27,462,991	5.4490	$27,462,991	5.4490	$27,462,991	5.4490	$27,462,991	5.4490	$27,462,991	5.4490	$27,462,991	5.4490
Leaching												
Operating Labor and Fringes	$377,382	0.0749	$377,382	0.0749	$377,382	0.0749	$377,382	0.0749	$377,382	0.0749	$377,382	0.0749
Power	$2,157,972	0.4282	$2,157,972	0.4282	$2,157,972	0.4282	$2,157,972	0.4282	$2,157,972	0.4282	$2,157,972	0.4282
Reagents	$17,215,380	3.4158	$17,215,380	3.4158	$17,215,380	3.4158	$17,215,380	3.4158	$17,215,380	3.4158	$17,215,380	3.4158
Grinding Media & Wear Parts		-		-		-		-		-		-
Maintenance Parts & Services	$959,150	0.1903	$959,150	0.1903	$959,150	0.1903	$959,150	0.1903	$959,150	0.1903	$959,150	0.1903
Maintenance Labor and Fringes	$418,440	0.0830	$418,440	0.0830	$418,440	0.0830	$418,440	0.0830	$418,440	0.0830	$418,440	0.0830
Supplies and Services	$77,000	0.0153	$77,000	0.0153	$77,000	0.0153	$77,000	0.0153	$77,000	0.0153	$77,000	0.0153
Subtotal Flotation	$21,205,323	4.2074	$21,205,323	4.2074	$21,205,323	4.2074	$21,205,323	4.2074	$21,205,323	4.2074	$21,205,323	4.2074
Carbon Handling & Refinery												
Operating Labor and Fringes	$270,719	0.0537	$270,719	0.0537	$270,719	0.0537	$270,719	0.0537	$270,719	0.0537	$270,719	0.0537
Power	$322,077	0.0639	$322,077	0.0639	$322,077	0.0639	$322,077	0.0639	$322,077	0.0639	$322,077	0.0639
Reagents		-		-		-		-		-		-
Maintenance Parts & Services	$233,148	0.0463	$233,148	0.0463	$233,148	0.0463	$233,148	0.0463	$233,148	0.0463	$233,148	0.0463
Maintenance Labor and Fringes	$101,713	0.0202	$101,713	0.0202	$101,713	0.0202	$101,713	0.0202	$101,713	0.0202	$101,713	0.0202
Supplies and Services	$381,940	0.0758	$381,940	0.0758	$381,940	0.0758	$381,940	0.0758	$381,940	0.0758	$381,940	0.0758
Subtotal Carbon Handling & Refinery	$1,309,596	0.2598	$1,309,596	0.2598	$1,309,596	0.2598	$1,309,596	0.2598	$1,309,596	0.2598	$1,309,596	0.2598
Filtered Tailings												
Operating Labor and Fringes	$754,763	0.1498	$754,763	0.1498	$754,763	0.1498	$754,763	0.1498	$754,763	0.1498	$754,763	0.1498
Power	$3,467,372	0.6880	$3,467,372	0.6880	$3,467,372	0.6880	$3,467,372	0.6880	$3,467,372	0.6880	$3,467,372	0.6880
Reagents		-		-		-		-		-		-
Maintenance Parts & Services	$775,650	0.1539	$775,650	0.1539	$775,650	0.1539	$775,650	0.1539	$775,650	0.1539	$775,650	0.1539
Maintenance Labor and Fringes	$338,386	0.0671	$338,386	0.0671	$338,386	0.0671	$338,386	0.0671	$338,386	0.0671	$338,386	0.0671
Supplies and Services	$8,831,184	1.7522	$8,959,972	1.7778	$11,473,592	2.2765	$11,473,592	2.2765	$11,473,592	2.2765	$12,998,775	2.5791
Subtotal Filtered Tailings	$14,167,354	2.8110	$14,296,143	2.8365	$16,809,763	3.3353	$16,809,763	3.3353	$16,809,763	3.3353	$18,334,946	3.6379
Ancillary Services												
Operating Labor and Fringes	$521,209	0.1034	$521,209	0.1034	$521,209	0.1034	$521,209	0.1034	$521,209	0.1034	$521,209	0.1034
Power	$944,521	0.1874	$944,521	0.1874	$944,521	0.1874	$944,521	0.1874	$944,521	0.1874	$944,521	0.1874
Maintenance Parts & Services	$283,223	0.0562	$283,223	0.0562	$283,223	0.0562	$283,223	0.0562	$283,223	0.0562	$283,223	0.0562
Maintenance Labor and Fringes	$123,559	0.0245	$123,559	0.0245	$123,559	0.0245	$123,559	0.0245	$123,559	0.0245	$123,559	0.0245
Supplies and Services	$68,000	0.0135	$68,000	0.0135	$68,000	0.0135	$68,000	0.0135	$68,000	0.0135	$68,000	0.0135
Subtotal Ancillary Services	$1,940,512	0.3850	$1,940,512	0.3850	$1,940,512	0.3850	$1,940,512	0.3850	$1,940,512	0.3850	$1,940,512	0.3850
Total Process Plant	$69,384,065	$13.77	$69,367,561	$13.76	$71,790,130	$14.24	$71,811,455	$14.25	$71,789,525	$14.24	$73,325,642	$14.55

	Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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	$191,092	0.0379	$191,092	0.0379	$98,425	0.0749	$50,958	-	$50,958	0.0976	$50,958	0.0879
Power	$482,273	0.0957	$480,658	0.0954	-$47,143	(0.0359)	$0	-	$28,298	0.0542	$81,538	0.1406
Grinding Media & Wear Parts	$178,759	0.0355	$178,759	0.0355	$46,605	0.0355	$104,635	-	$18,514	0.0355	$20,567	0.0355
Maintenance Parts & Services	$1,268,227	0.2516	$1,268,227	0.2516	$330,645	0.2516	$10,500	-	$131,352	0.2516	$145,917	0.2516
Maintenance Labor and Fringes	$553,278	0.1098	$553,278	0.1098	$284,976	0.2169	$62,260	-	$62,260	0.1193	$62,260	0.1074
Supplies & Services	$398,250	0.0790	$398,250	0.0790	$211,950	0.1613	$6,000	-	$71,100	0.1362	$73,994	0.1276
Subtotal Crushing Plant	$3,071,879	0.6095	$3,070,264	0.6092	$925,458	0.7043	$234,353	-	$362,482	0.6944	$435,234	0.7506
Grinding												
Operating Labor and Fringes	$316,886	0.0629	$316,886	0.0629	$163,218	0.1242	$84,503	-	$84,503	0.1619	$84,503	0.1457
Power	$13,089,574	2.5971	$13,089,574	2.5971	$3,412,639	2.5971	$12,000	-	$1,355,706	2.5971	$1,506,030	2.5971
Grinding Media & Wear Parts	$10,839,198	2.1506	$10,839,198	2.1506	$2,825,934	2.1506	$0	-	$1,122,631	2.1506	$1,247,111	2.1506
Maintenance Parts & Services	$1,472,138	0.2921	$1,472,138	0.2921	$383,807	0.2921	$10,500	-	$152,471	0.2921	$169,378	0.2921
Maintenance Labor and Fringes	$642,237	0.1274	$642,237	0.1274	$330,796	0.2517	$72,271	-	$72,271	0.1384	$72,271	0.1246
Supplies and Services	$1,102,959	0.2188	$1,102,959	0.2188	$541,871	0.4124	$6,000	-	$150,606	0.2885	$159,323	0.2748
Subtotal Grinding	$27,462,991	5.4490	$27,462,991	5.4490	$7,658,265	5.8282	$185,274	-	$2,938,189	5.6287	$3,238,614	5.5850
Leaching												
Operating Labor and Fringes	$377,382	0.0749	$377,382	0.0749	$194,377	0.1479	$67,090	-	$67,090	0.1285	$67,090	0.1157
Power	$2,157,972	0.4282	$2,157,972	0.4282	$562,614	0.4282	$12,000	-	$223,504	0.4282	$248,287	0.4282
Reagents	$17,215,380	3.4158	$17,215,380	3.4158	$4,488,296	3.4158	$0	-	$1,783,022	3.4158	$1,980,727	3.4158
Grinding Media & Wear Parts		-		-		-		-		-		-
Maintenance Parts & Services	$959,150	0.1903	$959,150	0.1903	$250,064	0.1903	$10,500	-	$99,341	0.1903	$110,356	0.1903
Maintenance Labor and Fringes	$418,440	0.0830	$418,440	0.0830	$215,525	0.1640	$47,087	-	$47,087	0.0902	$47,087	0.0812
Supplies and Services	$77,000	0.0153	$77,000	0.0153	$77,000	0.0586	$2,000	-	$16,000	0.0307	$16,000	0.0276
Subtotal Flotation	$21,205,323	4.2074	$21,205,323	4.2074	$5,787,876	4.4048	$138,677	-	$2,236,043	4.2836	$2,469,546	4.2587
Carbon Handling & Refinery												
Operating Labor and Fringes	$270,719	0.0537	$270,719	0.0537	$139,439	0.1061	$72,192	-	$72,192	0.1383	$72,192	0.1245
Power	$322,077	0.0639	$322,077	0.0639	$83,970	0.0639	$12,000	-	$33,358	0.0639	$37,057	0.0639
Reagents		-		-		-		-		-		-
Maintenance Parts & Services	$233,148	0.0463	$233,148	0.0463	$60,785	0.0463	$10,500	-	$24,147	0.0463	$26,825	0.0463
Maintenance Labor and Fringes	$101,713	0.0202	$101,713	0.0202	$52,389	0.0399	$11,446	-	$11,446	0.0219	$11,446	0.0197
Supplies and Services	$381,940	0.0758	$381,940	0.0758	$381,940	0.2907	$1,000	-	$172,970	0.3314	$172,970	0.2983
Subtotal Carbon Handling & Refinery	$1,309,596	0.2598	$1,309,596	0.2598	$718,523	0.5468	$107,137	-	$314,113	0.6017	$320,489	0.5527
Filtered Tailings												
Operating Labor and Fringes	$754,763	0.1498	$754,763	0.1498	$388,755	0.2959	$100,635	-	$100,635	0.1928	$100,635	0.1735
Power	$3,467,372	0.6880	$3,467,372	0.6880	$903,993	0.6880	$12,000	-	$359,121	0.6880	$398,941	0.6880
Reagents		-		-		-		-		-		-
Maintenance Parts & Services	$775,650	0.1539	$775,650	0.1539	$202,223	0.1539	$10,500	-	$80,335	0.1539	$89,243	0.1539
Maintenance Labor and Fringes	$338,386	0.0671	$338,386	0.0671	$174,292	0.1326	$38,079	-	$38,079	0.0729	$38,079	0.0657
Supplies and Services	$12,998,775	2.5791	$13,496,984	2.6780	$3,584,500	2.7279	$1,000	-	$1,421,500	2.7232	$1,575,970	2.7177
Subtotal Filtered Tailings	$18,334,946	3.6379	$18,833,155	3.7367	$5,253,763	3.9983	$162,214	-	$1,999,669	3.8308	$2,202,867	3.7988
Ancillary Services												
Operating Labor and Fringes	$521,209	0.1034	$521,209	0.1034	$268,458	0.2043	$417,101	-	$417,101	0.7990	$417,101	0.7193
Power	$944,521	0.1874	$944,521	0.1874	$246,250	0.1874	$36,000	-	$97,825	0.1874	$108,672	0.1874
Maintenance Parts & Services	$283,223	0.0562	$283,223	0.0562	$73,840	0.0562	$10,500	-	$29,334	0.0562	$32,586	0.0562
Maintenance Labor and Fringes	$123,559	0.0245	$123,559	0.0245	$63,641	0.0484	$13,904	-	$13,904	0.0266	$13,904	0.0240
Supplies and Services	$68,000	0.0135	$68,000	0.0135	$68,000	0.0518	$14,000	-	$14,000	0.0268	$14,000	0.0241
Subtotal Ancillary Services	$1,940,512	0.3850	$1,940,512	0.3850	$720,190	0.5481	$491,505	-	$572,164	1.0961	$586,264	1.0110
Total Process Plant	$73,325,247	$14.55	$73,821,841	$14.65	$21,064,076	$16.03	$1,319,160	$0.00	$8,422,660	$16.14	$9,253,015	$15.96

	Total LOM		Year 1 - Pre-production		Year 1 - Operating		Year 1		Year 2	
Manpower	$49,348,139	$1.01	$2,333,153	$1.69	$786,264	$0.87	$3,119,417	$1.37	$3,864,541	$1.03
Power	$198,486,532	$4.07	$7,000,656	$5.07	$2,359,195	$2.62	$9,359,851	$4.11	$15,394,492	$4.11
Reagents	$166,572,056	$3.42	$5,824,930	$4.22	$1,962,980	$2.18	$7,787,910	$3.42	$12,809,063	$3.42
Grinding Media & Wear Parts	$106,711,849	$2.19	$3,727,994	$2.70	$1,256,320	$1.40	$4,984,314	$2.19	$8,197,884	$2.19
Maintenance Parts & Services	$48,359,935	$0.99	$1,688,916	$1.22	$569,159	$0.63	$2,258,075	$0.99	$3,713,939	$0.99
Supplies & Services	$136,104,679	$2.79	$6,837,156	$4.95	$2,304,097	$2.56	$9,141,253	$4.01	$10,278,075	$2.74
Total Process Plant	$705,583,191	$14.47	$27,412,805	$19.86	$9,238,015	$10.26	$36,650,819	$16.07	$54,257,994	$14.47

	Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
Manpower	$4,609,664	$0.91	$4,609,664	$0.91	$4,609,664	$0.91	$4,609,664	$0.91	$4,609,664	$0.91	$4,609,664	$0.91
Power	$20,690,198	$4.11	$20,544,905	$4.08	$20,453,854	$4.06	$20,475,179	$4.06	$20,453,250	$4.06	$20,464,183	$4.06
Reagents	$17,215,380	$3.42	$17,215,380	$3.42	$17,215,380	$3.42	$17,215,380	$3.42	$17,215,380	$3.42	$17,215,380	$3.42
Grinding Media & Wear Parts	$11,017,957	$2.19	$11,017,957	$2.19	$11,017,957	$2.19	$11,017,957	$2.19	$11,017,957	$2.19	$11,017,957	$2.19
Maintenance Parts & Services	$4,991,534	$0.99	$4,991,534	$0.99	$4,991,534	$0.99	$4,991,534	$0.99	$4,991,534	$0.99	$4,991,534	$0.99
Supplies & Services	$10,859,333	$2.15	$10,988,121	$2.18	$13,501,741	$2.68	$13,501,741	$2.68	$13,501,741	$2.68	$15,026,924	$2.98
Total Process Plant	$69,384,065	$13.77	$69,367,561	$13.76	$71,790,130	$14.24	$71,811,455	$14.25	$71,789,525	$14.24	$73,325,642	$14.55

	Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Manpower	$4,609,664	$0.91	$4,609,664	$0.91	$2,374,293	$1.81	$1,037,525	$0.00	$1,037,525	$1.99	$1,037,525	$1.79
Power	$20,463,788	$4.06	$20,462,173	$4.06	$5,162,323	$3.93	$84,000	$0.00	$2,097,812	$4.02	$2,380,524	$4.11
Reagents	$17,215,380	$3.42	$17,215,380	$3.42	$4,488,296	$3.42	$0	$0.00	$1,783,022	$3.42	$1,980,727	$3.42
Grinding Media & Wear Parts	$11,017,957	$2.19	$11,017,957	$2.19	$2,872,539	$2.19	$104,635	$0.00	$1,141,146	$2.19	$1,267,678	$2.19
Maintenance Parts & Services	$4,991,534	$0.99	$4,991,534	$0.99	$1,301,364	$0.99	$63,000	$0.00	$516,980	$0.99	$574,304	$0.99
Supplies & Services	$15,026,924	$2.98	$15,525,133	$3.08	$4,865,261	$3.70	$30,000	$0.00	$1,846,176	$3.54	$2,012,257	$3.47
Total Process Plant	$73,325,247	$14.55	$73,821,841	$14.65	$21,064,076	$16.03	$1,319,160	$0.00	$8,422,660	$16.14	$9,253,015	$15.96

Torex Gold Resources Inc. - Morelos Project

Labor Summary

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year
General & Administrative	5	$594,935	5	$594,935	5	$594,935	5	$594,935	5	$594,935	5	$594,935	5	$594,935
Accounting	11	$388,243	11	$388,243	11	$388,243	11	$388,243	11	$388,243	11	$388,243	11	$388,243
Purchasing	11	$325,736	11	$325,736	11	$325,736	11	$325,736	11	$325,736	11	$325,736	11	$325,736
Human Resources	6	$289,410	6	$289,410	6	$289,410	6	$289,410	6	$289,410	6	$289,410	6	$289,410
Safety, Environmental & Security	35	$1,513,004	35	$1,513,004	35	$1,513,004	35	$1,513,004	35	$1,513,004	35	$1,513,004	35	$1,513,004
Process Plant & Laboratory	114	$3,322,138	114	$4,115,685	114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$4,909,232
	182	$6,433,465	182	$7,227,012	182	$8,020,559	182	$8,020,559	182	$8,020,559	182	$8,020,559	182	$8,020,559

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year	Number Of Personnel	Total Labor ($)/year
General & Administrative	5	$594,935	5	$594,935	5	$594,935	4	$580,557	2	$417,267	2	$417,267	2	$417,267
Accounting	11	$388,243	11	$388,243	11	$388,243	6	$236,077	4	$167,183	4	$167,183	4	$167,183
Purchasing	11	$325,736	11	$325,736	11	$325,736	6	$195,151	2	$94,371	2	$94,371	2	$94,371
Human Resources	6	$289,410	6	$289,410	6	$289,410	4	$228,616	2	$167,822	2	$167,822	2	$167,822
Safety, Environmental & Security	35	$1,513,004	35	$1,513,004	35	$1,513,004	30	$1,351,478	28	$1,123,046	28	$1,123,046	28	$1,123,046
Process Plant & Laboratory	114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$2,528,590	27	$1,180,859	27	$1,180,859	27	$1,180,859
	182	$8,020,559	182	$8,020,559	182	$8,020,559	164	$5,120,469	65	$3,150,548	65	$3,150,548	65	$3,150,548

Torex Gold Resources Inc. - Morelos Project
General & Adminitration Labor Summary

			2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
		Days	365		365		365		365		365		365		365
		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
		Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year
General Manager	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889
Assistant Genral Manager	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913
Administration Assistant	$ 14,378	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755
Receptionist	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378
Accounting Manager	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Senior Accountant	$ 46,416	2	$ 92,833	2	$ 92,833	2	$ 92,833	2	$ 92,833	2	$ 92,833	2	$ 92,833	2	$ 92,833
IT Technician	$ 38,316	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633
Payroll Clerk	$ 22,478	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955
Accounts Clerk	$ 22,478	4	$ 89,911	4	$ 89,911	4	$ 89,911	4	$ 89,911	4	$ 89,911	4	$ 89,911	4	$ 89,911
Purchasing Manager	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Purchasing Agent	$ 28,298	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190
Warehouseman	$ 29,806	4	$ 119,225	4	$ 119,225	4	$ 119,225	4	$ 119,225	4	$ 119,225	4	$ 119,225	4	$ 119,225
Administration Assistant	$ 14,378	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755	2	$ 28,755
HR Manager	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Administration Assistant	$ 22,478	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955
Community Relation Manager	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Community Relation Assistant	$ 38,316	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633	2	$ 76,633
Safety Manager	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Safety Trainer	$ 28,298	2	$ 56,595	2	$ 56,595	2	$ 56,595	2	$ 56,595	2	$ 56,595	2	$ 56,595	2	$ 56,595
Doctor	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Nurse	$ 38,316	4	$ 153,266	4	$ 153,266	4	$ 153,266	4	$ 153,266	4	$ 153,266	4	$ 153,266	4	$ 153,266
Environmental Manger	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Environmental Engineer	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Environmental Technician	$ 28,298	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190
Security Manager	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Security Officer	$ 46,006	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 736,101
Janitor/Laundry	$ 18,247	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 72,989
		68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328

		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
		365		365		365		365		365		365		365
	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year
General Manager	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889	1	$ 402,889
Assistant Genral Manager	1	$ 148,913	1	$ 148,913	1	$ 148,913	1	$ 148,913	0	$ -	0	$ -	0	$ -
Administration Assistant	2	$ 28,755	2	$ 28,755	2	$ 28,755	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378
Receptionist	1	$ 14,378	1	$ 14,378	1	$ 14,378	1	$ 14,378	0	$ -	0	$ -	0	$ -
Accounting Manager	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Senior Accountant	2	$ 92,833	2	$ 92,833	2	$ 92,833	1	$ 46,416	0	$ -	0	$ -	0	$ -
IT Technician	2	$ 76,633	2	$ 76,633	2	$ 76,633	1	$ 38,316	1	$ 38,316	1	$ 38,316	1	$ 38,316
Payroll Clerk	2	$ 44,955	2	$ 44,955	2	$ 44,955	1	$ 22,478	1	$ 22,478	1	$ 22,478	1	$ 22,478
Accounts Clerk	4	$ 89,911	4	$ 89,911	4	$ 89,911	2	$ 44,955	1	$ 22,478	1	$ 22,478	1	$ 22,478
Purchasing Manager	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Purchasing Agent	4	$ 113,190	4	$ 113,190	4	$ 113,190	2	$ 56,595	0	$ -	0	$ -	0	$ -
Warehouseman	4	$ 119,225	4	$ 119,225	4	$ 119,225	2	$ 59,613	1	$ 29,806	1	$ 29,806	1	$ 29,806
Administration Assistant	2	$ 28,755	2	$ 28,755	2	$ 28,755	1	$ 14,378	0	$ -	0	$ -	0	$ -
HR Manager	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Administration Assistant	2	$ 44,955	2	$ 44,955	2	$ 44,955	1	$ 22,478	0	$ -	0	$ -	0	$ -
Community Relation Manager	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Community Relation Assistant	2	$ 76,633	2	$ 76,633	2	$ 76,633	1	$ 38,316	0	$ -	0	$ -	0	$ -
Safety Manager	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Safety Trainer	2	$ 56,595	2	$ 56,595	2	$ 56,595	1	$ 28,298	1	$ 28,298	1	$ 28,298	1	$ 28,298
Doctor	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Nurse	4	$ 153,266	4	$ 153,266	4	$ 153,266	2	$ 76,633	1	$ 38,316	1	$ 38,316	1	$ 38,316
Environmental Manger	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Environmental Engineer	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Environmental Technician	4	$ 113,190	4	$ 113,190	4	$ 113,190	2	$ 56,595	1	$ 28,298	1	$ 28,298	1	$ 28,298
Security Manager	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Security Officer	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 736,101	16	$ 588,881	16	$ 588,881	16	$ 588,881
Janitor/Laundry	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 72,989	4	$ 58,391	4	$ 58,391	4	$ 58,391
	68	$ 3,111,328	68	$ 3,111,328	68	$ 3,111,328	50	$ 2,591,879	38	$ 1,969,689	38	$ 1,969,689	38	$ 1,969,689

Torex Gold Resources Inc. - Morelos Project
Process Labor

				2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
			Days	247		306		365		365		365		365		365
			Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
			Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year
Mill Manager	Ancillary	$ 201,997	1	$ 136,694	1	$ 169,346	1	$ 201,997	1	$ 201,997	1	$ 201,997	1	$ 201,997	1	$ 201,997
Administrative Assistant	Ancillary	$ 20,198	2	$ 27,336	2	$ 33,865	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 40,395
General Foreman	Allocated	$ 64,565	1	$ 43,692	1	$ 54,129	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565
Maintenance Foreman	Maint	$ 46,416	1	$ 31,411	1	$ 38,914	1	$ 46,416	1	$ 46,416	1	$ 46,416	1	$ 46,416	1	$ 46,416
Shift Foreman	Allocated	$ 67,988	3	$ 138,024	3	$ 170,994	3	$ 203,963	3	$ 203,963	3	$ 203,963	3	$ 203,963	3	$ 203,963
Trainer	Allocated	$ 20,198	2	$ 27,336	2	$ 33,865	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 40,395
Control Room Operator	Grinding	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Crusher Operator	Crushing	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Crusher Helper	Crushing	$ 18,247	3	$ 37,044	3	$ 45,893	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 54,741
Grinding Operator	Grinding	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Grinding Helper	Grinding	$ 18,247	3	$ 37,044	3	$ 45,893	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 54,741
Leaching & CIP Operator	Leaching	$ 35,152	6	$ 142,728	6	$ 176,821	6	$ 210,914	6	$ 210,914	6	$ 210,914	6	$ 210,914	6	$ 210,914
Carbon Handling Operator	Carbon	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Reagent Operator	Leaching	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Refining Operator	Carbon	$ 40,498	3	$ 82,217	3	$ 101,856	3	$ 121,495	3	$ 121,495	3	$ 121,495	3	$ 121,495	3	$ 121,495
Tailing & Water System Operator	Tailings	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Loader Operator	Tailings	$ 35,152	3	$ 71,364	3	$ 88,410	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 105,457
Tail Haulage Operator	Tailings	$ 35,152	12	$ 285,456	12	$ 353,642	12	$ 421,828	12	$ 421,828	12	$ 421,828	12	$ 421,828	12	$ 421,828
Backfill Plant Operator	Backfill	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Backfill Plant Helper	Backfill	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Chief Metallurgist	Ancillary	$ 110,995	1	$ 75,112	1	$ 93,053	1	$ 110,995	1	$ 110,995	1	$ 110,995	1	$ 110,995	1	$ 110,995
Mill Metallurgist	Ancillary	$ 83,911	2	$ 113,567	2	$ 140,694	2	$ 167,822	2	$ 167,822	2	$ 167,822	2	$ 167,822	2	$ 167,822
Chemist	Laboratory	$ 83,911	1	$ 56,784	1	$ 70,347	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911
Laboratory Technician	Laboratory	$ 28,298	4	$ 76,597	4	$ 94,894	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 113,190
Sample Preparation Technician	Laboratory	$ 14,378	4	$ 38,918	4	$ 48,215	4	$ 57,511	4	$ 57,511	4	$ 57,511	4	$ 57,511	4	$ 57,511
Data Technician	Laboratory	$ 22,478	2	$ 30,422	2	$ 37,689	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 44,955
Electrical/Instrument Technician	Maint	$ 53,211	10	$ 360,088	10	$ 446,101	10	$ 532,114	10	$ 532,114	10	$ 532,114	10	$ 532,114	10	$ 532,114
Mechanical Technician	Maint	$ 49,971	32	$ 1,082,120	32	$ 1,340,602	32	$ 1,599,084	32	$ 1,599,084	32	$ 1,599,084	32	$ 1,599,084	32	$ 1,599,084
			114	$3,322,138	114	$4,115,685	114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$4,909,232

				5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
				365		365		365		188		365		365		365
			Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
			Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year	Number Of Personnel	Total Annual ($)/year
Mill Manager	Ancillary	$ 201,997	1	$ 201,997	1	$ 201,997	1	$ 201,997	1	$ 104,042	1	$ 201,997	1	$ 201,997	1	$ 201,997
Administrative Assistant	Ancillary	$ 20,198	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 20,806	1	$ 20,198	1	$ 20,198	1	$ 20,198
General Foreman	Allocated	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 64,565	1	$ 33,255	0	$ -	0	$ -	0	$ -
Maintenance Foreman	Maint	$ 46,416	1	$ 46,416	1	$ 46,416	1	$ 46,416	1	$ 23,908	0	$ -	0	$ -	0	$ -
Shift Foreman	Allocated	$ 67,988	3	$ 203,963	3	$ 203,963	3	$ 203,963	3	$ 105,055	1	$ 67,988	1	$ 67,988	1	$ 67,988
Trainer	Allocated	$ 20,198	2	$ 40,395	2	$ 40,395	2	$ 40,395	2	$ 20,806	0	$ -	0	$ -	0	$ -
Control Room Operator	Grinding	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Crusher Operator	Crushing	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Crusher Helper	Crushing	$ 18,247	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 28,196	1	$ 14,598	1	$ 14,598	1	$ 14,598
Grinding Operator	Grinding	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Grinding Helper	Grinding	$ 18,247	3	$ 54,741	3	$ 54,741	3	$ 54,741	3	$ 28,196	1	$ 14,598	1	$ 14,598	1	$ 14,598
Leaching & CIP Operator	Leaching	$ 35,152	6	$ 210,914	6	$ 210,914	6	$ 210,914	6	$ 108,635	1	$ 28,122	1	$ 28,122	1	$ 28,122
Carbon Handling Operator	Carbon	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Reagent Operator	Leaching	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Refining Operator	Carbon	$ 40,498	3	$ 121,495	3	$ 121,495	3	$ 121,495	3	$ 62,578	1	$ 32,399	1	$ 32,399	1	$ 32,399
Tailing & Water System Operator	Tailings	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Loader Operator	Tailings	$ 35,152	3	$ 105,457	3	$ 105,457	3	$ 105,457	3	$ 54,318	1	$ 28,122	1	$ 28,122	1	$ 28,122
Tail Haulage Operator	Tailings	$ 35,152	12	$ 421,828	12	$ 421,828	12	$ 421,828	12	$ 217,270	1	$ 28,122	1	$ 28,122	1	$ 28,122
Backfill Plant Operator	Backfill	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Backfill Plant Helper	Backfill	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -	0	$ -
Chief Metallurgist	Ancillary	$ 110,995	1	$ 110,995	1	$ 110,995	1	$ 110,995	1	$ 57,170	1	$ 110,995	1	$ 110,995	1	$ 110,995
Mill Metallurgist	Ancillary	$ 83,911	2	$ 167,822	2	$ 167,822	2	$ 167,822	2	$ 86,440	1	$ 83,911	1	$ 83,911	1	$ 83,911
Chemist	Laboratory	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 83,911	1	$ 43,220	1	$ 83,911	1	$ 83,911	1	$ 83,911
Laboratory Technician	Laboratory	$ 28,298	4	$ 113,190	4	$ 113,190	4	$ 113,190	4	$ 58,301	1	$ 22,638	1	$ 22,638	1	$ 22,638
Sample Preparation Technician	Laboratory	$ 14,378	4	$ 57,511	4	$ 57,511	4	$ 57,511	4	$ 29,622	1	$ 11,502	1	$ 11,502	1	$ 11,502
Data Technician	Laboratory	$ 22,478	2	$ 44,955	2	$ 44,955	2	$ 44,955	2	$ 23,155	1	$ 17,982	1	$ 17,982	1	$ 17,982
Electrical/Instrument Technician	Maint	$ 53,211	10	$ 532,114	10	$ 532,114	10	$ 532,114	10	$ 274,075	2	$ 85,138	2	$ 85,138	2	$ 85,138
Mechanical Technician	Maint	$ 49,971	32	$ 1,599,084	32	$ 1,599,084	32	$ 1,599,084	32	$ 823,638	4	$ 159,908	4	$ 159,908	4	$ 159,908
			114	$4,909,232	114	$4,909,232	114	$4,909,232	114	$2,528,590	27	$1,180,859	27	$1,180,859	27	$1,180,859

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Crushing and Ore Storage	$ 129,314	$ 160,203	$ 191,092	$ 191,092	$ 191,092	$ 191,092	$ 191,092
Grinding	$ 214,441	$ 265,663	$ 316,886	$ 316,886	$ 316,886	$ 316,886	$ 316,886
Leaching	$ 255,379	$ 316,380	$ 377,382	$ 377,382	$ 377,382	$ 377,382	$ 377,382
Carbon Handling and Refinery	$ 183,199	$ 226,959	$ 270,719	$ 270,719	$ 270,719	$ 270,719	$ 270,719
Filtered Tailings	$ 510,758	$ 632,760	$ 754,763	$ 754,763	$ 754,763	$ 754,763	$ 754,763
Backfill Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ancillary	$ 352,709	$ 436,959	$ 521,209	$ 521,209	$ 521,209	$ 521,209	$ 521,209
Laboratory	$ 202,721	$ 251,144	$ 299,567	$ 299,567	$ 299,567	$ 299,567	$ 299,567
Maintenance	$ 1,473,618	$ 1,825,616	$ 2,177,614	$ 2,177,614	$ 2,177,614	$ 2,177,614	$ 2,177,614
	$ 3,322,138	$ 4,115,685	$ 4,909,232	$ 4,909,232	$ 4,909,232	$ 4,909,232	$ 4,909,232
Allocated	$ 209,052	$ 258,988	$ 308,923	$ 308,923	$ 308,923	$ 308,923	$ 308,923

	Year 8	Year 9	Year 10	Year 11	Year 12		Year 13	Year 14
					WO OT	0.8		
Crushing and Ore Storage	$ 191,092	$ 191,092	$ 191,092	$ 98,425		$ 50,958	$ 50,958	$ 50,958
Grinding	$ 316,886	$ 316,886	$ 316,886	$ 163,218		$ 84,503	$ 84,503	$ 84,503
Leaching	$ 377,382	$ 377,382	$ 377,382	$ 194,377		$ 67,090	$ 67,090	$ 67,090
Carbon Handling and Refinery	$ 270,719	$ 270,719	$ 270,719	$ 139,439		$ 72,192	$ 72,192	$ 72,192
Filtered Tailings	$ 754,763	$ 754,763	$ 754,763	$ 388,755		$ 100,635	$ 100,635	$ 100,635
Backfill Plant	$ -	$ -	$ -	$ -		$ -	$ -	$ -
Ancillary	$ 521,209	$ 521,209	$ 521,209	$ 268,458		$ 417,101	$ 417,101	$ 417,101
Laboratory	$ 299,567	$ 299,567	$ 299,567	$ 154,298		$ 136,033	$ 136,033	$ 136,033
Maintenance	$ 2,177,614	$ 2,177,614	$ 2,177,614	$ 1,121,621		$ 245,047	$ 245,047	$ 245,047
	$ 4,909,232	$ 4,909,232	$ 4,909,232	$ 2,528,590		$ 1,173,558	$ 1,173,558	$ 1,173,558
Allocated	$ 308,923	$ 308,923	$ 308,923	$ 159,117		$ 67,988	$ 67,988	$ 67,988

Torex Gold Resources Inc. - Morelos Project

Operating Cost - Electrical Power Summary

	Year 1 Total (kW hr/yr)	Year 1 Annual Cost $	Year 2 Total (kW hr/yr)	Year 2 Annual Cost $	Year 3 Total (kW hr/yr)	Year 3 Annual Cost $	Year 4 Total (kW hr/yr)	Year 4 Annual Cost $	Year 5 Total (kW hr/yr)	Year 5 Annual Cost $	Year 6 Total (kW hr/yr)	Year 6 Annual Cost $	Year 7 Total (kW hr/yr)	Year 7 Annual Cost $
Crushing & Ore Storage	3,067,891	$320,595	5,045,873	$527,294	6,781,653	$708,683	6,781,653	$563,390	6,781,653	$472,339	6,781,653	$493,664	6,781,653	$471,735
Grinding and Classification	56,664,823	$5,921,474	93,198,721	$9,739,266	125,259,082	$13,089,574	125,259,082	$13,089,574	125,259,082	$13,089,574	125,259,082	$13,089,574	125,259,082	$13,089,574
Leaching	9,341,870	$976,225	15,364,917	$1,605,634	20,650,449	$2,157,972	20,650,449	$2,157,972	20,650,449	$2,157,972	20,650,449	$2,157,972	20,650,449	$2,157,972
Carbon Handling & Refinery	1,394,271	$145,701	2,293,209	$239,640	3,082,073	$322,077	3,082,073	$322,077	3,082,073	$322,077	3,082,073	$322,077	3,082,073	$322,077
Reagents Systems	340,801	$35,614	560,527	$58,575	753,349	$78,725	753,349	$78,725	753,349	$78,725	753,349	$78,725	753,349	$78,725
Filtered Tailings	15,010,267	$1,568,573	24,687,939	$2,579,890	33,180,590	$3,467,372	33,180,590	$3,467,372	33,180,590	$3,467,372	33,180,590	$3,467,372	33,180,590	$3,467,372
Fresh Water	3,561,398	$372,166	5,857,562	$612,115	7,872,563	$822,683	7,872,563	$822,683	7,872,563	$822,683	7,872,563	$822,683	7,872,563	$822,683
Ancillaries	186,636	$19,503	306,967	$32,078	412,563	$43,113	412,563	$43,113	412,563	$43,113	412,563	$43,113	412,563	$43,113
Total	89,567,955	$9,359,851	147,315,716	$15,394,492	197,992,322	$20,690,198	197,992,322	$20,544,905	197,992,322	$20,453,854	197,992,322	$20,475,179	197,992,322	$20,453,250

	Year 8 Total (kW hr/yr)	Year 8 Annual Cost $	Year 9 Total (kW hr/yr)	Year 9 Annual Cost $	Year 10 Total (kW hr/yr)	Year 10 Annual Cost $	Year 11 Total (kW hr/yr)	Year 11 Annual Cost $	Year 12 Total (kW hr/yr)	Year 12 Annual Cost $	Year 13 Total (kW hr/yr)	Year 13 Annual Cost $	Year 14 Total (kW hr/yr)	Year 14 Annual Cost $
Crushing & Ore Storage	6,781,653	$482,668	6,781,653	$482,273	6,781,653	$480,658	1,768,074	-$47,143	-	$0	702,385	$28,298	780,268	$81,538
Grinding and Classification	125,259,082	$13,089,574	125,259,082	$13,089,574	125,259,082	$13,089,574	32,656,832	$3,412,639	-	$12,000	12,973,262	$1,355,706	14,411,766	$1,506,030
Leaching	20,650,449	$2,157,972	20,650,449	$2,157,972	20,650,449	$2,157,972	5,383,867	$562,614	-	$12,000	2,138,797	$223,504	2,375,951	$248,287
Carbon Handling & Refinery	3,082,073	$322,077	3,082,073	$322,077	3,082,073	$322,077	803,540	$83,970	-	$12,000	319,215	$33,358	354,610	$37,057
Reagents Systems	753,349	$78,725	753,349	$78,725	753,349	$78,725	196,409	$20,525	-	$12,000	78,025	$8,154	86,677	$9,058
Filtered Tailings	33,180,590	$3,467,372	33,180,590	$3,467,372	33,180,590	$3,467,372	8,650,654	$903,993	-	$12,000	3,436,561	$359,121	3,817,615	$398,941
Fresh Water	7,872,563	$822,683	7,872,563	$822,683	7,872,563	$822,683	2,052,490	$214,485	-	$12,000	815,373	$85,206	905,783	$94,654
Ancillaries	412,563	$43,113	412,563	$43,113	412,563	$43,113	107,561	$11,240	-	$12,000	42,730	$4,465	47,468	$4,960
Total	197,992,322	$20,464,183	197,992,322	$20,463,788	197,992,322	$20,462,173	51,619,427	$5,162,323	-	$84,000	20,506,348	$2,097,812	22,780,136	$2,380,524

Torex Gold Resources Inc. - Morelos Project

Operating Cost - Process Reagents & Wear Parts

2950123.97

Consumption Kilogram/tonne	Unit Rate $/kilogram		Year 1 Kilogram/year	Year 1 Annual Cost	Year 2 Kilogram/year	Year 2 Annual Cost	Year 3 Kilogram/year	Year 3 Annual Cost	Year 4 Kilogram/year	Year 4 Annual Cost	Year 5 Kilogram/year	Year 5 Annual Cost	Year 6 Kilogram/year	Year 6 Annual Cost	Year 7 Kilogram/year	Year 7 Annual Cost
			Tonnes	2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
		Reagents														
2.000	$0.13	Lime	4,560,000	592,800	7,500,000	975,000	10,080,000	1,310,400	10,080,000	1,310,400	10,080,000	1,310,400	10,080,000	1,310,400	10,080,000	1,310,400
0.943	$2.40	Sodium Cyanide	2,150,040	5,160,096	3,536,250	8,487,000	4,752,720	11,406,528	4,752,720	11,406,528	4,752,720	11,406,528	4,752,720	11,406,528	4,752,720	11,406,528
0.125	$0.33	Sodium Hydroxide	285,000	94,050	468,750	154,688	630,000	207,900	630,000	207,900	630,000	207,900	630,000	207,900	630,000	207,900
0.050	$3.20	Copper Sulfate	114,000	364,800	187,500	600,000	252,000	806,400	252,000	806,400	252,000	806,400	252,000	806,400	252,000	806,400
0.440	$0.71	Sodium Meta-bisulfite	1,003,200	712,272	1,650,000	1,171,500	2,217,600	1,574,496	2,217,600	1,574,496	2,217,600	1,574,496	2,217,600	1,574,496	2,217,600	1,574,496
0.100	$0.40	Hydrochloric Acid	228,000	91,200	375,000	150,000	504,000	201,600	504,000	201,600	504,000	201,600	504,000	201,600	504,000	201,600
0.050	$3.64	Flocculant	114,000	414,960	187,500	682,500	252,000	917,280	252,000	917,280	252,000	917,280	252,000	917,280	252,000	917,280
0.012	$2.70	Antiscalent	27,360	73,872	45,000	121,500	60,480	163,296	60,480	163,296	60,480	163,296	60,480	163,296	60,480	163,296
0.050	$2.49	Carbon	114,000	283,860	187,500	466,875	252,000	627,480	252,000	627,480	252,000	627,480	252,000	627,480	252,000	627,480
		Total Reagents		7,787,910		12,809,063		17,215,380		17,215,380		17,215,380		17,215,380		17,215,380
		Wear Parts														
0.525	$1.05	SAG Mill - grinding balls	1,197,017	1,256,868	1,968,778	2,067,216	2,646,037	2,778,339	2,646,037	2,778,339	2,646,037	2,778,339	2,646,037	2,778,339	2,646,037	2,778,339
0.930	$1.29	Ball Mill - grinding balls	2,120,434	2,735,359	3,487,555	4,498,946	4,687,274	6,046,584	4,687,274	6,046,584	4,687,274	6,046,584	4,687,274	6,046,584	4,687,274	6,046,584
0.000	$0.00	Regrind Mill - grinding balls	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.008	$4.27	Primary Crusher - liners	18,938	80,867	31,149	133,005	41,864	178,759	41,864	178,759	41,864	178,759	41,864	178,759	41,864	178,759
0.050	$4.90	SAG Mill - liners	113,161	554,487	186,119	911,985	250,144	1,225,707	250,144	1,225,707	250,144	1,225,707	250,144	1,225,707	250,144	1,225,707
0.033	$4.27	Ball Mill - liners	76,358	326,049	125,589	536,265	168,792	720,741	168,792	720,741	168,792	720,741	168,792	720,741	168,792	720,741
0.003	$4.27	Pebble Crusher - liners	7,186	30,684	11,819	50,466	15,885	67,827	15,885	67,827	15,885	67,827	15,885	67,827	15,885	67,827
		Total Wear Parts		4,984,314		8,197,884		11,017,957		11,017,957		11,017,957		11,017,957		11,017,957
-	-	**Total Reagent & Wear Parts Cost - Processing**		12,772,224		21,006,947		28,233,337		28,233,337		28,233,337		28,233,337		28,233,337

Consumption Kilogram/tonne	Unit Rate $/kilogram		Year 8 Kilogram/year	Year 8 Annual Cost	Year 9 Kilogram/year	Year 9 Annual Cost	Year 10 Kilogram/year	Year 10 Annual Cost	Year 11 Kilogram/year	Year 11 Annual Cost	Year 12 Kilogram/year	Year 12 Annual Cost	Year 13 Kilogram/year	Year 13 Annual Cost	Year 14 Kilogram/year	Year 14 Annual Cost
				5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
		Reagents														
2.000	$0.13	Lime	10,080,000	1,310,400	10,080,000	1,310,400	10,080,000	1,310,400	2,628,000	341,640	-	-	1,044,000	135,720	1,159,761	150,769
0.943	$2.40	Sodium Cyanide	4,752,720	11,406,528	4,752,720	11,406,528	4,752,720	11,406,528	1,239,102	2,973,845	-	-	492,246	1,181,390	546,827	1,312,386
0.125	$0.33	Sodium Hydroxide	630,000	207,900	630,000	207,900	630,000	207,900	164,250	54,203	-	-	65,250	21,533	72,485	23,920
0.050	$3.20	Copper Sulfate	252,000	806,400	252,000	806,400	252,000	806,400	65,700	210,240	-	-	26,100	83,520	28,994	92,781
0.440	$0.71	Sodium Meta-bisulfite	2,217,600	1,574,496	2,217,600	1,574,496	2,217,600	1,574,496	578,160	410,494	-	-	229,680	163,073	255,147	181,155
0.100	$0.40	Hydrochloric Acid	504,000	201,600	504,000	201,600	504,000	201,600	131,400	52,560	-	-	52,200	20,880	57,988	23,195
0.050	$3.64	Flocculant	252,000	917,280	252,000	917,280	252,000	917,280	65,700	239,148	-	-	26,100	95,004	28,994	105,538
0.012	$2.70	Antiscalent	60,480	163,296	60,480	163,296	60,480	163,296	15,768	42,574	-	-	6,264	16,913	6,959	18,788
0.050	$2.49	Carbon	252,000	627,480	252,000	627,480	252,000	627,480	65,700	163,593	-	-	26,100	64,989	28,994	72,195
		Total Reagents		17,215,380		17,215,380		17,215,380		4,488,296		-		1,783,022		1,980,727
		Wear Parts														
0.525	$1.05	SAG Mill - grinding balls	2,646,037	2,778,339	2,646,037	2,778,339	2,646,037	2,778,339	689,860	724,353	-	-	274,054	287,757	304,442	319,664
0.930	$1.29	Ball Mill - grinding balls	4,687,274	6,046,584	4,687,274	6,046,584	4,687,274	6,046,584	1,222,039	1,576,431	-	-	485,468	626,253	539,297	695,694
0.000	$0.00	Regrind Mill - grinding balls	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.008	$4.27	Primary Crusher - liners	41,864	178,759	41,864	178,759	41,864	178,759	10,915	46,605	24,504.71	104,635	4,336	18,514	4,817	20,567
0.050	$4.90	SAG Mill - liners	250,144	1,225,707	250,144	1,225,707	250,144	1,225,707	65,216	319,559	-	-	25,908	126,948	28,781	141,025
0.033	$4.27	Ball Mill - liners	168,792	720,741	168,792	720,741	168,792	720,741	44,006	187,907	-	-	17,482	74,648	19,420	82,925
0.003	$4.27	Pebble Crusher - liners	15,885	67,827	15,885	67,827	15,885	67,827	4,141	17,683	-	-	1,645	7,025	1,828	7,804
		Total Wear Parts		11,017,957		11,017,957		11,017,957		2,872,539		104,635		1,141,146		1,267,678
-	-	**Total Reagent & Wear Parts Cost - Processing**		28,233,337		28,233,337		28,233,337		7,360,834		104,635		2,924,167		3,248,405

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	2,280,000		3,750,000		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 (	$546,401		$898,687		$1,207,835		$1,207,835		$1,207,835		$1,207,835		$1,207,835	
Maintenance Outside Repairs	$27,320		$44,934		$60,392		$60,392		$60,392		$60,392		$60,392	
Maintenance: Allocation Labor and Fringes	$374,410		$463,844		$553,278		$553,278		$553,278		$553,278		$553,278	
Subtotal Crushing & Ore Storage	$948,132		$1,407,465		$1,821,505		$1,821,505		$1,821,505		$1,821,505		$1,821,505	
Grinding														
Maintenance Parts Allocation - Capital (New) Equipment (	$634,254		$1,043,181		$1,402,036		$1,402,036		$1,402,036		$1,402,036		$1,402,036	
Maintenance Outside Repairs	$31,713		$52,159		$70,102		$70,102		$70,102		$70,102		$70,102	
Maintenance: Allocation Labor and Fringes	$434,610		$538,423		$642,237		$642,237		$642,237		$642,237		$642,237	
Subtotal Grinding	$1,100,577		$1,633,764		$2,114,375		$2,114,375		$2,114,375		$2,114,375		$2,114,375	
Leaching														
Maintenance Parts Allocation - Capital (New) Equipment (	$413,239		$679,670		$913,476		$913,476		$913,476		$913,476		$913,476	
Maintenance Outside Repairs	$20,662		$33,983		$45,674		$45,674		$45,674		$45,674		$45,674	
Maintenance: Allocation Labor and Fringes	$283,164		$350,802		$418,440		$418,440		$418,440		$418,440		$418,440	
Subtotal Leaching	$717,065		$1,064,455		$1,377,590		$1,377,590		$1,377,590		$1,377,590		$1,377,590	
Carbon Handling & Refinery														
Maintenance Parts Allocation - Capital (New) Equipment (	$100,449		$165,212		$222,045		$222,045		$222,045		$222,045		$222,045	
Maintenance Outside Repairs	$5,022		$8,261		$11,102		$11,102		$11,102		$11,102		$11,102	
Maintenance: Allocation Labor and Fringes	$68,831		$85,272		$101,713		$101,713		$101,713		$101,713		$101,713	
Subtotal Carbon Handling & Refinery	$174,302		$258,745		$334,861		$334,861		$334,861		$334,861		$334,861	
Filtered Tailings														
Maintenance Parts Allocation - Capital (New) Equipment (	$334,180		$549,638		$738,714		$738,714		$738,714		$738,714		$738,714	
Maintenance Outside Repairs	$16,709		$27,482		$36,936		$36,936		$36,936		$36,936		$36,936	
Maintenance: Allocation Labor and Fringes	$228,990		$283,688		$338,386		$338,386		$338,386		$338,386		$338,386	
Subtotal Filtered Tailings	$579,879		$860,808		$1,114,036		$1,114,036		$1,114,036		$1,114,036		$1,114,036	
Ancillary Process Services														
Maintenance Parts Allocation - Capital (New) Equipment (	$122,023		$200,696		$269,736		$269,736		$269,736		$269,736		$269,736	
Maintenance Outside Repairs	$6,101		$10,035		$13,487		$13,487		$13,487		$13,487		$13,487	
Maintenance: Allocation Labor and Fringes	$83,614		$103,587		$123,559		$123,559		$123,559		$123,559		$123,559	
Subtotal Ancillary Process Services	$211,739	$0	$314,318	$0	$406,782	$0	$406,782	$0	$406,782	$0	$406,782	$0	$406,782	$0
Total Process Plant Maintenance	$3,731,693	$0	$5,539,555	$0	$7,169,148	$0	$7,169,148	$0	$7,169,148	$0	$7,169,148	$0	$7,169,148	$0

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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 (	$1,207,835		$1,207,835		$1,207,835		$314,900		$10,000		$125,097		$138,968	
Maintenance Outside Repairs	$60,392		$60,392		$60,392		$15,745		$500		$6,255		$6,948	
Maintenance: Allocation Labor and Fringes	$553,278		$553,278		$553,278		$284,976		$62,260		$62,260		$62,260	
Subtotal Crushing & Ore Storage	$1,821,505		$1,821,505		$1,821,505		$615,621		$72,760		$193,612		$208,177	
Grinding														
Maintenance Parts Allocation - Capital (New) Equipment (	$1,402,036		$1,402,036		$1,402,036		$365,531		$10,000		$145,211		$161,312	
Maintenance Outside Repairs	$70,102		$70,102		$70,102		$18,277		$500		$7,261		$8,066	
Maintenance: Allocation Labor and Fringes	$642,237		$642,237		$642,237		$330,796		$72,271		$72,271		$72,271	
Subtotal Grinding	$2,114,375		$2,114,375		$2,114,375		$714,603		$82,771		$224,742		$241,649	
Leaching														
Maintenance Parts Allocation - Capital (New) Equipment (	$913,476		$913,476		$913,476		$238,156		$10,000		$94,610		$105,101	
Maintenance Outside Repairs	$45,674		$45,674		$45,674		$11,908		$500		$4,731		$5,255	
Maintenance: Allocation Labor and Fringes	$418,440		$418,440		$418,440		$215,525		$47,087		$47,087		$47,087	
Subtotal Leaching	$1,377,590		$1,377,590		$1,377,590		$465,589		$57,587		$146,428		$157,443	
Carbon Handling & Refinery														
Maintenance Parts Allocation - Capital (New) Equipment (	$222,045		$222,045		$222,045		$57,890		$10,000		$22,998		$25,548	
Maintenance Outside Repairs	$11,102		$11,102		$11,102		$2,895		$500		$1,150		$1,277	
Maintenance: Allocation Labor and Fringes	$101,713		$101,713		$101,713		$52,389		$11,446		$11,446		$11,446	
Subtotal Carbon Handling & Refinery	$334,861		$334,861		$334,861		$113,174		$21,946		$35,593		$38,271	
Filtered Tailings														
Maintenance Parts Allocation - Capital (New) Equipment (	$738,714		$738,714		$738,714		$192,593		$10,000		$76,510		$84,993	
Maintenance Outside Repairs	$36,936		$36,936		$36,936		$9,630		$500		$3,825		$4,250	
Maintenance: Allocation Labor and Fringes	$338,386		$338,386		$338,386		$174,292		$38,079		$38,079		$38,079	
Subtotal Filtered Tailings	$1,114,036		$1,114,036		$1,114,036		$376,515		$48,579		$118,414		$127,321	
Ancillary Process Services														
Maintenance Parts Allocation - Capital (New) Equipment (	$269,736		$269,736		$269,736		$70,324		$10,000		$27,937		$31,035	
Maintenance Outside Repairs	$13,487		$13,487		$13,487		$3,516		$500		$1,397		$1,552	
Maintenance: Allocation Labor and Fringes	$123,559		$123,559		$123,559		$63,641		$13,904		$13,904		$13,904	
Subtotal Ancillary Process Services	$406,782	$0	$406,782	$0	$406,782	$0	$137,482	$0	$24,404	$0	$43,238	$0	$46,490	$0
Total Process Plant Maintenance	$7,169,148	$0	$7,169,148	$0	$7,169,148	$0	$2,422,985	$0	$308,047	$0	$762,027	$0	$819,351	$0

Operating Cost - Process Supplies & Services

	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
Processing Units Base Rate (tons/year ore)	Tonnes	2,280,000		3,750,000		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
rushing & Ore Storage														
Lubricants	$75,000		$75,000		$75,000		$75,000		$75,000		$75,000		$75,000	
Safety Items	$15,000		$15,000		$15,000		$15,000		$15,000		$15,000		$15,000	
Outside Services	$31,250		$31,250		$31,250		$31,250		$31,250		$31,250		$31,250	
Tools	$25,000		$25,000		$25,000		$25,000		$25,000		$25,000		$25,000	
Crusher Feed and Stockpile Management	$114,000		$187,500		$252,000		$252,000		$252,000		$252,000		$252,000	
Subtotal Crushing & Ore Storage	$260,250		$333,750		$398,250		$398,250		$398,250		$398,250		$398,250	
rinding														
Water Charges	$343,339		$564,702		$758,959		$758,959		$758,959		$758,959		$758,959	
Lubricants	25,000		25,000		25,000		25,000		25,000		25,000		25,000	
Safety Items	6,000		6,000		6,000		6,000		6,000		6,000		6,000	
Outside Services	250,000		250,000		250,000		250,000		250,000		250,000		250,000	
Tools	63,000		63,000		63,000		63,000		63,000		63,000		63,000	
Subtotal Grinding	$687,339		$908,702		$1,102,959		$1,102,959		$1,102,959		$1,102,959		$1,102,959	
eaching														
Lubricants	13,000		13,000		13,000		13,000		13,000		13,000		13,000	
Safety Items	6,000		6,000		6,000		6,000		6,000		6,000		6,000	
Outside Services	50,000		50,000		50,000		50,000		50,000		50,000		50,000	
Tools	8,000		8,000		8,000		8,000		8,000		8,000		8,000	
Subtotal Leaching	$77,000		$77,000		$77,000		$77,000		$77,000		$77,000		$77,000	
arbon Handling & Refinery														
Safety Items	6,000		6,000		6,000		6,000		6,000		6,000		6,000	
Diesel	317,940		317,940		317,940		317,940		317,940		317,940		317,940	
Outside Services	50,000		50,000		50,000		50,000		50,000		50,000		50,000	
Tools	8,000		8,000		8,000		8,000		8,000		8,000		8,000	
Subtotal Carbon Handling & Refinery	$381,940		$381,940		$381,940		$381,940		$381,940		$381,940		$381,940	
iltered Tailings														
Safety Items	6,000		6,000		6,000		6,000		6,000		6,000		6,000	
Tailings Compaction	$7,007,724		$7,482,184		$7,482,184		$7,610,972		$10,124,592		$10,124,592		$10,124,592	
Outside Services	75,000		75,000		75,000		75,000		75,000		75,000		75,000	
Filter Cloth	$570,000		$937,500		$1,260,000		$1,260,000		$1,260,000		$1,260,000		$1,260,000	
Tools	8,000		8,000		8,000		8,000		8,000		8,000		8,000	
Subtotal Filtered Tailings	$7,666,724		$8,508,684		$8,831,184		$8,959,972		$11,473,592		$11,473,592		$11,473,592	
ncillary														
Safety Items	6,000		6,000		6,000		6,000		6,000		6,000		6,000	
Outside Services	10,000		10,000		10,000		10,000		10,000		10,000		10,000	
Tools, Misc. Equipment	52,000		52,000		52,000		52,000		52,000		52,000		52,000	
Subtotal Ancillary	$68,000		$68,000		$68,000		$68,000		$68,000		$68,000		$68,000	
otal Process Plant Supplies & Services	$9,141,253		$10,278,075		$10,859,333		$10,988,121		$13,501,741		$13,501,741		$13,501,741	

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Processing Units Base Rate (tons/year ore)		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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
rushing & Ore Storage														
Lubricants	$75,000		$75,000		$75,000		$75,000		$5,000		$25,000		$25,000	
Safety Items	$15,000		$15,000		$15,000		$15,000		$1,000		$5,000		$5,000	
Outside Services	$31,250		$31,250		$31,250		$31,250		$0		$10,000		$10,000	
Tools	$25,000		$25,000		$25,000		$25,000		$0		$5,000		$5,000	
Crusher Feed and Stockpile Management	$252,000		$252,000		$252,000		$65,700		$0		$26,100		$28,994	
Subtotal Crushing & Ore Storage	$398,250		$398,250		$398,250		$211,950		$6,000		$71,100		$73,994	
rinding														
Water Charges	$758,959		$758,959		$758,959		$197,871		$0		$78,606		$87,323	
Lubricants	25,000		25,000		25,000		25,000		5,000		5,000		5,000	
Safety Items	6,000		6,000		6,000		6,000		1,000		2,000		2,000	
Outside Services	250,000		250,000		250,000		250,000		0		50,000		50,000	
Tools	63,000		63,000		63,000		63,000		0		15,000		15,000	
Subtotal Grinding	$1,102,959		$1,102,959		$1,102,959		$541,871		$6,000		$150,606		$159,323	
eaching														
Lubricants	13,000		13,000		13,000		13,000		1,000		2,000		2,000	
Safety Items	6,000		6,000		6,000		6,000		1,000		2,000		2,000	
Outside Services	50,000		50,000		50,000		50,000		0		10,000		10,000	
Tools	8,000		8,000		8,000		8,000		0		2,000		2,000	
Subtotal Leaching	$77,000		$77,000		$77,000		$77,000		$2,000		$16,000		$16,000	
arbon Handling & Refinery														
Safety Items	6,000		6,000		6,000		6,000		1,000		2,000		2,000	
Diesel	317,940		317,940		317,940		317,940		0		158,970		158,970	
Outside Services	50,000		50,000		50,000		50,000		0		10,000		10,000	
Tools	8,000		8,000		8,000		8,000		0		2,000		2,000	
Subtotal Carbon Handling & Refinery	$381,940		$381,940		$381,940		$381,940		$1,000		$172,970		$172,970	
iltered Tailings														
Safety Items	6,000		6,000		6,000		6,000		1,000		2,000		2,000	
Tailings Compaction	$11,649,775		$11,649,775		$12,147,984		$3,167,000		$0		$1,260,000		$1,400,000	
Outside Services	75,000		75,000		75,000		75,000		0		25,000		25,000	
Filter Cloth	$1,260,000		$1,260,000		$1,260,000		$328,500		$0		$130,500		$144,970	
Tools	8,000		8,000		8,000		8,000		0		4,000		4,000	
Subtotal Filtered Tailings	$12,998,775		$12,998,775		$13,496,984		$3,584,500		$1,000		$1,421,500		$1,575,970	
ncillary														
Safety Items	6,000		6,000		6,000		6,000		2,000		2,000		2,000	
Outside Services	10,000		10,000		10,000		10,000		2,000		2,000		2,000	
Tools, Misc. Equipment	52,000		52,000		52,000		52,000		10,000		10,000		10,000	
Subtotal Ancillary	$68,000		$68,000		$68,000		$68,000		$14,000		$14,000		$14,000	
otal Process Plant Supplies & Services	$15,026,924		$15,026,924		$15,525,133		$4,865,261		$30,000		$1,846,176		$2,012,257	

Torex Gold Resources Inc. - Morelos Project
Laboratory Cost Summary

	Total LOM		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
Processing Units Base Rate (tons/year ore)	Ore Tonnes	48,765,881		2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
	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
Labor & Fringes	$3,412,800	$0.07	$202,721	$0.09	$251,144	$0.07	$299,567	$0.06	$299,567	$0.06	$299,567	$0.06	$299,567	$0.06	$299,567	$0.06
Power	$431,387	$0.01	$19,608	$0.01	$32,250	$0.01	$43,344	$0.01	$43,344	$0.01	$43,344	$0.01	$43,344	$0.01	$43,344	$0.01
Reagents & Fuel	$167,669	$0.00	$16,000	$0.01	$16,000	$0.00	$16,000	$0.00	$16,000	$0.00	$16,000	$0.00	$16,000	$0.00	$16,000	$0.00
Assay Consumables	$1,362,314	$0.03	$130,000	$0.06	$130,000	$0.03	$130,000	$0.03	$130,000	$0.03	$130,000	$0.03	$130,000	$0.03	$130,000	$0.03
Wear & Maintenance Parts	$523,967	$0.01	$50,000	$0.02	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01
Maintenance Labor, Fringes, and Allocations	$377,256	$0.01	$36,000	$0.02	$36,000	$0.01	$36,000	$0.01	$36,000	$0.01	$36,000	$0.01	$36,000	$0.01	$36,000	$0.01
Supplies and Services	$52,397	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00
Total Laboratory Cost	6,327,790	$0.13	$459,329	$0.20	$520,394	$0.14	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Processing Units Base Rate (tons/year ore)		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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
Labor & Fringes	$299,567	$0.06	$299,567	$0.06	$299,567	$0.06	$154,298	$0.12	$136,033	$0.00	$136,033	$0.26	$136,033	$0.23
Power	$43,344	$0.01	$43,344	$0.01	$43,344	$0.01	$11,300	$0.01	$12,000	$0.00	$4,489	$0.01	$4,987	$0.01
Reagents & Fuel	$16,000	$0.00	$16,000	$0.00	$16,000	$0.00	$4,171	$0.00	$343	$0.00	$1,314	$0.00	$1,841	$0.00
Assay Consumables	$130,000	$0.03	$130,000	$0.03	$130,000	$0.03	$33,893	$0.03	$2,786	$0.00	$10,679	$0.02	$14,957	$0.03
Wear & Maintenance Parts	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$13,036	$0.01	$1,071	$0.00	$4,107	$0.01	$5,753	$0.01
Maintenance Labor, Fringes, and Allocations	$36,000	$0.01	$36,000	$0.01	$36,000	$0.01	$9,386	$0.01	$771	$0.00	$2,957	$0.01	$4,142	$0.01
Supplies and Services	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$1,304	$0.00	$107	$0.00	$411	$0.00	$575	$0.00
Total Laboratory Cost	$579,911	$0.12	$579,911	$0.12	$579,911	$0.12	$227,387	$0.17	$153,112	$0.00	$159,990	$0.31	$168,288	$0.29

Torex Gold Resources Inc. - Morelos Project
Table 9.9 Environmental Department Cost Summary

	Total LOM		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
Processing Units Base Rate (tons/year ore)	Ore Tonnes	48,765,881	Tonnes	2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
	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
Labor & Fringes	$3,352,053	$0.07	$ 261,666	$0.11	$ 261,666	$0.07	$ 261,666	$0.05	$ 261,666	$0.05	$ 261,666	$0.05	$ 261,666	$0.05	$ 261,666	$0.05
Outside Services	$1,392,000	$0.03	120,000	$0.05	120,000	$0.03	120,000	$0.02	120,000	$0.02	120,000	$0.02	120,000	$0.02	120,000	$0.02
Outside Analytical	$580,000	$0.01	50,000	$0.02	50,000	$0.01	50,000	$0.01	50,000	$0.01	50,000	$0.01	50,000	$0.01	50,000	$0.01
Outside Consultants	$232,000	$0.00	20,000	$0.01	20,000	$0.01	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.00
Outside Contractors	$116,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00
Audit	$116,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.00
Maintenance Labor, Fringe & Alloc	$23,200	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00
Supplies & Services	$232,000	$0.00	20,000	$0.01	20,000	$0.01	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.00
Total Environmental Department Cost	$6,043,253	$0.12	$ 493,666	$0.22	$ 493,666	$0.13	$ 493,666	$0.10	$ 493,666	$0.10	$ 493,666	$0.10	$ 493,666	$0.10	$ 493,666	$0.10

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Processing Units Base Rate (tons/year ore)		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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
Labor & Fringes	$ 261,666	$0.05	$ 261,666	$0.05	$ 261,666	$0.05	$ 205,071	$0.16	$ 176,774	$0.00	$ 176,774	$0.34	$ 176,774	
Outside Services	120,000	$0.02	120,000	$0.02	120,000	$0.02	120,000	$0.09	24,000	$0.00	24,000	$0.05	24,000	
Outside Analytical	50,000	$0.01	50,000	$0.01	50,000	$0.01	50,000	$0.04	10,000	$0.00	10,000	$0.02	10,000	
Outside Consultants	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.02	4,000	$0.00	4,000	$0.01	4,000	
Outside Contractors	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.01	2,000	$0.00	2,000	$0.00	2,000	
Audit	10,000	$0.00	10,000	$0.00	10,000	$0.00	10,000	$0.01	2,000	$0.00	2,000	$0.00	2,000	
Maintenance Labor, Fringe & Alloc	2,000	$0.00	2,000	$0.00	2,000	$0.00	2,000	$0.00	400	$0.00	400	$0.00	400	
Supplies & Services	20,000	$0.00	20,000	$0.00	20,000	$0.00	20,000	$0.02	4,000	$0.00	4,000	$0.01	4,000	
Total Environmental Department Cost	$ 493,666	$0.10	$ 493,666	$0.10	$ 493,666	$0.10	$ 437,071	$0.33	$ 223,174	$0.00	$ 223,174	$0.43	$ 223,174	

Torex Gold Resources Inc. - Morelos Project
General & Administrative Cost Summary

	Total LOM		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7	
	Ore Tonnes	48,765,881		2,280,000		3,750,000		5,040,000		5,040,000		5,040,000		5,040,000		5,040,000
	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
Labor & Fringes	$36,262,169	$0.74	$2,849,662	$1.25	$2,849,662	$0.76	$2,849,662	$0.57	$2,849,662	$0.57	$2,849,662	$0.57	$2,849,662	$0.57	$2,849,662	$0.57
Accounting (excluding labor)	$58,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00
Safety (excluding labor)	$139,200	$0.00	$12,000	$0.01	$12,000	$0.00	$12,000	$0.00	$12,000	$0.00	$12,000	$0.00	$12,000	$0.00	$12,000	$0.00
Human Resources (excluding labor)	$116,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00
Security (excluding labor)	$116,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00
Janitorial Services (contract)	$406,000	$0.01	$35,000	$0.02	$35,000	$0.01	$35,000	$0.01	$35,000	$0.01	$35,000	$0.01	$35,000	$0.01	$35,000	$0.01
Office Operating Supplies and Postage	$580,000	$0.01	$50,000	$0.02	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01
Maintenance Supplies	$116,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00
Maintenance Labor, Fringes, and Allocations	$162,400	$0.00	$14,000	$0.01	$14,000	$0.00	$14,000	$0.00	$14,000	$0.00	$14,000	$0.00	$14,000	$0.00	$14,000	$0.00
Propane	$58,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00
Communications/Computers	$1,160,000	$0.02	$100,000	$0.04	$100,000	$0.03	$100,000	$0.02	$100,000	$0.02	$100,000	$0.02	$100,000	$0.02	$100,000	$0.02
Licenses, Fees, and Vehicle Taxes	$174,000	$0.00	$15,000	$0.01	$15,000	$0.00	$15,000	$0.00	$15,000	$0.00	$15,000	$0.00	$15,000	$0.00	$15,000	$0.00
Claims Assessment	$2,912,000	$0.06	$208,000	$0.09	$208,000	$0.06	$208,000	$0.04	$208,000	$0.04	$208,000	$0.04	$208,000	$0.04	$208,000	$0.04
Land Ownership	$83,227,375	$1.71	$7,011,813	$3.08	$6,496,875	$1.73	$6,193,688	$1.23	$5,775,000	$1.15	$5,775,000	$1.15	$5,775,000	$1.15	$5,775,000	$1.15
Consultants, Legal, Environmental, Audits	$2,320,000	$0.05	$200,000	$0.09	$200,000	$0.05	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04
Insurances	$11,600,000	$0.24	$1,000,000	$0.44	$1,000,000	$0.27	$1,000,000	$0.20	$1,000,000	$0.20	$1,000,000	$0.20	$1,000,000	$0.20	$1,000,000	$0.20
Subs, Dues, PR, and Donations	$6,960,000	$0.14	$600,000	$0.26	$600,000	$0.16	$600,000	$0.12	$600,000	$0.12	$600,000	$0.12	$600,000	$0.12	$600,000	$0.12
Light Vehicles	$2,320,000	$0.05	$200,000	$0.09	$200,000	$0.05	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04
Camp Services	$14,732,000	$0.30	$711,000	$0.31	$881,000	$0.23	$1,314,000	$0.26	$1,314,000	$0.26	$1,314,000	$0.26	$1,314,000	$0.26	$1,314,000	$0.26
Bussing	$4,911,000	$0.10	$237,000	$0.10	$294,000	$0.08	$438,000	$0.09	$438,000	$0.09	$438,000	$0.09	$438,000	$0.09	$438,000	$0.09
Travel, Lodging, and Meals	$1,740,000	$0.04	$150,000	$0.07	$150,000	$0.04	$150,000	$0.03	$150,000	$0.03	$150,000	$0.03	$150,000	$0.03	$150,000	$0.03
Training	$870,000	$0.02	$75,000	$0.03	$75,000	$0.02	$75,000	$0.01	$75,000	$0.01	$75,000	$0.01	$75,000	$0.01	$75,000	$0.01
Total General & Administrative Cost	$161,790,029	$3.32	$13,508,474	$5.92	$13,220,537	$3.53	$13,494,349	$2.68	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59

	Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
		5,040,000		5,040,000		5,040,000		1,314,000		-		522,000		579,881
	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
Labor & Fringes	$2,849,662	$0.57	$2,849,662	$0.57	$2,849,662	$0.57	$2,386,808	$1.82	$1,792,915	$0.00	$1,792,915	$3.43	$ 1,792,915	$3.09
Accounting (excluding labor)	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$1,000	$0.00	$1,000	$0.00	$1,000	$0.00
Safety (excluding labor)	$12,000	$0.00	$12,000	$0.00	$12,000	$0.00	$12,000	$0.01	$2,400	$0.00	$2,400	$0.00	$2,400	$0.00
Human Resources (excluding labor)	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.01	$2,000	$0.00	$2,000	$0.00	$2,000	$0.00
Security (excluding labor)	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.01	$2,000	$0.00	$2,000	$0.00	$2,000	$0.00
Janitorial Services (contract)	$35,000	$0.01	$35,000	$0.01	$35,000	$0.01	$35,000	$0.03	$7,000	$0.00	$7,000	$0.01	$7,000	$0.01
Office Operating Supplies and Postage	$50,000	$0.01	$50,000	$0.01	$50,000	$0.01	$50,000	$0.04	$10,000	$0.00	$10,000	$0.02	$10,000	$0.02
Maintenance Supplies	$10,000	$0.00	$10,000	$0.00	$10,000	$0.00	$10,000	$0.01	$2,000	$0.00	$2,000	$0.00	$2,000	$0.00
Maintenance Labor, Fringes, and Allocations	$14,000	$0.00	$14,000	$0.00	$14,000	$0.00	$14,000	$0.01	$2,800	$0.00	$2,800	$0.01	$2,800	$0.00
Propane	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$5,000	$0.00	$1,000	$0.00	$1,000	$0.00	$1,000	$0.00
Communications/Computers	$100,000	$0.02	$100,000	$0.02	$100,000	$0.02	$100,000	$0.08	$20,000	$0.00	$20,000	$0.04	$20,000	$0.03
Licenses, Fees, and Vehicle Taxes	$15,000	$0.00	$15,000	$0.00	$15,000	$0.00	$15,000	$0.01	$3,000	$0.00	$3,000	$0.01	$3,000	$0.01
Claims Assessment	$208,000	$0.04	$208,000	$0.04	$208,000	$0.04	$208,000	$0.16	$208,000	$0.00	$208,000	$0.40	$208,000	$0.36
Land Ownership	$5,775,000	$1.15	$5,775,000	$1.15	$5,775,000	$1.15	$5,775,000	$4.39	$5,775,000	$0.00	$5,775,000	$11.06	$5,775,000	$9.96
Consultants, Legal, Environmental, Audits	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.15	$40,000	$0.00	$40,000	$0.08	$40,000	$0.07
Insurances	$1,000,000	$0.20	$1,000,000	$0.20	$1,000,000	$0.20	$1,000,000	$0.76	$200,000	$0.00	$200,000	$0.38	$200,000	$0.34
Subs, Dues, PR, and Donations	$600,000	$0.12	$600,000	$0.12	$600,000	$0.12	$600,000	$0.46	$120,000	$0.00	$120,000	$0.23	$120,000	$0.21
Light Vehicles	$200,000	$0.04	$200,000	$0.04	$200,000	$0.04	$200,000	$0.15	$40,000	$0.00	$40,000	$0.08	$40,000	$0.07
Camp Services	$1,314,000	$0.26	$1,314,000	$0.26	$1,314,000	$0.26	$657,000	$0.50	$657,000	$0.00	$657,000	$1.26	657,000	$1.13
Bussing	$438,000	$0.09	$438,000	$0.09	$438,000	$0.09	$219,000	$0.17	$219,000	$0.00	$219,000	$0.42	219,000	$0.38
Travel, Lodging, and Meals	$150,000	$0.03	$150,000	$0.03	$150,000	$0.03	$150,000	$0.11	$30,000	$0.00	$30,000	$0.06	$30,000	$0.05
Training	$75,000	$0.01	$75,000	$0.01	$75,000	$0.01	$75,000	$0.06	$15,000	$0.00	$15,000	$0.03	$15,000	$0.03
Total General & Administrative Cost	$13,075,662	$2.59	$13,075,662	$2.59	$13,075,662	$2.59	$11,736,808	$8.93	$9,150,115	$0.00	$9,150,115	$17.53	$ 9,150,115	$15.78

Torex Gold Resources Inc. - Morelos Project
Detail Power Summary

										44.6%		73.4%		98.6%		98.6%		98.6%		98.6%		98.6%		98.6%		98.6%		98.6%		25.7%		0.0%		10.2%		11.3%
									Tonnes	2,280,000	-	3,750,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	5,040,000	-	1,314,000	-	-	-	522,000	-	579,881
									Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10		Year 11		Year 12		Year 13		Year 14	
Equipment	Tag Number	Connected HP	Connected Kilowatt	Full Load Current %	Oper Load @ Motor Eff (kw)	Operating Factor	Available Hours	Days	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr	Operating Factor	Annual kWhr
Area 100 - Crushing & Ore Storage																																				
HVAC Unit	100-BG-01	15	11	80%	10	50%	24	365	22%	18,763.66	37%	30,861.28	49%	41,477.56	49%	41,477.56	49%	41,477.56	49%	41,477.56	49%	41,477.56	49%	41,477.56	49%	41,477.56	49%	41,477.56	13%	10,813.79	0%	-	5%	4,295.89	6%	4,772.23
Crushing Area Air Compressor	100-CM-01	50	37	80%	32	75%	24	365	33%	93,818	55%	154,306	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	19%	54,069	0%	-	8%	21,479	9%	23,861
Crushing Area Air Compressor	100-CM-02	50	37	80%	32	75%	24	365	33%	93,818	55%	154,306	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	74%	207,388	19%	54,069	0%	-	8%	21,479	9%	23,861
Primary Crusher	100-CR-01	500	373	80%	320	75%	24	365	33%	938,183	55%	1,543,064	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	19%	540,690	0%	-	8%	214,794	9%	238,611
Lubrication System Pump No. 1 (on-line)	100-CR-01	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Hydraulic System Pump	100-CR-01	8	6	50%	3	75%	24	365	33%	8,795	55%	14,466	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	19%	5,069	0%	-	8%	2,014	9%	2,237
Primary Crusher	100-CR-02	500	373	80%	320	75%	24	365	33%	938,183	55%	1,543,064	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	74%	2,073,878	19%	540,690	0%	-	8%	214,794	9%	238,611
Lubrication System Pump No. 1 (on-line)	100-CR-02	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Hydraulic System Pump	100-CR-02	8	6	50%	3	75%	24	365	33%	8,795	55%	14,466	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	74%	19,443	19%	5,069	0%	-	8%	2,014	9%	2,237
Coarse Ore Stockpile Feed Conveyor	100-CV-01	250	186	80%	160	75%	24	365	33%	469,091	55%	771,532	74%	1,036,939	74%	1,036,939	74%	1,036,939	74%	1,036,939	74%	1,036,939	74%	1,036,939	74%	1,036,939	74%	1,036,939	19%	270,345	0%	-	8%	107,397	9%	119,306
Primary Crusher Dust Collector	100-DC-01	15	11	80%	10	75%	24	365	33%	28,145	55%	46,292	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	19%	16,221	0%	-	8%	6,444	9%	7,158
Primary Crusher Dust Collector	100-DC-02	15	11	80%	10	75%	24	365	33%	28,145	55%	46,292	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	74%	62,216	19%	16,221	0%	-	8%	6,444	9%	7,158
Crusher Discharge Feeder	100-FD-01	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Crusher Discharge Feeder	100-FD-02	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Tramp Iron Magnet	100-MG-01	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Tramp Iron Magnet	100-MG-02	20	15	80%	13	75%	24	365	33%	37,527	55%	61,723	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	74%	82,955	19%	21,628	0%	-	8%	8,592	9%	9,544
Crushing Area Sump Pump	100-PP-01	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Rock Breaker	100-RP-01	75	56	80%	48	40%	24	365	18%	75,055	29%	123,445	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	10%	43,255	0%	-	4%	17,184	5%	19,089
Rock Breaker	100-RP-02	75	56	80%	48	40%	24	365	18%	75,055	29%	123,445	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	39%	165,910	10%	43,255	0%	-	4%	17,184	5%	19,089
Stockpile Feed Belt Scale	100-SC-01	0	0	80%	0	75%	24	365	33%	469	55%	772	74%	1,037	74%	1,037	74%	1,037	74%	1,037	74%	1,037	74%	1,037	74%	1,037	74%	1,037	19%	270	0%	-	8%	107	9%	119
Miscellaneous lighting and small power allowance (2% of subtotal)										60,155		98,939		132,974		132,974		132,974		132,974		132,974		132,974		132,974		132,974		34,668		-		13,772		15,299
Total kWh/year		1,705	1,272		1,088					3,067,891		5,045,873		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653		1,768,074		-		702,385		780,268
Area 200 - Grinding and Classification																																				
Plant Air Compressor	200-CM-01	75	56	80%	48	92%	24	365	41%	172,626	68%	283,924	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	24%	99,487	0%	-	9%	39,522	10%	43,904
Plant Air Compressor	200-CM-02	75	56	80%	48	92%	24	365	41%	172,626	68%	283,924	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	91%	381,594	24%	99,487	0%	-	9%	39,522	10%	43,904
Pebble Crusher	200-CR-01	800	597	80%	512	92%	24	365	41%	1,841,340	68%	3,028,520	91%	4,070,331	91%	4,070,331	91%	4,070,331	91%	4,070,331	91%	4,070,331	91%	4,070,331	91%	4,070,331	91%	4,070,331	24%	1,061,193	0%	-	9%	421,570	10%	468,315
Lubrication System Pump No. 1 (on-line)	200-CR-01	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Hydraulic System Pump	200-CR-01	0	0	80%	0	92%	24	365	41%	575	68%	946	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	24%	332	0%	-	9%	132	10%	146
SAG Mill Feed Conveyor No. 2	200-CV-01	200	149	50%	80	92%	24	365	41%	287,709	68%	473,206	91%	635,989	91%	635,989	91%	635,989	91%	635,989	91%	635,989	91%	635,989	91%	635,989	91%	635,989	24%	165,811	0%	-	9%	65,870	10%	73,174
SAG Oversize Conveyor No. 3	200-CV-02	25	19	50%	10	92%	24	365	41%	35,964	68%	59,151	91%	79,499	91%	79,499	91%	79,499	91%	79,499	91%	79,499	91%	79,499	91%	79,499	91%	79,499	24%	20,726	0%	-	9%	8,234	10%	9,147
SAG Oversize Conveyor No. 4	200-CV-03	150	112	50%	60	92%	24	365	41%	215,782	68%	354,905	91%	476,992	91%	476,992	91%	476,992	91%	476,992	91%	476,992	91%	476,992	91%	476,992	91%	476,992	24%	124,359	0%	-	9%	49,403	10%	54,881
Reclaim Conveyor Dust Collector	200-DC-01	15	11	50%	6	92%	24	365	41%	21,578	68%	35,490	91%	47,699	91%	47,699	91%	47,699	91%	47,699	91%	47,699	91%	47,699	91%	47,699	91%	47,699	24%	12,436	0%	-	9%	4,940	10%	5,488
Instrument Air Dryer	200-DR-01	1	0	80%	0	92%	24	365	41%	1,151	68%	1,893	91%	2,544	91%	2,544	91%	2,544	91%	2,544	91%	2,544	91%	2,544	91%	2,544	91%	2,544	24%	663	0%	-	9%	263	10%	293
Reclaim Feeder	200-FE-01	20	15	80%	13	92%	24	365	41%	46,034	68%	75,713	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	24%	26,530	0%	-	9%	10,539	10%	11,708
Reclaim Feeder	200-FE-02	20	15	80%	13	92%	24	365	41%	46,034	68%	75,713	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	24%	26,530	0%	-	9%	10,539	10%	11,708
Lime Feeder	200-FE-03	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Pebble Crusher Feeder	200-FE-04	15	11	80%	10	92%	24	365	41%	34,525	68%	56,785	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	24%	19,897	0%	-	9%	7,904	10%	8,781
SAG Mill Ball Feeder	200-FE-05	8	6	80%	5	50%	24	365	22%	9,382	37%	15,431	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	13%	5,407	0%	-	5%	2,148	6%	2,386
Lime Bin Vent Filter	200-FL-01	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Grinding Area Overhead Crane	200-HO-01	20	15	80%	13	50%	24	365	22%	25,018	37%	41,148	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	13%	14,418	0%	-	5%	5,728	6%	6,363
Mill Liner Handler	200-LH-01	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Metal Detector	200-MD-01	0	0	80%	0	92%	24	365	41%	575	68%	946	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	24%	332	0%	-	9%	132	10%	146
Self Cleaning Magnet	200-MG-01	20	15	80%	13	92%	24	365	41%	46,034	68%	75,713	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	24%	26,530	0%	-	9%	10,539	10%	11,708
SAG Mill	200-ML-01	7,000	5,220	80%	4,481	92%	24	365	41%	16,111,726	68%	26,499,550	91%	35,615,395	91%	35,615,395	91%	35,615,395	91%	35,615,395	91%	35,615,395	91%	35,615,395	91%	35,615,395	91%	35,615,395	24%	9,285,442	0%	-	9%	3,688,737	10%	4,097,753
High Pressure Lube Pump	200-ML-01	40	30	80%	26	92%	24	365	41%	92,067	68%	151,426	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	24%	53,060	0%	-	9%	21,078	10%	23,416
Low Pressure Lube Pump	200-ML-01	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Ball Mill	200-ML-02	15,000	11,185	80%	9,601	92%	24	365	41%	34,525,128	68%	56,784,750	91%	76,318,704	91%	76,318,704	91%	76,318,704	91%	76,318,704	91%	76,318,704	91%	76,318,704	91%	76,318,704	91%	76,318,704	24%	19,897,376	0%	-	9%	7,904,437	10%	8,780,898
High Pressure Lube Pump	200-ML-02	30	22	80%	19	92%	24	365	41%	69,140	68%	113,717	91%	152,835	91%	152,835	91%	152,835	91%	152,835	91%	152,835	91%	152,835	91%	152,835	91%	152,835	24%	39,846	0%	-	9%	15,829	10%	17,585
Pinion Bearing Lube Pump	200-ML-02	1	1	80%	1	92%	24	365	41%	2,302	68%	3,786	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	24%	1,326	0%	-	9%	527	10%	585
Ball Feed System	200-MS-01	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Cyclone Feed Pump	200-PP-01	700	522	80%	448	92%	24	365	41%	1,611,173	68%	2,649,955	91%	3,561,540	91%	3,561,540	91%	3,561,540	91%	3,561,540	91%	3,561,540	91%	3,561,540	91%	3,561,540	91%	3,561,540	24%	928,544	0%	-	9%	368,874	10%	409,775
Cyclone Feed Pump (standby)	200-PP-02	700	522	80%	448	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Grinding Area Sump Pump	200-PP-04	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Pebble Crushing Area Sump Pump	200-PP-05	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Reclaim Tunnel Area Sump Pump	200-PP-06	10	7	80%	6	10%	24	365	4%	2,502	7%	4,115	10%	5,530	10%	5,530	10%	5,530	10%	5,530	10%	5,530	10%	5,530	10%	5,530	10%	5,530	3%	1,442	0%	-	1%	573	1%	636
SAG Mill Feed Belt Scale	200-SC-01	0	0	80%	0	92%	24	365	41%	575	68%	946	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	91%	1,272	24%	332	0%	-	9%	132	10%	146
SAG Mill Discharge Screen	200-SR-01	30	22	80%	19	92%	24	365	41%	69,050	68%	113,570	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	24%	39,795	0%	-	9%	15,809	10%	17,562
SAG Mill Discharge Screen (uninstalled spare)	200-SR-02	-	-	80%	-	92%	24	365	41%	-	68%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	24%	-	0%	-	9%	-	10%	-
Trash Screen	200-SR-03	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Miscellaneous lighting and small power allowance (2% of subtotal)										1,111,075		1,827,426		2,456,060		2,456,060		2,456,060		2,456,060		2,456,060		2,456,060		2,456,060		2,456,060		640,330		-		254,378		282,584
Total kWh/year		25,071	18,695		15,954					56,664,823		93,198,721		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082		32,656,832		-		12,973,262		14,411,766
Area 300 - Leaching																																				
Leach Tank Agitator	300-AG-01	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-02	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-03	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-04	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-05	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-06	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-07	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-08	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-09	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-10	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
Leach Tank Agitator	300-AG-11	200	149	80%	128	92%	24	365	41%	460,335	68%	757,130	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	91%	1,017,583	24%	265,298	0%	-	9%	105,392	10%	117,079
CIP Agitator and Screen	300-AG-12	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-13	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-14	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-15	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-16	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-17	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-18	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen	300-AG-19	74	55	80%	47	92%	24	365	41%	169,633	68%	279,002	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	91%	374,979	24%	97,762	0%	-	9%	38,837	10%	43,143
CIP Agitator and Screen (spare)	300-AG-20	-	-	80%	-	92%	24	365	41%	-	68%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	24%	-	0%	-	9%	-	10%	-
Plant Control/Electrical Room - HVAC Unit	300-BG-01	15	11	80%	10	50%	24	365	22%	18,764	37%	30,861	49%	41,478	49%	41,478	49%	41,478	49%	41,478	49%	41,478	49%	41,478	49%	41,478	49%	41,478	13%	10,814	0%	-	5%	4,296	6%	4,772
Process Air Compressor	300-CM-01	350	261	80%	224	92%	24	365	41%	805,586	68%	1,324,978	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	24%	464,272	0%	-	9%	184,437	10%	204,888
Process Air Compressor	300-CM-02	350	261	80%	224	92%	24	365	41%	805,586	68%	1,324,978	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	91%	1,780,770	24%	464,272	0%	-	9%	184,437	10%	204,888
Preleach Thickener Underflow Pump	300-PP-001	100	75	80%	64	92%	24	365	41%	230,168	68%	378,565	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	24%	132,649	0%	-	9%	52,696	10%	58,539
Preleach Thickener Underflow Pump	300-PP-002	100	75	80%	64	92%	24	365	41%	230,168	68%	378,565	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	24%	132,649	0%	-	9%	52,696	10%	58,539
Carbon Advance Pump	300-PP-04	20	15	80%	13	92%	24	365	41%	46,034	68%	75,713	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	24%	26,530	0%	-	9%	10,539	10%	11,708
Carbon Advance Pump	300-PP-07	60	45	80%	38	92%	24	365	41%	138,101	68%	227,139	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	24%	79,590	0%	-	9%	31,618	10%	35,124
Preleach Thickener Area Sump Pump	300-PP-13	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Leaching Area Sump Pump	300-PP-14	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
Leaching Area Sump Pump	300-PP-15	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
CIP Area Sump Pump	300-PP-16	25	19	80%	16	10%	24	365	4%	6,255	7%	10,287	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	10%	13,826	3%	3,605	0%	-	1%	1,432	1%	1,591
CIP/Leach Tank Drain Pump	300-PP-17	60	45	80%	38	10%	24	365	4%	15,011	7%	24,689	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	3%	8,651	0%	-	1%	3,437	1%	3,818
Process Water Pump	300-PP-018	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
CIP Tailing Pump	300-PP-019	40	30	80%	26	92%	24	365	41%	92,067	68%	151,426	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	24%	53,060	0%	-	9%	21,078	10%	23,416
CIP Tailing Pump	300-PP-020	40	30	80%	26	92%	24	365	41%	92,067	68%	151,426	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	24%	53,060	0%	-	9%	21,078	10%	23,416
Leach Feed Sampler	300-SA-01A	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Leach Feed Sampler	300-SA-01B	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Leach Tailing Sampler	300-SA-02A	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171

Leach Tailing Sampler	300-SA-02B	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
CIP Tailing Sampler	300-SA-03A	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
CIP Tailing Sampler	300-SA-03B	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
On-Stream Analyzer	300-SA-04	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Carbon Safety Screen - CIC	300-SR-01	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Preleach Thickener	300-TH-01	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
Pressure Washer	300-WA-01	30	22	80%	19	92%	24	365	41%	69,050	68%	113,570	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	24%	39,795	0%	-	9%	15,809	10%	17,562
Miscellaneous lighting and small power allowance (2% of subtotal)										183,174		301,273		404,911		404,911		404,911		404,911		404,911		404,911		404,911		404,911		105,566		-		41,937		46,587
Total kWh/year		4,129	3,079		2,643					9,341,870		15,364,917		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449		5,383,867		-		2,138,797		2,375,951
Area 400 - Carbon Handling & Refinery																																				
Carbon Conditioning Tank Agitator	400-AG-01	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Cathode Sludge Tank Agitator	400-AG-02	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Flux Mixer	400-AG-03	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Carbon Attrition Agitator	400-AG-04	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Refiniery Air Compressor	400-CM-01	15	11	80%	10	92%	24	365	41%	34,525	68%	56,785	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	24%	19,897	0%	-	9%	7,904	10%	8,781
Wet Scrubber	400-DC-01	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Instrument Air Dryer	400-DR-01	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Sludge Filter Press	400-FL-003	20	15	80%	13	92%	24	365	41%	46,034	68%	75,713	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	91%	101,758	24%	26,530	0%	-	9%	10,539	10%	11,708
Acid Wash Fan	400-FN-001	1	1	80%	1	92%	24	365	41%	2,302	68%	3,786	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	24%	1,326	0%	-	9%	527	10%	585
Electrowinning Cells Exhaust Fan	400-FN-003	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Dry Filter Fan	400-FN-004	30	22	80%	19	92%	24	365	41%	69,050	68%	113,570	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	91%	152,637	24%	39,795	0%	-	9%	15,809	10%	17,562
Refinery Roof Exhaust Fan	400-FN-05	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Kiln Exhaust Fan	400-FN-06	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Scrubber Fan	400-FN-07	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Melting Furnace	400-FU-001	8	6	80%	5	50%	24	365	22%	9,382	37%	15,431	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	49%	20,739	13%	5,407	0%	-	5%	2,148	6%	2,386
Mercury Retort Furnace	400-FU-002	133	99	80%	85	50%	24	365	22%	166,371	37%	273,637	49%	367,768	49%	367,768	49%	367,768	49%	367,768	49%	367,768	49%	367,768	49%	367,768	49%	367,768	13%	95,882	0%	-	5%	38,090	6%	42,314
Carbon Regeneration Kiln	400-KN-001	34	25	80%	21	92%	24	365	41%	77,106	68%	126,819	91%	170,445	91%	170,445	91%	170,445	91%	170,445	91%	170,445	91%	170,445	91%	170,445	91%	170,445	24%	44,437	0%	-	9%	17,653	10%	19,611
Refinery Building Monorail Hoist	400-HO-01	2	1	80%	1	30%	24	365	13%	1,501	22%	2,469	30%	3,318	30%	3,318	30%	3,318	30%	3,318	30%	3,318	30%	3,318	30%	3,318	30%	3,318	8%	865	0%	-	3%	344	3%	382
Kiln Area Monorail Crane	400-HO-02	8	6	80%	5	30%	24	365	13%	5,629	22%	9,258	30%	12,443	30%	12,443	30%	12,443	30%	12,443	30%	12,443	30%	12,443	30%	12,443	30%	12,443	8%	3,244	0%	-	3%	1,289	3%	1,432
Carbon Attrition Tank Hoist	400-HO-03	3	2	80%	2	30%	24	365	13%	2,252	22%	3,703	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	8%	1,298	0%	-	3%	516	3%	573
Strip Solution Heater	400-HT-01	2	1	80%	1	92%	24	365	41%	3,453	68%	5,678	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	24%	1,990	0%	-	9%	790	10%	878
Acid Wash Recirculation Pump	400-PP-01	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Loaded Carbon Screen Underflow Pump	400-PP-02	40.0	30	80%	26	92%	24	365	41%	92,067	68%	151,426	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	91%	203,517	24%	53,060	0%	-	9%	21,078	10%	23,416
Acid Washed Carbon Transfer Pump	400-PP-03	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Stripped Carbon Transfer Pump	400-PP-04	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Carbon Transport Water Pump	400-PP-05	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Pregnant Solution Pump	400-PP-06	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Barren Strip Solution Pump	400-PP-07	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Carbon Handling Area Sump Pump	400-PP-08	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Strip Solution Area Sump Pump	400-PP-09	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Acid Wash Area Sump Pump	400-PP-10	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Barren Solution Pump	400-PP-11	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Filter Press Feed Pump	400-PP-12	50.0	37	80%	32	92%	24	365	41%	115,084	68%	189,283	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	24%	66,325	0%	-	9%	26,348	10%	29,270
Refinery Area Sump Pump	400-PP-14	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Regenerated Carbon Transfer Pump	400-PP-17	7.5	6	80%	5	33%	24	365	15%	6,192	24%	10,184	33%	13,688	33%	13,688	33%	13,688	33%	13,688	33%	13,688	33%	13,688	33%	13,688	33%	13,688	8%	3,569	0%	-	3%	1,418	4%	1,575
Carbon Transfer Pump	400-PP-18	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Carbon Transfer Pump, unistalled spare	400-PP-19	-	-	80%	-	92%	24	365	41%	-	68%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	24%	-	0%	-	9%	-	10%	-
Electrowinning Sludge Pump	400-PP-20	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Electrowinning Sludge Pump	400-PP-21	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Electrowinning Sludge Pump	400-PP-22	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Electrowinning Sludge Pump	400-PP-23	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Cathode Wash Sludge Pump	400-PP-25	5.0	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Boiler Circulation Pump	400-PP-27	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Boiler Chemical Pump	400-PP-28	1.0	1	80%	1	92%	24	365	41%	2,302	68%	3,786	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	91%	5,088	24%	1,326	0%	-	9%	527	10%	585
Concentrated Acid Transfer Pump	400-PP-29	5.0	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Strip Vessel Drain Pump	400-PP-30	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Carbon Fines Pump	400-PP-32	5.0	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Nutralization Pump	400-PP-33	5.0	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Caustic Transfer Pump	400-PP-34	5.0	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
New Carbon Transfer Pump	400-PP-36	7.5	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Scrubber Pump	400-PP-37	10.0	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Electrowinning Cell Rectifier	400-RC-01	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
Electrowinning Cell Rectifier	400-RC-02	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
Electrowinning Cell Rectifier	400-RC-03	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
Electrowinning Cell Rectifier	400-RC-04	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
Loaded Carbon Desliming Screen (CIC)	400-SR-01	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Loaded Carbon Desliming Screen (CIP)	400-SR-02	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Pressure Washer	400-WA-01	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
			-	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)										27,339		44,965		60,433		60,433		60,433		60,433		60,433		60,433		60,433		60,433		15,756		-		6,259		6,953
Total kWh/year		698	520		447					1,394,271		2,293,209		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073		803,540		-		319,215		354,610
Area 500 - Reagents Systems																																				
Milk of Lime Tank Agitator	500-AG-01	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Sodium Cyanide Mix Tank Agitator	500-AG-02	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Copper Sulfate Dosing Tank Agitator	500-AG-04	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Copper Sulfate Mix Tank Agitator	500-AG-05	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Sodium Metabisulfite Mix Tank Agitator	500-AG-06	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Sodium Metabisulfite Distribution Tank Agitator	500-AG-07	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Caustic Mix/Storage Tank Agitator	500-AG-08	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Lime Silo Bin Activator	500-BA-01	10	7	80%	6	92%	24	365	41%	23,017	68%	37,857	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	91%	50,879	24%	13,265	0%	-	9%	5,270	10%	5,854
Lime Silo Bin Vent Filter	500-DC-01	2	1	80%	1	92%	24	365	41%	3,453	68%	5,678	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	24%	1,990	0%	-	9%	790	10%	878
Lime Feeder	500-FE-03	3	2	80%	2	92%	24	365	41%	6,905	68%	11,357	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	91%	15,264	24%	3,979	0%	-	9%	1,581	10%	1,756
Reagent Building Hoist	500-HO-01	3	2	80%	2	30%	24	365	13%	2,252	22%	3,703	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	30%	4,977	8%	1,298	0%	-	3%	516	3%	573
Lime Slaking Mill	500- ML-01	150	112	80%	96	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
M.O.L. Distribution Pump	500-PP-01	15	11	80%	10	92%	24	365	41%	34,525	68%	56,785	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	24%	19,897	0%	-	9%	7,904	10%	8,781
M.O.L. Distribution Pump	500-PP-02	15	11	80%	10	92%	24	365	41%	34,525	68%	56,785	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	91%	76,319	24%	19,897	0%	-	9%	7,904	10%	8,781
Sodium Cyanide Area Sump Pump	500-PP-05	8	6	80%	5	10%	24	365	4%	1,876	7%	3,086	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	3%	1,081	0%	-	1%	430	1%	477
Sodium Cyanide Transfer Pump	500-PP-06	3	2	80%	2	10%	24	365	4%	751	7%	1,234	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	3%	433	0%	-	1%	172	1%	191
Sodium Cyanide Distribution Pump	500-PP-07	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Sodium Cyanide Distribution Pump	500-PP-08	8	6	80%	5	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Flocculant Dosing Pump	500-PP-10	2	1	80%	1	92%	24	365	41%	3,453	68%	5,678	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	24%	1,990	0%	-	9%	790	10%	878
Flocculant Dosing Pump	500-PP-11	8	6	80%	5	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Flocculant Area Sump Pump	500-PP-12	8	6	80%	5	10%	24	365	4%	1,876	7%	3,086	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	3%	1,081	0%	-	1%	430	1%	477
Copper Sulfate Transfer Pump	500-PP-13	3	2	80%	2	10%	24	365	4%	751	7%	1,234	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	3%	433	0%	-	1%	172	1%	191
Copper Sulfate Dosing Pump	500-PP-14	2	1	80%	1	92%	24	365	41%	3,453	68%	5,678	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	24%	1,990	0%	-	9%	790	10%	878
Copper Sulfate Dosing Pump	500-PP-15	2	1	80%	1	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Sodium Metabisulfite Transfer Pump	500-PP-17	1	1	80%	1	10%	24	365	4%	300	7%	494	10%	664	10%	664	10%	664	10%	664	10%	664	10%	664	10%	664	10%	664	3%	173	0%	-	1%	69	1%	76
Sodium Metabisulfite Distribution Pump	500-PP-18	2	1	80%	1	92%	24	365	41%	3,453	68%	5,678	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	91%	7,632	24%	1,990	0%	-	9%	790	10%	878
Sodium Metabisulfite Distribution Pump	500-PP-19	2	1	80%	1	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
General Reagent Area Sump Pump	500-PP-20	8	6	80%	5	10%	24	365	4%	1,876	7%	3,086	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	10%	4,148	3%	1,081	0%	-	1%	430	1%	477
Lime Area Sump Pump	500-PP-21	15	11	80%	10	10%	24	365	4%	3,753	7%	6,172	10%	8,296	10%	8,296	10%	8,296	10%	8,296	10%	8,296	10%	8,296	10%	8,296	10%	8,296	3%	2,163	0%	-	1%	859	1%	954
Hydrochloric Acid Pump	500-PP-22	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Caustic Dosing Pump	500-PP-24	5	3	80%	3	92%	24	365	41%	10,358	68%	17,035	91%	22,896	91%	22,896	91%	22,896	91%	22,896	91%	22,896	91%	22,896	91%	22,896	91%	22,896	24%	5,969	0%	-	9%	2,371	10%	2,634
Caustic Dosing Pump	500-PP-25	5	3	80%	3	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Caustic Transfer Pump	500-PP-26	3	2	80%	2	10%	24	365	4%	751	7%	1,234	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	3%	433	0%	-	1%	172	1%	191
Fuel Oil Pump	500-PP-27	8	6	80%	5	92%	24	365	41%	17,263	68%	28,392	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	91%	38,159	24%	9,949	0%	-	9%	3,952	10%	4,390
Fuel Oil Pump	500-PP-28	8	6	80%	5	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)										6,682		10,991		14,772		14,772		14,772		14,772		14,772		14,772		14,772		14,772		3,851		-		1,530		1,700
Total kWh/year		370	276		237					340,801		560,527		753,349		753,349		753,349		753,349		753,349		753,349		753,349		753,349		196,409		-		78,025		86,677

Area 600 - Filtered Tailings																																				
Cyanide Destruction Agitator	600-AG-01	100	75	80%	64	92%	24	365	41%	230,168	68%	378,565	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	24%	132,649	0%	-	9%	52,696	10%	58,539
Cyanide Destruction Agitator	600-AG-02	100	75	80%	64	92%	24	365	41%	230,168	68%	378,565	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	24%	132,649	0%	-	9%	52,696	10%	58,539
Filter Feed Tank Agitator	600-AG-03	45	34	80%	29	92%	24	365	41%	103,575	68%	170,354	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	24%	59,692	0%	-	9%	23,713	10%	26,343
Filter Feed Tank Agitator	600-AG-04	45	34	80%	29	92%	24	365	41%	103,575	68%	170,354	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	24%	59,692	0%	-	9%	23,713	10%	26,343
Filter Feed Tank Agitator	600-AG-05	45	34	80%	29	92%	24	365	41%	103,575	68%	170,354	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	24%	59,692	0%	-	9%	23,713	10%	26,343
Filter Feed Tank Agitator	600-AG-06	45	34	80%	29	92%	24	365	41%	103,575	68%	170,354	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	91%	228,956	24%	59,692	0%	-	9%	23,713	10%	26,343
Air Compressor System	600-CM-01	1,333	994	80%	853	92%	24	365	41%	3,068,133	68%	5,046,271	91%	6,782,189	91%	6,782,189	91%	6,782,189	91%	6,782,189	91%	6,782,189	91%	6,782,189	91%	6,782,189	91%	6,782,189	24%	1,768,214	0%	-	9%	702,441	10%	780,329
Air Compressor System (spare)	600-CM-02	-	-	80%	-	92%	24	365	41%	-	68%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	91%	-	24%	-	0%	-	9%	-	10%	-
Tailing Filter Discharge Conveyor	600-CV-01	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-02	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-03	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-04	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-05	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-06	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Discharge Conveyor	600-CV-07	60	45	50%	24	92%	24	365	41%	86,313	68%	141,962	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	91%	190,797	24%	49,743	0%	-	9%	19,761	10%	21,952
Tailing Filter Collecting Conveyor	600-CV-08	100	75	50%	40	92%	24	365	41%	143,855	68%	236,603	91%	317,995	91%	317,995	91%	317,995	91%	317,995	91%	317,995	91%	317,995	91%	317,995	91%	317,995	24%	82,906	0%	-	9%	32,935	10%	36,587
Stacking System Overland Conveyor	600-CV-601	250	186	50%	100	92%	24	365	41%	359,637	68%	591,508	91%	794,987	91%	794,987	91%	794,987	91%	794,987	91%	794,987	91%	794,987	91%	794,987	91%	794,987	24%	207,264	0%	-	9%	82,338	10%	91,468
Stacking System Grasshopper Conveyor No. 1	600-CV-602	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 2	600-CV-603	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 3	600-CV-604	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 4	600-CV-605	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 5	600-CV-606	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 6	600-CV-607	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 7	600-CV-608	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 8	600-CV-609	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 9	600-CV-610	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 10	600-CV-611	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 11	600-CV-612	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 12	600-CV-613	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 13	600-CV-614	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 14	600-CV-615	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 15	600-CV-616	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 16	600-CV-617	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 17	600-CV-618	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Grasshopper Conveyor No. 18	600-CV-619	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Transverse Conveyor	600-CV-620	50	37	50%	20	92%	24	365	41%	71,927	68%	118,302	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	24%	41,453	0%	-	9%	16,468	10%	18,294
Stacking System Belt Wagon (Horizontal conveyor)	600-CV-621	50	37	50%	20	92%	24	365	41%	71,927	68%	118,302	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	24%	41,453	0%	-	9%	16,468	10%	18,294
Stacking System Radial Stacker Motor No. 1	600-CV-622	75	56	50%	30	92%	24	365	41%	107,891	68%	177,452	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	91%	238,496	24%	62,179	0%	-	9%	24,701	10%	27,440
Stacking System Radial Stacker Motor No. 2	600-CV-622	50	37	50%	20	92%	24	365	41%	71,927	68%	118,302	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	91%	158,997	24%	41,453	0%	-	9%	16,468	10%	18,294
Tailing Filter	600-FL-01	89	66	80%	57	92%	24	365	41%	204,389	68%	336,166	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	24%	117,792	0%	-	9%	46,794	10%	51,983
Tailing Filter	600-FL-02	89	66	80%	57	92%	24	365	41%	204,389	68%	336,166	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	24%	117,792	0%	-	9%	46,794	10%	51,983
Tailing Filter	600-FL-03	89	66	80%	57	92%	24	365	41%	204,389	68%	336,166	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	24%	117,792	0%	-	9%	46,794	10%	51,983
Tailing Filter	600-FL-04	89	66	80%	57	92%	24	365	41%	204,389	68%	336,166	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	24%	117,792	0%	-	9%	46,794	10%	51,983
Tailing Filter	600-FL-05	89	66	80%	57	92%	24	365	41%	204,389	68%	336,166	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	91%	451,807	24%	117,792	0%	-	9%	46,794	10%	51,983
Tailing Filter	600-FL-06	89	66	80%	57	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Filter Area Bridge Crane	600-HO-01	10	7	80%	6	50%	24	365	22%	12,509	37%	20,574	49%	27,652	49%	27,652	49%	27,652	49%	27,652	49%	27,652	49%	27,652	49%	27,652	49%	27,652	13%	7,209	0%	-	5%	2,864	6%	3,181
Tailing Filter Feed Pump	600-PP-001	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump	600-PP-002	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump	600-PP-003	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump	600-PP-004	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump	600-PP-005	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump	600-PP-006	335	250	80%	214	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-007	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailing Filter Feed Pump (spare)	600-PP-008	335	250	80%	214	92%	24	365	41%	771,061	68%	1,268,193	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	91%	1,704,451	24%	444,375	0%	-	9%	176,532	10%	196,107
Tailings Cloth Wash Water Pump	600-PP-009	60	45	80%	38	92%	24	365	41%	138,101	68%	227,139	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	24%	79,590	0%	-	9%	31,618	10%	35,124
Tailings Cloth Wash Water Pump (spare)	600-PP-009	60	45	80%	38	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Tailing Filtrate Pump	600-PP-11	60	45	80%	38	92%	24	365	41%	138,101	68%	227,139	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	24%	79,590	0%	-	9%	31,618	10%	35,124
Tailing Filtrate Pump	600-PP-12	60	45	80%	38	92%	24	365	41%	138,101	68%	227,139	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	91%	305,275	24%	79,590	0%	-	9%	31,618	10%	35,124
Tailing Filter Area Sump Pump	600-PP-13	60	45	80%	38	10%	24	365	4%	15,011	7%	24,689	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	10%	33,182	3%	8,651	0%	-	1%	3,437	1%	3,818
Cyanide Recovery Underflow Pump	600-PP-17	100	75	80%	64	92%	24	365	41%	230,168	68%	378,565	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	91%	508,791	24%	132,649	0%	-	9%	52,696	10%	58,539
Cyanide Recovery Underflow Pump (spare)	600-PP-18	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	600-PP-19	50	37	80%	32	92%	24	365	41%	115,084	68%	189,283	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	24%	66,325	0%	-	9%	26,348	10%	29,270
Cyanide Recovery Overflow Pump (spare)	600-PP-20	50	37	80%	32	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Cyanide Destruction Tail Pump	600-PP-21	50	37	80%	32	92%	24	365	41%	115,084	68%	189,283	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	91%	254,396	24%	66,325	0%	-	9%	26,348	10%	29,270
Cyanide Destruction Tail Pump (spare)	600-PP-22	50	37	80%	32	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Tailing Filter Feed Pump	600-PP-23	5	4	80%	3	92%	24	365	41%	11,508	68%	18,928	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	91%	25,440	24%	6,632	0%	-	9%	2,635	10%	2,927
Cyanide Destruction Tailing Sampler	600-SA-01A	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Cyanide Destruction Tailing Sampler	600-SA-01B	2	1	80%	1	92%	24	365	41%	4,603	68%	7,571	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	91%	10,176	24%	2,653	0%	-	9%	1,054	10%	1,171
Cyanide Recovering Thickener	600-TH-01	25	19	80%	16	92%	24	365	41%	57,542	68%	94,641	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	91%	127,198	24%	33,162	0%	-	9%	13,174	10%	14,635
			-	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)										294,319		484,077		650,600		650,600		650,600		650,600		650,600		650,600		650,600		650,600		169,621		-		67,384		74,855
Total kWh/year		8,015	5,977		4,567					15,010,267		24,687,939		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590		8,650,654		-		3,436,561		3,817,615
Area 650 - Fresh Water																																				
Well Field Pump	650-PP-01	150	112	80%	96	67%	24	365	30%	251,433	49%	413,541	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	17%	144,905	0%	-	7%	57,565	8%	63,948
Well Field Pump	650-PP-02	150	112	80%	96	67%	24	365	30%	251,433	49%	413,541	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	17%	144,905	0%	-	7%	57,565	8%	63,948
Well Field Pump	650-PP-03	150	112	80%	96	67%	24	365	30%	251,433	49%	413,541	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	66%	555,799	17%	144,905	0%	-	7%	57,565	8%	63,948
Pit Dewatering Well Field Pump	650-PP-04	125	93	80%	80	67%	24	365	30%	209,527	49%	344,618	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	17%	120,754	0%	-	7%	47,971	8%	53,290
Pit Dewatering Well Field Pump	650-PP-05	125	93	80%	80	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Pit Dewatering Well Field Pump	650-PP-06	125	93	80%	80	67%	24	365	30%	209,527	49%	344,618	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	17%	120,754	0%	-	7%	47,971	8%	53,290
Pit Dewatering Well Field Pump	650-PP-07	125	93	80%	80	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Pit Dewatering Well Field Pump	650-PP-08	125	93	80%	80	67%	24	365	30%	209,527	49%	344,618	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	17%	120,754	0%	-	7%	47,971	8%	53,290
Pit Dewatering Well Field Pump	650-PP-09	125	93	80%	80	67%	24	365	30%	209,527	49%	344,618	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	17%	120,754	0%	-	7%	47,971	8%	53,290
Pit Dewatering Well Field Pump	650-PP-10	125	93	80%	80	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Pit Dewatering Well Field Pump	650-PP-11	125	93	80%	80	67%	24	365	30%	209,527	49%	344,618	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	66%	463,166	17%	120,754	0%	-	7%	47,971	8%	53,290
Process Water Pump	650-PP-12	100	75	80%	64	67%	24	365	30%	167,622	49%	275,694	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	17%	96,603	0%	-	7%	38,377	8%	42,632
Process Water Pump	650-PP-13	100	75	80%	64	67%	24	365	30%	167,622	49%	275,694	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	17%	96,603	0%	-	7%	38,377	8%	42,632
Process Water Pump	650-PP-14	100	75	80%	64	67%	24	365	30%	167,622	49%	275,694	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	66%	370,533	17%	96,603	0%	-	7%	38,377	8%	42,632
Fresh Water Transfer Pump	650-PP-15	500	373	80%	320	67%	24	365	30%	838,110	49%	1,378,470	66%	1,852,664	66%	1,852,664	66%	1,852,664	66%	1,852,664	66%	1,852,664	66%	1,852,664	66%	1,852,664	66%	1,852,664	17%	483,016	0%	-	7%	191,883	8%	213,159
Fresh Water Transfer Pump (Stand-By)	650-PP-16	500	373	80%	320	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Fire Water Pump	650-PP-17	15	11	80%	10	67%	24	365	30%	25,143	49%	41,354	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	17%	14,490	0%	-	7%	5,756	8%	6,395
Fire Water Pump	650-PP-18	15	11	80%	10	67%	24	365	30%	25,143	49%	41,354	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	66%	55,580	17%	14,490	0%	-	7%	5,756	8%	6,395
Potable Water Pump	650-PP-19	8	6	80%	5	67%	24	365	30%	13,410	49%	22,056	66%	29,643	66%	29,643	66%	29,643	66%	29,643	66%	29,643	66%	29,643	66%	29,643	66%	29,643	17%	7,728	0%	-	7%	3,070	8%	3,411
Stripping Fresh Water Pump	650-PP-20	20	15	80%	13	67%	24	365	30%	33,524	49%	55,139	66%	74,107	66%	74,107	66%	74,107	66%	74,107	66%	74,107	66%	74,107	66%	74,107	66%	74,107	17%	19,321	0%	-	7%	7,675	8%	8,526
Reagent Fresh Water Pump	650-PP-21	10	7	80%	6	67%	24	365	30%	16,762	49%	27,569	66%	37,053	66%	37,053	66%	37,053	66%	37,053	66%	37,053	66%	37,053	66%	37,053	66%	37,053	17%	9,660	0%	-	7%	3,838	8%	4,263
Seal Water Pump	650-PP-22	50	37	80%	32	67%	24	365	30%	83,811	49%	137,847	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	17%	48,302	0%	-	7%	19,188	8%	21,316
Seal Water Pump (Stand-By)	650-PP-23	50	37	80%	32	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Seal Water Pump	650-PP-24	50	37	80%	32	67%	24	365	30%	83,811	49%	137,847	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	66%	185,266	17%	48,302	0%	-	7%	19,188	8%	21,316
Seal Water Pump (Stand-By)	650-PP-25	50	37	80%	32	0%	24	365	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-	0%	-
Crusher Fresh Water Pump	650-PP-26	40	30	80%	26	67%	24	365	30%	67,049	49%	110,278	66%	148,213	66%	148,213	66%	148,213	66%	148,213	66%	148,213	66%	148,213	66%	148,213	66%	148,213	17%	38,641	0%	-	7%	15,351	8%	17,053
Chlorinator Package	650-WT-01	-	-	80%	-	67%	24	365	30%	-	49%	-	66%	-	66%	-	66%	-	66%	-	66%	-	66%	-	66%	-	66%	-	17%	-	0%	-	7%	-	8%	-
Miscellaneous lighting and small power allowance (2% of subtotal)										69,831		114,854		154,364		154,364		154,364		154,364		154,364		154,364		154,364		154,364		40,245		-		15,988		17,760
Total kWh/year		3,058	2,280		1,957					3,561,398		5,857,562		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563		2,052,490		-		815,373		905,783
Area 900 - Ancillaries																																				
Air Compressor	900-CM-001	75	56	80%	48	50%	24	365	22%	93,818	37%	154,306	49%	207,388	49%	207,388	49%	207,388	49%	207,388	49%	207,388	49%	207,388	49%	207,388	49%	207,388	13%	54,069	0%	-	5%	21,479	6%	23,861
Truck Shop Overhead Crane	900-HO-001	20	15	80%	13	50%	24	365	22%	25,018	37%	41,148	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	13%	14,418	0%	-	5%	5,728	6%	6,363
Hauling Truck Fueling Pump	900-PP-01	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591
Diesel Fuel Truck Loading Pump	900-PP-02	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591
Diesel Fuel Truck Unloading Pump	900-PP-03	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591
Diesel Fuel Station Sump Pump	900-PP-04	5	4	80%	3	10%	24	365	4%	1,251	7%	2,057	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Diesel Fuel Transfer Pump	900-PP-05	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591

Diesel Fuel Truck Unloading Pump	900-PP-06	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287
Diesel Fuel Storage Sump Pump	900-PP-07	5	4	80%	3	10%	24	365	4%	1,251	7%	2,057
Gasoline Dispenser	900-PP-08	20	15	80%	13	50%	24	365	22%	25,018	37%	41,148
Truck Wash Dewatering Sump Pump	900-PP-18	5	4	80%	3	10%	24	365	4%	1,251	7%	2,057
Truck Lube/Oil Storage Area Sump Pump	900-PP-21	3	2	80%	2	10%	24	365	4%	751	7%	1,234
Small Vehicle Fuel Station Area Sump Pump	900-PP-23	3	2	80%	2	10%	24	365	4%	751	7%	1,234
Grease Pump	900-PP-24	5	4	80%	3	50%	24	365	22%	6,255	37%	10,287
Laboratory Equipment	910	150	112	80%	96	50%	24	365	22%	187,637	37%	308,613
Miscellaneous lighting and small power allowance (2% of subtotal)										7,485		12,312
Total kWh/year		316	236		202					381,758		627,891
Cost per kWh												
Area 100 - Crushing & Ore Storage		1,705	1,272		1,088					3,067,891		5,045,873
Area 200 - Grinding and Classification		25,071	18,695		15,954					56,664,823		93,198,721
Area 300 - Leaching		4,129	3,079		2,643					9,341,870		15,364,917
Area 400 - Carbon Handling & Refinery		698	520		447					1,394,271		2,293,209
Area 500 - Reagents Systems		370	276		237					340,801		560,527
Area 600 - Filtered Tailings		8,015	5,977		4,567					15,010,267		24,687,939
Area 650 - Fresh Water		3,058	2,280		1,957					3,561,398		5,857,562
Area 900 - Ancillaries		166	124		106					186,636		306,967
Area 910 - Laboratory Equipment		150	112		96					187,637		308,613
Total		43,361	32,334		27,095					89,755,592		147,624,328
Unit Cost per kWh										**$0.105**		**$0.105**
Area 100 - Crushing & Ore Storage										$320,595		$527,294
Area 200 - Grinding and Classification										$5,921,474		$9,739,266
Area 300 - Leaching										$976,225		$1,605,634
Area 400 - Carbon Handling & Refinery										$145,701		$239,640
Area 500 - Reagents Systems										$35,614		$58,575
Area 600 - Filtered Tailings										$1,568,573		$2,579,890
Area 650 - Fresh Water										$372,166		$612,115
Area 900 - Ancillaries										$19,503		$32,078
Area 910 - Laboratory Equipment										$19,608		$32,250
Total										$9,379,459		$15,426,742
Tonnes										-		-
$/Tonne Credit										-0.06953		-0.06953
RopeCon Credit										$0		$0

Diesel Fuel Truck Unloading Pump	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826
Diesel Fuel Storage Sump Pump	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765
Gasoline Dispenser	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303	49%	55,303
Truck Wash Dewatering Sump Pump	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765	10%	2,765
Truck Lube/Oil Storage Area Sump Pump	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659
Small Vehicle Fuel Station Area Sump Pump	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659	10%	1,659
Grease Pump	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826	49%	13,826
Laboratory Equipment	49%	414,776	49%	414,776	49%	414,776	49%	414,776	49%	414,776	49%	414,776
Miscellaneous lighting and small power allowance (2% of subtotal)		16,547		16,547		16,547		16,547		16,547		16,547
Total kWh/year		843,886		843,886		843,886		843,886		843,886		843,886
Cost per kWh												
Area 100 - Crushing & Ore Storage		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653		6,781,653
Area 200 - Grinding and Classification		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082		125,259,082
Area 300 - Leaching		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449		20,650,449
Area 400 - Carbon Handling & Refinery		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073		3,082,073
Area 500 - Reagents Systems		753,349		753,349		753,349		753,349		753,349		753,349
Area 600 - Filtered Tailings		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590		33,180,590
Area 650 - Fresh Water		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563		7,872,563
Area 900 - Ancillaries		412,563		412,563		412,563		412,563		412,563		412,563
Area 910 - Laboratory Equipment		414,776		414,776		414,776		414,776		414,776		414,776
Total		198,407,097		198,407,097		198,407,097		198,407,097		198,407,097		198,407,097
Unit Cost per kWh		**$0.105**		**$0.105**		**$0.105**		**$0.105**		**$0.105**		**$0.105**
Area 100 - Crushing & Ore Storage		$708,683		$563,390		$472,339		$493,664		$471,735		$482,668
Area 200 - Grinding and Classification		$13,089,574		$13,089,574		$13,089,574		$13,089,574		$13,089,574		$13,089,574
Area 300 - Leaching		$2,157,972		$2,157,972		$2,157,972		$2,157,972		$2,157,972		$2,157,972
Area 400 - Carbon Handling & Refinery		$322,077		$322,077		$322,077		$322,077		$322,077		$322,077
Area 500 - Reagents Systems		$78,725		$78,725		$78,725		$78,725		$78,725		$78,725
Area 600 - Filtered Tailings		$3,467,372		$3,467,372		$3,467,372		$3,467,372		$3,467,372		$3,467,372
Area 650 - Fresh Water		$822,683		$822,683		$822,683		$822,683		$822,683		$822,683
Area 900 - Ancillaries		$43,113		$43,113		$43,113		$43,113		$43,113		$43,113
Area 910 - Laboratory Equipment		$43,344		$43,344		$43,344		$43,344		$43,344		$43,344
Total		$20,733,542		$20,588,249		$20,497,198		$20,518,523		$20,496,594		$20,507,527
Tonnes		-		2,089,635		3,399,161		3,092,454		3,407,854		3,250,607
$/Tonne Credit		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953
RopeCon Credit		$0		-$145,292		-$236,344		-$215,018		-$236,948		-$226,015

Diesel Fuel Truck Unloading Pump	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591
Diesel Fuel Storage Sump Pump	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Gasoline Dispenser	49%	55,303	49%	55,303	13%	14,418	0%	-	5%	5,728	6%	6,363
Truck Wash Dewatering Sump Pump	10%	2,765	10%	2,765	3%	721	0%	-	1%	286	1%	318
Truck Lube/Oil Storage Area Sump Pump	10%	1,659	10%	1,659	3%	433	0%	-	1%	172	1%	191
Small Vehicle Fuel Station Area Sump Pump	10%	1,659	10%	1,659	3%	433	0%	-	1%	172	1%	191
Grease Pump	49%	13,826	49%	13,826	13%	3,605	0%	-	5%	1,432	6%	1,591
Laboratory Equipment	49%	414,776	49%	414,776	13%	108,138	0%	-	5%	42,959	6%	47,722
Miscellaneous lighting and small power allowance (2% of subtotal)		16,547		16,547		4,314		-		1,714		1,904
Total kWh/year		843,886		843,886		220,013		-		87,402		97,094
Cost per kWh												
Area 100 - Crushing & Ore Storage		6,781,653		6,781,653		1,768,074		-		702,385		780,268
Area 200 - Grinding and Classification		125,259,082		125,259,082		32,656,832		-		12,973,262		14,411,766
Area 300 - Leaching		20,650,449		20,650,449		5,383,867		-		2,138,797		2,375,951
Area 400 - Carbon Handling & Refinery		3,082,073		3,082,073		803,540		-		319,215		354,610
Area 500 - Reagents Systems		753,349		753,349		196,409		-		78,025		86,677
Area 600 - Filtered Tailings		33,180,590		33,180,590		8,650,654		-		3,436,561		3,817,615
Area 650 - Fresh Water		7,872,563		7,872,563		2,052,490		-		815,373		905,783
Area 900 - Ancillaries		412,563		412,563		107,561		-		42,730		47,468
Area 910 - Laboratory Equipment		414,776		414,776		108,138		-		42,959		47,722
Total		198,407,097		198,407,097		51,727,565		-		20,549,307		22,827,859
Unit Cost per kWh		**$0.105**		**$0.105**		**$0.105**		**$0.105**		**$0.105**		**$0.105**
Area 100 - Crushing & Ore Storage		$482,273		$480,658		-$47,143		$0.00		$28,298		$81,538
Area 200 - Grinding and Classification		$13,089,574		$13,089,574		$3,412,639		$12,000		$1,355,706		$1,506,030
Area 300 - Leaching		$2,157,972		$2,157,972		$562,614		$12,000		$223,504		$248,287
Area 400 - Carbon Handling & Refinery		$322,077		$322,077		$83,970		$12,000		$33,358		$37,057
Area 500 - Reagents Systems		$78,725		$78,725		$20,525		$12,000		$8,154		$9,058
Area 600 - Filtered Tailings		$3,467,372		$3,467,372		$903,993		$12,000		$359,121		$398,941
Area 650 - Fresh Water		$822,683		$822,683		$214,485		$12,000		$85,206		$94,654
Area 900 - Ancillaries		$43,113		$43,113		$11,240		$12,000		$4,465		$4,960
Area 910 - Laboratory Equipment		$43,344		$43,344		$11,300		$12,000		$4,489		$4,987
Total		$20,507,132		$20,505,517		$5,173,624		$96,000		$2,102,301		$2,385,511
Tonnes		3,256,292		3,279,511		3,335,350		2,950,124		648,663		0
$/Tonne Credit		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953		-0.06953
RopeCon Credit		-$226,410		-$228,024		-$231,907		-$205,122		-$45,102		$0

Table 21-12: Water Treatment Plant – Estimated Capital & Operating Costs (Alternate Case)

Labor Assumption is that one person will be allocated from another area to cover.			
	kWhr/yr	Rate	Amount
Power	1,152,000	$0.105	$120,384
	$/Day	Days	Amount
Reagents	$30,250	32	$968,000
	Cost of Equipment	Factor	Amount
Maintenance Parts & Labor	$16,113,370	2.3%	$375,979
Supplies & Services	$16,113,370	0.3%	$53,711
Total			$1,518,074
Year 1	2,280	$0.67	$1,518
Year 2	3,750	$0.40	$1,518
Year 3	5,040	$0.30	$1,518
Year 4	5,040	$0.30	$1,518
Year 5	5,040	$0.30	$1,518
Year 6	5,040	$0.30	$1,518
Year 7	5,040	$0.30	$1,518
Year 8	5,040	$0.30	$1,518
Year 9	5,040	$0.30	$1,518
Year 10	5,040	$0.30	$1,518
Year 11	1,314	$1.16	$1,518
Year 12			
Year 13	522	$0.00	$0
Year 14	580	$0.00	$0

22 ECONOMIC ANALYSIS

22.1 INTRODUCTION

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 project. 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 project 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.

Table 22-1: Life of Mine Ore, Waste Quantities, and Ore Grade

	Tonnes	Gold Grade	Silver Grade
	(kt)	(g/t)	(g/t)
Ore	48,766	2.61	4.35
Waste	272,399	-	-
Total Tonnes Mined	321,165	-	-

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 87.4% for gold and 32.7% for silver.

The estimated metal production is estimated to be 3.6 million ounces of gold and 2.2 million ounces of silver.

22.3.1 Refinery Return Factors

A gold and silver doré will be shipped from the site to refining company. Refining treatment charges are negotiable at the time of agreement.

The refining charges calculated in the financial evaluation are presented in Table 22-2.

Table 22-2: Refining Return Factors

Gold and Silver Doré	
Payable gold	99.5 %
Payable silver	99.0 %
Treatment charge ($/oz)	$0.25
Refining charge – Au ($/oz)	$0.75
Refining charge – Ag ($/oz)	$0.20
Transportation & Insurance Charges($/oz)	$1.15

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.

Presented below is the initial capital.

Table 22-3: Initial Capital

	In Millions
Mining	139.8
Process Plant	490.1
Owner's Cost	41.4
Pre-production revenues	-119.7
Total	551.6

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 $86.1 million. This capital will be expended during a 9 year period.

22.3.4 Working Capital

A 15 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 $7.0 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 $21.5 million allowance for salvage value has been included in the cash flow analysis.

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 22-4: Gold and Silver Prices

	Year 1	Year 2	Year 3	Year 4 Forward
Gold	$1,500.00	$1,407.00	$1,315.00	$1,250.00
Silver	$27.75	$25.00	$25.00	$22.00

22.5 OPERATING COST

The average Cash Operating Cost over the life of the mine is estimated to be $30.32 per metric ton 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 22-5 shows the estimated operating cost by area per metric ton of ore processed.

Table 22-5: Operating Cost

Operating Cost	$/ore tonne
Mine	$12.13
Process Plant	$14.31
General Administration	$3.64
Smelting/Refining Treatment	$0.24
Total Operating Cost	$30.32

22.6 TOTAL CASH COST

The average Total Cash Cost over the life of the mine is estimated to be $34.62 per metric ton 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 $111.6 million.

22.6.2 Reclamation & Closure

An allowance of $113.7 million for the cost of reclamation and closure of the property has been included in the cash flow projection.

22.6.3 Depreciation

Accelerated depreciation was taken for the initial capital expenditures at 85% of the expenditures in the first production year. Depreciation for the other assets 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 Corporate Income Tax

The Project is evaluated with a 28% corporate tax based taxable income from the operations. A loss carry forward of $11.6 million and other deductions for expenditures of $101.9 million were included in the tax calculation.

Corporate income taxes paid are estimated to be $627.0 million.

22.8 PROJECT FINANCING

It is assumed the project will be all equity financed.

22.9 NET INCOME AFTER TAX

Net Income after Tax amounts to $1,558.4 million.

22.10 NPV AND IRR

The economic analysis indicates that the project has an Internal Rate of Return (IRR) of 24.2% with a payback period of 3.6 years after taxes. Table 22-6 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.

The Project is approximately four times more sensitive to changes in commodity prices, grade of ore and recoveries then to changes to operating and capital costs.

Table 22-6: Sensitivity Analysis ($ in thousands) – After Taxes

	Undiscounted Cash Flow 0%	Net Present Value @ 5%	Net Present Value @ 10%	IRR %	Payback (yrs)
Base Case	$1,558,437	$900,016	$499,541	24.2%	3.6
Metal Prices +15%	$2,043,433	$1,224,429	$725,529	29.4%	3.0
Metal Prices +10%	$1,881,768	$1,116,291	$650,200	27.7%	3.2
Metal Prices -10%	$1,235,107	$682,903	$347,614	20.4%	4.2
Metal Prices -15%	$1,073,441	$574,262	$271,522	18.3%	4.5
Initial Capital +15%	$1,481,674	$825,457	$427,747	21.0%	4.0
Initial Capital +10%	$1,507,262	$850,366	$451,764	22.0%	3.9
Initial Capital -10%	$1,609,612	$949,239	$546,672	26.7%	3.3
Initial Capital -15%	$1,635,200	$973,850	$570,237	28.2%	3.1
Operating Cost +15%	$1,402,259	$795,077	$426,156	22.4%	3.9
Operating Cost +10%	$1,454,319	$830,113	$450,703	23.0%	3.8
Operating Cost -10%	$1,662,556	$969,763	$548,143	25.4%	3.4
Operating Cost -15%	$1,714,615	$1,004,636	$572,443	25.9%	3.4
Ore Grade +15%	$2,042,177	$1,223,583	$724,936	29.4%	3.0
Ore Grade +10%	$1,880,930	$1,115,727	$649,804	27.7%	3.2
Ore Grade -10%	$1,235,944	$683,470	$348,014	20.4%	4.2
Ore Grade -15%	$1,074,697	$575,112	$272,122	18.3%	4.5
Gold Recovery +5%	$1,718,020	$1,006,700	$573,816	26.0%	3.4
Gold Recovery +2.5%	$1,638,229	$953,358	$536,678	25.1%	3.5
Gold Recovery -2.5%	$1,478,646	$846,596	$462,286	23.3%	3.7
Gold Recovery -5%	$1,398,854	$793,007	$424,775	22.4%	3.9
Royalty +2%	$1,492,113	$855,495	$468,423	23.5%	3.7
Royalty +4%	$1,425,789	$810,806	$437,049	22.7%	3.8
Royalty +6%	$1,359,464	$766,116	$405,676	21.9%	3.9
Royalty +8%	$1,293,140	$721,426	$374,303	21.1%	4.1

Table 22-7: Base Case Detail Financial Model

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
14,000 TPD	Total	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mining Operations																					
Ore																					
Beginning Inventory (kt)	48,766	48,766	48,766	48,766	48,766	48,503	46,378	42,723	37,530	32,651	27,448	22,393	17,349	12,409	7,285	2,319	1,099	983	572	0	0
Mined (kt)	48,766	-	-	-	262	2,125	3,656	5,193	4,879	5,204	5,055	5,043	4,940	5,124	4,966	1,220	116	411	572	-	-
Ending Inventory (kt)	-	48,766	48,766	48,766	48,503	46,378	42,723	37,530	32,651	27,448	22,393	17,349	12,409	7,285	2,319	1,099	983	572	0	0	0
Gold Grade (g/t)	2.609	-	-	-	1.434	2.089	2.328	2.344	2.229	2.326	2.437	2.335	3.096	3.477	2.953	2.895	2.764	3.950	2.421	-	-
Silver Grade (g/t)	4.346	-	-	-	2.507	4.852	6.677	6.282	5.529	3.692	3.474	3.067	3.765	3.965	3.207	2.758	6.306	8.052	4.297	-	-
Contained Gold (kozs)	4,090	-	-	-	12	143	274	391	350	389	396	379	492	573	471	114	10	52	45	-	-
Contained Silver (kozs)	6,813	-	-	-	21	331	785	1,049	867	618	565	497	598	653	512	108	24	106	79	-	-
Waste																					
Beginning Inventory(kt)	272,399	272,399	272,399	272,399	267,874	256,876	243,862	218,292	189,221	156,765	125,440	94,377	63,241	36,741	17,230	4,244	2,175	1,470	590	0	0
Mined (kt)	272,399	-	-	4,525	10,998	13,014	25,571	29,071	32,456	31,325	31,062	31,136	26,500	19,511	12,986	2,069	705	881	590	-	-
Ending Inventory (kt)	-	272,399	272,399	267,874	256,876	243,862	218,292	189,221	156,765	125,440	94,377	63,241	36,741	17,230	4,244	2,175	1,470	590	0	0	0
Total Material Mined (kt)	321,165	-	-	4,525	11,261	15,139	29,226	34,264	37,334	36,529	36,118	36,179	31,441	24,635	17,952	3,289	821	1,291	1,162	-	-
Process Plant Operations																					
Beginning Ore Inventory (kt)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mined Ore to Concentrator (kt)	48,766	-	-	-	-	2,280	3,750	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	1,314	-	522	580	-	-
Mined Ore - Processed (kt)	48,766	-	-	-	-	2,280	3,750	5,040	5,040	5,040	5,040	5,040	5,040	5,040	5,040	1,314	-	522	580	-	-
Ending Ore Inventory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gold Grade (g/t)	2.609	-	-	-	-	2.013	2.320	2.355	2.223	2.326	2.434	2.338	3.068	3.471	2.970	2.899	-	3.681	2.442	-	-
Silver Grade (g/t)	4.346	-	-	-	-	4.576	6.625	6.302	5.538	3.693	3.481	3.082	3.739	3.962	3.233	2.791	-	7.637	4.346	-	-
Contained Gold (kozs)	4,090	-	-	-	-	148	280	382	360	377	394	379	497	562	481	122	-	62	46	-	-
Contained Silver (kozs)	6,813	-	-	-	-	335	799	1,021	897	598	564	499	606	642	524	118	-	128	81	-	-
Recovery Gold (%)	87.4%	0.0%	0.0%	0.0%	0.0%	86.7%	87.8%	87.3%	87.7%	85.9%	87.4%	87.5%	87.2%	87.8%	88.1%	87.1%	0.0%	86.7%	85.2%	0.0%	0.0%
Recovery Silver (%)	32.7%	0.0%	0.0%	0.0%	0.0%	32.9%	33.4%	33.8%	32.7%	30.9%	32.4%	32.7%	31.5%	31.8%	32.2%	32.2%	0.0%	38.1%	37.0%	0.0%	0.0%
Recovered Gold (kozs)	3,573	-	-	-	-	128	246	333	316	324	345	332	434	494	424	107	-	54	39	-	-
Recovered Silver (kozs)	2,227	-	-	-	-	110	267	345	293	185	183	163	191	204	168	38	-	49	30	-	-
Payable Metals																					
Payable Gold (kozs)	3,555			-	-	127	244	332	315	322	343	330	432	491	422	106	-	53	39	-	-
Payable Silver (kozs)	2,204				-	109	264	342	290	183	181	162	189	202	167	38	-	48	30	-	-
Income Statement ($000)																					
Metal Prices																					
Gold ($/oz)	$ 1,270.58			$ -	$ -	$ 1,500.00	$ 1,407.00	$ 1,315.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00	$ 1,250.00
Silver ($/oz)	$ 22.96			$ -	$ -	$ 27.75	$ 25.00	$ 25.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00	$ 22.00
Revenues																					
Gold Revenue ($ 000)	$ 4,414,598			$ -	$ -	$ 69,622	$ 343,701	$ 436,040	$ 393,181	$ 402,576	$ 428,897	$ 412,372	$ 539,426	$ 613,913	$ 527,334	$ 132,687	$ -	$ 66,594	$ 48,256	$ -	$ -
Silver Revenue ($ 000)	$ 49,016			$ -	$ -	$ 1,107	$ 6,608	$ 8,539	$ 6,384	$ 4,025	$ 3,979	$ 3,560	$ 4,153	$ 4,450	$ 3,668	$ 827	$ -	$ 1,064	$ 653	$ -	$ -
Total Revenues	$ 4,463,614			$ -	$ -	$ 70,729	$ 350,309	$ 444,579	$ 399,565	$ 406,600	$ 432,876	$ 415,931	$ 543,579	$ 618,363	$ 531,002	$ 133,514	$ -	$ 67,658	$ 48,909	$ -	$ -
Operating Cost																					
Mining	$ 574,699			$ -	$ -	$ 9,267	$ 61,901	$ 72,190	$ 67,116	$ 64,451	$ 64,773	$ 63,570	$ 57,050	$ 47,583	$ 38,266	$ 12,284	$ 5,103	$ 5,788	$ 5,357	$ -	$ -
Process Plant	$ 678,170			$ -	$ -	$ 9,238	$ 54,258	$ 69,384	$ 69,368	$ 71,790	$ 71,811	$ 71,790	$ 73,326	$ 73,325	$ 73,822	$ 21,064	$ 1,319	$ 8,423	$ 9,253	$ -	$ -
General Administration	$ 172,495			$ -	$ -	$ 3,645	$ 14,235	$ 14,568	$ 14,149	$ 14,149	$ 14,149	$ 14,149	$ 14,149	$ 14,149	$ 14,149	$ 12,401	$ 9,526	$ 9,533	$ 9,542	$ -	$ -
Treatment & Refining Charges																					
Dore'																					
Treatment Charges	$ 1,412			$ -	$ -	$ 22	$ 128	$ 170	$ 152	$ 127	$ 132	$ 124	$ 156	$ 174	$ 148	$ 36	$ -	$ 26	$ 17	$ -	$ -
Gold Refining Charges	$ 2,619			$ -	$ -	$ 35	$ 184	$ 250	$ 237	$ 243	$ 259	$ 249	$ 325	$ 370	$ 318	$ 80	$ -	$ 40	$ 29	$ -	$ -
Silver Refining Charges	$ 431			$ -	$ -	$ 8	$ 53	$ 69	$ 59	$ 37	$ 37	$ 33	$ 38	$ 41	$ 34	$ 8	$ -	$ 10	$ 6	$ -	$ -
Transportation	$ 6,820			$ -	$ -	$ 105	$ 619	$ 819	$ 736	$ 614	$ 637	$ 598	$ 754	$ 843	$ 715	$ 175	$ -	$ 124	$ 83	$ -	$ -
Total Operating Cost	$ 1,436,647			-	-	22,320	131,378	157,449	151,816	151,411	151,797	150,511	145,798	136,486	127,452	46,047	15,948	23,943	24,287	-	-
Royalty	$ 111,590				$ -	$ 1,768	$ 8,758	$ 11,114	$ 9,989	$ 10,165	$ 10,822	$ 10,398	$ 13,589	$ 15,459	$ 13,275	$ 3,338	$ -	$ 1,691	$ 1,223	$ -	$ -
Salvage Value	$ (21,497)				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	\	$ -	$ (21,497)	$ -	$ -
Reclamation & Closure	$ 113,700				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 113,700	$ -	$ -
Total Production Cost	$ 1,640,439		$ -	$ -	$ -	$ 24,089	$ 140,136	$ 168,564	$ 161,806	$ 161,576	$ 162,619	$ 160,910	$ 159,388	$ 151,945	$ 140,727	$ 49,385	$ 15,948	$ 25,635	$ 117,712	$ -	$ -
Operating Income	$ 2,823,175		$ -	$ -	$ -	$ 46,640	$ 210,173	$ 276,015	$ 237,759	$ 245,024	$ 270,257	$ 255,022	$ 384,191	$ 466,418	$ 390,275	$ 84,128	$ (15,948)	$ 42,023	$ (68,803)	$ -	$ -
Initial Capital Depreciation	$ 521,630					$ 519,025	$ 289	$ 289	$ 289	$ 289	$ 289	$ 289	$ 289	$ 289	$ 289	$ -	$ -	$ -	$ -	$ -	$ -
Sustaining Capital Depreciation	$ 86,107					$ 1,899	$ 5,370	$ 6,358	$ 7,015	$ 7,257	$ 7,358	$ 7,438	$ 7,446	$ 7,446	$ 7,446	$ 5,547	$ 3,241	$ 2,253	$ 10,035	$ -	$ -
Total Depreciation	$ 607,737		$ -	$ -	$ -	$ 520,924	$ 5,659	$ 6,647	$ 7,304	$ 7,547	$ 7,647	$ 7,727	$ 7,735	$ 7,735	$ 7,735	$ 5,547	$ 3,241	$ 2,253	$ 10,035	$ -	$ -
Net Income After Depreciation	$ 2,215,438	$ -	$ -	$ -	$ -	$ (474,284)	$ 204,514	$ 269,368	$ 230,455	$ 237,477	$ 262,610	$ 247,295	$ 376,456	$ 458,683	$ 382,540	$ 78,581	$ (19,189)	$ 39,770	$ (78,837)	$ -	$ -
Income Taxes	$ 627,048					-	-	4,517	61,673	63,640	70,677	66,388	102,554	125,577	104,257	22,003	-	5,763	-	-	-
Net Income After Taxes	$ 1,588,390		-	-	-	(474,284)	204,514	264,851	168,782	173,838	191,933	180,906	273,902	333,105	278,283	56,579	(19,189)	34,007	(78,837)	-	-

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
14,000 TPD	Total	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cash Flow																					
Operating Income after Depreciation	$ 2,215,438	$ -	$ -	$ -	$ -	$ (474,284)	$ 204,514	$ 269,368	$ 230,455	$ 237,477	$ 262,610	$ 247,295	$ 376,456	$ 458,683	$ 382,540	$ 78,581	$ (19,189)	$ 39,770	$ (78,837)	$ -	$ -
Add Back Depreciation	$ 607,737	$ -	$ -	$ -	$ -	$ 520,924	$ 5,659	$ 6,647	$ 7,304	$ 7,547	$ 7,647	$ 7,727	$ 7,735	$ 7,735	$ 7,735	$ 5,547	$ 3,241	$ 2,253	$ 10,035	$ -	$ -
Working Capital																					
Account Recievable (15 days)	$ -	$ -	$ -	$ -	$ -	$ (2,907)	$ (11,490)	$ (3,874)	$ 1,850	$ (289)	$ (1,080)	$ 696	$ (5,246)	$ (3,073)	$ 3,590	$ 16,335	$ 5,487	$ (2,780)	$ 770	$ 2,010	$ -
Accounts Payable (30 days)	$ -	$ -	$ -	$ -	$ -	$ 1,835	$ 8,964	$ 2,143	$ (463)	$ (33)	$ 32	$ (106)	$ (387)	$ (765)	$ (743)	$ (6,691)	$ (2,474)	$ 657	$ 28	$ (1,996)	$ -
Inventory - Parts, Supplies	$ -	$ -	$ -	$ -	$ (5,000)	$ (2,000)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,000	$ -	$ -	$ -
Total Working Capital	$ -	$ -	$ -	$ -	$ (5,000)	$ (3,072)	$ (2,526)	$ (1,731)	$ 1,387	$ (322)	$ (1,048)	$ 591	$ (5,633)	$ (3,839)	$ 2,848	$ 9,644	$ 3,013	$ 4,877	$ 799	$ 14	$ -
Capital Expenditures																					
Initial Capital																					
Mine	$ 139,832	$ -	$ -	$ 47,387	$ 45,189	$ 47,255	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Process Plant	$ 490,129	$ -	$ -	$ 218,061	$ 218,061	$ 54,008	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Owners Cost	$ 41,459	$ -	$ -	$ 18,307	$ 18,961	$ 4,191	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pre-production Revenues	$ (119,837)					$ (119,837)															
Sustaining Capital																					
Mine	$ 71,119	$ -	$ -	$ -	$ -	$ 18,990	$ 19,719	$ 9,879	$ 6,570	$ 2,426	$ 1,005	$ 799	$ 84	$ -	$ -	$ -	$ 11,647	$ -	$ -	$ -	$ -
Process Plant	$ 14,988	$ -	$ -	$ -	$ -	$ -	$ 14,988	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Expenditures	$ 637,689	$ -	$ -	$ 283,755	$ 282,211	$ 4,607	$ 34,707	$ 9,879	$ 6,570	$ 2,426	$ 1,005	$ 799	$ 84	$ -	$ -	$ -	$ 11,647	$ -	$ -	$ -	$ -
Cash Flow before Taxes	$ 2,185,486	$ -	$ -	$ (283,755)	$ (287,211)	$ 38,961	$ 172,940	$ 264,404	$ 232,576	$ 242,276	$ 268,204	$ 254,813	$ 378,474	$ 462,579	$ 393,123	$ 93,773	$ (24,582)	$ 46,900	$ (68,004)	$ 14	$ -
Cummulative Cash Flow before Taxes		$ -	$ -	$ (283,755)	$ (570,965)	$ (532,004)	$ (359,064)	$ (94,660)	$ 137,916	$ 380,193	$ 648,396	$ 903,210	$ 1,281,684	$ 1,744,263	$ 2,137,386	$ 2,231,158	$ 2,206,576	$ 2,253,476	$ 2,185,472	$ 2,185,486	$ 2,185,486
						1.0	1.0	1.0	0.4	-	-	-	-	-	-	-	-				
Taxes																					
Income Taxes	$ 627,048	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,517	$ 61,673	$ 63,640	$ 70,677	$ 66,388	$ 102,554	$ 125,577	$ 104,257	$ 22,003	$ -	$ 5,763	$ -	$ -	$ -
Cash Flow after Taxes	$ 1,558,437	$ -	$ -	$ (283,755)	$ (287,211)	$ 38,961	$ 172,940	$ 259,887	$ 170,903	$ 178,636	$ 197,527	$ 188,425	$ 275,921	$ 337,002	$ 288,866	$ 71,770	$ (24,582)	$ 41,137	$ (68,004)	$ 14	$ -
Cummulative Cash Flow after Taxes		$ -	$ -	$ (283,755)	$ (570,965)	$ (532,004)	$ (359,064)	$ (99,177)	$ 71,726	$ 250,363	$ 447,890	$ 636,314	$ 912,235	$ 1,249,237	$ 1,538,103	$ 1,609,873	$ 1,585,290	$ 1,626,428	$ 1,558,423	$ 1,558,437	$ 1,558,437
						1.0	1.0	1.0	0.6	-	-	-	-	-	-	-	-	-	-	-	-
Economic Indicators before Taxes																					
NPV @ 0%	0%	$ 2,185,486																			
NPV @ 5%	5%	$ 1,294,312																			
NPV @ 10%	10%	$ 755,468																			
IRR		28.6%																			
Payback	Years	3.4																			
Economic Indicators after Taxes																					
NPV @ 0%	0%	$ 1,558,437																			
NPV @ 5%	5%	$ 900,016																			
NPV @ 10%	10%	$ 499,541																			
IRR		24.2%																			
Payback	Years	3.6																			

23 ADJACENT PROPERTIES

The QPs have not verified the following information, and have relied upon cited reports in the public domain and corporate websites for the data presented.

The Nukay district, in which the project is located, hosts two adjacent arcuate mineralized belts, with a gold belt lying to the east and on the concave margin of a massive sulphide belt. Both are approximately 30 km wide and over 100 km long, from northwest to southeast, between Mochitlán and Telolapan. Regional mineralization styles comprise skarn hosted and epithermal precious metal deposits and volcanogenic massive sulphides. Skarn-hosted and epithermal precious metal deposits (gold–silver) include Los Filos, Todos Santos, Nukay, Bermejal, Ana Paula and Mochitlán. Volcanogenic massive sulphide deposits (gold–silver–lead–zinc–copper) include Campo Seco, Farallon and Rey de Plata.

The closest deposits to the project are Ana Paula, operated by Newstrike Capital Inc. ("Newstrike") and Los Filos and Bermejal (Figure 23-1), operated by Goldcorp, Inc.

The Los Filos and Bermejal deposits are hosted within the southern portion of the former Morelos Mineral Reserve. Skarn-hosted gold–silver mineralization is associated with three diorite to granodiorite stocks that were emplaced in carbonate rocks of the upper Cretaceous Morelos Formation (Goldcorp Inc., 2009a). Mining, which commenced in 2008, employs open pit methods, at a mining rate of 24 Mt/a. Mineralization is processed by a heap leach operation that utilizes a multiple-lift, single-use leach pad (Goldcorp Inc., 2009a). Gold mineral resources for the Los Filos as of 31 December 2011 totaled 7.89 Mt at 1.95 g/t Au in the Measured Mineral Resource category, 42.70 Mt at 1.04 g/t Au in the Indicated Mineral Resource category, with an additional 158.37 Mt at 0.77 g/t Au in the Inferred Mineral Resource category. In addition to the mineral resources, Proven Mineral Reserves totaled 80.96 Mt at 0.96 g/t Au and Probable Mineral Reserves totaled 231.21 Mt at 0.71 g/t Au (Goldcorp Inc., 2011b).

In June 2010, Newstrike acquired the Ana Paula project as part of the Aurea Norte Concessions from Goldcorp which lies eight km to the northwest of the Morelos Property. Exploration work conducted by Newstrike, is documented in a published NI 43-101 technical report titled *Geological Report and Summary of Field Examinations, Ana Paula Project, Guerrero State, Mexico*, dated June 26, 2010. Gold mineralization is hosted in breccia zones, quartz monzonite, and Teloloapan volcanic, volcaniclastics, and carbonate units. In 2005, Goldcorp drilled 11 core holes for 3,689 m at San Jeronimo with intercepts of high-grade gold. An additional 69 drill holes were drilled in 2011 as part of a 36,000 m drill program. Newstrike's 2012 plans include a 45,000 m exploration drill program with four drill rigs on site.

Mineralization and mineral resources at the Newstrike and Goldcorp projects are not necessarily indicative of the mineralization or mineral resources observed at the Project.

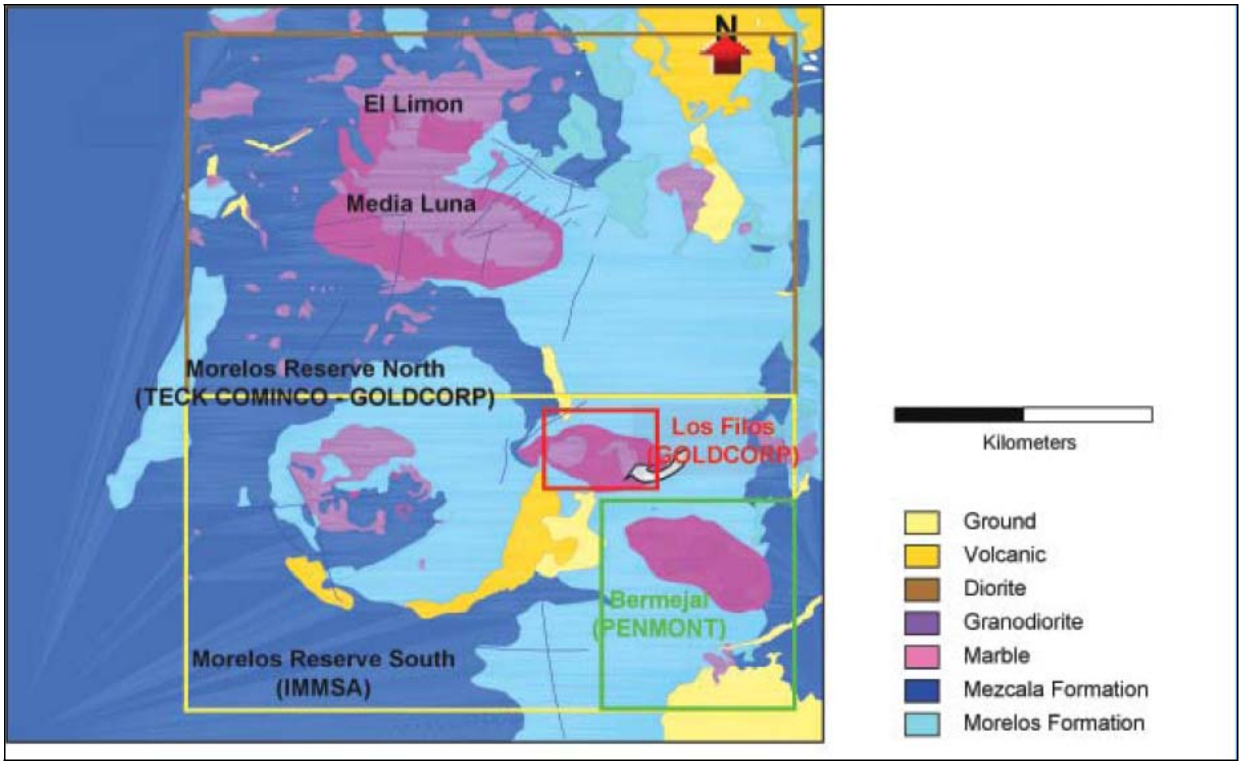


Figure 23-1: Location Map, Los Filos Operation

Note: Figure from Goldcorp Inc., 2004. The Los Filos deposit is outside the project area

24 OTHER RELEVANT DATA AND INFORMATION

Other information relevant to this report includes:

- As part of the Feasibility Study, M3 was asked to provide a Project Execution Plan, detailing the approximate schedule and a description of how the project will be carried out.

- Golder Associates of Mississauga, Ontario ("Golder") will complete a full Environmental Social Impact Study.

- A basic alternative water management plan was also developed which incorporates water handling and treatment due to elevated arsenic levels.

24.1 PROJECT EXECUTION PLAN

24.1.1 Key Points

The execution plan and schedule covers the following points:

- Financing for the project is projected to be in place prior to the end of the first quarter of 2013.
- Permit approvals are anticipated early in the second quarter of 2013. Plant construction would commence immediately thereafter.
- Exploration access roads for the mine development are planned to be started during the fourth quarter of 2012 with dozer trails to the top of the Guajes pit completed by April 2013 to allow mine pre-stripping by MML to begin with in-house personnel (MML is a wholly owned subsidiary of Torex and is the operator of the Project). The mine development haul roads will be contracted out to at least two road contractors. Using multiple contractors will facilitate meeting schedule and allow flexibility. The mine planning will be a combination of internal MML personnel and independent consultants.
- Pre-stripping of the El Limón pit will begin in the first quarter of 2015 after completion of the south side access road and relocation of the villages of La Fundición and El Limón by the end of 2014.
- Detailed engineering is scheduled to start at the beginning of the fourth quarter of 2012 to allow for the placing of orders for the long lead time equipment. The long lead time equipment is expected to include the grinding mills, transformers, and crushers. An EPCM (Engineering, Procurement, and Construction Management) Company will provide the detailed engineering for the process plant and infrastructure.
- The East Service Road construction is planned to start in the fourth quarter of 2012, followed by the Camp and power lines as access becomes available. The Process Plant construction will start once permits are received in the second quarter of 2013. The Process Plant construction will begin with the main access road and earthwork at the plant site to develop rough grading of areas for mine maintenance, construction trailers, and construction laydown.

- Construction and initial mine maintenance power will be provided by diesel generators, with change over to permanent power as soon as it is available.
- Water will be delivered by truck until the Azcala wellfield pipeline is commissioned.
- Process plant construction will be scheduled to accommodate major equipment deliveries. Ancillary buildings at the Process Plant will be prioritized to complete the Truck Maintenance Facility and the Laboratory first. Startup of the Process Plant is scheduled for the beginning of 2015.
- MML is currently staffing the senior management team to manage the early mining and engage in the process plant design. Once financing is in place, MML will staff operations personnel for mining and contract for Mine Equipment maintenance through a MARC agreement. Additional personnel for the Process Plant and infrastructure will be added as construction progresses and the plant is completed and commissioned.
- Environmental controls for surface runoff will be developed to suit the requirements of the mining plan.

24.1.2 Description

The Project Execution Plan describes, at a high level, how the project will be carried out. This plan contains an overall description of what the main work focuses are, project organization, the estimated schedule, and where important aspects of the project will be carried out.

The project execution proposed incorporates an integrated strategy for EPCM. The primary objective of the execution methodology is to deliver the project at the lowest capital cost, on schedule, and consistent with the project standards for quality, safety, and environmental compliance.

24.1.3 Objectives

The project execution plan has been established with the following objectives:

- To maintain the highest standard of safety so as to minimize incidents and accidents
- To design and construct a process plant, together with the associated infrastructure, that is cost-effective, achieves performance specifications and is built to high quality standards
- To design and operate the mine using proven methods, techniques and equipment
- To optimize the project schedule to achieve an operating plant in the most efficient and timely manner within the various constraints placed upon the project
- To comply with the requirements of the conditions for the construction and operating license approvals.

24.1.4 Plan of Approach

This section describes the execution plan for advancing the Project from the current Feasibility Report stage to production. The project execution plan will ensure that key project processes and procedures are in place that will:

- Develop a Master Schedule;

- Consider significant project logistics;
- Develop a project procedures manual with a project communication and document control plan;
- Develop and implement site communications, construction infrastructure, and water supply for an early and efficient startup;
- Plan for early construction mobilization;
- Develop and execute project control procedures and processes;
- Perform constructability reviews;
- Implement project accounting and cost control best practices;
- Issue a cost control plan and a control budget; and
- Oversee project accounting.

MML intends to utilize an EPCM approach utilizing multiple prime contracts for CM, as the recommended method for executing the project. Mining and pre-production work activities will be by MML crews with maintenance undertaken by the equipment supplier. Site road construction will be undertaken by two Mexican contracting companies which were selected through a pre-tending process.

Some items affecting the project are:

- Ability to start work that does not require engineering;
- Availability of construction and engineering resources;
- Experience of the qualified firms considered and their typical and proposed approach;
- An approach that utilizes the best resources available (matching contractors to the size of each contract); and
- Fee-at risk incentives such as bonuses to ensure the quality, cost, safety, and schedule goals of Torex are met or exceeded.

M3 utilized an EPCM approach as the basis for the capital cost estimate. This approach provides for contracts that would include civil, concrete, structural steel, mechanical, piping, electrical and instrumentation.

24.1.5 Engineering

Engineering will be done to match the plant protocol for drawing titles, equipment numbers and area numbers. Design will produce drawings in the kg-metric format. Drawings will be done in Spanish (with English subtitles). Specifications will be done in Spanish.

A site conditions specification will be done to ensure that vendors are aware of the site conditions. Individual equipment specifications will be done.

Engineering control will be maintained through drawing lists, specification lists, equipment lists, pipeline lists and instrument lists. Control of Engineering Requisitions for Quote (ERFQ) will be performed through an anticipated purchase orders list. Progress will be tracked through the use of the lists mentioned.

Concrete reinforcing steel drawings will be done using customary bar available in Mexico. Reinforcing bar will be fully detailed to allow either site or shop fabrication.

Structural steel will be detailed using Tekla software. This will allow fabrication of steel prior to the award of steel installation contracts.

Owner review of engineering progress and design philosophy will be an ongoing process.

24.1.6 Procurement

Procurement of major process equipment will be by the Engineering, Procurement, and Construction Management (EPCM) contractor (M3), acting as an agent for Minera Media Luna, S.A. de C.V. (MML) and on MML purchase order forms. This will include all of the equipment in the equipment list as well as all of the instruments in the instrument list. Some instruments will be part of vendor equipment packages. In addition, structural steel, electrical panels, electrical lighting, major cable quantities, specialty valves and special pipe will be purchased. Contractors will be responsible for the purchase of common materials only.

The mine mobile fleet will be procured directly by MML with the assistance of EMG LLC. EMG is World Bank certified mine mobile fleet procurement company which will assist directly with negotiation of equipment supply and maintenance repair contracts.

It is intended that equipment will be sourced on a world-wide basis, assessed on the best delivered price and delivery schedule, fit-for-purpose basis. Preference will be made to procure goods from Mexico.

Equipment, with the exception of the mine mobile fleet, will be purchased Free On Board (“FOB”) at the point of manufacture or nearest shipping port for international shipments. A logistics contractor will be selected to coordinate all shipments of equipment and materials for the project and arrange for ocean and overland freight to the job site.

The EPCM contractor will be responsible for the receipt of the major equipment and materials at site. The equipment and materials will be turned over to the installation contractor for storage and safe keeping until installed. Bulk piping and electrical materials and some minor equipment will be made part of the construction contracts, and as such will be supplied by the various construction contractors. It is expected that each construction contractor provide for the receipt, storage, and distribution of materials and minor equipment they purchased.

The EPCM contractor will establish a list of recommended pre-qualified vendors for each major item of equipment for approval by MML. The EPCM contractor will prepare the tender documents, issue the equipment packages for the bid, prepare a technical and commercial evaluation, and issue a letter of recommendation for purchase for approval by MML. MML will conduct the commercial negotiations with the recommended vendor and advise the EPCM contractor of the negotiated terms for preparation of the purchase documents. When approved, the EPCM contractor will issue the purchase order, track the order, and expedite the engineering information and delivery of the equipment to the site.

The majority of the bulk supplies will be delivered via an upgraded road from Mezcala rather than through Nuevo Balsas. This road connects directly to Highway 95, the main north-south highway connecting Acapulo and Mexico City. Supplies coming into Mexico by ocean transport would likely enter through the Port of Lazaro Cardenas on the Pacific Coast or Veracruz on the Gulf Coast. Supplies would be transported by road for the most part.

The road from Mezcala will be upgraded for the purpose of delivering the large capital equipment but will be maintained for delivery of operating supplies.

24.1.6.1 Inspection

The EPCM contractor will be responsible to conduct QA/QC inspections for major equipment during the fabrication process to ensure the quality of manufacture and adherence to specifications. Levels of inspection for major equipment will be identified during the bidding stage, which may range from receipt and review of the manufacturer's quality control procedures to visits to the vendor's shops for inspection and witnessing of shop tests prior to shipment of the equipment. Where possible, inspectors close to the point of fabrication will be contracted to perform this service in order to minimize the travel cost for the project. Some assistance may also be provided by the EPCM engineering design team.

24.1.6.2 Expediting

The EPCM contractor will also be responsible to expedite the receipt of vendor drawings to support the engineering effort as well as the fabrication and delivery of major equipment to the site. An expediting report will be issued at regular intervals outlining the status of each purchase order in order to alert the project of any delays in the expected shipping date or issue of critical vendor drawings. Corrective action can then be taken to mitigate any delay.

The logistics contractor will be responsible to coordinate and expedite the equipment and material shipments from point of manufacture to site, including international shipments through customs.

24.1.7 Construction Management

Construction Management will be done as agents for the Owner using multiple prime contracts for each of the major work disciplines. The contracting plan is based on utilizing a series of local contractors to execute the construction work packages. The EPCM contractor will pre-qualify local contractors and prepare tender documents to bid and select the most qualified contractor for the various work packages. Some work packages will include the design, supply, and erection for specific facilities which are specialized in nature. The EPCM contractor will be comprised of individuals capable of coordinating the construction effort, supervising and inspecting the work, performing field engineering functions, administering contracts, supervising warehouse and material management functions, and performing cost control and schedule control functions. These activities will be under the direction of a resident construction manager and a team of engineers, supervisors, and technicians. There would also be a commissioning team to do final checkout of the project.

Some site services will be contracted to third party specialists, working under the direction of the resident construction manager. Construction service contracts identified at this time include the following:

- Field survey services.
- QA/QC testing services.
- Site security (If required)

Temporary construction water will be provided by existing plant services. Fire protection and emergency services for the site are already in place. Torex will provide sources of construction water and power for the contractors. The contractors will provide their own radios and temporary power.

24.1.8 Contracting Plan

Contracting is an integral function in the project's overall execution. A combination of vertical, horizontal, and design construct contracts will be employed as best suits the work to be performed, degree of engineering and scope definition available at the time of award. Contracts where possible will be lump sum fixed price contracts with the mechanical and electrical equipment being purchased by the Owner.

A site installed concrete batch plant will supply concrete to all construction contractors. The temporary construction camp(s) will be the responsibility of the contractors and are expected to house most if not all of the contractor's personnel.

Site earthwork contract(s) will cover all mine pre-stripping, clearing, grubbing, bulk excavation, tailing & overburden storage area preparation. By dividing the site into workable areas, this results in concurrent work which leads to economy of scale, more efficient use of workforce and expeditious completion of the project.

As part of the contracting strategy, a list of proposed contract work packages has been developed to identify items of work anticipated for assembly into a contract bid package. Depending upon how the project is ultimately executed and the timing, several work packages may be combined to form one contract bid package. The following table represents the Proposed Contract Work Package list:

Table 24-1: Proposed Contract Work Packages

1	Power Transmission Line
2	Main Substation (Plant site)
3	East Service Road
4	Site Clearing & Grubbing
5	Site Fencing
6	Main Access Road
7	Process Plant Site Excavation (Incl. In-plant Roads & Drainage)
8	Process/Fresh Water Piping Systems
9	Site Power Distribution
10	Haul Roads
11	Overburden Storage Area Site Preparation
12	Ponds, Control Structures & Diversion Channels
13	Tailing Area Site Preparation
14	Tailing Area Power Distribution
15	Tailing Area Structural/Mechanical/Piping
16	Tailing Area Electrical/Instrumentation
17	Concrete Batch Plant
18	Primary Crusher Concrete
19	Primary Crusher Structural/Mechanical/Piping
20	Primary Crusher Electrical/Instrumentation
21	RopeCon Gyratory Crusher Concrete
22	RopeCon Gyratory Crusher Structural/Mechanical
23	RopeCon Gyratory Crusher Electrical/Instrumentation
24	Process Plant Area Concrete
25	Process Plant Area Mills Installation
26	Process Plant Area Structural/Mechanical/Piping
27	Process Plant Area Electrical/Instrumentation
28	Process Plant Area Field Erected Tanks
29	Process Plant Area Building Enclosures
30	Process Plant Area Controls
31	Process Plant Area Fire Protection
32	Ancillaries Facilities
	Gatehouse
	Administration Building
	Warehouse & Maintenance Building
	Truck Shop
	Fuel Station

Contracts are not detailed for services such as topography, quality control, storage, crane rental services, and it would be important to define if said contracts exist or if they will be the direct responsibility of Torex.

These contracts could be broken down into smaller contracts due either to project phasing or the physical separation of construction work activities within the mine site area. Section 24.1.10

includes the project schedule with the estimated duration for each portion of work. The capital cost estimate summary sheets in Section 21 include the estimated costs of each section of work.

Man hours for this work are included in the cost estimate at 3,261,972.

24.1.9 Quality Control Plan

Quality Control of construction will be done as part of basic engineering under a project-wide Quality Control Plan. All of the necessary forms and protocol will be given to each bidder at the time of contract bidding. This plan will also include the handover protocol of the work from the Contractor to the Owner. Each area and each subsystem in each area will be individually verified for completion.

The Quality Control Plan has the contractors responsible for doing quality control and the EPCM firm confirming that the quality control was done by doing Quality Assurance.

The Quality Control Plan defines who is responsible for what testing using a matrix across all disciplines of the work. Certain quality control testing will need to be done by specialized contracted third party testing companies, such as x-ray testing of welds or nuclear densometer testing of soil compaction. Quality Control resources will be required from the start of work up to final completion. The frequency of inspections is outlined in the QA/QC plan. Quality Control Assurance will require a person in each discipline, for an average of four to eight persons for the duration of the project.

24.1.10 Project EPCM Schedule

The project schedule is based on typical project phasing from feasibility through detailed design and construction. The project schedule utilizes standard work flow with concurrent activity where possible from feasibility study completion and acceptance through basic engineering, detailed engineering design, procurement and construction. The schedule outlined in Figure 24-1 has been developed using Microsoft Project and includes land acquisition, permitting, basic engineering, detailed engineering, procurement and construction components for the process plant and infrastructure.

Major assumptions of the schedule include:

1. A Notice to Proceed will occur on October 1, 2012.
2. Sufficient financing will be in place beforehand in order procure long lead items and support the schedule.
3. Once approved by Torex, basic engineering will start in order to:
    a. Develop a sufficient level of engineering detail to support permit applications.
    b. Provide specification of long-lead time equipment in order to prepare purchase orders for release immediately upon funding.
4. Grinding mills assume an 80-week manufacturing schedule from time of release of P.O. to delivery to site.

5. Contracts will be formed, priced and ready to award prior to a release of the Notice to Proceed on each contract.
6. Contracts will have a notice to proceed upon release of the funding.
7. The construction schedule requires sufficient skilled labor on site to meet this schedule.
8. Sufficient fresh water will be developed locally for construction, from existing wells.

A graphical schedule appears on the next page as Figure 24-1.

Morelos Project
M3-PN110063

ID	Task Name	Duration	Start	Finish
1	FEASIBILITY STUDY	269 days	Wed 8/31/11	Mon 9/10/12
2	BASIC ENGINEERING	5 mons	Mon 10/15/12	Fri 3/1/13
3	DETAILED ENGINEERING	12 mons	Mon 1/7/13	Fri 12/6/13
4	**SOCIOECONOMIC ACTIVITIES**	**456 days**	**Wed 6/1/11**	**Wed 2/27/13**
5	**Land Access**	**317 days**	**Wed 6/1/11**	**Thu 8/16/12**
6	Rio Balsas Ejido	142 days	Wed 6/1/11	Thu 12/15/11
7	Real Del Limon Ejido	211 days	Wed 6/1/11	Wed 3/21/12
8	Private Land	317 days	Wed 6/1/11	Thu 8/16/12
9	**East Service Road**	**456 days**	**Wed 6/1/11**	**Wed 2/27/13**
10	Concula Municipality	1 day	Fri 9/28/12	Fri 9/28/12
11	Atzcala Ejido (Completed)	0 days	Wed 6/1/11	Wed 6/1/11
12	Valerio Trujano	40 days	Fri 9/28/12	Thu 11/22/12
13	Rio Balsas Ejido	109 days	Fri 9/28/12	Wed 2/27/13
14	Real Del Limon Ejido	62 days	Tue 12/4/12	Wed 2/27/13
15	**PERMITTING**	**1312 days**	**Tue 9/21/10**	**Wed 9/30/15**
16	**East Service Road Permit**	**563 days**	**Wed 6/1/11**	**Fri 7/26/13**
17	Road Design	347 days	Wed 6/1/11	Thu 9/27/12
18	Pipe Line Design	26 days	Fri 9/14/12	Fri 10/19/12
19	MIA & ETJ Completion	20 days	Mon 4/8/13	Fri 5/3/13
20	Submit MIA & ETJ	0 days	Fri 5/3/13	Fri 5/3/13
21	Guerrero State Acceptance (Resolution Impacto Ambiental)	0 days	Fri 7/26/13	Fri 7/26/13
22	**Power Line For Water Well Field**	**184 days**	**Sun 7/1/12**	**Thu 3/14/13**
23	Power Line Design	45 days	Sun 7/1/12	Fri 8/31/12
24	Power Line Permitting	120 days	Fri 9/28/12	Thu 3/14/13
25	**Explosives**	**197 days**	**Tue 9/21/10**	**Wed 6/22/11**
26	Construction Needs (To Be Provided By Contractor)	50 days	Tue 9/21/10	Mon 11/29/10
27	Pre-Production Needs (To Be Provided By Explosives Contractor)	120 days	Tue 9/21/10	Mon 3/7/11
28	Application to SEDENA (Completed)	147 days	Tue 11/30/10	Wed 6/22/11
29	**Site Development Permits**	**1028 days**	**Mon 10/24/11**	**Wed 9/30/15**
30	Final Review (Internal)	2 days	Mon 10/24/11	Tue 10/25/11
31	Legal Review	15 days	Wed 10/26/11	Tue 11/15/11
32	Submit MIA	207 days	Wed 11/16/11	Thu 8/30/12
33	Submit ETJ, and RA	218 days	Wed 11/16/11	Fri 9/14/12
34	Archeology Review of Area	120 days	Mon 4/2/12	Fri 9/14/12

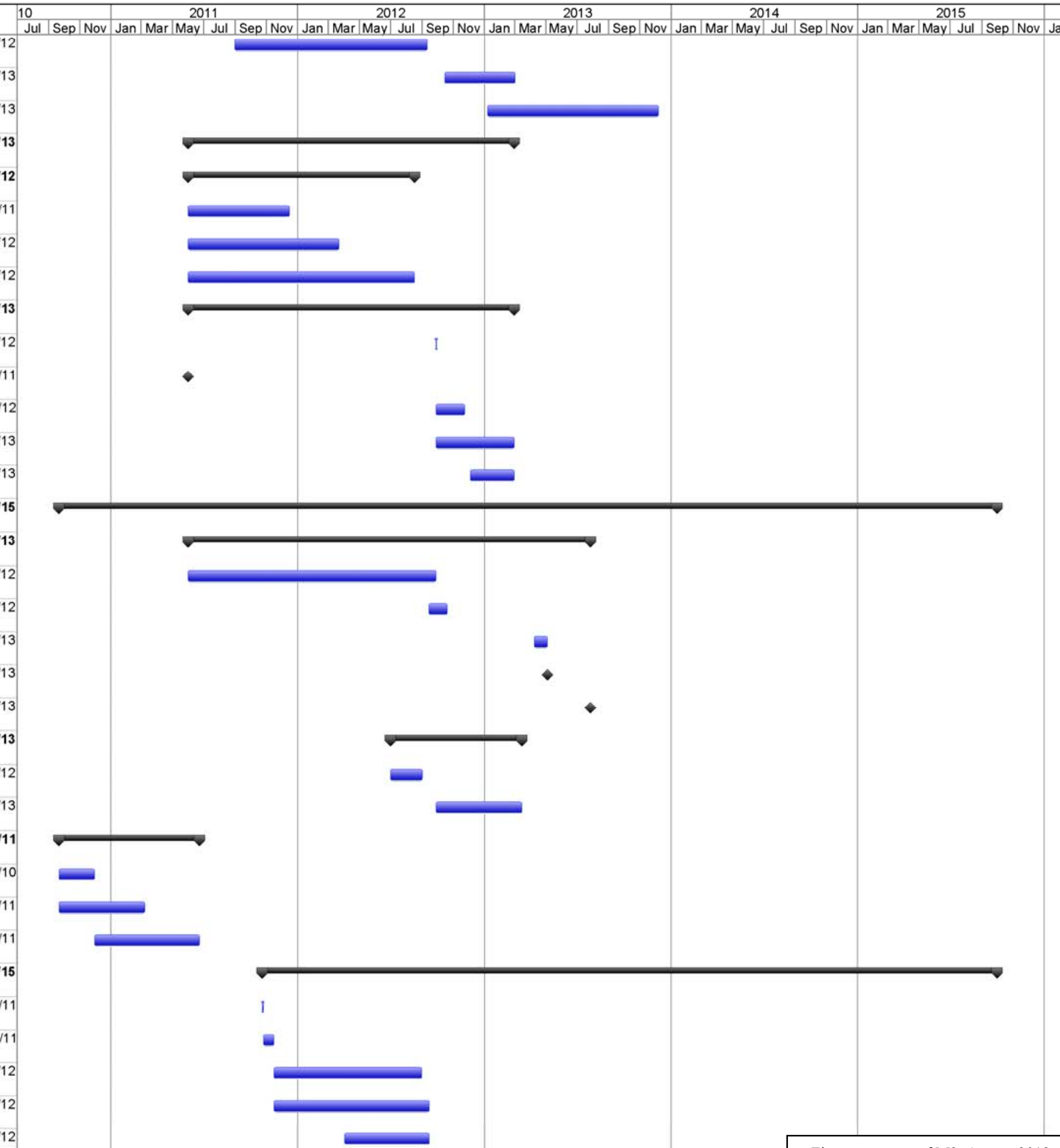


Figure courtesy of M3, August 2012.

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Figure 24-1: Project Schedule

Morelos Project
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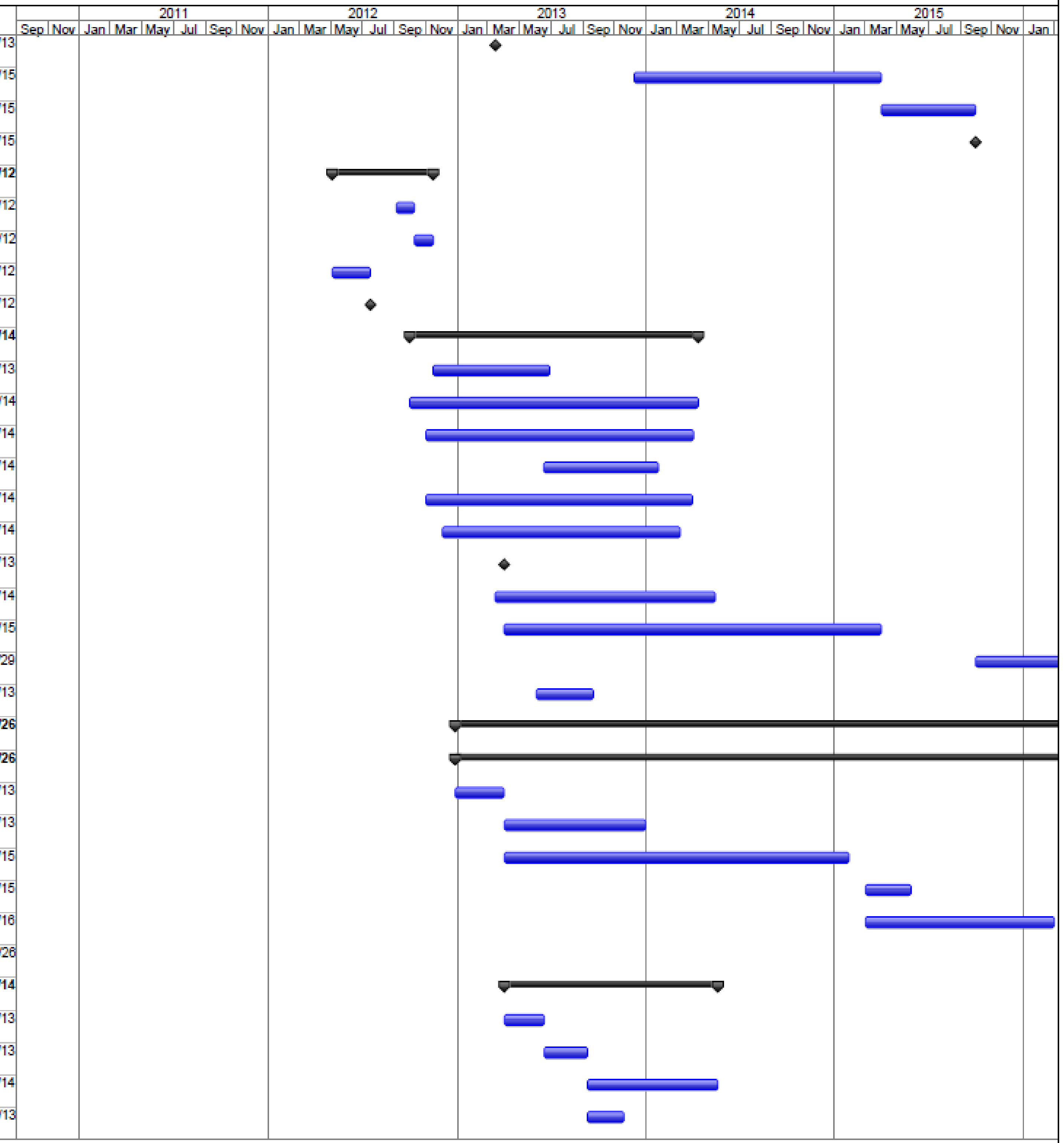
ID	Task Name	Duration	Start	Finish
35	Output Resolution Impacto Ambiental Permiso	0 days	Fri 3/15/13	Fri 3/15/13
36	PPA Prepared	342 days	Mon 12/9/13	Tue 3/31/15
37	PPA and Site Operation Review (after 6 months operation)	131 days	Wed 4/1/15	Wed 9/30/15
38	Output Licencia Ambiental Unica (LAU)	0 days	Wed 9/30/15	Wed 9/30/15
39	**Water Well Field (Water Rights)**	**139.5 days**	**Fri 5/4/12**	**Thu 11/15/12**
40	MIA & ETJ Completion	25 days	Wed 9/5/12	Tue 10/9/12
41	Submit MIA & ETJ Review by SEMARNAT	5.3 wks	Wed 10/10/12	Thu 11/15/12
42	Apply for water rights (CONAGUA)	2.6 mons	Fri 5/4/12	Mon 7/16/12
43	Water Rights - Titulo de Concesion de Agua	0 days	Mon 7/16/12	Mon 7/16/12
44	**LONG LEAD EQUIPMENT (PROCUREMENT & DELIVERY)**	**400 days**	**Mon 10/1/12**	**Fri 4/11/14**
45	Mining Equipment	8.1 mons	Thu 11/15/12	Fri 6/28/13
46	Grinding Mills	80 wks	Mon 10/1/12	Fri 4/11/14
47	Primary Crusher	74 wks	Thu 11/1/12	Wed 4/2/14
48	Leach Tanks	32 wks	Mon 6/17/13	Fri 1/24/14
49	RopeCon Ropeway	368 days	Thu 11/1/12	Mon 3/31/14
50	Transformers & Switchgear	66 wks	Mon 12/3/12	Fri 3/7/14
51	COMMENCE ONSITE CONSTRUCTION	0.05 mons	Mon 4/1/13	Mon 4/1/13
52	POWER LINE CONSTRUCTION	15.2 mons	Fri 3/15/13	Wed 5/14/14
53	MINING PRE-PRODUCTION	26.1 mons	Mon 4/1/13	Tue 3/31/15
54	MINE OPERATION (10/1/15 - 12/15/29)	3707 days	Thu 10/1/15	Sat 12/15/29
55	PERMANENT CAMP CONSTRUCTION	80 days	Mon 6/3/13	Fri 9/20/13
56	**SITE WORK CONSTRUCTION**	**3612 days**	**Fri 12/28/12**	**Mon 11/2/26**
57	**Haul Roads**	**3612 days**	**Fri 12/28/12**	**Mon 11/2/26**
58	Dozer Trails (Guajes & El Limon Access Roads)	66 days	Fri 12/28/12	Sun 3/31/13
59	Guajes Haul Roads, Phases GE & GW To Plant Site	195 days	Tue 4/2/13	Mon 12/30/13
60	El Limon Access Road	477 days	Tue 4/2/13	Wed 1/28/15
61	El Limon Waste Haul Roads, Phases EB & EC	64 days	Mon 3/2/15	Thu 5/28/15
62	El Limon Ore Haul Road To RopeCon	261 days	Mon 3/2/15	Mon 2/29/16
63	El Limon NN Pit Access - Haul Road (1/5/26 - 11/2/26)	216 days	Mon 1/5/26	Mon 11/2/26
64	**DRY STACK TAILING FACILITY**	**295 days**	**Tue 4/2/13**	**Mon 5/19/14**
65	Clear, Grub Topsoil Stripping	55 days	Tue 4/2/13	Mon 6/17/13
66	Cut to Fill	60 days	Tue 6/18/13	Mon 9/9/13
67	Install Liner & Pipe Work	180 days	Tue 9/10/13	Mon 5/19/14
68	Collection Ponds #1,3	50 days	Tue 9/10/13	Mon 11/18/13



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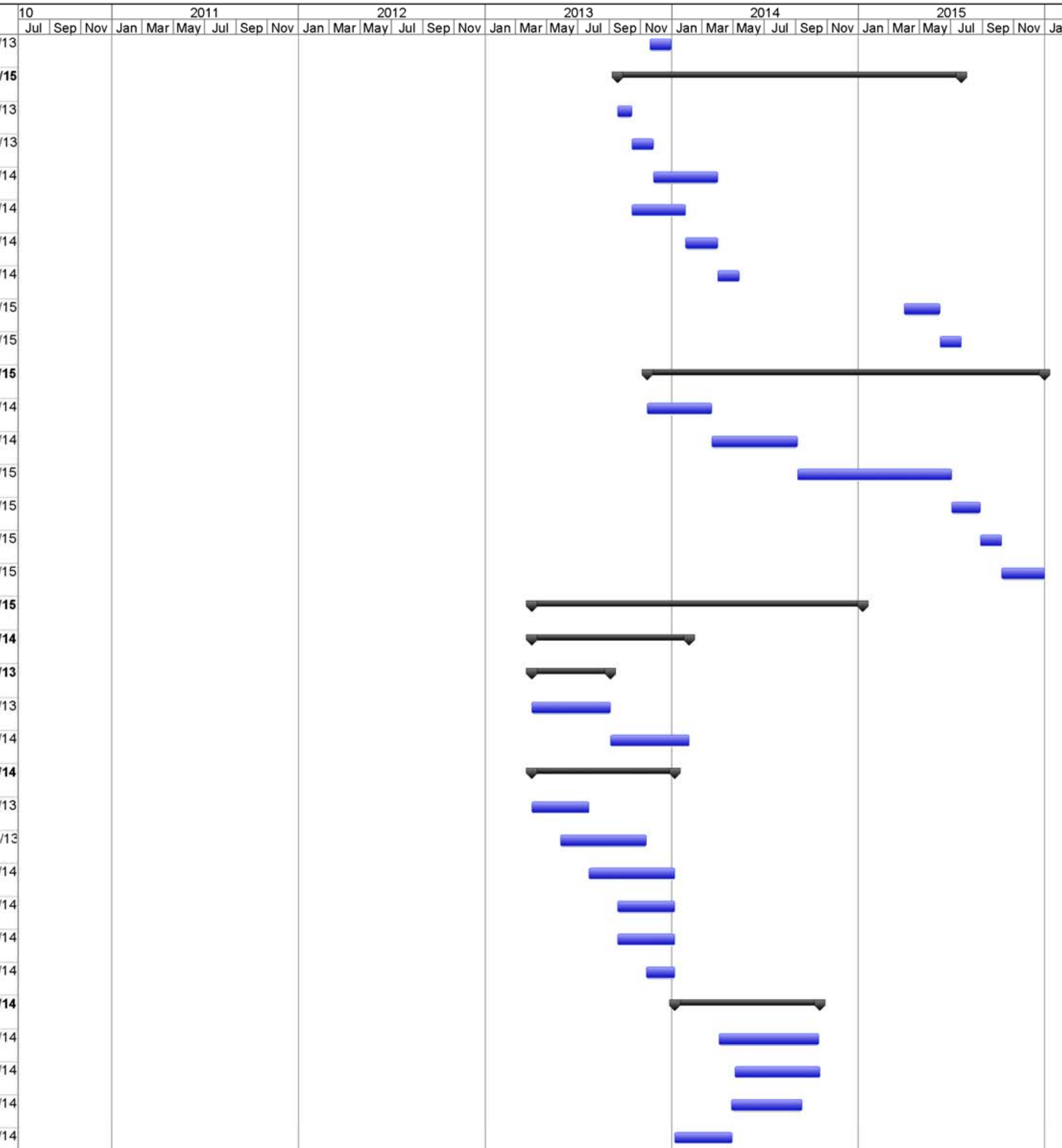
ID	Task Name	Duration	Start	Finish
69	Collection Ponds #1,3 Control Structures Spillways	30 days	Tue 11/19/13	Mon 12/30/13
70	**OVERBURDEN STORAGE AREAS**	**481 days**	**Tue 9/17/13**	**Tue 7/21/15**
71	Clear, Grub, Topsoil Stripping	20 days	Tue 9/17/13	Mon 10/14/13
72	Foundation Prep	30 days	Tue 10/15/13	Mon 11/25/13
73	Install Liner	90 days	Tue 11/26/13	Mon 3/31/14
74	Collection Ponds #4,5,6	75 days	Tue 10/15/13	Mon 1/27/14
75	Collection Ponds #4,5,6 Control Structures Spillways	45 days	Tue 1/28/14	Mon 3/31/14
76	Diversion Channels and Sediment Control	30 days	Tue 4/1/14	Mon 5/12/14
77	Collection Ponds #2	50 days	Wed 4/1/15	Tue 6/9/15
78	Collection Ponds #2 Control Structures Spillways	30 days	Wed 6/10/15	Tue 7/21/15
79	**EL LIMON CRUSHER / ROPEWAY CONSTRUCTION**	**556 days**	**Thu 11/14/13**	**Thu 12/31/15**
80	Crusher / RopeCon Ropeway Bulk Excavation	90 days	Thu 11/14/13	Wed 3/19/14
81	Crusher / RopeCon Ropeway Concrete Foundations	120 days	Thu 3/20/14	Wed 9/3/14
82	Crusher / RopeCon Ropeway Mechanical / Structural Installation	10.8 mons	Thu 9/4/14	Thu 7/2/15
83	Crusher / RopeCon Ropeway Electrical / Piping Installation	40 days	Fri 7/3/15	Thu 8/27/15
84	Crusher / RopeCon Ropeway Instrumentation / Controls Installation	30 days	Fri 8/28/15	Thu 10/8/15
85	Crusher / RopeCon Ropeway Commissioning And Turnover	60 days	Fri 10/9/15	Thu 12/31/15
86	**PROCESS PLANT CONSTRUCTION**	**464 days**	**Tue 4/2/13**	**Fri 1/9/15**
87	**CIVIL CONSTRUCTION**	**220 days**	**Tue 4/2/13**	**Mon 2/3/14**
88	**Clear & Grub Site**	**110 days**	**Tue 4/2/13**	**Mon 9/2/13**
89	Bulk Excavation	110 days	Tue 4/2/13	Mon 9/2/13
90	In-Plant Roads Construction	110 days	Tue 9/3/13	Mon 2/3/14
91	**CONCRETE**	**200 days**	**Tue 4/2/13**	**Mon 1/6/14**
92	Hilfiker Wall Erection & Backfill	80 days	Tue 4/2/13	Mon 7/22/13
93	Primary Crusher Foundation	120 days	Tue 5/28/13	Mon 11/11/13
94	Grinding Mill Foundations	120 days	Tue 7/23/13	Mon 1/6/14
95	Leach Tanks & Refinery Area	80 days	Tue 9/17/13	Mon 1/6/14
96	Other Buildings	80 days	Tue 9/17/13	Mon 1/6/14
97	Reagents Area	40 days	Tue 11/12/13	Mon 1/6/14
98	**MECHANICAL / STRUCTURAL**	**204 days**	**Tue 1/7/14**	**Fri 10/17/14**
99	Primary Crusher Installation	140 days	Thu 4/3/14	Wed 10/15/14
100	Grinding Mills Installation	120 days	Mon 5/5/14	Fri 10/17/14
101	Leach Tanks Installation	100 days	Mon 4/28/14	Fri 9/12/14
102	Refinery Process Equipment Installation	80 days	Tue 1/7/14	Mon 4/28/14



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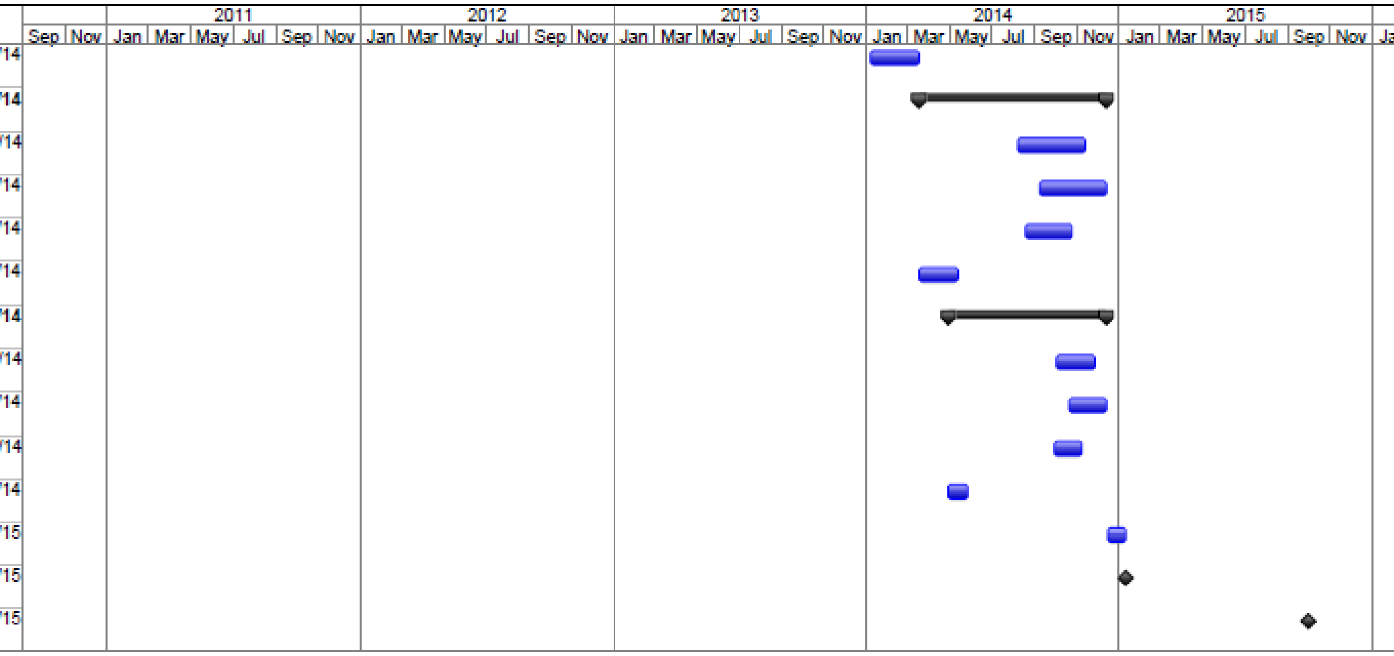
ID	Task Name	Duration	Start	Finish
103	Reagent Tanks Installation	50 days	Tue 1/7/14	Mon 3/17/14
104	**ELECTRICAL / PIPING**	**194 days**	**Tue 3/18/14**	**Fri 12/12/14**
105	Primary Crusher	70 days	Thu 8/7/14	Wed 11/12/14
106	Grinding Mills	70 days	Mon 9/8/14	Fri 12/12/14
107	Leach Tanks	50 days	Mon 8/18/14	Fri 10/24/14
108	Reagents	40 days	Tue 3/18/14	Mon 5/12/14
109	**INSTRUMENTATION / CONTROLS**	**164 days**	**Tue 4/29/14**	**Fri 12/12/14**
110	Primary Crusher	40 days	Thu 10/2/14	Wed 11/26/14
111	Grinding Mills	40 days	Mon 10/20/14	Fri 12/12/14
112	Leach Tanks & Refinery	30 days	Mon 9/29/14	Fri 11/7/14
113	Reagents	20 days	Tue 4/29/14	Mon 5/26/14
114	COMMISSIONING (PLANT) - DRY (NO ORE)	1 mon	Mon 12/15/14	Fri 1/9/15
115	PROCESS PLANT START UP	0 days	Fri 1/9/15	Fri 1/9/15
116	COMMERCIAL PRODUCTION DECLARED	0 days	Thu 10/1/15	Thu 10/1/15



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24.1.11 Cost Control

The cost control will begin with collecting the estimate items into budget line items that will match the anticipated purchasing and contracting format. Generally, equipment will be separated into equipment purchases and equipment installation items. Material costs will be collected into material types by area. Installation costs of construction materials will be along contract line items per area.

Purchase orders will be part of the electronic input to the cost control system.

Each of the commitments will be entered against their corresponding budget line items. Variances will be dealt with on a line item basis.

24.1.12 Risk Management

The key elements in the risk management will be in contractor selection and use of a project-wide safety plan. That plan will incorporate the entire operations safety program plus the special hazards of construction. Each bidder will have a copy of the plan at the time of bidding each contract.

Risk management will also apply to the general design in considering such things as a "warehouse" spare or an "installed" spare of certain process-critical items. This would be developed as part of the Basic Engineering phase.

24.1.13 Labor

Labor is included in the Basis of Capital Cost Estimate – Base Case. Man hours for this work are included in the cost estimate at 3,261,972. For a construction project lasting approximately twenty months (20), it would require an average daily crew of 850 craft workers, with a peak of 1,300 for a period of about 4 months.

Unskilled labor workforce will be readily sourced locally where possible, but certain skilled trades may have to be sourced further away. The intentions are to hire locally as much as possible. Hiring preference will be; Local communities, Municipality of Cocula, Guerrero State, Southern Mexico and Northern Mexico.

24.1.14 Project Organization

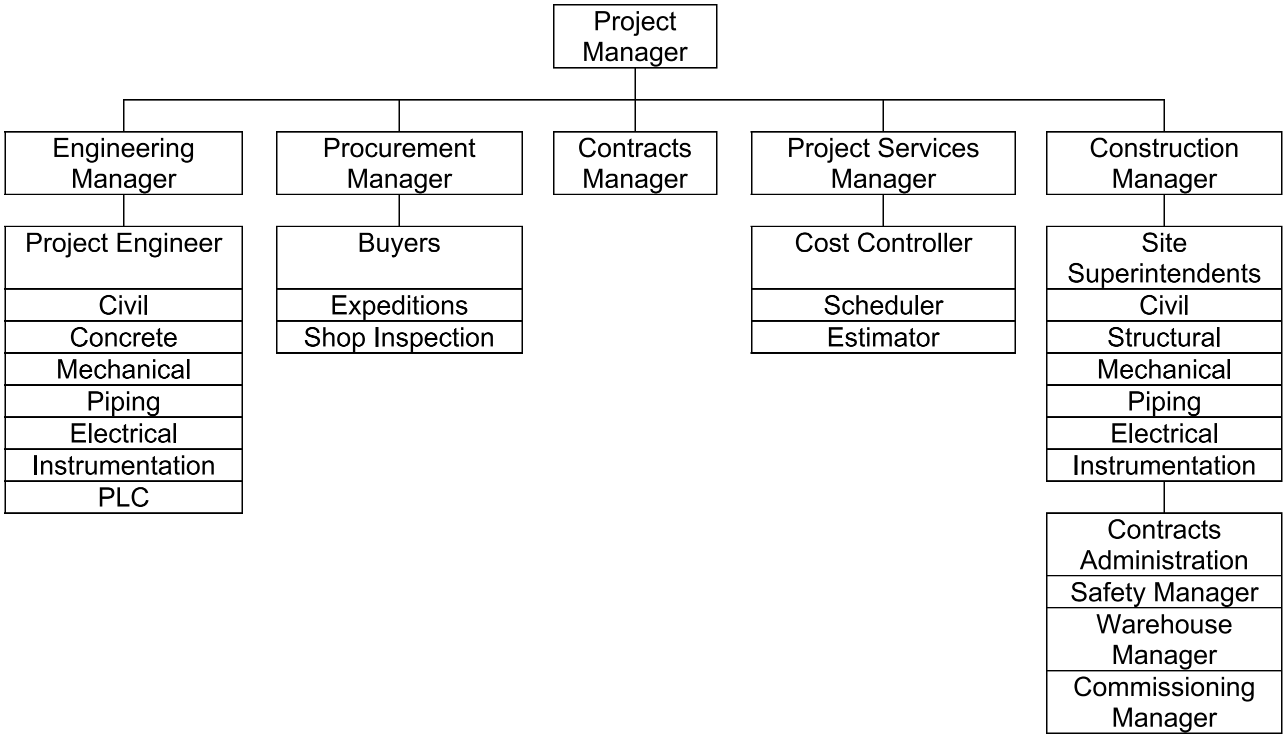

Figure 24-2: Project Organization Block Diagram

24.2 ENVIRONMENTAL MODEL

AMEC was commissioned by Torex to create a model containing estimates of arsenic, calcium, iron, magnesium and sulfur, (the "environmental variables") for the Project located in Guerrero, Mexico. The project comprises the Guajes and El Limón gold deposits. All geological information in this report is inclusive up to and including March 15th, 2012. Although no significant issues with the drillhole database have been observed relating to these five elements, no official database audit has been performed by AMEC. Additionally, approximately half of the drillholes have not been assayed for sulfur, and the confidence in the sulfur estimates is therefore lower.

24.2.1 Principal Outcome

Three-dimensional block modeling of the environmental variables was performed using the commercial mine planning software, MineSight®. This modeling built upon the 7m x 7m x 7m block model of lithology and gold domains that are described in Section 14.

Table 24-2 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 (AMEC, Reno) and reviewed by Edward J. C. Orbock III, RM SME, Principal Geologist (AMEC, Reno).

Table 24-2: Summary of Mean Grade of Estimated 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 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

24.2.2 Recommendations

The arsenic distribution is highly variable, even after being sub-domained using Au mineralized shells. AMEC recommends investigating the use of separate As mineralized shells in future estimates.

AMEC 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 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.

24.3 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 8 and 7 to Pond 1
- Pond 6 to Pond 5
- Pond 5 to Pond 4
- Ponds 4 and 3 to CWP
- Pond 2 to Pond 3
- Pond 1 to Pond 2

The contingency plan also provides 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 2,500 m^3/hr. Water will be pumped to the WTP for treatment from the CWP. The treated water will be discharged to an existing seasonal creek course to the north flowing to the Rio Cocula. The sludge from the WTP will be disposed of in the tailings dry stack interior in separate cells.

25 INTERPRETATION AND CONCLUSIONS

This section shows the major conclusions reached by the main participants in the study.

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 Project 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
Non-discounted Cash Flow	$1,558,437
NPV @ 5%	$900,016
NPV @ 10%	$499,541
IRR %	24.2%
Payback (yrs)	3.6

25.2 CONCLUSIONS BY AMEC

In the opinion of AMEC E&C QPs, the following interpretations and conclusions, based on the Feasibility Study Report, can be reached:

- The project geology and mineralization is sufficiently well established and understood to support mineral resource estimation.
- Work programs included geological mapping, geophysical surveys, geochemical sampling, channel sampling, age dating, petrography, mineralogical studies, and Quick bird imagery, and drilling.
- Drilling between 1997 and 2011 comprised 1,202 drill holes (197,980 m), including 1,141 core holes (188,023 m) and 61 RC holes (9,957 m). Forty-three surface channel samples (4,162 m) were also collected from El Limón Norte Oxide and El Limón Sur.
- Completed exploration programs were appropriate to the mineralization style.
- Drill data collected by Torex and MML meets industry standards for exploration of gold and silver deposits. No material factors were identified with the drill data collection that could affect Mineral Resource estimation. Core methods sampling employed by Torex and MML are in line with industry norms. Sample preparation for samples that support Mineral Resource estimation has followed a similar procedure for the Torex and MML

drill programs. The Torex and MML core samples were analyzed by reputable independent, accredited laboratories using analytical methods appropriate to the gold and silver concentration. Drill data are typically verified by AMEC prior to Mineral Resource estimation, by running a software program check.

- Density assignments were based on results from wax coating analytical methods. All previous density results from water immersion method were rejected as potentially being biased high for skarn and intrusive group lithologies.
- Drill sampling has been adequately spaced to first define, then infill, gold anomalies to produce prospect-scale and deposit-scale drill data. Drill hole spacing varies with depth. Drill hole spacing increases with depth as the number of holes decrease and holes deviate apart. Drilling is more widely-spaced on the edges of the El Limón and Guajes deposits
- Sample data collected adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits.
- Gold grades were estimated using ordinary kriging. Mineralization was confined within a conceptual open pit shell, which used economic parameters developed by SRK and M3 from first principles. AMEC has reviewed the economic parameters used in the Mineral Resource and is of the opinion that they are reasonable for supporting Mineral Resource declaration within a conceptual open pit shell.
- To date, two major deposits, and a number of prospects and exploration targets have been identified.
- There is sufficient area within the Project to host an open pit mining operation including any proposed open pit, waste dumps, and process plant.
- The arsenic grade distribution is highly variable, even after being sub-domained using Au mineralized shells.
- AMEC considers calcium, iron and magnesium estimated grade distribution to be well-behaved and reasonable.
- Future block estimates of sulphur will benefit most significantly from assaying of holes that currently lack sulphur data.

The Project retains significant exploration potential, and additional work is planned.

25.3 CONCLUSIONS BY SRK

Open pit mining of the Morelos deposit is considered appropriate. The two ultimate pits designed, Guajes and El Limón, contain sufficient ore to support a 14,000 tpd operation.

Pit optimization analysis indicates the potential for a larger open pit mine. The El Limón Sur deposit was excluded since it is not yet fully delineated and exploration is in progress. Deep potentially minable resources in El Limón were excluded as they are not fully defined.

Project characteristics that have the largest impact on mine design include the steep terrain, the significant elevation difference within mining areas, and the presence of the village of La Fundición downill from the El Limón pit.

The upper benches of the 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. Conventional truck-shovel mining is planned on lower benches. An El Limón crusher and ore conveyor is planned to avoid long downhill loaded ore hauls from the El Limón pit exit to the plant site 400m below.

The 3.5 year lead time to reach full production from the start of development in April 2013 is principally due to the large elevation difference from pit crest to benches containing significant quantities of ore in the Guajes pit and the presence of village of La Fundición downhill from the El Limón pit. The Guajes deposit is expected to require almost two years of pre-stripping to reach sufficient ore for plant startup at low feed rates, during which time El Limón pit access road construction is planned. El Limón pre-stripping does not commence until village relocation is complete in January 2015, and El Limón ore feed does not commence until the end of 2015 when an ore haul road to the crusher and conveyor is complete. By late 2016 both pits are expected to be fully developed to large ore benches, which is required in order to meet the target plant feed rate.

The production schedule includes a four year period at low mining and processing rates at the end of the mine life. This long “tail” is principally the result of scheduling El Limón north ridge ore mining after the main El Limón pit is depleted and the ore conveyor is taken out of service. The north ridge ore is located adjacent to the conveyor and is expected to impact conveyor operation.

Considerable blasthole sample assaying for grade control purposes is included in the mine plan, since it is expected that above cut-off mineralization will not be visibly distinguishable from waste

Testwork indicates that Morelos rock is quite hard, which led to the selection of hammer blasthole drilling rather than rotary drilling and a higher than typical explosives powder factor. The terrain is considered advantageous for waste disposal, with generally short downhill loaded hauling profiles to high elevation wrap-around waste dumps expected. Ore hauls from both pits to their respective crushers are also considered favorable. It is planned that pit production equipment will be maintained by an equipment supplier from 2013 to 2017, which helps minimize initial owner workforce recruiting requirements thereby facilitating bringing the mine to an operational level.

25.4 RISKS

According to the study QPs, the project carries the following risks:

25.4.1 Waste Management Facilities (AMEC E&I)

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:

- Waste rock block model to quantify the rock generating contaminants and its distribution in the waste rock dumps.
- Laboratory testing of selected existing humidity cells to collect longer term data.
- Small scale field lysimeters to provide a better indication of leaching in field conditions versus laboratory conditions.
- Baseline studies of surface and groundwater quality to define suitable discharge criteria.

The waste management designs are based on an earlier mine plan. During detailed design some modifications will be required to update to the current mine plan. No unresolvable issues are anticipated.

25.4.2 Mineral Resource, Reserves and Mining

25.4.2.1 Pit Geotechnical

- Failure to 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 Limon northeast pit wall and beneath the rope conveyor and crusher presents risk primarily to project schedule and budget as any large voids encountered will require delineation and backfilling.

- Risk that unanticipated conditions may exist along the pit access roads also exists. Significantly worse conditions than expected could delay project schedule and increase costs.

25.4.2.2 Mineral Resources

Mineral Resource estimate is potential at risk due to variations in commodity price and exchange rate assumptions; changes to the assumptions used to generate the conceptual pit shell that constrains the mineral resources, including mining, processing, and other costs, pit slope angles, metallurgical recoveries; and assumptions that all required permits and approvals can be obtained to support mine construction and operation.

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.

25.4.2.3 Mineral Reserves and Mining

- There is a risk of mine development delays due to the following:
  - Potential delays in obtaining remaining surface rights. The El Limón access road crosses private land and SRK understands that work is underway to contact the owner or heirs. If unsuccessful then the intention is to apply for expropriation of the land, which may be time consuming;
  - Construction of dozer trails by contractor may take longer than expected. Trail construction may require unusual and time consuming development methods, possibly including horizontally drilled blastholes on segments traversing extremely steep natural slopes that require blasting prior to excavation;
  - Possible difficulty recruiting experienced mine operating personnel by the start of owner workforce preproduction development in April 2013, due to the short timeline available. Experienced dozer operators are required in the Guajes dozer pits for safety reasons due to the small working benches located on steep terrain. A possible solution, albeit at higher cost, may be to utilize experienced contractors for the initial high elevation mining.
  - High mining rates (in terms of vertical advance or sinking rate) planned in the Guajes dozer pits may not be achieved due to operational delays. Close operational supervision will be required to facilitate and coordinate the drilling, blasting and dozing activities. Dozer pit mining on 10.5m benches rather than 7m benches is considered feasible and may assist in meeting mine plan sinking rates.
- There is a risk that dozer trail and access road alignments may have to be revised. The dozer trails and roads were designed based on 5 m topographical contour data, and the routes traversing extremely steep slopes have not been inspected on the ground or drilled for geotechnical purposes, due to accessibility issues. Topographical maps with a 1 m contour intervals are being prepared and should facilitate a reassessment of dozer trail and access road alignment. Confirmation of actual conditions along the alignments during construction and, especially, mapping of the geotechnical characteristics of the materials exposed during the initial road cuts will be necessary.
- There is a risk of flyrock affecting the El Limon Crusher and RopeCon conveyor, since these facilities are located close to the mining area, which would cause El Limon plant feed disruptions. A blasting specialist retained by Torex expects that the incidence of flyrock should be minimal provided the recommended drilling and blasting parameters are followed, and should flyrock occur the distance it could be expected to fly would not affect the Rope Conveyor according to the specialist. Recommendations include 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 Rope Conveyor.
- There is a risk that more grade control sampling and assaying than allowed for in the feasibility study will be needed if potentially mineralized areas cannot be visually recognized in the open pits. It is expected that initially most rock drilled in the truck-shovel phase pits will be sampling and assayed, but over time, as geological knowledge is gained, pit geologists will optimize grade control practices by recognizing potentially mineralized areas where blasthole sampling and assaying is warranted (i.e. areas of

fractured rock, quartz veining etc.) and avoiding the cost of sampling in areas that are likely barren.

25.4.3 Metallurgy (M3)

- Due to the level and quality of study employed, there are no notable risks remaining with regards to metallurgy or metallurgical testing.

25.4.4 Environmental

- M3 did not find risks associated with the climate data.

25.4.5 Schedule

- The development of environmental permitting in the schedule assumes a seamless process for the permits for construction. If the process is slowed, delays can occur.
- The potential for significantly large voids in the marble should be further evaluated based on the existing resource borehole database to estimate what percentage of the marble 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 and ground penetrating radar may also be necessary prior to and/or during operation. The current belief is that these zones are neither sufficiently large nor sufficiently closely spaced to create potential failure surfaces on a scale that would adversely impact high interramp/overall slopes. Such zones are, however, expected to present operational hazards, particularly since most of the primary El Limon ramp system, including the access to and from the rope conveyor loading pad, will be underlain by marble engineering lithology materials.

25.4.6 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 for employers in order to retain employees. This could potentially drive up the operating cost.

25.5 OPPORTUNITIES

The QPs of the study believe that the project has the following opportunities:

25.5.1 Mineralization

AMEC is of the opinion that the project has the following opportunity:

- 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 prospect, and these targets are being actively explored and/or drill tested.

25.5.2 Mineral Resource, Reserves and Mining

- During the mining operation some of the inferred mineralization contained in the open pits may be upgraded to ore and processed, which would increase gold revenue. The open pits as designed contain an estimated 2.3 Mt of inferred mineral resources that are included in waste stripping quantities.

- There is potential to increase mineral reserves if the El Limón Sur deposit can be incorporated in the mine plan. Pit optimization analysis identified potentially mineable El Limón Sur measured and indicated resources that were excluded from the mine design since geotechnical parameters are not available and exploration to fully delineate the deposit it is not yet complete.

- There is an opportunity to mine a larger El Limón open pit, which would increase life of mine gold production. A preliminary mine plan analysis showed that deepening the El Limón ultimate pit is economically viable although the incremental strip ratio is high and operating margin relatively low. The analysis indicated that a final decision on the El Limón ultimate pit size need not be made until early in 2016.

25.5.3 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.

25.5.4 Capital Cost

- The capital cost estimate is based on budgetary quotes for equipment. An opportunity exists for capital cost reduction with the negotiation of firm purchase orders. Most quotes were received in 2012.

- The development of detail engineering, with a possible optimization of the arrangement of facilities, could show savings in the expected quantities for excavation and fill. Some costs allocated to engineering may become sunk costs as payments will be incurred prior to project financing.

- The capital cost of the main power line from CFE-Mezcala was estimated by CFE. Local independent contractors tend to be lower cost than CFE.

25.5.5 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 development of the detail mine plan and schedule.

- Optimization of the mine plan could reduce the requirements for management of stormwater runoff from the waste dumps. This can save on operating costs.

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

Based on the economic analysis, M3 believes that since the project is viable, the project should proceed to detailed engineering, procurement and construction. Torex should continue with environmental permitting and project financing efforts.

While awaiting permitting and financing, the following items should be completed to enable construction to commence once permitting and financing obtained:

- Detailed engineering project engineering complete with tender packages
- Recruitment of Owners team
- Contractual commitment to EPCM
- Identification of bidders for construction packages
- Securement of long lead time items (based on securement of financing)

Additionally, M3 recommends that Torex undertake the following activities while awaiting project financing:

1) Village relocation
2) Construction of East Service Road
3) Development of Bull dozer access roads to Guajes and El Limón Project

26.2 RECOMMENDATIONS BY AMEC

AMEC considers that there are sufficient data available for Torex to proceed with the work programs outlined in this sub-section.

The work program is currently designed to support potential upgrade of Inferred Mineral Resources to a higher classification and further evaluate outlying exploration targets.

26.2.1 Resource Work Program

26.2.1.1 Develop Infill and Step-Out Drill Program

Torex should review areas on the periphery of the known mineralized areas where mineralization has been interpreted to 'end' based on the results of a single drill hole, or where known mineralization has not been adequately closed-off by drilling. Assuming a total drilling cost, including assays, of $200/m, AMEC has estimated that approximately 5,000 m of drilling, in 30 drill holes, may be required. Estimated cost: $1 M.

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 has estimated that approximately 6,000 m of drilling, in 12 drill holes, may be required. Estimated cost: $1.2 M.

Torex should infill drill El Limón Sur along the ridge line, AMEC estimates that approximately 15,000 m of drilling in 75 drill holes may be required. Estimated cost is $3 M.

26.2.1.2 Resource Models

In reviewing geological logs, AMEC noted high-grade assays associated with marble and intrusive units that are contiguous with high-grade skarn zones. Geological logging of these zones should be revisited to ensure the accuracy of original logging. Estimated cost: $10,000–$20,000.

Some sample intervals were noted to be missing the relevant lithology code. The missing lithology code should be established, either from the original geological logs, or by core re-logging where appropriate. Estimated cost: $10,000–$20,000.

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: US$25,000–$40,000.

Develop an endoskarn-exoskarn geological model to assist in future resource modeling work.

26.2.1.3 Exploration

Key aims of the program is to continue exploration efforts of 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. Torex’s exploration drill program, currently underway, consists of 110 planned drill holes, totaling 51,600 m, testing Media Luna, La Fe, Los Pichones, Naranjo, Pacifico, El Cristo, and Corona. Estimated cost: $10.3 M.

26.3 RECOMMENDATIONS BY SRK

26.3.1 Geotechnical

- Confirmation of actual conditions along the pit access road alignments during construction and, especially, mapping of the geotechnical characteristics of the materials exposed during the initial road cuts.

- 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.

- It is recommended that further drilling and geophysical surveys be undertaken prior to construction of the rope conveyor and adjacent crusher to verify that a major, adverse void is not present that could cause a malfunction of the engineering works in this area. If a major adverse void is detected, its adverse impact must be neutralized, e.g. by filling the void with concrete, pressure grouting, etc.

- The potential for significantly large voids in the El Limon northeast pit wall should be further evaluated based on the existing resource drill hole database 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.

26.3.2 Mining

- It is recommended that experienced bulldozer operators be assigned to work on the upper benches of the Guajes dozer phase pits, for safety reasons since the bulldozers must operate on small benches located on very steep terrain.
- The following mine planning studies are recommended:
  - It is recommended that the dozer trails and El Limon access road alignment be reassessed when detailed topographical contour data is available. The dozer trails and access road are on the project critical path and changes to routing may impact on plant startup or the date full production is is achieved;
  - It is recommended that the El Limon Sur deposit be assessed from a mining perspective once the exploration program to delineate the deposit is complete and mineral resources estimates are updated. The El Limon Sur deposit is in close proximity to the El Limon access road, and the impact of this key road on El Limon Sur mineability should be assessed;
  - It is recommended that the alternative deep El Limon pit design be re-evaluated prior to the approximate January 2016 final decision date estimated in preliminary analyses;
  - It is recommended that the El Limon Phase NN pit mining method be reassessed, to see if it is possible to advance or accelerate the mining of this phase pit, thereby reducing the production schedule “tail” at the end of the mine life.

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PEA CONTRIBUTERS AND PROFESSIONAL QUALIFICATIONS

CERTIFICATE of QUALIFIED PERSON

I, Daniel H. Neff, P.E., do hereby certify that:

1. I am currently employed as President by:

   M3 Engineering & Technology Corporation
   2051 W. Sunset Road, Ste. 101
   Tucson, Arizona 85704
   U.S.A.

2. I am a graduate of 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.

3. I am a:

   - Registered Professional Engineer in the State of Arizona (No. 11804 & 13848)

4. I have practiced civil and structural engineering and project management for 37 years. I have worked for engineering consulting companies for 12 years and for M3 Engineering & Technology Corporation for 25 years.

5. 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.

6. I am responsible for the preparation of sections 1, 2, 3, 4, 5, 18, 19, 21, 22, 24, 25, 26 and 27 of the technical report titled "Morelos Gold Project, 43-101 Technical Report Feasibility Study, Guerrero, Mexico" dated October 1, 2012 (the "Technical Report").

7. I have prior involvement with the property that is the subject of the Technical Report. I was a contributing author of a previous technical report on the subject property entitled "Morelos Gold Project, Guajes and El Limon Open Pit Deposits, Updated Mineral Resource Statement, Form 43-101F1 Technical Report, Guerrero, Mexico" dated June 18, 2012.

8. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

9. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10. I am independent of Torex Gold Resources Inc., applying all of the tests in section 1.5 of NI 43-101.

11. I visited the Morelos property on April 2 to 4, 2012.

Dated this 1st day of October, 2012.

“signed” Daniel H. Neff

Signature of Qualified Person

Daniel H. Neff

Print name of Qualified Person

CERTIFICATE of QUALIFIED PERSON

I, Thomas L. Drielick, P.E., do hereby certify that:

1. I am currently employed as Sr. Vice President by:

   M3 Engineering & Technology Corporation
   2051 W. Sunset Road, Ste. 101
   Tucson, Arizona 85704
   U.S.A.

2. I am a graduate of 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.

3. I am a:

   - Registered Professional Engineer in the State of Arizona (No. 22958)
   - Registered Professional Engineer in the State of Michigan (No. 6201055633)
   - Member in good standing of the Society for Mining, Metallurgy and Exploration, Inc. (No. 850920)

4. I have practiced metallurgical and mineral processing engineering and project management for 41 years. I have worked for mining and exploration companies for 18 years and for M3 Engineering & Technology Corporation for 23 years.

5. 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.

6. I am responsible for the preparation of Sections 13, and 17 of the technical report titled "Morelos Gold Project, 43-101 Technical Report Feasibility Study Guerrero, Mexico" dated October 1, 2012 (the "Technical Report").

7. I have prior involvement with the property that is the subject of the Technical Report. I was a contributing author of a previous technical report on the subject property entitled "Morelos Gold Project, Guajes and El Limon Open Pit Deposits, Updated Mineral Resource Statement, Form 43-101F1 Technical Report, Guerrero, Mexico" dated June 18, 2012.

8. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

9. I am independent of Torex Gold Resources Inc., applying all of the tests in section 1.5 of NI 43-101.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 1st day of October, 2012.

“signed” Thomas L. Drielick

Signature of Qualified Person

Thomas L. Drielick

Print name of Qualified Person

CERTIFICATE OF QUALIFIED PERSON

I, Edward J.C. Orbock III, SME Registered Member, am employed as a Principal Geologist with AMEC E&C Services Inc.

This certificate applies to the technical report entitled “Morelos Gold Project, 43-101 Technical Report Feasibility Study, Guerrero, Mexico” that has an effective date of 4 September, 2012 (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, 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 Project on September 1 to 3, 2009 and again on March 1 to 3, 2011.

I am responsible for Sections 6, 7, 8, 9, 10, 11, 12, the portions of Section 14 that pertain to Mineral Resource estimation of the El Limon deposit (14.1 to 14.3 and 14.5 to 14.10), 23, and those portions of the Summary, Interpretations and Conclusions and Recommendations that pertain to those Sections of the Technical Report (1,24.2, 25.2, 26.2, and 27).

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 Project since 2009 during the preparation of a mineral resource estimate and subsequent completion of a technical report, and was a 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

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 date of this certificate, to the best of my knowledge, information and belief, those 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: 1 October 2012

“Signed and sealed”

Edward J.C. Orbock III, SME Registered Member

CERTIFICATE OF QUALIFIED PERSON

I, Mark P Hertel, SME Registered Member, am employed as a Principal Geologist with AMEC E&C Services Inc.

This certificate applies to the technical report entitled "Morelos Gold Project, 43-101 Technical Report Feasibility Study, Guerrero, Mexico" that has an effective date of 4 September 2012 (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.

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 Project from March 1 to 3, 2011.

I am responsible for portions of Section 14 that pertain to Mineral Resource estimation of the Guajes deposit (sections 14.4, 14.7, 14.8), and those portions of the Summary, Interpretations and Conclusions and Recommendations that pertain to those Sections of the Technical Report (sections 25.2, 25.4.2, 25.5.2, and 26.2).

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 Project since 2009 during the preparation of a mineral resource estimate and subsequent completion of a technical report, and was a 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., 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

AMEC E&C Services, Inc.
1640 Stapley Dr., Suite 241
Mesa, AZ., 85204-6667
Tel 480-253-4930
Fax: 480-253-4932

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 date of this certificate, to the best of my knowledge, information and belief, those 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: 1 October 2012

“Signed and sealed”

Mark P. Hertel, SME Registered Member

CERTIFICATE of QUALIFIED PERSON

I, Brian H. Connolly, P.Eng., of Whitby, Ontario, do hereby certify that:

1. I am employed as a Principal Mining Engineer with SRK Consulting (Canada) Inc. ("SRK"), 25 Adelaide Street East, Toronto, Ontario, Canada, M5C 3A1

2. I graduated from the University of British Columbia with a Bachelor of Applied Science in Mineral Engineering in 1973.

3. I am a member in good standing of the Association of Professional Engineers of Ontario, Registration # 90545203.

4. 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;

5. 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.

6. I am responsible for the preparation of sections 1.14.2, 1.15, 15, 16.1, 16.7 to 16.15, 21.3, 21.4.2, 25.3, 25.4.2.3, 25.5.2, and 26.3.2 of the technical report titled "Morelos Gold Project 43-101 Technical Report Feasibility Study, Guerrero, Mexico" dated October 1, 2012 (the "Technical Report").

7. I have had prior involvement with the property that is the subject of the Technical Report. I have participated in the preliminary technical studies on the project as a consultant to Torex since 2010.

8. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

9. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10. I am independent of Torex Gold Resources Inc., applying all of the tests in section 1.5 of NI 43-101.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

12. I visited the Morelos property on May 5th and 6th, 2010.

Dated this 1st day of October, 2012.

"signed" Brian H. Connolly

Signature of Qualified Person

Brian H. Connolly

Print name of Qualified Person

CERTIFICATE of QUALIFIED PERSON

I, Bernardo (Benny) Susi, P.E., do hereby certify that:

1. I am currently employed as Principal and Practice Leader by:

   Golder Associates Inc.
   6026 NW 1st Place
   Gainesville, Florida 32607
   U.S.A.

2. I am a graduate of the University of Florida and received a Bachelor of Science degree in Civil Engineering in 1977 and a Master of Engineering degree in Civil Engineering in 1979.

3. I am a:

   - Registered Professional Engineer in the State of Florida (No. 35042)

4. I have practiced civil and environmental assessments and project management for 34 years. I have worked for engineering and environmental consulting companies for 18 years and for Golder Associates Inc for 16 years.

5. 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.

6. I am responsible for the preparation of section 20 of the technical report titled “Morelos Gold Project, 43-101 Technical Report Feasibility Study Guerrero, Mexico” (Technical Report) dated October 1, 2012.

7. I have had prior involvement with the property. I have conducted a site reconnaissance to evaluate a gap of environmental studies conducted by Golder in 2010. I was a contributing author to the environmental and social work plans, and am currently leading the environmental and social section of the Feasibility Study.

8. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Section 20 of the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

9. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10. I am independent of Torex Gold Resources Inc., applying all of the tests of section 1.5 of NI 43-101.

11. I visited the Morelos property on August 7 to 9, 2012.

Dated this 1st day of October, 2012.

“signed” Bernardo (Benny) Susi

Signature of Qualified Person

Bernardo (Benny) Susi

Print name of Qualified Person

SRK Consulting (U.S.) Inc.
7175 West Jefferson Avenue, Suite 3000
Lakewood, Colorado
80235

denver@srk.com
www.srk.com

Tel: 303.985.1333
Fax: 303.985.9947

CERTIFICATE OF QUALIFIED PERSON

Michael Levy, P.E., P.G.

I, Michael E Levy, am a Professional Engineer, employed as a Senior Geotechnical Engineer with SRK Consulting Inc.

This certificate applies to the technical report titled "Morelos Gold Project, 43-101 Technical Report Feasibility Study Guerrero, Mexico" dated October 1, 2012 (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 graduated with a B.Sc. in Geology from the University of Iowa in 1998 and a M.Sc. in Civil-Geotechnical Engineering from the University of Colorado in 2004.

I have practiced my profession continuously since March 1999 and have been involved in a variety of geotechnical projects 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 of Mineral Projects* (NI 43-101).

I have visited the Morelos site several times in the past two years, most recently on April 4-5, 2012.

I am responsible for preparation of sections 16.2 and 16.3 of the Technical Report and any conclusion, recommendation, risks or opportunities that relate 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 prior involvement with the property that is the subject of the Technical Report. I provided information for a previous technical report on the subject property entitled "Guajes and El Limon Open Pit Deposits Updated Mineral Resource Statement Form 43-101F1 Technical Report Guerrero, Mexico", issued June 18, 2012.

I have read National Instrument 43-101 and this report has been prepared in compliance with that Instrument. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"Original Signed"

Michael E. Levy, P.E, P.G.

Dated: October 1, 2012

Group Offices:
Africa
Asia
Australia
Europe
North America
South America

Canadian Offices:
Saskatoon 306.955.4778
Sudbury 705.682.3270
Toronto 416.601.1445
Vancouver 604.681.4196
Yellowknife 867.445.8670

U.S. Offices:
Anchorage 907.677.3520
Denver 303.985.1333
Elko 775.753.4151
Fort Collins 970.407.8302
Reno 775.828.6800
Tucson 520.544.3688

CERTIFICATE OF QUALIFIED PERSON

I, Prabhat Habbu, P.Eng. am employed as a Senior Geotechnical Engineer with AMEC Environment & Infrastructure, a Division of AMEC Americas Ltd. (AMEC E & I).

This certificate applies to the technical report titled "Morelos Gold Project, 43-101Technical Report Feasibility Study, Guerrero, Mexico" that has an effective date of 4 September 2012 (the "technical report").

I am a Registered Professional Engineer in the Province of Ontario, Canada (No. 100112130). I graduated in Civil Engineering from the University of Karnataka with a post graduation degree of Master of Technology (M.Tech) from the Indian Institute of Technology, New Delhi in Soil Mechanics and Foundation Engineering in 1990.

I have practiced my profession for over 20 years. I have been directly involved in the design of the tailings storage facilities, mine waste rock dumps, dams and spillways for water management and geotechnical investigations for the 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 Project between September 13 and 16, 2011.

I am responsible for Sections 16.4, 16.6, and 18.7 to 18.9 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 Project in the role of geotechnical assessments during the preparation of the feasibility study on which the technical report is based.

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: 1 October 2012

"Signed and sealed"

Prabhat Habbu. P.Eng.

SRK Denver
7175 West Jefferson Avenue.
Suite 3000
Lakewood, CO 80235

T: 303.985.1333
F: 303.985.9947

denver@srk.com
www.srk.com

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.
   7175 W. Jefferson Ave, Suite 3000
   Denver, CO, USA, 80235

2. This certificate applies to the technical report titled "Morelos Gold Project, 43-101 Technical Report Feasibility Study Guerrero, Mexico" dated October 1, 2012 (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 34 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 project.
6. I am responsible for the preparation of Section 16.5 of the Technical Report.
7. I am independent of the issuer applying all of the tests in section 1.5 of 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 September 4th 2012, to the best of my knowledge, information and belief, the sections of the Technical Report I am responsible for contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

"Original Signed"

____
Dr. Vladimir Ugorets

Dated: October 1, 2012