# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

# Form 6-K

**REPORT OF FOREIGN ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934**

**For the month of December ,2005.**

Commission File Number 1-31597

# Western Silver Corporation
(Translation of registrant's name into English)

**Suite 2050, 1111 West Georgia Street, Vancouver, B.C., V6E 4M3, Canada**
(Address of principal executive office)

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Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F □ or Form 40-F.
Form 20-F_____ Form 40-F ✓

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If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Western Silver Corporation
(Registrant)

Date: December 19, 2005

By: ______________________
(Signature)*

Jeffrey Giesbrecht, V.P. Legal

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* Print the name and title under the signature of the signing officer.

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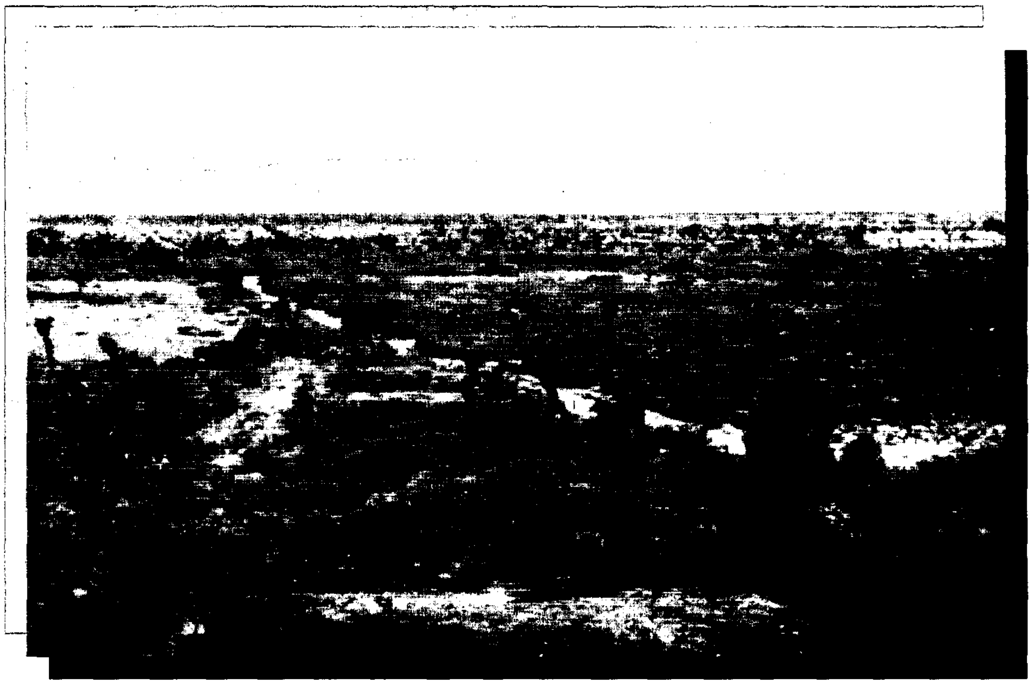
# Peñasquito Feasibility Study

# Volume I
# NI 43-101 Technical Report



**Prepared for:**

WESTERN SILVER CORPORATION

M3 Engineering & Technology Corp.

M3-PN04074
November 2005

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| A | Professional Qualifications<br>➢ Certificate of Qualified Person and Consent of Author<br>➢ Resumés of Principal Authors |

| Responsibility | Qualified Person | Registration |
|---|---|---|
| Resource Modeling | John Marek | P.E. |
| Mine Planning | John Marek | P.E. |
| Reserves | John Marek | P.E. |
| Geology | Western Silver | |
| Metallurgical Testing | Jerry Hanks | P. E. |
| Pit Geotechnical | Thomas Wythes | P. E., R.G. |
| Process Plant and Costing | Conrad Huss | P.E. |
| Foundation Design | Michael Pegnam | P.E. |

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# 1 EXECUTIVE SUMMARY

## 1.1 TITLE PAGE

This report is prepared in accordance with the Canadian Standard NI 43-101. The first two items of this 26 item outline are the Title Page and Table of Contents. For ease of cross referencing during review, the first two subsections of this report (1.1 and 1.2) are incorporated into the format for this report.

## 1.2 TABLE OF CONTENTS

See discussion in subsection 1.1.

## 1.3 SUMMARY (SYNOPSIS)

This feasibility study has been prepared by M3 to summarize the work performed to date on the Western Silver Peñasquito project. The study also sets forth the conclusions and recommendations, based on M3's experience and professional opinion, which result from their analysis of work and data collected.

*Conclusion*

M3 recommends development of the Peñasquito project.

Total capital investment in the project is estimated to be $460 million over the life of the mine. After the deduction of a 2% NSR royalty payable to Kennecott, the economic model for the project indicates an after-tax internal rate of return (IRR) of 16.2% based on 100% equity and a zero percent discount rate NPV of $877 million using $6.74 per ounce of silver, $434 per ounce of gold, $0.52 per pound of zinc and $0.37 per pound of lead. These prices represent a three year historical rolling average to the end of October 2005 and two year future prices, weighted 60:40 historical to future. For an explanation of metal prices used and sensitivity analysis, refer to Sections 1.25.8 (f) and (o).

This project has a number of favorable characteristics:

- Established threshold for NPV and IRR with economics that withstand sensitivity tests, i.e. a robust project.
- Minimum mine life of 17 plus years. This life significantly exceeds metal pricing cycles.
- High daily tonnage production.
- Early revenue from leaching oxide ore to produce silver/gold doré.
- Favorable site with relatively low earthwork costs.

- Strong potential for further near surface Peñasco ore which could provide higher grades in early years and reduce stripping in later years, leading to increased overall tonnage in the pit.
- Significant opportunity to develop the Azul deposit as extension of Chile Colorado open pit.
- Reasonable opportunity to develop underground deposits.
- Reasonable opportunity to improve the Chile Colorado recoveries that have already been established by laboratory testing.
- Favorable business atmosphere in the setting of long established mining district heritage.

As further information on the project is collected, metrics continue to improve as well as the overall established robustness of the property.

*Property Description and Location*

Western Silver owns 100% of the mineral rights to a large area covering approximately 39,000 hectares located in the north-eastern portion of the State of Zacatecas (Figures 1-1 and 1-2) in north-central Mexico. As shown on Figures 1-3 and 1-4, the portion of this area referred to as the Peñasquito property lies approximately 27 km west of the town of Concepcíon del Oro in a wide, generally flat valley covered by coarse grasses and cacti.

Investigations on this property have identified several major sulphide mineralization zones with significant values of silver, gold, zinc and lead (Figure 1-9). This study considers the economic development of two zones, the Peñasco and the Chile Colorado, which have been the subject of most of the geological and metallurgical investigations to date. Preliminary resource investigation has been performed on two additional zones, Azul Breccia and El Sotol, but no development plan has yet been evaluated. In addition to the sulphide mineralization, the Peñasco and the Chile Colorado zones also have substantial oxide ore and mixed ore (oxide/sulphide transition material) caps which contain recoverable gold and silver. The gold and silver recovered from the oxide and mixed ores has been included in the project economic evaluation.

*Development Plan*

The sulphide ore bodies will be developed in sequence beginning with the Peñasco pit followed by the Chile Colorado pit. Overburden and oxide ore will be stripped to allow access to the sulphide ore. Oxide ore, as it is encountered during the stripping, will be placed on a leach pad. The oxide material will be leached with sodium cyanide solution and gold and silver will be recovered through a Merrill-Crowe processing facility. The rate at which oxide ore is placed on the leach pad varies from about 10,000 metric tonnes per day (mtpd) to 50,000 mtpd during the first seven years of operation and at a diminished rate over an additional nine years.

The sulphide ore will be mined as follows:

a) Peñasco Pit (50,000 mtpd nominal) operating Years 1 through 13.
b) Chile Colorado Pit (40,000 mtpd nominal) operating Years 11 through 18.

As implied above, during Years 11, 12 and 13, both pits will be mined simultaneously.

The Azul zone is contiguous with the northern edge of the Chile Colorado pit. For this report, the Azul resources are not included in any technical or financial analyses. El Sotol is a zone of mineralization to the west of Peñasco. Like Azul, its tabulated resources are not included in any technical or financial evaluation.

*Resources*

Independent Mining Consultants (IMC) developed block models for both the Peñasco (including El Sotol) and Chile Colorado (including Azul) deposits based on exploration drilling performed by Western Silver. Data through Drilling Campaign 14 was used. The floating cone geometry used to determine a reasonable expectation of the mineable open pit resources was based on end of September 2005 spot metals pricing Resources were calculated within this geometry using end of September 2005 M3 pricing. Section 1.25.8 explains the M3 pricing and shows a summary with the methodology used.

A net smelter return (NSR) value for the sulphide, mixed and oxide materials was calculated using input data on operating costs, metallurgical recoveries, metal pricing and smelter terms effective the $4^{th}$ quarter of 2005. A flotation milling process has been defined for the sulphide material with an internal cut-off calculated at \$3.60 NSR for Peñasco and El Sotol a \$4.18 NSR for Chile Colorado and Azul. A run-of-mine, heap leach process for gold and silver has been defined for the oxide and mixed materials with an internal cut-off calculated at \$1.30 NSR for both pits.

The resources with open pit potential estimated by IMC are summarized as follows:

**Table 1-1 Estimated Resource Potential by Open Pit**

| Combined Measured and Indicated Category | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| Peñasco Oxide Resource | 27.8 | 1.30 | 25.15 | 0.270 | - | - |
| Peñasco Mixed Resource | 24.4 | 1.30 | 25.95 | 0.360 | - | - |
| Peñasco Sulphide Resource | 281.7 | 3.60 | 29.11 | 0.607 | 0.30 | 0.69 |
| | | | | | | |
| Chile Colorado Oxide Resource | 19.0 | 1.30 | 18.35 | 0.212 | - | - |
| Chile Colorado Mixed Resource | 7.1 | 1.30 | 20.40 | 0.213 | - | - |
| Chile Colorado Sulphide Resource | 188.4 | 4.18 | 29.84 | 0.301 | 0.27 | 0.72 |
| | | | | | | |
| Azul Oxide Resource | 6.8 | 1.30 | 22.13 | 0.158 | - | - |
| Azul Mix Resource | 3.7 | 1.30 | 31.89 | 0.161 | - | - |
| Azul Sulphide Resource | 107.7 | 4.18 | 28.74 | 0.162 | 0.34 | 0.70 |
| | | | | | | |
| El Sotol Oxide Resource | 1.4 | 1.30 | 21.93 | 0.242 | - | - |
| El Sotol Mixed Resource | 0.0 | 1.30 | | | | |
| El Sotol Sulphide Resource | 3.2 | 3.60 | 17.38 | 0.297 | 0.28 | 0.55 |
| | | | | | | |
| **Total Oxide** | **55.1** | | **22.34** | **0.235** | **-** | **-** |
| **Total Mixed** | **35.2** | | **25.46** | **0.309** | **-** | **-** |
| **Total Sulphide** | **581.0** | | **29.21** | **0.423** | **0.30** | **0.70** |
| | | | | | | |
| **Inferred Category** | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
| | | | | | | |
| Peñasco Oxide Resource | 2.1 | 1.30 | 21.42 | 0.244 | - | - |
| Peñasco Mixed Resource | 2.1 | 1.30 | 23.29 | 0.723 | - | - |
| Peñasco Sulphide Resource | 101.5 | 3.60 | 24.97 | 0.569 | 0.22 | 0.59 |
| | | | | | | |
| Chile Colorado Oxide Resource | 1.6 | 1.30 | 14.36 | 0.139 | - | - |
| Chile Colorado Mixed Resource | 2.2 | 1.30 | 23.17 | 0.161 | - | - |
| Chile Colorado Sulphide Resource | 52.9 | 4.18 | 23.60 | 0.223 | 0.19 | 0.53 |
| | | | | | | |
| Azul Oxide Resource | 9.5 | 1.30 | 16.10 | 0.156 | - | - |
| Azul Mix Resource | 2.2 | 1.30 | 22.27 | 0.148 | - | - |
| Azul Sulphide Resource | 68.7 | 4.18 | 25.50 | 0.174 | 0.33 | 0.66 |
| | | | | | | |
| El Sotol Oxide Resource | 2.1 | 1.30 | 20.13 | 0.174 | - | - |
| El Sotol Mixed Resource | 0.0 | 1.30 | | | | |
| El Sotol Sulphide Resource | 1.7 | 3.60 | 20.32 | 0.257 | 0.34 | 0.57 |
| | | | | | | |
| **Total Oxide** | **15.4** | | **17.20** | **0.169** | **-** | **-** |
| **Total Mixed** | **6.4** | | **22.90** | **0.338** | **-** | **-** |
| **Total Sulphide** | **224.9** | | **24.77** | **0.365** | **0.25** | **0.60** |

In accordance with NI 43-101 guidelines, only material in the measured and indicated categories has been used in the economic evaluation of these deposits. In addition, only the Peñasco and Chile Colorado deposits have been used.

A number of zones of high grade mineralization are located outside the proposed Peñasco pit envelope at depths between 300 and 650 metres. The economic potential of mining this material by underground methods is being assessed on a preliminary basis by Wardrop Engineering, Inc. of Vancouver.

*Reserves*

The proven and probable reserves for the deposits are contained within engineered pit designs based on a floating cone analysis of the resource block models using only the measured and indicated sulphide, mixed and oxide resources. Inferred resources are not included in the reserve estimations.

The pit shell geometry was conservatively designed using the following metal prices: gold at $350/ounce, silver at $5.50/ounce, lead at $0.30/pound, and zinc at $0.45/pound. Having developed a conservative geometry, end of September 2005 M3 prices were then used to calculate the reserves.

**Table 1-2 Open Pit Reserves**
(Sum of Proven & Probable)

| | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| Peñasco Oxide Reserves | 27.8 | $1.30 | 25.5 | 0.27 | --- | --- |
| Peñasco Mixed Reserves | 23.9 | $1.30 | 25.9 | 0.351 | --- | --- |
| Peñasco Sulphide Reserves | 169.1 | $3.60 | 27.0 | 0.60 | 0.29% | 0.61% |
| Chile Colorado Oxide Reserves | 18.9 | $1.30 | 18.4 | 0.21 | --- | --- |
| Chile Colorado Mixed Reserves | 6.6 | $1.30 | 20.5 | 0.22 | --- | --- |
| Chile Colorado Sulphide Reserves | 88.7 | $4.18 | 36.3 | 0.33 | 0.36% | 0.84% |
| **Total** | **335.1** | | | | | |

The combined life-of-mine stripping ratio is 1.94 if oxide, mixed, and sulphide ores are taken into account. The stripping ratio is 2.82 if only the sulphide ore is used, i.e., the oxide and mixed ore is considered waste. Individually, the Peñasco stripping ratio is 3.02 for sulphide only and 2.08 for sulphide, oxide and mixed. Chile Colorado is 2.43 for sulphide only and 1.66 for sulphide, oxide and mixed.

*Facilities* (Figures 1-5 and 1-6)

Ore and waste will be mined using one large front end loader, one hydraulic and up to two electric shovels and a fleet of diesel haul trucks; the number of haulage units will vary from 8 in Year 1 (2007) to 29 in Year 10 (2016) depending on the phase of the development.

Run-of-mine oxide and mixed ore will be hauled for placement on the leach pad. The heap leach system will treat the ore with sodium cyanide solution to produce a pregnant solution bearing the precious metals. A Merrill-Crowe zinc precipitation process will be used to recover gold and silver from pregnant solution. Precipitate containing precious metals will be de-watered with plate-and-frame filter presses, treated in a retort furnace, and poured into doré molds.

The sulphide ore will be processed through a conventional crushing, milling and flotation facility. Haul trucks will deliver ore to a primary crusher, crushed ore will be conveyed to a SAG mill, ball mill, and pebble crusher facility. Ground and classified sulphide ore will be piped to the flotation circuit where the ore will be processed to produce a lead concentrate and zinc concentrate. In the later years of the Chile Colorado development, carbonaceous materials must be floated prior to lead flotation. The concentrate slurries will first be thickened and then dewatered using pressure filters. The dewatered concentrates will be stockpiled before loading onto highway road vehicles for transport to in-country smelters or to the ports for export to foreign smelters.

*Utilities*

Process water will be initially obtained from wells to be developed on site and supplemented during later development from pit dewatering. Process design will highlight water conservation. Section 1.7 includes further discussion on water rights.

As a result of several productive meetings with Comision Federal de Electricidad (CFE), the federal government utility company, the Feasibility Study assumes that power will be available from a 400kV power line tapped in reasonable proximity to the site. (Figure 1-4). From this location, power will be transmitted at 230kV via a new overhead power line to the mine site main substation. The power rate of $0.06/kWhr used in the feasibility study, is based on CFE's published interruptible power rates with limited power shedding during peak hours (approximately 15 hours on average per week).Power shedding is accomplished mainly by operating only one ball mill during these peak hours and performing scheduled maintenance on the off-line unit.

*Infrastructure*

The mine site is located 26 km west of Concepcion del Oro (Figures 1-3 and 1-4) which is situated on Highway 54, a well maintained, major highway. A new road is being constructed by the State of Zacatecas from just east of the mine site to Highway 54 which will provide good road access for the mine. This road is scheduled to be completed prior to the start of construction.

A rail head is located some 100 km west of the mine site at Estacion Camacho. This sparsely populated area is easily accessed by a dirt road directly from the site.

*Schedule*

The project development schedule assumes that engineering and procurement activities will begin immediately following issuance of the Feasibility Study. Starting in the second quarter 2006, conditional purchase orders will be placed for major, schedule critical, mine and process equipment. The conditional equipment awards will provide the vendor data that will allow detailed engineering to proceed and protect the overall project schedule. Vendor buy-outs and fabrication will be restricted until full project release is obtained. The exception to this approach will be the initial mining equipment orders which will be placed without restriction but with appropriate cancellation clauses.

Permits, surface rights negotiations, and financing are assumed to be in place by end of June 2006 leading to full release of the project (NTP). At this time all purchase orders will be released for full fabrication and delivery.

Mobilization to the field will commence at NTP and early field work will comprise temporary facilities, earthworks, roads, foundations, leach pad and ponds and power supply.

Mobile mine equipment (e.g., shovels and trucks) will arrive for assembly in late 2006 early 2007. Stripping of mine overburden will begin in February 2007. Placement of oxide and mixed ore on the leach pad will begin in May 2007. Sulphide ore mining will begin in earnest with the introduction of feed to the concentrator in July 2008.

The Merrill-Crowe plant will be completed by mid 2007 leading to the first doré production in July 2007.

The sulphide concentrator pre-operational testing will be completed at the end of June of 2008. Mill start up and commissioning will commence in July 2008 with ramp up through August of 2008.

Figure 1-14 is the Project Development Summary Schedule.

*Metallurgy*

Three hundred and sixty-eight development metallurgical tests were undertaken on sulphide ore, and a further 91 were undertaken on oxide ore. Locked cycle tests on ore from both the Peñasco and Chile Colorado deposits were performed as part of the flotation test program in order to provide a basis for the projected plant recoveries. These tests revealed that recoveries in the Peñasco Pit correlated with three basic ore categories: breccia, intrusive and sedimentary. Recoveries in the Chile Colorado tests have not yet revealed an obvious correlation. Work is ongoing to determine if any correlation exists and to improve recoveries. Based on the most recent results, the following metallurgical data has been used in the study:

**Projected Metallurgical Data**

| **Peñasquito Poly-Metallic Project<br>Peñasco Breccia** | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.29% | 0.62% | 26.94g/t | 0.62g/t |
| Pb Flotation Recovery | 86% | 4.2% | 74% | 65% |
| Zn Flotation Recovery | 5.9% | 88% | 15% | 12% |
| Pb Cleaner Concentrate Grade | 60% | | 4792 | 96g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 391g/t | 7.2g/t |

| **Peñasquito Poly-Metallic Project<br>Peñasco Intrusive** | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.30% | 0.55% | 28.00g/t | 0.58g/t |
| Pb Flotation Recovery | 74% | 6.2% | 63% | 63% |
| Zn Flotation Recovery | 6.1% | 60% | 12% | 8% |
| Pb Cleaner Concentrate Grade | 54% | - | 4241g/t | 89g/t |
| Zn Cleaner Concentrate Grade | - | 51% | 522g/t | 3.6g/t |

| **Peñasquito Poly-Metallic Project<br>Peñasco Sedimentary** | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.22% | 0.50% | 24.22 | 0.37g/t |
| Pb Flotation Recovery | 70% | 4.0% | 42% | 35% |
| Zn Flotation Recovery | 6.0% | 55% | 4% | 6% |
| Pb Cleaner Concentrate Grade | 54% | | 2446g/t | 31g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 186g/t | 4.3g/t |

| Peñasquito Poly-Metallic Project<br>Chile Colorado Sedimentary | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.36% | 0.84% | 36.26g/t | 0.33g/t |
| Pb Flotation Recovery * | 70% | 2.4% | 59% | 36% |
| Zn Flotation Recovery | 3.2% | 80% | 19% | 10% |
| Pb Cleaner Concentrate Grade | 50% | | 5143g/t | 28g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 166g/t | 2.2g/t |

*Lead plus carbon concentrate.

The recoveries for silver and gold from the heap leach are presently estimated as: 1) Peñasco oxide and mixed ores, gold 58%, silver 26%; and 2) Chile Colorado oxide and mixed ores, gold 57%, silver 23%.

Testing continues as of this report to further optimize recoveries.

*Smelters and Refineries*

Concentrates from the plant are expected to be custom processed at both local and overseas smelters. For the purpose of this study it is has been assumed that the lead concentrate sales will be largely processed locally within Mexico. Alternatively, lead concentrate could be smelted in Canada, Asia or Europe. Such alternatives may provide for competition in the negotiation of smelter terms. Zinc concentrate treatment will most probably be split between Mexican and overseas markets in Canada, Asia or Europe. Concentrate destined for overseas markets will be hauled to the appropriate port; on the west coast for Asian and Canadian sales and the east coast for European and Canadian sales.

Smelter terms and transportation costs assumed for the project are considered typical and are not the result of negotiations with any particular smelter. The terms and cost assumptions are based on payable metals, deductions and payment terms.

Doré will likely be shipped to either Salt Lake City, Utah or Idaho for refinery.

*Total Metal Production*

Over the 17 year mine life, the sulphide ore mill is expected to produce approximately 2.6 million tonnes of zinc concentrate and 1.1 million tonnes of lead concentrate containing a total of 205.9 million ounces of silver, 2.9 million ounces of gold, 631 thousand tonnes of lead and 1.36 million tonnes of zinc. The oxide ore leach plant is expected to produce a further 14.0 million ounces of silver and 389 thousand ounces of gold.

*Capital and Operating Costs*

The total plant capital cost is estimated as follows:

**Estimated Plant Capital Costs**

| | |
|---|---|
| Direct Costs | $ 210,882,600 |
| | |
| Indirects, Camp and Busing, Construction Power | $ 10,786,400 |
| EPCM | $ 31,405,400 |
| Vendor Commissioning and Spare Parts | $ 2,586,300 |
| Total Contracted Cost | $ 255,660,700 |
| | |
| Contingency | $ 30,656,600 |
| Total Contracted Cost Plus Contingency | $ 286,317,300 |
| | |
| Owner's Capital | $ 9,300,000 |
| Initial Capital Total | $ 295,617,300 |
| | |
| Sustaining Capital, Leach Pad Extensions | $ 5,862,000 |
| Grand Total | $ 301,479,300 |

Total mine equipment investment including on-going expenditure are estimated as follows over the life of the mine.

**Estimated Mine Equipment**

| | |
|---|---|
| Year 2006 | $7,741,000 |
| Year 2007 | $30,965,000 |
| Year 2008 Sustaining | $47,283,000 |
| Ongoing Sustaining Costs | $72,396,000 |
| Sustaining Credits | $0 |
| Total | $158,385,000 |

A 5% contingency on recently quoted equipment prices has been included in the above figures for Years 2006, 2007, and 2008.

**Operation & Maintenance Costs Summary**

| | LOM* | YEARS 1-5 |
|---|---|---|
| Mining (per tonne mined) | $0.71 | $0.63 |
| Process - mill (per tonne milled) | $3.68 | $3.49 |
| Process – Leach (per tonne leached) | $1.16 | $1.03 |
| G&A (per tonne milled) | $0.12 | $0.14 |
| Overall cost (per tonne milled & leached) | $5.30 | $4.55 |

* Life-of-Mine

## 1.4 INTRODUCTION & TERMS OF REFERENCE

In 1998 Western Silver acquired the entire Peñasquito property from Kennecott. Since that time Western Silver has made several additions and deletions to the claims comprising the property. Figure 1-7 shows the claims in the immediate area affected by this development. Since 2002 Western Silver has undertaken a continuous series of drilling campaigns on the property. Initially attention focussed on Chile Colorado but more recently attention shifted to Peñasco.

In March of 2003 Western Silver completed an internal scoping study on the development of the Chile Colorado deposit. Western Silver requested that M3 review this document and produce a scoping level document of their own. This led to the production in March 2004 of a Pre-feasibility Study which also focused on the development of Chile Colorado.

In April 2004 following the encouraging results of the Pre-feasibility Study, Western Silver requested M3 continue to work on the Peñasquito Project to produce a comprehensive Feasibility Study suitable for financing purposes. With the exception of geology, drilling and assay data, which Western Silver would provide, M3 was assigned full responsibility for all other aspects of the study. The Feasibility Study would consider the development of both the Chile Colorado and Peñasco deposits including the oxide caps that had not been evaluated in the Pre-feasibility Study.

During the course of their work on the Peñasquito Project, M3 has authored the following previous studies for the Peñasquito site:

- In July 2003 M3 Engineering and Technology Corporation completed and issued a SCOPING STUDY and Capital Cost Estimate for the Chile Colorado ore body on behalf of Western Silver. The study was based upon a Preliminary Mineral Resource Estimate prepared by SNC-Lavalin Engineers and Constructors, Inc. The study demonstrated that the project was economically viable at the prevailing metal prices, but approximately 20% of the material in the pit at the time was still categorized as inferred.

- In September of 2003, Western Silver authorized M3 to commence work on a PRE-FEASIBILITY STUDY for the project. At the same time Western Silver commenced work on an in-fill drilling program on the Chile Colorado deposit with a view to upgrading the confidence level of the material in the pit to the point where it could all be reported in the measured and indicated category as required by NI 43-101.

  In March 2004, M3 completed and issued this Pre-feasibility Study for the Chile-Colorado deposit. This study confirmed the apparent economic viability of the project and the report summary was made public by Western Silver.

- In October of 2004, M3 produced a confidential SCOPING STUDY for Western Silver's internal use only. The purpose of the Scoping Study was to consider the impact of mining the Peñasco and Chile Colorado ore bodies in combination. It was based on the pre-feasibility resource model of Chile Colorado and an early version of the Peñasco resource model developed by Western Silver. Various financial analyses were developed for different pit development scenarios. The study also looked at heap leaching oxide ore from both the Chile Colorado and the Peñasco deposits. This study concluded that mining both ore bodies potentially yielded a higher IRR and NPV than the March 2004 Pre-feasibility Study and warranted further study.

- In November 2004, M3 Engineering completed a confidential Heap Leach Study for the Peñasquito Project for Western Silver's internal planning use. This study concluded that the oxide ore bodes were not sufficient on their own to justify a project, but that processing oxide ore in concert with the development of the sulphide ore could add value.

- As part of these ongoing earlier efforts, SNC-Lavalin Engineers and Constructors, Inc. (SNC) prepared a report entitled, *Peñasquito Deposit - Mineral Resource Estimate for the Chile Colorado Zon*e, March 2004 which was an update to the *Minera Peñasquito S.A. de C.V. Peñasquito Preliminary Mineral Resource Estimate, March 2003.* In addition, SNC prepared a report outlining the mineral resource estimate for the Peñasco zone. In an independent effort during the last quarter of 2004, and to provide further assurance, M3 reviewed the base data and validated and accepted the SNC findings in M3's *Amended and Restated Peñasquito Pre-Feasibility Study, December 10, 2004.*

- In February, 2005, M3 Engineering completed a confidential Capital Cost Update for the Heap Leach Study which included a mine fleet cost analysis. This study further substantiated the findings of the November 2004 study, and verified the potential financial worthiness of processing oxide ore given the facilities already being in place for sulphide ores.

- In March 2005, M3 completed an Interim Feasibility Study for internal use, based on developing both the Peñasco and Chile Colorado pits. This report concluded that if Peñasco inferred resources could be advanced to the measured and indicated categories, the project NPV would increase. Accordingly, an infill drilling campaign was initiated by Western Silver.

For the study at hand, M3 and its consultants have developed all resource and reserve models, i.e., qualifying persons for this Feasibility Study are solely M3 and its direct sub-consultants.

Other data and information used in the study has been collected independently by M3 and is explained and/or referenced in further detail in the subsequent sections.

Personnel from the M3 Tucson office and M3 sub-consultants (Huss, Gonzalez, Oliver, Hanks, Welhener, Ayala, Bennett, Hensley, Wythes) have made visits to the site for the purpose of collecting information and gaining an understanding of the local conditions.

## 1.5 DISCLAIMER

All resource modeling, metallurgy, process development, environmental program, initial groundwater investigations, archeological reviews, mine design, metals pricing, and plant design have been directed by M3 or under its direction by one of its consultants (e.g., Independent Mining Consultants).

Western Silver has provided information on Land Position & Status and Geology.

Information on underground potential has been generated by Wardrop Engineering, Inc. of Vancouver, B.C. and provided to M3 by Western Silver.

## 1.6 PROPERTY DESCRIPTION & LOCATION

Peñasquito is situated in the western half of the Concepcíon del Oro district in the north-east corner of Zacatecas State, Mexico, approximately 200 km north-east of the city of Zacatecas, approximately 24° 45′ N latitude / 101°30′W longitude. Figure 1-1 shows the general location in Mexico. The closest major town is Concepcíon del Oro which lies on Mexican highway 54, a well maintained, paved highway which links the major cities of Zacatecas (in the state of Zacatecas), approximately 250 km to the south-west with Saltillo (in the state of Coahuila), approximately 125 km to the north-east. Figure 1-2 shows its location in the state.

Some 20 km to the north-east, on the north side of Sierra el Mascaron, is the Tayahua Mine at Terminal and Concepcíon del Oro is the site of the Macocozac Mine. The following table lists claims affected by the development of the Peñasquito Project. This table is not a complete list of Western Silver claims in the area.

| CLAIM | TYPE | TITLE | FILE NO. | AREA HECTARES | DATE ISSUED | EXP. DATE |
|---|---|---|---|---|---|---|
| EL PEÑASQUITO | EXPLOIT. | 196289 | 43/885 | 2.000 | 1993-07-16 | 2011-07-11 |
| LA PEÑA | EXPLOIT. | 203264 | 07/1.3/547 | 58.000 | 1996-06-28 | 2046-06-27 |
| LAS PEÑAS | EXPLOIT. | 212290 | 8/1.3/00983 | 40.000 | 2000-09-29 | 2050-09-28 |
| ALFA | EXPLOIT. | 201997 | 7/1.3/485 | 1100.000 | 1995-10-11 | 2045-10-10 |
| BETA | EXPLOIT. | 211970 | 8/1.3/01137 | 2054.761 | 2000-08-18 | 2050-08-17 |
| SEGUNDA RED. CONCHA | EXPLOR. | 218920 | 8/2/00018 | 23304.691 | 2000-11-07 | 2006-11-06 |
| MAZAPIL 3 F. I | EXPLOR. | 217001 | 007/13852 | 1950.702 | 2002-06-14 | 2008-06-13 |
| MAZAPIL 10 | EXPLOR | 223327 | 93/26975 | 1073.555 | 2004-10-02 | 2010-10-01 |

M3 has not verified Western Silver's title to the mineral rights covered by the Chile Colorado and Peñasco deposits. However, qualified Mexican attorney, Dr. Francisco Heiras Mancera, has issued an opinion dated December 23, 2004, stating that Western Silver legally owns the mineral rights and is in full compliance with its legal obligations.

Based on Western Silver's acquisition agreement, a 2% NSR royalty is owed to Kennecott on production from both the Chile Colorado and Peñasco locations. A further 3% NSR royalty is owed to Grupo Industrial de Coahuila S.A. de C.V. as assignee from Minera Catasillas, S.A. de C.V., on the El Peñasquito, Las Peñas, La Peña, Mazapil and Mazapil 2 concessions. According to the original sales agreement, this obligation may be purchased by Western Silver at any time for the sum of U.S. $5 million.

In addition to the Chile Colorado, Peñasco Azul and El Sotol deposits, further mineralization is known to exist in areas known as Las Palmas, Chamisal and Northeast Azul targets, some of which are also shown on Figure 1-9. Limited information has been obtained on these latter deposits.

There is no previous mine development of any form in the immediate area of Chile Colorado or Peñasco deposits and as such no environmental liabilities are attached to the property. All drilling pads are cleaned and rehabilitated on an ongoing basis.

Western Silver is currently in possession of valid exploration permits for the drill work being performed in the area. The development of a mine at this location will require additional permits from state and federal authorities. These permits are listed in detail in Volume II of the Feasibility Study and are addressed in the EIA.

## 1.7 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

*Physiography*

The deposits occur in a wide valley bounded to the north by the Sierra El Mascaron and the south by the Sierra Las Bocas. Except for one small outcrop, the area is covered by up to 30 metres of alluvium. The terrain is generally flat, rolling hills; vegetation is mostly scrub, with cactus and coarse grasses. The prevailing elevation of the property is approximately 1900 m above sea level.

*Infrastructure*

An adequate network of road and rail services exists in the region. Road access to the site is presently gained west out of Concepcíon del Oro approximately 15km to the town of Mazapil and then a further 12 km west from Mazapil. The road is very steep immediately west of Concepcíon del Oro with numerous tight switch-backs. It is either paved or cobbled and maintained to approximately 6km west of Mazapil. After that the road is gravel but well maintained. The Chile Colorado deposit is within 2km of this main road and the Peñasco deposit lies directly beneath the road. Figures 1-4 and 1-5 show the project site plan. A system of gravel roads to the east connects to Cedros and eventually to Torreon and the Torreon/Fresnillo highway.

Additionally there is one railhead close to the site approximately 100 km to the west. Figure 1-3 shows some of the regional corridors.

The State of Zacatecas is in the process of building a new road east from Mazapil to join Highway 54 approximately 25km south of Concepcíon del Oro. The road is approximately 70% complete with only about 5 km yet to be completed over the mountain pass north of La Laja. This road will provide much superior grade and alignment to the old road from Concepcíon del Oro. However, some minor improvements to this road will be needed on sections already completed to accommodate large construction loads. Use of this new road will eliminate the rather steep switchback sections of cobblestone road just west of Concepcíon del Oro and the town of Concepcíon del Oro itself. Work is in the final stages and will be completed well in advance of project construction start-up.

*Climate*

The climate is generally dry with precipitation being limited for the most part to a rainy season in the months of June and July. Annual precipitation for the area is approximately 700 mm, most of which falls in the rainy season. Temperatures range between 30 deg C and 20 deg C in the summer and 15 deg C to 0 deg C in the winter. Western Silver has maintained an automatic weather station in the area since August 2003, however some data has been lost due to power supply problems.

*Surface Rights*

Surface rights in the vicinity of the Chile Colorado and Peñasco pits are held by one private individual and three Ejidos.

Western Silver currently is in negotiations to purchase surface rights to the land required for the project, assisted by a Mexican legal firm.

An Ejido is a communal ownership of land recognized by the Federal laws in Mexico. While mineral rights are administered by the Federal government through federally issued mining concessions, an Ejido controls surface rights over communal property through a Board of Directors which is headed by a president. An Ejido may also allow individual members of the Ejido to obtain title to specific parcels of land and thus the right to rent or sell the land.

Relations with the Ejidos through the exploration process have been positive.

Negotiations for the high voltage power line right-of-way will begin upon finalization of preliminary routing.

The project site is generally flat with a gradual fall of 1.5 – 2.5% to the west. There is adequate space for development of the process facilities and the tailings and waste areas. The tailings disposal will be constructed as a four-sided containment area using mine waste for a starter dam and tailings for raising the embankment. In general, this is a very favourable site for development.

Given the mining experience in the area and the high unemployment rate, there is expected to be an adequate pool of mining personnel available.

*Water*

By Mexican federal law, water encountered as the result of mining operations (e.g., open pits or underground workings) are available to the mining operation without application so long as mining continues. The pits will intercept both the upper regional aquifer and the more massive lower multi-valley aquifer. In meetings and teleconferences with Comision Nacional del Agua (CNA), it has been indicated that the lower aquifer is totally unsubscribed.

A study has been conducted to confirm the presence of adequate capacity in solely the upper aquifer. Reportedly, such a general study was not previously carried out and as such, by Mexican regulations, the general report was the first step in process. This summary report was prepared for M3 entitled, "Study for an Integral Hydrogeological Evaluation of Cedro's Aquifer and Adjoining Basins, Mazapil County, Zacatecas". Its analysis concludes that the unsubscribed water availability from the Cedros upper aquifer is 17.3 million m3/year, evaluated according to NOM-011-CNA-2000 which is more than adequate for the project.

This report was submitted to CNA authorities on December 15, 2004 in regional offices of Torreon Coahuila. Within this report Western Silver indicated its intent to apply for water rights. Typically, the multi-department CNA review takes between 8 to 12 months. Upon completion of the review, the report and associated CNA findings are published in the official Diary of the Federation (DOF). During the CNA review for this report, a letter of intent was prepared for a concession to pump up to 10 million m3/year to be used for the operation of Peñasquito. This letter was transmitted to CNA in April 2005. In subsequent communications, CNA has indicated that it will post the report and its findings for this and several other projects in December 2005. After this public posting, Western Silver makes its official application.

## 1.8 HISTORY

The region has a strong tradition of mining going back to the mid 1500's when silver mining first started in the region and the city of Zacatecas was founded. On a historical note, up until the 19th century, 20% of all silver mined in the world was reportedly mined from the City of Zacatecas Region.

Mining remains active in the State of Zacatecas. M3 has provided Engineering & Procurement and Start Up services for the recent Peñoles Fresnillo expansion as well as the greenfields Peñoles F.Y. Madero project. Both of these ongoing operations have poly-metallic ore bodies.

Perhaps of greater interest is the recently mined out Real de Angeles property near the city of Zacatecas. This open pit mine operated from June 1982 to November 1998, averaged 17,000 mtpd ore, and had life-of-mine ore grades of 0.58% lead, 0.9% zinc, 70 grams/tonne of silver and no appreciable gold. Life-of-mine stripping ratio was approximately 5 to 1. Values of metal contained are similar to the Peñasquito deposit, taking into account the gold prevalent at Peñasquito.

Focusing on the Peñasquito project under consideration, some limited exploration of the project area had taken place previously with a short shaft and two shallow drill holes in the 1950's. But it was not until 1994 when Kennecott initiated a comprehensive exploration program that the size and potential of the mineralized system were recognized.

Beginning in 1994, Kennecott consolidated the land position and completed extensive geochemical, geophysical and drilling programs to evaluate the area, primarily for large tonnage porphyry copper/skarn deposits.

During 1996, drilling along the southern edge of the Azul pipe resulted in the discovery of the Chile Colorado silver-lead-zinc-gold zone, which was not of interest to Kennecott on a stand-alone basis.

Western Silver acquired 100% of the Peñasquito project from Kennecott in March 1998. The acquisition was driven by the large size of the alteration-mineralization system (in excess of 9 km sq), the two large breccia pipes, the zone of probable economic Ag-Pb-Zn-Au mineralization at Chile Colorado, and numerous untested targets with potential similar to Chile Colorado. During 1998 Western Silver completed nine core holes (3,185 metres) and 13.4 line kilometres of Tensor CSAMT. Most of the work was focused on Chile Colorado and the adjacent Azul breccia pipe.

During the fourth quarter of 2000, Hochschild completed a 14 hole, 4,601 metre drill program, with 11 holes drilled in the Chile Colorado area. However, they returned Peñasquito to Western Silver after spending more than $1 million on drilling and land payments. Hochschild decided not to tackle a bulk tonnage target with potentially large capital costs.

Since 2002, Western Silver has continually drilled the deposit and continues to do so as of the date of this report (Campaign 15). Drilling to end of July 2005 (Phase 14) is included in this report.

Section 1.13 has summaries of the drilling effort.

## 1.9 GEOLOGICAL SETTING

Figure 1-9 shows the local geology.

The regional geology of the area is well understood and has been extensively mapped. Concepción del Oro lies within the Mexico Geosyncline, a 2.5 km thick series of marine sediments deposited during the Jurassic and Cretaceous Periods and consisting of a 2000 metre thick sequence of carbonaceous and calcareous turbidic siltstones and interbedded sandstones underlain by a 1200 metre thick limestone sequence.

The two sierras in the area are separated in the western half of the district by the Mazapil Valley which is a synclinal valley underlain by the Upper Cretaceous Caracol Formation. The Caracol siltstone-sandstone section is generally flat lying in the valley with occasional small parasitic anticlines and drag folds along faults. The local geology is dominated almost entirely by the rocks of the Mexico Geosyncline. The oldest rocks in the area are the Upper Jurassic aged limestones and cherts of the Zuloaga Limestone.

These rocks are overlain by the La Caja Formation, a series of thinly bedded phosphatic cherts and silty to sandy limestones that may be fossiliferous.

The La Caja Formation is overlain by the limestones and argillaceous limestones of the Taraises Formation which in turn are overlain by the limestones of the Cupido Formation, one of the more favorable host rock units for much of the mineralization previously mined in the area.

The Cupido limestones are overlain by the cherty limestones of the La Pena Formation, deposited during the Lower Cretaceous Period. These rocks are in turn overlain by the Cuesta del Cura limestone.

The Indidura Formation, a series of shales, calcareous siltstones and argillaceous limestones, overlies the Cuesta del Cura limestone.

Upper Cretaceous Period rocks of the Caracol Formation, consisting primarily of interbedded shales and sandstones, overlie the Indidura Formation. These rocks dominate the geology in the Peñasquito Project area and are overlain by the Tertiary aged Mazapil Conglomerate.

A large granodiorite stock is believed to underlie the entire area and the sediments described above are cut by numerous intrusive dykes, sills and stocks of intermediate to felsic composition. The intrusives are interpreted to have been emplaced from the late Eocene to mid-Oligocene Epochs and have been dated at 30-40 million years in age.

## 1.10 DEPOSIT TYPES AND MINERALIZATION

Both the Caracol sediments and the granodiorite are believed to have been intruded along the western and southern margins of the granodiorite by one or two quartz-feldspar porphyry stocks. The porphyry stocks did not reach surface but are at depth. They are represented at the bedrock surface by two hydrothermal diatreme breccia pipes, the Azul and Outcrop breccia pipes. There is a single outcrop of silicified breccia of the Outcrop breccia, the *Peñasco*. It is the only outcrop on the property.

Both breccia pipes are believed to have erupted to and breached surface. Their eruption craters and ejecta aprons have since been eroded away, and the current bedrock surface at Peñasquito is estimated to be on the order of 50-75 metres below the paleo-eruption surface. Both of the breccia pipes sit within a hydrothermal alteration shell of propylitic alteration that has largely been overprinted by weak phyllic alteration that intensifies at depth.

## 1.11 MINERALIZATION

Sulphide mineralization occurs in the Chile Colorado deposit, in the Peñasco deposit hosted in the Outcrop breccia, in the Luna Azul and Azul NE deposits hosted in the Azul Breccia, and at other smaller targets on the Peñasquito project. Exploration drilling has recently focused on the large Peñasco deposit.

The Peñasco deposit is in the east half of the Outcrop breccia directly above the projected throat of the brecca pipe. In plan view it is ovoid in shape, at least 300 meters wide in an east direction and 450 meters long in a north direction, and has formed around a complex series of small quartz-porphyry stocks and dikes with some felsite dikes. It is composed of disseminations and veinlets of medium to coarse-grained sphalerite-galena-argentite, other unidentified silver sulfosalts, minor tetrahedrite-polybasite and common gangue of calcite-rhodochrosite-quartz-fluorite.

The intrusive rocks themselves are also often mineralized. Mineralization also extends upwards along the north and south contacts of the Outcrop breccia. At the south contract, it extends upwards in the mixed clast breccia adjacent to the northwest faults that cut the breccia pipe.

The most common mineral host is the intrusive hydrothermal breccia. This breccia is the dominant rock below the 1,600 metre level. It also is widely distributed as a halo around the porphyry stocks and dikes. The porphyry often appears to brecciate into the intrusive hydrothermal breccia as it passes upwards. Mineralization is present in the upper mixed clast breccia along the south contact, the quartz-felsdpar porphyry intrusive breccia and to a lesser extent the quartz-porphyry dikes. The felsite dikes are at times also good mineral hosts.

The Chile Colorado Ag-Zn-Pb mineralization normally occurs as both veining and narrow fracture filling, hosted in weakly silicified sandstone, siltstone or shale. The mineralization has been interpreted to represent stockworks, localized by a north-south trending fracture zone, extending south from the Azul diatreme.

Sphalerite and galena associated with carbonate and pyrite occur as massive veins. Pyrite, sphalerite and galena have also been observed as discrete crystals and disseminations within sandstone units. Late state carbonates and pyrite fracture fillings occur throughout the sediments.

## 1.12 EXPLORATION

Kennecott completed numerous air and ground based geophysical surveys on the Peñasquito claim groups between 1994 and 1997. The aeromagnetic survey of the region defined an 8 km x 4 km, N-S trending magnetic high centered roughly on the Outcrop Breccia. These surveys provided coverage of the area including the Peñasco zone and confirmed the area as a suitable target for drilling.

In 2004 Western Silver initiated additional CSAMT and IP surveys that extended coverage on the older lines, and extended coverage to the east of the pre-existing coverage. The geophysical database for the Peñasquito project area now provides a detailed electric cross-section that images changes in geology, and appears to identify specific targets of interest.

Kennecott completed an extensive rapid air blast ("RAB") drilling campaign across much the Peñasquito project area after the discovery of the Chile Colorado deposit. This program, designed to systematically test the entire project area, consisted of 250 holes. The holes penetrated the extensive overburden cover and collected chip samples from anomalies, which had been discovered during the numerous geophysical surveys as well as outlining other, previously unknown anomalies. Twenty-eight of the RAB holes in this campaign by Kennecott were drilled within and immediately adjacent to the Peñasco zone breccia pipe. The geochemical survey results indicated that further exploration was warranted in this area. Exploration drilling results have subsequently confirmed significant mineralization in the Peñasco zone.

## 1.13 DRILLING

Drilling at the Peñasquito property has focused on the exploration of three principal areas: Chile Colorado, Azul (Azul Breccia, Azul NE and Luna Azul) and Peñasco including El Sotol adjacent to Peñasco. (Figures 1-9 and 1-10). Work is presently concentrated on both in-fill and step-out exploration drilling of the Peñasco zone.

The Peñasquito property has been drilled by different operators over several campaigns and phases beginning in 1995 under Minera Kennecott S.A. de C.V.

The following tables summarize exploration drilling performed and assayed to date on the Peñasquito property. This data has been used in the preparation of the resource estimates used in this report.

The summaries of the drilling through Campaign 14 are as of end of July 2005. Additional extensive (5 rigs) drilling is ongoing.

**Table 1-3 Summary of Project Drilling at Peñasquito**

| Hole Purpose | TOTAL DRILLHOLES | |
|---|---|---|
| | Number | Metres |
| Resource Estimate – Peñasco & El Sotol | 265 | 117,200 |
| Resource Estimation – Chile Colorado & Azul | 122 | 48,900 |
| Subtotal – Holes Used for Resource Estimate (1) | 387 | 166,100 |
| | | |
| Chile Colorado – Hochschild Holes Excluded for Resource Estimate | 14 | 4,601 |
| Condemnation | 11 | 4,559 |
| Metallurgy | 13 | 4,016 |
| Pit Geotechnical | 11 | 4,126 |
| Outside Exploration | 29 | 7,721 |
| **Total** | 465 | 191,123 |

(1) 15,135 metres are reverse circulation drilling; the balance is core.

**Table 1-4 Summary of Exploration Drilling Campaigns at Peñasquito***

| Campaign | Period | Drilling Type | Hole ID's | Number of Drillholes | Metres of Drilling | Average Hole Length (m) |
|---|---|---|---|---|---|---|
| Kennecott | 1994-1997 | Reverse Circulation & Diamond Drilling | PN01 - PN71 | 71 | 23,325 | 329 |
| Western Copper | 1998 | Diamond Drilling | WC01 - WC09 | 9 | 3,185 | 354 |
| Mauricio Hochschild | 2000 | Diamond Drilling | MHC01 - MHC14 | 14 | 4,601 | 329 |
| Western Copper | 2002 | Diamond Drilling | WC10 - WC54 | 45 | 19,645 | 437 |
| Western Copper | 2003 | Reverse Circulation Diamond Drilling | S01 - S57 S09Ext*,S24Ext*,S30Ext* | 57 | 6,845 | 120 |
| Western Copper | 2003 | Diamond Drilling | WC55 - WC100 WC67A, PN26Ext* WC53Ext** | 47 | 19,816 | 422 |
| Western Silver - Phase 9 | 2004 | Diamond Drilling | WC101 - WC130 WC119A | 31 | 14,841 | 479 |
| Western Silver - Phase 10 | 2004 | Diamond Drilling | WC131 - WC179 WC131A,WC137A WC138A,WC146A WC150A,WC154A WC156A | 56 | 20,241 | 361 |
| Western Silver - Phase 11 | 2004 | Diamond Drilling | WC180 - WC211 WC99Ext**, WC189A | 33 | 22,186 | 672 |
| Western Silver - Phase 12 | 2005 | Diamond Drilling | WC212 - WC227 | 16 | 10,003 | 625 |
| Western Silver - Phase 13 | 2005 | Diamond Drilling | WC228 - WC256 | 29 | 19,508 | 673 |
| Western Silver - Phase 14 | 2005 | Diamond Drilling | WC257 - WC278 | 22 | 14,226 | 647 |

* - Feasibility Study grade modeling excludes all MHC drilling, WC277, the latter part of WC276, and all of Phase 15.
Ext*- diamond drill extension of reverse circulation hole.
Ext**- diamond drill extension of diamond drill hole.

**Table 1-5 Summary of Drilling Activity at the Peñasquito Property**

| Calendar Year | Number of Drillholes | Metres of Drilling | Average Hole Length (m) |
|---|---|---|---|
| 1994-1997 Drilling | 71 | 23,325 | 329 |
| 1998 Drilling | 9 | 3,185 | 354 |
| 2000 Drilling | 14 | 4,601 | 329 |
| 2002 Drilling | 45 | 19,645 | 437 |
| 2003 Drilling | 104 | 26,661 | 256 |
| 2004 Drilling | 120 | 57,269 | 477 |
| 2005 Drilling to July 31 | 67 | 43,737 | 653 |
| **Drilling Total** | **430** | **178,422** | **415** |

## 1.14 SAMPLING METHOD AND APPROACH

Due to the alluvial cover at Peñasquito the vast majority of resource sampling has been done using either reverse circulation or diamond core drilling. All drilling in 2004 and most other drilling has been primarily HQ size core drilling, but narrowing to NQ diameter at depth in the longer holes.

Western Silver reports that it samples drillholes from bedrock to final depth. The standard sample interval is 2.0 metres. Some samples are limited to geological boundaries and are less than 2.0 metres in length. A senior geologist examines the core, defines the primary sample contacts, and designates the axis along which to cut the core. Special attention in veined areas is taken to ensure representative splits are made perpendicular and not parallel to veins.

Geological logging is very detailed and follows the geological legend on a regional scale. Once the core has been measured, marked, photographed and logged geotechnically and geologically the core boxes are brought to the diamond saw cutting stations. The core is sawed in half. One half of every sample is placed into a heavy plastic bag. The Splitter's Helper has previously marked the drill hole and sample number on the plastic bag and inserted the relative sample tag in the plastic bag.

Standard Reference Material samples and blanks are inserted into the sample stream going to the assay laboratory in a documented sequence on a frequency of approximately 1 in 20 samples.

A Western Silver truck transports the sacks to the ALS Chemex laboratories in Guadalajara approximately once per week, where the samples are prepped and pulped. Pulps are sent to ALS Chemex labs in Vancouver where they are assayed and checked. At present ALS Chemex is Western Silver's primary assay lab. Check samples are sent to Acme Labs of Vancouver.

The sample preparation procedures on site prior to shipment to the laboratory have been independently reviewed and deemed secure and adequate.

An independent sampling, preparation and assaying audit has not been performed.

## 1.15 SAMPLE PREPARATION AND ANALYSES AND SECURITY

The quality assurance and quality control procedures employed by Minera Peñasquito ("QA/QC") have been independently reviewed and no significant concerns noted. Approximately 90% of the data base assays were run on Western Silver samples, and Western Silver generally used ALS Chemex as the primary lab and Acme as the check lab. Both Chemex and Acme are ISO9002-certified. Both labs use industry standard sample preparation procedures.

No independent samples have been taken and assayed, but comparisons between Western Silver and Kennecott drilling results show no biases (See Section 1.16).

The samples assayed are under the control of Western Silver or either ALS Chemex or Acme as described in Section 1.14.

## 1.16 DATA VERIFICATION

Based on a review of Western Silver's sample preparation, analysis, security, and QA/QC procedures to date with respect to database verification, the database used for the resource estimates is deemed to be accurately compiled and maintained, and is suitable for use in mineral resource estimation.

No significant problems were identified during reviews of the drilling data. The holes appear to have been properly located and downhole-surveyed and to have recovered an adequate sample (core recovery during the later Western Silver campaigns averaged 97.8%).

Almost all of the drilled intervals are assayed for gold, silver, lead and zinc. The average assay interval is slightly over 2m. Approximately 90% of the data base assays were run on Western Silver samples, and Western Silver generally used ALS Chemex as the primary lab and Acme as the check lab. Both Chemex and Acme are ISO9002-certified. Data entry errors should be minimal because IMC re-compiled the bulk of the assay data base directly from the original lab's electronic files of assay certificates.

Several thousand gold, silver, lead and zinc check assays run by a check laboratory (usually Acme) on pulps prepared by the primary laboratory that ran the data base assays (usually Chemex) are available for the Kennecott campaign and for Western Silver Phases 1, 2, 3, 5, 6, 7, 8 9, 10 and 11. These assays act as a check on the analytical procedures used by the primary lab. A few hundred gold, silver, lead and zinc assays run by a check lab (Acme, M3/Hazen Research or Davis Metallurgical Laboratories) on fresh pulps prepared by the check lab are available for Western Silver Phases 1, 2, 3, 7, 8, 9, 10, 11 and 12. These assays act as a check on both the analytical and the sample preparation procedures used by the primary lab. No check assays are available for the Hochschild, Western Silver 1998 and Western Silver Phase 4 campaigns, and as of the time of writing the check assaying for Western Silver Phases 13 and 14 was in progress.

The check assay comparisons show generally acceptable overall agreement between the primary and check labs for all of the campaigns/phases for which check assays are available. Standard and blank assaying results also appear to be generally acceptable. There are indications that some of the data base silver assays run by Chemex during the later Western Silver phases may be biased 5-15% low as a result of analytical factors, but this bias cannot presently be confirmed, and the errors introduced into NSR value estimates would be minimal even if it did exist.

IMC supplemented the check assay data by performing numerous paired comparisons of grades from different drilling and assaying campaigns, including those for which no check assays are available. The results show no evidence to indicate that any of the Western Silver and Kennecott data base assays are affected by large analytical or sample preparation biases. However, they do suggest that the Hochschild grades are quite heavily high-biased relative to the Kennecott and Western Silver grades for gold, silver and zinc. No Hochschild samples were available for re-assay, so the precautionary decision was taken not to use the Hochschild assays when estimating grades in the model.

The paired-comparison reviews did not detect any biases between core and reverse circulation drilling. (About 10% of the exploration drilling is RC.)

No significant problems were identified with other data supplied to IMC, which included sulfur assays (used to define oxidized zones) and lithology, alteration, and oxidation data base codings. Drill logs were of excellent quality. Density data were obtained from core sample measurements and the values are reasonable relative to sample lithology.

## 1.17 ADJACENT PROPERTIES

There are no adjacent properties from which exploration and/or mining activities would lead to better understanding of the Chile Colorado or Peñasco open pit deposits.

The Tayahua underground mine operates in the foothills to the northeast of the Peñasquito property. This is a poly-metallic zoned Cu-Pb-Zn-Ag-Au skarn ore body hosted in carbonates adjacent to a quartz monzonite intrusion. As such it might become of interest as Western Silver pursues its potential underground deposit beneath the Peñasco Pit.

## 1.18 MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical testwork initiated since the 2004 Pre-feasibility Study was completed includes: comminution testing, flotation testing, modal analyses, and gravity testing, all for the sulphide process. For the oxide process, bottle roll and column leach tests have been performed. Additional work is in progress for both the sulphide and oxide mineralization. Samples from both Chile Colorado and the Peñasco areas are being tested. Most of the work now in progress and planned for the near future utilizes metallurgical diamond drill hole (DDH) samples produced in late 2004 and early 2005. A program consisting of 13 DDH's was completed in February 2005. The program produced approximately 3,400 metres of PQ (83 mm) and 600 metres of HQ (64 mm diameter). The core from the sulphide zone was shrink wrapped to prevent oxidation. Crushed sulphide samples are also being stored in freezers until they can be tested. Additionally, bulk samples for run-of-mine testing of the oxide ore were extracted from four hand dug wells in the Peñasco deposit.

The following tests have been run on Chile Colorado and Peñasco ores. This program has been used to determine the recoveries employed in this study.

| **Peñasquito Process Development Tests 2004-2005** | | | | | |
|---|---|---|---|---|---|
| **Sulphide Tests** | | **Oxide Tests** | | | |
| Flotation Tests | 280 | | | | |
| Comminution Tests | 49 | Bottle Rolls | 47 | | |
| Process Mineralogy | 11 | Columns | 38 | | |
| Leach | 5 | small columns | 34 | | |
| Settling | 18 | intermediate column | 1 | | |
| Analyses | 2 | large column | 3 | | |
| Pilot Plant | 1 | Miscellaneous | 6 | | |
| Tailing Cyclone Test | 2 | | | | |
| **Total number of tests** | **368** | **Total number of tests** | **91** | **=>** | **459** |

### 1.18.1 Sulphide Metallurgical Testing

Comminution test work was performed on 19 samples from the Chile Colorado deposit and 24 samples from the Peñasco deposit. The tests were performed by Minnovex of Toronto, and included the SAG Power Index (SPI), Crusher Index (CI), and the Minnovex Modified Bond Work

Index (Wi). Three full Bond Work Index determinations were also performed to calibrate the modified procedure. *(Progressive Grinding Circuit Design for the Western Silver – Peñasquito Project, Minnovex Technologies, Inc., June 2005.)* Using data from these tests and additional input parameters provided by M3, Minnovex used their proprietary grinding circuit simulation program, CEET, to estimate mill sizes. The CEET data were used by mill vendors to recommend sizing as follows:

SAG mill: one mill @ 18,690 kW, 11.6 m x 6.1 m (38' x 20')
Ball mill: two mills @ 14,317 kW each, 7.6 m x 10.4 m (25' x 34.5')
Pebble crusher: one @ 600 kW, 2.4 m (8') (For this report M3 has selected one HP800 crusher.)

Tests were also performed by SGS Lakefield using the JK Tech drop-weight test method. The JKSimMet simulation method was used to estimate mill sizing, which generally agreed with the Minnovex results. The SGS Lakefield report was not received in time to be considered by the mill vendors.

The primary crusher was sized from the 2004 test work and the required capacity of 50,000 tpd of Peñasco ore. The crusher is a gyratory type, 1524 x 2260 mm (60"x89") in size.

Following completion of the pre-feasibility testwork, a new campaign of flotation test work was performed in two laboratories, Dawson Metallurgical Laboratories in Salt Lake City and G&T Laboratories in Kamloops BC. In total these test programs resulted in 24 variability scheme tests on Chile Colorado and 34 tests on Peñasco ore. A further 40 tests, approximately, were performed to examine the grind-grade-recovery relationship and to improve the reagent scheme from that developed for the 2004 Pre-feasibility Study.

Locked cycle tests on ore from both deposits were performed as part of the flotation test program in order to provide a basis for the projected plant recoveries. These tests revealed that recoveries in the Peñasco Pit correlated with three basic ore categories: breccia, intrusive and sedimentary. Recoveries in the Chile Colorado tests have not yet revealed an obvious correlation. Work is ongoing to determine if any correlation exists and to improve recoveries. Based on the most recent results, the following metallurgical data has been used in the study:

**Table 1-6 Projected Metallurgical Data**

| Peñasquito Poly-Metallic Project<br>Peñasco Breccia | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.29% | 0.62% | 26.94g/t | 0.62g/t |
| Pb Flotation Recovery | 86% | 4.2% | 74% | 65% |
| Zn Flotation Recovery | 5.9% | 88% | 15% | 12% |
| Pb Cleaner Concentrate Grade | 60% | | 4792 | 96g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 391g/t | 7.2g/t |

| Peñasquito Poly-Metallic Project<br>Peñasco Intrusive | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.30% | 0.55% | 28.00g/t | 0.58g/t |
| Pb Flotation Recovery | 74% | 6.2% | 63% | 63% |
| Zn Flotation Recovery | 6.1% | 60% | 12% | 8% |
| Pb Cleaner Concentrate Grade | 54% | - | 4241g/t | 89g/t |
| Zn Cleaner Concentrate Grade | - | 51% | 522g/t | 3.6g/t |

| Peñasquito Poly-Metallic Project<br>Peñasco Sedimentary | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.22% | 0.50% | 24.22 | 0.37g/t |
| Pb Flotation Recovery | 70% | 4.0% | 42% | 35% |
| Zn Flotation Recovery | 6.0% | 55% | 4% | 6% |
| Pb Cleaner Concentrate Grade | 54% | | 2446g/t | 31g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 186g/t | 4.3g/t |

| Peñasquito Poly-Metallic Project<br>Chile Colorado Sedimentary | | | | |
|---|---|---|---|---|
| | **Pb** | **Zn** | **Ag** | **Au** |
| Mine Head Grades | 0.36% | 0.84% | 36.26g/t | 0.33g/t |
| Pb Flotation Recovery * | 70% | 2.4% | 59% | 36% |
| Zn Flotation Recovery | 3.2% | 80% | 19% | 10% |
| Pb Cleaner Concentrate Grade | 50% | | 5143g/t | 28g/t |
| Zn Cleaner Concentrate Grade | - | 53% | 166g/t | 2.2g/t |

*Lead plus carbon concentrate.

A small scale pilot plant test was performed on samples of the Peñasco ore. The plant capacity was approximately 100kg/hr and was run intermittently over a period of four days. The purpose of the run was to provide concentrate samples for smelter testing as well as tailing samples for geotechnical and environmental testing. Due to the low grade of the ore relative to the size of the pilot plant equipment and the short duration of the test it was not possible to optimize test conditions. The lead first and second cleaners were operated in a locked cycle mode and the zinc concentrate was re-cleaned in the laboratory after the pilot plant run. The pilot plant generally confirmed that the recoveries predicted by locked cycle testing were achievable at larger scale and yielded approximately 9kg of zinc concentrate and 7kg of lead concentrate.

Modal analyses and liberation analyses were also performed to support the test work through a better understanding of the mineralogy and liberation characteristics of the samples.

One small scale gravity test was performed on a sample from Peñasco, high in gold and silver. The test products were assayed and evaluated using and Automated Digital Imaging System (ADIS.) The results indicated that any free gold occurs as particles finer than about 10 microns, meaning gravity recovery of gold is not likely to be successful.

An ADIS analysis of the occurrence of gold in the rougher and cleaner tailing from a locked cycle test on a sample from the Peñasco deposit revealed very little visible gold in either product. In the rougher tailing 275 slides, approximately 30 x $10^6$ particles, were examined, and only four gold particles were found at an average mean diameter of 7.2 microns. In the cleaner tailing examination of 75 slides, 11 x $10^6$ particles, found 3 particles with an average mean diameter of 15.4 microns.

A gold model was constructed using multiple regression techniques on the locked cycle test products. These results suggest that, for Peñasco the gold and silver track galena in the flotation process. A small amount of the silver tracks sphalerite. For Chile Colorado most of the gold tends to track pyrite, with a small fraction behaving like copper sulphides and galena. Most of the silver tends to track copper sulphides and galena.

### 1.18.2 Sulphide Process Plant

The process plant selected for the project is conventional and is described in more detail in Section 6.0 of Volume II. Figure 1-6 outlines the plant. The following is a simplified process description for the sulphide ore process:

- Run-of-mine ore is discharged from haul trucks into the crusher pocket.
- The crusher is a single 60"x89" (1524x2261 mm) gyratory crusher.
- Crusher product is conveyed to a 40,000 tonne live capacity stockpile.

- Crushed ore from the stockpile will be reclaimed via three variable speed belt feeders located in the reclaim tunnel.
- Ore from the stockpile will be conveyed to a one SAG mill / two ball mill circuit designed to produce an average of 50,000 mtpd of Peñasco ore or 40,000 mtpd at 80% passing 125 micron.
- One pebble crusher in closed circuit with the SAG mill will crush pebbles to minus 19.5 mm and return the material to the SAG mill feed conveyor.
- The slurry from the grinding circuit will first pass to the lead floatation circuit.
- Lead flotation consists of two banks of four each rougher flotation cells in parallel followed by regrinding and two stages of cleaner flotation cells.
- The first cell of each row in the lead floatation circuit may be used for carbon pre-float when treating carbonaceous ore from Chile Colorado. Space will be provided to install carbon cleaner flotation cell when needed.
- The zinc flotation circuit consists of two banks of four each rougher flotation cells in parallel followed by regrinding and two stages of cleaner cells.
- Concentrate from the lead and zinc circuits will be pumped to respective thickeners followed by pressure filters.
- Concentrate filter cake from the pressure filters will be discharged to stockpiles from which the material will be reclaimed by loader and loaded onto highway trucks for transport to rail, port or smelter.

### 1.18.3 Oxide Metallurgical Testing

Preliminary metallurgical testing of oxide ore has been performed. Process flowsheets were developed based on results of the testwork. All testwork on oxide ore to date has been completed by METCON, Research located in Tucson, Arizona.

Initial testing of the oxide ore was performed by means of bottle roll tests. A total of 13 bottle roll tests, of 72 hour duration, were performed using coarse reject material supplied from the Chemex sample preparation facilities in Guadalajara. The samples originated from the Peñasco Deposit diamond drill samples (DDH WC-102 from 16 to 68 m and DDH WC-108, Intervals from 16 to 80 m, downhole.) Test results indicated that the ore leached well with expected reagent consumptions.

Based on the results of the bottle roll tests two column leach tests were performed using the same original samples, but composited into shallow and deep fractions.

The tests were performed by agglomerating the ore and curing with cyanide, lime and Portland cement. These tests are described in *"Peñasquito Project Preliminary Cyanide Leach Tests," METCON Research Inc., December 2004.*

A second series of bottle roll and column leach tests was completed on six trench samples taken from old dump sites in the Peñasco ore. One bottle roll test was done on each sample (six total). Two column leach tests were done on each sample at different crush sizes (P80=38 mm & P80 = 9.5 mm) to determine affect of size on recovery and reagent consumption. One bottle roll and one column leach test was completed on a seventh dump sample. This column test was run at 'as received' size to determine impact to recovery with no crushing.

A third series of 21 bottle roll and 17 column leach tests were completed using the metallurgical DDH samples. Four of the column tests were run on Chile Colorado ore and 13 of the column tests were run on Peñasco ore. All columns were run on ore that was crushed to 38 mm.

A fourth series of tests, six bottle roll and six column leach, were completed on bulk samples taken from three wells in the Peñasco area. Two column leach tests were done on each sample, one at estimated run-of-mine (ROM) size and one at 38 mm. Results from these tests were used to develop the flowsheets, as well as estimates of extraction and cyanide and lime consumption for this study.

Because of the extremely high ratio of Ag to Au, the Merrill-Crowe (zinc precipitation) process was selected over the carbon adsorption method of recovering the precious metals from solution.

The recoveries for silver and gold from the heap leach are presently estimated for: 1) Peñasco oxide and mixed ores, gold 58%, silver 26%; and 2) Chile Colorado oxide and mixed ores, gold 57%, silver 23%.

### 1.18.4 Oxide Process Plant

The following is a simplified process description for the oxide ore:

- ROM ore is discharged from haul trucks onto a heap leach pile.
- Lime is added to the ROM ore prior to being placed on the pad. The ore is placed in 10m lifts.
- The ore is leached with cyanide solution.
- The pregnant leach solution is clarified, filtered, and de-aerated, then treated with zinc dust to precipitate the precious metals.
- The precipitated metals are then pressure filtered.
- The resulting filter cake is smelted to doré.

## 1.19 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

Mineral Resource Estimate:

Mineral resources for Chile Colorado and the Peñasco zones were calculated by IMC, an independent consulting company based in Tucson, Arizona and were classified according to the "CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines" prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council August 20, 2000. A number of elements that represent the confidence in the geological interpretation, the database integrity, the spatial continuity of mineralization and the quality of estimation were utilized in the classification.

The model used for the Chile Colorado and Azul deposits in this report is the IMC March 2005 model based on drill hole information through the Phase 12 drilling completed in early 2005. No significant additional drilling has been done in this area after Phase 12 (only five holes in Phases 13 and 14 were drilled in the Chile Colorado – Azul area). The Hochschild drilling information (14 holes) was not used for grade estimation (IMC believes this data is high biased). A total of 122 drill holes (48,900m) were used to define the Chile Colorado – Azul resource.

The Chile Colorado – Azul resource is based on a computer block model with a block size of 20m by 20m in plan and 10m high. The silver, gold, lead and zinc grade are estimated into the model from 10m composites of the drill data using ordinary kriging with a 135m maximum spherical search. Geologic information (lithology, alteration and oxidization) are assigned to the model using a nearest neighbor approach from the drill hole composite data. Density values are based on test work on core samples and are assigned to the model based on the oxidization and lithology assignments: overburden, 2.20; oxide (all lithologies), 2.40; mixed (all lithologies), 2.475; sulphide, Caracol sediments, 2.60; sulphide, Azul breccia units, 2.50.

The model used for the Peñasco deposit is the IMC September 2005 model developed from drill hole information through drill Phase 14 (with the exception of a few intervals of the last hole in Phase 14). The drill hole data used for the Peñasco model contains 265 holes (117,200m).

The Peñasco resource is from a computer block model with a block size of 10m by 10m in plan and 10m high. The silver, gold, lead and zinc grade are estimated into the model from 10m composites of the drill data using ordinary kriging with a 50m maximum spherical search. Geologic information (lithology, alteration and oxidization) are assigned to the model using a nearest neighbor approach from the drill hole composite data. Density values are based on test work on core samples and are assigned to the model based on the oxidization and lithology assignments:

overburden, 2.20; oxide (all lithologies), 2.30; mixed (all lithologies), 2.40; sulphide, Caracol sediments, 2.60; sulphide, breccia units, 2.50.

An NSR value for the sulphide, mixed and oxide materials was calculated using input data on costs and recoveries dated September 2005. A flotation mill process is assumed for the sulphide material with an internal cut-off calculated at $3.60 NSR for Peñasco and $4.18 for Chile Colorado. A run-of-mine (ROM) heap leach for gold and silver is assumed for the oxide and mixed materials with an internal cut-off calculated at $1.30 NSR.

The classification of the resources is based on the following criteria:

<u>Chile Colorado – Azul Deposits</u>

| | |
|---|---|
| Within 135m of 5 or more holes and within 30-40m of the closest hole | Measured |
| Within 135m of 2 to 4 holes and within 50m of the closest hole | Indicated |
| Within 135m of one hole | Inferred |

<u>Peñasco Deposit</u>

| | |
|---|---|
| Within 50m of 5 or more holes | Measured |
| Within 50m of 2 to 4 holes | Indicated |
| Within 50m of one hole | Inferred |

These criteria ensured that measured-indicated blocks were identified only in areas within and immediately adjacent to the closer-spaced drilling, not around isolated holes.

Constraints are much tighter at Peñasco because primary variogram ranges here are much shorter than at Chile Colorado/Azul (60-70m versus 180-210m for silver, lead and zinc), indicating significantly lower grade continuity in the Peñasco deposit.

The grade of the block was not used as a determinant in resource classification.

Table 1-9 summarizes the Peñasquito resources by measured, indicated and inferred classifications. The resource is with a geometry defined by the end of September 2005 spot metal prices. This geometry bounds a resource, which has potential extraction by open pit mining. The tabulation of this resource used NSR values based on September 2005 M3 metal prices.

**Table 1-9 Estimated Resource Potential by Open Pit**

| **Measured Category** | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| Peñasco Oxide Resource | 16.0 | 1.30 | 25.09 | 0.247 | - | - |
| Peñasco Mixed Resource | 11.6 | 1.30 | 26.49 | 0.288 | - | - |
| Peñasco Sulphide Resource | 59.4 | 3.60 | 30.93 | 0.628 | 0.38 | 0.77 |
| | | | | | | |
| Chile Colorado Oxide Resource | 15.8 | 1.30 | 19.36 | 0.216 | - | - |
| Chile Colorado Mixed Resource | 4.8 | 1.30 | 20.45 | 0.225 | - | - |
| Chile Colorado Sulphide Resource | 137.0 | 4.18 | 33.36 | 0.321 | 0.31 | 0.79 |
| | | | | | | |
| Azul Oxide Resource | 1.0 | 1.30 | 25.90 | 0.162 | - | - |
| Azul Mixed Resource | 1.5 | 1.30 | 25.68 | 0.187 | - | - |
| Azul Sulphide Resource | 26.4 | 4.18 | 32.50 | 0.201 | 0.37 | 0.75 |
| | | | | | | |
| El Sotol Oxide Resource | 0.0 | 1.30 | | | | |
| El Sotol Mixed Resource | 0.0 | 1.30 | | | | |
| El Sotol Sulphide Resource | 0.1 | 3.60 | 18.22 | 0.296 | 0.31 | 0.55 |
| | | | | | | |
| **Total Oxide** | **32.9** | | **22.36** | **0.230** | **-** | **-** |
| **Total Mixed** | **17.9** | | **24.79** | **0.263** | **-** | **-** |
| **Total Sulphide** | **222.9** | | **32.60** | **0.389** | **0.34** | **0.78** |

| **Indicated Category** | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| Peñasco Oxide Resource | 11.8 | 1.30 | 25.22 | 0.301 | - | - |
| Peñasco Mixed Resource | 12.8 | 1.30 | 25.46 | 0.425 | - | - |
| Peñasco Sulphide Resource | 222.3 | 3.60 | 28.62 | 0.601 | 0.28 | 0.67 |
| | | | | | | |
| Chile Colorado Oxide Resource | 3.2 | 1.30 | 13.35 | 0.192 | - | - |
| Chile Colorado Mixed Resource | 2.3 | 1.30 | 20.31 | 0.189 | - | - |
| Chile Colorado Sulphide Resource | 51.4 | 4.18 | 20.45 | 0.247 | 0.17 | 0.53 |
| | | | | | | |
| Azul Oxide Resource | 5.8 | 1.30 | 21.48 | 0.157 | - | - |
| Azul Mixed Resource | 2.2 | 1.30 | 36.01 | 0.143 | - | - |
| Azul Sulphide Resource | 81.4 | 4.18 | 27.52 | 0.150 | 0.33 | 0.68 |
| | | | | | | |
| El Sotol Oxide Resource | 1.4 | 1.30 | 21.91 | 0.241 | - | - |
| El Sotol Mixed Resource | 0.0 | 1.30 | | | | |
| El Sotol Sulphide Resource | 3.1 | 3.60 | 17.35 | 0.297 | 0.28 | 0.55 |
| | | | | | | |
| **Total Oxide** | **22.2** | | **22.32** | **0.244** | **-** | **-** |
| **Total Mixed** | **17.3** | | **26.14** | **0.357** | **-** | **-** |
| **Total Sulphide** | **358.1** | | **27.10** | **0.445** | **0.28** | **0.65** |

**Table 1-9 Estimated Resource Potential by Open Pit (Continued)**

| Inferred Category | Million Tonnes | Cut-Off | Silver g/tonne | Gold g/tonne | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| Peñasco Oxide Resource | 2.1 | 1.30 | 21.42 | 0.244 | - | - |
| Peñasco Mixed Resource | 2.1 | 1.30 | 23.29 | 0.723 | - | - |
| Peñasco Sulphide Resource | 101.5 | 3.60 | 24.97 | 0.569 | 0.22 | 0.59 |
| Chile Colorado Oxide Resource | 1.6 | 1.30 | 14.36 | 0.139 | - | - |
| Chile Colorado Mixed Resource | 2.2 | 1.30 | 22.27 | 0.148 | - | - |
| Chile Colorado Sulphide Resource | 52.9 | 4.18 | 23.60 | 0.223 | 0.19 | 0.53 |
| Azul Oxide Resource | 9.5 | 1.30 | 16.10 | 0.156 | - | - |
| Azul Mixed Resource | 2.2 | 1.30 | 22.27 | 0.148 | - | - |
| Azul Sulphide Resource | 68.7 | 4.18 | 25.50 | 0.174 | 0.33 | 0.66 |
| El Sotol Oxide Resource | 2.1 | 1.30 | 20.13 | 0.174 | - | - |
| El Sotol Mixed Resource | 0.0 | 1.30 | | | | |
| El Sotol Sulphide Resource | 1.7 | 3.60 | 20.32 | 0.257 | 0.34 | 0.57 |
| **Total Oxide** | **15.4** | | **17.20** | **0.169** | - | - |
| **Total Mixed** | **6.4** | | **22.90** | **0.338** | - | - |
| **Total Sulphide** | **224.9** | | **24.77** | **0.365** | **0.25** | **0.60** |

Mineral Reserve Estimate: *(for sulphides, mixed and oxides):*

The proven and probable reserves for the Chile Colorado and Peñasco deposit are contained within an engineered pit design based on a floating cone analysis of the resource block model using the measured and indicated resources. Proven and probable reserves are derived from measured and indicated resources respectively that fall within the pit boundary. The figures obtained for metallurgical recovery, revenue and costs were combined to assign NSR figures for each block in the resource model. The NSR values assigned to the block models for the purpose of developing the pit geometry are based on lower metal prices than those used to tabulate the reserve within the final pit. The prices used for the development of the pit geometry were \$5.50/oz Ag, \$350/oz Au, \$0.30/lb Pb and \$0.45/lb Zn.

Based on the calculated operating costs from previous studies and an overall pit slope angles based on earlier pit designs, a number of theoretical pit shell runs were calculated. The "final" pit shell in both deposits was based on a \$0.65/tonne mining cost for rock and \$0.50/tonne for overburden, an additional 2.0-cent per bench of depth below the 1980 elevation to both ore and waste and a discount rate of 1% per bench or 8% per year assuming on average 8 benches are mined per year along the final wall. Overall slope angles ranged from 39° to 46° in Peñasco and 37° to 44° in Chile Colorado – Azul. The floating cone runs did generate a pit shell in the Azul and El Sotol deposits, but for this study they were not included in the reserve or mine production schedule.

The reserve summary is the sum of a mine production schedule using the proven and probable tonnages from the two pit designs. The sulphide material reports to a flotation mill and the oxide plus mixed material reports to a run-of-mine, heap leach. The NSR values used to tabulate the reserves within the final pits are based on metal prices of: $6.62/oz Ag, $432/oz Au, $0.35/lb Pb and $0.51/lb Zn. These prices are the M3 reporting metal prices as of the end of September 2005.

**Table 1-10 Project Open Pit Reserve Summary**

| | | | Grades | | | |
|---|---|---|---|---|---|---|
| | | Ktonnes | Ag, g/t | Au, g/t | Pb, % | Zn, % |
| | | | | | | |
| **Sulphides: Mill ore (1)** | | | | | | |
| Chile Colorado | Proven | 81,810 | 37.58 | 0.332 | 0.37 | 0.87 |
| Peñasco | Proven | 38,742 | 26.42 | 0.484 | 0.32 | 0.59 |
| Total, Proven Pit Reserve | | 120,552 | 33.99 | 0.381 | 0.35 | 0.78 |
| | | | | | | |
| Chile Colorado | Probable | 6,937 | 20.75 | 0.268 | 0.18 | 0.56 |
| Peñasco | Probable | 130,326 | 27.17 | 0.639 | 0.28 | 0.61 |
| Total, Probable Pit Reserve | | 137,263 | 26.85 | 0.620 | 0.27 | 0.61 |
| | | | | | | |
| **Mill Ore, Combined Proven & Probable** | | **257,815** | **30.19** | **0.508** | **0.31** | **0.69** |
| | | | | | | |
| Oxides + Mixed: Leach ore (2) | | | | | | |
| Chile Colorado | Proven | 20,530 | 19.63 | 0.218 | - | - |
| Peñasco | Proven | 27,565 | 25.65 | 0.263 | - | - |
| Total, Proven Pit Reserve | | 48,095 | 23.08 | 0.244 | - | - |
| | | | | | | |
| Chile Colorado | Probable | 5,027 | 16.14 | 0.194 | - | - |
| Peñasco | Probable | 24,204 | 25.35 | 0.358 | - | - |
| Total, Probable Pit Reserve | | 29,231 | 23.76 | 0.330 | - | - |
| | | | | | | |
| **Leach Ore, Combined Proven & Probable** | | **77,326** | **23.34** | **0.277** | - | - |

NSR values based on $6.62/oz Ag, $432/oz Au, $0.35/lb Pb, $0.51/lb Zn (end of September 2005 M3 pricing).
1) Sulphides are reported at a U.S.$3.60/tonne NSR cut-off for Peñasco and $4.18/tonne for Chile Colorado.
2) Leach tonnage is reported at a U.S.$1.30/tonne NSR cut-off.

## 1.20 OTHER RELEVANT DATA AND INFORMATION

### 1.20.1 Geotechnical

a) Geotechnical Drilling and Sampling Program for Foundation Design

The first-portion of the geotechnical field investigation was performed by Golder Associates of Tucson, Arizona to collect the geotechnical data required to support the design of the heap leach facility, waste rock piles, tailings impoundment and process plant. The field investigation was performed from March 2, 2005 to March 23, 2005.

The first-portion of the field investigation included the drilling of thirty-four boreholes within the project site area. The second-portion of the field investigation included excavation of test pits to characterize the superficial foundation and construction materials. This work was performed during late May and Early June 2005.

The drilling contractor utilized by Golder was Estudios Especializados de Mecanica de Suelos, S.A. de C.V. (EEMSSA) from Monterrey, Nuevo Leon, Mexico. The contractor used a Foremost Mobil Drill Model B-59 and a CME-55 to perform the drilling.

1.5m long, 4.50-inch outside diameter (OD) continuous flight augers were used to advance the borehole through the alluvial soil. Standard Penetration Tests (SPTs) were performed in each borehole. The SPT used a standard split-spoon sampler with a 2-inch OD; applicable American Society for Testing and Materials (ASTM) D1586 procedures were followed during the testing. Rock coring techniques were also performed with 1.5 m long, NQ size double barrel equipment to collect samples of the rock materials.

The boreholes were logged by Golder's geotechnical field technicians. Borehole logs associated with the field investigation, including sample descriptions, SPT blow counts, sample numbers and visual classifications according to the United Soil Classification System (USCS) were prepared.

The report summarizing the work, analysis, conclusions and recommendations was issued in September 2005 and is included as an appendix in the Feasibility Study.

b) Geotechnical Oriented Core Drilling Summary for Pit Slope Stability

Oriented core drilling and geotechnical logging was completed to support feasibility level pit slope designs. Oriented core drilling was performed by Major Drilling Co. A geologist was present at the drill rig full-time during drilling. An extensive geotechnical database is available from previous exploration core drilling performed by Western Silver. However, geotechnical conditions in the vicinity of the final pit walls required additional investigation. A total 3,045.73 m of oriented core drilling was completed in four core holes in the Chile Colorado pit and three core holes in the Peñasco pit. Oriented core drilling commenced on November 24, 2004 and continued until holiday break on December 12, 2004. Drilling re-commenced on January 17 and was completed February 24, 2005. Core hole diameters were typically HQ3 (61 mm ID) but were telescoped down to NQ3 (45 mm ID) if difficult drilling conditions were encountered. Core was recovered in a triple tube core barrel assembly. The holes were oriented at an angle of 60 degrees to the horizontal and were sited to intersect the design basis pit wall one-third of the ultimate wall height above the base of the final pit level. Core orientation was accomplished using two independent methods: clay impression and a mechanical downhole system referred to as Corientor™. The slope stability analyses were completed and slope angle recommendations were provided in a report dated July 15, 2005 and is included as an appendix in the Feasibility Study.

Following the initial slope recommendations a decision was made to drill additional supplemental oriented coreholes in the south wall of the Chile Colorado Pit to optimize the slope recommendations in that area. Four additional shallow oriented drillholes were completed between July 16 and 24 that totaled 634 m of oriented coring below the precollared alluvium that was approximately 50 m thick. The results of the supplemental drilling program and revised slope recommendations were issued in an Addendum Report dated August 24, 2005 that is included as an appendix in the Feasibility Study.

### 1.20.2 Tailings Design

This property is a zero discharge plant. The base of the dam and impoundment will be caliche and silty clay. Tailings placement will be by centerline spigot or cyclone discharge. Physical properties of the pilot plant tailings have been determined and the next stage of structural testing has been authorized. The starter dam will be constructed from Peñasco Pit overburden. Monitoring wells will be provided downstream from the dam seepage pond.

### 1.20.3 Rock Piles

Rock piles will be placed close to the pit to minimize haulage costs. The lower layer of all piles will be constructed from benign overburden and oxide buffering material.

### 1.20.4 Leach Pad

The leach pad will be double lined in accordance with Mexican regulations. Both the pregnant solution pond and emergency overflow pond will also be double lined. Monitoring wells will be provided downstream from the pond.

## 1.21 INTERPRETATION AND CONCLUSIONS

In the amended and restated "Peñasquito Pre-Feasibility Study" dated December 10, 2004, M3 identified the following items as needing further development. Following the description of each of these Pre-Feasibility Study items, M3 provides a discussion of the further development that has taken place in this Feasibility Study.

1. "Completion of Environmental Impact Assessment (EIA)."

The preparation of a full Environmental Impact Assessment is nearing completion and will be filed following shortly after the release of this document. The EIA has been essentially complete for some time, but has been held pending completion of the mining plan.

2. "Completion of permit matrix."

A permit matrix has been prepared as part of the EIA and provides documentation on the permitting status for the Peñasquito project.

3. "Geotechnical investigation into pit slope stability and plant site foundation design."

Geotechnical investigations for the project have been conducted by Golder Associates of Tucson, Arizona.

4. "Groundwater Study."

A groundwater study has been completed as noted. Efforts are now on schedule to secure sufficient water rights to adequate water for the project.

5. "Additional Resource Estimation work and mine planning."

IMC has completed resource models on data through Campaign 14 (July 2005). Further drilling within the limits of the pit could convert material presently classified as waste or inferred into indicated. Peñasco presently indicates strong potential for further near surface ore to the south-west which could provide higher grades in early years and reduce stripping in later years, leading to increased overall tonnage in the pit.

6. "Verification of availability of low permeability soil for pad liners."

Site investigations as well as drilling activity have revealed that the site has fine-grained soils with adequate plasticity and exhibiting low coefficients of permeability under optimum moisture-density conditions in the laboratory. The fine grained soils that exhibit a low coefficient of permeability will be used as borrow materials for a low permeability soil liner for construction of the heap leach pad.

The fine-grained soils will need to be placed in controlled lifts and compacted to specifications. Initial review of core samples indicates an adequate source of fine-grained soils also exists within pit perimeters. Golder Associates has also taken several test pit samples of the fine grained soils outside the pit to test to determine the coefficients of permeability. The permeability test results tend to indicate that soils with a saturated coefficient of permeability of $10^{-6}$ cm/sec or less may be achievable using the on-site soil materials if the soils are selected and placed carefully.

7. "Quantification of economics for oxide material processing."

The viability of processing oxide ore has been established and has been incorporated into the project. Although low grade, the oxide ores contribute significantly to the project economics.

8. "Initial exploration program for adjacent ore bodies."

Considerable drilling has occurred since Campaign 14 and continues today.

9. "Initial metallurgical testing for adjacent ore bodies."

Extensive metallurgical testing of oxide ores and sulphide ore from both the Chile Colorado and Peñasco locations have been performed and process flowsheets developed accordingly.

Variability testing has been performed on both Chile Colorado ore and Peñasco. Recoveries are based on this and lock-cycle testwork. Future testwork focuses on sulphide in Chile Colorado deposit to improve recoveries which have been less than those of Peñasco. Work on Azul should commence. This is an opportunity to increase the IRR and NPV. As implied, extensive metallurgical testing has been carried out by M3 using the following laboratories: Dawson Metallurgical Laboratories (Flotation), G&T Metallurgical Services, Ltd. (Modal Analysis, Flotation and Pilot Plant), and Lakefield, Minnovex (Grinding).

10. "Final Mine Planning for ore bodies."

Based on the latest resource model, IMC has provided mining plans for the Peñasco Pit and the Chile Colorado Pit.

11. "Final decision on flowsheets and equipment sizing."

Flowsheets and equipment sizing have been completed based on metallurgical testing. It is noted that the ore in Chile Colorado is considerably harder than assumed in previous studies.

12. "Selection of the most appropriate power supply option."

Several options have been considered. These options have included a power supply from Saltillo or from Primero de Mayo. CFE is presently preparing a study for a new 400/230 kV substation near Concepcion del Oro. This would be a preferred option. Western Silver would then construct a new 230 kV high voltage line from this CFE substation to the main mine substation.

13. "Update of Financial Model."

The financial model now contains both the sulphide and oxide plant and incorporates different ore types from both Peñasco and Chile Colorado ore bodies.

This financial model has been used to direct recent exploration and project sequencing. This effort has supported the prior work in the Pre-feasibility Study while indicating that the Peñasco should be mined first and the Chile Colorado second. An extensive testwork program has yielded favorable recoveries for Peñasco, but some challenges remain in the Chile Colorado. This NI 43-101 report is based on the less than expected recoveries determined so far for Chile Colorado, i.e. there is a significant opportunity for improvement in the IRR and NPV.

### 1.22 RECOMMENDATIONS

1. Based on M3 metals pricing, the results of the base case economic analysis indicate that an after-tax IRR of 16.2% and an undiscounted NPV of $877 million can be achieved based on the scenario envisaged in this report. The NPV is $411 million at an appropriately conservative discount rate of 5% or $163 million at a discount rate of 10%.

   Based on the above, M3 recommends that this project pursue financing.

2. M3 recommends that this project be placed into production as quickly as practical.

3. With the considerable expertise developed in the Mexico mining industry, M3 recommends that construction be by local and national contractors.

4. M3 is recommending that the following items be given particular attention during interim engineering to be completed in the next few months.

   A. Incorporation of Environmental Impact Assessment (EIA) into basic engineering documents.

   B. Maintenance of permit matrix.

   C. Addition of geotechnical foundation investigation based on final major equipment location.

   D. Continuation of metallurgical testing program, with emphasis on early phase of Peñasco mining and Chile Colorado.

   E. Groundwater Study has been completed for upper aquifer. Water rights should be secured for this upper aquifer. Consideration should be given to securing addition rights for the lower aquifer to accommodate the possibility of mill growth.

   F. Resource Estimation update based on current drilling campaign and associated revised mine planning. Further drilling in Peñasco to improve production in early years and provide additional ore tonnage.

   G. Verification of timely availability of clay for pad liners at near surface.

   H. Final design of tailings pond.

I. Material (sulphide rock, oxide rock, overburden, and silty-clays) management plan be developed for rockpiles, leach pad, tailings, and open pits. This plan will constitute the first step of reclamation.

J. Negotiation proceeds on an urgent basis with CFE to approve the power supply option.

5.T he following items are likely to have the greatest impact on improved economics and will be revised if appropriate during interim engineering.

A. Improved early grades and increased ore tonnage at Peñasco.

B. Concurrent underground mining of deeper deposits

C. Study effects of coarser grinds for Chile Colorado.

D. Determination of metrics affecting metallurgical recoveries in Chile Colorado which are expected to lead to increased recoveries and lower operating costs possibly increasing reserves by more than 50% in Chile Colorado.

E. Incorporation of Azul resources into the project.

F. Continued strong metal prices.

If the end of September 2005 spot metal prices were used to calculate the pit shell geometry, the sulphide mill feed tonnage has the potential to increase from 257.8 million tonnes to 538.0 million tonnes from the Peñasco, Chile Colorado and Azul deposits. The heap leach tonnage could increase from 77.3 million to 95.3 million tonnes. These measured and indicated category tonnages are tabulated from an end of September 2005 spot metal price NSR value floating cone geometry based on measured and indicated categories material.

## 1.23 REFERENCES

The Feasibility Study is based in part on the findings of others as listed below:


- "Peñasquito Project – Mineral Resource Estimate for the Chile Colorado Zone", dated March 2004, prepared by SNC-Lavalin Engineers and Constructors, Inc.
- "Peñasquito Grindability Evaluation", dated 19 January 2004 prepared by Hazen Research, Inc.
- "Modal Analysis of Test Products, Peñasquito Project, Mexico, M3 Engineering, KM1445", dated 27 January 2004, prepared by G&T Metallurgical Services, Ltd.
- "Modal Analysis of Test Products, Peñasquito Project, Mexico, M3 Engineering, KM1483", dated 26 February 2004, prepared by G&T Metallurgical Services, Ltd.
- "Phase II Pilot Plant Testing Program from the Peñasquito Deposit", dated 20 January 2004, prepared by Mountain States R&D International, Inc.
- "Marketing Input Into Pre-Feasibility Study for the Peñasquito Project", dated February 2004, prepared by Neil S. Seldon and Associates.
- "Peñasquito Project Preliminary Cyanide Leach Tests", dated December 2004, prepared by METCON Research, Inc.
- "Progressive Grinding Circuit Design for the Western Silver – Peñasquito Project," dated June 2005, prepared by Minnovex Technologies, Inc.
- "Report on Metallurgical Testwork Conducted on Composite Samples from the Peñasquito Property in Mexico", dated 15 March 2004, prepared by Dawson Metallurgical, Inc.
- "Report on Metallurgical Testwork Conducted on a Master Composite (HG + MF) Sample from the Chile Colorado Deposit Located on the Peñasquito Property", dated 26 August 2004, prepared by Dawson Metallurgical Laboratories, Inc.
- "Phase 1 Pit Slope Stability Evaluation Chile Colorado and Peñasco Pits", dated 3 November 2004, prepared by Golder Associates.
- "Analysis of Carbon Concentrate Peñasquito Project M3 Engineering KM1528", dated 24 July 2004, prepared by G&T Metallurgical Services Ltd.
- "Estudio Regional De Evaluación Hidrogeológica del Acuífero Cedros, En El Municipio de Mazapil, En El Estado De Zacatecas", prepared by Universidad de Sonora, Departamento de Geología.
- "Summaries of Variability Flotation Testing of 50 Samples and Testing of Selected Samples for Gold Recovery from the Peñasquito Project", dated 3 May 2005, prepared by Dawson Metallurgical, Inc.

- "Peñasquito Project Crush Size Study Open Cycle Column Leach Oxide Dump Samples", dated July 2005, prepared by Metcon Research.
- "Proposed Grinding System for the Peñasquito Project Using Small-scale Data", dated 8 July 2005, prepared by SGS Lakefield Research Ltd.
- "Peñasquito Project, Feasibility Pit Slope Design", dated July 2005, prepared by Golder Associates.
- "Addendum to Peñasquito Project, Feasibility Pit Slope Design", dated 24 August 2005, prepared by Golder Associates.
- "Final Report on Flotation Test Work Conducted on Individual (Variability Tests) and Master Composite Samples from the Chile Colorado and Peñasco Deposits within the Peñasquitos Property in Mexico", dated 9 September 2005, prepared by Dawson Metallurgical Laboratories, Inc.
- "Final Report on Percent Moisture, Bulk Density and Assays Results on Individual Samples from the Chile Colorado and Peñasco Deposits within the Peñasquitos Property in Mexico", dated 7 September 2005, prepared by Dawson Metallurgical.
- "Feasibility Study Heap Leach Facility, Waste Rock Pile, Tailings Impoundment, and plant Site Foundation Recommendations", dated 22 September 2005, prepared by Golder Associates.
- "An Assessment of Metallurgical Performance, Concepcion del Oro District, Zacatecas State, Mexico, Western Silver, KM1652", dated October 2005, prepared by G&T Metallurgical Services, Ltd.
- "Mineral Liberation Assessments", dated 14 October 2005, prepared by G&T Metallurgical Services, Ltd.
- "Flora and Fauna Study", dated November 2004, prepared by M3 Engineering & Technology Corp.
- "Environmental Impact Assessment", dated November 2005, prepared by M3 Engineering & Technology Corp.
- Tailings testing information dated June, July and October 2005 prepared by Krebs Engineers.
- "Gold Occurrences in Peñasco Tailings Products", dated 2 November 2005, prepared by G&T Metallurgical Services, Ltd.

## 1.24 DATE

The information in this report is current as of the 11th of November 2005.

## 1.25 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

### 1.25.1 Mine Operations

The Chile Colorado and Peñasco mine plan will provide sulphide ore to a mill – flotation plant that will produce two concentrates for sale: a lead concentrate and a zinc concentrate. Both concentrates will have gold and silver credits. Likewise, the mine plan will provide oxide and mixed ores to a heap leaching facility that will produce a silver and gold doré.

Table 1-11 shows the combined production schedule for both sulphide and oxide ores from both the Peñasco and Chile Colorado deposits. The calendar year 2007, the start of mining operations, is taken as year 1 in the mining schedule. The average annual mining rate during commercial production is 15.2 million tonnes of sulphide ore per year from Year 2 through Year 18, 5.5 million tonnes of leach ore per year from Year 1 through Year 14, and nominally 40.3 million tonnes of waste per year from Year 1 through Year 15. The total material mined per year peaks at 73.0 million (208,600 tpd) during Years 3 through 12.

The current ore reserves are 257.8 million tonnes of sulphide, 77.3 million tones of leach ore with a life of mine waste to ore ratio of 1.94. Commercial sulphide production is scheduled for 17 years.

Mining begins in the Peñasco pit, which provides the only sulphide mill feed through Year 10, and continues to provide mill feed through Year 13. Waste stripping begins in Chile Colorado in Year 9. Sulphide ore is mined during Years 11 through 18. The sulphide mill feed if from both pits during Years 11, 12 and 13.

Table 1-12 shows the parameters used to determine the mine equipment fleet requirements.

## Table 1-11 Mine Production Schedule

| Year | SULPHIDE MILL ORE (1) | | | | | | LEACH ORE, $1.30 NSR Cutoff | | | | Overbrdn | Waste Rock | Total Waste | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ktonnes | NSR | lead | zinc | silver | gold | ktonnes | NSR | silver | gold | ktonnes | ktonnes | ktonnes | ktonnes |
| 1 | 65 | 6.22 | 0.22 | 0.25 | 16.94 | 0.173 | 3,625 | 3.12 | 29.01 | 0.199 | 12,024 | 2,286 | 14,310 | 18,000 |
| 2 | 7,985 | 9.46 | 0.33 | 0.59 | 25.79 | 0.194 | 18,866 | 3.10 | 24.57 | 0.225 | 19.952 | 20,197 | 40,149 | 67,000 |
| 3 | 18,250 | 10.69 | 0.34 | 0.61 | 26.89 | 0.273 | 10,553 | 3.68 | 28.01 | 0.275 | 5,510 | 28,687 | 44,197 | 73,000 |
| 4 | 18,250 | 9.58 | 0.29 | 0.53 | 24.16 | 0.296 | 5,930 | 3.54 | 24.60 | 0.280 | 16,543 | 32,277 | 48,820 | 73,000 |
| 5 | 18,250 | 11.67 | 0.28 | 0.69 | 24.45 | 0.430 | 3,163 | 4.67 | 21.33 | 0.442 | 14,544 | 37,043 | 51,587 | 73,000 |
| 6 | 18,250 | 11.82 | 0.25 | 0.63 | 26.51 | 0.455 | 2,842 | 3.81 | 24.3 | 0.315 | 2,470 | 49,438 | 51,908 | 73,000 |
| 7 | 18,250 | 11.38 | 0.28 | 0.54 | 25.53 | 0.442 | 3,428 | 4.45 | 24.80 | 0.393 | 3,347 | 47,975 | 51,322 | 73,000 |
| 8 | 18,250 | 11.35 | 0.25 | 0.51 | 24.12 | 0.491 | 1,415 | 5.48 | 23.11 | 0.530 | 12,415 | 40,920 | 53,335 | 73,000 |
| 9 | 13,507 | 19.22 | 0.33 | 0.71 | 34.76 | 0.986 | 1,281 | 7.63 | 23.48 | 0.802 | 12,072 | 46,140 | 58,212 | 73,000 |
| 10 | 12,020 | 17.60 | 0.25 | 0.56 | 26.03 | 1.074 | 8,681 | 2.66 | 15.95 | 0.244 | 8,841 | 43,458 | 52,299 | 73,000 |
| 11 | 16,585 | 11.85 | 0.31 | 0.58 | 26.01 | 0.495 | 8,168 | 2.70 | 22.10 | 0.211 | 16,007 | 32,240 | 48,247 | 73,000 |
| 12 | 16,947 | 19.26 | 0.34 | 0.71 | 32.40 | 1.044 | 4,033 | 3.97 | 21.74 | 0.370 | 28,527 | 23,493 | 52,020 | 73,000 |
| 13 | 15.511 | 15.12 | 0.40 | 0.69 | 38.32 | 0.635 | 1,933 | 2.27 | 17.48 | 0.184 | 714 | 27,663 | 28,377 | 45,821 |
| 14 | 14,600 | 12.91 | 0.52 | 0.86 | 46.52 | 0.269 | 2,969 | 2.61 | 20.86 | 0.208 | | 33,405 | 33,405 | 50,974 |
| 15 | 14,600 | 10.59 | 0.34 | 0.81 | 33.33 | 0.309 | 374 | 2.88 | 19.64 | 0.250 | | 16,327 | 16,327 | 31,301 |
| 16 | 14,600 | 10.15 | 0.29 | 0.75 | 32.43 | 0.320 | 66 | 1.96 | 6.20 | 0.212 | | 4,352 | 4,352 | 18,018 |
| 17 | 14,600 | 13.69 | 0.31 | 1.14 | 40.33 | 0.466 | | | | | | 597 | 597 | 15,197 |
| 18 | 7,287 | 12.04 | 0.12 | 1.10 | 30.42 | 0.542 | | | | | | 167 | 167 | 7,454 |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| Total | 257,807 | 12.79 | 0.31 | 0.69 | 30.19 | 0.508 | 77,327 | 3.40 | 23.34 | 0.276 | 152,966 | 496,665 | 649,631 | 984,765 |

Note: Sulphide mill cutoff grade is $3.60/t for Peñasco ore and $4.18/t for Chile Colorado ore.

**Table 1-12 Mine Plan Basis**

| | | |
|---|---|---|
| Available Days per Year | d | 365 |
| Available Shifts per Day | shifts / d | 2 |
| Available Shifts per Year | shifts / yr | 730 |
| Scheduled Operating Days / Year | d | 350 |
| Scheduled Operating Shifts / Year | shifts | 700 |
| | | |
| Shift Duration | hrs | 12 |
| Available Time per Shift | min | 720 |
| Lunch & Breaks Duration | min | 60 |
| Equipment Inspection Duration | min | 10 |
| Shift Change Duration | min | 10 |
| Fuel, Lube and Service Duration | min | 10 |
| Operating Delays per Operating Hour | Min / op hr | 10 |
| Operating Delays per Shift | Min / shift | 105 |
| Effective Minutes per Shift | min | 525 |
| | | |
| **Sulphide Ore and Waste Rock** | | |
| Material – Average In Place Density | Kg /bcm | 2,570 |
| Swell % | % | 40.0% |
| Swell Factor | * | 0.71 |
| Material Bulk Density, Dry | Kg /lcm | 1,836 |
| Moisture Content | % | 5% |
| | | |
| **Oxide & Mixed Ore and Waste Rock** | | |
| Material – Average In Place Density | Kg /bcm | 2,400 |
| Swell % | % | 40.0% |
| Swell Factor | * | 0.71 |
| Material Bulk Density, Dry | Kg /lcm | 1,714 |
| Moisture Content | % | 5% |
| | | |
| **Overburden** | | |
| Material - In Place Density | Kg/bcm | 2,200 |
| Swell % | % | 40.0% |
| Swell Factor | * | 0.71 |
| Material Bulk Density, Dry | kg / lcm | 1,570 |
| Moisture Content | % | 5% |

The mine plan incorporates a conventional shovel (34 cubic metre) –truck (220 tonne) open pit mining operation with the basic parameters shown on Table 1-13.

a) Equipment Selection

The mining equipment sized to accommodate the mine plan at a production rate peaking at 208,600 tpd of total material (assuming 350 operating days per year) during Years 3 through consists of large sized primary mining equipment and a selection of matched pit / dump support and maintenance equipment.

For the purpose of capacity and cost calculations, it has been assumed that the major mining equipment will be the equivalent of P & H 2800 XPB shovels, an O&K RH200 hydraulic shovel, a Caterpillar 994G loader, IR DMM3 blasthole drills and Caterpillar 793 haul trucks. Support equipment including track dozers, rubber tire dozers, excavator, and graders are assumed to be equivalent to the Caterpillar models.

Drilling for all materials except the heap leach ore will be carried out with crawler mounted, diesel powered, 311 mm rotary blasthole drills on 10 m benches on a 7.3 by 7.3 m hole pattern, on average, drilled with 1.5 m of sub-grade. It is assumed that 20% of the overburden will be drilled and blasted using about an 8.5 by 8.5 m hole pattern, drilled with 1.5m of sub-grade. The heap leach ore will be drilled with a smaller hole diameter (172mm) and closer spaced holes (approximate 4.0 by 4.0m). This is to assure rock fragmentation of about 5 to 6 inch for leaching. This hole diameter may require a smaller drill than what is presently included in the mine capital cost estimate.

It is assumed that blasting will be carried out primarily with conventional ANFO explosive, supplied by an explosives contractor. The blast holes will be loaded by mine personnel and initiated by the blasting supervisor. A powder factor of 0.20 kg / tonne has been used for explosives consumption estimation in rock, 0.12 kg / tonne for overburden and 0.40 kg / tonne for the heap leach ore.

The primary loading units will be the P&H 2800 shovels equipped with a 34 cubic metre bucket and then O&K RH200 hydraulic shovel with a 21 cubic metre bucket. The Cat 994 front-end loader (18 cubic metre bucket) will be used for selective mining at ore/ waste contacts, low mining faces and in the tighter mining geometries. The loader will also be used for general and utility work around the mine property.

The 220 tonne class haul trucks will be the primary hauling unit for ore and waste.

b) Equipment Requirements

Major mining equipment requirements have been determined on the basis of a two shift per day basis for seven days per week to a total of 350 days per year (assuming 10 holidays and 5 shut down days for weather or other reasons). The mine will operate a total of 700 shifts per year with four mining crews working on a 4 on and 4 off rotation.

A stockpile will allow the mill to operate 365 days per year.

Table 1-13 lists the mining and support equipment that has been selected, sized and evaluated for this plan. A detail list of mining equipment requirements by year is included in Volume II of this report, Section 4. The list also includes estimated support equipment requirements.

Haul truck productivities over the life-of-mine were calculated on the basis of the fixed and variable components of the hauling cycle and travel distances to the primary crusher truck dump pocket at the 1,968 m elevation, to the run of mine heap leach and to the waste dumps. For this study, the waste material has been segregated into separate dumps for overburden, oxide plus mixed material and sulphide material.

## Table 1-13 Mining Equipment Selection*

| Equipment | Initial No Reqd | Maximum No Reqd | General Specification |
|---|---|---|---|
| Wheel Loader | 1 | 1 | Cat 994G,18 cu m, Rock Bucket |
| Hydraulic Shovel | 1 | 1 | O&K RH200, 21 cu m |
| Electric Shovel | 0 | 2 | P&H 2800, 34 cu m, Electric |
| Haul Truck | 8 | 29 | Cat 793, 129 lcu m, 220 t, End Dump |
| Rotary Blasthole Drill | 1 | 3 | IR DMM3, 311 mm, diesel |
| Auxiliary Rock Drill | 1 | 1 | IR ECM 370, |
| Blasthole Stemmer | 1 | 1 | Cat 416C |
| Rubber Tire Dozer | 1 | 2 | Cat 824G, 4.51 m blade |
| Track Dozer | 2 | 3 | D10 R, 10SU, 18.5 cu m, Ripper |
| Grader | 2 | 2 | Cat 16H, 4.9 m |
| Cable Reeler | 1 | 1 | Cat 966G |
| Backhoe / Excavator | 1 | 1 | Cat 325, 2.2 cu m, with hammer |
| Water Truck | 1 | 2 | Cat 777, 70,000 liter |
| Flat Deck Truck | 1 | 1 | 10 tonne crane, 30,000 kg GVW |
| Service / Welder / Steam Truck | 1 | 1 | 25,000 kg GVW |
| Fuel / Lube Truck | 1 | 1 | 25,000 kg GVW, 3500 liter |
| Pole Truck | 1 | 1 | 30,000 kg GVW |
| Mobile Crane | 1 | 1 | 40 tonne, Rough Terrain |
| Crew Bus | 1 | 1 | 20 man |
| Light Plant | 2 | 4 | Diesel Generator |
| Pick-Up Truck, Mine Maintenance | 2 | 2 | 1/2 tonne, Crew Cab, 4 x 4, Mine Maint. |
| Pick-Up Truck, Supervision and Eng. | 8 | 8 | 4 x 4, Mine Supervision & Engineering |
| Integrated Tool carrier | 1 | 1 | Cat IT-62G, Tire Service / Maintenance |
| Pumps | 1 | 1 | Submersible, Pit Dewatering |
| Engineering Computers & Software | 1 | 1 | Drafting, Plotting, Engineering |
| Surveying Equipment | 1 | 1 | GPS Surveying System |
| Mine Maintenance Computers & Software | 1 | 1 | Inventory Control, Planning |

* Selection assumes fire truck and ambulance are to the account of G&A area.
* Selection assumes existence of on – site bulk diesel / gasoline fuel storage with dispensing capability to fuel and haul trucks.
* Selection provides for full field fuel service to dozers, loaders, excavator and portable generators only. Trucks refueled at tank farm.

* Selection does not include step down transformers, switchgear and cabling for pit power.
* Selection does not include mobile equipment maintenance shop equipped with small tools, power tools, welders, hoists, lube dispensing

c) Manpower

All personnel in the mine department will be Mexican nationals with the exception of an expatriate mine superintendent, the mine and maintenance general foremen, the mine and maintenance trainers and a maintenance planner for the initial years (Years 1 – 3) of production. It is expected that based on the unemployment levels in the area and the regional experience in mining, that there will be no difficulty staffing the project.

Mine operations and mine maintenance manpower complement has been estimated based on a two 12 hour shift per day, four-on-four-off, seven day per week operation for all unit operations. Supervision, engineering personnel and the blasting crews are scheduled to work on an eight hour day, five day per week rotation.

In general one operator has been assigned to each equipment unit on each shift. For instance, in drilling operations four operators are assigned to each drill during high utilization years and reduced during low drill utilization years. Some manpower reductions have been made where opportunities to use operators on several equipment types exist, such as in mining support equipment.

Maintenance personnel requirements have been estimated on the basis of equipment requirements and utilization with adjustments to reflect an average mine-life ratio of about 0.65:1 mine maintenance personnel to mine operating personnel.

A summary life of mine manpower schedule is shown on Table 1-14.

## Table 1-14 Summary Manpower Requirements
### Mine

| Area Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supervision/Staff | 26 | 26 | 36 | 26 | 26 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 20 | 20 | 20 |
| Mine Eng./Geology | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| Mine Operations | 72 | 119 | 131 | 137 | 139 | 145 | 163 | 166 | 168 | 176 | 161 | 162 | 119 | 116 | 91 | 75 | 67 | 69 |
| Mine Maintenance | 45 | 80 | 90 | 90 | 90 | 95 | 104 | 104 | 104 | 109 | 99 | 99 | 79 | 79 | 58 | 48 | 43 | 43 |
| VS&A Allowance | 12 | 20 | 22 | 23 | 23 | 24 | 27 | 27 | 27 | 29 | 26 | 26 | 20 | 20 | 15 | 12 | 11 | 11 |
| **Total - Mining** | **164** | **254** | **288** | **285** | **287** | **295** | **325** | **328** | **330** | **345** | **317** | **318** | **249** | **246** | **185** | **164** | **150** | **152** |
| Ratio – Maint./ Ops. | .63 | .67 | .69 | .66 | .65 | .66 | .64 | .63 | .62 | .62 | .61 | .61 | .66 | .68 | .64 | .64 | .64 | .62 |

### Process and G & A

| Area | Number of Personnel |
|---|---|
| General & Administrative | |
| General | 11 |
| Accounting | 17 |
| Safety & Environmental | 10 |
| Mill Process Plant - Operation | 71 |
| Mill Process Plant - Maintenance | 33 |
| Heap Leach Process Plant Operation | 21 |
| Heap Leach Process Plant - Maintenance | 6 |
| Laboratory | 18 |
| **Total Process & G & A Manpower** | **187** |

d) Mine Maintenance and Dry Facilities

A mine service complex will be provided adjacent to the plant site which will include truck and support equipment repair and maintenance bays, a steam bay, a tire service bay and a welding bay. Fuelling facilities for haul trucks and small mobile equipment will be constructed. A mine dry which includes clean and dirty change areas, storage lockers and washroom/shower facilities will be constructed.

e) Explosive Magazines and AN Storage

Explosives supplies, office/shop facilities and AN storage facilities for mining operations will be supplied by an explosives contractor. High explosives will be stored in magazines, and AN will be stored in dispensing silos. The magazines will be fenced and located within the property boundary and situated to meet the legal required distances from the mine facilities, roads or populated areas.

Service roads connecting the magazine area, the AN storage silo, and the office / shop facilities will be constructed. Fuel oil for blasting will be supplied by the owner.

f) Pit Power

The electrical power to operate in-pit submersible sump pumps for mine dewatering and the electric loading shovels will be distributed from the main site substation to in-pit and pit perimeter transformers and switchgear.

g) Mine Dewatering

The groundwater inflow into the pits has been assumed to be minimal for purposes of this study. It is anticipated that groundwater inflow and pit runoff will be carried by drainage ditches along haul roads and sumped in the pit floor for pumping out of the pit. Additional pumping capacity for flood control will be required for periods of intense precipitation during the wet season. A requirement for peak inflow pumping capacity has been assumed.

Simple ditches along pit rim perimeters will prevent runoff water from entering the pit. A mining support excavator will be available to provide ongoing road/runoff ditching and pit sump excavation capacity.

h) Engineering and Grade Control

The mine department personnel complement will include engineers, a surveyor, a geologist, a draftsman, grade control technicians, and a mine clerk that will carry out required mine engineering, surveying, geology, grade control, production planning, and production tracking tasks. The mine engineering department will be equipped with office computers, mine planning software, GPS surveying equipment, and CAD drafting stations and software. A truck dispatching system has not been included.

Sulphide mill ore, oxide plus mixed heap leach ore and ore/waste contacts will be marked in the field to guide the ore loading operations to allow for selective mining with a minimum of dilution. Grade contacts will be defined with aid of sampled and assayed blasthole cuttings.

The maintenance clerk will schedule equipment maintenance, monitor repair parts inventories and track maintenance performance with the aid of maintenance scheduling software.

### 1.25.2 Recoveries

This is discussed in Section 1.16.

### 1.25.3 Markets

At the time of this report no agreements have been made with any smelters and no discussions have been entered into with a view to concluding any agreements. Not withstanding this, several smelter operators have expressed interest in entering into discussions. Samples of the concentrates have been provided to those requesting it.

Market research has been performed by a specialist consultant, Neil S. Seldon and Associates Limited. His report forms an appendix to the Feasibility Study. The follow is a summary of the findings:

The markets for the lead and zinc concentrates from Peñasquito fall into two categories, smelters within Mexico and smelters overseas. The overseas smelters are further divided into Asian, North American and European markets.

For the purpose of the study, it is assumed that all lead concentrate will be smelted in Mexico but it is also recognized that some will be smelted in overseas smelters. The smelter terms recommended in the consultant's report for the lead concentrate represent "typical" terms for the market. They represent a forecast of terms based on historical averages with due consideration for projected supply and demand over the foreseeable future.

It is possible that there may be a market for zinc concentrate in Mexico. The report assumes that zinc will be split between local and overseas either Europe or Asia. Again the smelter terms used in the calculations in this report represent an average of the typical terms deduced from the market research.

Transportation cost and port charges in-country have been determined based on a survey of transportation companies and other users. They represent current costs. Ocean freight charges recommended by the consultant are projected future costs based on historical averages and projected supply and demand.

Actual smelter terms and freight costs used in the report are set out in Section 1.25.8.

### 1.25.4 Contracts

Mining and mill operating costs as discussed later are derived from engineering estimates based on the current level of information available. They are not based on contract prices obtained from third parties. The rates used are viewed as being within the typical range for operations of this size.

As noted in the previous section, no smelting, refining or transportation contracts have yet been entered into, nor have any such discussion been initiated.

### 1.25.5 Environmental Considerations

Federal laws primarily regulate mining in Mexico, however there are several permit programs subject to state and local jurisdiction. The key permits required are shown in Table 1-15. The chart shows the government agencies involved as well as the status and the estimated approval time for each permit. The Secretary of Environment and Natural Resources (SEMARNAT) is the chief agency regulating environmental matters in Mexico. The CNA has authority over all matters concerning water rights and activities that affect ground and surface water supplies, including activities in the floodplains.

The SEMARNAT permit programs that are mandatory for the construction stage are the Environmental Impact Manifest (MIA), Risk Study and the Land Use Change Study. An endorsement must also be obtained at the municipal level to start the mine construction. A release letter from National Institute of Anthropology and History (INAH) must be obtained prior to any actions that could disturb the identified cultural resources at the site. Western Silver has obtained a release letter from INAH.

The explosives use permit must be secured before any explosives can be brought into the storage area. The National Secretary of Defense (SEDENA) has authority over all explosives permits.

The preparation of a full MIA for the mine, processing plant and associated facilities is complete in accordance with Mexican requirements. The MIA will comprise the following volumes:

- Environmental Impact Assessment
- Risk Analysis
- Land Use Change

A separate MIA must be prepared for the power line once the final alignment is established. This MIA does not require a risk analysis.

The Aquifer Study and Flora and Fauna Study are both complete. The Aquifer Study has identified adequate water for the project and work is in progress to secure this water. The Flora and Fauna Study identified no obstacles to the project.

Key elements of reclamation will be accomplished during the course of mining.

- Rock pile will be placed at a 3 horizontal to 1 vertical average side slope.

- Leach piles will be placed at a 2½ horizontal to 1 vertical average side slope.
- Tailings will be placed by centerline spigot (or cyclone) construction and have a minimum average side slope of 4 horizontal to 1 vertical.
- Rock pile foundations will be caliche or silty-clay grade surface. A suitable thickness of pit oxide overburden (10 metres minimum) will be placed on this benign strata. Sulphide or oxide waste rock will be placed over the oxide overburden layer. During the last placements of material, surveying will be employed to ensure proper slopes and suitable grades for drainage of the top surface. At the end-of-mine life, a topcover layer will be placed on the sides and top of each rock pile unit, in effect "bagging" the sulphide material in an oxide envelope. In the case of the Peñasco rock piles, overburden for the Chile Colorado pit will likely be largely used as it is scheduled to be mined after Peñasco. For Chile Colorado waste rock, topcover will come from previously stockpiled topsoil. The possibility also exists that Chile Colorado waste rock maybe deposited in the Peñasco Pit.
- Leach pile foundations will be cliché or silty-clay scarified surface. On this surface a double liner will be placed (clay and LLDPE geomembrane). On top of this a cushioning sand layer will be followed by a crushed and screened drainage layer.
- Tailings foundation will be caliche or silty-clay grade surface. The caliche/silty-clay will be overlain by consolidated tails to form a sufficient barrier for tails confinement.

**Table 1-15 Key Permits**

| REQUIRED PERMIT | MINING STAGE | AGENCY | ESTIMATED RESPONSE TIME | ACTUAL STATUS (November 2005) |
|---|---|---|---|---|
| Environmental Impact Manifest-mine[1] | Construction/ operation/ abandonment | SEMARNAT-State offices | 2 to 4 months | Substantially Complete |
| Land use change study-mine[1] | Construction/ operation | SEMARNAT-DGGFS[2]-State offices. | 2 to 3 months | Substantially Complete |
| Risk analysis study-mine[1] | Construction/ operation | SEMARNAT-(Mexico City office) | 2 to 4 months | Substantially Complete |
| Environmental Impact Manifest-power line[1] | Construction/ operation/ abandonment | SEMARNAT-State offices | 2 to 4 months | 20% complete |
| Land use change study-power line[1] | Construction/ operation | SEMARNAT-DGGFS[2]-State offices. | 2 to 3 months | 20% complete |
| Land use license[1] | Construction | Mazapil municipality | 2 months | Discussions underway |
| Explosive handling and storage permits | Construction/-operation | SEDENA[3] (Also requires state and local approvals) | 2 to 3 months | Application to be submitted when final design is complete |
| Archaeological release letter[1] | Construction | INAH[4] (State offices) | 3 to 4 months | Complete |
| Water use concession title | Construction/ operation | CNA[5] (State offices) | 2 to 5 months | Hydrologic study complete. Water rights application submitted April 25, 2005. On July 25,2005, CNA responded with a request for more details and completed Environmental Impact Manifest. |
| Water discharge permit | Operation | CNA (State offices) | 2 to 5 months | Application to be submitted when final design is complete |
| Unique license | Operation | SEMARNAT-State offices | 3 to 12 months | Not required for construction and start-up, application will be submitted once mine is in operation |
| Accident prevention plan | Operation | SEMARNAT-State offices | Not defined | Not required for construction and start-up; to be submitted once mine is in operation |

[1]Mandatory to start construction activities.
[2]DGGFS (General Department of Permitting for Forestry and Soils)
[3]SEDENA (National Secretary of Defense)
[4]INAH (National Institute of Anthropology and History)
[5]CNA (National Water Commission)

### 1.25.6 Taxes

Taxes have been calculated on a project basis in accordance with published Mexican taxation legislation. Additional details of how taxes have been applied can be found in Volume II of the Feasibility Study. Specialist taxation advice has not been solicited at this stage and no tax planning strategies have been assumed.

IVA (Impuesto Valor Agregado) is a value-added sales tax at the Federal level. This tax has not been included in the estimates.

PITEX (Programa de Importacion Temporal para Producir Articulos de Exportacion) is a federal program allowing a waiver of import duties on imported items that will exported at the end of the project. The cost of administrating this program has been included in the estimate.

Income tax has been applied at a rate of 28% of taxable income after 2007 and an allowance for employee profit sharing has been included.

Total federal income tax paid over the life of the mine is $337 million.

### 1.25.7 Capital and Operating Costs

The total plant capital cost is estimated as follows:

**Table 1-16 Estimated Plant Capital Costs**

| | |
|---|---|
| Direct Costs | $ 210,882,600 |
| | |
| Indirects, Camp and Busing, Construction Power | $ 10,786,400 |
| EPCM | $ 31,405,400 |
| Vendor Commissioning and Spare Parts | $ 2,586,300 |
| Total Contracted Cost | $ 255,660,700 |
| | |
| | $ |
| Contingency | $ 30,656,600 |
| Total Contracted Cost Plus Contingency | $ 286,317,300 |
| | |
| Owner's Capital | $ 9,300,000 |
| Initial Capital Total | $ 295,617,300 |
| | |
| Sustaining Capital, Leach Pad Extensions | $ 5,862,000 |
| Grand Total | $ 301,479,300 |

Total mine equipment investment including on-going expenditure are estimated as follows over the life of the mine.

**Table 1-17 Estimated Mine Equipment**

| | |
|---|---|
| Year 2006 | $7,741,000 |
| Year 2007 | $30,965,000 |
| Year 2008 Sustaining | $47,283,000 |
| Ongoing Sustaining Costs | $72,396,000 |
| Sustaining Credits | $0 |
| Total | $158,385,000 |

A 5% contingency on recently quoted equipment prices has been included in the above figures for Years 2006, 2007, and 2008.

The capital cost of the project has been estimated to a level of accuracy commensurate with a typical feasibility study. The estimate is estimated to be accurate at the summary level to within plus 10% and minus 15%. A more detailed discussion of the estimates can be found in Section 9 of the Feasibility Study.

The estimated process operating and maintenance costs are summarized in the following table. These costs represent life-of-mine averages for the combined operation of the heap leach and sulphide mills:

**Table 1-18 Life-of-Mine Average Process Plant O & M Costs**

| Cost Area | $/tonne Ore |
|---|---|
| Manpower | $0.10 |
| Consumables | $0.86 |
| Reagents | $0.94 |
| Power | $1.20 |
| Total | $3.10 |

The estimated mine operating and maintenance costs have been calculated on an annual basis and are summarized on Table 1-19. These costs cover the mining activities of drilling, blasting, loading, hauling material to the crusher, leach heap or waste stockpiles, auxiliary support to the mining activities, the maintenance of all mine equipment, mine supervision (including the pit manager), and geology and engineering support.

**Table 1-19 Estimated Mine O & M Costs**

| Year | $/tonne Mined |
|---|---|
| -1 (2006) | |
| 1 | 1.018 |
| 2 | 0.582 |
| 3 | 0.609 |
| 4 | 0.607 |
| 5 | 0.614 |
| 6 | 0.650 |
| 7 | 0.732 |
| 8 | 0.739 |
| 9 | 0.742 |
| 10 | 0.786 |
| 11 | 0.709 |
| 12 | 0.693 |
| 13 | 0.781 |
| 14 | 0.704 |
| 15 | 0.815 |
| 16 | 0.959 |
| 17 | 1.027 |
| 18 (2024) | 1.103 |
| LoM Avg. | 0.710 |

General and Administration costs over the life of the mine are estimated in accordance with prevailing costs for large tonnage hard rock mines, at a cost of $0.12/tonne for the mine and mill.

Other project expenditures and parameters of interest include the following:

| | |
|---|---|
| • Owner's Initial Working Capital | $13,800,000 |
| • Site Reclamation at End of Mine Life | $15,784,000 |
| TOTAL | $29,584,000 |

- Revenue Delay – 2 months from time of shipment for both Doré and Concentrate.
- Property Acquisition – Sunk Cost.
- SEMARNAT Change of Land Use Fee – Sunk Cost.

It is noted that in addition to the reclamation costs indicated above, additional operating costs are incurred during the course of mining to accomplish reclamation as a continual process, e.g., rock piles and leach piles are placed to find average side slopes (instead of angle of repose) needed for reclamation, as described in 1.25.5. Annual haulage costs reflect this accordingly.

### 1.25.8 Economics

a) Key Parameters

The following unit costs significantly affect the financial model.

- Mechanical and electrical equipment costs are in late 3rd quarter 2005 and early 4th quarter 2005 dollars, based on vendor quotations.
- Electricity power costs are based on published 4th quarter CFE rates.
- Diesel costs are based on 4th quarter negotiated contracts for other M3 Mexico projects.
- Base Case Metals pricing is based on the M3 end of October 2005 values, calculated on 60% historical and 40% futures. (See Paragraph F for further explanation).
- Smelter terms represent a forecast based on historical terms, current terms, and future projections.
- Concentrate transportation charges and port storage charges are based on current pricing.

- Concentrate ocean shipping charges are a forecast based on recent historical terms, current terms, and future projections.
- Reagent costs are based on 4th quarter quotations.
- Grinding media costs are based on 4th quarter quotations.
- Construction labor rates are based on the M3 historical data base as updated by bids received in September and October of 2005.
- Operation labor rates are based on the M3 historical data base as updated by confidential records received in September and October of 2005.
- M3's capital costs estimate has been calibrated to unit metrics (e.g., all in cost for cubic meter of concrete or tonne of structural steel) received on comparable construction bids in September and October of 2005.

b) Ore Reserves and Mine Life

These are summarized in Section 1.3.

c) Metallurgical Recoveries

Recoveries are indicated in Section 1.18.

d) Smelter Terms

| | | |
|---|---|---|
| ***Lead Concentrate*** | | |
| Payable Lead in Lead Concentrate | | 95.00% |
| Lead Minimum Deduction - unit | | 3.0 |
| Treatment Charge - $/t | $ | 145.00 |
| Gold Refining Charge - $/oz | $ | 6.00 |
| Silver Refining Charge - $/oz | $ | 0.40 |
| Payable Zinc in Lead Concentrate | | 0.00% |
| Payable Gold in Lead Concentrate | | 95.00% |
| Gold Deduction - gpt | | 1.000 |
| Payable Silver in Lead Concentrate | | 95.00% |
| Silver Minimum Deduction - gpt | | 50.0 |
| ***Zinc Concentrate*** | | |
| Payable Zinc in Zinc Concentrate | | 85.00% |
| Zinc Minimum Deduction - unit | | 8 |
| Treatment Charge - $/t* | $ | 150.00 |
| Payable Lead in Zinc Concentrate | | 0.00% |
| Payable Gold in Zinc Concentrate | | 75.00% |
| Gold Deduction - gpt | | 1.000 |
| Payable Silver in Zinc Concentrate | | 70.00% |
| Silver Deduction - gpt | | 93.3 |

* Treatment charge increases to $165.00 after two years

e) Concentrate Transportation Costs

The base case considers concentrate transportation charges as follows:

| | |
|---|---|
| • Truck from mine to port | $25.00 |
| • Port storage and loading charges | $10.00 |
| • Ocean freight including losses and insurance | $35.00 |
| Total Overseas Cost | $70.00 |
| • Truck from mine to inland smelter | $25.00 |
| Total Local Cost | $25.00 |

Wet concentrate tonnages estimates are based on a moisture content of 8%.

Concentrate quality, based on Peñasco ore, is characterized in the following table. Concentrate from Chile Colorado ore is very similar. In general, the concentrates produced are clean and relatively free of deleterious elements. Although antimony and cadmium may be on the high side, general discussions with smelters suggest that these may not be problematic for all the smelters. No penalty charges have been assumed.

**Table 1-20 Pilot Plant Concentrate Production**

| Element | Units | Concentrate Mass and Assays | |
|---|---|---|---|
| | | Lead | Zinc |
| Mass | kg | 7.2 | 9.3 |
| Lead | % | 52.6 | 2.83 |
| Zinc | % | 7.3 | 51.0 |
| Gold | ppm | 70.3 | 6.8 |
| Silver | ppm | 2960 | 486 |
| Antimony | % | 1.86 | 0.244 |
| Arsenic | % | 0.536 | 0.137 |
| Bismuth | ppm | 719 | 96 |
| Cadmium | % | 0.077 | 0.354 |
| Cobalt | % | 0.003 | 0.002 |
| Copper | % | 2.36 | 0.55 |
| Iron | % | 6.6 | 3.25 |
| Mercury | ppm | <1 | 4 |
| Molybdenum | % | <0.001 | <0.001 |
| Nickel | % | 0.007 | 0.005 |
| Selenium | ppm | 891 | 67 |
| Silica | % | 3.35 | 6.4 |
| Sulphur | % | 21.5 | 29.7 |
| Aluminum Oxide | % | 0.98 | 1.77 |
| Calcium Oxide | % | 0.22 | 0.61 |
| Magnesium Oxide | % | 0.14 | 0.27 |

f) NI 43-101 Metals Pricing for Resources and Reserves

- Table 1-21 shows end of September 2005 M3 metal pricing based on three years of recent historical data and two years of future price forecast. M3 has used this proprietary method since 2004. M3 notes that Orion Research on October 5, 2005 stated "We are having indications that the SEC will allow the use of three-year trailing and two-year forward gold prices for reserve calculation".

## Table 1-21 End of September 2005 Summary of Historical and Future Commodity Prices

**Summary of Historical and Future Commodity Prices**
**September 30, 2005**

| | | Prices used for US Sec filings | | | | M3 Prices used for NI 43-101 filings |
|---|---|---|---|---|---|---|
| **Commodity** | **Spot Price** | **Historical Price** | | **Futures Price Forecast** | | **Weighted Average** |
| | EOM Sept. 2005 | (36-months) | Source of Data | (24-Month) Projected thru September 2007 | | (60-40) |
| **Gold** (USD per Tr Oz) | 473.25 | 392.18 | COMEX Daily Ave LME Daily Ave | 490.66 | COMEX Futures | 431.57 |
| **Silver** (USD per Tr Oz) | 7.530 | 5.978 | COMEX Daily Ave LME Daily Ave | 7.593 | COMEX Futures | 6.624 |
| **Copper** (USD per lb) | 1.807 | 1.155 | LME Monthly Ave | 1.318 | COMEX Futures & LME Futures | 1.220 |
| **Lead** (USD per lb) | 0.443 | 0.337 | LME Monthly Ave | 0.385 | LME Futures | 0.351 |
| **Nickel** (USD per lb) | 6.096 | 5.503 | LME Monthly Ave | 5.240 | LME Futures | 5.398 |
| **Zinc** (USD per lb) | 0.631 | 0.459 | LME Monthly Ave | 0.582 | LME Futures | 0.508 |

Notes:

1. Precious Metals updated through End-of-Month (EOM) September 2005
   Base metals updated through EOM September 2005
2. Sources: COMEX prices for gold and silver daily historical and EOM futures pricing
   London Metals Exchange for copper, lead, nickel, and zinc monthly average settlement and futures pricing.
   Copper futures pricing is the average of the LME and COMEX copper futures prices.
3. M3 uses weighted average prices for NI-43-101 reporting purposes, 60 % historical prices; 40% futures forecast prices.
4. Lead futures price projected for 15 months forward. Historical to futures price ratio is 70.6% to 29.4%.
5. Spot prices are from London Bullion Market Association & Kitco Metals for precious metals and base metals, respectively.

- NI 43-101 Metals Pricing for Financial Analysis

  As considerable time is required to develop resources and reserves, out of necessity pricing must be used that is at least two months in the past for this technical effort.

  On the other hand, commercial financial models can be adjusted in a matter of minutes to incorporate the latest pricing. Accordingly, end of October 2005 metals pricing has been used to most accurately characterize the commercial aspects of this project.

**Table 1-22 End of October 2005 Summary of Historical and Future Commodity Prices**

**October 31, 2005**

| | | **Prices used for US Sec filings** | | | | **M3 Prices used for NI 43-101 filings** |
|---|---|---|---|---|---|---|
| **Commodity** | **Spot Price** | **Historical Price** | | **Futures Price Forecast** | | **Weighted Average** |
| | EOM Oct. 2005 | (36-months) | Source of Data | (24-Month) Projected thru October 2007 | | (60-40) |
| **Gold** (USD per Tr Oz) | 470.75 | 396.72 | COMEX Daily Ave LME Daily Ave | 489.97 | COMEX Futures | 434.02 |
| **Silver** (USD per Tr Oz) | 7.765 | 6.075 | COMEX Daily Ave LME Daily Ave | 7.743 | COMEX Futures | 6.742 |
| **Copper** (USD per lb) | 1.864 | 1.187 | LME Monthly Ave | 1.363 | COMEX Futures & LME Futures | 1.257 |
| **Lead** (USD per lb) | 0.450 | 0.344 | LME Monthly Ave | 0.414 | LME Futures | 0.365 |
| **Nickel** (USD per lb) | 5.360 | 5.574 | LME Monthly Ave | 5.024 | LME Futures | 5.354 |
| **Zinc** (USD per lb) | 0.694 | 0.468 | LME Monthly Ave | 0.605 | LME Futures | 0.523 |

Notes:
1. Precious Metals updated through End-of-Month (EOM) October 2005
   Base metals updated through EOM October 2005
2. Sources: COMEX prices for gold and silver daily historical and EOM futures pricing
   London Metals Exchange for copper, lead, nickel, and zinc monthly average settlement and futures pricing.
   Copper futures pricing is the average of the LME and COMEX copper futures prices.
3. M3 uses weighted average prices for NI-43-101 reporting purposes, 60 % historical prices; 40% futures forecast prices.
4. Lead futures price projected for 15 months forward. Historical to futures price ratio is 70.6% to 29.4%.
5. Spot prices are from London Bullion Market Association & Kitco Metals for precious metals and base metals, respectively.

g) Exchange Rate

An exchange rate of 10.8 Mexican pesos to the United States dollar has been used. Financial analyses are all in United States dollars.

h) Operating Costs

The operating costs are summarized below:

**Table 1-23 O & M Costs Summary**

| | LOM* | Year 2008 to 2012 |
|---|---|---|
| Mining (per tonne mined) | $0.71 | $0.63 |
| Process - mill (per tonne milled) | $3.68 | $3.49 |
| Process – Leach (per tonne leached) | $1.16 | $1.03 |
| G&A (per tonne milled) | $0.12 | $0.14 |
| Overall Cost (per tonne milled & leached) | $5.30 | $4.55 |

*LOM is Life-of-Mine

i) Capital Costs

These are outlined in Section 1.25.7.

j) Royalties

The base case includes a 2% NSR royalty payable to Kennecott on all production.

k) Taxes

Taxes are discussed in Section 1.25.6.

l) Financing

The base case economic analysis has been run on a basis of 100% equity.

m) Inflation

The base case economic analysis has been run with no inflation (constant dollar basis). Capital and operating cots are expressed in 4$^{th}$ quarter 2005 United States dollars.

n) Economic Results

For end of month of October M3 metals pricing, the economic results based on a 100% equity calculation indicate that with an after-tax and mandated profit sharing an IRR of 16.2% can be achieved. The corresponding after tax NPV is $877 million at a zero discount rate, $411 million at a 5% discount rate, and $163 million at a 10% discount rate.

**Table 1-24 Economic Results**

| | | | | |
|---|---|---|---|---|
| **Average Operating Margin - Sulphide Operation ($/tonne ore)** | | | | |
| | **Years 2008 - 2012** | | **LOM** | |
| Lead & Zinc Concentrate Revenues | $ | 13.08 | | 16.06 |
| Treatement & Shipping Charges | | 2.99 | | 3.39 |
| Net Smelter Return | $ | 10.09 | $ | 12.67 |
| Operating Cost | | 6.03 | | 6.33 |
| Royalties | | 0.22 | | 0.26 |
| Gross Margin | $ | 3.84 | $ | 6.08 |
| **Average Operating Margin - Oxide Operation ($/tonne ore)** | | | | |
| | **Years 2008 - 2012** | | **LOM** | |
| Dore Revenues | $ | 3.37 | | 3.39 |
| Treatement & Shipping Charges | | 0.05 | | 0.06 |
| Net Smelter Return | $ | 3.32 | $ | 3.33 |
| Operating Cost | | 1.62 | | 1.87 |
| Royalties | | - | | - |
| Gross Margin | $ | 1.70 | $ | 1.46 |
| **Average Operating Margin - Combined Operation ($/tonne ore)** | | | | |
| | **Years 2008 - 2012** | | **LOM** | |
| Lead & Zinc Concentrate & Dore Revenues | $ | 9.76 | | 13.14 |
| Treatement & Shipping Charges | | 1.98 | | 2.62 |
| Net Smelter Return | $ | 7.78 | $ | 10.52 |
| Operating Cost | | 4.52 | | 5.30 |
| Royalties | | 0.15 | | 0.20 |
| Gross Margin | $ | 3.11 | $ | 5.02 |

| After Tax Cash Flows ($000) | Start of Project to end of 2012 | LOM |
|---|---|---|
| **Income statement** | | |
| Revenues | $ 1,213,329 | $ 4,403,169 |
| Production cost | 1,243,420 | 3,198,913 |
| Income taxes | - | 337,192 |
| **Net income** | $ (30,091) | $ 867,064 |
| **Cash flow statement** | | |
| Net income | $ (30,091) | $ 867,064 |
| Plus depreciation | 398,664 | 459,864 |
| Working capital | (24,800) | 0 |
| Cash flow from operations | $ 343,773 | $ 1,326,928 |
| Initial capital investment | 334,323 | 334,323 |
| Sustaining capital | 69,280 | 125,541 |
| Salvage Income | | 10,000 |
| **Net cash flow** | $ (59,830) | $ 877,064 |

| After Tax Rate Of Return And Payback | LOM |
|---|---|
| IRR (100% equity basis) | 16.2% |
| Payback (years, 100% equity basis) | 6.4 |

| After Tax Net Present Value | LOM |
|---|---|
| 0% Discount (000) | $877 million |
| 5% Discount (000) | $411 million |
| 10% Discount (000) | $163 million |

o) Sensitivities

- Spot Metal Prices.
- 36-month historical.
- Fluctuation on Main Model sensitivity of the IRR and NPV to changes in basic factors is reflected in the table below.

## Table 1-25 IRR and NPV Factors

| Case | Cumulative Net Cash Flow ($MM) | NPV @5% ($MM) | NPV @10% ($MM) | Payback (Years) | IRR (%) |
|---|---|---|---|---|---|
| **Base Case** | 877 | 411 | 163 | 6.4 | 16.2 |
| Metal Price Variation* | | | | | |
| Metal Price +10% | 1.184 | 606 | 296 | 5.2 | 21.0 |
| Metal Price -10% | 559 | 205 | 20 | 8.3 | 10.8 |
| Spot Pricing | 1,473 | 785 | 416 | 4.5 | 25.1 |
| 36-month Historical | 584 | 223 | 33 | 8.1 | 11.3 |
| Capital Cost Variation | | | | | |
| Capital Cost +10% | 844 | 378 | 131 | 6.9 | 14.7 |
| Capital Cost -10% | 910 | 443 | 194 | 5.9 | 17.9 |
| Operating Cost Variation | | | | | |
| Operating Cost +10% | 752 | 326 | 103 | 7.4 | 13.9 |
| Operating Cost -10% | 1,003 | 494 | 222 | 5.7 | 18.5 |
| Mill Recovery Variation | | | | | |
| Mill Recovery +5% | 994 | 485 | 213 | 5.8 | 18.0 |
| Mill Recovery -5% | 748 | 327 | 105 | 7.2 | 14.0 |

p) For end of month of October spot metals pricing, the economic results based on a 100% equity calculation indicate that after-tax and profit sharing, an IRR of 25% can be achieved. The corresponding after tax NPV is $1,473 million at a zero discount and $785 million at a 5% discount rate and $416 million at a 10% discount rate.

q) Payback

Based on the cash flow schedule in the previous section it can be seen that the payback of the initial capital investment will be realized in 6.4 years for the base case. It would be 4.5 years for the spot metals pricing.

r) Mine Life

The proven and probable reserves identified at present, together with the selected production rate result in a mine life of 17 years.

s) Cash Flow

- Life of project cash flow. See Table 1-26.
- Design/construction phase cash flow.

## Production Statistics and Financial Analysis

Lead Price $/lb. = $ [illegible] | Zinc Price $/lb. = $ [illegible] | Silver Price $/oz = $ [illegible] | Gold Price $/oz = $ [illegible] | Price Factor 1.00

| | | Total | PPN-3 | PPN-2 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Days per Year | | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| **Mine Production Statistics** | | | | | | | | | | | | | | | | |
| Combined Oxide Ore | Mined (kt) | 77,327 | 0 | 0 | 0 | 3,625 | 18,866 | 10,553 | 5,930 | 3,163 | 2,842 | 3,428 | 1,415 | 1,281 | 8,681 | 8,168 |
| Combined Sulphide Ore | Mined (kt) | 257,807 | 0 | 0 | 0 | 65 | 7,985 | 18,250 | 18,250 | 18,250 | 18,250 | 18,250 | 18,250 | 13,507 | 12,020 | 16,585 |
| Total Waste | Mined (kt) | 649,631 | 0 | 0 | 0 | 14,310 | 40,149 | 44,197 | 48,820 | 51,587 | 51,908 | 51,372 | 53,335 | 58,212 | 52,299 | 48,247 |
| Strip Ratio | | 1.94 | 0.00 | 0.00 | 0.00 | 3.88 | 1.50 | 1.53 | 2.02 | 2.41 | 2.46 | 2.37 | 2.71 | 3.94 | 2.53 | 1.95 |
| **Plant Production Statistics** | | | | | | | | | | | | | | | | |
| Total oxide processed | (kt) | 77,327 | 0 | 0 | 0 | 3,625 | 18,866 | 10,553 | 5,930 | 3,163 | 2,842 | 3,428 | 1,415 | 1,281 | 8,681 | 8,168 |
| Oxide overall grade processed | Lead - percent | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| | Zinc - percent | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| | Gold - g/t | 0.2817 | 0.0000 | 0.0000 | 0.0000 | 0.1991 | 0.2248 | 0.2749 | 0.2801 | 0.4433 | 0.3153 | 0.3931 | 0.5304 | 0.8015 | 0.2439 | 0.2111 |
| | Silver - g/t | 23.3367 | 0.0000 | 0.0000 | 0.0000 | 29.0041 | 24.5663 | 28.0149 | 24.5974 | 21.3367 | 24.2938 | 24.7993 | 23.1116 | 25.4848 | 15.9528 | 22.0981 |
| Total sulphide processed | (kt) | 257,807 | 0 | 0 | 0 | 0 | 8,050 | 18,250 | 18,250 | 18,250 | 18,250 | 18,250 | 18,250 | 13,507 | 12,020 | 16,585 |
| Sulphide overall grade processed | Lead - percent | 0.31% | 0.00% | 0.00% | 0.00% | 0.00% | 0.34% | 0.35% | 0.29% | 0.28% | 0.25% | 0.28% | 0.25% | 0.33% | 0.25% | 0.31% |
| | Zinc - percent | 0.69% | 0.00% | 0.00% | 0.00% | 0.00% | 0.59% | 0.61% | 0.53% | 0.69% | 0.63% | 0.54% | 0.50% | 0.70% | 0.56% | 0.58% |
| | Gold - g/t | 0.5081 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.1940 | 0.2732 | 0.2964 | 0.4299 | 0.4552 | 0.4430 | 0.4910 | 0.9861 | 1.0741 | 0.4947 |
| | Silver - g/t | 30.1852 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 25.7166 | 26.8868 | 24.1636 | 24.4535 | 26.5066 | 25.5270 | 24.1239 | 34.7598 | 26.0274 | 26.0127 |
| Concentrate Production | Lead - (kt) | 1,134 | - | - | - | - | 38 | 86 | 75 | 72 | 65 | 73 | 65 | 64 | 43 | 71 |
| | Zinc - (kt) | 2,579 | - | - | - | - | 66 | 165 | 137 | 182 | 152 | 138 | 117 | 132 | 93 | 143 |
| Contained Metal | Lead concentrate | | | | | | | | | | | | | | | |
| | Lead (kt) | 631 | - | - | - | - | 22 | 51 | 44 | 42 | 38 | 43 | 38 | 38 | 25 | 40 |
| | Zinc (kt) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Gold - (1000 ounces) | 2,434 | - | - | - | - | 32 | 103 | 108 | 159 | 170 | 164 | 183 | 276 | 265 | 156 |
| | Silver - (1000 ounces) | 165,445 | - | - | - | - | 4,738 | 11,564 | 9,762 | 10,076 | 10,912 | 10,604 | 10,019 | 10,847 | 7,088 | 9,274 |
| | Zinc concentrate | | | | | | | | | | | | | | | |
| | Zinc (kt) | 1,363 | - | - | - | - | 35 | 87 | 72 | 96 | 80 | 73 | 62 | 70 | 49 | 78 |
| | Lead (kt) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Gold - (1000 ounces) | 464 | - | - | - | - | 6 | 18 | 19 | 28 | 30 | 29 | 31 | 48 | 45 | 30 |
| | Silver - (1000 ounces) | 40,412 | - | - | - | - | 943 | 2,278 | 1,891 | 1,583 | 2,156 | 2,101 | 1,993 | 2,175 | 1,414 | 2,307 |
| | Dore' metal | | | | | | | | | | | | | | | |
| | Gold - (1000 ounces) | 389 | - | - | - | 13 | 78 | 53 | 30 | 26 | 16 | 25 | 14 | 19 | 38 | 31 |
| | Silver - (1000 ounces) | 14,037 | - | - | - | 845 | 3,725 | 2,376 | 1,172 | 542 | 555 | 683 | 263 | 240 | 986 | 1,282 |
| **Cash flow and economic indicators ($ 000's)** | | | | | | | | | | | | | | | | |
| Capital - (initial & sustaining) | | $ 459,864 | $ - | $ - | $ 46,283 | $ 178,774 | $ 159,450 | $ 6,833 | $ 7,302 | $ 2,340 | $ 2,593 | $ 11,550 | $ 3,883 | $ 4,171 | $ 2,888 | $ 18,043 |
| Salvage Value | | $ (10,000) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Working Capital | | $ - | $ - | $ - | $ 4,159 | $ 7,143 | $ 8,498 | $ 5,000 | $ (1,000) | $ 2,000 | $ (1,000) | $ - | $ - | $ 2,000 | $ (2,000) | $ - |
| Revenue | | $ 4,403,169 | | | | | | | | | | | | | | |
| Cash Operating Costs | Mine, Process, G&A and TRC's | $ 2,655,365 | $ - | $ - | $ - | $ 24,774 | $ 112,934 | $ 180,175 | $ 166,023 | $ 173,956 | $ 168,544 | $ 173,190 | $ 165,080 | $ 153,196 | $ 146,705 | $ 177,383 |
| Royalty | | $ 67,000 | $ - | $ - | $ - | $ - | $ 2,000 | $ 4,000 | $ 4,000 | $ 4,000 | $ 4,000 | $ 4,000 | $ 4,000 | $ 5,000 | $ 5,000 | $ 4,000 |
| Property tax | | $ 900 | $ - | $ - | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 |
| Reclamation & closure | | $ 15,784 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Depreciation | | $ 459,864 | $ - | $ - | $ 11,571 | $ 56,264 | $ 96,134 | $ 57,842 | $ 88,097 | $ 43,589 | $ 4,767 | $ 5,946 | $ 5,091 | $ 5,549 | $ 5,673 | $ 7,246 |
| Total Production Costs | | $ 3,158,913 | $ - | $ - | $ 11,621 | $ 81,088 | $ 211,118 | $ 282,067 | $ 258,170 | $ 221,995 | $ 177,361 | $ 183,186 | $ 174,221 | $ 163,789 | $ 157,378 | $ 188,679 |
| Income from operations | | $ 1,204,256 | | | | | | | | | | | | | | |
| Income taxes | | $ 337,193 | | | | | | | | | | | | | | |
| Net income after taxes | | $ 867,063 | | | | | | | | | | | | | | |
| Cash Flow - yearly | | | $ - | $ - | $ (50,492) | $ (201,337) | $ (149,187) | $ 71,080 | $ 75,445 | $ 94,510 | $ 100,152 | $ 66,472 | $ 59,421 | $ 98,518 | $ 86,415 | $ 45,711 |
| Cash Flow - cumulative | | $ 877,063 | $ - | $ - | $ (50,492) | $ (251,829) | $ (401,016) | $ (329,937) | $ (254,492) | $ (159,982) | $ (59,830) | $ 6,642 | $ 66,063 | $ 164,581 | $ 250,996 | $ 296,707 |
| Property economic indicators | | | | | | | | | | | | | | | | |
| NPV at 0% - ($000) after tax | | $ 877,063 | | | | | | | | | | | | | | |
| NPV at 5% - ($000) after tax | | $ 410,614 | | | | | | | | | | | | | | |
| NPV at 10% - ($000) after tax | | $ 162,617 | | | | | | | | | | | | | | |
| IRR | | 16.2% | | | | | | | | | | | | | | |
| Payback - years from startup | | 6.4 | | | | | | | | | | | | | | |
| Net Smelter Return | | $ 3,265,000 | $ - | $ - | $ - | $ - | $ 76,000 | $ 192,000 | $ 174,000 | $ 209,000 | $ 210,000 | $ 206,000 | $ 202,000 | $ 253,000 | $ 206,000 | $ 195,000 |
| Silver cash cost - net of byproduct credits - $/oz | | $ (1.91) | $ - | $ - | $ - | $ 22.85 | $ 1.86 | $ (0.60) | $ 0.41 | $ (2.77) | $ (1.54) | $ (2.01) | $ (0.86) | $ (6.28) | $ (6.36) | $ (0.91) |

| | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Days per Year | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| **Mine Production Statistics** | | | | | | | | | | | | | | |
| Combined Oxide Ore | Mined (kt) | 4,033 | 1,933 | 2,969 | 374 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Combined Sulphide Ore | Mined (kt) | 16,947 | 15,511 | 14,600 | 14,600 | 14,600 | 14,600 | 7,287 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Waste | Mined (kt) | 52,020 | 28,377 | 33,405 | 16,327 | 4,352 | 597 | 167 | 0 | 0 | 0 | 0 | 0 | 0 |
| Strip Ratio | | 2.48 | 1.63 | 1.90 | 1.09 | 0.30 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Plant Production Statistics** | | | | | | | | | | | | | | |
| Total oxide processed | (kt) | 4,033 | 1,933 | 2,969 | 374 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oxide overall grade processed | Lead - percent | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| | Zinc - percent | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| | Gold - g/t | 0.3702 | 0.1839 | 0.2076 | 0.2500 | 0.2120 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | Silver - g/t | 21.7377 | 17.4816 | 20.8562 | 19.6390 | 6.1970 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total sulphide processed | (kt) | 16,947 | 15,511 | 14,600 | 14,600 | 14,600 | 14,600 | 7,287 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sulphide overall grade processed | Lead - percent | 0.34% | 0.41% | 0.52% | 0.34% | 0.29% | 0.31% | 0.12% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Zinc - percent | 0.71% | 0.69% | 0.86% | 0.81% | 0.75% | 1.14% | 1.10% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| | Gold - g/t | 1.0441 | 0.6353 | 0.2690 | 0.3090 | 0.3200 | 0.4660 | 0.5420 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | Silver - g/t | 32.4047 | 38.3212 | 46.5200 | 33.3300 | 32.4300 | 40.3300 | 30.4200 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Concentrate Production | Lead - (kt) | 83 | 88 | 106 | 70 | 59 | 63 | 13 | - | - | - | - | - | - |
| | Zinc - (kt) | 182 | 163 | 190 | 178 | 166 | 251 | 121 | - | - | - | - | - | - |
| Contained Metal | Lead concentrate | | | | | | | | | | | | | |
| | Lead (kt) | 47 | 46 | 53 | 35 | 30 | 32 | 7 | - | - | - | - | - | - |
| | Zinc (kt) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Gold - (1000 ounces) | 360 | 182 | 45 | 52 | 54 | 79 | 46 | - | - | - | - | - | - |
| | Silver - (1000 ounces) | 12,334 | 11,957 | 12,884 | 9,231 | 8,981 | 11,169 | 4,205 | - | - | - | - | - | - |
| | Zinc concentrate | | | | | | | | | | | | | |
| | Zinc (kt) | 96 | 85 | 101 | 94 | 88 | 133 | 64 | - | - | - | - | - | - |
| | Lead (kt) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | Gold - (1000 ounces) | 66 | 36 | 13 | 15 | 15 | 22 | 13 | - | - | - | - | - | - |
| | Silver - (1000 ounces) | 2,777 | 3,429 | 4,149 | 2,973 | 2,892 | 3,597 | 1,354 | - | - | - | - | - | - |
| | Dore' metal | | | | | | | | | | | | | |
| | Gold - (1000 ounces) | 27 | 6 | 11 | 2 | - | - | - | - | - | - | - | - | - |
| | Silver - (1000 ounces) | 635 | 240 | 438 | 52 | 3 | - | - | - | - | - | - | - | - |
| **Cash flow and economic indicators ($ 000's)** | | | | | | | | | | | | | | |
| Capital - (initial & sustaining) | | $ 11,270 | $ 4,036 | $ 11 | $ 62 | $ 347 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Salvage Value | | $ - | $ - | $ - | $ - | $ - | $ (2,000) | $ (8,000) | $ - | $ - | $ - | $ - | $ - | $ - |
| Working Capital | | $ 5,000 | $ (3,000) | $ (2,000) | $ (2,000) | $ (1,000) | $ 3,000 | $ (18,800) | $ (5,000) | $ (1,000) | $ - | $ - | $ - | $ - |
| Revenue | | | | | | | | | | | | | | |
| Cash Operating Costs | Mine, Process, G&A and TRC's | $ 183,784 | $ 159,246 | $ 168,971 | $ 144,984 | $ 132,564 | $ 151,010 | $ 72,852 | $ - | $ - | $ - | $ - | $ - | $ - |
| Royalty | | $ 6,000 | $ 5,000 | $ 4,000 | $ 3,000 | $ 3,000 | $ 4,000 | $ 2,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| Property tax | | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ 50 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Reclamation & closure | | $ - | $ - | $ - | $ - | $ - | $ - | $ 3,000 | $ 12,784 | $ - | $ - | $ - | $ - | $ - |
| Depreciation | | $ 9,093 | $ 9,059 | $ 8,340 | $ 3,845 | $ 1,114 | $ 102 | $ 102 | $ 87 | $ - | $ 3 | $ - | $ - | $ - |
| Total Production Costs | | $ 198,927 | $ 173,355 | $ 181,361 | $ 151,879 | $ 136,728 | $ 155,162 | $ 77,954 | $ 12,871 | $ - | $ 3 | $ - | $ - | $ - |
| Income from operations | | | | | | | | | | | | | | |
| Income taxes | | | | | | | | | | | | | | |
| Net income after taxes | | | | | | | | | | | | | | |
| Cash Flow - yearly | | $ 123,567 | $ 110,118 | $ 74,945 | $ 56,481 | $ 49,640 | $ 76,748 | $ 77,335 | $ 10,220 | $ 1,000 | $ - | $ - | $ - | $ - |
| Cash Flow - cumulative | | $ 420,574 | $ 530,692 | $ 605,640 | $ 662,121 | $ 711,761 | $ 788,509 | $ 865,843 | $ 876,063 | $ 877,063 | $ 877,063 | $ 877,063 | $ 877,063 | $ 877,063 |
| Net Smelter Return | | $ 324,000 | $ 234,000 | $ 190,000 | $ 154,000 | $ 149,000 | $ 201,000 | $ 90,000 | $ - | $ - | $ - | $ - | $ - | $ - |
| Silver cash cost - net of byproduct credits - $/oz | | $ (8.55) | $ (2.58) | $ 0.66 | $ 0.47 | $ 0.24 | $ (2.78) | $ (3.10) | $ - | $ - | $ - | $ - | $ - | $ - |

## 1.26 ILLUSTRATIONS

# FIGURE 1-1
# NATIONAL TRANSPORTATION CORRIDORS

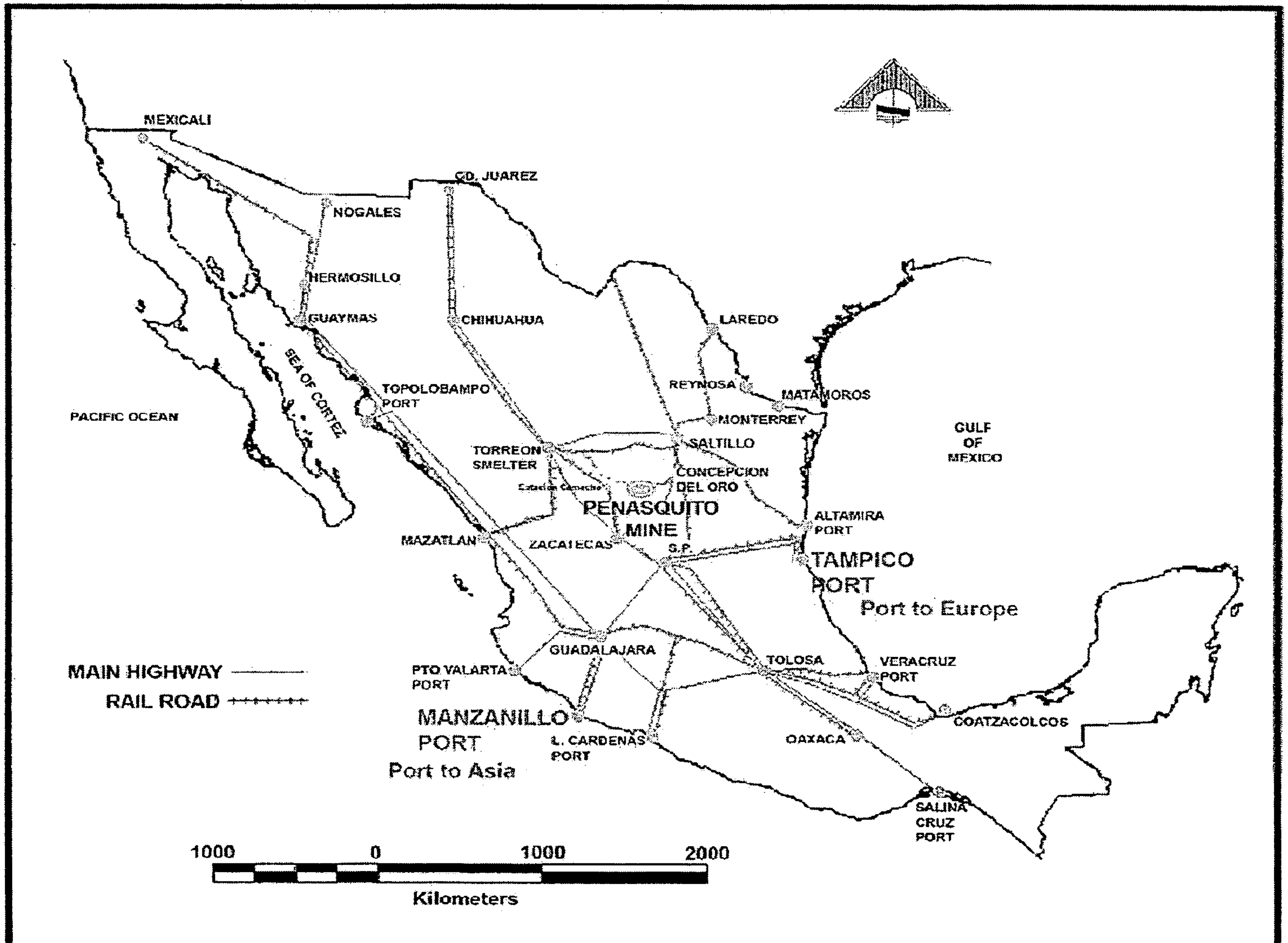


**FIGURE 1-2**
**PROJECT STATE PLAN**

**FIGURE 1-3**
**PROJECT REGION PLAN**

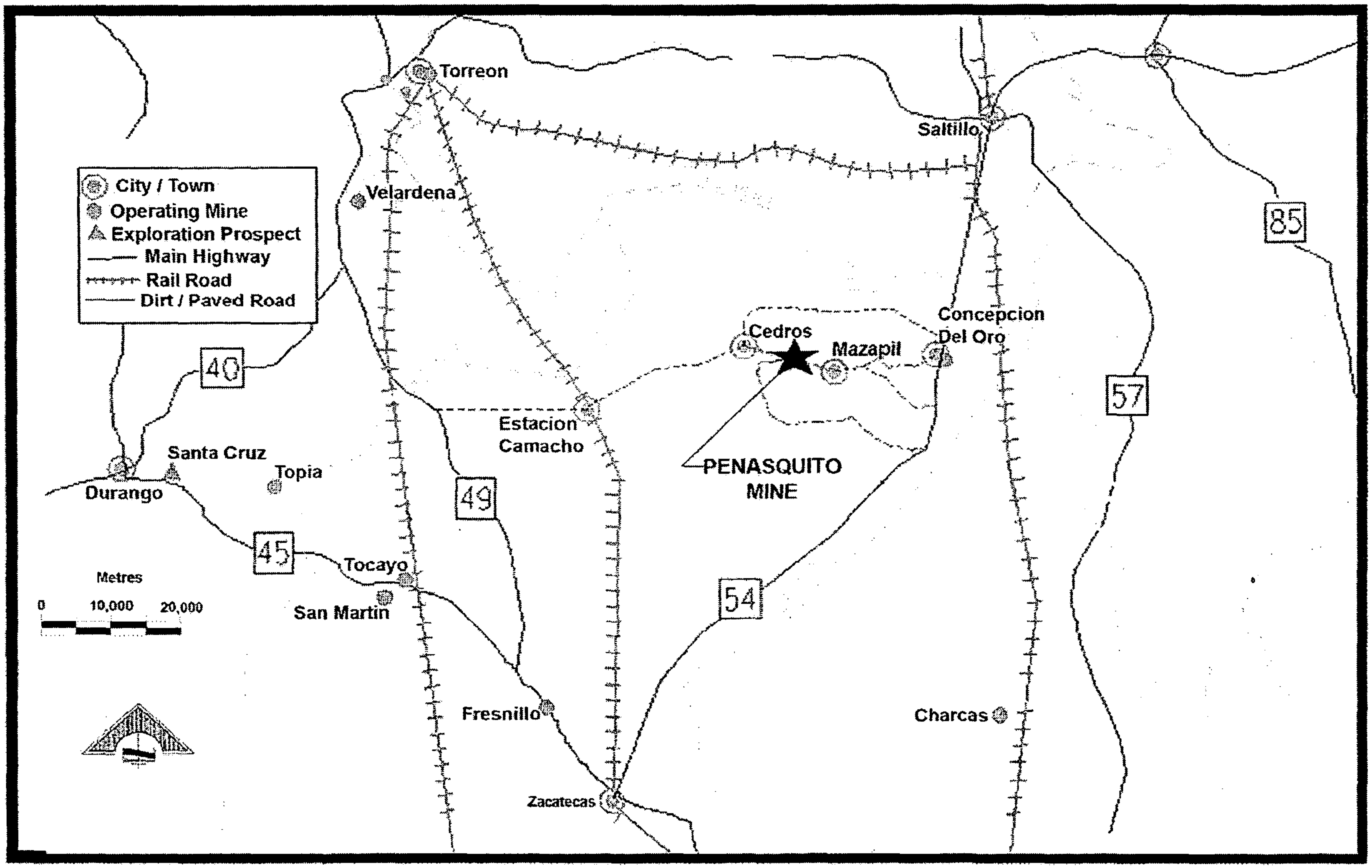


**FIGURE 1-4**
**PROJECT VICINITY PLAN**

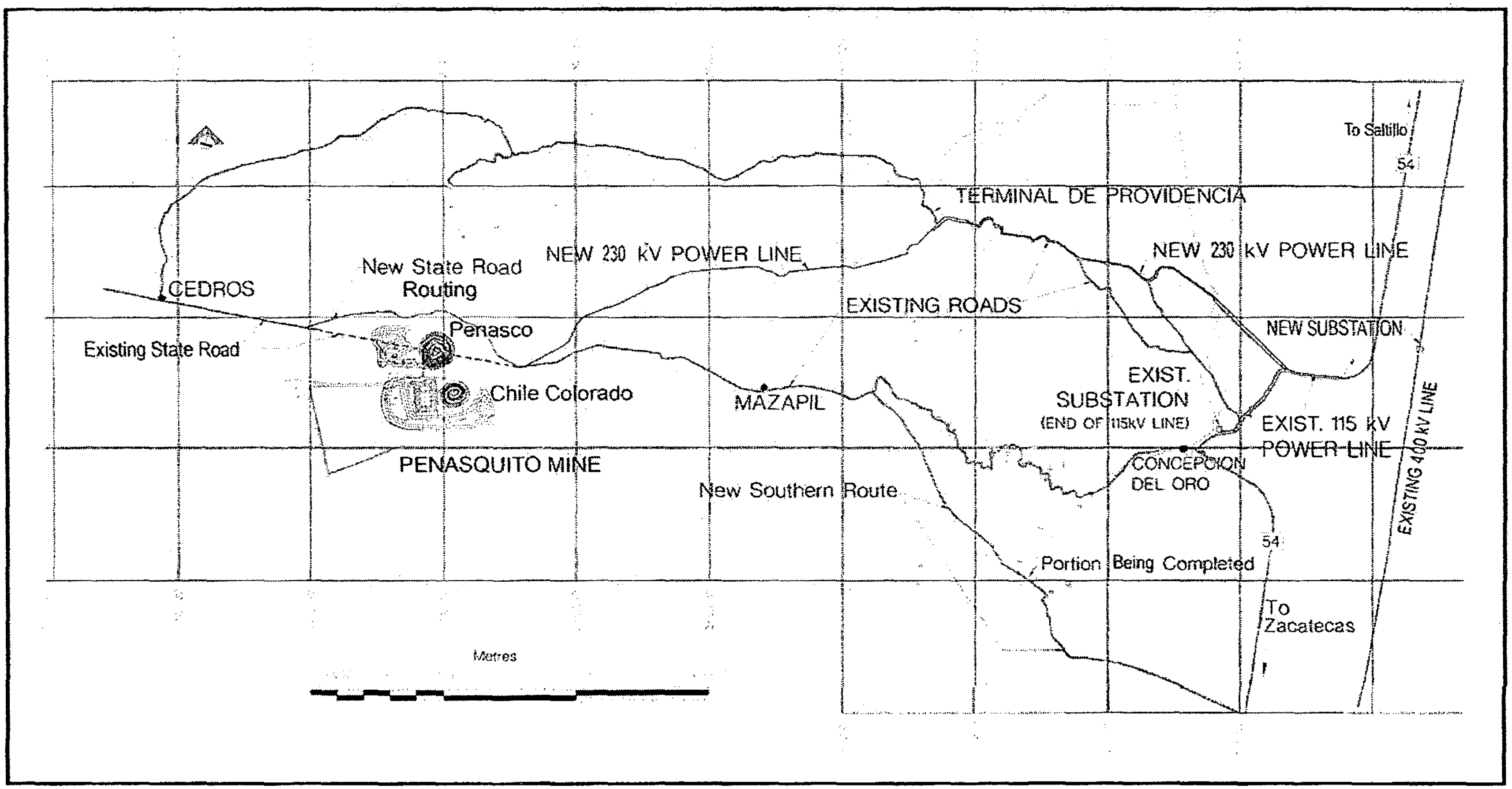


**FIGURE 1-5**
**PROJECT FACILITIES PLAN**

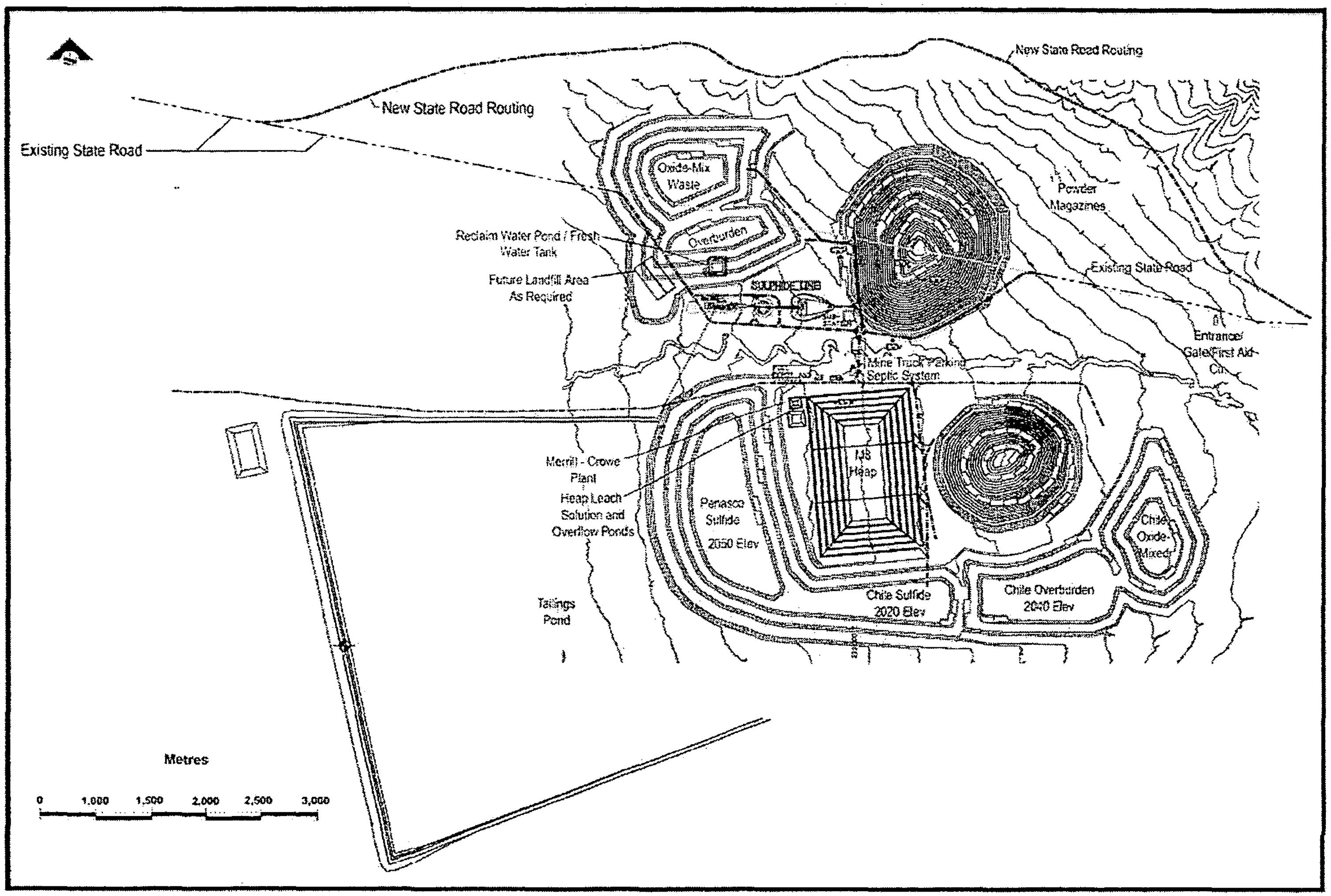
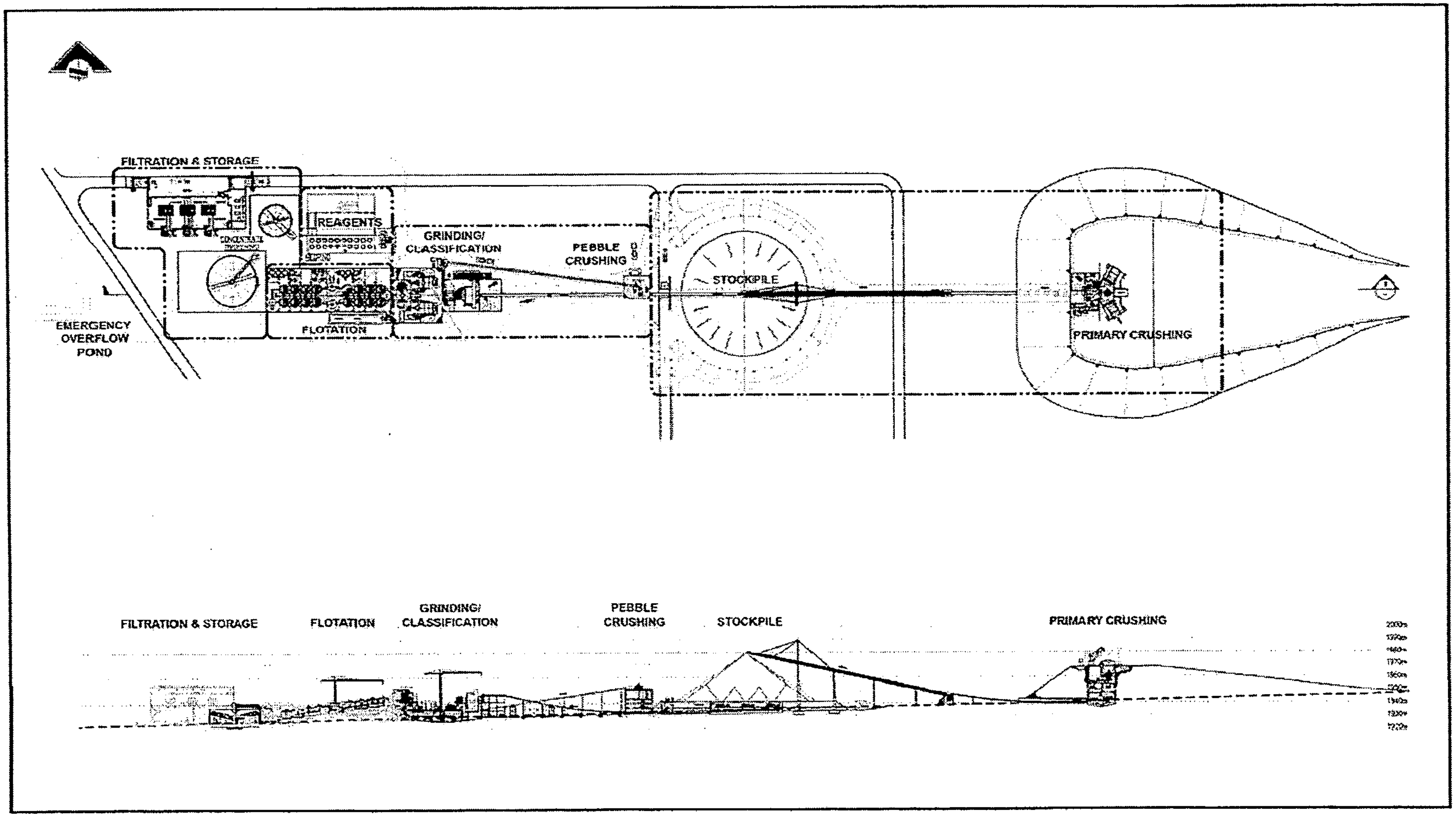
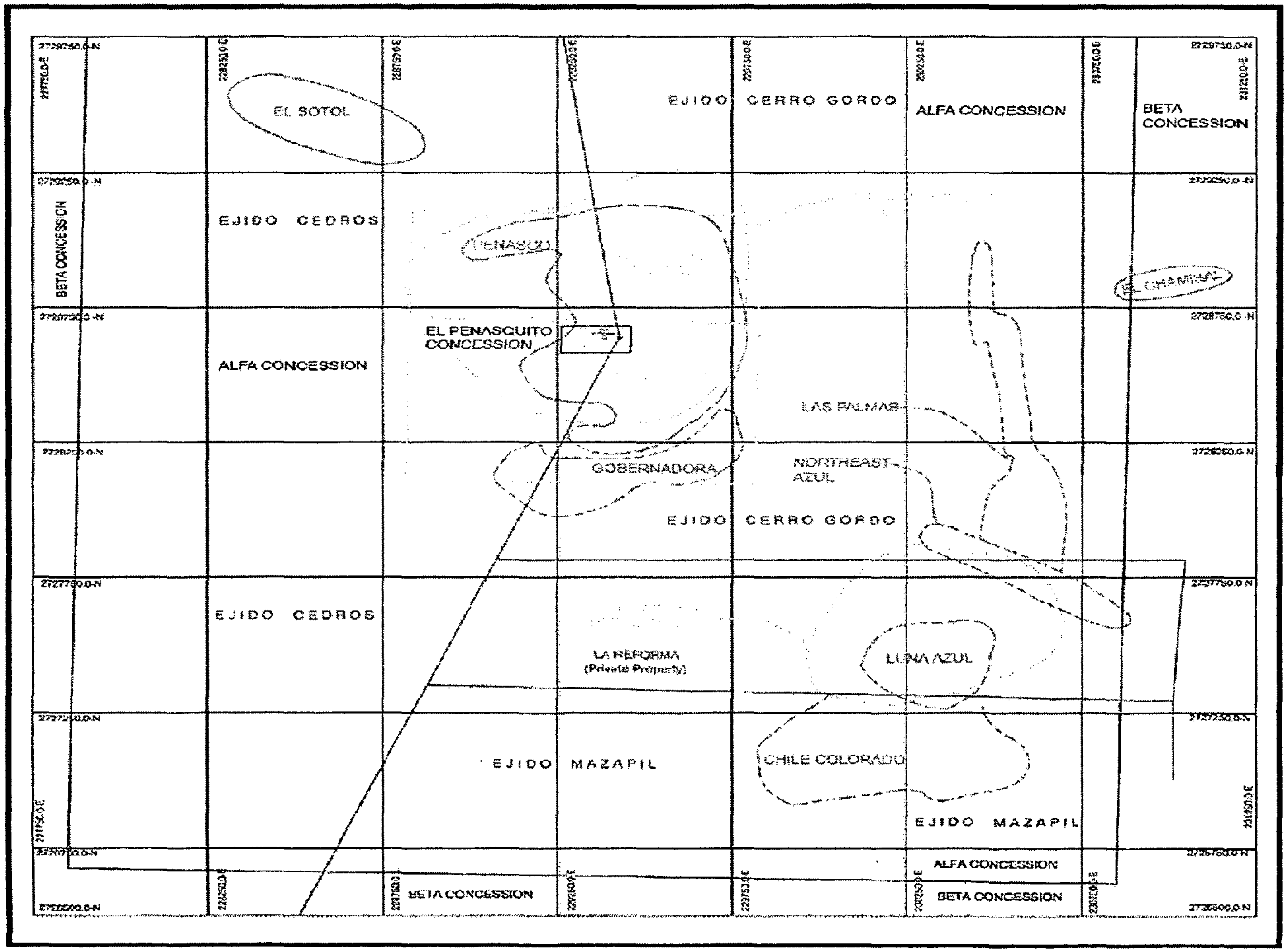


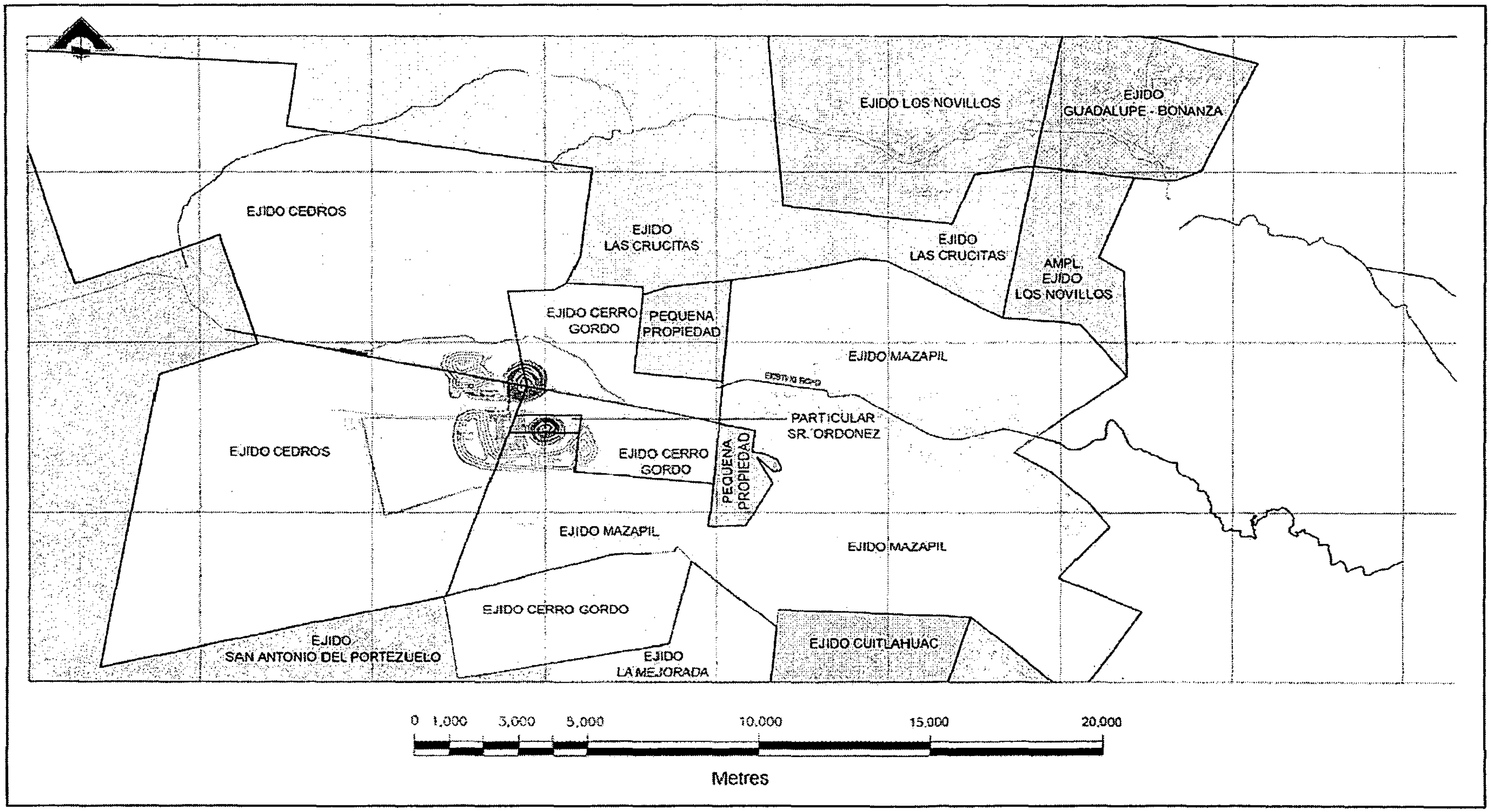
**FIGURE 1-6**
**SULPHIDE MILL**



# FIGURE 1-7
# PEÑASQUITO MINERAL CONCESSIONS



## FIGURE 1-8
## PRIVATE AND EJIDO SURFACE OWNERSHIP



# FIGURE 1-9
# LOCAL GEOLOGY

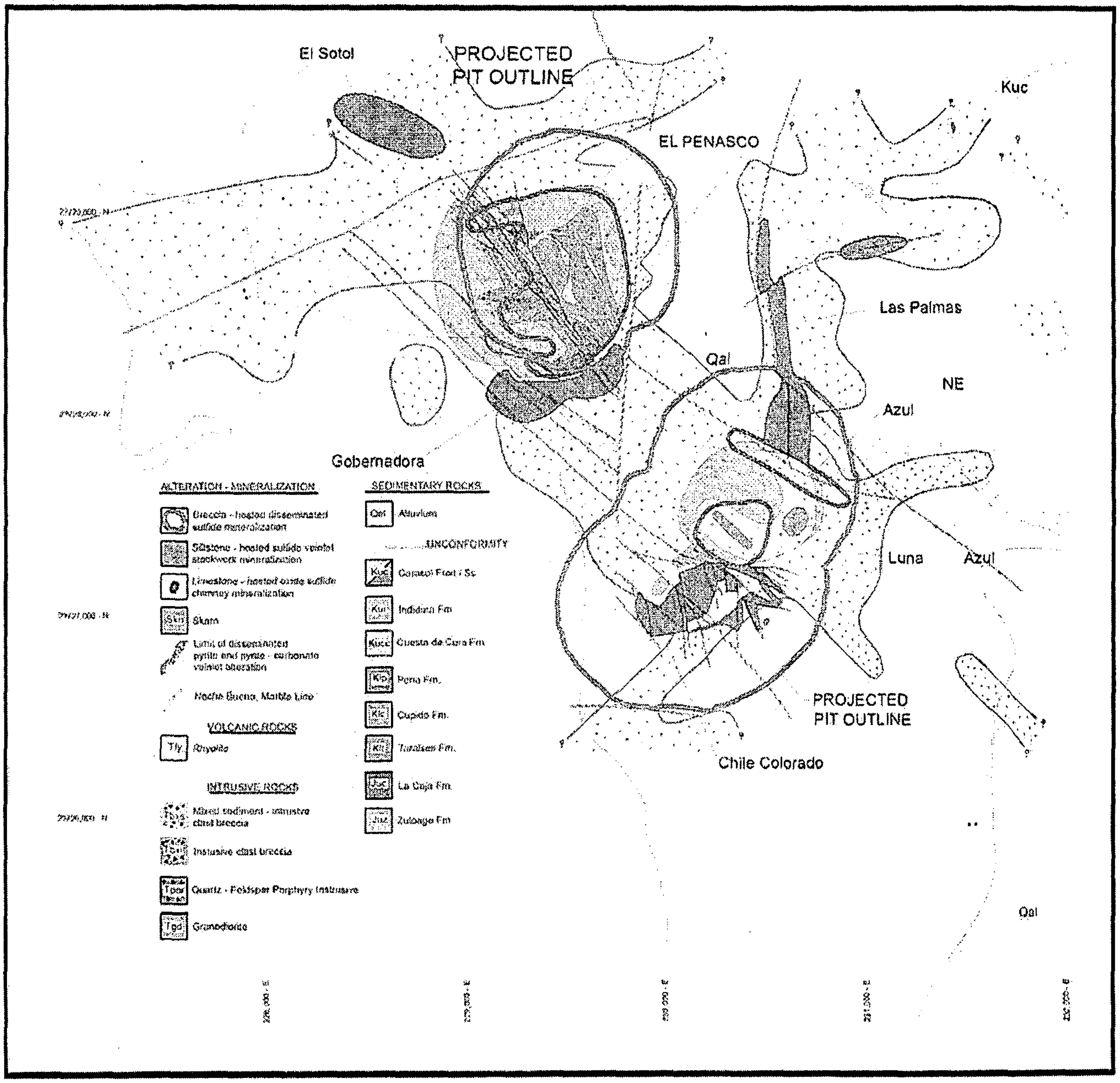
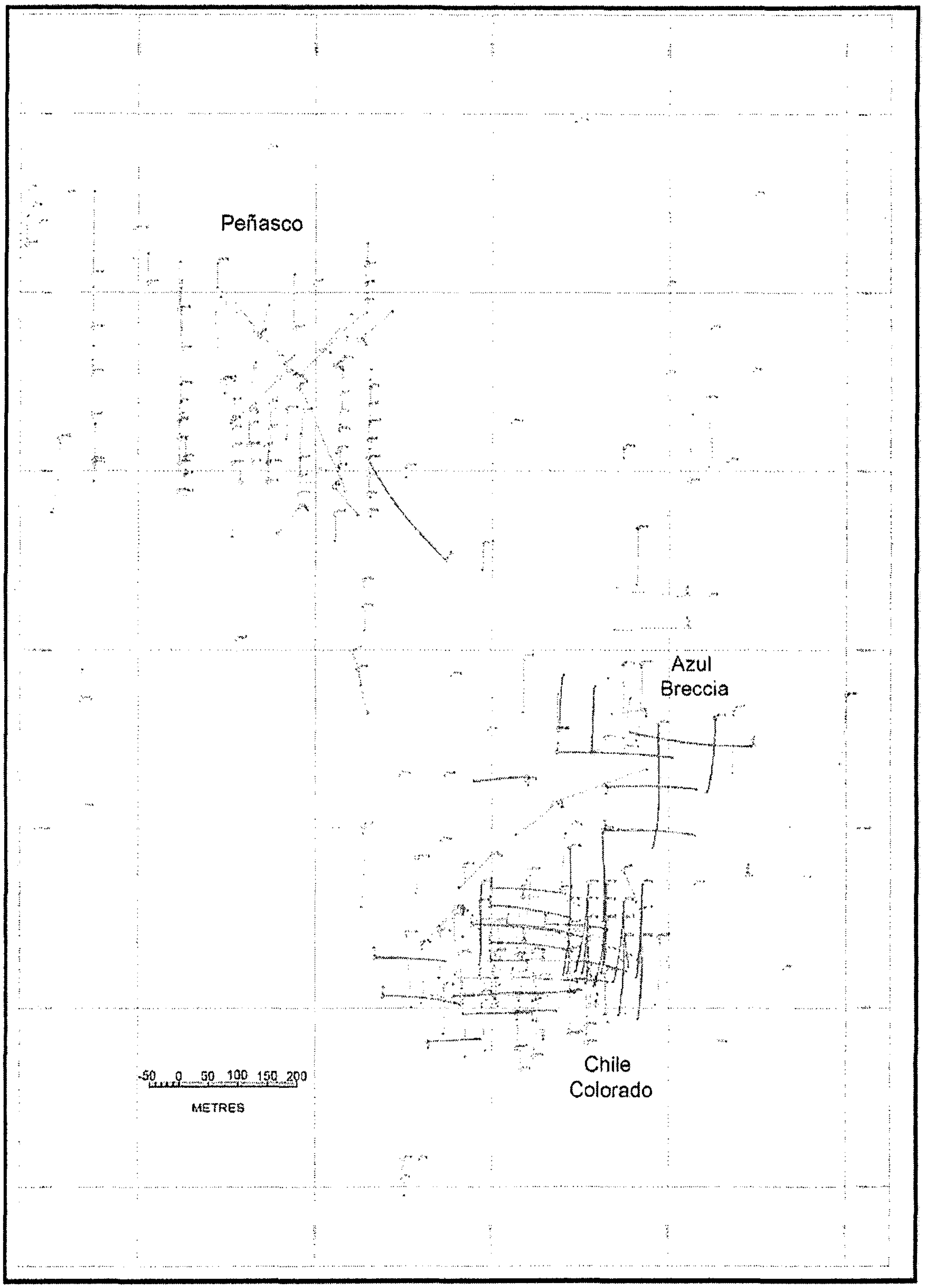
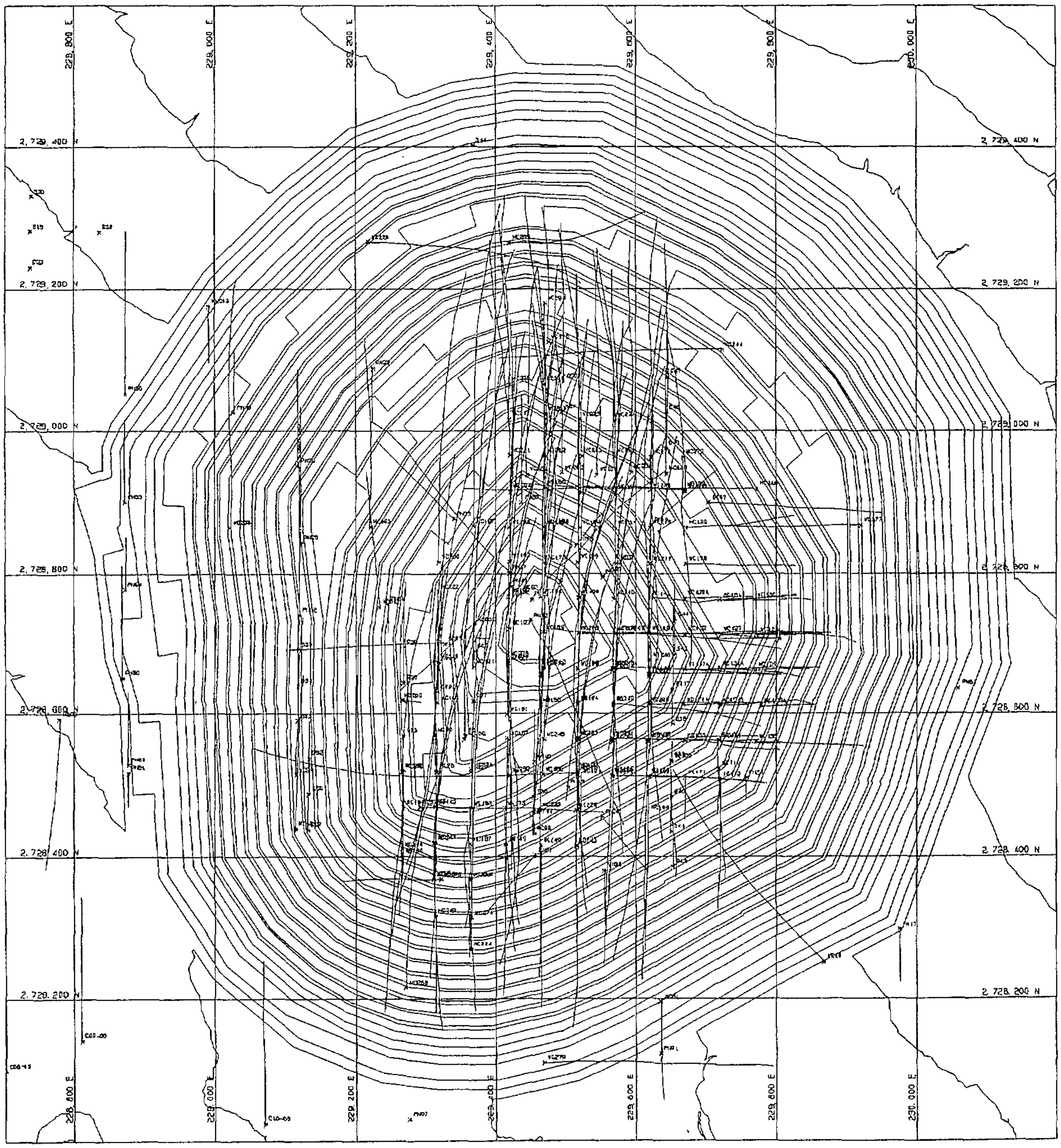


**FIGURE 1-10**
**EXPLORATION PLAN**



## FIGURE 1-10A
## PEÑASCO DRILL HOLE TRACES

Notes: Drill Holes Through Phase 14
November 2005 Feasibility Study Final Pit



# FIGURE 1-10B
# CHILE COLORADO DRILL HOLE TRACES

Notes: Drill Holes Through Phase 14
November 2005 Feasibility Study Final Pit

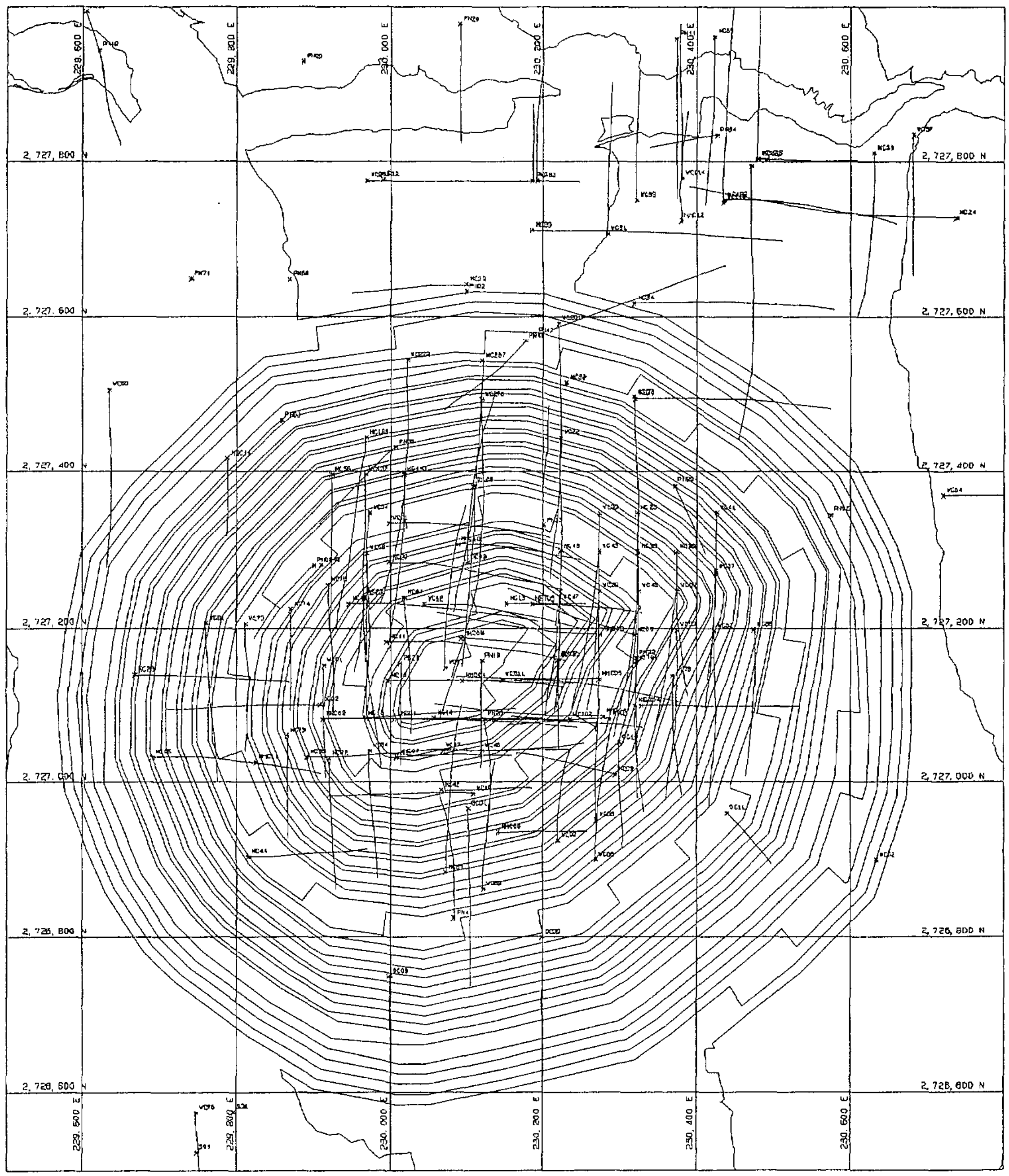


**FIGURE 1-11**
**PEÑASCO AND CHILE COLORADO PIT PLAN**

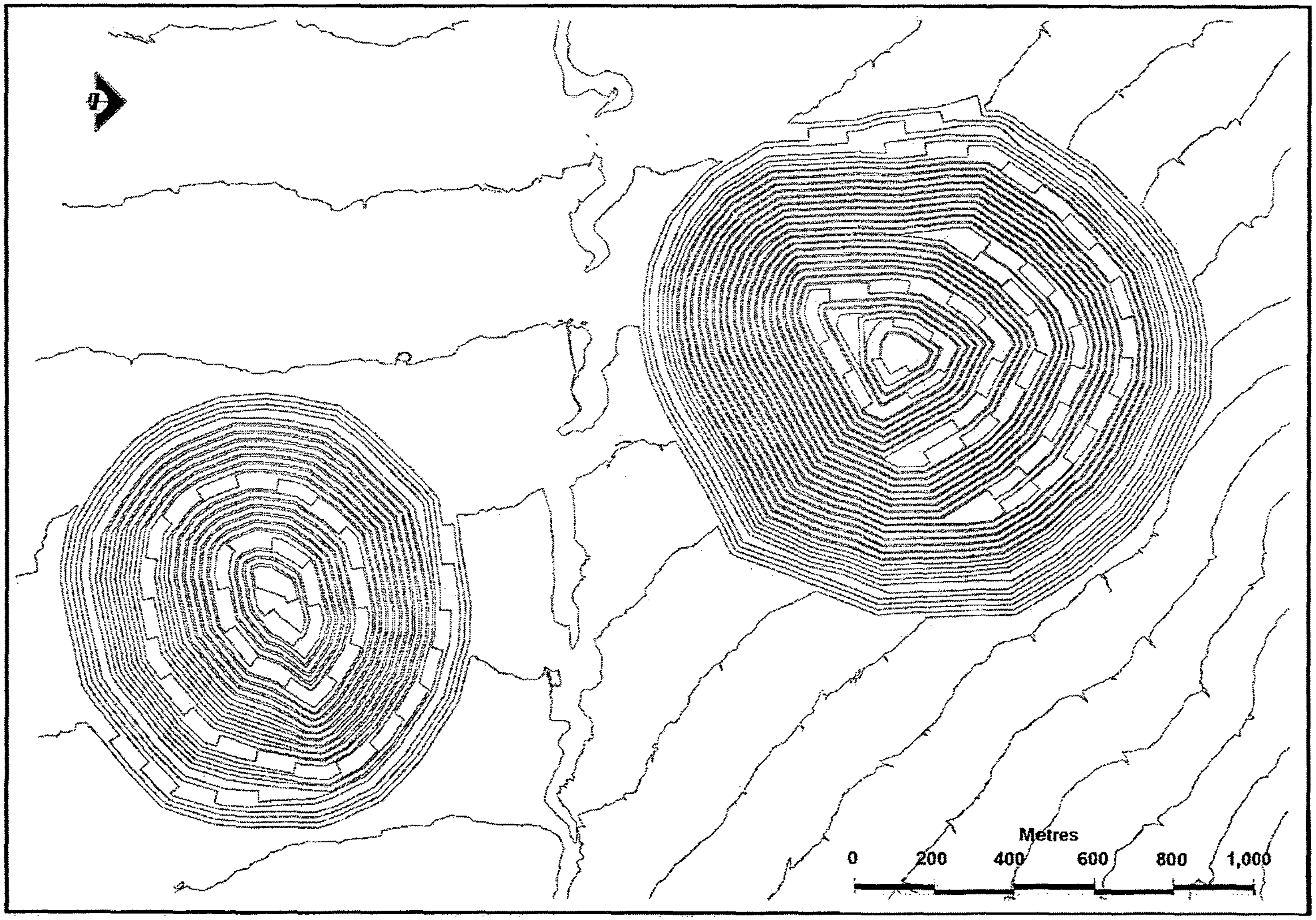


**FIGURE 1-12**
**NORTH-SOUTH CROSS SECTION - PEÑASCO PIT**

Notes: Block NSR Values shown in color based on end of September 2005 metal prices ($431/oz Au, $6.62/oz Ag, $0.35/lb Pb, $0.51/lb Zn)
Color Ranges for NSR Value per tonne:
Black, $0.00 - $1.30; Light Blue, $1.30 - $3.60; Green, $3.60 - $10.00; Red, $10.00 - $20.00; Dark Blue, greater than $20.00/t
Blocks with X are Inferred Category
November 2005 Mining Phases Shown

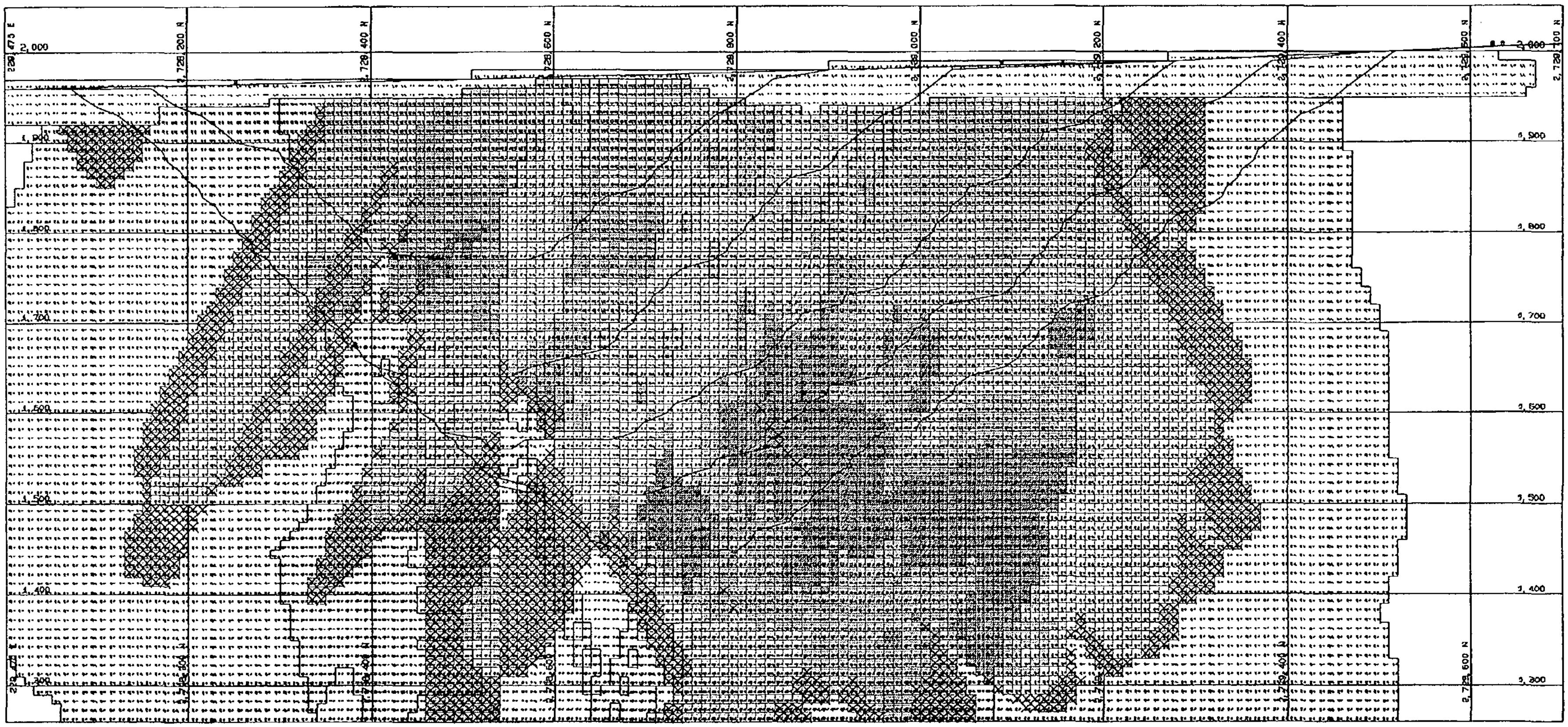
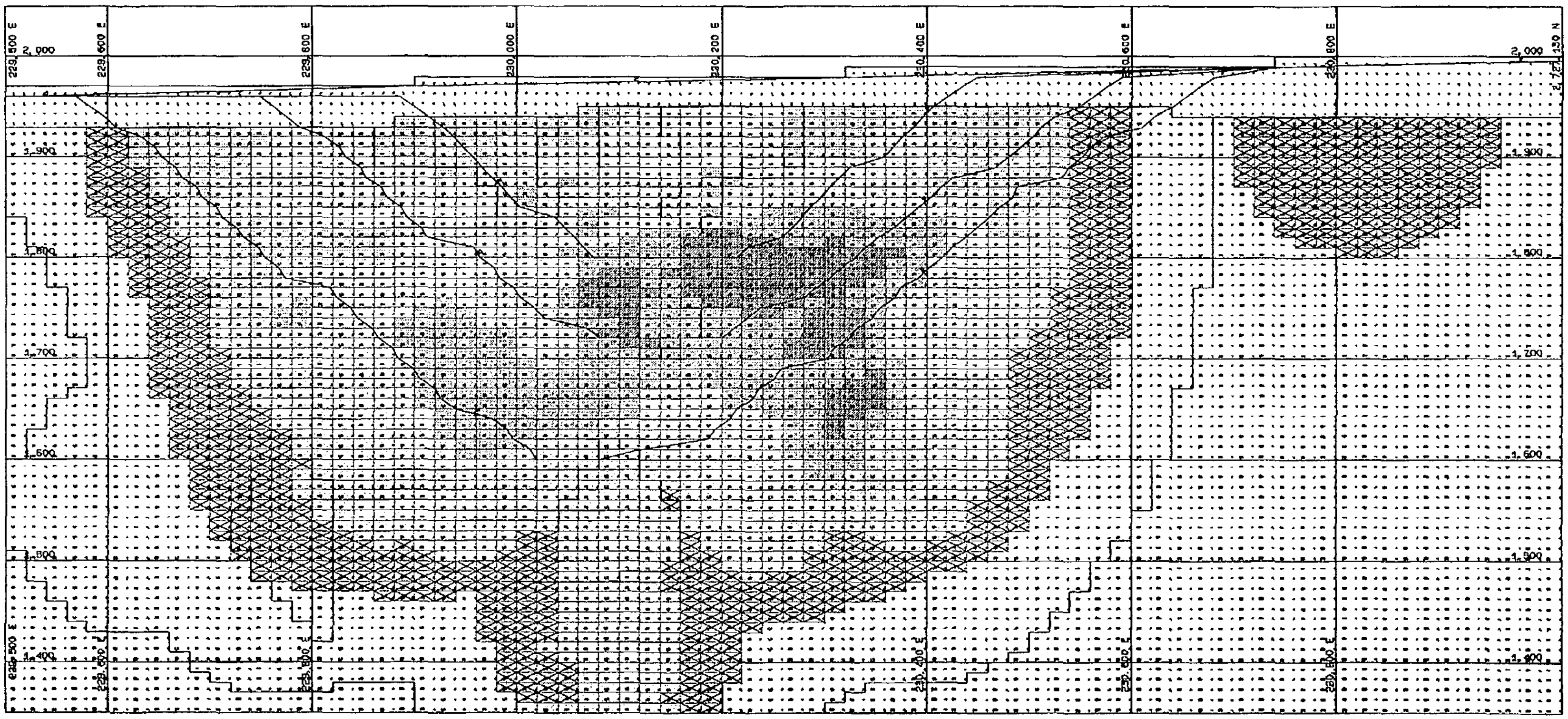


**FIGURE 1-13**
**EAST-WEST CROSS SECTION - CHILE COLORADO PIT**

Notes: Block NSR Values shown in color based on end of September 2005 metal prices ($431/oz Au, $6.62/oz Ag, $0.35/lb Pb, $0.51/lb Zn)
Color Ranges for NSR Value per tonne:
Black, $0.00 - $1.30; Light Blue, $1.30 - $4.18; Green, $4.18 - $10.00; Red, $10.00 - $20.00; Dark Blue, greater than $20.00/t
Blocks with X are Inferred Category
November 2005 Mining Phases Shown

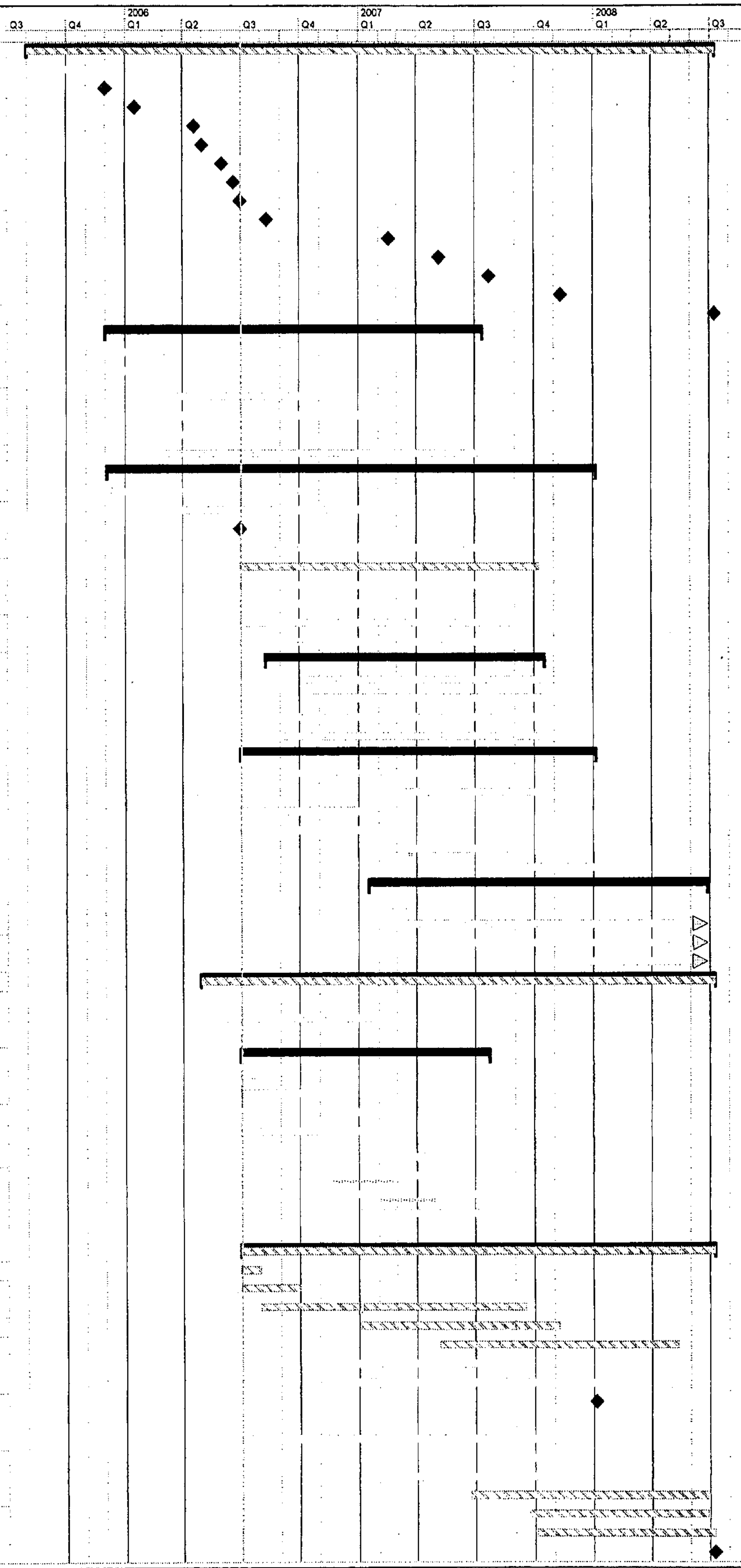


**PEÑASQUITO PROJECT**
**PROJECT DEVELOPMENT SUMMARY SCHEDULE**

**FIGURE 1-14**

WESTERN SILVER CORPORATION

| ID | Task Name |
|---|---|
| 1 | MILESTONES |
| 2 | Compile & Author Feasibility Study |
| 3 | Start Interim Engineering |
| 4 | Award EPCM |
| 5 | Land Acquisition Complete |
| 6 | MIA Approved - Project |
| 7 | Water Rights Approved |
| 8 | Financing in Place |
| 9 | Full Project Release |
| 10 | MIA Approved - Power line |
| 11 | Start Stripping |
| 12 | Start Placing Oxide Ore on Leach Pad |
| 13 | First Dore Poured / Merrill Crowe Plant |
| 14 | 230kV Power Available |
| 15 | Sulphide Plant, Feed Introduced to Mill |
| 16 | ENGINEERING |
| 17 | Interim Engineering |
| 18 | Power Line, Establish Route, Prepare MIA app |
| 19 | Power line, Design Subcontract |
| 20 | Mine Design |
| 21 | 80 % Basic & Detailed Eng, OXIDE |
| 22 | 80 % Basic & Detailed Eng, SULPHIDE |
| 23 | PROCUREMENT |
| 24 | Bid Evaluate Award |
| 25 | Mine, Initial Stripping Equipment |
| 26 | Release for Fab, Eng & Vendor Buyout |
| 27 | Mine, Balance of Equipment |
| 28 | Primary & Pebble Crushers |
| 29 | Mills and Drives |
| 30 | Flotation Cells |
| 31 | Thickeners & Filters |
| 32 | Conveyors & Feeders |
| 33 | Electrical |
| 34 | Main Transformers |
| 35 | High V Switchgear |
| 36 | MCC |
| 37 | Electrical rooms |
| 38 | Bulks |
| 39 | Fabricated Structural Steel |
| 40 | Fabricated Mechanical Steel |
| 41 | HDPE liner for first phase |
| 42 | HDPE pipe |
| 43 | Pipe, valves etc |
| 44 | Electrical |
| 45 | MINE |
| 46 | Assemble Test Mine Equipment |
| 47 | Stripping / Oxide Mining |
| 48 | Place oxide ore on pad |
| 49 | Sulphide Mining |
| 50 | CONSTRUCTION |
| 51 | Planning & Pre Project Release |
| 52 | Temporary Facilities & Construction Power |
| 53 | Mobilize CM team to Job Site |
| 54 | OXIDE |
| 55 | Contractor Mobilization |
| 56 | Site Grading, Clearing, Grubbing |
| 57 | Power Supply |
| 58 | Pad / Pond Civil Construction, First Phase |
| 59 | HDPE Liner, First Phase |
| 60 | Piping / Pumps |
| 61 | Buildings / Ancillaries |
| 62 | Merrill Crow Plant, with Structure |
| 63 | Merrill Crow Plant, Pre-Operational Testing |
| 64 | SULPHIDE |
| 65 | Contractor Mobilization |
| 66 | Site Grading, Clearing, Grubbing |
| 67 | Concrete place |
| 68 | Structural Steel |
| 69 | Mechanical |
| 70 | Buildings / Ancillaries / Mill Water Pond |
| 71 | Tailing Impoundment |
| 72 | Start to Impound Water in Tailing Pond |
| 73 | |
| 74 | 230 kV Power line (50 km long) |
| 75 | CFE Substation at Concepcion |
| 76 | Main Substation at Mine |
| 77 | Electrical |
| 78 | Instrumentation & Programming |
| 79 | Pre-Operational Testing / Commissioning |
| 80 | Start up |




Task | Split | Milestone | Summary | Critical

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**FIGURE 1-15**
**PROJECT PERSPECTIVE**

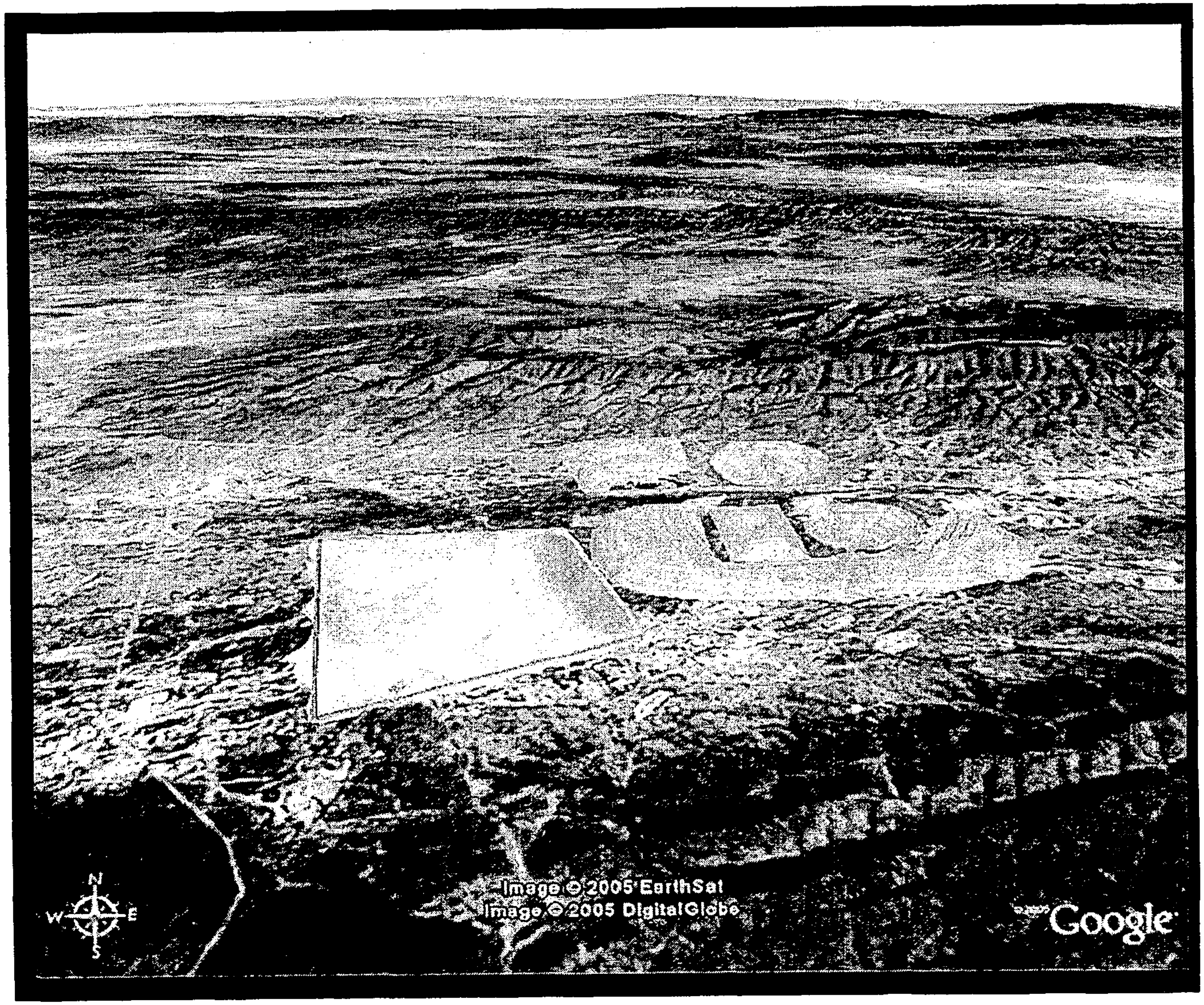


**FIGURE 1-16**
**MILL AREA PERSPECTIVE**

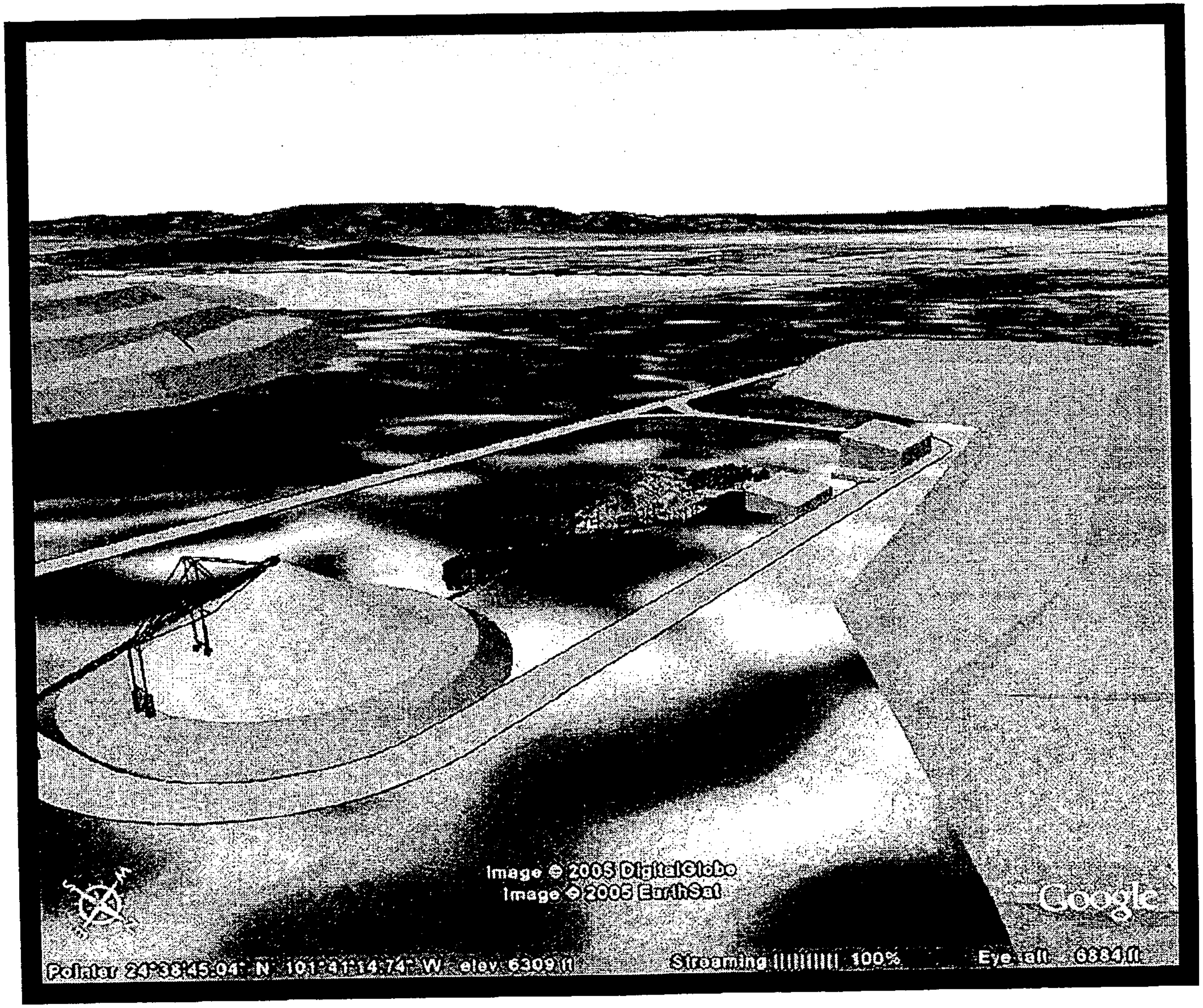
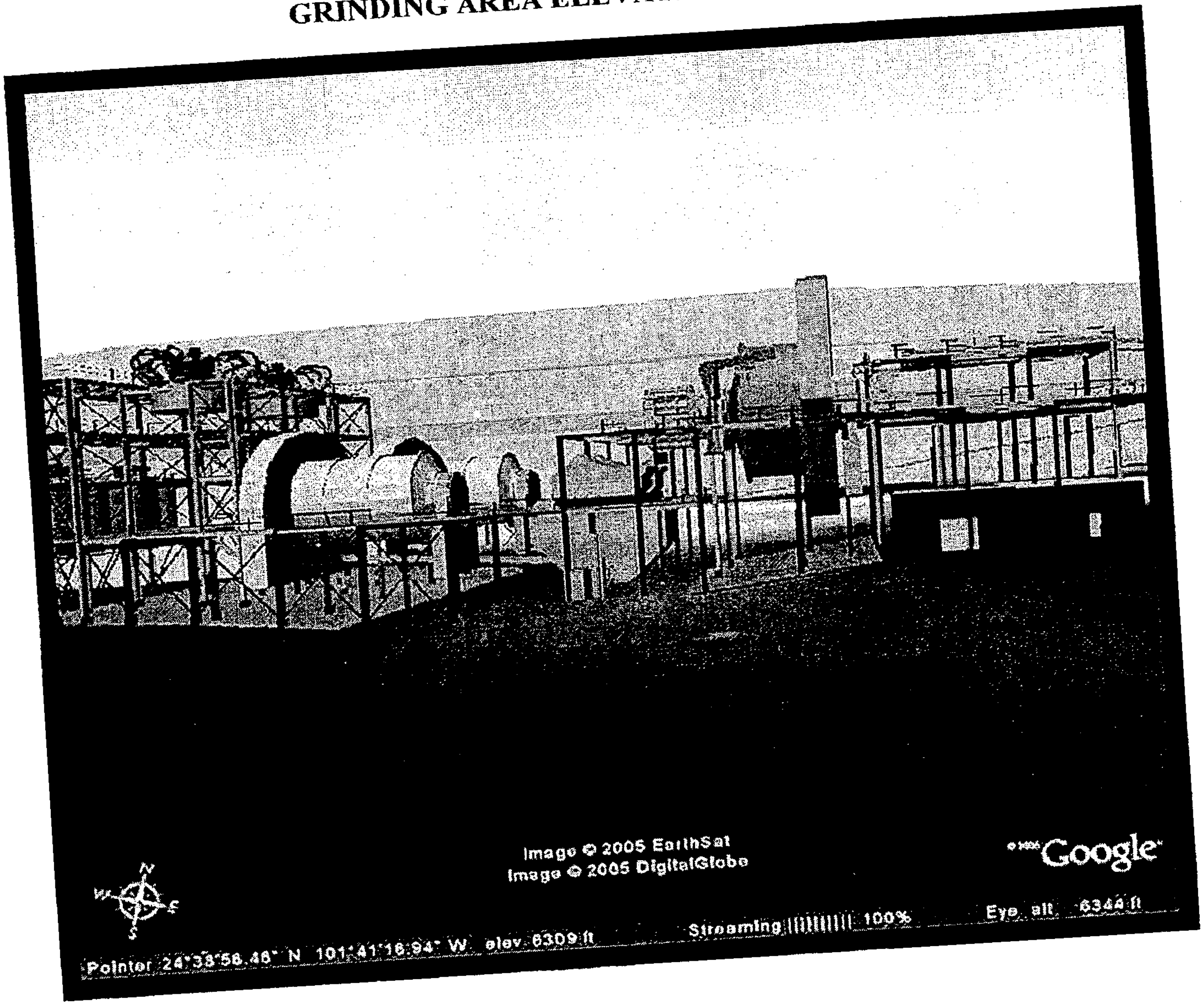


**FIGURE 1-17**
**GRINDING AREA ELEVATION**



**John Marek**
Independent Mining Consultants, Inc.
2700 E. Executive Drive, Suite 140
Tucson, AZ 85706 USA
Phone: 520-294-9861 / Fax 520-294-9865

## CERTIFICATE of AUTHOR

I, John Marek, do hereby certify that:

1. I am President and Principal Mining Engineer:

   Independent Mining Consultants, Inc.
   2700 E. Executive Drive, Suite 140
   Tucson, AZ 85706 USA

2. I graduated with the following degrees from the Colorado School of Mines:
   Bachelors of Science, Mineral Engineering – Physics 1974
   Masters of Science, Mining Engineering 1976

3. I am a Registered Professional Mining Engineer in the State of Arizona USA Registration # 12772
   I am a Registered Professional Engineer in the State of Colorado USA Registration # 16191
   I am a member of the American Institute of Mining and Metallurgical Engineers, Society of Mining Engineers

4. I have worked as a Mining Engineer for a total of thirty years since my graduation from the university.

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 have not visited the Peñasquito property.

7. I have been involved with the resource and reserve calculations, pit design, mine production schedule, waste dump design, mine equipment requirements, and mine operation and capital cost estimates for the feasibility study on Peñasquito Project and authored the sections related to these topics for the "Volume I, NI 43-101 Technical Report of the Peñasquito Feasibility Study" dated November 2005 publisher by M3 Engineering & Technology Corporation.

8. I am not aware of any material fact or material change with respect to the mine related subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent person based on the tests set out in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101 and the Technical Report has been prepared in compliance with that instrument.

11[1]. 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.

Dated this 5th Day of December 2005.

[signature]

Signature of Qualified Person

John Marek
Print name of Qualified Person

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

## JOHN M. MAREK, P.E.

**Education:** **B.S. Mineral Engineering – Physics**
**M.S. Mining Engineering,** Colorado School of Mines

**Registration:** **Registered Professional Engineer**
**Arizona and Colorado**

**Experience:**

**1983 - Present** **Principal Mining Engineer, President**
**Independent Mining Consultants, Inc.**
Responsibilities are shared for all phases of project engineering and management for this multi-disciplined mining consulting group. Mine planning, rock mechanics, equipment selection, ore reserves, and financial analysis are some of the areas of expertise covered. Project specialties include determination of mine operating policy integrating all disciplines and constraints.

**1981 - 1983** **Senior Mining Engineer - Manager of Technical Services**
**Pincock, Allen & Holt, Inc.**
Duties included project management, contract administration for surface and underground mine planning, ore reserves, and rock mechanics. All computer applications and software development were part of the job responsibility.

**1979 - 1981** **Mining Engineer**
**Pincock, Allen and Holt, Inc.**
Responsibilities included mine planning for surface and underground mines, ore reserve estimation, and computer applications to mine engineering.

**1976 - 1979** **Rock Mechanics - Mining Engineer**
**Pincock, Allen & Holt, Inc.**
Primary responsibilities included rock mechanics design analysis for both surface and underground mines. Project management of all phases of rock mechanics analysis from field data collection through detailed statistical design analysis was part of the job responsibility. Mine planning and rock mechanics were integrated for realistic design results.

Jerry T. Hanks P.E.,
7307 W. Mesquite River Drive
Tucson, Arizona 85743 USA
Phone: 520-579-9720
Email: jerryhanks@hotmail.com

## CERTIFICATE of AUTHOR

I, Jerry T. Hanks, P.E, do hereby certify that:

1. I am self-employed as a metallurgical and mineral processing engineer. My office is located at 7307 W. Mesquite River Drive, Tucson, Arizona 85743 USA.

2. I am a graduate of the Colorado School of Mines with the degree of Metallurgical Engineer, 1963.

3. I am a registered professional engineer in good standing in the states of Arizona (#21106) and Colorado (#10042), USA. I am a member in good standing of the Society of Mining, Metallurgy, and Exploration (SME.)

4. I have practiced metallurgical and mineral processing engineering for 43 years. I worked for mining and exploration companies including ASARCO, AMAX, and Phelps Dodge Exploration (PDX) for thirty years and for engineering companies (The Ralph M. Parsons Company and E&C International) for seven years. I have been self-employed for six years following retirement from PDX in 1999.

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 5, "Metallurgy," of the technical report titled "Peñasquito Feasibility Study" dated March of 2005 relating to the Western Silver Peñasquito property. I also oversaw the 2003-2005 process design test work. I visited the Peñasquito property on August 25 – 27, 2004.

7. I have had prior involvement with the Peñasquito property that is the subject of Technical Report. The nature of my prior involvement is preparation of Section 5 of a "Pre-Feasibility Study" dated March 2004.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101, and certify that Section 5 of the Technical Report has been prepared in compliance with that instrument.

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.

Dated this 11th Day of November 2005.

Signature of Qualified Person

Jerry T. Hanks, PE
Print name of Qualified Person

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

**JERRY HANKS, P.E.**
**Mineral Processing Engineer**

**EDUCATION** Colorado School of Mines, Metallurgical Engineer, 1963

**REGISTRATION** Arizona and Colorado

**EXPERIENCE** Forty (40) years of experience in exploration, mineral property evaluation, process development, project management, due diligence, feasibility studies, startups, plant operations and maintenance.

**PROJECT EXPERIENCE**

- Mineral Processing Consultant (15 years)
  - Provided process engineering for a copper-cobalt project in the Democratic Republic of Congo, for Phelps Dodge Corporation.
  - Managed a pre-feasibility study for the Cobre del Mayo Piedras Verdes Copper Project in Sonora, Mexico.
  - Provided technical assistance on a copper heap leach project to a confidential client.
  - Managed process development work and assisted with a bankable feasibility study for the Sossego Copper-Gold Project in Brazil, for Companhia Serra do Sossego.
  - Assisted CVRD with evaluating test programs for the Vermelho nickel-cobalt laterite project in Brazil.
  - Managed worldwide process development and engineering studies for Phelps Dodge Exploration Corporation. Assisted the Strategy and Business Development Group in evaluating properties for potential acquisitions, joint ventures, and licensing.
  - Managed process development work and assisted with a prefeasibility study for a world class copper-gold project being developed in the Amazon Basin of Brazil.
  - Evaluated the Las Cruces lead-zinc property in Bolivia as a possible acquisition for Phelps Dodge.
  - Directed process testwork and metallurgical evaluation for the Piedras Verdes heap leach, SX/EW copper project in Mexico.
  - Managed process development work for a large nickel-cobalt laterite deposit in Madagascar. Also acted as technical study manager during the bankable feasibility study for this $800 million project.
  - Acted as team leader for a joint Exxon-Phelps Dodge evaluation of the Crandon lead-zinc project in Wisconsin.
  - Oversaw testwork and managed a scoping study on the Jerome zinc-copper-gold project in Arizona, for Phelps Dodge.
  - Evaluated a zinc concentrator and zinc refinery in Tennessee as a possible acquisition for Phelps Dodge.
  - Managed both the process development work and the feasibility study for the La Candelaria Project, a highly successful $500 million dollar copper project in Chile.
  - Developed standard practices for testing and evaluating exploration properties, thereby improving management's ability to choose between projects competing for limited exploration funds.
  - Served as a member of the Phelps Dodge Concentrator and Hydrometallurgy Steering Teams.

**JERRY HANKS, P.E.**
**Mineral Processing Engineer**

- E&C International, Chief Metallurgist (3 years)
  - Wrote the control system manuals in Spanish for the new Cananea Concentrator. Assisted with startup and trouble shooting in both the new and old concentrators.
  - Performed in-plant consulting, trouble shooting, and de-bottlenecking at the Real de Angeles lead-zinc concentrator in Zacatecas, Mexico
  - Designed, supervised fabrication, and commissioned the first two flotation columns installed in Mexico, for the Real de Angeles lead-zinc plant. .

- Ralph M. Parsons Company, Principal Process Engineer (5 years)
  - Preformed process design and engineering for the Cominco Red Dog lead-zinc concentrator in Alaska.
  - Assisted with startup of a SAG mill / copper concentrator project in Chile.
  - Performed both process and project engineering for a feasibility study for an 84,000 ton /day copper concentrator project also in Chile.
  - Provided in-plant trouble shooting and de-bottlenecking for the Molycorp plant at Questa, NM.

- The Southern Peru Copper Corporation, Assistant Mill Superintendent (2 years)
  - Oversaw operations, maintenance, and metallurgy for the 45,000 ton /day copper-moly concentrator in Toquepala, Peru.

- Climax Molybdenum Company, Shift Boss, Sr. Metallurgist, Mine-Mill Design Engineer, Mill Superintendent (10 years)

  - Supervised production at the Climax moly-oxide recovery plant and at the Henderson Concentrator.
  - Managed all process development work for the Henderson Project.
  - Acted as Climax's representative to the engineering company during detailed design of mine, mill, and infrastructure facilities for the Henderson Project.

Earlier positions include: Mill Superintendent and Advisor to the Black Sea Copper Company in Turkey; General Mill Foreman for Molycorp, Questa; Junior Metallurgist and Shift Boss for ASARCO copper concentrators at Mission and Silver Bell, Arizona. At Mission, worked on the process development team for the lead-zinc-moly byproducts plant.

## LANGUAGES

- Spanish
- Portuguese
- French (Some)

## PUBLICATIONS

**JERRY HANKS, P.E.**
**Mineral Processing Engineer**

"Sampling a Mineral Deposit and Metallurgical Testing for the Design of Comminution and Mineral Separation Processes" (co-author) presented at the SME Symposium on Mineral Processing Design, Vancouver, BC Canada, October 20-24, 2002

"Nickel and Cobalt Recovery from Madagascar Laterite," (co-author) presented at the Pressure Technology and Applications in Hydrometallurgy of Copper, Nickel, Cobalt and Precious Metals Symposium, TMS Annual Meeting, Nashville, 2000.

"Development of Nickel/Cobalt Precipitation Process from Laterite Pressure Acid Leach Liquor," (co-author) presented at the ALTA Nickel/Cobalt Pressure Leaching & Hydrometallurgy Forum, Perth, 1999.

"Process Development for Exploration Projects," presented at the SME Annual Meeting, Denver, 1997.

"Metallurgical Development at Phelps Dodge's Ojos del Salado Concentrator in Chile Since 1982," (co-author) presented at the SME Annual Meeting, Reno, 1993. Also published in *Mining Engineering,* December 1993 (cover story).

"Designing Semiautogenous Grinding Installations for Effective Maintenance," presented at the Annual Meeting of the Arizona Conference of AIME, Tucson, 1986.

"Maintenance Considerations in the Design and Operation of Autogenous Mills," (co-author) presented at "Primer Taller de Molienda Autogena de Minerales," Santiago de Chile, 1983.

"The Grinding and Flotation Investigation of Henderson Ore" (co-author) presented at the SME Annual Meeting, Reno, 1971.

**CERTIFICATE of AUTHOR**

I, Thomas Wythes, P.E., R.G., do hereby certify that:

1. I am Senior Engineer of:

   Golder Associates
   4730 North Oracle Rd. #210
   Tucson, Arizona USA 85705

2. I graduated with a degree in Bachelor's of Science in Geological Sciences from the University of Washington in 1980 and a Master's of Science in Geological Engineering from the Mackay School of Mines, University of Nevada-Reno in 1993.

3. I am a Professional Engineer in good standing in the State of Arizona in the areas of Geological Engineering and am a Registered Geologist in good standing the State of California.

4. I have worked as an engineer for a total of 12 years since my graduation from the University of Nevada-Reno.

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 geotechnical study for the technical report titled "Peñasquito Feasibility Study" dated November of 2005 relating to the Western Silver Peñasquito property. I visited the Peñasquito property on between October 15 and October 19, 2004 and again between November 22 and November 26, 2004.

7. I have had no prior involvement with the property that is the subject of Technical Report.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101, and the Technical Report has been prepared in compliance with that instrument.

11[1]. 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.

Dated this 11th Day of November 2005.

Signature of Qualified Person

Thomas Wythes, P.E., R.G.
Print name of Qualified Person

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

# Thomas J. Wythes, P.E., R.G

**Education:**

M.S., Geological Engineering, University of Nevada, Reno, 1993
B.S., Geological Sciences, University of Washington, Seattle, 1980
Short Course, Blast Design, Assessment for Surface Mines and Quarries, October 2000
Short Course, River Modeling, Boss International, October 1999
Short Course, Applications in Stormwater Management, ASCE, January 1998
Short Course, Earthquake Hazards and Critical Facility Siting, AEG, October 1992

**Affiliations:**

Professional Engineer (P.E.) Arizona
Registered Geologist (R.G.) California
Society of Mining, Metallurgy, and Exploration (SME)
Arizona Geological Society (AGS)

**Experience:**

1996 to Present — **Golder Associates** — **Tucson, Arizona**

*Senior Engineer*

Mr. Wythes is responsible for performing and developing geotechnical and geological investigation programs and engineering analyses methods, and providing technical oversight, direction, and management on such projects. His areas of technical expertise include slope stability analyses, pit slope design, rock foundation analyses, surface water hydrology analyses and design, heap leach facility design, tailings dam design, and geologic hazard studies. Mr. Wythes' technical skills have been applied extensively in the mineral industry providing consulting services for mineral exploration, resource delineation, mine facility permitting, design of mine facilities, facility expansions, aquifer protection permit support, and reclamation and closure support.

1994 to 1996 — **WESTEC** — **Reno, Nevada**

*Staff Engineer*

Responsible for providing geotechnical engineering and design recommendations primarily for mining clients in support of facilities design and various permitting issues. Extensive background in slope stability, surface hydrology, rock mechanics, and geologic hazards.

1989 to 1991 — **Consulting Geologist** — **Reno, Nevada**

Reviewed mineral property submittals from mineral landholders for mining clients. Generated and evaluated viable mineral exploration targets in Nevada, Oregon, and Arizona and presented these opportunities to mining clients.

1980 to 1989 — **Freeport McMoRan Gold Company** — **Reno, Nevada**

*Associate Geologist*

Reviewed mineral property submittals. Generated and evaluated viable mineral exploration targets throughout the western U.S. Responsible for the design and oversight of exploration and development drilling programs and interpreted the results to provide recommendations for future action.

## Thomas J. Wythes, P.E., R.G

### PROJECT RELATED EXPERIENCE - ROCK SLOPES/OPEN PIT MINES

**Peñasquito Project** **Zacatecas, Mexico**

Project Manager and lead engineer for feasibility-level pit slope design for a proposed new poly-metallic lead-zinc-silver-gold mine in northeast Zacatecas, Mexico. Investigation activities include oriented coreholes up to 500 m deep and rotary drillholes in shallow alluvium. Responsible for site investigation activities, project management, data compilation, and development of a detailed geotechnical model.

**Copperstone Project** **Arizona**

Prepared recommendations for geotechnical data collection from surface and underground exploratory core drilling at a proposed underground gold mine in western Arizona. The geotechnical data will be used to support underground development designs. Geotechnical data collection criteria was tailored to the site conditions and factors that will have greatest bearing on designs.

**Veladero Project** **Argentina**

Coordinated on-site investigation activities for pre-feasibility and feasibility pit slope design study phases of a proposed new gold mine. Investigation activities included oriented coreholes up to 550 m deep and optical televiewer surveys of core and rotary drillholes. Other investigation activities included surface and subsurface geotechnical mapping and point load testing.

**Cananea Mine** **Sonora, Mexico**

Project Manager for a review of pit slopes to evaluate the validity of slope designs based on a study completed 25 years previously. Review was initiated to support a major expansion of the pit that would expose previously uncharacterized geologic and geotechnical units. The project was put on indefinite hold after completion of Phase 1 due to low copper prices.

**El Sauzal Project** **Chihuahua, Mexico**

Lead engineer for ongoing bankable feasibility-level pit slope study for a proposed new open pit with ultimate highwalls up to 300 m. The investigation included review of available existing data, oriented core drilling, surface mapping, and development of geotechnical model.

**Morenci Mine** **Morenci, Arizona**

Project Manager and lead engineer for feasibility-level pit slope design of a new open pit with ultimate highwalls up to 2,200 feet. The investigation included oriented core drilling, cell mapping, bench face mapping, compilation of client's geotechnical database, and geologic and hydrologic model. Slope optimization recommendations included a controlled blasting program and slope dewatering.

**San Manuel Mine** **San Manuel, Arizona**

Provided pit slope design recommendations for a major expansion of an existing open pit mine. Unique design considerations included the presence of a subsurface block cave that will be exposed by the pit expansion and an in-situ leach operation that is to be resumed upon completion of the expansion. A large existing database was available from the operator that was compiled and incorporated into the design recommendations.

## Thomas J. Wythes, P.E., R.G

### La Granja Mine — Peru

Involved in many phases of the proposed La Granja open pit mine slope stability study. The design was based on an extensive mapping, sampling, and testing program to develop statistical rock strength and discontinuity parameters that were incorporated into a reliability-based design. Special design considerations included exceptionally high walls in excess of 3,500 feet and extreme groundwater conditions. The project's success required the incorporation of groundwater hydrology, ore reserve calculation models, leach pad and waste dump siting, and the integration of these considerations on pit stability.

### San Francisco Mine — Sonora, Mexico

Completed a preliminary pit slope design for a major expansion of an existing open pit gold mine. Detailed cell mapping of existing pit walls and laboratory rock testing were performed in support of the project. High material strengths and relatively low overall slope heights resulted in a primarily structurally controlled pit design. The project was designed using a reliability-based procedure. Statistical rock strength parameters were generated for relevant lithologies.

### Imperial Project — Winterhaven, California

Completed preliminary pit slope design for two proposed open pits with highwalls in excess of 800 feet. The project was designed using a reliability-based procedure. Final pit geology maps were prepared from available drill data. Statistical rock strength parameters were generated for relevant lithologies.

### Sleeper Mine — Winnemucca, Nevada

Performed emergency response investigation of an incipient pit slope failure involving a large non-daylighted wedge. Detailed investigation and analysis of the slide mechanism were completed. Continued monitoring was performed throughout the final months of the mine life. Mitigation recommendations and implementation allowed continued mining, while monitoring activities recognized impending failure and provided safe warning for mine workers.

### Sleeper Mine — Winnemucca, Nevada

Performed emergency response investigation of an incipient pit slope failure marked by the development of tension cracks throughout the height of the highwall. A toppling failure mechanism was identified and a limit equilibrium analysis was completed to determine the risk level. An appropriate mitigation program was developed and the slide was stabilized.

### Pinto Valley Mine — Miami, Arizona

Reviewed previous pit slope stability data and analyses to provide recommendations for design pit slope angles and dewatering requirements for a major expansion of an existing open pit.

### Mary Drinkwater Project — Tonopah, Nevada

Performed detailed discontinuity cell mapping, coordinated rock testing program, and performed stability analyses to provide cut slope and foundation stability recommendations for proposed mine facilities.

### Hayden Hill Mine — Adin, California

Mapped surface landslide features of a slope failure that was induced by waste dump loading. The slope failure involved 29 acres and had a head scarp in excess of 200 feet high. Incorporated available drill and geophysical logs to develop input parameters for the development of a reclamation plan. These parameters were used to perform back-analyses, analyze stability of regrading options, and recommend reclamation strategies. The stability analysis incorporated a stochastic water balance model to quantify the effects on stability of revegetation and rainfall/snowmelt events.

# Thomas J. Wythes, P.E., R.G

## PROJECT RELATED EXPERIENCE - GEOLOGIC HAZARDS

### Lama Project — Argentina

Assessed geologic hazards for Lama Project area for environmental permitting. Hazard mapping was based on previous geomorphologic mapping, aerial photograph review, and a site investigation. A geologic hazard map was prepared at a scale of 1:10000 in Arcview™ format for a 48 $km^2$ area between elevations of 3,500 to 5,250 m amsl. Trenching studies were performed across potential active faults. Other mapped hazards included debris flows, debris slides, rock and soil slumps, rockfall, and outwash for facility siting and mine design considerations. Hazards were ranked high, medium, or low.

### El Indio Mine — Chile

Prepared avalanche and landslide hazard maps for mine closure purposes. Avalanche runout distances and potential landslide impacts were estimated to assist in siting drainage channels alignments.

### Veladero Mine — Argentina

Assessed avalanche hazards, landslide hazards, and active fault hazards for facility siting and mine design considerations.

### Master's Thesis — Reno, Nevada

Produced a hazard map series depicting the distribution of earthquake-induced ground failure hazards, including liquefaction and landslides, throughout the Reno/Sparks region.

### Nevada Bureau of Mines and Geology

Co-author for NBMG publication *Planning Scenario for a Major Earthquake in Western Nevada.* NBMG Special Publication 20, 1996.

# Thomas J. Wythes, P.E., R.G

## PROJECT RELATED EXPERIENCE - HEAP LEACH, WASTE ROCK, AND MINE PROCESS FACILITIES

### Erdenet Mine — Mongolia

Project Manager for preliminary design of a 150 Mt copper heap leach pad and associated ponds and diversion channels and for a solution collection system for the proposed leaching of an existing dump. Site challenges included low strength and relatively high permeability foundation soils, water balance surplus, high groundwater conditions, cold winter temperatures.

### Veladero Project — Argentina

Coordinated on-site investigation activities for pre-feasibility, feasibility, and detailed design phases of a proposed new gold mine. Investigation activities included geotechnical drilling, test pit excavation, geophysical profiling, installation of piezometers, subsurface thermal surveying, and geological mapping with a crew of two to four geologists. Site investigations took place during three consecutive field seasons. The site is located at an altitude between 4,000 and 4,775 m amsl and is subject to low temperatures, high winds, and a number of other site challenges that required assessment including earthquake hazards, avalanche hazards, landslide hazards, active fault potential, debris flows, and floods.

### Vueltas del Rio — Honduras

Project Manager and lead engineer for the design and production of construction-level drawings for a >100,000 $m^2$ gold heap leach pad expansion, contingency pond, and diversion channel. The site is located in an area of high rainfall and saprolitic soils. The leach pad expansion design incorporated the ability to convert a contingency pond into additional leach pad area after the initial pad expansion area was covered by ore.

### Morenci Mine — Morenci, Arizona

Project Manager for Golder's geotechnical support for feasibility and final design phases of a large copper heap leach facility. Components of the investigation included evaluations of geotechnical and flow parameters of various crushed ore sizes, soil borrow investigations, heap flow modeling, embankment stability, settlement estimates, grading plans, liner designs, pipe crushing analyses, and development of a monitoring program.

### Cyprus Miami Mine — Miami, Arizona

Responsible for permitting and final design of several major aspects of a proposed lined copper heap leach facility that is to encompass 313 acres. Major issues include the damming of tributary drainages, retrofitting an existing dam and impoundment to perform as a process pond, and the conveyance of seepage and stormwater runoff.

### Cyprus Miami Mine — Miami, Arizona

Completed designs and bid documents for BADCT upgrades to several existing stormwater retention ponds and mine process facility storm runoff containment systems.

### Robinson Project — Ely, Nevada

Performed site investigation in support of a leach pad and solution pond design. Designed leach pad liner system, solution collection system, process and overflow ponds, and stormwater diversion for 12 million ton gold heap leach pad expansion. Produced complete design drawing set and design report suitable for permitting and construction.

## Thomas J. Wythes, P.E., R.G

**Hayden Hill Mine** **Adin, California**

Prepared design plans and technical specifications for a major expansion to an existing heap leach pad.

**Reona Project** **Battle Mountain, Nevada**

Involved in numerous aspects of the design and construction of the heap leach pad including solution collection, leak detection, storm diversion, and grading plans.

**Corona Gold Mine** **Gabbs, Nevada**

Designed a liner apron and associated solution collection and leak detection systems to allow regrading of the ore heap for reclamation purposes.

**Pinto Valley Mine** **Miami, Arizona**

Performed feasibility-level stability analyses of proposed waste rock storage facilities to be incorporated into the Plan of Operation. The analyses followed U.S. Forest Service guidelines for stability analyses of waste rock facilities on Forest Service Lands.

# Thomas J. Wythes, P.E., R.G

## PROJECT RELATED EXPERIENCE - TAILINGS DAMS

### Grizzly Gulch Tailings Facility — Lead, South Dakota

Assisted in the development and completion of a geotechnical investigation of a tailings facility involving CPTU, drilling from floating barge, and drilling from land-based equipment. Information gathered was compiled to develop design parameters that were used to evaluate draindown behavior, water balance for evaporative water disposal system, consolidation rates, and magnitudes. A geochemical characterization study was performed concurrently by Golder. This information was used to develop closure options and help to define long-term risks associated with closure of the facility.

### Mercur Mine — Tooele, Utah

Performed geotechnical investigation of tailings facility involving CPTU and drilling from floating barge and tracked equipment. Information gathered was compiled to develop design parameters that were used to evaluate draindown behavior, water balance for evaporative water disposal system, consolidation rates and magnitudes, embankment stability, liquefaction potential, and post-liquefaction stability. This information was used to develop closure options and to define long-term risks associated with closure of the tailings facility.

### Bullfrog Mine — Beatty, Nevada

Prepared design plans, technical specifications, and a final report suitable for permitting and construction for a major expansion of an existing tailings facility. The design included a balanced cut and fill, a staged construction sequence, tie-in to existing piping system and solution storage facilities, a redesign of the storm diversion system, and an analysis of the liquefaction potential of the upstream constructed portion. The project was completed within 6 weeks and was approved for construction in 10 weeks without modification. A set of bid documents suitable for the solicitation of contractor bids was prepared.

### Robinson Project — Ely, Nevada

Performed many of the technical analyses for a 250-foot high tailings embankment including seepage, settlement, stability, and seepage collection piping. Completed the design plan revisions and revised the technical specifications for revised dam design.

### Tintaya Mine — Peru

Performed a feasibility-level redesign of an existing tailings facility to extend the life of the facility 5 to 8 years and provide stabilization measures for existing structures susceptible to failure during the design seismic event. The redesign involved switching the tailings deposition method from a thickened discharge method, which was not well suited to the site conditions, to an upstream cycloned embankment construction method.

# Thomas J. Wythes, P.E., R.G

## PROJECT RELATED EXPERIENCE - SURFACE WATER HYDROLOGY

**Mercur Mine** **Tooele, Utah**

Prepared detailed design and design specifications for a site-wide stormwater diversion channel system for the reclamation and closure of the mine. The channel system design incorporated fluvial geomorphic principles, natural stream classification systems, and stream restoration practices to re-establish the natural hydrologic regimes. The design provides for channels that are self-maintaining and that will exhibit long-term stability.

**Cyprus Miami Mine** **Miami, Arizona**

Prepared detail design and design specifications, for an approximately 2-mile long surface stormwater diversion channel and stormwater impoundment in support of a copper heap leach pad. Performed hydrologic runoff computations to determine impoundment storage requirements and to compute peak runoff for channel design. Completed stable channel design incorporating sediment transport and channel armoring aspects.

**Cyprus Miami Mine** **Miami, Arizona**

Completed a site-wide stormwater pond evaluation. This evaluation assessed the ability of the existing ponds and pumps to contain a wet pattern storm sequence and provided recommendations for additional upgrades.

**Robinson Project** **Ely, Nevada**

Calculated design storm runoff and bedload transport rates and incorporated these into a stable channel design of 7-mile stormwater diversion around a tailings facility. Completed detailed design layout that included a balanced cut and fill and prepared design drawings and technical specifications suitable for construction.

**Robinson Project** **Ely, Nevada**

Performed hydrologic calculations and developed a layout and design for an approximately 3-mile long diversion channel to convey storm runoff from the mine facilities area around the town of Ruth. The design incorporated natural drainage features to the extent possible but required bedrock excavation, a highway culvert, a railroad culvert, and erosion protection measures.

**Pinto Valley Mine** **Miami, Arizona**

Performed hydrological analyses and designed containment facilities to control storm runoff per BADCT, Aquifer Protection Permit, and National Pollutant Discharge Elimination System requirements. Provided pumping and piping requirements recommendations to restore required capacity within specified time.

# Thomas J. Wythes, P.E., R.G

## PROJECT RELATED EXPERIENCE – MINE RECLAMATION AND CLOSURE

### Bullfrog Mine — Beatty, Utah

Completed an alternatives study to evaluate tailings underdrain solution disposal options for closure planning. Options evaluated included evaporation, water treatment, land application, infiltration, and outlet sealing. Options were evaluated in terms of cost, potential environmental liability, duration, visual impacts, and regulatory acceptance.

### Mercur Mine — Tooele, Utah

Prepared design drawings and bid documents for mine site reclamation. Aided in acquisition of agency approvals, Notice of Intent revision, and annual state reporting. Reclamation activities included regrading; topsoiling; and revegetation of waste rock facilities, heap leach facilities, mill, and ancillary facilities and tailings embankment slopes. Re-established site-wide stormwater drainage system and historical road access routes. Project involved approximately 4 million cubic yards of earthworks. The entire project from initial scoping to bidding through completion of regrading and revegetation was completed within 10 months.

### Ray Complex — Hayden, Arizona

Analyzed the post-closure stability of three tailings disposal facilities for inclusion in reclamation plan. Carried out a review of relevant prior geotechnical investigations and applied the information generated in those studies to an evaluation of the stability of the tailings embankments for post-closure conditions. Performed transient, finite element seepage modeling to predict long-term draindown condition. Generated analytical cross-sections of the proposed ultimate embankments to analyze the embankment stability and conducted sensitivity analyses for variable and uncertain parameters.

Dr. Conrad E. Huss, P.E., Ph.D.
M3 Engineering & Technology Corporation
2440 W. Ruthrauff Rd., Suite 170
Tucson, Arizona USA 85705
Phone: 520-293-1488 / Fax 520-293-8349
Email: chuss@m3eng.com

## CERTIFICATE of AUTHOR

I, Dr. Conrad E. Huss, P.E., Ph.D., do hereby certify that:

1. I am Executive Vice President and Chairman of the Board of:

   M3 Engineering & Technology Corporation
   2440 W. Ruthrauff Rd., Suite 170
   Tucson, Arizona USA 85705

2. I graduated with a degree in Bachelor's of Science in Mathematics and a Bachelor's of Art in English from the University of Illinois in 1963. I graduated with a Master's of Science in Engineering Mechanics from the University of Arizona in 1968. In addition, I earned a Doctor of Philosophy in Engineering Mechanics from the University of Arizona in 1970.

3. I am a Professional Engineer in good standing in the State of Arizona in the areas of Civil and in Structural engineering. I am also registered as a professional engineering in the States of California, Maine, Minnesota, Missouri, Montana, New Mexico, Oklahoma, Oregon, Texas, Utah and Wyoming.

4. I have worked as an engineer for a total of thirty-seven years since my graduation from the University of Illinois. I have taught at the University level part-time for 5 years and as an assistant professor for one year.

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 the technical report titled "Peñasquito Feasibility Study" dated November of 2005 relating to the Western Silver Peñasquito property. I visited the Peñasquito property on two separate occasions: September 24-25, 2003 and February 19-20, 2005.

7. I have had prior involvement with the property that is the subject of Technical Report. The nature of my prior involvement is preparation of a "Pre-Feasibility Study" dated March 2004.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101 and the Technical Report has been prepared in compliance with that instrument.

11[1]. 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.

Dated this 11th Day of November 2005.

Conrad Huss

Signature of Qualified Person

Conrad Huss, PE

Print name of Qualified Person

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

**CONRAD E. HUSS, P.E.**
**Project Manager, Engineering Manager**

**EDUCATION**

Ph.D., Engineering Mechanics, University of Arizona
M.S., Engineering Mechanics, University of Arizona
B.A., English, University of Illinois
B.S., Mathematics, University of Illinois

**REGISTRATION**

Civil and Structural Engineer - Arizona
Professional Engineer - California, Idaho, Maine, Minnesota, Montana, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, Wyoming

**EXPERIENCE**

Thirty-nine (39) years of design in industrial, municipal, commercial projects, including material handling, reclamation, water treatment, base metal and precious metal process plants, industrial minerals, smelters, institutional buildings, special structures and audits. Career highlights include twenty-five years of design/construct experience, plant startups in South America and Mexico, oceanography/surveying in Alaska and Hawaii, and six years of university teaching.

**PROJECT EXPERIENCE**

- M3 Engineering & Technology, Project and Engineering Manager (18 Years)
  - Phelps Dodge Safford Copper Leach - Arizona
  - CEMEX Victorville Clinker Hall - California
  - Piedras Verdes Copper Leach - Mexico
  - AVESTOR Lithium Vanadium Polymer Battery Plant with Laboratories - Nevada
  - Western Silver Zacatecas - Mexico
  - Kennecott Utah Lime Plant Feasibility Study - Utah
  - Phelps Dodge Arizona Closure/Closeout Plans at 7 properties - Arizona
  - Alamos Gold Mulatos Prefeasibility - Mexico
  - Teck Cominco Glamis Gold Feasibility - Mexico
  - Kennecott Rawhide conceptual Closeout Plan for Leach Pile - Nevada
  - Phelps Dodge El Abra Structural and Material Handling Audit - Chile
  - Kennecott Utah Bid Call for Restructure of Maintenance Workforce - Utah
  - Phelps Dodge El Abra SX-EW ER Tank Replacement - Chile
  - Fischer-Watt Copper SX-EW Prefeasibility - Mexico
  - Kerr McGee 1200 MTPY BLVO Plant - Apex, Nevada
  - Billiton/BHP Worsley Alumina Plant Audit - Australia
  - Phelps Dodge Tyrone Closure/Closeout Plans with Water Treatment Plant - New Mexico
  - Mitsubishi Cement Lucerne Valley Plant Upgrades - California
  - Chino Closure/Closeout Plans with Water Treatment Plant - New Mexico
  - Mitsubishi Cement Longbeach Ocean Port - California
  - Cobre Closure/Closeout Plans - New Mexico

- M3 Engineering & Technology, (continued)
  - Phelps Dodge El Abra, Chile, Material Handling and Structural Audit
  - Billiton/ALCOA Alumar Alumina Refinery Plant in Brazil, Material Handling/Structural Audit
  - Peñoles F.I. Madero 8,000 TMPD Greensfield Silver/Lead/Zinc - Mexico
  - Kennecott Greens Creek Flotation Expansion, Silver/Lead/Zinc - Alaska
  - Phelps Dodge Henderson, Colorado, Material Handling and Structural Audit
  - Kennecott Greens Creek Pyrite Circuit for Reclamation - Alaska
  - Phelps Dodge Morenci Coronado Leach -Arizona
  - Cyprus Cerro Verde Crush/Convey - Peru
  - California Portland Cement RIMOD 3 Expansion - Arizona
  - Phelps Dodge Candelaria Material Handling and Structural Audit - Chile
  - Minera Alumbrera Startup and Performance Test for Copper/Gold Plant - Argentina
  - Echo Bay Gold Aquarius Feasibility Study - Canada
  - Arizona Portland Cement Expansion - Arizona
  - Minera Alumbrera, SAG Mill Run In – 3 month field assignment - Argentina
  - Phelps Dodge Ajo, Open Air Copper Mill - Arizona
  - Echo Bay Paredones Gold Amarillos EPCM Basic Engineering - Mexico
  - Cyprus Sierrita Inpit Crush/Convey - Arizona
  - Kennecott Smelter Upgrade following Audit - Utah
  - Battle Mountain Crown Jewel, Gold and Silver Detail Engineering - Washington
  - Kennecott Greens Creek Reopening and Reclamation, Lead/Zinc/Silver - Alaska
  - Cyprus Bagdad Material Handling and Structural Audit - Arizona
  - Hecla Rosebud Precious Metal Detail Engineering and Reclamation - Nevada
  - Phelps Dodge Morenci Ball Mills A-7 and B-32, Copper Concentrator
  - Phelps Dodge Hidalgo Smelter Upgrade Simulation
  - Kerr-McGee West Chicago Physical Separation Reclamation Facility with Water Treatment
  - Lluvia Del Oro Gold Plant Detail Engineering - Mexico
  - Cyprus Miami Smelter Modifications for Ancillaries - Arizona
  - Phelps Dodge Chino Smelter Upgrade including Uptake Shaft - Arizona
  - Cyprus Miami Smelter Casting Furnace Upgrade - Arizona
  - Phelps Dodge Morenci Material Handling and Structural Audit - Arizona
  - Geomaque Gold - Detail Engineering - Sonora, Mexico
  - Phelps Dodge Morenci Smelter Equipment Relocation - Arizona
  - Phelps Dodge Hidalgo Smelter Fugitive Gas Collection System - Arizona
  - Magma San Manuel Smelter Anode Press Plant - Arizona
  - Phelps Dodge Ajo Smelter Demolition - Arizona
  - Penmont La Herradura Gold Plant - Mexico
  - Phelps Dodge Hidalgo Smelter Upgrade including Reaction Shaft - New Mexico
  - Cyprus Casa Grande Roaster Upgrades, Copper - Arizona
  - Zinc Corp Roaster Upgrade - Oklahoma

**CONRAD E. HUSS, P.E.**
**Project Manager, Engineering Manager**

- M3 Engineering & Technology, (continued)
  - Cyprus Bagdad WaterFlush Crusher, Copper - Arizona
  - ASARCO Hayden Smelter Dust System - Arizona
  - Placer Dome Mulatos Gold Plant Basic Engineering -Mexico
  - Cyprus Bagdad 156,000 TPD Feasibility Study - Arizona
  - Cyprus Bagdad Feasibility Study for Inpit Crushing and Mill Expansion - Arizona
  - Hecla La Choya Gold Plant, Sonora, Mexico
  - Chemstar Lime Plants, Western United States
  - Majdanpek, Yugoslavia, Crush/Convey for Copper Mine
  - Phelps Dodge Chino SX-EW Expansion - New Mexico
  - Magma McCabe Gold Plant Expansion - Arizona
  - Phelps Dodge Morenci Flotation Expansion, Copper - Arizona
  - Phelps Dodge Chino Waterflush Crusher, Copper - New Mexico
  - Granite Sand & Gravel Plant - Arizona
  - Kerr-McGee Manganese Dioxide Chemical Plant - Nevada
  - Cyprus Sierrita Acid Plant (Rhenium Recovery) - Arizona
  - Phelps Dodge Chino Conveyor System Rebuild - New Mexico
  - Molycorp Mountain Pass Crush/Convey System for Rare Earths - California
  - Cyprus Esperanza/Twin Buttes Cross Country Conveyor Upgrade - Arizona
  - Mt. Graham Utilities and Tankage - Arizona
  - Old Tucson Utility Inventory and Upgrade - Arizona
  - ASDM Utility Inventory and Upgrade - Arizona
  - Cyprus Twin Buttes Fuel Stations Demolition and Upgrade - Arizona
  - Cyprus Sierrita Fuel Station Demolition and Upgrade - Arizona
  - Cyprus Sierrita ADM Chemical Plant - Arizona
  - ASARCO Mission Mill Feed Upgrade, Copper - Arizona
  - Cyprus Miami Road and Bridge - Arizona
  - ASARCO Mission Dust Collection, 96,000 CFM - Arizona
  - Magma San Manuel No. 4 Head Frame Upgrade - Arizona
  - Cyprus Sierrita Ferro Moly Dust Collection - Arizona
  - St. Cloud Flotation Upgrade, Lead/Zinc/Silver - New Mexico
  - University of Arizona Optical Mirror Laboratory - Arizona
  - Mt. Graham SMT Telescope Facility - Arizona
  - Mt. Graham Observatory Site Programming, Utilities and Maintenance Building - Arizona
  - Phelps Dodge Chino Inpit Crush/Convey Study - New Mexico
  - Philippines Crush/Convey Study
  - Cyprus Bagdad Tankhouse Expansion, Copper
  - Phelps Dodge Morenci Inpit Crush/Convey Checking - Arizona

**CONRAD E. HUSS, P.E.**
**Project Manager, Engineering Manager**

- M3 Engineering & Technology, (continued)
  - Cyprus Sierrita Inpit Crush/Convey - Arizona
  - AZANG Maintenance Hangar and Hush House - Arizona
  - Cyprus Sierrita Column Cell Expansion I & II, Copper/Moly - Arizona
  - Cyprus Sierrita Moly Roaster Feed Systems I & II - Arizona
  - Magma Pinto Valley #4 Tailing Dam Slurry Pump Station - Arizona
  - Ft. Huachuca General Instruction Building - Arizona
  - Mt. Bell Communication Centers - Arizona
  - Cyprus Sierrita Moly Packaging System Upgrade - Arizona

- RGA Engineering Corporation, Structural Engineer, V. President, Engineering Director (4 Years)

  - Coronado Post Office for USPS - Arizona
  - Amphitheater Elementary School and University of Arizona Science Building - Arizona
  - Tanque Verde and Campbell Avenue Street Lighting - Arizona
  - Reid Park Band Shell and Master Plan - Arizona
  - AZANG Engine Shop, General Purpose Shop, Hush House - Arizona
  - Northern Arizona University Information Center - Arizona
  - Davis-Monthan Combat Support Center - Arizona
  - Ft. Huachuca Communications Facilities - Arizona
  - University of Texas Submillimeter Telescope - Texas
  - Arizona-Sonora Desert Museum Mountain Habitat - Arizona
  - Ina Road Bridge, Tanque Verde Bridge, Clifton Bridge, I-17 AC/DC Bridge, Orange Grove Bridge
  - University of Arizona Submillimeter Telescope - Arizona
  - University Heights Shopping and Parking Complex - Arizona
  - La Paloma Resort Hotel and Office Complex - Arizona
  - Design of warehouses and greenhouses - Worldwide
  - Design of banks, apartments, office buildings - Arizona
  - Design of elephant enclosure - Arizona
  - Design of conveyor head frames and maintenance shops- Arizona
  - Design of schools, libraries, churches - Arizona
  - Project Engineer for conversion of U.S.P.S. power system in Phoenix, Az with 2-350 ton chillers
  - Analysis for parking garage and pedestrian bridge - Arizona
  - Finite element earthquake analysis of ten-story office building - Arizona
  - Design of eight-story reinforced concrete hotel - Mexico
  - Converter Blower Electrification, Project Manager, Inspiration, Arizona

- Mountain States Engineers, Vice President and Manager of Engineering (4 Years)
  - 52,000-65,000 TPD Mill Expansion, SPCC - Cuajone, Peru
  - Pennsylvania Fuels Group, Coal Gasification Plant Study
  - Gold Mill Expansion, Newmont, Carlin - Nevada
- Mountain States Engineers, Vice President and Manager of Engineering (4 Years)

**CONRAD E. HUSS, P.E.**
**Project Manager, Engineering Manager**

- Shuichang Bethlehem International Crush/Convey, 10,000 TPH - China
- Gold Heap Leach Study, Newmont, Telfer - Australia
- Fly Ash Disposal System, Tucson Electric - Springerville, Arizona
- Concentrate Loadout, Cyprus Bagdad - Arizona
- Tailings System, Cyprus Bagdad - Arizona
- No. 19 Dump Leach System, Inspiration - Arizona
- 8000 TPH Crushing/Conveying of Waste, Kennecott Copper Corp. - Arizona
- 150,000 TPD Crush/Convey, Kennecott - Ray, Arizona
- 50,000 TPD Crushing/Conveying System, Island Copper - BC, Canada
- 10,000 TPD Limestone Loadout, Grupo Cementos - Mexico
- 40,000-54,000 TPD Mill Expansion, Cyprus Bagdad - Arizona
- Smelter Coal Conversion, Phelps Dodge - Hidalgo, New Mexico
- Modification of 3000 TPH Wash Plant, Carbon Coal - New Mexico
- Moly By-Product Plant, Phelps Dodge - Ajo, Arizona
- 50 TPD Zinc Skimmings Plant, National Zinc - Oklahoma
- 4000 TPH Portable Crusher, Duval Corp. - Sierrita, Arizona
- Sulfur Unloading Facility, Duval Corp. - Galveston, Texas

- Mountain States Engineers, Piping Department Head (1 Year)
  - Gulf & Western Sonora Gold - California
  - 1000 TPD Moly By-Product Plant, ASARCO, Mission - Arizona
  - 40,000 TPY Flotation Retrofit, ASARCO, Mission - Arizona
  - Tailings System, Plateau Resources - Utah
  - 2600 TPH Crush/Convey, Climax Molybdenum Co. - Colorado
  - 2000 TPD Moly By-Product Plant, La Caridad - Mexico
  - 6600 TPH Crushing/Conveying - Majdanpek, Yugoslavia
  - Coal Loadout Facility, CF&I, Maxwell Mine - Colorado
  - 12,000 TPD Uranium/Vanadium Plant, Cotter Corp. - Colorado
  - Lined Tailings Pond, Cotter Corp. - Colorado
  - Spent Catalyst Plant, Cotter Corp. - Colorado
  - 750 TPD Uranium Mill, Plateau Resources - Utah
  - Potash Plant Modifications, Duval Corp. - Carlsbad, New Mexico
  - Feasibility Study for Urangesellschaft, Site Determination and Environmental
  - Delamar Silver Plant CCD - Idaho

- Mountain States Engineers, Structural Engineer and Department Head (5 Years)
  - Round Mountain, Nevada, Heap Leach Gold including recovery pad
  - Lime Plant, Nafinsa, Job Engineer - Santa Rita, Arizona
  - 250,000 TPD Crushing/Conveying, Job Engineer, Duval Corporation - Sierrita, Arizona
  - Ferro-Moly Plant, Job Engineer, Duval Corp. - Sierrita, Arizona
  - Special Investigations of Towers, Thickener and Frames
- Hughes Aircraft Company, Structural Engineer (½ Year)

- Finite element analysis of missiles and vibration isolation of missile components
- Strain gauge layout and destructive testing

- Teaching (6 Years)
  - Adjunct Lecturer, University of Arizona (2 Years)
  - Assistant Professor of Engineering, Northern Arizona University (1 Year)
  - Graduate Fellow in Engineering Mechanics, University of Arizona (4 Years)
  - High School Teacher, West Tampa Junior High School (½ Year)

- LTJG U.S. Coast and Geodetic Survey (3 Years)
  - 3rd in Command, USC & GSS Hydrographer
  - Hydrographical surveys in Hawaii, Alaska and Florida
  - Inspection of damage caused by Alaskan Good Friday Earthquake
  - Photogrammetry and land surveying in Alaska

## COURSES

- Cold Regions Engineering Short Course
- Completed MSHA Training

## PUBLICATIONS

HUSS, Conrad, and Dan Neff; "Horizontally Stiffened Angular Hoppers Analyzed by Beam Action Versus Finite Element", Bulk Solids Handling, June 1984.

HUSS, Conrad, and Nikita G. Reisler; "A Comparison of Handling Systems for Overburden of Coal Seams", Bulk Solids Handling, March 1984.

HUSS, Conrad, and Dan Neff; "Horizontally Stiffened Membrane Hoppers Analyzed by Virtual Work Versus Finite Element", Bulk Solids Handling, November 1983.

HUSS, Conrad, Nikita G. Reisler, and R. Mead Almond; "Practical and Economic Aspects of In-Pit Crushing Conveyor Systems", SME/ AIME, October 1983.

HUSS, Conrad, and Dan Neff; "Finite Element Structural Analysis of Movable Crusher Supports", Bulk Solids Handling, March 1983.

HUSS, Conrad; "Cost Considerations for In-Pit Crushing/Conveying Systems", Bulk Solids Handling, December 1982.

## PUBLICATIONS Continued

**CONRAD E. HUSS, P.E.**
**Project Manager, Engineering Manager**


ALMOND, R. Mead, and Conrad Huss; "Open-Pit Crushing and Conveying Systems", Engineering and Mining Journal, June 1982.

MUNSELL, Stephen, R. Mead Almond, and Conrad Huss; "The Trend Toward Belt Conveying of Ore and Waste in Arizona Open Pit Mines", SME/AIME, September 1978.

SANAN, Bal, and Conrad Huss; "Foundation Design for Rod and Ball Mills", ACI Conference 1977, Presentation Only.

HUSS, Conrad, and Ralph Richard; "Dynamic Earthquake Analysis of Tucson Federal Office Building", GSA Contract 70-6-02-0058, May 1972.

HUSS, Conrad; "Axisymmetric Shells Under Arbitrary Loading", The University of Arizona, 1970. Doctoral Thesis.

HUSS, Conrad; "Airy's Function by a Modified Trefftz's Procedure" The University of Arizona, 1968. Master's Thesis.

## CERTIFICATE of AUTHOR

I, Michael Pegnam, P.E., do hereby certify that:

1. I am Senior Project Engineer of:

   Golder Associates
   4730 North Oracle Rd. #210
   Tucson, Arizona USA 85705

2. I graduated with a degree in Bachelor's of Science in Geological Engineering from the University of Arizona in 1992 and a Master's of Science Degree in Geotechnical Engineering from University of California, Berkeley in 1994.

3. I am a Professional Engineer in good standing in the State of Arizona in the area of Civil Engineering. I am also registered as a professional engineer in the states of California and New Mexico.

4. I have worked as an engineer for a total of 11 years since my graduation from the University of California.

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 geotechnical study for the technical report titled "Peñasquito Feasibility Study" dated March of 2005 relating to the Western Silver Peñasquito property. I have not visited the Peñasquito property.

7. I have had no prior involvement with the property that is the subject of Technical Report.

8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have read National Instrument 43-101, and the Technical Report has been prepared in compliance with that instrument.

11[1]. 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.

Dated this 11th Day of November 2005.

Signature of Qualified Person

Michael Pegnam, PE

Print name of Qualified Person

[1] If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

# Michael L. Pegnam, P.E.

**Education:** M.S., Geotechnical Engineering, University of California, Berkeley, 1994
B.S., Geological Engineering, University of Arizona, Tucson, 1992
Short Course, Geotechnical Foundation Engineering – Rock Slopes, National Highway Institute, December 2000

**Registrations/ Affiliations:** Professional Engineer in Arizona, California, and New Mexico
American Society of Civil Engineers
U.C. Berkeley Geotechnical Society

**Experience:**

2004 to Present **Golder Associates** **Tucson, Arizona**

*Senior Geotechnical Engineer*

Responsible for the geotechnical and geologic design of civil surface transportation projects and heap leach facilities and waste containment systems for the mining industry. Specialty expertise in civil projects includes geotechnical retaining wall design, including soil nail walls and mechanically stabilized earth walls, rigid and flexible pavement design, and bridge foundations. Specialty expertise in mining applications includes rock and soil slope stability evaluation. Foundation design experience for a wide variety of facilities and includes drilled shafts, micropiles, and shallow spread footings. Responsibilities also include providing technical oversight and review

1999 to 2004 **URS Corporation** **Tucson, Arizona**

*Geotechnical Team Leader*

Project Manager and Geotechnical Engineer with the Surface Transportation Group of URS in Arizona. Responsible for the direction of design projects and field investigations for a wide variety of foundation engineering projects involving design of shallow and deep foundations in both soil and rock. These projects have included multi-disciplinary urban transportation projects, including highways and bridges, foundation engineering for light and heavy industrial development, including processing plants and power plant substations, and pavement design for applications ranging from major freeways to private parking facilities. Responsibilities also included management of junior geotechnical engineering personnel.

1997 to 1999 **Call & Nicholas, Inc.** **Tucson, Arizona**

*Project Engineer*

Responsible for rock mass characterization, analysis of rock strength and structure data, as design of optimum pit slope angles for a variety of open pit mining operations. Responsibilities also included slope stability analysis and design of mine waste containment facilities.

1994 to 1997 **WESTEC, Inc.** **Reno, Nevada**

*Staff Engineer*

Performed field investigations, and assisted in the design of heap leach facilities, tailings impoundments, and the geotechnical analysis of mine facility foundations.

# Michael L. Pegnam, P.E.

## PROJECT RELATED EXPERIENCE – SURFACE TRANSPORTATION

### US 70 Hondo Valley Design/Build Project — Ruidoso, New Mexico

Provide geotechnical engineering services for this design-build project involving reconstruction and widening of US 70 to a 4-lane facility between Ruidoso Downs and Riverside. Detailed geotechnical design of approximately 30 soldier-pile lagging walls, and six mechanically stabilized earth walls was provided. Additional services included interpretation of subsurface soil geotechnical properties along the alignment based on borehole data, preparation of comprehensive geotechnical design reports, and coordination with team structural engineers and construction inspectors during retaining wall construction.

### Pima County DOT – Skyline Drive Design Build Project — Tucson, Arizona

Provided geotechnical services on this project involving the reconstruction of Skyline Drive from Chula Vista Road to east of Campbell Avenue. Major geotechnical design issues included pavement design, technical review of mechanically stabilized earth wall design submittals, and plans and specification and construction inspection and testing for a soil nail wall.

### On-call Geotechnical Engineering Services,
### New Mexico State Highway and Transportation Department — Arizona

Served as Project Geotechnical Engineer for Statewide On-call Geotechnical Services for the New Mexico State Highway and Transportation Department. The project started in April 1999 and was completed in March 2003. Tasks completed with a brief description are as follows:

1. US 70, Ruidoso: Evaluate rock cuts and provide design recommendations. Revise the NMSHTD standard specs for rock excavation.
2. Raton Pass: Provide independent technical reviews for geotechnical work performed by others. There are several active landslides and rock cuts along the highway through Raton Pass.
3. US 84/285, Tesuque Traffic Interchange: Provide complete geotechnical analysis and design for Bohanon Huston, Inc.
4. US 84/285: Pojoaque and Cuyamungue Traffic Interchanges: Provide complete geotechnical analysis and design for Louis Berger.
5. I-40 / Louisiana Traffic Interchange in Albuquerque: Provide final geotechnical analysis and design for Parsons Brinckerhoff.
6. NM 434 Mora to Black Lake: Provide complete geotechnical services include subsurface investigations, analysis and design for a 25-mile-long highway for Holmes and Narver.

### I-10 / I-19 Traffic Interchange — Tucson, Arizona

Served as a Project Geotechnical Engineer For the reconstruction of the largest freeway (I-10) to freeway (I-19) traffic interchange in southern Arizona. The project included 10 bridges and 10 retaining walls. Responsible for the field and laboratory investigation of soils and providing geotechnical recommendations for drilled shaft foundations, cut and fill slopes, retaining walls, and pavements. Mr. Pegnam was also an integral part of a drilled shaft load test program that resulted in significant cost savings for the client. The load test was performed on an 8-foot diameter, 135-feet deep shaft and the ultimate failure load imposed on the shaft, at an equivalent top-down load of 34,000 kips, established a world record in drilled shaft load testing.

### On-call Subsurface Investigations
### Arizona Department of Transportation — Arizona

Project Geotechnical Engineer responsible for providing as-needed geotechnical services to ADOT. Services include field and laboratory investigations analysis and design, preparation of reports, peer review, and field construction services. In addition, may be requested to supplement ADOT's geotechnical staff on a short-term basis. Several of these tasks are briefly described as follows:

1. I-17, MP 292±, Rock fall study: Provide recommendations for mitigation of rockfall hazard. The evaluation was twofold: including drainage and geotechnical issues.
2. ADOT Nogales Maintenance Facility, Foundation Repair: The foundation slab for the facility has experienced large settlements and cracked. Assignment includes investigation of the cause of distress and recommendations for foundation repair.
3. SR 89A – Oak Creek Canyon Switchbacks, Mitigation of Roadway Distress: The outside lane of SR 89A has experienced settlement and possibly sliding down the side of a steep rock slope. Assignment includes investigation of the cause of distress and recommendations for repair.
4. SR 82 Bridge over Santa Cruz River, Nogales: Provide complete geotechnical services for a five span bridge widening.
5. SR 87 Whiskey Springs Bridge: Evaluated the cause of distress of the MSE wall at the abutment, and evaluated several mitigation procedures in coordination with ADOT.

### On-call Geotechnical Engineering
### Pima County Department of Transportation — Arizona

Project Geotechnical Engineer/Project Manger responsible for providing as-needed geotechnical services to PCDOT. Services include field and laboratory investigations analysis and design, preparation of reports, peer review, and field construction services. Some of the completed tasks are briefly described as follows:

1. Soil Nail Wall – River Road Improvements: Provide geotechnical construction inspection and training and review of value-engineered designs.
2. Soil Nail and Tied-back Wall Designs – Sunrise Drive: Provide guidance on design of cut walls, technical specifications, and review of MSE wall submittals. Provide inspectors during cut wall construction.
3. MSE wall design review - Phoenix Avenue, Summerhaven: Provide technical review of a geotechnical design report, design calculations, and preliminary project drawings associated with an MSE wall.

### Interchange 10 Traffic Interchange -Twin Peaks/Linda Vista — Marana, Arizona

Lead Project Geotechnical Engineer for this two-phase project to add a new interchange on Interstate 10 between Cortaro Road and Avra Valley Road. Geotechnical issues included foundations for a new bridge over the Santa Cruz River, grade separation structures at Interstate 10 and the Union Pacific Railroad, pavement design, and retaining wall design. The first phase of the project included preparation of a Design Concept Report. The second phase of the project included final design documents.

### I-10 Mainline Widening – Cortaro Road to Ina Road — Marana, Arizona

Performed geotechnical investigation and provided foundation recommendations for the widening of the I-10 Mainline. Bridge foundation recommendations were provided for the widening of the I-10 bridges over Ina Road and pavement structural sections for the new widened lanes and rehabilitation alternatives for the existing mainline lanes were developed.

### Duval Mine Road – I-19 T.I. — Sahuarita, Arizona

Provided complete geotechnical services associated with the reconfiguration and reconstruction of the traffic interchange at the intersection of Interstate 19 with Duval Mine Road. Services included: a thorough geotechnical subsurface investigation, recommendations for shallow and deep foundation systems for the new bridge, evaluation of the collapse potential of soils beneath new embankments, pavement design report and materials memorandum for new frontage roads, and evaluation of soils for drainage structures.

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**SR 77 (Oracle Road): River Road to Ina Road, Tucson, Arizona**
Provided geotechnical design report, detailed design drawings, and complete special provisions for a 14,000 $ft^2$ soil nail wall. The wall is part of the addition of multi-purpose lanes along Oracle Road, and is designed to provide for the 20-foot clear zone adjacent to a soil bluff near River Road.

**B-10 Quartzsite – Roadway Reconstruction Arizona**
Provided full geotechnical services for the widening of a 10-span bridge and a 5-span bridge. Additional tasks included roadway subgrade investigation, retaining wall foundation recommendations, bridge foundation data sheets, and scour studies.

**Silvercroft Wash Pedestrian Bridge, Pima County DOT&FCD, Arizona**
Provided geotechnical foundation design report for this pedestrian bridge spanning the Silvercroft Wash at its confluence with the Santa Cruz River. Design recommendations were provided for drilled shaft foundations and shallow spread footings, abutment and retaining walls, and cut and fill slopes.

**US 93 Burro Creek Section – Mohave County, Arizona**
Provided complete geotechnical evaluation for the foundations of a new steel truss arch bridge spanning Burro Creek Canyon. Rock mass characterization, rock strength determination, and rock structural stability analyses were performed to determine allowable bearing capacity, and stability of the bridge abutments, pier and two large concrete skewbacks.

**US 93 Cottonwood Canyon-Bridle Creek Section, Mohave County, Arizona**
Lead Geotechnical Engineer for the design of this 3.5-mile segment of US 93. Geotechnical design elements included drilled shaft foundations in Tertiary bedrock for two bridges over Cottonwood Creek, design of a 60-foot-high reinforced soil slope, cut slope design in rock cuts up to 180 feet high, and development of materials and earthwork factor recommendations.

**I-10 Mainline Interim Widening – Marana Rd to Cortaro Rd, Marana, Arizona**
Lead geotechnical engineer for this interim widening of I-10. Services included geotechnical investigation and drilled shaft foundation recommendations for six bridges to be widened, preparation of Bridge Foundation Report, Pavement Design Summary, Materials Pavement Design Report. Rehabilitation alternatives for the existing mainline lanes were also developed.

# Michael L. Pegnam, P.E.

## PROJECT RELATED EXPERIENCE – GEOTECHNICAL FIELD INVESTIGATIONS

**P-483, Station Ordinance Area, Phase I – U.S. Marine Corps Air Station Yuma**
Complete geotechnical field investigation and geotechnical design recommendations for shallow spread footings, slabs-on-grade, post-tensioned slabs, retaining walls, rigid and flexible pavement, site grading and earthwork.

**SlimFast Foods Company Tucson, Arizona**
Mr. Pegnam was responsible for providing complete geotechnical services including field and laboratory investigations, foundation recommendations and preparing geotechnical reports. Foundation types included spread footings and drilled piers in collapsible soils.

**Tucson Electric Power - Gateway Substation Tucson, Arizona**
Responsible for providing complete geotechnical services including field and laboratory investigations, foundation recommendations, and preparing the geotechnical report. The project requirements included providing recommendations for grading and erosion control for the site, which required cuts and fills up to 48 feet deep, and foundation recommendations for both spread footings and drilled piers.

**Midtown Library Project Tucson, Arizona**
Directed field investigation and preparation of geotechnical design recommendations for a new library in Tucson, Arizona. Recommendations included design of shallow spread footings for masonry walls, floor slabs, post tensioned slabs-on-grade, flexible pavement structural sections for the parking lot, and site grading and earthwork. Special project issues included design for mitigation of potentially hydro-collapsible soil.

**Kirk-Bear Canyon Library Expansion Tucson, Arizona**
Provided geotechnical field investigation and geotechnical design recommendations for a 4,500 square foot addition to an existing library. Recommendations included design of shallow spread masonry wall footings, floor slabs, post tensioned slabs-on-grade, and site grading and earthwork.

**Electrical Consultants, Inc. Arizona**
Directed a field investigation to provide recommendations for the foundations for large transmission towers proposed to connect two electrical substation switchyards west of Phoenix. Performed geotechnical analysis for drilled pier foundations, including consideration of the large overturning moments imposed by the tower

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## PROJECT RELATED EXPERIENCE – PIT SLOPE DESIGN

**Minera Alumbrera, Ltd.** **Argentina**
Performed bench-scale, inter-ramp scale, and overall pit wall scale slope stability analysis associated with optimizing pit slope angles for Phase II of the Bajo de la Alumbrera Mine. Project included development of a rock mass geotechnical model from RQD and rock hardness logging from various drilling campaigns and laboratory rock strength testing.

**Compania Minera Mantos De Oro** **Chile**
Project engineer on this study to provide recommended slope angles for the Coipa Norte Pit and for the Farellon North Extension. Overall pit wall scale slope stability was evaluated using limiting-equilibrium methods with anisotropic strengths to define the critical noncircular shear surfaces.

**Calaveras Cement Company** **Redding, California**
Performed oriented core drilling program, and rock structure mapping campaign, and assisted in pit slope stability analysis to provide recommendations for pit slope angles for this limestone quarry in northern California.

**Hanson Permanente Quarry** **California**
Evaluated failure of the west wall of this limestone quarry and provided recommendations for mitigation. Failure mechanism was determined to be mass sliding along a fault contact between limestone and underlying serpentinitic greenstone. Mitigation included excavation at crest and installation of horizontal drains to relieve pore pressure on the failure plane.

**Luzenac America Talc Quarry** **Ennis, Montana**
Performed geologic mapping, rock structure mapping, and oriented core drilling to evaluate the stability of a talc processing facility at the crest of a pit wall failure. Stability evaluation also considered potential liquefaction of subsurface saturated ash deposit that extended below the limits of the facility.

**Freeport McMoran** **Irian Jaya, Indonesia**
Performed rock structure mapping in support of pit slope design of the west wall of the Grasberg Pit. Evaluation of rock strength from laboratory testing and oriented core drilling program was also provided.

**Diavik Diamond Mines, Inc.** **Northwest Territory, Canada**
Trained local Diavik Diamond Mines personnel in oriented coring, and assisted in core logging for preliminary pit slope evaluation during the feasibility phase of mine development. Pit slope stability analysis was performed for the granite pit wall rock through evaluation of oriented core data to map out potential major failure planes involving a combination of pervasive joints and intact rock.

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## PROJECT RELATED EXPERIENCE – HEAP LEACH

**Ruby Hill Project** — **Eureka, Nevada**

Project involved design of two Phases of this 11 million ton heap leach facility. Project work included complete geotechnical investigation, preparation of final engineering drawings, construction specifications, and report suitable for permitting and construction of the heap leach facilities. Sizing and design of associated solution and event ponds were also included.

**Trenton Canyon Project** — **Valmy, Nevada**

Project engineer for the siting, geotechnical investigation, and design of heap leach facility. Project work also included extensive borrow source investigation for construction materials.

**Mule Canyon Project** — **Valmy, Nevada**

Project engineer for the preliminary siting and feasibility design of heap leach facility.

**Mesquite Mine** — **Brawley, California**

Performed preliminary sizing, and piping design for feasibility study of the expansion of an existing heap leach facility.

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## PROJECT RELATED EXPERIENCE – DAMS/EARTHWORK

**Section 4 Tailings Impoundment Elkhorn Mine** **Jefferson County, Montana**
Project engineer for the development of four alternative conceptual embankment designs, development of comparative cost estimate for construction and closure, and preparation of a summary report of the findings.

**Calaveras Cement Company** **Redding, California**
Responsible for the design of a 6-million ton low-grade limestone stockpile within steep, forest terrain. Project work included geologic mapping, drilling, test pit excavation, and laboratory testing.

**Ayam Hitam Ore Stockpile** **Irian Jaya, Indonesia**
Conducted evaluation of stability and settlement of a large ore stockpile founded upon peat filled sediments. Design issues included estimating how close the stockpile toe could approach existing facilities without causing damaging differential settlement.

**Centralia Mining Company** **Centralia, Washington**
Conducted cone penetrometer investigation of a mine waste filled pit, and assisted in design of earthen cap for the mine waste. Design included utilizing geogrid support over the extremely soft and saturated waste deposits to develop a working platform for earth moving equipment.

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## PUBLICATIONS

Samtani, N.C. and M. L. Pegnam, 2001. *Pullout Resistance of Cut/Splayed Grid Reinforcement in MSE Walls.* The 10th International Conference on Computer Methods and Advances in Geomechanics, Tucson, AZ. January 2001.