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Executive Summary for the Prefeasibility Study of the Tepal Project Michoacán, Mexico

2,116,257mN and 717,161mE, Zone 13Q (UTM - NAD 83) - Centre of Project

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1 Executive Summary

1.1 Introduction JDS

JDS Energy and Mining Inc. (JDS) was commissioned by Geologix Explorations Inc. (Geologix) to prepare an independent Canadian National Instrument 43-101 (NI 43-101) compliant technical report for the Tepal Project (Tepal or Project) located in Michoacán state, Mexico.

JDS was assisted in the compilation of this report by Micon International Limited (Micon), Allnorth Consultants Ltd. (Allnorth) and Knight Piésold Ltd. (KP).

This report details the results of the pre-feasibility study (PFS). The report includes Mineral Reserves estimates and represents an economically viable, technically credible and environmentally sound development plan for the Project.

1.2 Property Description and Ownership

The Tepal property is located in the municipality of Tepalcatepec, Michoacán State in southwestern Mexico as shown on Figure 1-1. The property is centered at 19° 7' 40" Latitude and 102° 56' 8" Longitude or 2,116,257mN and 717,161mE, Zone 13Q (UTM - NAD 83). The average elevation is 550m. The climate is hot and relatively dry.

Figure 1-1: Location Map of the Tepal Property





The Tepal property consists of seven contiguous concessions totalling 17,237.2ha. The property has been explored by several exploration companies over the past 30 years. Geologix owns 100% of the concession with small underlying royalties.

1.3 Geology and Mineralization

The property is located within the Coastal Range of south-western Mexico south of the Neogene Trans-Mexican Volcanic Belt. Basement rocks consist of Cretaceous to early Tertiary intermediate plutons, stocks and plugs intruding weakly metamorphosed sedimentary and volcanic rocks of probable Jurassic to Cretaceous age.

Three mineralized tonalite stocks have been identified on the property. The mineralization is characteristic of porphyry copper-gold deposits consisting of disseminated copper sulphides in structurally controlled, multi-phase intrusive zones. The North and South Zones have a gold enriched core with a copper dominant periphery and then to barren pyritic halos. There is a distinct oxide zone in the three deposits but the majority (85 to 90%) of the mineralization is sulphides.

1.4 History and Exploration

Geologix completed over 40,000m of infill diamond drilling in 2011, after the last mineral resource estimate was completed. This new drilling combined with the historic drilling was the basis of the latest mineral resource technical report (Makepeace, 2012). This infill drill program upgraded much of the previous Inferred Mineral Resource into higher classifications for use in the preliminary feasibility study.

1.5 Mineral Processing and Metallurgical Testing

There are three sources of gross metal value (GMV) from the Tepal resources. They are chalcopyrite (copper sulphide with interstitial gold and silver) in a quartz matrix, an iron pyrite (iron sulphide with interstitial gold and silver) encased in a secondary quartz/gangue matrix, and a surface oxide layer containing copper minerals (in decreasing amounts; tenorite, malachite, azurite and covellite) which also contain gold and silver values.

Sulphide ore hardness is variable in the three pits, with Tepal North being the moderately hard and Tizate being hard. Over 42 variability tests were completed with Bond Work index hardnesses ranging from a low of 10.1kWh/tonne to a high of 18.4kWh/tonnes. Due to this variation, the milling circuit is designed to process 40,000tpd of Tepal North ore and 35,000tpd of Tepal South and Tizate ore. The oxide ore is soft from all three areas resulting in a design capacity of 56,000tpd through the same milling circuit.

The saleable products for this PFS are a copper concentrate with gold and silver values obtained from a sulphide flotation, and a gold/silver doré bar from an on-site refinery.

The pyrite contains approximately another 30% of the sulphide's gold which is to be processed for this PFS using a pyrite float followed by a carbon-in-leach (CIL) circuit, carbon plant and refinery.



The surface oxides contain copper, gold and silver values; however, only the gold and silver is designed to be recovered for this PFS in a CIL circuit, carbon plant and refinery.

The metallurgical results from the 2009 NZ/SZ float and leach tests used in the 2011 preliminary assessment were added to the Tizate locked cycle and leach tests performed in 2012 and are summarized in Table 1-1, Table 1-2 and Table 1-3. These results were used as the design criteria for the PFS.

The copper concentrate is unusually clean owing to the quartz matrix containing the chalcopyrite. No fatal flaws or deleterious elements were found in the metallurgical tests reviewed. There is good separation between chalcopyrite and pyrite due to the faster chalcopyrite flotation kinetics. Fortunately there is little contamination of pyrite in the copper concentrate, which should make the concentrate easy to market.



Table 1-1: Metallurgical Design Criteria Summary

Product	Unit	Flotation
Resource Grade		
Tepal Grade		
Copper	%	0.22
Gold	g/t	0.37
Silver	g/t	1.02
Tizate Grade		
Copper	%	0.17
Gold	g/t	0.19
Silver	g/t	2.23
Recovery		
Tepal Recovery		
Copper	%	88.2
Gold	%	62.4
Silver	%	27.4
Tizate Recovery		
Copper	%	85.9
Gold	%	58.0
Silver	%	59.6
Concentrate Grade		
Concentrate Grade - Tepal		
Copper	%	25.7
Gold	g/t	32.8
Silver	g/t	42.9
Concentrate Grade - Tizate		
Copper	%	26.9
Gold	g/t	15.0
Silver	g/t	267.6



Table 1-2: Pyrite Flotation and Leach Predictions

Product	Unit	Recovery
Pyrite Conc. Leach		
Tepal		
Copper	%	1.0
Gold	%	10.7
Silver	%	6.1
Tizate		
Copper	%	4.0
Gold	%	15.5
Silver	%	7.8
Cu Cleaner Tails Leach		
Tepal		
Copper	%	0.8
Gold	%	6.5
Silver	%	7.5
Tizate		
Copper	%	0.5
Gold	%	5.0
Silver	%	4.3

Sulphide cyanide and lime consumption is expected to average 2.5kg/t and 1.4kg/t for Tepal and 2.8kg/t and 1.5kg/t for Tizate.

Table 1-3: Oxide Leach Predictions

Product	Unit	Recovery
Tepal		
Gold	%	83.2
Silver	%	63.3
Tizate		
Gold	%	75.2
Silver	%	55.9

Oxide cyanide and lime consumption is expected to average 1.4kg/t and 2.4kg/t for Tepal and 0.4kg/t and 3.6kg/t for Tizate.



1.6 Mineral Resource Estimate

A new mineral resource estimate was calculated on March 29, 2012, using the Ordinary Kriging method. The three deposits were defined by mineralogical models which were based on grade and geological boundaries. The interpolation was further constrained by potentially economic pit shells. The following table documents the Measured and Indicated Mineral Resources of the three deposits at US \$5/t equivalent value NSR cut-off.

Table 1-4: Measured and Indicated Mineral Resources at US \$5/t Equivalent Value Cut-Off

Deposit	Resource	Tonnage	In Situ Average Grade				Contained Metal	
			Au (g/t)	Cu (%)	Ag (g/t)	Mo (%)	Au (koz)	Cu (Mlb)
Tepal North	Measured	14,067	0.50	0.29	0.78	0.002	228	89
	Indicated	55,320	0.30	0.21	1.01	0.002	533	252
	M + I	69,387	0.34	0.22	0.96	0.002	761	341
Tepal South	Measured	20,011	0.47	0.22	1.07	0.002	300	96
	Indicated	20,993	0.45	0.2	1.17	0.002	305	91
	M + I	41,005	0.46	0.21	1.12	0.002	605	187
Tizate	Measured	-	-	-	-	-	-	-
	Indicated	77,375	0.18	0.17	2.29	0.006	438	285
	M + I	77,375	0.18	0.17	2.29	0.006	438	285
Total	Measured	34,078	0.48	0.25	0.95	0.002	528	185
	Indicated	153,688	0.26	0.19	1.67	0.004	1,276	628
	M + I	187,766	0.30	0.20	1.54	0.004	1,804	813

*Assumptions used to calculate soft pit constraint: Au Price US\$ 1300/oz, Cu Price US\$ 3.30/lb

Tizate Oxide Au Recovery - 68.8%, Cu Recovery - 6.8%

Tizate Sulphide Au Recovery - 66.2%, Cu Recovery - 85.3%

Tepal Oxide Au Recovery - 78.4%, Cu Recovery - 14.3%

Tepal Sulphide Au Recovery - 60.7%, Cu Recovery - 87.4%

*Mineral resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource would be converted into Mineral Reserves.

The following table documents the Inferred Mineral Resources of the three deposits at the same US \$5/t equivalent value NSR cut-off.



Table 1-5: Inferred Mineral Resources at US \$5/t Equivalent Value Cut-Off

Deposit	Resource	Tonnage (kt)	In Situ Average Grade				Contained Metal	
	Category		Au (g/t)	Cu (%)	Ag (g/t)	Mo (%)	Au (koz)	Cu (Mlb)
Tepal North	Inferred	906	0.22	0.21	1.21	0.003	6.5	4.2
Tepal South	Inferred	412	0.40	0.16	0.95	0.002	5.3	1.5
Tizate	Inferred	34,426	0.15	0.15	1.70	0.007	169.8	114.8
Total	Inferred	35,743	0.16	0.15	1.68	0.006	181.7	120.4

*Assumptions used to calculate soft pit constraint: Au Price US\$ 1300/oz, Cu Price US\$ 3.30/lb

Tizate Oxide Au Recovery - 68.8%, Cu Recovery - 6.8%

Tizate Sulphide Au Recovery - 66.2%, Cu Recovery - 85.3%

Tepal Oxide Au Recovery - 78.4%, Cu Recovery - 14.3%

Tepal Sulphide Au Recovery - 60.7%, Cu Recovery - 87.4%

1.7 Mineral Reserve Estimate

The estimate of Mineral Reserve as of March 19, 2013 is reported in Table 1-6. Mineral Reserves are a subset of the Mineral Resource. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The Mineral Reserves identified in Table 1-6 comply with CIM definitions and standards for a National Instrument NI43-101 technical report. Detailed information on mining, processing, metallurgical, and other relevant factors are contained within this report and demonstrate, at the time of this report, that economic extraction is justified.

This study did not identify any mining, metallurgical, infrastructure or other relevant factors that may materially affect the estimate of the Mineral Reserves or potential production.



Table 1-6: Mineral Reserves

Proven and Probable Reserves									
		Diluted Grade			Contained Metal			Equivalent Metal	
Oxide Ore	Tonnes (Mt)	Au g/t	Ag g/t	Cu%	Au koz.	Ag koz.	Cu Mlbs.	AuEq koz. ¹	CuEq Mlbs. ¹
Proven	3.8	0.56	0.91	0.28	68	111	23.7	129	52.2
Probable	8.0	0.36	1.41	0.18	93	363	32.3	179	72.4
Proven and Probable	11.8	0.42	1.25	0.22	161	474	56.0	308	124.6
Sulphide Ore	Tonnes (Mt)	Au g/t	Ag g/t	Cu%	Au koz.	Ag koz.	Cu Mlbs.	AuEq koz. ¹	CuEq Mlbs. ¹
Proven	28.3	0.48	0.97	0.24	439	885	151.3	830	335.3
Probable	109.5	0.25	1.63	0.19	894	5,741	447.3	2,108	851.9
Proven and Probable	137.8	0.30	1.50	0.20	1,333	6,625	598.6	2,938	1,187.2
Oxide+Sulphide Ore	Tonnes (Mt)	Au g/t	Ag g/t	Cu%	Au koz.	Ag koz.	Cu Mlbs.	AuEq koz. ¹	CuEq Mlbs. ¹
Proven and Probable	149.6	0.31	1.48	0.20	1,494	7,099	654.6	3,247	1,311.8

Notes:

1) Uses PFS Base Case Four-Year Trailing Average Metal Prices: Au US\$1389.95/oz, Cu US\$3.44/lb and Ag US\$26.03/oz.

AuEq = Au oz + (Ag oz * \$26.03/\$1389.95) + (Cu lbs * \$3.44/\$1389.95); CuEq = Cu lbs + (Au oz * \$1389.95/\$3.44) + (Ag oz * \$26.03/\$3.44)

Au = gold, Cu = copper, Ag = silver, g/t = grams per tonne, % = percent, koz. = thousand ounces, Mlbs. = millions of pounds.

The Reserves stated in the table above conform to CIM guidelines. Resources are not to be confused as reserves.

Reserve numbers are rounded to the nearest 100,000 tonnes, 1,000 oz Au, 1,000 oz Ag, 100,000 lbs Cu, 1,000 oz. AuEq and 100,000 lbs CuEq.

1.8 Mining Methods

Mining of the Tepal deposit is planned as a conventional open pit operation.

Three pits are proposed: North, South and Tizate. Pit slope angles are based on geotechnical studies completed by Knight Piésold Ltd. in 2012. Pit designs are double-benched. Haul roads and in-pit ramps are designed at 10% gradient and 30m width. 30m is sufficient for two-lane CAT 789D traffic. The ramp is narrowed to 23m (single-lane CAT 789D traffic) within 60m of the pit bottom to reduce waste stripping.

The pits are planned to be mined in sequence, targeting the highest value ore early in the mine life to reduce the capital payback period and improve overall project economics.

Two years were allocated for construction of both the mill and site infrastructure. Mining during that period would be focused on supplying non-acid generating waste to construct the starter tailings dam and preparing the pit for full-scale operation. Oxide milling is scheduled to commence in the latter half of the second construction year. Commissioning of the sulphide circuit at design capacity is planned to be completed at the end of the second construction year. Production would begin immediately afterwards, and continue for 11 years.

A total of 11.8Mt of oxide ore, 137.8Mt of sulphide ore and 267.6Mt of waste would be mined at an average daily rate of 88,000tpd. Life of mine stripping ratio is 1.8:1 waste to ore. Tepal has two waste types: 97.7Mt of non-acid generating (NAG) waste and 169.9Mt of potentially acid generating (PAG) waste. 68.7Mt of NAG is planned to be used for the construction of the tailings storage facility. The remaining NAG and PAG would be stored in engineered dumps located adjacent to the open pits.

The mine plan uses a fleet of diesel equipment supplied by Caterpillar (Tracsa), Mexico. The fleet includes: 6050 hydraulic shovels, a 994H and 992K wheel loaders, 789D trucks, and MD6540 rotary drills as the primary mining equipment. The primary mining equipment would be supported by a fleet of track dozers, motor graders, a rubber tire dozer and water truck. A contract waste stripping fleet would be used to supplement the mine fleet in Years 6 through 10.

1.9 Recovery Methods

Two types of ore are planned to be processed: oxide ore from the top layer and sulphide ore from deposit under the oxide layer. The overall process flowsheets can be found in Figures 1-2 and 1-3. Oxide ore would be processed for 4 days of a 32-day cycle at a rate of 56,000tpd and the sulphide ore would be processed for 28 days at a rate of 40,000tpd for Tepal North and 35,000tpd for Tepal South and Tizate in a common crushing and grinding circuit.

The oxide ore is planned to be transported by haul truck and processed using a conventional gyratory crusher, SAG & ball mill grinding circuit at 56,000tpd followed by settled storage in a pond. A dredge would be used to recover this material at 6850tpd for all 32 days, thickened to 50% solids, and pumped to an oxide CIL circuit.



Processing of the sulphide material is planned through the same grinding circuit as the oxide at a rate of 40,000tpd for Tepal North and 35,000tpd for Tepal South and Tizate. Ground material would be fed to a copper flotation circuit. The copper rougher/scavenger concentrates would be reground and cleaned to a final commercial concentrate grade, and then dewatered to 8% moisture. This concentrate is planned to be trucked off site to a smelter. A pyrite flotation concentrate made from copper rougher flotation tailings would be combined with the first copper cleaner tailings and fed to a sulphide CIL circuit. Carbon from both CIL circuits is planned to be sent to a common 5-tonne carbon plant for washing, stripping and regeneration. Stripped solution from the loaded carbon would be processed using electrowinning and smelting to produce doré bars.

The pyrite flotation tailings are proposed to be pumped to the Tailings Storage Facility (TSF) for disposal. A reclaim barge would transfer water from the TSF.

Figure 1-2: Oxide Overall Process Flowsheet

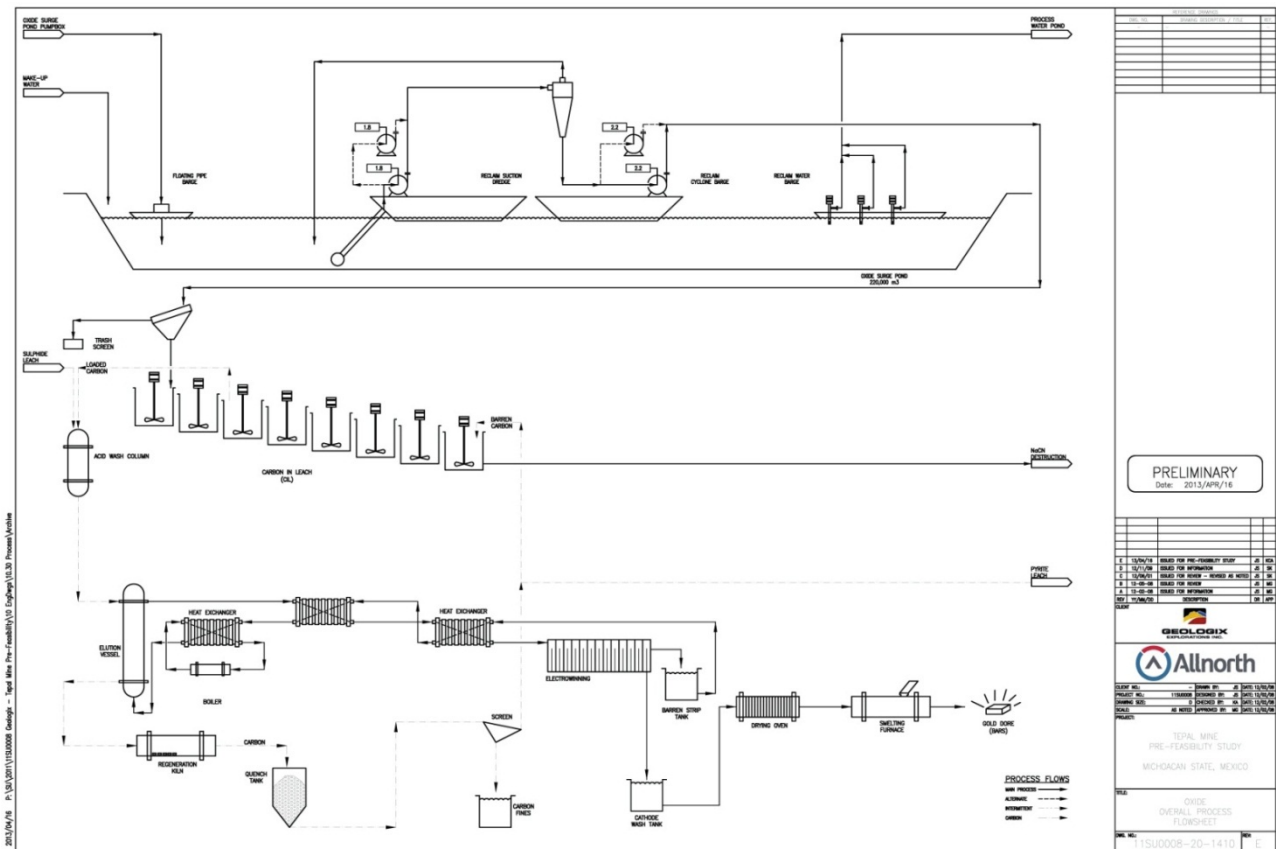
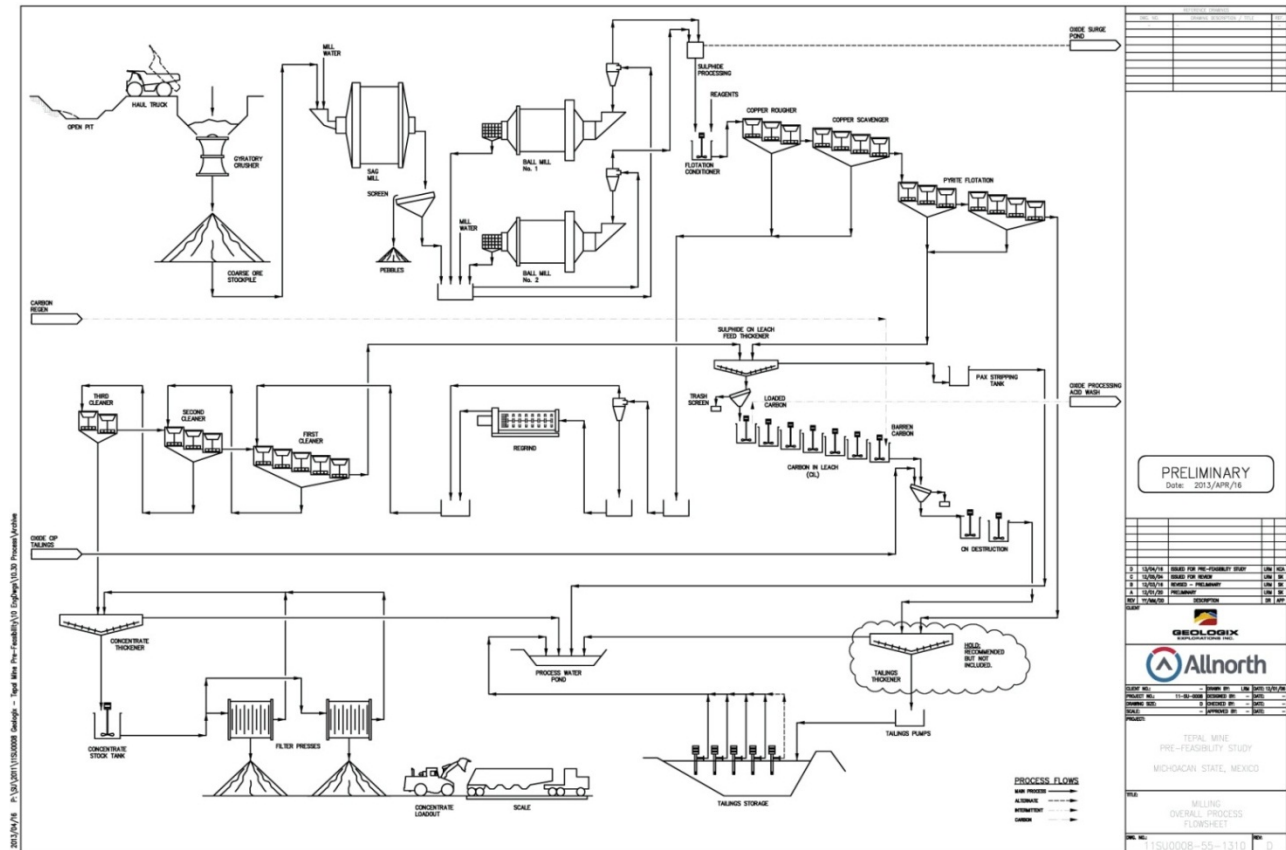


Figure 1-3: Sulphide Overall Process Flowsheet



1.10 Project Infrastructure

The project site is currently vacant or agricultural land, and has very little infrastructure in place. The services and ancillary facilities that would be required for the project include the following:

- Plant site access road
- Haul roads
- Waste rock dumps
- TSF
- Truck shop
- Service roads
- Power supply from the Comisión Federal de Electricidad grid, transmission to site, and project site distribution
- Oxide surge pond
- Process plant
- Assay laboratory

- CIL, carbon plant and refinery facilities
- Fuel storage and dispensing
- Security, scale house, administration and first aid facilities
- Fresh water supply, fire/fresh water storage and distribution, sewage collection and treatment, drainage and runoff settling ponds, and process water pond
- 350 person Temporary housing facilities for construction personnel
- 120 person Permanent accommodation complex
- Laydown areas and parking
- 750m long airstrip.

The majority of these facilities are planned to be constructed in the two year construction period prior to mining or mineral processing taking place. Commissioning would occur in the last 6 months of the 24 month construction period.

1.11 Environment and Permitting

Environmental baseline studies have been carried out for Geologix by Clifton Associates Ltd. out of Guadalajara, Jalisco, México. There are a number of protected species in the area; however the project is not in a protected area and a flora and fauna rescue and protection management plan is a normal requirement during Mexican permitting to manage protected species for mining projects.

Waste characterization studies were carried out by pHase Geochemistry Inc., Vancouver, British Columbia. Primary sulphide mineralization consists of chalcopyrite and pyrite with minor pyrrhotite, bornite, sphalerite, molybdenite and galena. The waste rock static test program on drill core was represented by 300 samples with 100 samples collected from each of the three deposits. With respect to rock type, a large proportion of tonalite (73% of samples tested) at Tepal North classified as potentially acid generating (PAG) compared to Tepal South (58% of samples) and Tizate (48% of samples). For all three deposits, >75% of late dyke and overburden samples typically classify as non-potentially acid generating (NAG). The altered volcanic samples at Tepal North consistently classified as PAG, whereas the unaltered volcanics at Tepal South predominantly classified as NAG. In relation to the in-situ oxidation state, the majority of oxide samples at Tepal South and Tizate classified as NAG. Further planning would be required for appropriate waste rock facility design and closure to manage PAG and metal leaching material, as well as a long-term monitoring protocol.

Water management requirements for the site would include groundwater wells to augment the water from other sources (i.e. pit seepage, tailings pond reclaim, waste rock retention) for use in the processing plant. There would be no discharge of process water to the environment during operation. All potentially acid generating waste dumps would be capped and revegetated at closure. Seepage during closure is planned to be collected, analysed, recycled or treated to ensure it meets standards for release to the environment.

Development of a number of social and environmental management plans would be important for this project including waste, water, air (dust), hazardous materials, public consultation and security plans.

There are a number of permits identified that would be required for the project under the General Law of Ecological Equilibrium and Environmental Protection. An Environmental Impact Manifest (MIA-P) and a Change of Land Use Authorization are the two key items that would be required to advance the project. Once the government would approve the MIA-P and Change of Land Use permit, additional detailed permits would be required for construction and operations.

Although the project is located adjacent to several small communities and the larger community of Tepalcatepec, the skilled workforce is limited. A technical institute, sponsored by the company, would assist with local capacity building for various positions in the mine. The majority of workers would likely come from other areas in Mexico and the plan is to house them at the camp. There are a number of different unions in Mexico that would influence construction and operations and would need to be considered in plans in the feasibility phase of the project.

1.12 Capital and Operating Costs

1.12.1 Capital Costs Estimates

The capital cost estimate was prepared using first principles, applying direct project experience and avoiding the use of general industry factors. The estimate is derived from engineers, contractors, and suppliers who have provided similar services to existing operations and have demonstrated success in executing the plans set forth in the study. Costs are expressed in US dollars with no escalation. The target accuracy of the estimate is $\pm 25\%$.

Total life of mine capital costs are estimated to be \$397M. Pre-production capital costs amount to \$354M. Capital costs during production years total \$44M. These costs are summarized in Table 1-7. The capital costs do not include mining fleet as it is accounted for in operating costs through leasing. Contingency for the project totals \$39M. Individual contingency rates were applied to each of the capital cost categories, with most rates being 15-20%. Some of the capital costs did not have any contingency applied as direct quotes were obtained from suppliers. This resulted in a blended contingency rate of 8.7%. Figures 1-4 and 1-5 show the breakdown of capital by pre-production and production period.

Table 1-7: Capital Cost Estimate Summary (\$M)

Category	Pre-Production	Production	Total Capital Costs	% of Total
Capitalized Pre-Stripping	21.5	0.0	21.5	5.4
Support Equipment	3.3	1.1	4.4	1.1
Tailings	34.7	42.0	76.7	19.3
Process Plant	229.6	0.0	229.6	57.8
Indirects	20.1	0.0	20.1	5.0
Owner's Costs	13.4	0.0	13.4	3.4
Salvage Value	0.0	-34.4	-34.4	-8.6
Closure	0.0	27.3	27.3	6.9
Contingency (8.7%)	31.3	7.6	38.9	9.8
Total Capital Costs	353.8	43.6	397.4	100.0

Figure 1-4: Breakdown of Pre-Production Capital Costs

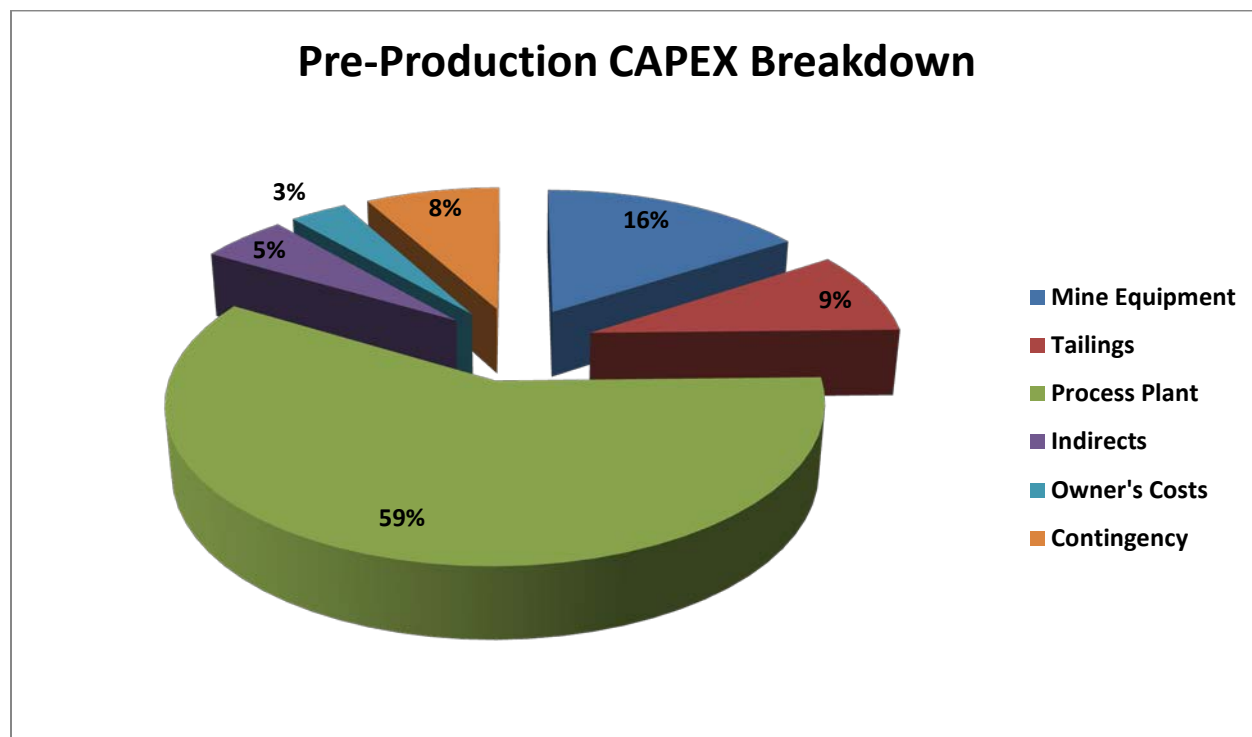
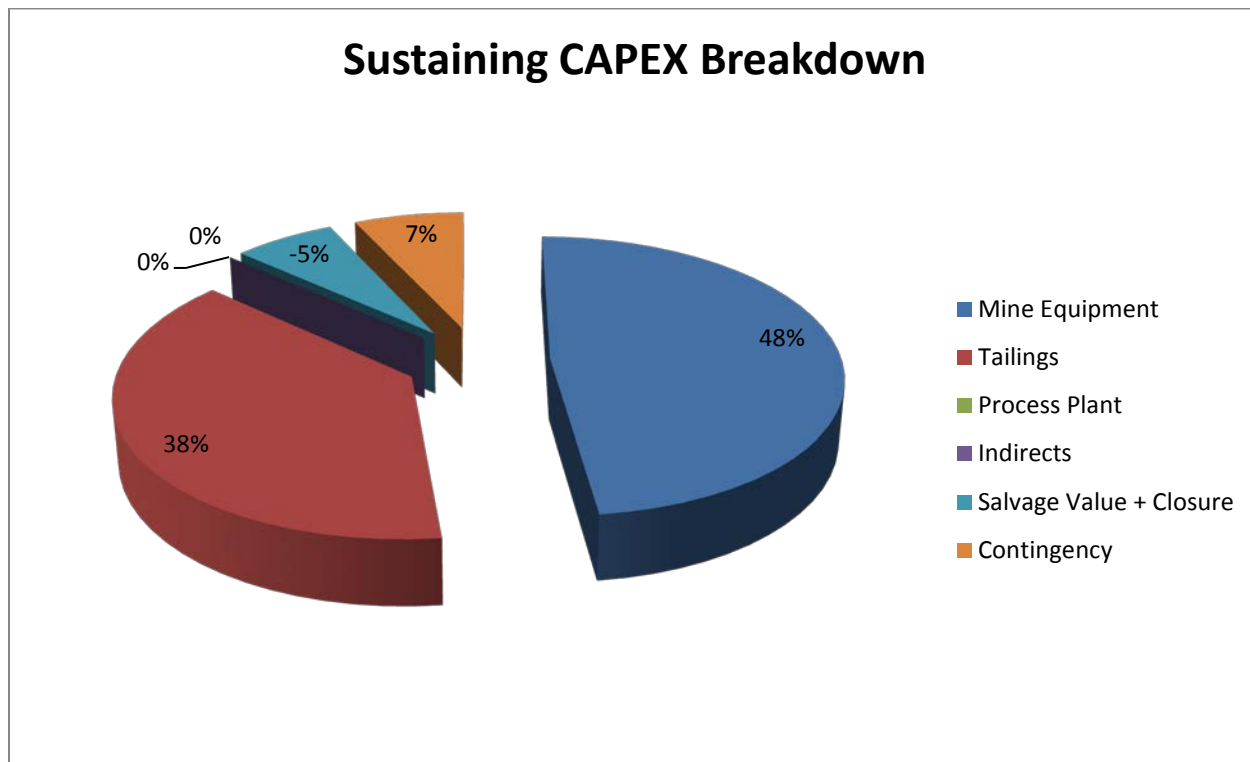


Figure 1-5: Breakdown of Sustaining Capita (including Closure and Salvage Value)



1.12.2 Reclamation/Closure & Salvage Cost Estimate

Closure cost for the project is estimated to be \$27M. Of this cost, \$25M accounted for the closure and reclamation of the TSF and the waste rock dumps. An additional \$2M was allocated for the closure and demolition of mill facility foundations. Closure costs are set to occur in Year 12, one year after the end of production. Salvage value is accounted for in 2027 amounting to \$34M. This amounts to 10% of the mine equipment and process plant capital costs.

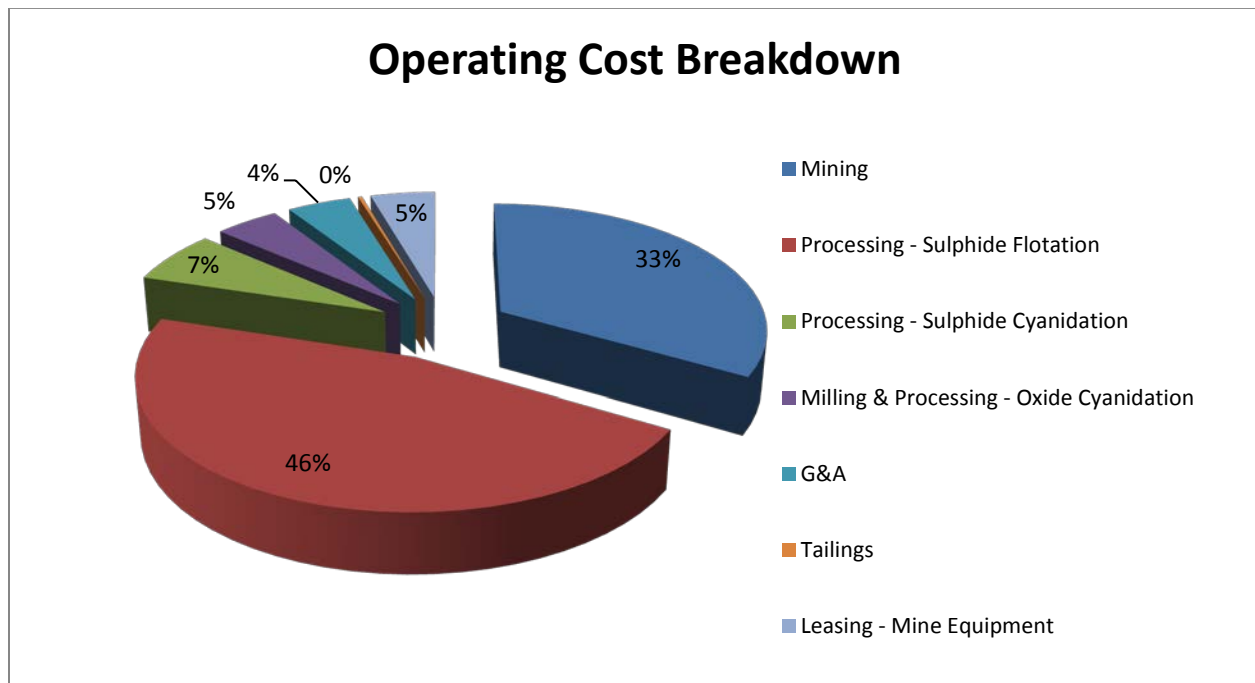
1.12.3 Operating Cost Estimates

Operating cost estimate in this section of the report include mining, processing, tailings, and administration up to the production of concentrate from the site. Mining costs incurred during the construction phase (pre-production Years -2 and -1) are capitalized and form part of the capital cost estimate. Concentrate transportation, treatment and refining charges, and royalties are discussed in Economic Analysis section of this report. Average annual operating costs over the life of mine are \$163M and are summarized in Table 1-8. Figure 1-6 demonstrates the distribution of operating costs.

Table 1-8: Average Annual Operating Cost Estimate

Category	\$M	%
Mining	54.9	33.6
Processing - Sulphide Flotation	76.3	46.8
Processing - Sulphide Cyanidation	10.8	6.6
Milling & Processing - Oxide Cyanidation	6.0	3.7
G&A	7.3	4.5
Tailings	0.5	0.3
Mine Equipment Leasing	7.4	4.5
Total Average Annual Operating Costs	163.2	100

Figure 1-6: Breakdown of Operating Costs



1.13 Economic Analysis

All operating scenarios were modeled to estimate the value that each could potentially realize. Pre-tax estimates of project values were prepared for comparative purposes, while after-tax estimates were developed to be more indicative of the true investment value. Sensitivity analyses were performed for variation in metal price, head grades, operating costs, and capital costs to determine their relative importance as project value drivers. The economic analysis presented includes the leasing of the mine equipment fleet. A discount rate of 7% was used for net present value (NPV) calculations.



This technical report contains forward-looking information regarding projected mine production rates and forecast of resulting cash flows as part of this study. The grades are based on sufficient sampling that is reasonably expected to be representative of the realized grades from actual mining operations. Factors such as the ability to obtain permits to construct and operate a mine, or to obtain major equipment of skilled labour on a timely basis, to achieve the assumed mine production rates at the assumed grades, may cause actual results to differ materially from those presented in this economic analysis.

1.13.1 Metal Price Scenarios

Table 1-9 outlines the metal prices scenarios that were used in the economic analysis.

Table 1-9: Metal Prices and Exchange Rates by Scenario

Parameter	Units	Three-Year Trailing Average as of February 28, 2013	PFS Base Case Four-Year Trailing Average as of February 28, 2013	Five-Year Trailing Average as of February 28, 2013	Whittle Parameter Pricing
Copper Price	USD \$/lb	3.71	3.44	3.32	3.15
Gold Price	USD \$/oz	1,518	1,390	1,286	1,400
Silver Price	USD \$/oz	29.58	26.03	23.68	26.00
Exchange Rate	MEX:USD	13:1	13:1	13:1	13:1
Exchange Rate	CDN:USD	1.00	1.00	1.00	1.00

The reserve estimates used in the economic analysis are outlined in the Section 1.7 of the Executive Summary and were held constant for all scenarios.

1.13.2 Copper, Gold, Silver Production

Recovered metals (for all four scenarios evaluated) are shown in Table 1-10. The amount of concentrate produced during the mine life is estimated at 908k dmt from 2016 to 2026. Figures 1-7 and 1-8 demonstrate the life of mine NSR breakdown as well as the payable metal by year.

Table 1-10: LOM Payable Metal

Category	Unit	Value
Payable Cu	LOM M lbs	503.1
Payable Au	LOM k oz	1,164.3
Payable Ag	LOM k oz	2,952.1

Figure 1-7: Life of Mine NSR Breakdown by Metal

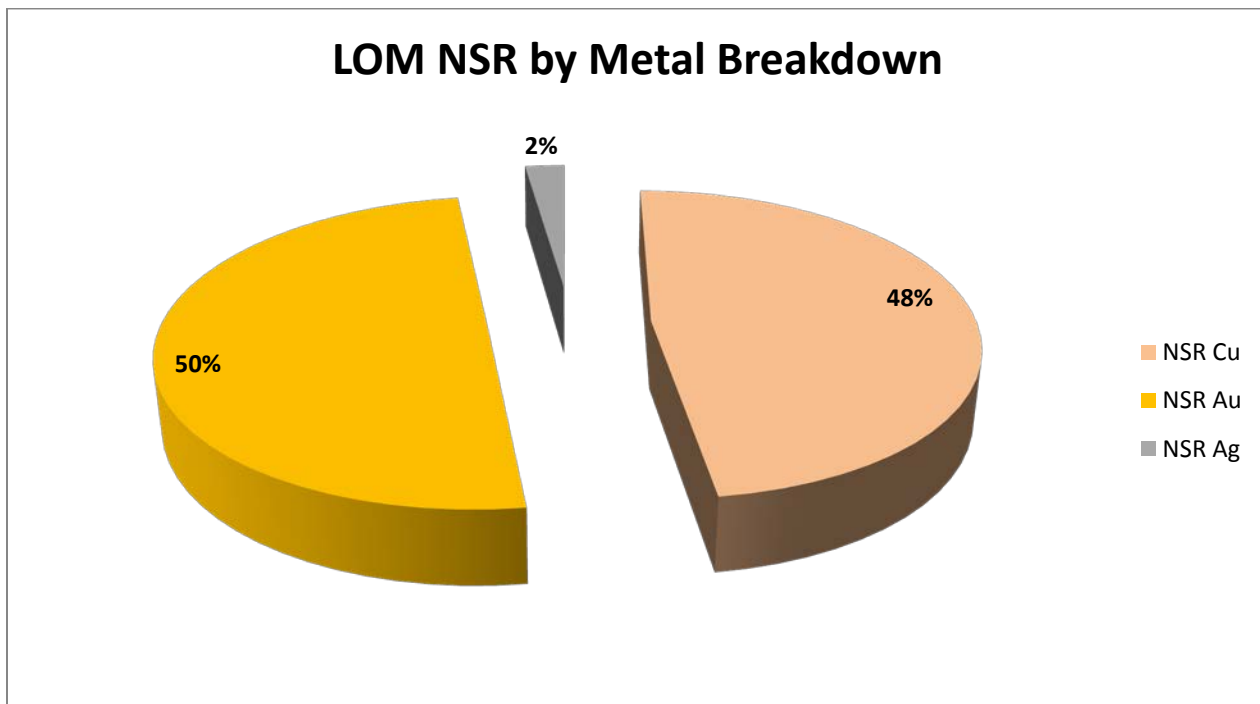
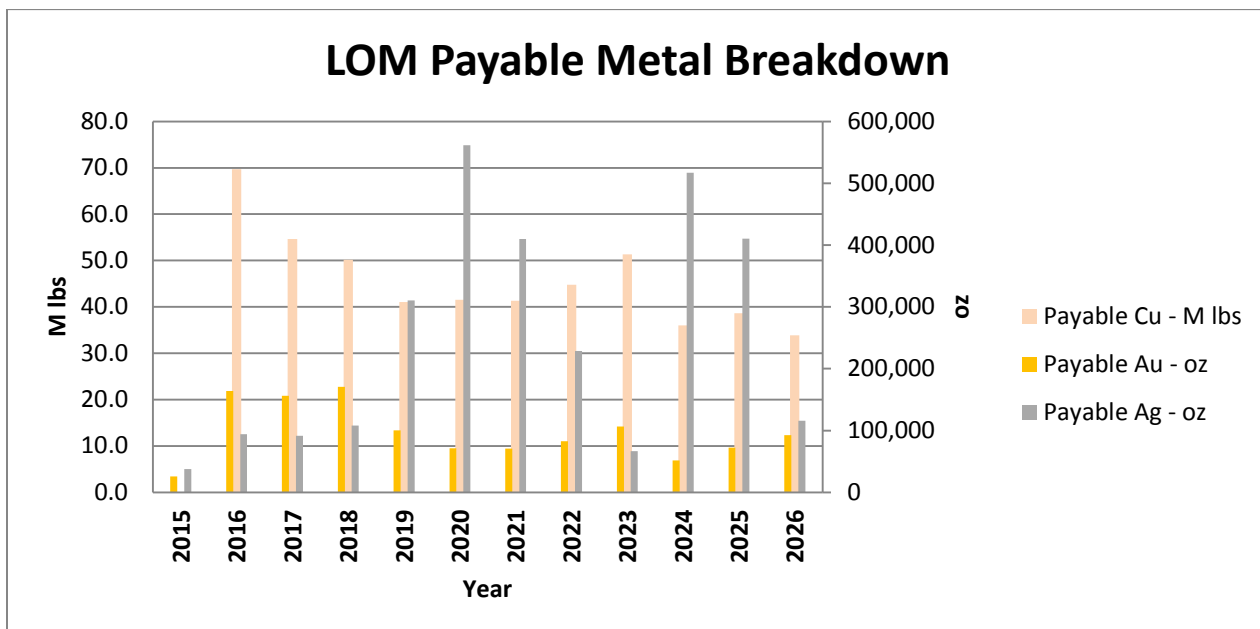


Figure 1-8: Payable Metal by Year





1.13.3 Taxes

The project has been evaluated on an after-tax basis in order to reflect a more indicative value of the project. Geologix commissioned PricewaterhouseCoopers LLP (PwC) in Vancouver, BC to prepare a tax model for the post tax economic evaluation of the project with the inclusion of applicable Mexican income taxes. These tax calculations have been used in the economic analysis presented in this report. The tax calculation uses an inflation factor of 3.5% per year, a 5% employee profit sharing, and a 28% Mexican corporate tax rate. Total taxes for the life of the project amount to \$234M.

1.13.4 Financial Performance

Pre-tax and after-tax financial performance for each of the four scenarios is summarized in Tables 1-11 through 1-14.



Table 1-11: Summary of Base Case Economic Results (Four-Year Trailing Average Metal Prices)

Category	Unit	Value
Mine Life	Years	11.5
Average Plant Throughput	M tpa	13.0
Payable Cu LOM	LOM M lbs	503.1
Average Payable Cu (Year 1-7)	M lbs/yr	49.0
Payable Au LOM	LOM k oz	1,164
Average Payable Au (Year 1-7)	k oz/yr	116.6
Payable Ag LOM	LOM k oz	2,952
Average Payable Ag (Year 1-7)	k oz/yr	257.8
Cash Cost (Net of By-Product Credits)	\$/Payable Cu lb	0.62
	\$/Payable Au oz	170
Cash Cost (Net of By-Product Credits incl. of Sustaining Capital)	\$/Payable Cu lb	0.81
	\$/Payable Au oz	251
Cash Cost (Net of By-Product Credits incl. Total Capital)	\$/Payable Cu lb	1.58
	\$/Payable Au oz	587
Unit OPEX (Offsite Costs + Operating Costs)	\$/tonne ore	13.40
Avg. Annual Cashflow during production	\$ M	86.8
Pre-Production Capital with Leased Equipment	\$ M	353.8
Sustaining & Closure Capital	\$ M	43.6
Total Capital + Contingency	\$ M	397.4
Pre-Tax NPV _{7%}	\$ M	495.1
Pre-Tax IRR	%	35.9
Pre-Tax Payback Period	Years	2.7
After-Tax NPV _{7%}	\$ M	344.8
After-Tax IRR	%	27.7
After-Tax Payback Period	Years	3.2



Table 1-12: Summary of Results using Three-Year Trailing Average Metal Prices

Category	Unit	Value
Mine Life	Years	11.5
Average Plant Throughput	M tpa	13.0
Payable Cu LOM	LOM M lbs	503.1
Average Payable Cu (Year 1-7)	M lbs/yr	49.0
Payable Au LOM	LOM k oz	1,164
Average Payable Au (Year 1-7)	k oz/yr	116.6
Payable Ag LOM	LOM k oz	2,952
Average Payable Ag (Year 1-7)	k oz/yr	257.8
Cash Cost (Net of By-Product Credits)	\$/Payable Cu lb	0.31
	\$/Payable Au oz	50
Cash Cost (Net of By-Product Credits incl. of Sustaining Capital)	\$/Payable Cu lb	0.50
	\$/Payable Au oz	132
Cash Cost (Net of By-Product Credits incl. Total Capital)	\$/Payable Cu lb	1.28
	\$/Payable Au oz	468
Unit OPEX (Offsite Costs + Operating Costs)	\$/tonne ore	13.45
Avg. Annual Cashflow during production	\$ M	103.8
Pre-Production Capital with Leased Equipment	\$ M	353.8
Sustaining & Closure Capital	\$ M	43.6
Total Capital + Contingency	\$ M	397.4
Pre-Tax NPV _{7%}	\$ M	675.2
Pre-Tax IRR	%	44.2
Pre-Tax Payback Period	Years	2.4
After-Tax NPV _{7%}	\$ M	474.5
After-Tax IRR	%	34.1
After-Tax Payback Period	Years	2.9



Table 1-13: Summary of Results using Five-Year Trailing Average Metal Prices

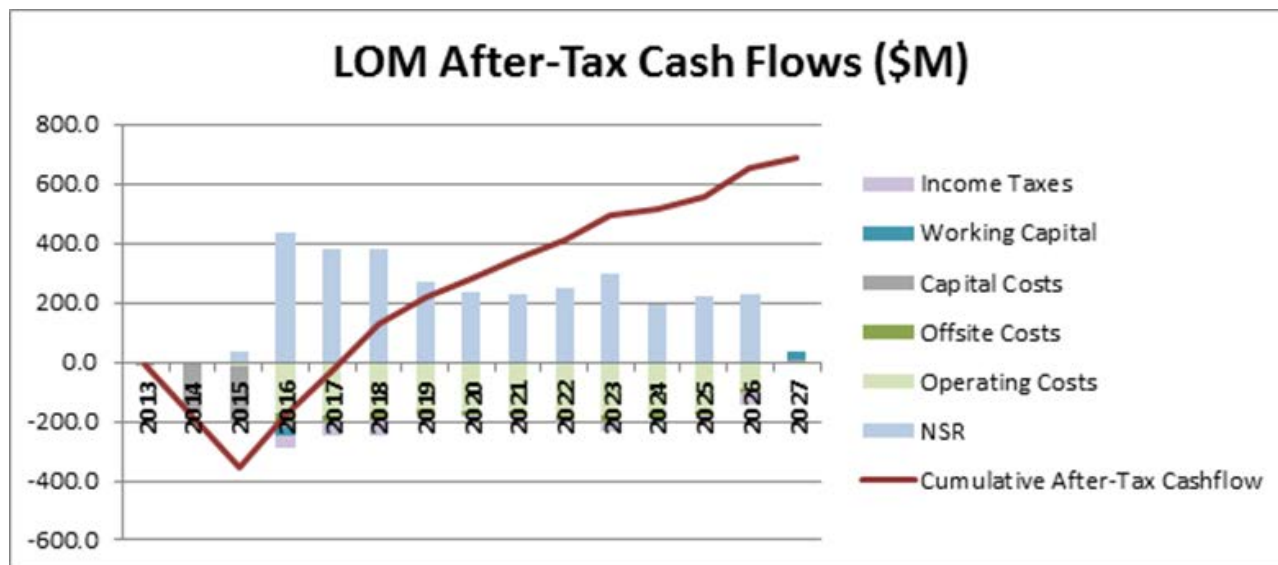
Category	Unit	Value
Mine Life	Years	11.5
Average Plant Throughput	M tpa	13.0
Payable Cu LOM	LOM M lbs	503.1
Average Payable Cu (Year 1-7)	M lbs/yr	49.0
Payable Au LOM	LOM k oz	1,164
Average Payable Au (Year 1-7)	k oz/yr	116.6
Payable Ag LOM	LOM k oz	2,952
Average Payable Ag (Year 1-7)	k oz/yr	257.8
Cash Cost (Net of By-Product Credits)	\$/Payable Cu lb	0.86
	\$/Payable Au oz	224
Cash Cost (Net of By-Product Credits incl. of Sustaining Capital)	\$/Payable Cu lb	1.05
	\$/Payable Au oz	305
Cash Cost (Net of By-Product Credits incl. Total Capital)	\$/Payable Cu lb	1.83
	\$/Payable Au oz	641
Unit OPEX (Offsite Costs + Operating Costs)	\$/tonne ore	13.37
Avg. Annual Cashflow during production	\$ M	76.1
Pre-Production Capital with Leased Equipment	\$ M	353.8
Sustaining & Closure Capital	\$ M	43.6
Total Capital + Contingency	\$ M	397.4
Pre-Tax NPV _{7%}	\$ M	379.7
Pre-Tax IRR	%	30.1
Pre-Tax Payback Period	Years	3.0
After-Tax NPV _{7%}	\$ M	261.5
After-Tax IRR	%	23.2
After-Tax Payback Period	Years	3.5



Table 1-14: Summary of Results using Whittle Parameter Pricing

Category	Unit	Value
Mine Life	Years	11.5
Average Plant Throughput	M tpa	13.0
Payable Cu LOM	LOM M lbs	503.1
Average Payable Cu (Year 1-7)	M lbs/yr	49.0
Payable Au LOM	LOM k oz	1,164
Average Payable Au (Year 1-7)	k oz/yr	116.6
Payable Ag LOM	LOM k oz	2,952
Average Payable Ag (Year 1-7)	k oz/yr	257.8
Cash Cost (Net of By-Product Credits)	\$/Payable Cu lb	0.59
	\$/Payable Au oz	292
Cash Cost (Net of By-Product Credits incl. of Sustaining Capital)	\$/Payable Cu lb	0.78
	\$/Payable Au oz	374
Cash Cost (Net of By-Product Credits incl. Total Capital)	\$/Payable Cu lb	1.55
	\$/Payable Au oz	709
Unit OPEX (Offsite Costs + Operating Costs)	\$/tonne ore	13.38
Avg. Annual Cashflow during production	\$ M	79.0
Pre-Production Capital with Leased Equipment	\$ M	353.8
Sustaining & Closure Capital	\$ M	43.6
Total Capital + Contingency	\$ M	397.4
Pre-Tax NPV _{7%}	\$ M	414.6
Pre-Tax IRR	%	32.2
Pre-Tax Payback Period	Years	2.9
After-Tax NPV _{7%}	\$ M	286.7
After-Tax IRR	%	24.8
After-Tax Payback Period	Years	3.4

Figure 1-9: After-Tax Cash Flows for Base Case



1.13.5 Sensitivity Analyses

Sensitivity Analyses were conducted on pre-tax and after-tax project NPV values for individual parameters including metal prices, head grades, operating costs, and capital costs. The results show that the project is most sensitive to metal price and head grade and least sensitive to changes in capital costs in all four scenarios.

The Base Case was evaluated at different discount rates to determine the effect on the project NPV. Project NPV declined as the discount rate increased. Table 1-15 demonstrates the summary of the discount rate sensitivity results on all three cases evaluated.

Table 1-15: NPV for Various Discount Rates using Four-Year Trailing Average Metal Prices

Discount Rate Sensitivity	Pre-Tax NPV _{x%} (\$M)	After-Tax NPV _{x%} (\$M)
0%	\$924.6	\$690.1
5%	\$590.3	\$421.2
7%	\$495.1	\$344.8
8%	\$453.6	\$311.6
10%	\$380.6	\$253.3

1.14 Conclusions and Recommendations

The financial analysis of the prefeasibility study demonstrates that the project has positive economics and warrants consideration for advancement to feasibility level engineering by Geologix.



Standard industry practices, equipment and processes were used in this study. The Qualified Persons for this report are not aware of any unusual significant risks or uncertainties that could affect the reliability or confidence in the project based on the data and information available to date.

1.14.1 Estimated Cost of Recommended Work Programs

The estimated cost of the next stage of work is presented in Table 1-16.

Table 1-16: Summary of Estimated Costs of Recommended Work Programs

Item	Cost in US\$
Mining Methods	515,000
Geotechnical and Hydrogeology Study	300,000
Geotechnical Evaluation for High wall Stability	100,000
Blast Pattern Design	15,000
Tailings Dam Design	100,000
Processing and Metallurgy	480,000
Testing for ADR and/or Merrill Crowe	5,000
Sulphide Process Testing	100,000
Pilot Plant	250,000
Oxide Mineralization Testing	50,000
Miscellaneous	75,000
Environment and Social	2,125,000
Additional Testwork	100,000
Security Risk Assessment	25,000
Environmental Studies, consultation, land acquisition	2,000,000
Feasibility Study	1,000,000
TOTAL	4,120,000