



1.0 EXECUTIVE SUMMARY

1.1 Summary

In November 2003, Corriente Resources (Corriente) commissioned AMEC Americas Limited (AMEC) to be the primary consultant for the preparation of a bankable feasibility study for the Mirador Copper Project. The deposit is located along the valley of the Rio Zamora in the Zamora Chinchipe Province of southeast Ecuador, adjacent to the border with Peru. The Mirador site is approximately 340 km south of Ecuador's capital city of Quito, 70 km east-southeast of the city of Cuenca, and about 418 km from the Pacific Ocean port of Machala. The site coordinates are 03°34'N latitude and 78°26'W longitude and the elevation ranges from 800 to 1,400 masl).

The site is accessible year round by road. The access from Machala to the city of Loja is on 259 km of paved road and then an additional 170 km on paved and gravel roads to site. Tundayme is the closest village to the deposit and is also accessed by about 170 km of paved and gravel roads from Cuenca or Loja. There is national highway road access from Cuenca to the capital city Quito 270 km to the north. Scheduled air service is available from Quito to Cuenca or Loja. Only small, chartered aircraft can fly to Gualaquiza, the closest asphalt airfield, about 40 km to the northwest of the deposit.

The region is characterized by a wet equatorial climate with a reported rainfall of 2,700 mm/a. Individual rainfall events can be over 60 mm in a 24 hour period. The site is bisected at its base by the valley of the Zamora River that lies at an elevation of about 700 masl and is flanked by highland areas that rise to the east and west. Drainage is into the Zamora River via the Wawayme River. Variations in the local topography have influenced the location of the main plant facilities.

Regional exploration was initiated in southeastern Ecuador by BHP Billiton S.A. in 1994. They identified possible porphyry copper systems in the region, including Mirador. Corriente has carried out exploration on the Mirador site since April 2000. The work completed to date has included 24,350 m of core drilling in 91 diamond drill holes arranged in a grid on approximately 75 m to 100 m centres.

The feasibility study is based on conventional open pit mining of the porphyry copper deposit. The deposit is covered by an average 22 m depth of overburden and a leached cap, a portion of which must be pre-stripped to access the orebody. The sulphide ore body is relatively homogenous, consisting dominantly of primary copper sulphides and is open at depth. Secondary enrichment is thinly developed in places over the primary sulphide mineralization. Overall, the metallurgy is regarded as relatively simple.



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The estimated mineral resources included in the mine plan total approximately 111 Mt grading 0.67% Cu and 0.22 g/t Au. Approximately 91 Mt of waste rock will be removed over the mine life, resulting in an average strip ratio of about 0.8:1.

The mine plan is based on a contract mining company providing ore to a conventional copper concentrator to support an average milling rate of 25,000 t/d (9.125 Mt/a). All facilities are designed for this throughput and operate on a continuous basis, 24 h/d, 365 d/a. Average production is estimated to be about 174,000 t/a of copper concentrate over the mine life of 12 plus years.

Run-of-mine ore will be crushed in a gyratory crusher. The mill flow sheet selected for Mirador will be a conventional copper-gold porphyry flowsheet, with relatively coarse primary semi-autogenous and ball mill grinding to about 150 µm followed by copper rougher flotation, concentrate regrind to 30 µm, and cleaner flotation and dewatering. Concentrates produced are predicted to average 29.8% copper at a recovery of 91%. Gold recovery is expected to average 47%. A laboratory analysis of concentrates indicated that no significant deleterious penalty element impurities are present. The concentrate will be trucked via the existing road network in the area to a port facility in Machala for shipment to smelters. Tailings from the process will be impounded in a zero discharge tailings pond; water will be reclaimed from the tailings pond and reused in the process.

The major infrastructure required to develop the property includes road access upgrades, a run-of-river hydroelectric scheme, and power line. The hydroelectric development is not part of the scope of this study and the supply of power will be through an independent build-own-operate arrangement. A 2.7 km access road is needed to connect the plant and administration areas to the existing highway that passes by the property. Access between the plant area and the mine will be via upgraded existing roads including a new 5 km section to the pit area. A 10 km overland conveyor will connect the process plant and the crusher. In addition, a 100 km power line will have to be constructed, as part of the Sabanilla Hydroelectric Project, to connect the site to the hydroelectric power station and the existing power grid. The power demand of the project is about 28.3 MW. Seasonal variations in the output of the hydroelectric scheme result in an average output of about 23.5 MW and, on average, 4.8 MW of supplementary power will be imported from the existing power grid.

Merit Consultants International Inc. (Merit) estimated the capital cost to build the facilities as described in this report to be US\$202 million.



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Mining costs were based on contract mining budget quotations. Process operating costs and G&A costs were estimated by AMEC with input from Corriente. The estimated life of mine operating costs is US\$3.23/t mined or US\$5.41/t milled.

At a copper price of US\$1.00/lb and a gold price of US\$400/oz, the project has a pre-tax IRR of 14.8%, an NPV of US\$71.2 million at 8% and a five-year payback.

The financial analysis indicates the project is most sensitive to changes in revenue, either through increased copper prices or increased tonnage. It is AMEC's recommendation that Corriente investigate increasing the plant throughput.

1.2 Project Background

1.2.1 Terms of Reference

Corriente is evaluating the development of the Mirador Copper Project in southeastern Ecuador. Corriente commissioned AMEC to be the prime consultant for the feasibility study and to compile this feasibility study report, with input from Corriente's various consultants as listed below. The feasibility study addressed the resource, mine plan, processing and support facilities, site access, transportation of concentrate, port requirements, concentrate marketing and project execution.

The following consultants were responsible for input to the feasibility study:

AMEC

- overall study compilation
- review of project geology
- review of sample QA/QC program
- estimate of mineral resources
- mine planning
- specification and management of metallurgical testwork program
- flowsheet development
- design of the process facilities and site support facilities
- design of mine roads and concentrator access road
- input to capital cost estimating:
 - equipment pricing for major process equipment
 - quantity estimation for major civil and structural components
- operating cost estimates for mining, process and administration



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- pre-tax financial analysis
- geotechnical engineering to support pit design
- site water management
- mine waste management
- ARD analysis
- specification and management of environmental and socio-economic baseline studies, including impact analysis.

Caminosca Caminos y Canales Cia. Ltda. (Caminosca)

- design of the site access roads and the mine haul road
- surveying.

Knight Piésold Ltd (KP)

- design of Tailings Management Facility
- geotechnical investigations to support tailings impoundment design
- investigations for freshwater wells
- design of tailings distribution pipework for TMF
- design of reclaim barge and pipeline for TMF
- TMF capital and operating cost estimates
- TMF closure plan.

Merit Consultants International Inc. (Merit)

- study coordination
- development of project implementation plan and schedule
- assessment of off-site infrastructure
- capital cost estimating.

Terrambiente

- environmental base line monitoring
- environmental impact assessment report
- socio economic studies
- environmental management plan.



Corriente

- geologic solids for dikes and supergene material
- geotechnical investigation of plant site area
- overland conveying system
- port operations and costing
- concentrate marketing
- concentrate trucking and shipping
- power supply.

1.2.2 Property Description and Location

The Mirador Project is located approximately 340 km south of Ecuador's capital City of Quito, along the valley of the Zamora River in the Zamora Chinchipe Province of southeast Ecuador, adjacent to the border with Peru at approximately 9 604 200 N, 785°000 E; UTM Zone 17S coordinates. The nearest village to the Mirador deposit is Tundayme, which is accessed by 170 km of paved highway and gravel roads from either Cuenca (about five to six hours travel time) or Loja (four hours travel time).

The area has a wet equatorial climate with a reported rainfall of 2,700 mm/a. Individual rainfall events can be over 60 mm in a 24-hour period. Due to variations in local topography there is a wide range in rainfall levels, and the area could be characterized as having numerous microclimates.

The valley of the Zamora bisects the project area at an elevation of about 700 masl. The flanking highland areas of the Paramos de Matanga on the west, and the Cordillera de Condor on the east, rise to maximum elevations of 4,200 and 3,500 masl, respectively. The elevation of the Mirador project ranges from about 800 masl to 1,400 masl. Drainage is into the Zamora via Wawayme River.

A site location map is provided in Figure 1-1 followed by photographs of the site.



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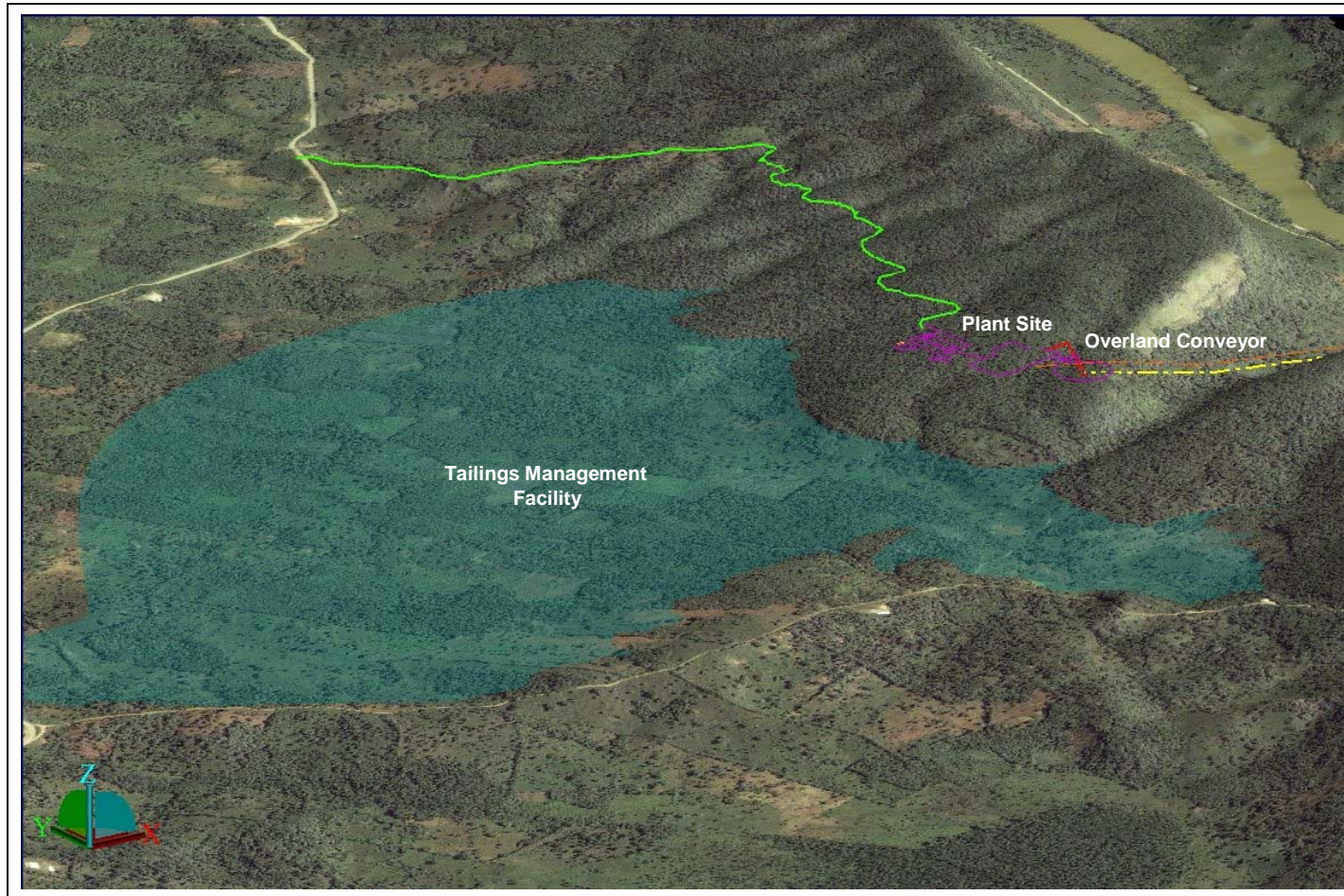
Figure 1-1: Location Map





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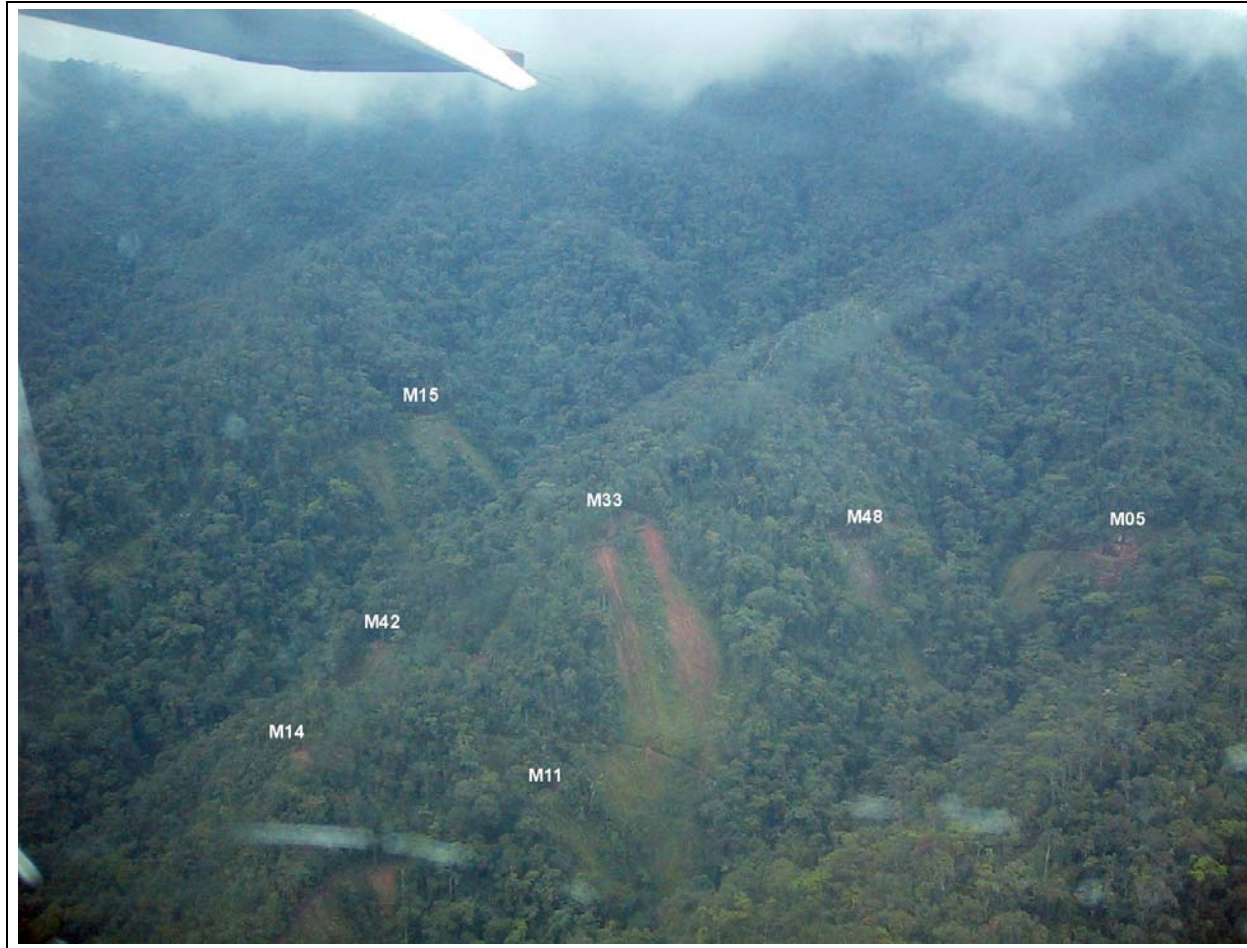
Figure 1-2: Plant Site Area





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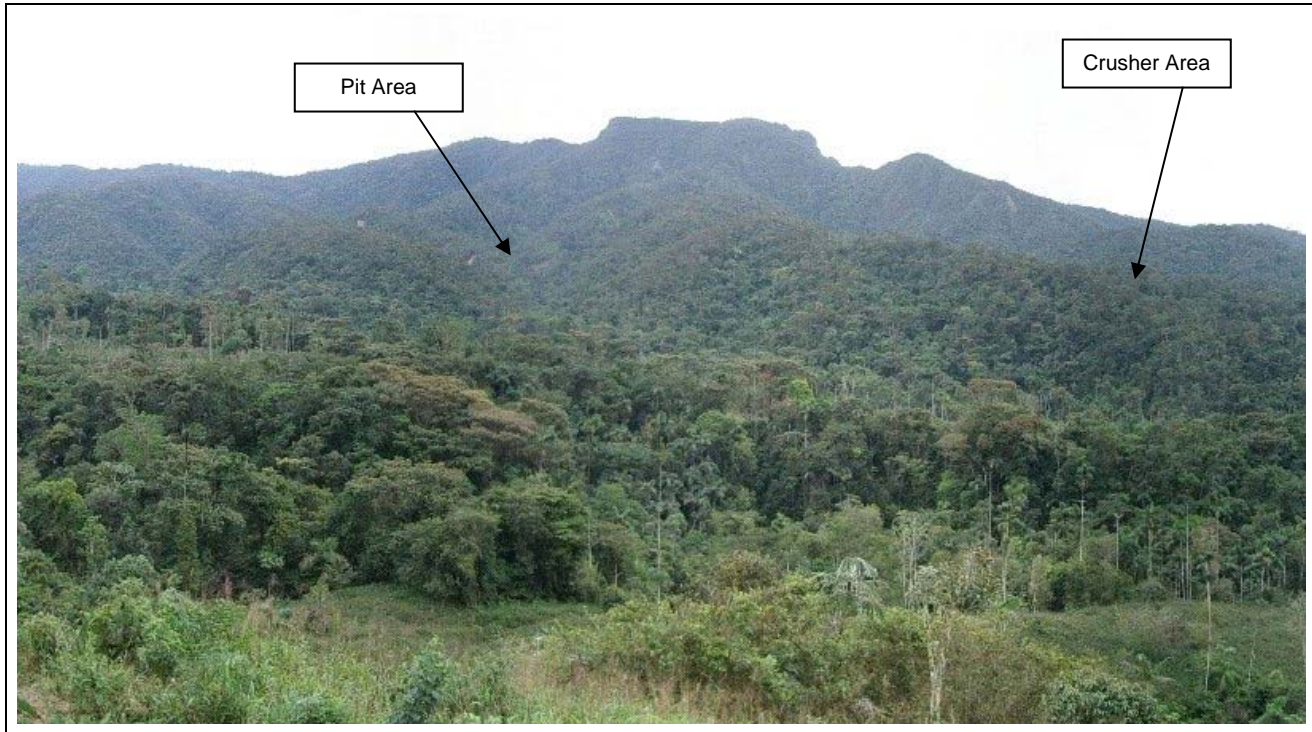
Figure 1-3: Pit Area Looking South





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Figure 1-4: View of the Crusher and Pit Areas





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Figure 1-5: Tailings Area Looking North





1.3 Geology and Resource Modelling

Corriente engaged AMEC to provide a mineral resource estimate and Qualified Person's review and Technical Report for the Mirador Project. The work entailed estimating mineral resources in conformance with the CIM Mineral Resource and Mineral Reserve definitions referred to in National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects. It also involved the preparation of a Technical Report as defined in NI 43-101 and in compliance with the format set out in 43-101F1. Susan Lomas, P.Geo., an employee of AMEC, served as the Qualified Person responsible for preparing the resource estimation.

1.3.1 History

Regional exploration was initiated in southeastern Ecuador by BHP Billiton S.A. in 1994. BHP Billiton used silt sampling to identify favourable areas of base metal anomalies. With further mapping they identified possible porphyry copper systems associated with these anomalies. At least eight separate porphyry copper systems have been identified in the region.

The area of Mirador was recognized as an area of interest during the original reconnaissance geological and geochemical surveys completed in December 1994. These surveys, which included 315 pan concentrates of stream sediments, defined an area roughly 50 km² that contained anomalous values for Cu, Mo, Au, Zn, and Ag. However, BHP Billiton was forced to focus its efforts in the north part of the belt since the present property was off limits between 1995 and 1999 due to the border conflict in the area between Ecuador and Peru.

After a peace treaty was signed with Peru in July 1999, BHP Billiton completed detailed follow-up surveys to better define the anomaly areas at the Mirador property. They collected 746 soil samples along ridges and 219 rock chips from outcrops found in drainages traversing the anomalous zones. This work along with geological and alteration mapping defined the Mirador (previously known as Wawayme) zone and the Chancho and Chancho Norte Zones to the southwest.

In October 1999, BHP Billiton entered into an option agreement with Corriente covering 880 km² in the northern part of the porphyry belt. Subsequently, BHP Billiton and Corriente entered into a further agreement in April 2000 covering 230 km² in the southern part of the porphyry belt (the Mirador – Chancho property).

In 2002, after completion of 52 diamond drill holes, results of a polygonal resource estimate were released (12 February 2002). The estimated tonnage and grade,



calculated at a 0.65% Cu cutoff grade, were 218 Mt grading 0.73% Cu, all in the Inferred Mineral Resource category.

In 2003, Corriente released a second mineral resource for the Mirador Project in a NI 43-101 Technical Report (February 2003). The updated resource estimate was based on 10 additional holes and estimated using polygonal methods. This resource estimate, calculated at a 0.65 Cu % cutoff grade, yielded 182 Mt grading 0.76% Cu and 0.221 g/t Au. The estimate was classified as Inferred Mineral Resources.

1.3.2 Deposit Type and Mineralization

The copper and gold mineralization encountered at the Mirador deposit display many of the characteristics of calc-alkaline type porphyry copper systems. Supergene zones of enrichment are weakly developed beneath a superficial leach cap that averages less than 22 m thick.

Mineralization at Mirador can be divided into early molybdenum, early copper ± gold, and late copper-gold stages. Molybdenum is associated with early quartz veining. Both copper-gold events are sulphide dominated. Chalcopyrite occurs as mainly irregular masses between clasts in the early breccia (with some disseminated) and as fine disseminations in a halo zone around the breccia within the Zamora granite. The syn- to post-mineral porphyry dykes are variably and weakly mineralized by the late copper-gold disseminations and sparse sulphide veins.

A late stage series of 1 cm to 2 cm quartz sulphide stingers transect the project. They are subvertically emplaced but their strike is unknown, as they have only been seen in drill core. These veinlets are sulphide rich and have elevated gold and zinc values. They were intersected in the vertical drill holes and were found running down the core over metres of core length. AMEC developed a capping strategy to limit the influence of these high gold values during gold grade interpolation.

The Mirador porphyry system exhibits well-defined alteration zoning, with a large (approximately 4 km²), quartz-sericite alteration zone covering a large part of the wall rock and quartz diorite porphyry. This alteration has overprinted a potassic alteration whose remnants are small secondary biotite nuclei mainly in the quartz monzonite.

1.3.3 Resource Classification and Summary

The mineral resources of the Mirador project were classified using logic consistent with the CIM definitions referred to in NI 43-101. The project mineral resources were classified into one of two categories: Indicated or Inferred Mineral Resources. Review



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of the model relative to the drill hole data, in sections and in plans, showed good geologic and grade continuity in areas where sample spacing is around 100 m. The current drill hole spacing is nominally 100 m with some areas approaching 75 m. Combined with spatial statistical work and investigation of confidence limits in predicting planned annual production work, AMEC decided that blocks covered by this data spacing may be classified as Indicated Mineral Resources. In the hypogene mineralization two drill holes needed to be within 100 m of the block centre or a single drill hole within 35 m to be classified as Indicated Mineral Resources. Supergene mineralization needed to have two drill holes within 75 m of a block centre or a single drill hole within 35 m. Locally a second pass utilizing a one-hole rule was necessary to prevent a “striping” effect of isolated Inferred Mineral Resource blocks amongst mostly Indicated mineral resource blocks.

All interpolated blocks that did not meet the criteria for Indicated mineral resources were assigned as Inferred mineral resources if they fell within 200 m of a drill hole composite in the hypogene mineralization or 150 m if in the supergene zone.

Table 1-1 contains the results of the resource estimation for the Mirador Deposit as of 23 September 2004. The estimate is made by mineralization type. The resource estimate result for Mirador is being declared using the 0.40% Cu cutoff. For comparative purposes, additional copper grade cutoffs equal to 0.50. 0.55. 0.60. 0.65 and 0.70 % were also tabulated and they are included in Table 1-2. The resources are reported to a depth of 850 m elevation, which is approximately 500 m below the surface.

Table 1-1: Mirador Deposit Mineral Resource Summary, 23 September 2004

Zone	Tonnes	Au (g/t)	Cu (%)
0.4 Cu % Cutoff			
<i>Indicated Mineral Resource</i>			
Mixed	1,300,000	0.23	0.57
Enriched	6,700,000	0.24	0.99
MNZD (mineralized)	301,700,000	0.20	0.65
Total			
Indicated hypogene	301,700,000	0.20	0.65
Indicated supergene	8,000,000	0.24	0.92
<i>Inferred Mineral Resource</i>			
Mixed	-	-	-
Enriched	1,200,000	0.25	0.83
MNZD	313,900,000	0.17	0.56
Total			
Inferred hypogene	313,900,000	0.17	0.56
Inferred supergene	1,200,000	0.25	0.83



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Table 1-2: Mirador Deposit Mineral Resource Summary – Comparative Cutoffs, 23 September 2004

Zone		Tonnes	Au (g/t)	Cu (%)
0.5 Cu % Cutoff (Cu ID)				
<i>Indicated Mineral Resource</i>				
	Mixed	800,000	0.25	0.65
	Enriched	6,600,000	0.24	1.00
	MNZD	254,800,000	0.21	0.68
Total	Indicated hypogene	254,800,000	0.21	0.68
	Indicated supergene	7,400,000	0.24	0.96
<i>Inferred Mineral Resource</i>				
	Mixed	-	-	-
	Enriched	1,200,000	0.25	0.83
	MNZD	215,300,000	0.18	0.62
Total	Inferred hypogene	215,300,000	0.18	0.62
	Inferred supergene	1,200,000	0.25	0.83
0.6 Cu % Cutoff (Cu ID)				
<i>Indicated Mineral Resource</i>				
	Mixed	500,000	0.28	0.76
	Enriched	6,200,000	0.24	1.03
	MNZD	182,400,000	0.22	0.73
Total	Indicated hypogene	182,400,000	0.22	0.73
	Indicated supergene	6,700,000	0.24	1.01
<i>Inferred Mineral Resource</i>				
	Mixed	-	-	-
	Enriched	900,000	0.22	0.89
	MNZD	93,300,000	0.20	0.71
Total	Inferred hypogene	93,300,000	0.20	0.71
	Inferred supergene	900,000	0.22	0.89
0.65 Cu % Cutoff (Cu ID)				
<i>Indicated Mineral Resource</i>				
	Mixed	400,000	0.25	0.75
	Enriched	6,000,000	0.25	1.05
	MNZD	140,600,000	0.23	0.77
Total	Indicated hypogene	140,600,000	0.23	0.77
	Indicated supergene	6,400,000	0.25	1.03
<i>Inferred Mineral Resource</i>				
	Mixed	-	-	-
	Enriched	800,000	0.25	1.00
	MNZD	56,900,000	0.22	0.76
Total	Inferred hypogene	56,900,000	0.22	0.76
	Inferred supergene	800,000	0.25	1.00
0.7 Cu % Cutoff (Cu ID)				
<i>Indicated Mineral Resource</i>				
	Mixed	200,000	0.35	1.05
	Enriched	5,800,000	0.24	1.05
	MNZD	101,600,000	0.24	0.80
Total	Indicated hypogene	101,600,000	0.24	0.80
	Indicated supergene	6,000,000	0.25	1.05
<i>Inferred Mineral Resource</i>				
	Mixed	-	-	-
	Enriched	800,000	0.25	1.00
	MNZD	40,400,000	0.23	0.79
Total	Inferred hypogene	40,400,000	0.23	0.79
	Inferred supergene	-	-	-



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1.4 Mine Plan

1.4.1 Introduction

The resource model was divided into four copper/gold-bearing zones: leached, mixed, enriched, and mineralized. After resource modelling was completed, these four zones were combined into a single zone per block to reflect the mineability of each block, on a diluted basis. The mine plan treats leached material as saprolitic and all other material as sulphide.

Mining at Mirador will be by conventional open pit truck and shovel methods. Budget pricing was obtained for contract mining. The mining fleet is estimated to consist of two 19.9 m³ front-end loaders and eight 140 t trucks. Support equipment will include bulldozers, graders, and excavators to maintain the surfaces of the roads, dumps and operating benches and the water collection system at the pit rim and in-pit.

Mining occurs in three phases: a starter pit which is mined for eight years, an intermediate pit which is mined over a 9 year time frame and the ultimate pit which is mined over 11 years. Overlaps of the pits occur to balance waste stripping and ore feed grade. The annual mine production and mill feed forecast for the three mining phases is summarized in Table 1-3.

Table 1-3: Mine Production Forecast

Year	Total	Grade			Total	S.R.
	Mill Feed (t x 000)	NSR (\$/t)	Cu (%)	Au (g/t)	Waste (t x 000)	
-1*	2,100	8.570	0.661	0.223	14,175	6.75
1	7,025	9.622	0.743	0.227	14,344	2.04
2	9,125	9.880	0.762	0.228	7,481	0.82
3	9,125	8.846	0.683	0.237	7,132	0.78
4	9,125	9.066	0.700	0.241	5,974	0.65
5	9,125	8.850	0.683	0.234	5,903	0.65
6	9,125	8.736	0.674	0.230	5,907	0.65
7	9,125	8.453	0.653	0.238	5,908	0.65
8	9,125	7.962	0.615	0.198	5,911	0.65
9	9,125	8.383	0.647	0.200	5,877	0.64
10	9,125	8.242	0.636	0.196	5,898	0.65
11	9,125	7.880	0.608	0.184	3,811	0.42
12	9,125	8.178	0.631	0.187	2,628	0.29
13	1,127	9.387	0.724	0.203	223	0.20
Total	110,627	8.662	0.668	0.216	91,172	0.82

* Includes stockpiled ore for plant feed in Year 1



1.4.2 Open Pit Optimization

To run the pit optimization, an NSR model was created within Gemcom®. The calculated NSR values are based on copper values only, and do not include gold. Only model blocks carrying ore grades within the indicated category were assigned a revenue value. Blocks carrying grades in the inferred category were treated as waste, and referenced as Waste-Inferred in this report. This model was then imported into Whittle 4X® mine optimization software package. A series of pit shells were created at various net smelter return (NSR) values utilizing a revenue factor, these pit shells were then analyzed to select the best one for pit design. The best pit is the maximum NPV at the stated criteria. The Whittle® Milawa algorithm was used to generate production forecasts at varying throughputs, from 20,000 t/d through 35,000 t/d, assuming three pit phases. The shells were loaded back into the mine planning package and evaluated for accessibility and overall pit footprint. For the purposes of this study, Corriente chose 25,000 t/d, based on company objectives at this time, and design work, which had completed to date. The discount rate used in all Whittle work was 10%.

The parameters used to create the NSR and optimization models are summarized in Table 1-4.

The Whittle forecast output for the series of generated shells is shown in Figure 1-6. The Worst Case mining forecast simulated mining the shell in a top-to-bottom manner, a scenario that is unlikely to occur in even the most challenging environment. The Best Case mining forecast mines in a shell-by-shell manner, which is far too optimistic to occur and due to mining width, is not feasible. The Specified Case allows mining each specified shell. In this case, three shells were chosen to represent the starter, intermediate and ultimate pit shells. These shells could then be forecast using the Milawa algorithm, which allows for simultaneous mining of multiple phases in an optimized manner. In summary, the ultimate pit was selected based on maximizing the deposits NPV. It is expected that the Specified Case will be achieved with proper scheduling, and therefore significantly greater gross value than the Worst Case indicates.



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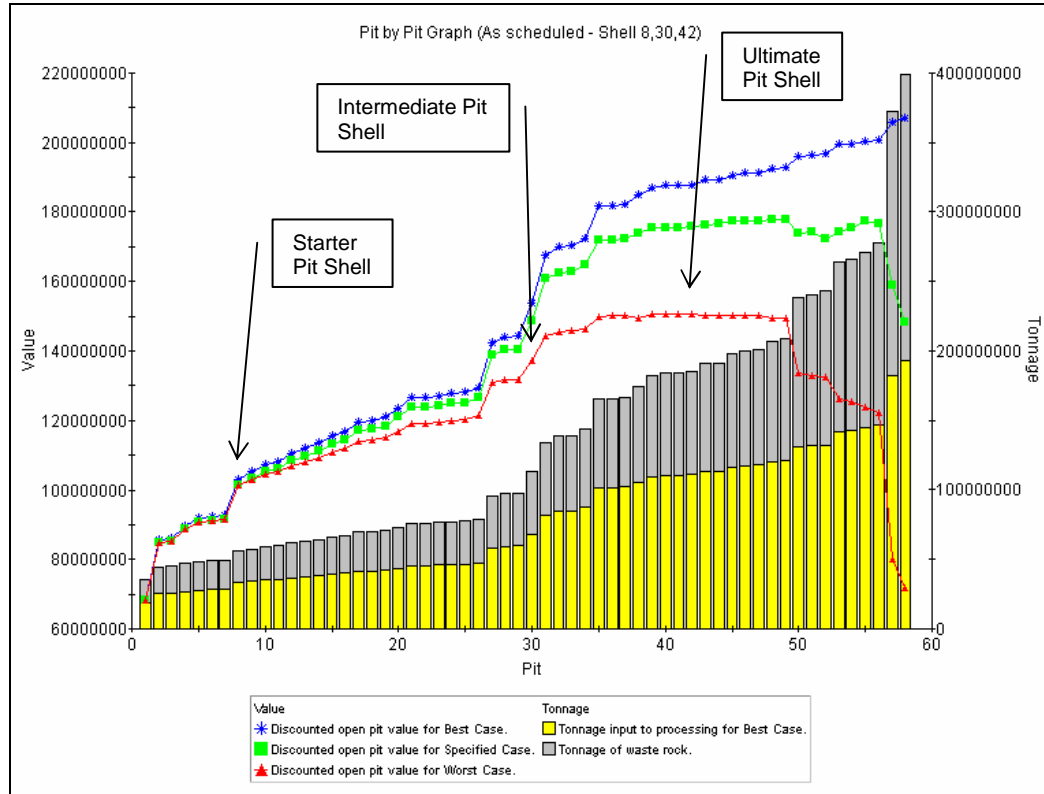
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Table 1-4: Pit Optimization and NSR Parameters

Parameter	Unit	Base Case
<i>Block Size</i>		
X	(m)	15
Y	(m)	15
Z – oxide	(m)	12
<i>Bulk Density</i>		
Ore & Waste	(t/m ³)	Variable from model
<i>Metal Price</i>		
Copper	(\$/lb)	1.00
<i>Primary Process Recovery</i>		
		Cu
	(%)	91.4
<i>By-product Credits</i>		
		N/A
<i>Concentrate Grade</i>		
Copper	(%)	29.8
<i>Smelter Terms</i>		
		Cu
Treatment Charge	(\$/dmt)	75
Amount Payable	(%)	96.5
Refining	(\$/lb)	0.075
<i>Transportation (all products)</i>		
Road freight & storage	(\$/wmt)	81.62
Ocean Freight	(\$/wmt)	Incl. above
Moisture	(%)	8.00
Losses	(%)	0.25
<i>Mining Recovery</i>		
	(%)	100
<i>Preliminary Costs</i>		
Process and G&A	(\$/t milled)	3.90
Ore mining @ 25,000tpd	(\$/t mined)	0.89
Waste mining	(\$/t mined)	0.89
<i>Pit Slope Angles</i>		
	(ø)	35 to 42
<i>Maximum Slope Height</i>		
	m	500



Figure 1-6: Whittle Nested Shell Output



1.4.3 Pit Design

The parameters used in the detailed pit design, including the geotechnical data described above, are as follows:

- bench height, single benching 12 m
- berm width 8 m
- haul roads and pit ramps
 - total width allowance 22 m
 - running surface 18 m
 - berms and ditches 4 m
 - berm access from ramp bottom only
 - maximum grade 10%

The three pit phases share a final wall on the southwest of the pit. Stripping will start on the south highwall and progress towards the north. Waste from the pit will be



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hauled to the waste dump or used for haul road construction and maintenance. Waste dump construction will isolate saprolitic (leached) waste so that it is contained within a sulphide waste berm.

The primary road access will be from the pit entrance through to the crushing facilities. All haul roads, both within and outside the pit, are designed to a minimum width of 22 m, except the lowest segments of the pit, which are 18 m (single-lane access).

1.4.4 Mining Estimate

The resources within the Mirador pits are summarized in Table 1-5, only the Indicated resources are considered mill feed; the Inferred resource is treated as waste.

Table 1-5: Resources by Material Type

	Tonnes (000)	Cutoff NSR (US\$/t)	Cutoff Cu (%)	NSR (US\$/t)	Cu (%)	Au (g/t)
<i>Indicated</i>						
Phase One	38,294	6.67	0.44	9.74	0.751	0.241
Phase Two	29,807	5.84	0.41	8.23	0.635	0.211
Phase Three	42,526	5.46	0.35	8.00	0.617	0.198
Total	110,627	-	-	8.66	0.668	0.216
<i>Inferred</i>						
Phase One	2,407	6.67	0.44	8.86	0.683	0.228
Phase Two	2,330	5.84	0.41	6.91	0.533	0.191
Phase Three	5,057	5.46	0.35	5.94	0.458	0.166
Total	9,794	-	-	6.89	0.531	0.187

Note: Copper cutoff shown as a NSR equivalent; actual NSR cutoff was completed in Whittle.

Waste material was categorized into the three types listed in Table 1-6. Material that was within the leached area was considered saprolite. Inferred waste was material above copper cutoff grade, but within the inferred resource category. All other material is been tabulated as sulphide waste.

Table 1-6: Waste Quantities and Type

Waste Type	Phase One (t x 000)	Phase Two (t x 000)	Phase Three (t x 000)	Total (t x 000)
Sulphide Waste	12,300	9,549	23,726	45,575
Inferred Waste	2,407	2,330	5,057	9,794
Saprolitic (Leached) Waste	21,129	6,143	8,531	35,803
Total	35,836	18,022	37,314	91,172



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1.4.5 Mining Equipment

A budget quotation for contract mining was received from Mamut Andino C.A., a large Ecuadorian civil construction company. The contract mining was quotation was based on AMEC's mine schedule, pit development plans, and layout drawings for the pit crusher and waste dump.

Loading and hauling estimated were carried out using Caterpillar software Fleet Production and Cost. Major input values are shown in Table 1-7. Blasting was estimated at 50% ANFO and 50% emulsion.

Table 1-7: Estimate Input Values

Schedule	
Calendar days	365 d/a
Shifts per day	2
Shift utilization	83%
FEL filling factor	90%
FEL & Truck availability	92%
FEL Passes / truck	5
Net Load / Truck	138 t

The estimated fleet requirements are listed in Table 1-8:

Table 1-8: Mine Equipment Fleet Requirements

Years	Quantity
203 mm blasthole drill	1
19.9 m ³ front-end loader	2
140 t haulage truck	8
"D10" track dozer	2
"D9" track dozer	1
Grader	2
"966" loader	2
"330" excavator	2
20 t dump trucks	2
Emulsion mix truck	1
Water truck	1
Lube truck	1
Drum vibrator	1



1.5 Metallurgy and Process Design

1.5.1 Metallurgical Testwork

A significant amount of metallurgical testwork has been undertaken on mineralized samples from the Mirador deposit since 2001. SGS Lakefield Research (Lakefield), in Lakefield, Ontario, Canada, carried out the main program of feasibility testing between December 2003 and September 2004. The groups responsible historically for the metallurgical testing aspects of the project are summarized below:

Geomet S.A., Santiago, Chile (May 2001)

- scoping batch rougher tests.

Resource Development Inc. (RDI), Co, USA (May 2002)

- scoping batch rougher tests.

Sumitomo Metal Mining Co, Limited, Japan (July 2003)

- scoping batch rougher and cleaner tests
- concentrate chemical and mineralogical analysis
- composite bond ball work index (BWI).

SGS Lakefield Research Limited, Lakefield, Ontario, Canada (Dec 2003 – Sept 2004)

- feasibility bench-scale flotation test program (batch and locked cycle flowsheet development and locked cycle variability testing)
- comminution testing (BWI, RWI, CWI, Ai and JK and SMC drop-weight testing) and modelling (JK SimMet)
- QEM*SEM characterization of composite samples for variability testing
- concentrate characterization and dewatering.

G&T Metallurgical Services Limited, Kamloops, BC, Canada (April – Sept 2004)

- supporting bench-scale flotation testwork
- mineralogical modal analysis.



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MinnovEX Technologies Inc, Toronto, Ontario, Canada (July 2004)

- comminution testing (SPI) and modelling (CEET).

In 2001 Geomet S.A. conducted a scoping rougher flotation test, on behalf of Billiton Chile, on an unidentified sample (Muestra 2) from Mirador.

In April 2002, Resource Development Inc. (RDI) conducted three batch rougher flotation tests also on unidentified samples.

In June 2003, Sumitomo Metal Mining Co., Ltd. (Sumitomo) conducted an independent scoping level metallurgical program on five selected drill core samples. This testing included batch rougher and cleaner flotation, mineralogical and chemical analysis of concentrates, and a bond work index determination. The liberation characteristics of the ore were also investigated. AMEC reviewed this work and found it to be done to industry standard.

Overall, the results of the Geomet, RDI and Sumitomo testwork showed the samples tested had relatively simple metallurgy and favourable commercial concentration potential. The subsequent follow-up feasibility work by Lakefield on 3,000 kg of split diamond drill core from 18 drill holes across the ore body, and at various depths, has confirmed their conclusions.

The feasibility metallurgical testwork carried out by Lakefield was done under the direction of AMEC. Lakefield also provided samples to MinnovEX and G&T Metallurgical Services (G&T) to conduct SPI grindability testwork, and mineralogical and flotation quality control testwork respectively. Lakefield and MinnovEX also conducted grinding circuit evaluations using their JKSimMet and Comminution Economic Evaluation Tool (CEET) simulation models respectively.

Lakefield's testing was conducted in two phases:

- Flowsheet Development December 2003 – March 2004
- Mapping and Recovery Variability April – September 2004.

Four master composites were produced from the core samples for an initial flowsheet and design criteria development program. This indicated the mill flow sheet for Mirador will be a conventional copper-gold porphyry flowsheet, with relatively coarse primary SAG and ball mill grinding to about 150 μm followed by copper rougher flotation, concentrate regrind to 30 μm , and cleaner flotation and dewatering. Metallurgical testing and mineralogical quantitative modal liberation analysis,



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conducted by G&T, supported the selection of the primary grind and regrind parameters.

A recovery and mineralogical variability mapping program completed during the third quarter of 2004 subsequently confirmed that the metallurgy and mineralogy of the ore body is quite simple and homogenous, and the samples tested responded consistently well to the conventional flowsheet and reagent scheme selected. Over 44 variability sub-composite samples were produced from 17 drillholes and tested by hole and depth. Each sample was subjected to chemical and QemSCAN (Quantitative Evaluation of Mineralogy by Scanning Electron Microscopy) mineralogical analysis, grindability testing, and locked cycle flotation. Locked cycle concentrates were subjected to mineralogical, chemical, pyroforicity, and dewatering testing.

Chemical analysis of the head samples indicated a range of copper grades from 0.20% to 1.07%, with average overall grade of 0.67%. Gold grades ranged from 0.05 g/t to 0.43 g/t with an average value of 0.22 g/t.

Concentrates produced are predicted to average 29.8% Cu at a recovery of 91%. The average gold grade and recovery was 5.2 g/t and 47.2%, respectively. A gold behaviour model developed from the flotation test data suggests gold tracks chalcopyrite, pyrite, and gangue, with near equal weighting throughout the process. There is good reconciliation between the test gold recovery data and that predicted by quantitative mineralogy.

A laboratory analysis of the individual locked cycle concentrate products indicated that no significant deleterious penalty element impurities were present and this is in good agreement with mineralogical mapping. Concentrate thickening and filtration testwork was conducted. The concentrates settled rapidly and no dewatering problems were identified. Pyroforicity results indicated the concentrate is not expected to be self-heating.

Grindability tests were conducted on the sub-composite intervals of core from individual drill holes. Two dedicated whole core geotechnical and comminution holes were also drilled and used for additional grinding testwork, including Bond Work and Abrasion Indices, JK drop-weight and MinnovEX SPI testing.

Most of the ore in the pit falls geologically in an alteration zone of intense gypsum depletion. This is indicated by low RQD data and poor rock quality observed in drill core boxes. Comparative Bond low energy impact (CWI) and drop-weight test data also indicates the +150 mm ore lumps will break relatively easily at low-energy, but that the resulting reduction may be small. On this basis it is reasonable to assume the



SAG mill feed granulometry will be relatively finer than the copper porphyry industry average.

JK and SPI testing data ranked the samples in the medium range of resistance to impact breakage for SAG milling. The ore exhibits low to moderate abrasivity. The average Bond ball mill work index is about 14.5 kWh/t and ranks the ore in hardness to ball milling as moderately soft relative to other copper porphyry ores in Lakefield's industry database and with relatively low variability. The JKTech drop weight and SPI test SAG mill parameters, and ball mill work indices, were used in JK SimMet and CEET simulation software models to confirm the grinding circuit design basis, and there was good agreement between both approaches.

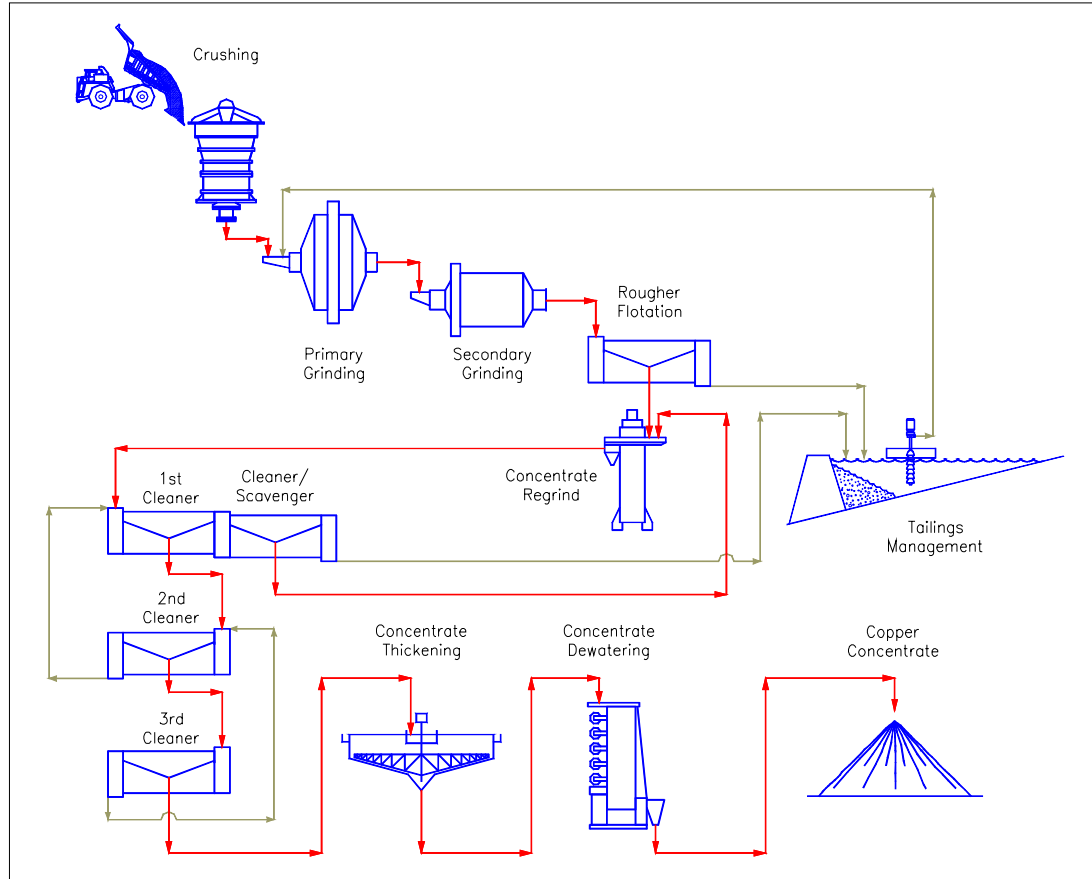
1.5.2 Flowsheet

The estimated mineral resources included in the mine plan total approximately 111 Mt grading 0.67% Cu and 0.22 g/t Au. Silver and molybdenum are present but the grades are relatively low. Approximately 91 Mt of overlying waste rock will be removed over the mine life, resulting in an average strip ratio of 0.8:1. The process will be designed to treat 25,000 t/d of material.

A simplified schematic drawing of the proposed flowsheet is provided in Figure 1-7. Run-of-mine open pit ore will be crushed in a gyratory crusher. The crushed ore will be processed by means of semi-autogenous and ball mill grinding followed by rougher flotation, regrind, cleaner flotation, and dewatering to produce copper concentrate. The concentrate will be trucked via the existing road network in the area to a port facility in Machala for shipment to smelters. Tailings from the process will be impounded in a tailings pond; water will be reclaimed from the tailings pond and reused in the process.



Figure 1-7: Simplified Mirador Flowsheet



1.6 Mine Site Infrastructure

The Mirador project site is located in rugged terrain, characterized by low mountains with steep slopes, and narrow ravines associated with drainage systems. The area is heavily forested.

Six locations were examined as possible sites for process facilities, two sites were examined as possibilities for the crusher, and seven locations were examined as alternatives for the tailings facilities, see Figure 1-8. The process, administration, concentrate filtration and loadout facilities area located approximately 11 km west of the deposit in the Pangui area, close to the towns of Santa Cruz and Paquintza and adjacent to the proposed tailings impoundment facility. These locations were examined by AMEC, Corriente, KP, and Merit personnel during field investigations.



Tailings site T3 was preferred because it was located away from populated areas and would be a zero discharge impoundment facility. With T3 being the tailings impoundment location, plant locations P1 to P5 were rejected, as it would require pumping of tails several kilometres. Therefore, location P6 was examined. This location provided suitable ground conditions for foundation design, easy access to the existing highway, gravity flow to the tailings impoundment and a short distance for reclaim water pumping. The process plant will be connected to the existing highway and road system via a new 2.7 km access road. An overland conveyor will connect the crusher and the process plant. Upgraded local roads and a new 4 km road section will provide access to the mine and crusher area. The overall site layout is shown in Figure 1-9.

The main entrance to the site will be at the administration area. A restricted road, designed for highway vehicles, will connect the administration area to the crusher area. A four-wheel drive road running parallel to the overland conveyor will provide maintenance access to the conveyor system.

The administration offices, shops, warehouses, process plant, concentrate filtration and loadout facility and the water treatment plant will be located at the administration area. At the crusher area will be the mine maintenance facilities and mine offices as well as the primary crusher. Work crews will report to the administration area before being bussed to the crusher area.

Freshwater, firewater and sanitary facilities will be provided at all areas.

Power will be brought to the site via a new 138 kV power line. The main substation will be at the concentrator area, as this is the location of the largest power demand. Power to the crusher area will be fed from the main substation via a 13.8 kV power line.

1.7 Tailings Impoundment

The tailings impoundment has been designed to accommodate the estimated 106 Mt of solids produced over the 12-year life of the project. The principal design consideration is ensuring that the proposed facility meets the “zero-discharge” criteria, meaning that no water will be released from the facility throughout the life of the project.



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A starter embankment will be built to an elevation of 748 m prior to the beginning of operations; this will provide about two years of storage at the proposed 25,000 t/d production rate. This elevation has been selected to provide ample time for commissioning of a cyclone system for coarse sand production and the procedures for placing and compacting the sand fraction. The main embankment will be raised to its ultimate elevation of 776 m using cyclone sand raises. It is estimated that the embankment will rise 3 m/a during year 3 to 6 and after that 2 m/a until closure. In addition to the starter embankment, a small dam will be built at the southeast corner of the facility to an elevation of 760 m to provide a pond in which the cleaner tailings may be stored under a constant water cover. This small dam will eventually be submerged as the pond surface rises to its ultimate elevation.

The close proximity of the tailings facility to the Mill reduces the length of the tailings distribution pipework, resulting in decreased capital expenditures as well as reduced power requirements. Rougher tailings will flow by gravity north, along the eastern bank of the impoundment, where the coarse fraction will be used as embankment material with the cyclone overflow material being deposited behind the embankment. Cleaner tailings (high sulphide cleaner tailings) will flow south through a separate pipe and be deposited sub-aqueously, thus preventing oxidation.

The embankment will be raised using the centreline construction method, with a starter earth embankment and ongoing raises using compacted cycloned tailings.

Embankment foundation and toe drains will be installed and will consist of a drain pipe, drain material, sand and filter fabric. The sand will have a filter relationship with the tailings that will prevent tailings from entering the drain. The seepage collected in the drains will be delivered to the seepage collection sump and pumped back into the impoundment area.

At start-up, a decant channel will be excavated at the east end of the impoundment, in close proximity to the plant site. The reclaim barge will be placed in this channel. Water will be continuously reclaimed from this supernatant pond, brought back to the plant site, and re-introduced into the process.

1.8 Off Site Infrastructure

1.8.1 Roads

The Mirador site is accessed from the Amazon Highway in southeastern Ecuador, about 25 km north of the town of El Pangui. The Amazon Highway is a good, all weather, two-lane road, paved in some sections and gravel in others. From the village



of Paquintza, it is about 3 km to the administration and process plant area and an additional 20 km to the mine site along a single lane gravel road, which will be upgraded as part of the project development. There is one river crossing, across the Zamora River, which is accomplished via a small barge. The overland conveyor will cross the Zamora on a dedicated bridge.

1.8.2 Concentrate Port

Copper concentrate will be trucked from the mine to Puerto Bolivar in Machala. The route is about 418 km and passes through the towns of Zamora, Loja and Santa Rosa, see Figure 1-10.

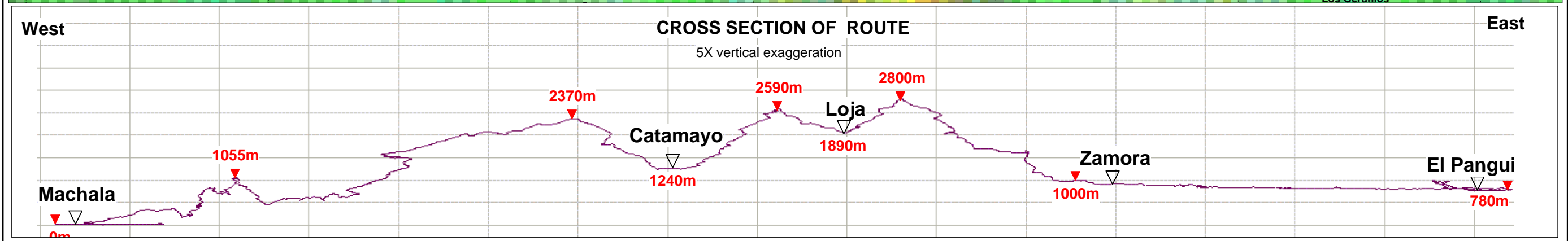
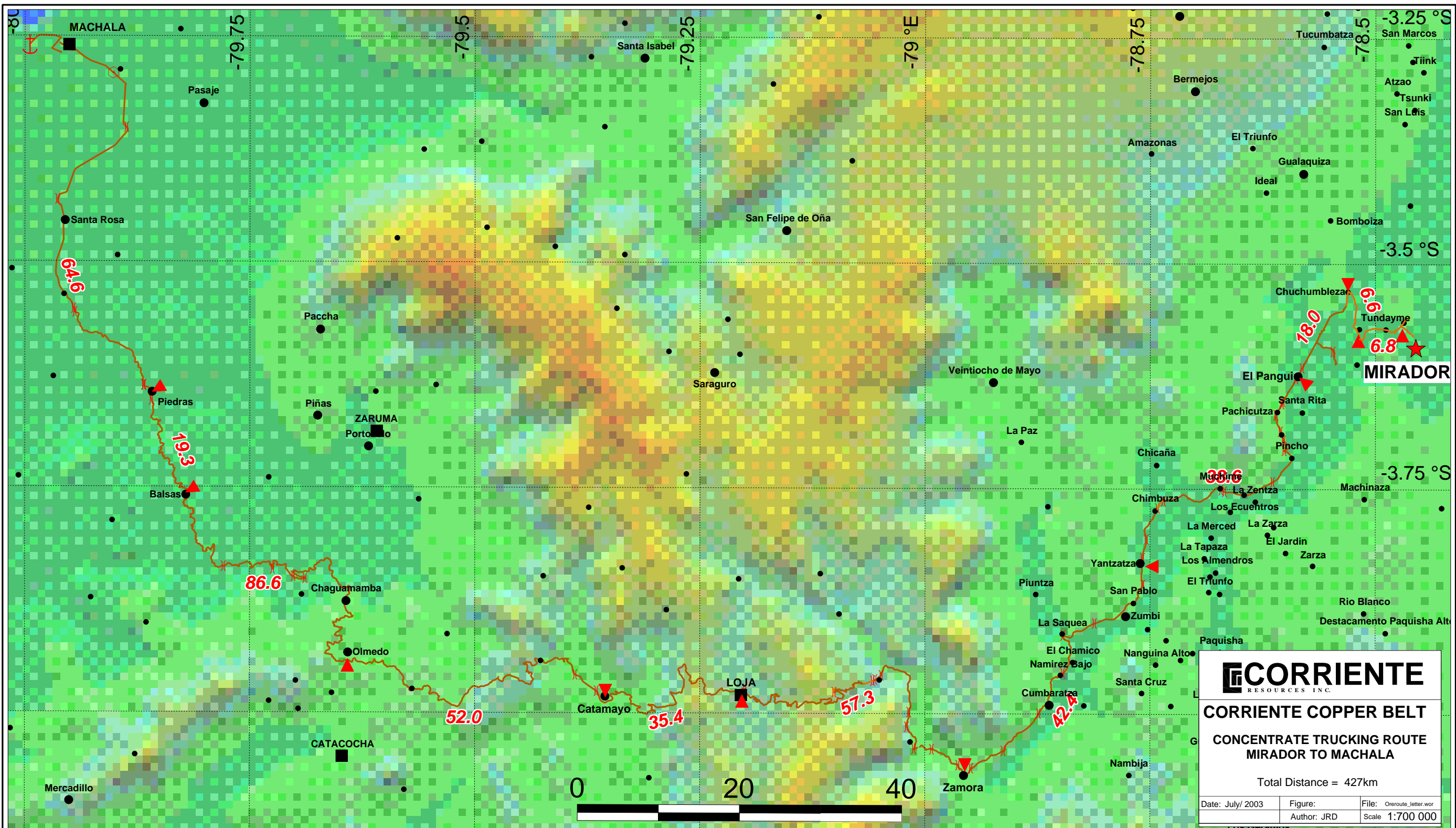
It is estimated there will be 18 to 20 trucks making the trip each day. The route to the coast is along good all-weather two-lane roads, the first hundred kilometres being gravel and the final distance being paved. Two of the bridges on route have been committed to be replaced by the government, the rest of the bridges and culverts along the route are in good condition and are part of the main east-west arterial route for heavy traffic crossing southern Ecuador. Bridges are generally rated for 40 t to 50 t capacity, of concrete construction, about 6 m wide on the gravel section and double laned on the asphalt section. It is not anticipated that any improvements to the existing roads, culverts, or bridges need to be performed before the start of operations.

At this time, it will take a truck about 15 hours to make the trip to the coast through Zamora, Loja, and Santa Rosa.

Machala, the closest port city to the Mirador Project, is located in southwest Ecuador at similar latitude to Mirador. The terminal, Puerto Bolivar, is located some 7 km south of Machala. Machala's industry is based on exportation of bananas and shrimps. The bulk of Ecuador's banana exportations go through Puerto Bolivar.

Puerto Bolivar is run by the Autoridad Portuaria de Puerto Bolivar (APPB), which manages the port concession on behalf of the government. APPB has six docks of which two are not utilized and are available to Corriente to use as a concentrate load out facility.

The concentrate load out facility will consist of a 15,000 t covered storage shed, load out conveyor and ship loading system. The facility will be on APPB property with security and access controlled by APPB.





Based on existing trade patterns for the west coast of South America, vessels are expected to range in size from small Handysize bulk carriers in the 12,000 DWT to 20,000 DWT capacity class, to a maximum Handymax vessel of 47,000 DWT. A detailed analysis of the marine market identified that empty 33,000 DWT bulk carriers currently travel from Guayaquil to Peru. These 33,000 DWT vessels are Corriente's best opportunity to optimize freight rates and therefore the ship loading system is designed for 33,000 DWT vessels.

Corriente's concentrate marketing study showed that copper concentrates will likely be sold in 10,000 wmt lots. An analysis by AMEC of the draft requirements for various size ships, confirmed that a 33,000 DWT vessel could load 10,000 t of product and not be affected by tide or draft restrictions. Depending on timing, some delays from three to six hours might be encountered waiting for tides to access the channel.

1.8.3 Power

At present, the Ecuadorian power grid is not able to supply sufficient power to meet the 28.3 MW needs of the Mirador project. As such, Corriente has purchased all the rights to the Sabanilla Hydroelectric Project in Ecuador, including all permits, studies and designs completed to date. The Sabanilla Hydroelectric Project is located in southern Ecuador, in the Province of Zamora Chinchipe, 40 km east of the City of Loja. The project will be able to supply an average of approximately 23.5 MW of power to the mine, with the remainder coming from the Ecuadorian power grid. A new line will be built, as part of the Sabanilla Hydroelectric Project, from the Sabanilla substation to bring the power to the site.

1.9 Environmental and Permitting

The Mirador project is located within the Cordillera del Condor. This area is considered ecologically important because of its high biological diversity and presence of endemic species.

Ecuador's environmental legislation is extensive and their requirements for early stage operations i.e., exploration, are well defined. Ecuador is one of the few Latin American countries that have adopted an EIA process for exploration activities. Argentina, Chile, and Peru have adopted a similar process to conduct environmental assessments for early stage exploration.

Under Ecuadorian Mining Law, the Ministry of Energy and Mines handles the environmental approval system for new mining projects. Mining concession holders are required to complete environmental impact studies and environmental



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management plans to prevent, mitigate, rehabilitate, and compensate for environmental and social impacts as a result of their activities. These studies are approved by the Ministry of Energy and Mines Sub secretary of the Environment.

Terrambiente, a Quito-based environmental firm, has completed an environmental baseline assessment for the Mirador Project. Baseline data collection commenced in March 2004 and has been ongoing through the study period.

The environmental approval process is summarized as follows:

- Proponent files a Project Description and Terms of Reference (ToRs) regarding how the EIA will be developed with respect to the conditions within the project area as well as the project description with the Ministry of Energy and Mines (MEM) and Ministry of the Environment (MoE). The ToR for Mirador has been reviewed by MEM and MoE.
- These ToRs need to be approved by MEM and published.
- Environmental baseline studies and environmental impact assessment are completed by proponent in accordance with the ToR.
- The EIA is presented to the local affected communities and input to the EIA is requested. Corriente will have community meetings in Valle del Quimi, San Marcos, Tundayme, El Pangui, and at the Ministries of Energy and of the Environment. The EIA is updated to acknowledge community input.
- The EIA is submitted to MEM who reviews within a 45-day period after which the ministry will request Corriente to respond to any comments and questions regarding the EIA.
- Corriente will have a 30-day period to submit responses to all comments and questions.
- The MEM will then take another 30-day period to revise the documentation and pronounce its satisfaction with all information, obtaining in this way the Approval for the EIA.
- Once the EIA is approved, proceedings towards granting of the Environmental License starts. It is estimated that another 30-day period is needed to prepare and grant the Environmental License.
- Submission of EIA to the Ministry of the Environment will take place at the same time as with the Ministry of Energy and Mines. Approval times are expected to be less than MEM.



1.10 Socio-economic

The Project area is located within the province of Zamora Chinchipe near the southern border of the Province of Morona Santiago. There are three parishes in the area, the El Guisme and Tundayme parishes in El Panguí County (Zamora Province) and the Bomboiza parish in Gualaquiza County (Morona Santiago Province).

The population in the Project area is composed primarily of immigrants from other parts of Ecuador. The density of the population in the Project area is low and poverty indexes are high. There is a scarcity of infrastructure and public services.

In general, there is a lack of employment and personal income is low. Productivity from farming is marginal, and primarily for local consumption. Approximately 40% of the households earn less than \$100 per month, while the remainder of the population earns between \$100 and \$300 per month. Responses to interviews with community members clearly indicate, from both high percentages of the responses and constant repetition, that the lack of employment is the most pressing problem in the communities.

Construction, while providing opportunities for local unskilled labour, is temporary. The area may experience an influx of persons from other parts of Ecuador who are looking for employment opportunities. This may create tension between the local area residents and the newcomers. Expectations in the local communities are high. These include improvements to the local road network to the provision of sanitary and potable water treatment systems.

1.11 Closure

The closure and reclamation plan is considered preliminary since some elements of the plan, such as post-closure monitoring requirements and associated cost estimates, may require revision upon project approval. Further, the specific details of the Mine Closure and Reclamation Plan will evolve as mining progresses, and so the plan will be updated periodically during the mine life. The final plan will be generated several years before mine closure.

The closure plan will include both progressive and final reclamation measures. Progressive reclamation will include reclamation following the construction phase and during operation. All borrow pits, quarries, equipment, and storage areas utilized during construction, but not required during mine operations, will be closed out and reclaimed at the end of the construction phase of the project. Prior to disturbing areas, all practically available soil will be salvaged and stockpiled for redistribution during ongoing reclamation and final closure of the mine.



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As far as practical, disturbed areas will be revegetated incrementally during operation to reduce erosion and improve aesthetics. Areas will be regraded, revegetated, and stabilized, as soon as possible.

The open pit mine will be allowed to fill with water when mining operations cease. There will be a height of exposed pit wall remaining above the final flooded surface. Some of the exposed wall materials could have the potential for acid generation. A pit lake study will be completed at Year 5 of the operation, when the ultimate mine life and pit configuration are better known and after more extensive geochemical characterization of the pit wall rocks has been carried out.

Waste dumps will have a cap of impervious material applied as soon as final surfaces are created, at which time they will also be vegetated. The waste dump will be constructed to its final slope angles where possible. Soil salvage will be incremental and concurrent with each phase of waste dump construction, pit development, and waste rock dump development. Acid rock drainage (ARD) will be minimized by the placement of the impervious cap and by maintaining runoff diversions around the waste dumps. The successful implementation of this strategy will minimize the volume of water that will require ongoing collection and treatment. Collection and treatment of acidic drainage from the waste dumps will continue for as many years as required, until the levels of acidity and metals abate to such that they will be acceptable for release or that can be adequately treated by passive systems.

The tailings impoundment facility will be designed such that upon completion of the mining operations, the tailings surface will be made trafficable and the potential for wind and water erosion minimized. During the final years of operation, the extent of the supernatant pond will be minimized and will be removed during the first year following closure. Water will be removed from the surface pond, if required, treated to an acceptable quality, and released to surface waters. The downstream embankment face will be revegetated and the tailings covered with soils from nearby borrow sources.

Closure activities after the end of mine life will also include removal of all facilities and infrastructure that is not planned to be left for other uses or is needed for post-closure maintenance, and reclamation of all disturbed areas.

Post operational reclamation will return the disturbed areas to the pre-mine conditions and habitat. Certain mine features may be left in place as permanent control measures to prevent environmental pollution, for long-term community use, or as a post-mining enhancement.



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Environmental impacts remaining post-closure are expected to be moderate. Key expected impacts would be:

- Potential for acid drainage from exposed wall rocks above the outlet elevation of the open pit. It is expected that, with the significant streamflows in the region, the rate of oxidation of pit wall rocks will be such that water quality in the pit water discharge could be mitigated by dilution. In the worst case the pit lake discharge could necessitate collection and treatment. Even in this worst case, there would be no downstream impact to the receiving waters of the Quimi River as the discharge would be collected and treated if necessary
- The waste dumps are expected to become acid generating and there will be discharges of acidic waters, containing dissolved metals, from the dump. The dump discharges will be monitored and collected and treated as necessary.
- The waste dump will permanently alter the topography. The location of the dump in a side valley and the anticipated vegetation growth will effectively mask waste dump visibility.
- The plant site and all other mine infrastructure will be essentially returned to pre-mining conditions and revegetated. This there will be little long-term impact of the plant site and infrastructure.
- The tailings dam will remain visible after closure, as the downstream face of the dam will be about 40 m high.
- A main impact of the Mirador project will be the loss of forest habitat in the open pit and waste dump area (188 ha).
- Typically, mine closure will impact the economic condition of the closest community(ies). Corriente will work with the communities in the area to enable all stakeholders to have their interests considered during the mine closure process. A consultative process involving local communities, regulators and other interested stakeholders will be established during the operation to determine the long-term use for the mine and all associated lands.

Corriente has developed a water quality monitoring plan that is already in place on the Mirador site. This existing water quality monitoring plan will form the basis of an environmental management and environmental effects monitoring plan during the life of the operation. That plan will be continued as required post-closure.

Maintenance of critical components will also continue post-closure, including inspection and repair of diversion ditches, repairs of any eroded reclaimed areas and repairs to any erosion noted on the tailings pond and waste dump covers, and operation of the water treatment plant and/or passive water treatment systems.



Final closure plans for Mirador will be implemented as soon as the mine reaches the end of its economically viable life.

1.12 Project Implementation

A project group will be established by Corriente to undertake the execution of the Mirador Copper Project. It will be comprised of Corriente's team working with outside specialist consultants to undertake the engineering, procurement and construction management, as well as much of the pre-production work. The proposed organization chart is shown as Figure 1-11.

The overall project capital program will take about 21 months from the scheduled project approval date to engineer and construct the facilities to Mechanical Completion when pre-operations can start.

After acceptance of the feasibility study and the associated trade-offs, and the issuing of permits, Corriente will select the engineering and procurement teams to undertake the design of the material handling, process plant facilities, tailings facility, mining, and infrastructure work.

The Project will generally be engineered to Canadian standards and regulations and will incorporate preferred South American codes when applicable. Measurement will be made in metric units for world-wide procurement.

The engineering contractor's purchasing group will provide procurement of capital equipment, and inspection of all equipment if needed. The construction management contractor's group will organize purchases of bulk materials such as pipe, cable, and cable tray and will provide expediting services of equipment and materials. Orders will be placed with qualified onshore and offshore suppliers on the basis of quality, price and delivery.

Most equipment and materials will be procured from sources within North and South America. All efforts will be made to purchase locally where possible and practical to do so. Corriente will purchase as much of the capital equipment and materials as possible rather than leave it to the contractors. Engineering and construction management expeditors will maintain contact with all suppliers to maximize their performance. The use of third party inspection and expediting services will be used where appropriate to minimise the cost of expediting and inspection.

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Project Manager
Corriente Representative

Infrastructure Engineering

- Power
- Roads
- Overland Conveyor
- Port
- Tailings

Process Plant Engineering

Engineering Disciplines

- Mine Planning
- Metallurgical
- Concrete
- Structural
- Mechanical
- Piping
- Structural
- Electrical
- Instrumentation
- Material Handling

Capital Equipment Procurement

- Prepare and Issue RFQ
- RFQ quote analysis
- Purchase Orders

Geotechnical Consultant

Construction Management

- Trade-off Study Input
- Constructability Reviews
- Bid Document Preparation
- Project Schedule
- Project Cost System
- Construction Management
- Field Engineering
- Field Procurement
- Expediting

Mine Planning

Environmental

- Water
- Waste
- Reclamation
- Construction Monitoring

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MIRADOR PROJECT
Project Organization Chart
Figure 1-11





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Incoming freight during construction and operations will come through the port at Guayaquil to the north of Machala. The port at Guayaquil has the appropriate unloading facilities on the dock to accommodate the heavy loads needed to be transported up to the mine construction site.

Dedicated customs brokers will operate from an office at the port to ensure that the paperwork has been received for inbound freight and the necessary clearances are obtained without delays at the port.

The construction management group will be responsible for the management of all field operations. The Construction Manager will be responsible to Corriente to effectively plan, organise, and manage the construction to meet quality, safety, budget, and schedule objectives.

It is planned to have the contractors originating from Ecuador and investigations indicate that there is a great interest and ability of contractors. Their experience has been generally associated with the oil industry and manufacturing plants and ports, but their labour pool is conversant with the trades needed to build the Mirador facilities.

A top-down commitment to health, safety and the environment (HSE) will be made and communicated to everyone associated with the project. Corriente will develop and issue a project safety program and an environmental control program based on its own policies and standards, internationally recognised requirements, and those required by North American and Ecuadorian law.

Construction contracts will require contractors to submit written health, safety and environmental action plans that conform to the project HSE programs or to provide a written commitment to adhere to Corriente's HSE programs. Each contractor will be responsible for administration of its own HSE programs, and will be required to designate a management-level person who will be personally responsible to carry out the safety program and the environmental control program. Key elements of the program include new employee orientation and weekly HSE meetings.

Workers will be provided a safe place to work. Proper inspection, guidance, and strict adherence to safety policy will ensure that safe working conditions are maintained.

Construction activities will be carried out with an acute awareness of the environment and the need to comply with the policies and program of the project. Regular environmental audits will ensure compliance to the procedures.

The project schedule has an estimated overall project duration of 21 months from the start of the detailed engineering to the completion processing plant ready for the dry



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runs of ore. The Sabanilla Hydroelectric Project will need to initiate the main civil works contracting process some 5 months ahead of the start of the Mirador process plant design in order for it to be supplying power for mill run-in.

For the Mirador Project, the critical path runs through the project financing, approval to proceed, mine access road construction and crusher installation, as well as pre-development work in the open pit.

Engineering for the plant can proceed immediately upon the completion of project financing/approval to proceed. Procurement of major capital equipment will be done at this time also.

The key activities to commence plant operation are the procurement and delivery of major capital components, such as the crusher, mills, and electrical equipment. The milestones may be summarized as shown in Table 1-9.

Table 1-9: Key Milestones for Mirador

Description	Month No.
Project approval	0
Tailings facility engineering complete	5
Concentrator access road complete	6
Overland conveyor design complete	6
Mine access road complete	6
Earthworks at concentrator & filter areas complete	12
Earthworks for overland conveyor complete	12
Tailings facility complete	15
Mill building structural completion	18
Port facilities complete	18
Thickeners complete	19
Flotation mechanical / piping complete	19
Grinding mechanical / piping complete	20
Crusher facilities complete	20
Overland conveyor complete	20
138 kV power on-site	20
Mechanical completion	21

1.13 Capital Costs

Merit prepared a bankable feasibility study level capital cost estimate that is considered by Merit to be within a 10% accuracy of actual costs.



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The total estimated cost to design and build the facilities described in this report is US\$202,306,000, see Table 1-11. All costs are expressed in first quarter 2005 US dollars, with no allowance for escalation, interest during construction or taxes.

The estimate covers the direct field costs of executing this project, plus the indirect costs associated with design, procurement, and construction efforts.

Table 1-10: Summary of Capital Costs by Area, US\$

Area	Cost (\$ x 000)
<i>Direct Costs</i>	
Mine	20,108
Process Plant	87,922
Utilities	6,920
Site Preparation and Roads	13,561
Tailings	8,474
Ancillary Facilities	3,847
Total Direct Costs	140,832
<i>Indirect Costs</i>	
Project Indirects	39,362
Owner Indirects	4,376
Total Indirect Costs	43,738
Subtotal	184,570
Contingency	17,736
Total Project	202,306

1.14 Operating Costs

Mine operating costs are based on a budget quotation from an Ecuadorian transportation and mining contractor. Process operating costs and G&A costs have been estimated by AMEC, with input from Corriente and impoundment operating costs have been estimated by KP. Operating costs have been prepared in fourth quarter 2004 US dollars, and exclude:

- contingency
- allowance for escalation
- value-added (IGV) taxes
- import duties.

The operating cost estimates have been assembled by area and component, based on estimated staffing levels, consumables and expenditures according to the mine plan



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and process design. Concentrate shipping costs are detailed in the financial analysis. Life-of-mine operating costs are shown in Table 1-11, and annual operating costs in Table 1-12.

Table 1-11: Operating Cost Life-of-Mine, US\$

	Labour	Expenses	Total Cost	\$/t Mined	\$/t Milled
Mine Operations	11,966,000	198,565,000	210,531,000	1.14	1.90
Processing Operations	28,179,000	289,784,000	317,963,000	1.71	2.87
Administration	36,093,000	34,302,000	70,395,000	0.38	0.64
Total	76,238,000	522,651,000	598,889,000	3.23	5.41

Table 1-12: Annual Operating Cost, US\$

Year	Mining	Processing	Admin	Total	\$/t Mined	\$/t Milled	\$/lb Cu
1	20,598,000	26,723,000	5,806,000	53,127,000	2.49	5.82	0.41
2	17,890,000	26,202,000	5,806,000	49,898,000	3.00	5.47	0.36
3	16,961,000	26,178,000	5,806,000	48,945,000	3.01	5.36	0.40
4	16,181,000	26,183,000	5,806,000	48,170,000	3.19	5.28	0.38
5	16,473,000	26,183,000	5,806,000	48,462,000	3.22	5.31	0.38
6	16,811,000	26,185,000	5,806,000	48,802,000	3.25	5.35	0.39
7	17,019,000	26,178,000	5,806,000	49,003,000	3.26	5.37	0.41
8	17,729,000	26,167,000	5,806,000	49,702,000	3.31	5.45	0.44
9	17,661,000	26,179,000	5,806,000	49,646,000	3.31	5.44	0.41
10	18,252,000	26,176,000	5,806,000	50,234,000	3.34	5.51	0.42
11	16,930,000	26,160,000	5,806,000	48,896,000	3.78	5.36	0.43
12	15,921,000	26,167,000	5,806,000	47,894,000	4.07	5.25	0.41
13	2,105,000	3,282,000	723,000	6,110,000	4.53	5.43	0.37
Total	210,531,000	317,963,000	70,395,000	598,889,000	3.23	5.41	0.40

1.15 Economic Analysis

The Mirador project was analyzed using a discounted cash flow approach assuming 100% equity in first quarter 2005 US dollars. Projections for annual revenues and costs are based on data developed for the mine, process plant, ancillary facilities, infrastructure, capital expenditures, and operating costs. Estimated project cash flows were used to determine the pre-tax net present value (NPV) and internal rate of return (IRR) for the base case.

Results of the base case analysis indicate that the project has a potential pre-tax internal rate of return of 14.8% and a pre-tax net present value \$71.2 million at a



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discount rate of 8%. Effects of changes to commodity prices, capital cost, and operating cost were examined in a sensitivity analysis. This analysis indicated that the project is more sensitive to changes in copper price than either capital or operating costs and is slightly more sensitive to operating costs than capital costs. The base case scenario has a projected payback period of approximately 5 years.

The variation in NPV with discount rate is shown in Table 1-13.

Table 1-13: Variation in Pre-Tax NPV with Discount Rate, (US\$ M)

	0%	5%	8%	10%
Net Present Value	254.6	122.2	71.2	45.1

Base case sensitivity analysis is summarized in Table 1-14, Figure 1-12, and Figure 1-13. For the range of changes examined, from 80% to 120% of the base case, the project is most sensitive to copper price.

Results of the NPV (8%) and internal rate of return for metal prices, capital cost and operating cost are shown in Figures 1-12 and 1-13.

Table 1-14: Base Case Pre-Tax Sensitivity Analysis

Parameter	Variation (%)	Value	IRR (%)	NPV at 8% (\$ M)
<i>Average Copper Price</i> (\$/lb)	-20	\$0.80	-	-86.2
	-10	\$0.90	7.2	-7.5
	0	\$1.00	14.8	71.2
	10	\$1.10	21.3	149.9
	20	\$1.20	27.2	228.6
<i>Average Gold Price</i> (\$/oz)	-20	\$320	13.5	55.9
	-10	\$360	14.2	63.6
	0	\$400	14.8	71.2
	10	\$440	15.5	78.9
	20	\$480	16.2	86.5
<i>Operating Cost</i> (\$/t ore)	-20	\$4.33	20.2	135.4
	-10	\$4.87	17.6	103.3
	0	\$5.41	14.8	71.2
	10	\$5.95	11.9	39.1
	20	\$6.49	8.7	7.1
<i>Capital Cost</i> (\$ M)	-20	\$161.8	20.1	107.1
	-10	\$182.1	17.2	89.2
	0	\$202.3	14.8	71.2
	10	\$222.5	12.7	53.3
	20	\$242.8	10.9	35.3



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Figure 1-12: Base Case Pre-Tax NPV Sensitivity @ 8%

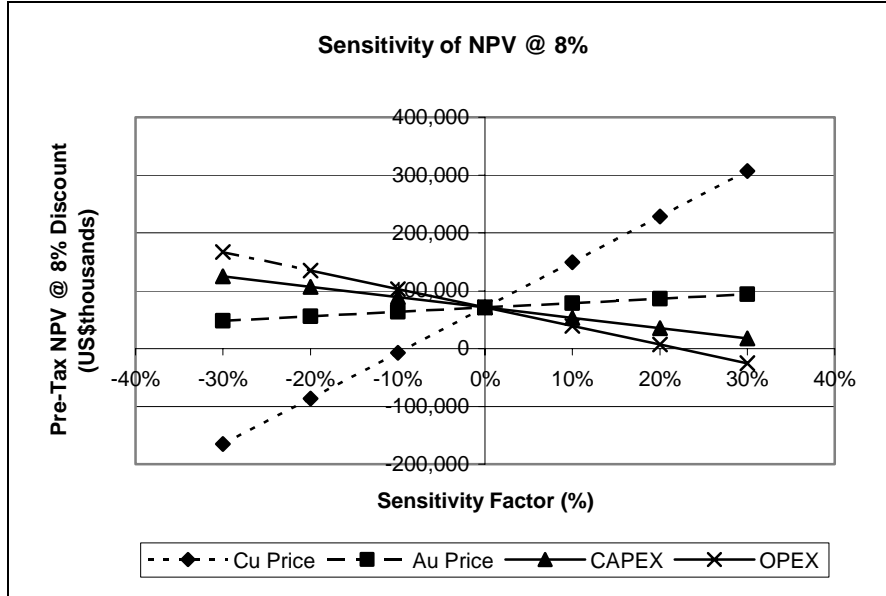
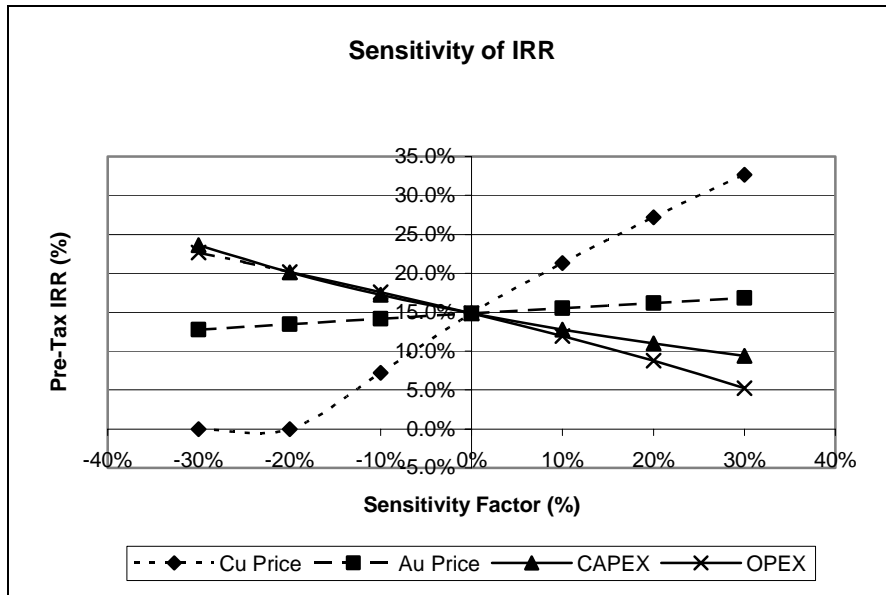


Figure 1-13: Pre-Tax IRR Sensitivity





1.16 Opportunities

Opportunities and recommendations for additional work to improve the project economics are discussed in the different sections of the report. This section summarizes these items.

1.16.1 General

- The plant throughput should be reviewed. Preliminary modeling showed the project IRR and NPV improved with increasing throughput. A mine Whittle shell based on a 75,000 t/d plant throughput using factored operating costs, showed a Measured and Indicated pit shell containing 223.4 Mt of ore at an average grade of 0.606% Cu and 0.194 g/t Au and a stripping ration of 0.65:1. The same model run showed a Measured, Indicated and Inferred shell containing 310.5 Mt at an average grade of 0.576% Cu and 0.185 g/t Au, with a strip ratio of 0.48. Additional studies are required to define the infrastructure requirements and costs to exploit this scenario.
- Silver should be included in the resource model. Silver is observed in the concentrate, but is not assayed in the drill core samples. Running the financial model with the silver grade observed in the concentrate, improves the pre-tax IRR by approximately 1%.

1.16.2 Resource Geology

- More angled drill holes should be drilled due to the presence of various geologic features having sub-vertical contacts (e.g., post-mineral dykes, late quartz-sulphide stringers). This would better define the locations and contacts of the vertical post-mineral dykes and help reduce dilution during the mining process.
- Downhole survey data should be captured for all drill holes in the future to accurately locate the drill holes and grade items during the resource estimation process.

1.16.3 Mine

- The final schedule includes 9,794,000 t of Inferred resources in the waste. This material represents potential mill feed if the classification can be successfully upgraded from Inferred to Indicated with further exploration drilling.
- A better estimate of overburden or saprolite should be established and a solid produced for use in further pit design work. The saprolite will require a flatter slope



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and wider berms, and will add waste tonnes to the current design. The new overburden solid would allow this flatter development to only occur in the poor saprolite.

- There is potential for increasing the open pit slope angles and improving open pit economics, based on additional investigation and analyses, as follows:
 - Additional geotechnical logging of any further exploration drillholes to increase the geotechnical database on the characteristics of the rock mass.
 - A detailed geologic/lithologic model incorporating such items as rock lithology, contact boundaries, faults, and dyking. This will allow for projection of lithologic information onto and behind proposed pit walls for stability assessment.
 - Additional geotechnical drilling to assess the hydrogeology of the pit area and to assess the rock mass strength at depth in the pit walls.
 - A hydrogeologic model to develop an understanding of the groundwater hydrology and the impact the pit will provide on the groundwater flow regime as well as what impact the drainage facilities (horizontal drains and/or drainage galleries) will have on optimizing the pit walls.
 - Additional rock strength testing on the various lithologic rock types within the pit to increase the confidence level in the rock strengths used for stability analysis.
 - Additional investigations into the characteristics and particularly persistence of major and intermediate scale structures.
 - A review of stability of the overall and bench face slope angles with the benefit of improved lithologic and hydrogeologic interpretations. The slope angles recommended are relatively low in comparison to many open pits, but are considered realistic for the rock quality indicated.

1.16.4 Process

- Pilot plant testing should be conducted to evaluate the flotation response of the different ore zones under continuous operation.
- Additional surface and shallow composites should be prepared so that further batch flotation testwork can be conducted to better define the relationship between rougher pH and final concentrate grade.
- Additional surface and shallow samples should be submitted for bulk modal analysis in order to clarify the effect of secondary copper on flotation response.
- The SAG mill size (motor) was fixed early in the feasibility study based on project power supply constraints that no longer apply. Comminution test data indicates a relatively low probability the ore will generate SAG resilient pebbles therefore, a SAB circuit was originally specified. However, a pebble crusher was added later to



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the SAG circuit, which was tonnage limiting, to increase throughput. Based on comminution modelling the revised SABC circuit throughput was increased from 22.5 kt/d to 25 kt/d. It is recommended additional modelling optimization is conducted to consider the economics of eliminating the pebble crusher, and using either a larger SAG mill, or ball mill with a coarser transfer size out of the SAG circuit. This could simplify the circuit and result in incremental capital cost savings.

- Grinding mill availability was originally fixed at 94% based on the use of synchronous drive with LCI speed control. Based on capital cost savings a WRIM drive with slip energy recovery was subsequently selected. It is recommended the mill availability of 94% is reviewed for consistency with this drive selection and a more detailed technical and economic analysis of each option is done during engineering.
- The cyclone configuration criteria selected reflects the lowest cost capital bid received. However, this is based on the use of multiple cyclones relative to other bids. The use of a greater number of smaller cyclones could result in higher ongoing maintenance costs and this should be reviewed during engineering to identify the best overall life-cycle cost cyclone configuration option.
- Secondary and final flotation cleaning is currently based on conventional cells, versus columns, based on Corriente's preference. AMEC believe columns will perform satisfactorily in this application and could provide layout and capital cost advantages. However, it is recommended this is left as an opportunity to be confirmed by future pilot testing.

1.16.5 Power Supply

- The choice of distribution voltage and mill motors should be reviewed. This entails basic design and detail pricing of the system at 13.8 kV as compared to 4.16 kV.

1.16.6 Tailings Management Facility

- A more detailed seismicity study be conducted for future TMF design work, to confirm the magnitude and associated maximum acceleration for the Maximum Design Earthquake. This would require more detailed probabilistic and/or deterministic seismic hazard analyses than have been completed to date.
- Hydrological and climate data gathering should be continued to provide ongoing site specific data. This will allow for further refinement of the water management measures during the detailed design.



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1.16.7 Water Management

- Site hydrologic data analysis to provide more site-specific design flows for sediment control systems, and diversions.
- Soil/waste samples for forested watersheds, the mine pit, and the waste rock dump to determine erodibility factors (K) and eroded particle size distributions for sediment control design.