OPERATION NAME: Escondi da

LOCATI ON

Region: II

Province: Antofagasta

Country: Chile

500,000:1 Scale Quad.: Antofagasta, Chile

Escondida - Latitude: 24 deg. 15.5' South Longitude: 69 deg. 4.3' West

Escondida - Located 106 miles southeast of Antofagasta, Chile at an elevation of 10,000 feet

Escondida Norte - Located immediately east of Zaldivar, approximately 4 miles north of Escondida



Chile

GEOLOGY

Regional Geological Setting

Northern Chile has been subdivided into five north-south trending morphotectonic physiographic provinces. Extending eastward from the Pacific Ocean, these include the Coastal Range, Central Depression, Cordillera de Domeyko, Preandean

MINING OPERATIONS REPORT

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Basin and the Andean Cordillera. The Escondida mining district is situated along the eastern edge of the Cordillera de Domeyko province, which is approximately 31 miles wide and characterized by north-south elongated mountain ranges separated by shallow alluvial filled basins.

Located off the western edge of Gondwana, the geological evolution of this region began during late Proterozoic time. In the Preandean Basin and extending easterly into Argentina and Bolivia, late Proterozoic to Ordovician turbiditic and volcano-sedimentary sequences were deposited within ensialic rifts and basins, which were deformed during several compressional tectonic cycles associated with terrain accretion. This early stage was followed by uplift and development of the Silurian continental magmatic arc, which is represented by tonalitic to granodioritic batholiths and intrusive stocks in the Cordillera de Domeyko and Preandean Basin provinces. From middle Silurian to late Carboniferous time, a passive margin was formed along the western edge of the Sedimentation during this period was represented by continental continent. fluvial sediments in the uplifted continental basement (Cordillera de Domeyko and Preandean Basin), while turbiditic sequences were deposited in an extensional oceanic basin to the west (Central Depression and Coastal Range provinces). Carboniferous to Permian, arc related intermediate to rhyolitic volcanics and coeval tonalitic to granitic batholiths were emplaced along the western margin of the continent during the Variscan Orogeny. At the close of Paleozoic time, a thick continental crust was bounded on the west by turbiditic basins deposited on oceanic crust. Cordillera de Domeyko is located at the boundary separating these two domains.

The development of an easterly dipping subduction zone along the western margin of the continent during early Triassic time, produced a Triassic and Jurassic magmatic arc in the Coastal Range province, while an extensional back-arc basin was formed above the Paleozoic basement of the Central Depression and Cordillera de Domeyko provinces. The final stage of development of this region is represented by a continental margin, where three stages of Andean-type arc magmatism evolved since late Cretaceous time, progressing eastward from the Central Depression through the Cordillera de Domeyko and Preandean Basin provinces to the Andean Cordillera. Formed between 31 and 42 Ma, most of the giant porphyry copper deposits of northern Chile occur within the Cordillera de Domeyko province or along its western margin. Since that time, this region has been tectonically quiet with low rates of denudation and exposed to climatic conditions, which have favored the formation and preservation of supergene enrichment blankets observed at many of these porphyry copper systems.

Escondida Mining District

Located on the western flank of the Domeyko Range, six porphyry copper deposits have been recognized within the Escondida mining district. From north to south, these include Escondida Norte, Zaldivar, Pinta Verde, Carmen, Ricardo and Escondida. They are localized along the West Fissure Zone, a major north-south trending structural zone, consisting of several parallel to subparallel faults that outcrop over a width of about six miles and have an aggregate strike length of more than 375 miles. The Escondida district occurs within a graben, which is bounded on the east and west by horsts of Paleozoic basement rocks. Mesozoic to Cenozoic marine and continental formations, exposed within the graben, are less eroded than in the adjacent uplifted blocks, where the batholithic roots and volcanics of an extensive Carboniferous-Permian magmatic arc are exposed. Basement lithologies exposed in the Escondida mining district include tonalitic, granodioritic and granitic batholithic roots of coeval andesitic and rhyolitic lavas and ignimbrites of the Carboniferous to Permian La Tabla Formation, which outcrops in the eastern and western uplifted structural blocks. The late Paleozoic section is unconformably overlain by a marine back-arc sequence composed of shale, sandstone, limestone, evaporite and andesite. These units include late Triassic andesite, rhyolitic tuff and flow domes of the Aqua Dulce Formation, the Jurassic El Profeta Formation (marine limestone) and early Cretaceous Santa Ana Formation, which consists of calcareous sandstone, red sandstone, conglomerate and shale interbedded with thin layers of red volcanic This sequence is unconformably overlain by the late Cretaceous to late tuff. Eocene Augusta Victoria Formation, which consists of a calc-alkaline sequence of andesite, dacite and andesitic breccias with minor rhyolite, interbedded with red shale, sandstone and conglomerate. These strata are locally covered and cut by middle Oligocene to Miocene rhyolitic subvolcanic intrusive and extrusive lithologies, which are succeeded by late Miocene to early Pliocene gravels with thin horizons of ash fall tuff.

Three periods of intrusive activity have been recognized in this area. Carbonaceous to Permian batholiths of granite, granodiorite and tonalite are exposed in the Domeyko Range, where they have cut coeval volcanics of the La Tabla Formation. Large, late Cretaceous monzonite to gabbro porphyry intrusions outcrop in a north-south belt west of Escondida. Porphyry copper mineralization and alteration of the Escondida mining district is spatially and genetically related to the emplacement of late Eccene to early Oligocene diorite, guartz monzonite to granodiorite porphyries. Escondida, Zaldivar and Escondida Norte exhibit an early central potassic alteration phase with peripheral propylitic alteration, which is overprinted by sericite-chlorite, quartz-sericite and advanced argillic alteration assemblages. Mineralization includes hypogene and supergene copper sulfides and copper oxides. The quartz monzonite to granodioritic porphyry stock at Escondida is emplaced into andesitic volcanics of the Augusta Victoria Formation, while dacitic porphyries at Zaldivar cut both Permian rhyolitic ignimbrites of the La Tabla Formation and andesitic to dacitic vol cani clasti cs of the Augusta Victoria Formation. Mineralization at Pinta Verde is hosted by pervasive potassically (biotite) altered Paleocene andesite and dacitic porphyry with disseminated chalcopyrite, copper oxides and sulfides vei ns. The monzodi ori te to granodi ori te porphyry stock at Escondi da Norte was emplaced within the Carboniferous-Permian volcano-sedimentary sequence. Concealed by gravels, little is known about the Carmen deposit. Localized along the Zaldivar fault zone, the Ricardo deposit is characterized by secondary supergene sulfides hosted by rhyolitic lithologies.

Escondi da

A late Eocene to early Oligocene quartz monzonite to granodiorite porphyry stock at Escondida cuts andesitic volcanics of the Augusta Victoria Formation. Measuring 14,800 feet long by 8,200 feet wide, this $N30^{\circ}-40^{\circ}W$ elongated elliptical shaped intrusive body has been sub-divided into at least three phases. The earliest two phases are porphyritic and include the Colorado Grande Porphyry (U-P age - 37.9 + 1.1 Ma) and the Escondida Porphyry, which have a similar mineralogy, but are distinguished by their average phenocryst content, vein continuity and intensity of alteration. The third intrusive phase of the Escondida stock is the porphyry breccia, which is similar in composition and phenocryst content as the Escondida Porphyry, but includes mineralized fragments of two earlier porphyritic phases and andesite. Approximately three million years after the emplacement of the Escondida stock and development of the porphyry system, a late mainly post-mineral rhyolite porphyry intrusive body (age - 32.6 to 34.9 Ma) cut the stock.

Hypogene copper-molybdenum mineralization (age - 34 to 38 Ma) is related to the first three intrusive events, while the late rhyolite porphyry is barren in terms of hypogene grades. Escondida is localized along the north-trending West Fissure Zone, which is locally represented by the Portezuelo and Panadero faults. The block between these two structures appears to have down thrown, explaining apparent higher level in the hydrothermal system as well as the greater thickness of supergene enriched ore within this structural block. Numerous northwest trending faults also cut the units in the area of the Escondida deposit.

Three stages of hypogene al teration have been recognized at Escondida. The first stage includes pervasive potassic and propylitic alteration assemblages. Within intrusive lithologies, potassic alteration is represented by a weak pervasive, but mainly vein-controlled orthoclase-quartz + biotite-anhydrite assemblage with borni te and chal copyrite, primarily affecting the Escondi da stock. Fine-grained, secondary bi oti te accompani ed by a magneti te-borni te-chal copyri te vei n assembl age is developed throughout the andesitic wall rocks. A peripheral propylitic assemblage is represented by the development of an epidote-chlorite-zeolite + pyrite assemblage. The first stage of alteration also included the development of a silicified shell at the contact between the andesite and the Escondida stock. Ranging from 65 to 130 feet in width, the silicified rock is aphanitic, hard, strongly fractured and composed of very fine-grained quartz. Veinlet controlled alteration assemblages of stage II include chlorite-sericite + guartz, quartz-sericite and pyrite-sericitic assemblages accompanied by chalcopyrite, pyrite and molybdenite. The final stage of alteration is represented by an advanced argillic assemblage. It is the only stage of alteration, which affects the rhyolitic porphyry. Mainly controlled by large fault zones and by the contact separating the rhyolite porphyry and country rock, this assemblage is characterized by a pervasive pyrophyllite-alunite-quartz assemblage, containing abundant sulfides.

The Escondida ore body measures 15,000 feet north-south by 8,000 feet east-west and extends to depths of more than 2,500 feet. Approximately half of total resource at Escondida is hosted by the Escondida stock, while the remainder occurs within the surrounding andesitic wall rocks of the Augusta Victoria Formation. This resource can be further sub-divided into hypogene, supergene sulfide and oxide mineralization.

Escondida is overlain by a leached cap, which extends from the surface to depths Characterized by an iron oxide rich assemblage of of more than 650 feet. hematite, jarosite and goethite, the copper and molybdenum content of the leached cap ranges from <100 to 600-ppm and <10 to 480-ppm, respectively. The higher grade and thicker zones of supergene copper sulfide generally underlie hematite, while thinner, lower grade supergene ores are overlain by a jarosite-rich Approximately 5% of the total copper resource at Escondida are cappi ng. classified as oxide ores, which locally lie between the leached cap and the supergene enrichment blanket. Mainly localized along fractures within biotite and chlorite-sericite altered andesite, the oxide mineral assemblage includes brochantite, antlerite, atacamite, chrysocolla, copper wad, cuprite and tenorite. Ranging from 10 to 650 feet in thickness, the tenor of the oxide zone ranges from less than 0.2% Cu to 1.5% Cu.

Supergene sulfide mineralization (K-Ar age - 14.6 to 18.0 Ma) within the enrichment blanket represents approximately 65% of the total copper resource at Escondida. Ranging from 65 to 1,300 feet in thickness, the disseminated and veinlet-controlled supergene mineralization consists of fine-grained chalcocite and covellite with minor amounts of digenite and idaite. Copper grades contained within the enrichment blanket generally range from 0.3% Cu to more than 2.0% Cu, but may locally exceed 3.5% Cu.

The underlying hypogene mineralization represents approximately 30% of the total resource at Escondida. It is characterized by an early assemblage of magnetite-bornite-chalcopyrite (Stage I alteration), which was overprinted by the Stage II assemblage of chalcopyrite with minor amounts of molybdenite and pyrite. The final stage hypogene sulfide mineralization was coeval with the Stage III alteration assemblage and is characterized by chalcopyrite, bornite, pyrite and covellite with minor amounts of chalcocite, enargite, sphalerite, tennantite and galena. Copper grades in areas of potassic alteration has overprinted the early potassic assemblages generally assay 0.4 to 0.6% Cu. Restricted zones, which have been further overprinted by advanced argillic assemblages are characterized by hypogene grades that may locally exceed 1.0% Cu.

HI STORY

Year of Discovery

Discovered By

Escondida - March 1981

Utah International/Getty Minerals JV

Exploration Methods Leading to Discovery: A reconnaissance exploration program was designed to search for hidden porphyry copper mineralization along a the Chilean porphyry copper belt between Chuquicamata in the north to El Salvador in the south. This exploration program consisted of a rapid geological reconnaissance and semi-detailed geochemical sampling of a large number of prospective copper anomalies within this area of study. The most favorable targets were tested by low-cost rotary drilling methods.

The decision to test the Escondida prospect was based on the presence of a regional stream sediment geochemical anomaly of copper, molybdenum and zinc; the existence of peripheral polymetallic deposits surrounding the Escondida prospect, the occurrence of a large area characterized by a well-zoned alteration of rock-silicates, weak evidence of limonite after disseminated chalcocite and a high molybdenum anomaly in the leached capping.

Summary: The Cerro Colorado-Cerro Zaldivar area was initially investigated by the Cerro de Pasco Corporation during the early 1960's, who recognized its importance as a porphyry copper target.

In October 1978, J. David Lowell proposed a \$4.5 million exploration program to Utah International, Inc. and the Getty Oil Company, to explore for porphyry copper mineralization over a 300 mile by 20 mile strip of territory extending along the Chilean porphyry copper belt from Chuquicamata in the north to El Salvador in the south. Utah International, Inc. and the Getty Mineral's Company subsequently formed an exploration joint venture to implement this study. Minera Utah de Chile, Inc., a subsidiary of Utah International, was designated the operator of the project. In December 1978, initial work on the Atacama Project began with preliminary bibliographical research plus a reconnaissance flight over most of the Chilean porphyry copper belt. As a result of these initial efforts, five areas were selected for more detailed examination. During the early reconnaissance phase of this program, the joint venture staked, registered and published 114 mining claims, covering 2,250,000 acres to provide protection of mineral rights while these sites were examined. Included within this land package was the copper prospect in the Cerro Colorado-Zaldivar area, which was acquired on June 13, 1979.

After a couple of years of exploration, the sixth drill hole of a drilling program at the Escondida prospect, the fifth exploration target to be evaluated by this regional reconnaissance program, encountered significant porphyry copper mineralization in March 1981. This hole intersected 171 feet of supergene copper mineralization, averaging 1.51% Cu, at a depth of 794 feet.

A detailed exploration and drilling program commenced at Escondida in June 1981. After several years of surface exploration, a 860-foot shaft was sunk at the property to obtain a bulk metallurgical sample and to confirm the results of the surface drilling program. During 1984, Broken Hill Pty. Company Ltd. acquired Utah International from the General Electric Company and Texaco, Inc. acquired the remaining interest in the project though its merger with the Getty Oil Company. In October 1985, BHP acquired Getty's 50% interest from Texaco and sold 30% and 10% interests in the project to RTZ and the Mitsubishi Corporation, respectively. The IFC acquired a 2.5% interest in the Escondida project in July 1988. Pre-production stripping of more than 198 million short tons of waste rock began in August 1988. The 38,500-stpd Los Colorados concentrator was commissioned in November 1990 with the first concentrates shipped in late December 1990. The initial cost of the Escondida project totaled US \$836 million.

Since commencement of commercial operations, this project has undergone several expansions. Phase I and II expansions were completed in 1993 and 1994, respectively, raising the mine and mill capacity to 60,000-stpd by the end of 1994. Furthermore, the second phase expansion also included the erection of an ammonia leach plant located at the port of Coloso. The innovative design of this facility allowed it by-pass the conventional smelting process converting copper concentrate directly to a copper cathode product. Although initial cathode copper production began in November 1994, process problems prevented this facility from achieving its design capacity. Although these initial difficulties were eventually overcome, this facility was permanently closed in June 1998 due to a down turn in the price of copper.

Completed in May 1996 at a total cost of \$575 million, Phase III expansion of the Escondi da project increased the mine and mill production capacity from 60,000 to 116,000-stpd. During 1996, Minera Escondi da Ltda. began studying the feasibility of adding SX-EW plant at the minesite, which would be designed to produce approximately 138,000 tons of cathode copper from the oxide dumps. This project was brought on line in December 1998 at a total cost of US \$451 million. Within the next twelve months, optimization of this facility expanded its annual copper cathode production capacity to 154,000 tons. In March 2001, the annual

production capacity of the SX-EW plant was further expanded by 10% to 165,000 tons. Phase 3.5 expansion of the Escondida project was completed in January 1999, increasing the mine and mill capacity to 132,000-stpd. In November 2000, the Phase IV expansion project of the Escondida operation was approved by the mine owners. Commissioned in October 2002 at a total cost of US \$984 million, the Phase IV expansion project increased the mine and mill capacity from 132,000 to 253,000-stpd with the addition of the Laguna Seca concentrator.

Early Mines: None

Early Production: None

SUMMARY OF RECENT MINING ACTIVITY

Deposits: Escondida and Escondida Norte

Present Status: Escondi da - Produci ng Escondi da Norte - Devel opment

Commodities

Major Products: Copper By-products: Silver and Gold

Operator

Name: Minera Escondida Ltda. Address: Avenida de la Mineria 501 Casilla 690 Antofagasta, Chile

Phone: 56 (5) 524-7935

Mine Manager: Bruce Turner, President

Owner(s)

Name(s): BHP Billiton Ltd. (57.5%) Rio Tinto PLC (30%) Japan Escondida Company (10%) International Finance Corporation (2.5%)

Important Dates

Property Acquired/Discovered: March 1981 (Discovery) Decision to Proceed with Development: 1988 Mine Development Began: August 1988 First Concentrate Produced: November 1990

Time from Acquisition/Discovery to Initial Production: 9.7 years Initial Development Time: 2.3 years Work Force

Number	of E	Employees:	Mi nera	Esc	condi da	- 2, 198 2, 189 2, 349	8 (2000) 9 (2001) 5 (2002)	2, 539 2, 837	9 (2003) 7 (2004)
		Contractor	s - 2,8 1,	880 775	(2000) (2001)	1, 84 2, 14	7 (2002) 3 (2003)	2, 400) (2004)

Uni on/Nonuni on: Uni on - Escondi da Syndi cate No. 1

Mining

Method(s): Open Pit - Escondida is a conventional open pit mining operation, utilizing 50-foot benches. As of 6/30/2004, the pit dimensions were 7,200 feet in an east-west direction by 10,500 feet in a north-south direction and 1,522 feet deep. The ultimate pit will measure 11, 500 feet by 15, 750 feet and reach an ultimate depth of 2,460 feet. Sulfide ores were initially reduced by two inpit gyratory crushers and transferred to the coarse ore stockpile adjacent to the Los Colorados concentrator by an overland conveyor system. Oxide ores are reduced a third in-pit gyratory crusher, prior to being delivered to the secondary/tertiary crushing plant. The mill feed for the new Laguna Seca concentrator are fed by a fourth in-pit Fuller 60-inch by 110-inch gyratory crusher and conveyor system, which was commissioned in October 2002.

Major mining equipment include eight Bucyrus-Erie (49R and 49RII) electric blasthole drills, two Ingersoll-Rand RMM2 diesel blasthole drills, two P&H 250 XP-ST blasthole drills, ten Bucyrus-Erie 495B electric shovels (50, 53 and 55cubic yd.), one 395 Bucyrus-Erie electric shovel, two P&H 4100-XPB shovels (73cubic yd.), three 23-cubic yd. front end loaders, twenty-eight 240-ton Dresser 830E diesel/electric haul trucks, twenty-three 240-ton Cat 793B mechanical haul trucks, twenty-three 240-ton Cat 793C mechanical haul trucks and thirteen 380-ton Cat 797 mechanical haul trucks (2002). Support equipment include three Komatsu WD-600 rubber-tired dozers, eight Cat 834-B rubber-tired dozers, four large rubber-tired dozers (Cat and Tiger), ten D-10 Cat tracked dozers, four D-11 Cat tracked dozers, five Cat 16-G graders, two Cat 24-H graders and six Cat 777 water trucks (2001).

Mining Performed by:

Annual Mining Rates:

55,000,000 short tons (1989)

117,030,000 short tons (1990)

121,442,000 short tons (1991)

118,661,000 short tons (1992)

141, 145, 000 short tons (1993)

159,377,000 short tons (1994)

243,794,000 short tons (1995)

311,715,000 short tons (1996)

Distance to Process Facilities: Los Colorados Concentrator - about 1 mile Laguna Seca Concentrator - about 4 miles

Open Pit

271,030,000 short tons (1997) 276,660,000 short tons (1998) 274,855,000 short tons (1999) 322,790,000 short tons (2000) 354,911,000 short tons (2001) 337,992,000 short tons (2002) 331, 121, 000 short tons (2003) 415,966,000 short tons (2004)

Waste: Ore Ratio: Open Pit - 5.5:1 (1990-1994, planned) 1.7:1 (initial est. for life of the mine) Cut-off Grade:

Processi ng

Ore Type(s): Sulfide and Oxide

Method(s): Los Colorados Concentrator (1991) - The ore is crushed by a semimobile 74-inch by 54-inch primary gyratory crusher, which feeds a 385,000-short ton stockpile. Coarsely crushed ore is drawn from this stockpile by two parallel conveyors, which feed twin grinding circuits, each consisting of a 5,500-hp, 28foot diameter by 14-foot primary semi-autogenous mill and an 18-foot diameter by 24.5-foot secondary ball mill. Discharge from the SAG and ball mills are combined and pumped to cyclone classifiers with the cyclone underflow returned to the ball mill.

The cyclone overflow directed to a bank of forty 1,500-cubic foot Dorr-Oliver cells, which serve as bulk copper-moly rougher flotation circuit. The rougher concentrates are reground by two 14-foot diameter by 26.5-foot regrind ball mills, which are operated in closed circuit with a cluster of cyclone classifiers. The cyclone underflow is returned to the regrind ball mills, while the overflow proceeds to a cleaner circuit, consisting of eight 13-foot diameter by 46-foot high column cells. The cleaner tails are scavenged by a bank of twenty 1,500-cubic foot Dorr-Oliver cells. The cleaner circuit. The copper concentrates are thickened to a minimum of 56% solids by two 170-foot diameter thickeners before being transported via an 106-mile slurry pipeline to the port of Coloso. At Coloso, the concentrates are thickened and dewatered by three Larox pressure filters prior to shipment to smelters in Japan, Germany and Finland.

When the moly circuit comes on line, copper will be depressed with sodium ferrocyanide and the molybdenite floated utilizing column flotation.

Rougher and cleaner-scavenger tails are combined and are directed to two claybottomed tailings thickeners. The tailings thickener overflow is returned to the plant, while the underflow reports to the tailings pond.

<u>Subsequent Modifications to the Los Colorados Concentrator (2002)</u> - Equipment presently employed in the mill facility include: two 28-foot diameter by 14-foot 5,500-hp SAG mills, one 36-foot diameter by 19-foot 18,000-hp SAG mill, four 18foot diameter by 24.5-foot 5,500-hp secondary ball mills, two 20-foot diameter by 33.5-foot 9,000-hp secondary ball mills, one 24-foot diameter by 34.5-foot 18,000-hp secondary ball mill, two 7-foot shorthead pebble crushers, eighty 3,500-cubic foot rougher flotation cells, three 14-foot diameter by 26.5-foot 2,750-hp regrind mills, fourteen 4-meter by 4-meter by 13-meter high column cleaner cells, fifty-two 1,550-cubic foot cleaner flotation cells, seventy-eight 1,550-cubic foot scavenger flotation cells, four 171-foot diameter concentrate thickeners and five 410-foot diameter tailings thickeners.

Laguna Seca Concentrator (2002) - Equipment employed at the Laguna Seca concentrator include a single primary 38-foot diameter by 20-foot SAG mill, three secondary 25-foot diameter by 40-foot ball mills, fifty-four rougher cells, twenty first cleaner flotation cells, twenty scavenger flotation cells and eight column flotation cells.



<u>Heap Leach</u> - The heap leach project at Escondida was brought on line in mid-December 1998. The oxide ores are initially reduced by an in-pit gyratory crusher and transported by an overland conveyor to the secondary/tertiary crushing plant (two standard cone crushers and four shorthead cone crushers). Following agglomeration (two drum agglomerators), the final crushed product (-0.6 inches) is conveyed to a dedicated leach pad, where is it is stacked by a radial stacker.

<u>Conventional SX-EW Plant</u> - The pregnant solutions are collected and report to a conventional solvent extraction plant, which employs three SX trains with two extraction, a single wash and one stripping stage. Four hundred eighty electrowinning cells are employed at the electrowinning facility.

<u>Sulfide Heap Leach</u> - The sulfide leach project at Escondida is scheduled to begin production in mid-2006. It will employ a bacteria assisted leaching process of low grade run-of-mine sulfide ores from the Escondida and Escondida Norte pits. The resulting solutions derived from this leaching operation will be treated by a solvent-extraction/electrowinning plants to produce a copper cathode product.

<u>Coloso Ammonia Leach Plant (1995)</u> - In late 1994, Minera Escondida commissioned an ammonia leach plant, located at the port of Coloso. Designed to treat about 40% of the concentrates, derived from the Escondida operation, this facility experienced a number of early operational problems. It was permanently closed in June 1998 due to the decline in copper prices.

This ammonia leach process uses an ammonia solution to selectively leach a portion of the copper (mainly chalcocite) contained within the concentrates. The resulting high-grade pregnant solution is treated by conventional SX-EW techniques. The remaining residue is upgraded by flotation to produce a marketable concentrate product.

Concentrates, shipped from Escondida via slurry pipeline (50% solids), are received in a 170-foot diameter thickener. The thickener underflow (70% solids) is pumped either to storage tanks, which feed the leach plant or to storage tanks that precede the filter plant.

The leach plant feed concentrates report to two horizontal belt filters, where it is dewatered and washed to remove any chlorides. The resulting filter cake reports to a conditioning tank, where it is repulped to 20% solids with raffinate from the solvent extraction plant and directed to a series of four agitated leach tanks (retention time - 3 hours). Following leaching, the slurry reports to a series of two 80-foot diameter thickeners. The first thickener overflow is the pregnant solution, which reports to a cone clarifier before proceeding to the solvent extraction plant. The solvent extraction process consists of two stages of contact with organic for copper recovery exceeding 99%, a single organic wash stage to remove impurities and one strip stage to transfer the copper in the organic to copper sulphate medium for electrowinning. The resulting solution reports to an electrolytic tank, followed by column cells and sand filters, which are designed to remove residual organic and solid contaminants. There are two electrowinning circuits, which employ permanent stainless steel cathodes as starting sheets and the latest refinery technology. This facility has 262 electrowinning cells, each containing 60 cathodes and 61 anodes. The cathodes are stripped from their stainless steel starting sheets, weighed and packaged in bundles for shipment to the port of Antofagasta.

The final thickener underflow (leached residue) reports to a horizontal belt filter, where it is washed of any ammoniacal residues and filtered. Since the leaching process liberates large amounts of pyrite, silicates and other insolubles, this residue can be upgraded by a conventional flotation circuit. This circuit consists of eighteen 1,000-cubic foot flotation cells, configured as roughers, scavengers and three stages of cleaning. A fourth cleaner stage employs of four 300-cubic foot flotation cells. The final flotation tails are directed to a 60-foot diameter tailings thickener and pumped to the tailings The final cleaner concentrate product reports to an 80-foot impoundment. diameter concentrate thickener. The thickener underflow and unleached concentrates are dewatered by a Larox pressure filter prior to shipment.



Design Capacity: Los Colorados Concentrator - 38,500 short tons/day (1990-1993) 50,000 short tons/day (1993-1994) 60,000 short tons/day (1994-1996) 116,000 short tons/day (1996-1998) 132,000 short tons/day (1998-2005) Laguna Seca Concentrator - 121,000 short tons/day (2002-2005) SX-EW Facility - 138,000 short tons of cathode Cu/year (1998-1999) 154,000 short tons of cathode Cu/year (1999-2001) 165,000 short tons of cathode Cu/year (2001-2005) Coloso Ammonia Leach Plant - 88,000 short tons of cathode Cu/year (1994-1998) Actual Processing Rate: Mill

21,082 short tons/day (1990) 36,753 short tons/day (1991) 42,377 short tons/day (1992) 46,085 short tons/day (1993) 55,652 short tons/day (1994) 60,112 short tons/day (1995) 111,740 short tons/day (1996) 110,482 short tons/day (1997) 117,523 short tons/day (1998) 138,992 short tons/day (1999) 141,268 short tons/day (2000) 129,989 short tons/day (2001) 140,540 short tons/day (2002) 212,452 short tons/day (2003) 248,107 short tons/day (2004)

38,578 short tons/day (2002)

41,381 short tons/day (2003)

47,115 short tons/day (2004)

Heap Leach

- short tons/day (1998) 44,510 short tons/day (1999) 37,863 short tons/day (2000) 36,967 short tons/day (2001)

Note: Mill and heap leach rates are based on a 7 day/week (365 day/year) work schedule.

Metallurgical Recov	ery:	Mill	
- % Cu (1990)	91.3% Cu (1994)	90.1% Cu (1998)	84.2% Cu (2002)
83.7% Cu (1991)	89.0% Cu (1995)	87.6% Cu (1999)	84.2% Cu (2003)
85.9% Cu (1992)	85.9% Cu (1996)	87.1% Cu (2000)	84.1% Cu (2004)
91.1% Cu (1993)	89.8% Cu (1997)	82.6% Cu (2001)	

Estimated Heap Leach Recoveries

E a constituita	0xi de Leach	80% Soluble Copper		
ESCONDI da	Sul fi de Leach	37% Total Copper		
	0xi de Leach	54% Soluble Copper		
Escondi da Norte	Sul fi de Leach	29% Total Copper		

Metals Production - Yea	ar Sulf Concen	ide trate	Col oso SX-EW	Oxide F SX-F	PLant EW	t Total Production
	Short	Tons S	Short Tons	Short	Tons	s Short Tons
19	90 6	, 432	0		0	6, 432
19	91 308	, 617	0		0	308, 617
19	92 370	, 532	0		0	370, 532
19	93 429	, 174	0		0	429, 174
19	94 530	, 486	1, 912		0	532, 398
19	95 483	, 727	31, 671		0	515, 398
19	96 873	, 329	54, 110		0	927, 439
19	97 957	, 553	70, 571		0	1, 028, 124
19	98 924	, 354	26, 025	5,	953	956, 332
19	99 911	, 338	0	145,	232	1, 056, 570
20	0 855	, 822	0	154,	588	1, 010, 410
20	01 708	, 878	0	166,	506	875, 384
20)2 682	, 640	0	152,	872	835, 512
20)3 933	, 796	0	162,	700	1, 096, 496
20	04 1, 152	, 500	0	167,	700	1, 320, 200
Concentrate Content:	Copper C	oncentra	ate			
38.3% Cu	0.023 0	z. Au/to	on	1.32	OZ.	Ag/ton (1990)
42.2% Cu	0.060 0	z. Au/to	on	2.97	OZ.	Ag/ton (1991)
44.1% Cu	0.078 0	z. Au/to	on	2.99	OZ.	Ag/ton (1992)
43.9% Cu	0.075 0	z. Au/to	on	2.62	OZ.	Ag/ton (1993)
43.8% Cu	0.089 0	z. Au/to	on	2.27	OZ.	Ag/ton (1994)
44.2% Cu	0.089 0	z. Au/to	on	2.07	OZ.	Ag/ton (1995)
38.4% Cu	0.056 0	z. Au/to	on	1.47	OZ.	Ag/ton (2000)
40. 2% Cu	0.057 0	z. Au/to	on	1.81	OZ.	Ag/ton (2001)
34.9% Cu	0.064 0	z. Au/to	on	1. 52	OZ.	Ag/ton (2002)
36.4% Cu	0.072 0	z. Au/to	on	1.84	OZ.	Ag/ton (2003)

<u>Financial Data</u>

Method of Acquisition

Year	Company	Method
1979	Utah/Getty	A 50/50 exploration joint venture, consisting of Minera Utah de Chile, Inc. (Utah International, Inc.) and the Getty Mining (Chile), Inc. (Getty Oil Company); staked, registered and published mining claims in the Cerro Colorado-Zaldivar area (Escondida) in June 1979.
1984	Texaco	Texaco acquired the assets of the Getty Oil Company in March 1984 and promptly put Getty's non-oil assets up for sale.
1984	BHP	Broken Hill Proprietary Co. Ltd. acquired a 50% interest in the Escondida project through its acquisition of Utah International, Inc. from the General Electric Company in April 1984. This transaction was valued at \$2.4 billion.

Year	Company	Method
1985	Escondi da	Minera Escondida Ltda. was formed in August 1985.
1985	Mi tsubi shi	In August 1985, the Mitsubishi Corporation purchased a 10% interest in the Escondida property from BHP. The Mitsubishi Corporation subsequently transferred a 2% interest in the Escondida property to an associate, the Mitsubishi Metal Corporation and sold a another 2% interest to Nippon Mining Co. Ltd. This consortium is named the Japan Escondida Corporation.
1985	ВНР	In October 1985, Broken Hill Proprietary Company Ltd. purchased Getty's 50% interest in the Escondida property from Texaco.
1985	RTZ	In October 1985, the RTZ Corporation PLC purchased a 30% interest in the Escondida project from BHP.
1988	I FC	In July 1988, the International Finance Corporation purchased a 2.5% interest in the Escondida project from BHP-Utah International, Inc.
2001	BHP Billiton	Following its merger with Billiton PLC in June 2001, Broken Hill Proprietary Company Ltd. was renamed BHP Billiton Ltd.
2002	Escondi da	In October 2002, Minera Escondida Ltda. merged with Sociedad Contractual Minera Escondida, which holds the mining rights of the Escondida property.

Acquisition Expenditures

Year	Costs \$ US	Comments
1985	55, 000, 000	The RTZ Corporation PLC acquired a 30% interest in the Escondida project for \$55 million, including two contingency payments and interest totaling \$25 million.

Exploration Expenditures

Year	Costs \$ US	Comments
1981-1983	-	An exploration and development drilling program completed 349 drill holes, which included 125,951 feet of rotary drilling and 322,408 feet of diamond drilling.

Year	Costs \$ US	Comments
1983	-	Sank a 14-foot diameter shaft to a depth of 860 feet and completed 2,756 feet of drifting and 6,063 feet of underground diamond drilling. A 17,100-ton bulk metallurgical sample was also taken.
2000	5, 250, 000	Approximately US \$5.25 million was spent on the prefeasibility study of the Escondida Norte deposit, which is located north of the Escondida mine. As of June 30, 2000, the Escondida Norte deposit contains a sulfide mineral resource of 1.65 billion tons (0.88% total Cu) and a oxide mineral resource of 159 million tons (0.73% acid soluble Cu).

Capital Expenditures

Year	Costs \$ US	Comments
1988-1990	836, 000, 000	Capital expenditures required to place the Escondida project in production. These expenditures included construction costs, mining and plant equipment (38, 500-stpd mill), concentrate pipeline, port and other facilities.
1992-1993	76, 000, 000	Capital expenditures of the Phase I mine and mill expansion project, which increased the annual production of copper in concentrate from 352,000 tons to 441,000 tons. This project was completed in October 1993.
1992-1994	261, 000, 000	Capital expenditures of the Phase II mine and mill expansion project, which increased the annual production of copper in concentrate to about 529,000 tons by the end of 1994. Furthermore, 88,000 tons of refined (cathode) copper will be produced from a portion of these copper concentrates, using an innovative hydrometallurgical process developed by Minera Escondida, which will be employed as an alternative to conventional smelting and refining methods.
1995-1996	575, 000, 000	Capital cost of the Phase III mine and mill expansion project increased annual copper in concentrate production from 529,000 tons to 802,000 tons. This project was completed in May 1996 at a cost of US \$575 million, raising the mill capacity to 116,000-stpd.

Year	Costs \$ US	Comments
1997-1998	451, 000, 000	Capital expenditures required to bring the dump leach project on line. Commissioned in December 1998, this project entails the blending, crushing, agglomerating, stacking and leaching of oxide copper ores at Escondida. The leach solutions are treated at a new conventional SX-EW facility, which has the annual capacity to produce 138,000 tons of copper cathode. Over the next twelve months, optimization of this facility increased its annual cathode production capacity to 154,000 tons.
1997-1999	104, 000, 000	Capital expenditures for the Phase 3.5 mine and mill expansion project increased the design capacity to 132,000-stpd. Completed in January 1999, it included the optimization and efficient integration of the original plant and subsequent three expansions, through the addition of a seventh secondary ball mill (24-foot diameter by 34.5- foot), a fifth tailings thickener, a pebble crushing circuit and replacement of concentrate filters at the port of Coloso. New mining equipment included a new 50-cubic yd. electric shovel and three 240-ton haul trucks.
1998-1999	165, 000, 000	Capital expenditures for the development of a water supply system at Monturaque, located about 50 miles east of the mine.
2000-2001	7, 100, 000	Capital expenditures required to expand the annual production capacity SX-EW facility from 154,000 to 165,000 short tons of copper cathode. This project was completed in March 2001.
2000-2002	984, 000, 000	In November 2000, the US \$1.045 billion Phase IV expansion project was approved by the mine owners. Planned to increase the mine and mill capacity from 132,000 to 253,000-stpd by September 2002, this project increased the annual copper production at Escondida to 1.3 million tons. It included the new 121,000-stpd Laguna Seca concentrator located four miles south of the mine; a fourth in-pit gyratory crusher and ore conveyor system, expansion of the mining fleet (13 Cat 797 haul trucks, two P&H 4100 XPB shovels and two P&H blasthole drills), a new concentrate slurry pipeline from the Laguna Seca concentrator to the existing Escondida concentrator and refurbishment of one of the existing concentrate slurry pipelines to the port of Coloso, a tailings disposal and water reclamation facility at Laguna Seca and modifications to the port facilities at Coloso, including additional filtering and storage capacity. This project was

Year	Costs \$ US	Comments
		commissioned in October 2002 at a total cost of US \$984 million.
2003-2005	400, 000, 000	In June 2003, the US \$400 million Escondida Norte project was approved by the mine owners. This project will include pre-mine waste stripping, mining equipment, a new gyratory crusher, 3.7-mile overland conveyor system, other infrastructure and owner's costs. Production is scheduled to begin in September 2005.
2004-2006	870, 000, 000	In April 2004, the Escondida Sulfide Leach project was approved by the mine owners. It is scheduled to produce 198,000 short tons of Cu cathode annually by mid-2006.

- Royalties: Production from Escondida is subject to a 5% NSR royalty payable to Sociedad Contractual Minera Escondida. Sociedad Contractual Minera Escondida is also owned by BHP Utah International, Inc. (57.5%), RTZ Corporation (30%), Japan Escondida Company (10%) and the International Finance Corporation (2.5%).
- Property Description: The Escondida property is held under perpetual exploitation concessions conferred to Sociedad Contractual Minera Escondida by the Chilean Government under the terms of the Chilean Mining Code. Minera Escondida Ltda. holds a leasehold interest in the Escondida property, which expires in 2059.

Operation Costs and Revenues (Fiscal Years Ended 12/31)

Cost Items	1996	1997	1998	1999	2000	2001	2002	2003
Labor	82. 8	99.3	99. 5	92.7	102.3	88. 8	81.0	100. 8
Contractors	78. 7	83.0	79. 0	75.5	96.0	86. 2	108. 9	130. 9
Power	69.6	71.2	63. 7	80. 9	81. 9	88. 6	89. 9	109. 8
Replacement Parts	43. 7	55. 1	45.6	47.7	49. 1	50. 1	67. 1	76.7
Fuel and Lube	25.5	24.2	19. 7	18. 9	28. 1	27.6	26. 3	32.3
Grinding Balls	24. 7	22.7	21.5	24.0	22.0	19. 4	20. 3	32. 1
Reagents	18.8	14.3	8.5	25.4	20. 9	23.7	21.2	27.1

Minera Escondida Ltda. Data (Millions \$ US)

Cost Items	1996	1997	1998	1999	2000	2001	2002	2003
Expl osi ves	21. 5	19. 0	16. 1	14. 9	16. 4	19. 4	20. 4	21.6
Consultant and Legal Fees	8.0	10. 4	16. 4	11. 8	14. 9	13.0	5.5	8. 0
Other Items	92. 8	106. 6	93. 0	98. 7	94.7	91.5	93. 3	105.6
Total Direct Operating Costs	466.2	505.8	463. 1	490.6	526.3	508. 2	534.3	644.9
Refining and Treatment Costs	339.6	409.8	386. 6	309. 7	266.4	210. 8	207. 1	263.0
Precious Metals Credits	(70.4)	(54.2)	(44.6)	(46.1)	(38.0)	(32.9)	(41.2)	(76.2)
Shipping Costs	63. 1	60. 1	54.2	55.7	59.6	47.9	45.3	62.8
Inventory Movements	(19.6)	2.6	14.7	(14.6)	(11.0)	(3.3)	(10.5)	(13.4)
Deferred Stripping	(50.2)	(33.9)	(20.9)	(6.0)	(47.0)	(65.6)	(52.7)	(23.5)
Total Direct Costs of Sales (C1)	728.7	890. 2	853.0	789.4	756.4	665.0	682.3	857.5
Depreciation	92. 6	109. 5	118. 1	163. 7	177.5	170. 6	184. 3	245.7
Amortization of Removal of Waste and Deferred Material	-	-	-	-	-	-	2.9	10. 2
Total Operational Costs (C2)	821.3	999.7	971.2	953.1	933.8	835.6	869.5	1, 113. 5
Net Interest Expense	4.3	31. 7	10. 0	70. 7	106. 5	85.5	66. 8	72.8
Other Net Expenses	10. 7	33. 6	11.5	188. 7	10. 7	16. 9	38. 2	30. 2
Total Operational and Financial Cost (C3)	836.4	1, 065. 0	992.7	1, 212. 5	1, 051. 0	938. 0	974.5	1, 216. 5
Total Copper Sold (000 lbs.)	1, 784. 8	1, 989. 2	1, 890. 2	2, 042. 7	1, 928. 9	1, 734. 4	1, 634. 3	2, 122. 2

Minera Escondida Ltda. Data

	1996 Cu \$ US/Ib.	1997 Cu \$ US/I b.	1998 Cu \$ US/Ib.	1999 Cu \$ US/I b.	2000 Cu \$ US/Ib.	2001 Cu \$ US/Ib.	2002 Cu \$ US/I b.	2003 Cu \$ US/I b.
Total Direct Operational Costs	0. 261	0. 254	0. 245	0.240	0. 273	0. 293	0. 327	0. 304
Total Direct Costs of Sales (C1)	0. 408	0. 448	0. 451	0. 386	0. 392	0. 383	0. 418	0. 404
Total Operational Costs (C2)	0. 460	0. 503	0. 514	0. 467	0. 484	0. 482	0. 532	0. 525
Total Operating and Funding Costs (C3)	0. 469	0. 535	0. 525	0. 594	0. 545	0. 541	0. 596	0. 573
Average Selling Price Realized	-	-	_	0. 709	0. 819	0. 681	0. 71	0.84

Note: C1 costs are "direct operating costs" in cash, necessarily incurred from the mining phase to the production of refined metal, less credits for by-products, excluding capitalization of the removal of waste or deferred material.

C2 costs are direct operating costs in cash (as defined above) plus depreciation and amortization of the capitalized costs for the removal of waste or deferred material.

C3 costs are C2 costs plus the indirect cash costs. Indirect cash costs include net interest payments on debt, but do not include prepayments of debt principal. Indirect cash costs also exclude capital investments.

Year	Sulfide Ore Milled	0xide Ore Treated	Sul fi de Ore	0xi de Ore	Cu	Au	Ag
	a .	o	Cu	Cu	Short	Troy	Troy
	Short lons	Short lons	%	%	lons	0z.	0z.
1990	1, 286, 000	0	2.02	-	6, 432	1, 077	68, 000
1991	13, 415, 000	0	2.75	-	308, 617	46, 695	2, 299, 000
1992	15, 510, 000	0	2.78	-	370, 532	65, 292	2, 511, 000
1993	16, 821, 000	0	2.80	-	429, 174	73, 440	2, 564, 000
1994	20, 313, 000	0	2.87	-	532, 398	108, 030	2, 749, 000
1995	21, 941, 000	0	2.64	-	515, 398	106, 286	2, 454, 000
1996	40, 897, 000	0	2.64	-	927, 439	187, 041	3, 498, 000
1997	40, 326, 000	0	2.84	-	1, 028, 124	178, 267	3, 028, 000
1998	42, 896, 000	1, 156, 000	2.46	1. 08	956, 332	149, 558	3, 068, 000
1999	50, 732, 000	16, 246, 000	2.05	1. 17	1, 056, 570	148, 941	3, 525, 000
2000	51, 704, 000	13, 858, 000	1.90	1. 08	1, 010, 410	126, 642	3, 282, 000
2001	47, 446, 000	13, 493, 000	1.81	1.07	875, 384	101, 000	3, 198, 000
2002	51, 297, 000	14, 081, 000	1.58	1.04	835, 512	126, 000	2, 981, 000
2003	77, 545, 000	15, 104, 000	1.43	1.06	1, 096, 496	184, 000	4, 728, 000
2004	90, 807, 000	17, 244, 000	1.51	1.03	1, 320, 200	217,000	5, 747, 000
Total	582, 936, 000	91, 182, 000	2.04	1. 08	11, 269, 018	1, 819, 269	45, 700, 000

Production (Fiscal Years Ended 12/31)

Reserves (Fiscal Years Ended 12/31)

Escondi da Proven and Probabl e Reserves

	Sulfide Ores			Low Grade Flot Sulfide Le	xed (2000-2002) 2003-2004)	Oxi de Ores			
Year	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contai ned Copper Short Tons
1989	-	_	_	-	-	-	_	_	_
1990	726, 427, 000	2.12	15, 400, 000	-	-	-	-	-	-
1991	712, 800, 000	2.12	15, 111, 000	-	-	-	-	-	-
1992	698,000,000	2.11	14, 728, 000	-	-	-	-	-	-
1993	682,000,000	2.08	14, 186, 000	-	-	-	-	-	-
1994	2, 322, 000, 000	1.30	30, 186, 000	-	-	-	-	-	-
1995	2, 293, 000, 000	1.27	29, 121, 000	-	-	-	-	-	-
1996	2, 260, 000, 000	1.27	28, 702, 000	-	-	-	-	-	-
1997	2,082,000,000	1.25	26,023,000	-	-	_	-	-	-

Reserves (continued)

	Sul	res	Low Grade Flot Sulfide Lea	d (2000-2002) 03-2004)	Oxide Ores				
Year	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons
1998	2, 194, 000, 000	1.23	26, 968, 000	-	-	-	-	-	-
1999	2, 143, 000, 000	1.21	25, 919, 000	-	-	-	-	-	-
2000	1, 780, 000, 000	1. 22	21, 716, 000	525, 000, 000	0. 62	3, 255, 000	241, 000, 000	0.63	1, 518, 000
2001	1, 735, 000, 000	1.21	20, 994, 000	518, 000, 000	0.62	3, 212, 000	265, 000, 000	0.62	1, 643, 000
2002	1, 703, 000, 000	1.21	20, 606, 000	688, 600, 000	0.64	4,367,000	218,000,000	0.70	1, 526, 000
2003	1,634,000,000	1.21	19, 771, 000	678,000,000	0.64	4, 339, 000	204,000,000	0.69	1,408,000
2004	1, 538, 000, 000	1.18	18, 148, 000	1, 303, 000, 000	0.54	7,036,000	174, 000, 000	0.69	1, 201, 000

Escondi da Norte Proven and Probable Reserves

	Sulfide Ores			Sulfide Lea	ch (200	03-2004)	Oxi de Ores		
Year	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons
2003 2004	553, 000, 000 639, 000, 000	1. 44 1. 37	7, 963, 000 8, 754, 000	105, 000, 000 554, 000, 000	0. 61 0. 56	640, 000 3, 102, 000	129, 000, 000 138, 000, 000	0. 77 0. 78	993, 000 1, 076, 000

Escondi da Measured, Indi cated and Inferred Resources (Excludes Proven and Probable Reserves)

	Sulfide Ores			Low Grade Flot Sulfide Lea	ed (2000-2002) 003-2004)	Oxide Ores			
Year	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons
2000	732, 000, 000	1.00	7, 320, 000	1, 066, 000, 000	0.64	6, 806, 000	146, 000, 000	0.40	584,000
2001	721, 000, 000	1.00	7, 210, 000	1,048,000,000	0.64	6, 689, 000	141, 000, 000	0.40	564,000
2002	638, 000, 000	0.90	5, 742, 000	1,701,000,000	0.51	8, 737, 000	61, 000, 000	0.50	305,000
2003	634,000,000	0.90	5, 706, 000	1,706,000,000	0.50	8, 530, 000	61, 000, 000	0.50	305,000
2004	776, 000, 000	0.90	6, 984, 000	4, 245, 000, 000	0.50	21, 225, 000	53,000,000	0.40	212,000

Escondida Norte Measured, Indicated and Inferred Resources (Excludes Proven and Probable Reserves)

	Sul	res	Low Grade Flot Sulfide Le	d (2000-2002) 03-2004)	Oxide Ores				
Year	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons	Tonnage Short Tons	Cu %	Contained Copper Short Tons
1999	1, 623, 000, 000	0. 90	14, 607, 000	-	-	-	158, 000, 000	0. 70	1, 106, 000
2000	1, 623, 000, 000	0.90	14, 607, 000	-	-	-	158, 000, 000	0.70	1, 106, 000
2001	1, 285, 000, 000	1.00	12, 850, 000	98, 000, 000	0.80	784,000	110, 000, 000	0.80	880, 000
2002	715,000,000	1.30	9, 295, 000	755, 000, 000	0. 61	4,625,000	157, 000, 000	0.80	1, 256, 000
2003	162,000,000	1.00	1, 620, 000	650, 000, 000	0.60	3, 900, 000	45, 000, 000	0.60	270, 000
2004	212, 000, 000	0.90	1, 908, 000	1, 456, 000, 000	0.50	7, 280, 000	43, 000, 000	0.60	258, 000

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