→ Gibraltar

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ANNUAL INFORMATION FORM AS AT FEBRUARY 11, 1993

Name and Incorporation of Issuer

Gibraltar Mines Limited (the "Company") was incorporated under the British Columbia Company Act on July 5, 1962. Through a series of amendments to the documents by which it was established, the authorized share capital of the Company was increased to present levels. The Company's principal and head office is located at 1600, Bentall IV, 1055 Dunsmuir Street, Vancouver, British Columbia, with mailing address P.O. Box 49330, Bentall Postal Station, Vancouver, B.C. V7X 1P1.

General Development of the Business

The Company is a 68.1% owned subsidiary of Placer Dome Inc. ("Placer Dome"), an international mining company with its head office in Vancouver, British Columbia. Placer Dome provides, at the Company's request, on-going general management, administrative, purchasing, marketing and technical services for a fee equal to Placer Dome's costs. Four of the Company's six directors and all of its officers are officers or employees of Placer Dome.

The Company owns and operates an open pit mine and related facilities 37 miles north of Williams Lake, British Columbia (the "Mine") which produces copper concentrate and cathode copper and, as a by-product, molybdenum disulphide concentrate. Williams Lake is approximately 350 miles north of Vancouver. The Mine commenced production of copper concentrate in March 1972. Access to the Mine is by an all-weather road which joins Highway 97 at the Village of McLeese Lake. A siding for the shipment of concentrate has been established on the British Columbia Railway's main line to Vancouver, four miles north of the junction of the Highway and the Mine road.

The Mine is located on a 4,435 acre site at an elevation of 3,675 feet and consists of 124 mineral claims held under leases expiring in 1993 and 1994 with rights of renewal and 150 mineral claims which are located claims under British Columbia mining law. Major facilities are primary and secondary crushers, a 38,000 tons-per-day concentrator, a cathode copper plant and an office, warehouse and repair facility.

History

Placer Dome and one of its predecessors, has been a significant shareholder of the Company since 1970. The cost of developing and equipping the property for production was $63.6 million. Production commenced in 1972. Mine development was financed by term loans from two Canadian chartered banks which were repaid in 1973 from operating cash flow. A cathode copper plant, designed to produce 10 million pounds annually of market-ready copper metal, began operating in October 1986.

Description of the Business

Business Segments

All of the Company's operations are within the mining sector. The major products produced are copper concentrate, cathode copper and, when economic, molybdenum disulphide concentrate.

During 1992, sales of copper to one non-affiliated customer totalled 45% (1991 - one customer - 47%) of total sales revenues for the year, comprising most of the 46% of the total sales to Japan (1991 sales to Japan - 68%). Sales to China represented 22% of total sales in 1992 compared to a negligible amount in 1991.

Geology and Ore Reserves

The Mine consists of four separate copper-molybdenum mineralized zones, namely Gibraltar East, Gibraltar West, Pollyanna and Granite Lake. Gibraltar West was mined out in 1985. All are contained within an area about 2 1/2 miles west to east and one mile north to south.

The Company's mineralized zones have been extensively explored by diamond drilling. As at December 31, 1992, the combination of proven and probable ore reserves at cut-off grades of 0.18% copper in the Gibraltar East pit and 0.20% copper in the other pits, and at a strip ratio of 1.20:1, were as follows:

Zone	Tons (000's)	% Copper	% Molybdenum	Cutoff Grade % Cu
Pollyanna	36,500	.322	.0095	.20
Granite Lake	56,300	.324	.0096	.20
Gibraltar East	69,800	.272	.0068	.18
Total Reserves	162,600	.301	.0084	

These ore reserves are based on mineral inventories that were re-interpolated and pit designs that were re-optimized and smoothed in 1990. Pit optimizations were based on zero profit, assuming 1990 economic parameters and average copper prices of about US$1.00 per pound.

Based on these reserves and forecast milling rates, it is estimated that the reserves are sufficient to sustain operations for 12 years. Material contained in the dumps being treated to recover cathode copper is excluded from the above reserves.

	Tons *(in thousands)*
Opening balance, January 1	165,800
Additions	10,769
Tonnage milled	13,969
Closing balance, December 31	162,600

The additions to the ore reserves resulted from the lowering of the cutoff grade in the Gibraltar East Stage 3 pit to 0.18% copper from 0.20% copper.

Exploration

Assay results from 60 holes drilled for definition purposes on the Gibraltar North property returned intersections which confirmed strike extensions and core zone grade distribution targeted by the drilling programme. The evaluation undertaken by the Company of the drilling programme in 1992 indicates that, because the mineralized zone lies at significant depth, the removal of overburden will require high stripping costs which, together with current market prices for copper, makes development of the zone uneconomic. Accordingly, the Company has decided not to proceed with development of the deposit as part of its mining plan. However, the Company will continue to study the deposit for possible development in the future. A royalty agreement signed in 1971 with Newcoast Silver Mines Ltd. was amended in 1992. The new agreement provides for Newcoast to receive a 30% Net Proceeds Interest (NPI) from their claims in the Gibraltar North zone after recovery of capital and financing costs. Gibraltar had requested that the agreement be amended as the previous terms did not provide an economic basis for further exploration work.

Mining

Mining is by the open pit method. Mining commenced in the Gibraltar East Zone in 1971 and has since occurred sequentially through two stages of the Gibraltar East, Granite Lake and Pollyanna zones, as well as mining in the Gibraltar West zone. Mining in 1992 was from the Pollyanna pit and Stage 3 of the Gibraltar East pit, in accordance with the long-term mining plan.

In 1990, the Company spent $16.7 million on new equipment for the development of Stage 3 of the Gibraltar East pit. Development costs were $13.9 million at December 31, 1992 and are estimated to total $20.4 million at completion. Mining from the Gibraltar East pit is expected to continue to mid-1998.

During 1992, a total of 14.7 million tons of ore was mined (1991 - 13.3 million) at a strip ratio of 1.24:1 (1991 - 1.72:1). The decrease in the strip ratio reflects a lower volume of overburden and waste.

Average mine production in 1992 was 90,000 tons per day (1991 - 99,100) at a mining cost of $0.46 per ton mined (1991 - $0.45). An increase in the mining rate to 105,000 tons per day is planned for 1993. Completion of mining from the Pollyanna pit is expected to occur in early 1993, and plans call for Gibraltar East to supply all the millfeed for the balance of the year.

Milling

The mill is conventional with primary and secondary crushing followed by three parallel grinding circuits each consisting of a rod mill feeding a ball mill. Copper is recovered by conventional rougher and column cleaner flotation. Molybdenum by-product is then extracted by differential flotation. Both copper and molybdenum concentrates are filtered and dried. Tailing is deposited in a closed impoundment area.

During 1992, the mill processed 14.0 million tons of ore at an average grade of 0.34% copper and 0.015% molybdenum disulphide (1991 - 13.1 million tons, 0.31%, 0.015%). The grinding circuit operated 94.1% of available time (1991 - 95.6%). The average daily throughput was 38,000 tons (1991 - 36,000). Recovery of copper was 73.8%, and of molybdenum 15.2% (1991 - 78.1% and 34.1%).

The continuing presence of oxide ore kept recoveries low in 1992. The volume of molybdenum in the millfeed did not allow for economical processing by December 1992 and the molybdenum circuit was not operated in that month. Production of molybdenum is not planned for 1993, but short-term operation of the circuit will occur if the circumstances are favourable.

CATHODE COPPER

Copper is leached from three of the four major mine waste dumps using sulphuric acid and natural biological leaching. The dissolved copper is recovered in a solvent extraction/electrowinning plant as cathode copper. Production in 1992 was 6.9 million pounds (1991 - 7.3 million pounds).

The 5% drop in production from 1991 was caused by a decrease in feed grades from the leached dumps. Leachable waste from the Pollyanna and Gibraltar East pits added 3.3 million pounds of copper to the dumps during the year. At December 31, 1992 the three operating dumps were estimated to contain 79.8 million pounds of leachable copper.

MARKETING

(a) Copper

The major end-user markets for copper are the telecommunications, automobile and construction industries and consumer durable goods manufacturers. Activity in these areas influences the demand for and price of copper.

The product of principal value produced by the Company is copper in concentrate having a copper content of 27-30%, plus minor payable amounts of silver. Most of the concentrate is sold under annual contracts to copper smelters in Japan and the Philippines and to merchants who may deliver to any market. The Company receives payments for an agreed percentage of the copper and silver contained in the concentrate, after deduction of smelting and refining costs.

In October 1986, the Company commenced the production and delivery of solvent extraction, electrowon cathode copper. The product is sold under annual contracts in Far Eastern markets.

The Company's copper concentrate and cathode copper are of good quality and are highly marketable. The Company does not experience difficulty in securing contracts for its copper concentrate and cathode copper.

A preliminary estimate of Western world production of refined copper in 1992 by the Commodities Research Unit (CRU[1]) was 9.84 million tons, 2.1% higher than in 1991. Copper consumption remained strong throughout the year with western world demand estimated at 9.94 million tons (1991 - 9.7 million tons).

At the end of 1992, western world stocks of refined copper were estimated at 1.4 million tons (1991 - 1.2 million tons).

The Company sells copper in concentrate and cathode forms on the basis of settlement prices quoted on the London Metal Exchange ("LME"). The LME quoted average price per pound for Grade A cathode, or previous equivalent, for each of the five years 1988 to 1992 was as follows:

	US$/lb.
1988	1.18
1989	1.29
1990	1.21
1991	1.06
1992	1.04

(b) Molybdenum

The Company also produces molybdenite concentrate as a by-product in quantities which since 1987 have ranged from 249,000 to 1,463,000 pounds of contained molybdenum per year. The Company has contracted to sell to Placer Dome all of its molybdenite concentrate until December 31, 1993. The price received from Placer Dome is based on the molybdic oxide price reported in Metals Week magazine, less a conversion fee for roasting, marketing and transportation, which is competitive with world terms. The contract may be terminated by either party on any anniversary date.

The 1992 Metals Week price averaged US$2.18 per pound of molybdenum contained in molybdic oxide compared to US$2.35 per pound in 1991.

Only incremental production costs are attributed by the Company to the production of molybdenum because it is a by-product. Molybdenum by-product credits have contributed positively to the Company's cash flow.

[1] An independent research organization based in London, England

HIGHLIGHTS

	1992	1991
OPERATIONS (in thousands, except grade)		
Millfeed (tons)	**13,969**	13,143
Grade (% copper)	**0.34**	0.31
Production		
Copper in concentrate (lbs.)	**70,861**	63,393
Cathode copper (lbs.)	**6,889**	7,343
Molybdenum (lbs.)	**376**	808
FINANCIAL (in thousands)		
Revenues	**$67,338**	$69,136
Net earnings	**3,107**	3,244
Dividends	**602**	2,408
Investing activities excluding short-term investments	**14,487**	22,066
PER SHARE		
Net earnings	**$ 0.26**	$ 0.27
Dividends	**0.05**	0.20
Book value	**5.60**	5.39
AVERAGE METALS PRICES (US$/lb.)		
Copper Grade A (London Metal Exchange)	**1.04**	1.06
Molybdenum contained in molybdic oxide (Metals Week)	**2.18**	2.35

Note: All amounts are for the years ended December 31, except for book value per share which is as at December 31, and grade and metals prices which are the average for each of the years.

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Production and Operating Summary[1]

Silver

Mine	% of mine production	Millfeed tons (000's)	Production cost per ton milled	Grade (ozs./ ton)	Recovery (%)	Production ozs. (000's)	Cost per oz. cash[2]	Cost per oz. total[3]
Equity Silver	100%	2,909	7	2.14	51.4	3,117	$4.05	$6.43
La Coipa[4]	50%	2,731	*	3.79	78.1	8,064	*	*
Misima	100%	7,637	*	0.73	37.4	2,082	*	*
Real de Angeles	49%	3,220	*	1.52	77.5	4,004	$2.68	$3.81
Consolidated silver[5]	*	*	*	*	*	13,263	*	*

Copper

Mine	% of mine production	Millfeed tons (000's)	Production cost per ton milled	Grade (%)	Recovery (%)	Production lbs. (000's)	Cost per lb. cash[2]	Cost per lb. total[3]
Equity Silver	100%	2,909	*	0.26	67.7	10,168	*	*
Gibraltar	100%	13,969	5	0.34	73.8	77,750	$0.83	$0.93
Marcopper	39.9%	2,330	*	0.58	67.1	18,368	$0.86	$0.93
Consolidated copper[5]	*	*	*	*	*	87,918	*	*

Molybdenum

Mine	% of mine production	Millfeed tons (000's)	Production cost per ton milled	Grade (%)	Recovery (%)	Production lbs. (000's)	Cost per lb. cash	Cost per lb. total
Endako	100%	10,693	4	0.15	80.1	15,461	*	*
Gibraltar	100%	13,969	*	*	*	376	*	*
Consolidated molybdenum	*	*	*	*	*	15,837	*	*

(1) Figures represent 100% of the results of mines owned by the Corporation and its subsidiaries and a pro-rata share of joint ventures. The Corporation's ownership interest is 58.8% of Equity Silver Mines Limited and 75.7% of Placer Pacific Limited which holds the 80% ownership interest in Misima Mines Pty. Limited. All dollar amounts are in U.S. currency.

(2) Includes all expenditures incurred for mining operations except royalties, exploration, financing and non-mine site general and administrative. Amounts include charges for smelting and refining.

(3) Comprises cash production cost plus depreciation, depletion and reclamation provision.

(4) Gold and silver are accounted for as co-products at the La Coipa joint venture. Silver is converted to equivalent ounces of gold, using the ratio of silver market price to gold market price, for purposes of calculating cash and total production costs per equivalent ounce of gold.

(5) Consolidated production excludes amounts from Real de Angeles and Marcopper since they are accounted for by the equity method.

Silver

(The resources shown are in addition to the ore reserves)

Mine	Ore Reserves Proven and Probable			Resources Measured and Indicated		
	Tons (000's)	Grade (ozs./ton)	Contained ozs. (000's)	Tons (000's)	Grade (ozs./ton)	Contained ozs. (000's)
Equity	186	4.310	802	118	2.040	241
La Coipa	34,738	2.187	75,972	8,933	2.320	20,725
Misima	27,091	0.411	11,141	5,741	0.211	1,211
Porgera	12,685	0.350	4,440	*	*	*
Real de Angeles	17,122	1.335	22,858	55,135	0.744	41,020
The Corporation's share	*	*	115,213	*	*	63,197

Copper

(The resources shown are in addition to the ore reserves)

Mine	Ore Reserves Proven and Probable			Resources Measured and Indicated		
	Tons (000's)	Grade (%)	Contained lbs. (millions)	Tons (000's)	Grade (%)	Contained lbs. (millions)
Equity	186	0.460	2	118	0.270	1
Gibraltar	110,796	0.301	667	374,157	0.286	2,140
Marcopper	85,142	0.440	749	*	*	*
The Corporation's share	*	*	1,418	*	*	2,141

Molybdenum

(The resources shown are in addition to the ore reserves)

Mine	Ore Reserves Proven and Probable			Resources Measured and Indicated		
	Tons (000's)	Grade (%)	Contained lbs. (millions)	Tons (000's)	Grade (%)	Contained lbs. (millions)
Endako	132,716	0.082	218	121,366	0.072	175
Gibraltar	110,796	0.008	19	374,157	0.008	60
The Corporation's share	*	*	237	*	*	235