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Gibraltar

Start-up memories re-lived

Gibraltar Mine celebrates its 20th anniversary

By *Ida Makaro*

On Saturday, June 20th, Gibraltar Mine at McLeese Lake, north of Williams Lake, B.C. celebrated its 20 anniversary (the mine officially opened on June 13, 1972) with an open house at the minesite and an evening reception in Williams Lake for more than 200 guests, the guests including many former employees, many of whom had worked together at Craigmont Mines near Merritt when it was in operation.

Mine manager Bill Myckatyn was host and master of ceremonies. Frank Gardner, M.L.A. for Cariboo North brought greetings from the Provincial Government and Alderman Charlie Wyse brought greetings from the City of Williams Lake.

Ald. Wyse paid special tribute to the impressive contribution made to the economy of Williams Lake over the years by Gibraltar, calling it a "good corporate citizen, contributing most valuably to the quality of life enjoyed in Williams Lake."

Gardner told the audience he knew how very important the mining industry was to his constituency, and in bringing greetings from Mines Minister Anne Edwards, (noticably absent) gave his assurance they are and always will be "strong advocates for the industry."

GIBRALTAR'S MINE MANAGERS CAME HOME: From the left, present manager and host for the 20th Anniversary celebration, Bill Myckatyn (1991 to present), Art Brown(1988-1991), Jeff Thompson (1981-1988), Jim Wright (1976-1981) and Mac Gibbs (1970-1976).

Tony Petrina, mine manager at Craigmont Mines in 1972 when Gibraltar opened, and in 1974 becoming vice president of operations for Gibraltar, and later president of Placer Dome, noted that when Gibraltar opened in 1972, the NDP government was in power in British Columbia and Dave Barrett was the premier.

"British Columbia was still a 'mine-friendly' place in 1972, so Gibraltar had a tax holiday that lasted until the end of 1973. The early start-up and below budget construction meant a longer earnings period during the balance of the tax-free phase, and reduced interest cost on the development loan."

> "Incentives such as the three-year tax free period for new mines were a boon to the industry and a major reason for Gibraltar's start in 1972."

Speakers pointed out that over its life, Gibraltar has mined 525 million tons of material and milled 250 million tons of ore.

That amount produced one and a half billion pounds of copper and 18 million pounds of molybdenum.

The expenditure of 64 million dollars through 11 months of development time provided direct work at a period of high unemployment to more than 1000 people in construction.

In the same period, wages earned by the construction force were $15 million, of which $3.5 million was paid to the government in personal income tax.

Of the $18 million spent on mining and processing equipment, over $10 million was spent in Canada on Canadian goods.

The Federal and Provincial Governments received direct benefits of more than $3 million in sales taxes during the construction period alone.

Gibraltar created 440 permanent jobs on start-up with an annual payroll of $4.5 million, providing personal income taxes of about $1 million (employment peaked at 659 in 1982).

What do the contributions come to today?

The 1991 payroll, with about 300 employees was $18 million, bringing total benefits to the community since 1972 of some $242million.

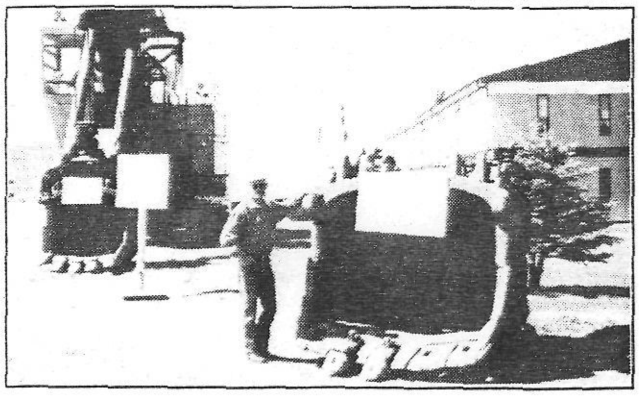
Since start-up, $83 million has been paid to governments in federal, provincial, property and mineral taxes.

In his summary, Petrina pointed out that the investment of $64 million for the construction of Gibraltar 20 years ago has temporarily disturbed about 2,000 hectares of land, "about the size of a suburban subdivision, and generated over $368 million of economic activity in the local area."

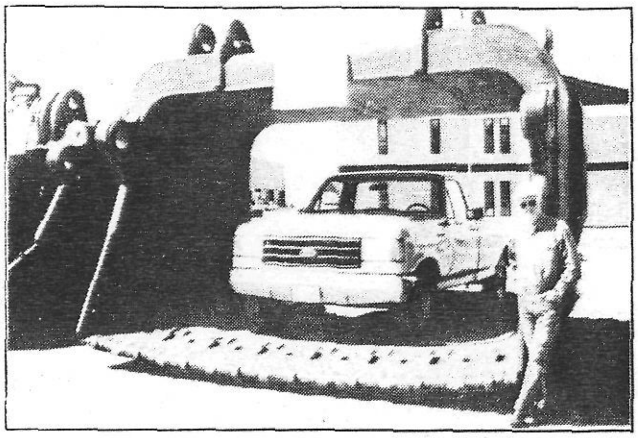
"And although I wasn't personally involved in the decision to develop Gibraltar, it is my belief that the tax free period (1936 to 1974) had a lot to do with it.

"And in spite of these impressive numbers, today's governments remain indifferent to future mine development.

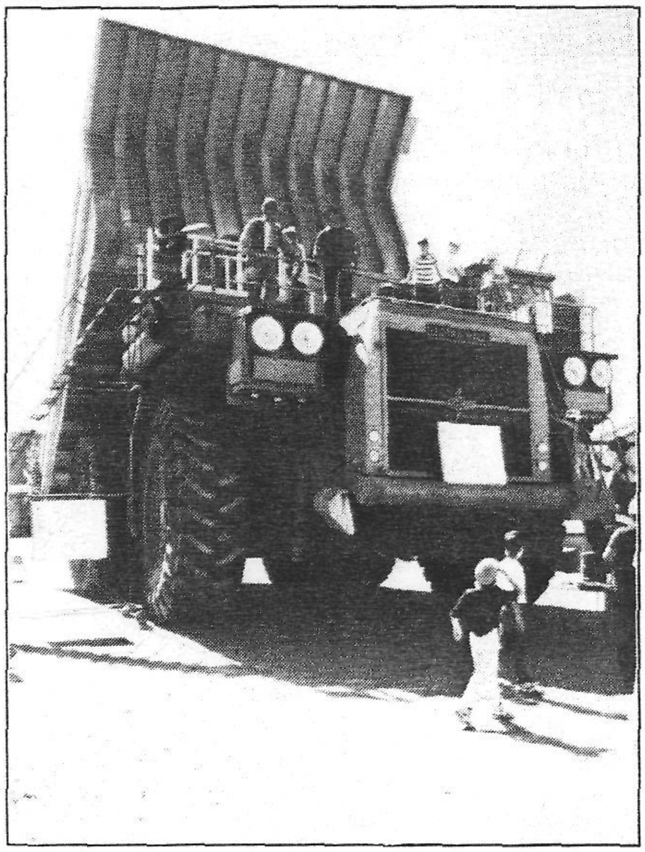
"We'll have to keep talking to them, the way we did 20 years ago when Barrett's NDP brought in the mining royalties."



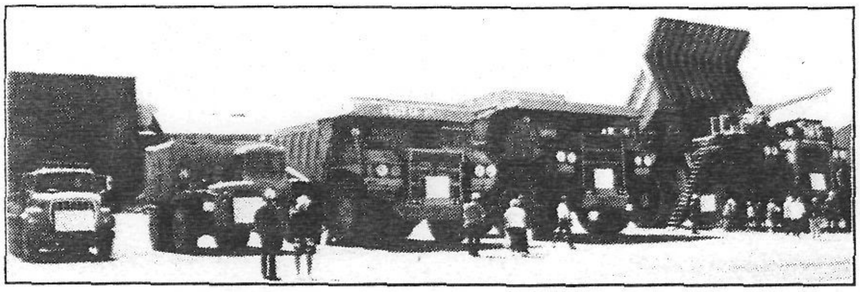
AS IT WAS THEN: Tom Waterland, President and CEO of the Mining Association of B.C., a guest at the 20th anniversary of Gibraltar Mine, stands beside the shovel that was the size in use away back in the early 70's - when he worked at Craigmont Mines near Merritt.



AS IT IS NOW: Waterland is dwarfed by the shovel now being used at Gibraltar Mine, inside of which is a pickup truck!



PEOPLE CAME TO SEE GIBRALTAR: Nearly 700 visitors came to the minesite north of Williams Lake to tour the operation and view the spectacular equipment lined up for them. This photo shows children and adults clambering over the 240 ton Electra Haul ore truck (a house on wheels!) which, visitors were told, is operated on one shift by a woman driver.



THE PROGRESSION OF TIME: As technology changed over the years, so did the equipment - the haul trucks grew bigger and bigger, and more sophisticated. The equipment was lined up at Gibraltar to demonstrate the progression from 1972 to 1992.

Schwindt gets an extended deadline

Government agrees not to proceed with Bill 32

The Resources Compensation Commission has been given until August 21 to finalize its report, Attorney General Colin Gabelmann announced in a press release recently. The extension to the commission was requested by the Commissioner, Richard Schiwindt, the release said.

"Schwindt's commission has generated considerable interest and some individuals have had difficulty in providing submissions within the time allowed," Gabelmann said. "The commission is dealing with complex issues and I want to ensure Dr. Schwindt has the time he needs to fully address them and provide interested parties with the time they need."

Schwindt, in a letter to the Attorney General requesting the extension, also noted that the commission will be making available a summary paper based on its interim report. "The additional time will allow responses to that paper," Gabelmann said.

"The government agrees with Dr. Schwindt that this is too important an issue not to give it additional time, therefore I have extended the deadline."

At the same time, Gabelmann stated that the government will not be proceeding with the Resources Compensation Interim Measures Act (Bill 32), the "freeze legislation".

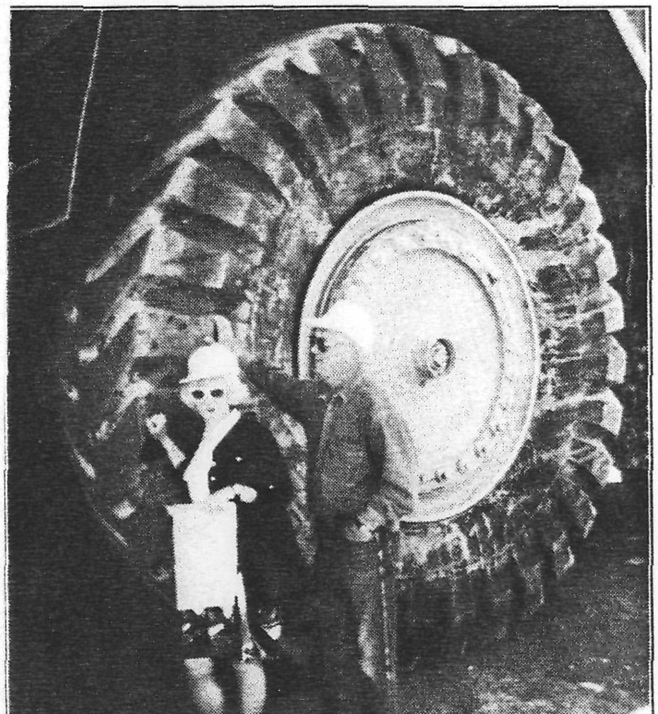
"Based on representations from concerned individuals, the government has been persuaded that it is not necessary to proceed with Bill 32."

"The introduction of the Bill has placed everyone on notice that the issue of compensation is under active review and that new mechanisms for resolving compensation claims may be implemented in the near future," Gabelmann added.

However, the Government has not gone far enough, ac cording to Tom Waterland, president and CEO of the Mining Association of B.C.

"The industry is still not comfortable, Bill 32 should be removed completely from the books. It can still be brought forward at any time, and it is an action with which we totally disagree.

"We will continue to urge the Provincial Government to remove the spectre of this kind of legislation if they wish to restore the confidence of the resource industries."



GIBRALTAR'S MONSTER: Tom and Donnie Waterland can't resist sizing themselves against one of the tires for the 240 ton Electra Haul truck on display at Gibraltar during the mine's 20th anniversary celebration. Each tire costs $20,000 and there are six tires on each truck. The truck itself costs $1,600,000 unassembled - it costs about another $25,000 to put it all together at the operation site! - *Photo by Ida Makaro* -

disseminated and associated with zones of silicification and minor fluorite or anhydrite or both. The South Kemess, by contrast, is essentially monzonite hosted, with chalcopyrite and minor pyrite in varyingly propylitized and K-altered intrusive. A plus for the South Kemess is an interesting and potentially significant mineralized regolith, and the fact that the deposit is open to the south and west. A minus is the fact that the intrusive is cut off at depth by a thrust fault. This is definitely a property to watch.

QR (Au) Rea Gold. Geoff Goodall and Ross Banner (consultant) brought us up to date. Rea is using the new thin kerf NQ2 drill to sample the upper benches of the proposed open pit. If assays are satisfactory, Rea will apply for permits, and expect to start mine construction next year. Current plans are to purchase a used mill to keep the capital cost down, hopefully to less than $12 million.

Gibraltar

Gibraltar Mine (Cu, Mo) George Brown brought us up to date on the new ore zone, which will be called Gibraltar North. The deposit was discovered by geological modelling and is shear zone-related. It may be the faulted extension of the Gibraltar West orebody, to which it has some similarities. The deposit dips gently west with a shallow NNW plunge and occurs in sheared quartz-sericite rock, below 70m of unmineralized sheared diorite. Copper grades are generally high, occasionally in the percent range (e.g. 7m of 4.8% Cu) Molybdenum is absent, zinc and silver are significant, and gold values may be high enough to get a refiner's credit. A preliminary ore reserve calculation is expected in the 35Mt range, grading 0.6% Cu equivalent or better - some 50% higher than current ore grades. Newcoast Silver Mines Ltd., who have had a 30% NSR after all costs on part of the ground have been making statements about immediate production, but the reality is that more drilling is needed, there would be at least two years of stripping needed to reach the ore, and George thought that it could be 5 years before Newcoast received any revenue.

Takla Rainbow (Au) Eastfield Resources. Dave Bailey brought us up to date. He has been mapping adjacent claims on contract and now feels he has a much better idea of the property geology than last year. He feels the gold mineralization is related to an early silicified shear zone in Takla volcanics that trends NW and that the copper mineralization is related to later NE trending fault zones.

The bottom line: the gold is not porphyry related and the tonnage potential is limited to the silicified shear. Financing for the proposed drilling fell through, and prospects for more work are poor.

Swan (Au) Eastfield Res. Candela Resources (a Prime Group company) had an option on the property and drilled 4 holes between the area of previous drilling and the Pinchi fault. IP anomalies identified by Eastfield were ignored. Result: two holes in poorly mineralized intrusive, one hole in siltstones and one hole in sheared serpentinite.

Lustdust (Au, base metals). A succession of companies has looked at this property, largely I suspect because of the feeling that with such spectacular gossans, there must be some significant mineralization somewhere. Hosts are Cache Creek group limestones, argillaceous sediments and minor felsic intrusives. Little mineralization was seen in the trenches examined.

July / Aug. 91
DG Report - Faulkner.

GIBRALTAR'S DUMP LEACHING

An insight into acid effluent control

By David Scott, P.Eng.

Since 1972 Gibraltar Mines has operated a medium-sized, copper-molybdenum open pit in the Cariboo country of British Columbia.

To improve the economics of a low-grade operation, Placer Dome (the majority shareholder) installed a dump leach system six years ago. While there is nothing new in heap leaching, Placer did go out on a limb in two respects. First, this was to be a dump leach rather than a heap leach. The dumps, upwards of 200 ft. high, were not engineered for leaching, they were simply taken as they stood. Second, winter temperatures in the Cariboo, frequently drop to -35° and -40° C. for several weeks during the long winter.

On the positive side, the dumps are underlain by thick beds of impervious till thus voiding the need for a geomembrane. The system went ahead in 1986 and has proved to be an unqualified success, producing up to 25,000 lb. of high-purity cathode copper per day.

For Gibraltar the benefits were immediate — a fresh source of revenue. For the mining industry as a whole, controlled dump leaching may well become the means for coping with the major environmental problem of the day — the generation of acid from mine wastes.

Gibraltar mills well over its nameplate capacity of 30,000 tons per day; 35,400 tons were treated daily in 1990. Grade for the same year was 0.30% copper and 0.018% molybdenum disulphide. Mineralized rock bearing less than the cut-off grade of 0.20% copper finds its way onto the waste-dump, and it is this material that is leached. Rock grading less than approximately 0.13% copper is allocated to the final waste dump. The reason for the approximation is not only the copper price, which has an immediate impact, but the rock's content of natural carbonate. Carbonate is good news for the environment, but it is a heavy consumer of acid and can be a make-or-break cost item.

The Process

Present practice at Gibraltar is to level the section of the dump to be leached and dozer-rip the surface. A grid of 2-inch HDPE pipe is laid to deliver leaching solution on 20-ft. centres. Leaching starts with spent electrolyte from the electro-winning cells. The solution is maintained at pH 2.2 and fresh sulphuric acid is invariably required when a new dump is being brought on line. The acidic solution sprays through simple perforations in the 2-inch branches and is distributed naturally by the prevailing winds during the warm weather months. When freezing temperatures arrive, the solution is drawn through a T and valve fitted on the 2-inch lines. The controlled flow of solution flows through an 8-ft. downpipe and then drips to the bottom a 10-inch-diameter hole drilled in the pile. These holes are drilled prior to installation of the pipe grid and were originally 20 ft. deep, the depth at which it was thought freezing would not cause problems. As it has turned out, the heat generated by the biochemical leaching reaction is far greater than anticipated and 10-ft. holes have been found to be entirely adequate.

On a recent visit to Gibraltar by *The Northern Miner Magazine*, we were told by Mill Superintendent, Paul Blythe, that pile temperatures of 20°C registered at depths of 20 ft. - 40 ft., while the outside air scored minus 35°C. Total sprayed area at Gibraltar is a little over six million square feet. Each spray grid covers 150,000 sq.ft.

Forty five grids are presently installed with eight or nine running at any one time and Gibraltar uses a run and rest cycle of 14 days spraying followed by 56 days of rest. The 100 million tons of leachable rock runs approximately 4% sulphides.

Leach solution is sprayed at the rate of 240 (US) gallons per hour per 1,000 sq. ft. and the pregnant solution carrying 0.9 grams copper and 1.5 grams ferric iron per litre is pumped to the solvent extraction plant.

The Environmental Result

What is of commanding interest is that chaotic dumps can be leached. Unlike Gibraltar, for whom leaching is a commercial enterprise, there will often be no recoverable metals and leaching will be employed solely to reduce the sulphur content of the rock pile The pregnant liquor carrying ferric iron spiked with thiobacillus ferrooxidans would be recycled to the dump until the solutions were sufficiently concentrated for secondary treatment. The net benefit to the mining company would be completion of the (mandatory) dump monitoring program in five or 10 years compared to the 50 - 75 years needed if nature alone were left to do the oxidation.

A second avenue for researchers is currently under study at Gibraltar. This work resulted from the opening of the initial dump where leaching started in 1986. A 30-ft.-deep cut was made earlier this year and a number of intriguing phenomena were revealed. Not the least of these is that coatings extracted from the leaching solutions have been deposited upon the exposed copper and iron sulphides and prevented little more than superficial oxidation from taking place. These species have consequently been removed from active acid generation. Not encouraging observations for Gibraltar where copper recoveries are in the scheduled 40% range but of major significance environmentally — can the growth of these coatings be controlled, can they be accelerated?

Also to be considered by researchers are the possibilities of using low-cost additives to leach solutions, such as common salt or the soluble fertilizers should phosphorus or ammonia assist in the solubilization or coating processes.

Fomento Minero will provide a minimum of $1.9 million for mining equipment and working capital for the project.

Japan/U.S. Zinc Powder Venture

Mitsui Mining and Smelting and Zinc Corp. of America have formed an equal joint venture to manufacture and market mercury-free zinc powder for alkaline batteries. Mitsui-ZCA Zinc Powders Co. was formed on November 2 with a capital of $5 million. The company is scheduled to begin operations after completing the construction of a 3,000 t/y plant budgeted at $3 million in Monaca, Pennsylvania in mid-1993. Mitsui will handle the sales.

Bauxite Plan In Russia

The premier of the northern Russian autonomous Komi republic has announced that a joint stock company will be set up to help develop a large bauxite deposit in the region. Prime Minister Vyacheslav Khudyaev told a meeting in the Komi capital Syktyvkar that the company would develop the Sredyo-Timansky deposit, which he said was the largest of its kind in Europe.

Local experts say the deposit could produce 6 Mt of bauxite and 1 Mt of alumina annually and make Russia a net exporter of alumina rather than a net importer. The deposit could also produce rare metals such as gallium and vanadium.

Gibraltar's Programme

Gibraltar Mines, operator of the Gibraltar copper mine near McLeese Lake, British Columbia, reports that capital expenditures for the first nine months of 1992 were $C3.6 million for equipment and $C7.6 million for development of stage 3 of the Gibraltar East pit. The total spent to date on this development is $C13.3 million and the total estimated cost of the project is $C24 million.

On the North copper zone, the company has completed 62 holes of definition drilling. Assay results have been received for 33 of the drill holes and these vary from 1.1% copper to 0.33% copper over relatively thick intersections. The results confirm strike extensions and core zone grade distribution. Assaying should be completed this month. This will be followed by an economic evaluation, the results of which are due in the first half of 1993.

Jangardup Mineral Sands Go-ahead

Cable Sands (WA) Pty Ltd has decided to proceed with the Jangardup mineral sands project in Western Australia (about 50 km south of Nannup), which is scheduled to have a production rate of 200,000 t/y of ilmenite. Capital costs of the project are expected to be $A48.0 million. Construction is expected to begin in the near future, the initial phase involving work in public roads and site preparation.

Production of heavy mineral sands is due to begin in April 1994 with first shipments of finished products from the Bunbury processing mill occurring in the third quarter of 1994.

Iranian Contracts

Austria's Aichelin company has won a $US3 million contract to supply furnaces and equipment to the Mobarakeh steel plant near Isfahan in central Iran.

Separately, Iran will import 400,000 t of aluminium ingots from the former Soviet republic of Tajikistan under a recently signed agreement.

Steel Proposals For Mauritania

Egypt, Syria, Algeria, Qatar, Saudi Arabia and Libya are to provide funding worth a total of $US6 million to finance a feasibility study for the construction of a large steel plant at an as yet unspecified location in Mauritania, reports the MENA news agency. The six countries are said to be keen to develop Mauritania's rich deposits for iron and steel production. A meeting will be held in Rabat, Morocco, this month to discuss the project.

PRODUCTION

Codelco's New Metalworking Division

Chile's Codelco has created a new division out of various metal working workshops previously administered by its El Teniente division. The new division, Talleres, will manage all resources and installations of the workshops.

Set up in 1916 to provide parts for Codelco machinery, the workshops had a total $4 million loss in 1991 and this year losses reached $8 million. Unions at Codelco have tried to stop the El Teniente workshops from being transformed into a new division because they believe this constitutes a first step towards its privatisation.

Iron Ore Contract For MMTC

India's Minerals and Metals Trading Corp. has signed an export contract with Metal Export-Import of Bucharest for the supply of 500,000 t of iron ore fines to be shipped to Romania within the next three months. In addition, a memorandum of understanding covers the export of a further 500,000 t to be shipped in the January-May period. A long-term supply agreement is also being negotiated.

R.S.A. Coal Mine Explosion

Six miners died and 19 were injured following a methane gas explosion on November 7 at one of the shafts of the Ermelo coal mine. Trans-Natal, the South African mine's owner, said the site of the blast has been stabilised.

Albanian Ferrochrome Output

A second furnace has started operation at the ferrochrome plant at Burrel, 30 km north of Tirana, Albania, thereby enabling the plant to increase its output to 60 t/d of ferrochrome, according to the Albanian Telegraphic Agency. This figure represents a doubling of production. Exports are said to be healthy.

The Burrel plant was built in the 1970s with Chinese funding and was said to have a 35,000 t/y design capacity.

Amcoal Colliery Betters Own Record

Amcoal's New Denmark colliery outside Standerton has broken the South African monthly production record for longwall mining for the third year in succession. In September the team on the East longwall produced a record 301,663 t (run of mine), bettering its own record of 289,347 t rom set in August 1991. The mine provides coal to Eskom's Tutuka power station.

RTZ Round-up

Mine production of gold, silver, copper and iron ore rose in the third quarter to September 30, reports RTZ Corp., but lead and zinc output fell. Its share of mined copper production in the three months totalled 136,000 t, up from 124,100 t in the same quarter last year. The increased production of copper in concentrates was mainly due to the higher ore treatment rate at Bingham Canyon following the start-up of the fourth mill at the Copperton concentrator in January. In contrast, RTZ no longer has a shareholding in Highland Valley following its sale of Rio Algom in mid-year. Copper output for the first nine months of 1992 came to 405.1 Mt, up from 373.2 Mt in the same period of 1991.

Gold output in the September quarter totalled 369,000 oz, up from 230,000 oz, reflecting the start-up of the Kelian mine

MINING

The Sun. July 23/94

Hot copper price spurs Gibraltar reopening

Cariboo operation back in full swing by October

ROD NUTT
Sun Business Reporter

Paced by the soaring price of copper, Gibraltar Mines Ltd. will reopen its McLeese Lake mine in October.

The mine has been closed since Dec. 1.

"The staff on site has worked extremely hard in assessing the alternatives open to us to re-start," said Gibraltar president and chief executive officer Mill Myckatyn. "The contributions of the job protection commissioner, the ministry of energy, mines and petroleum resources, B.C. Hydro and the Cariboo Regional District are greatly appreciated.

"This participation — together with the improved price of copper — have led to the decision for an early resumption of operations."

Myckatyn also attributed the reopening to the lower value of the Canadian dollar and cost reductions.

Copper traded in the $1.14 to $1.17 US a pound range last week and closed on Friday at $1.14.

The first recalled employees started working Friday. About 127 new staff members and hourly paid employees will be hired, bringing the total employment to 277 by October, when the mine will be at full production.

Myckatyn said the mill will process about 44,000 tonnes of ore a day, producing about 27 million kilograms of copper a year.

An agreement with the job protection commission provides for a deferral in the payment of 50 per cent of hydroelectric rates from October, 1994, through Dec. 28, 1995, and a deferral of 50 per cent of municipal taxes payable to the Cariboo Regional District in 1995 and 1996. The payments will be repaid by the end of 1998.

The company will fund its environmental bond in 1994, 1995 and 1996 at a rate of $1 million a year, rather than $2.7 million as previously agreed with the mines ministry.

Gibraltar, a former subsidiary of Placer Dome Inc., now functions as an independent company. Placer Dome still has a 44.4-per-cent interest in the mine, located 60 kilometres north of Williams Lake.

Earlier this year, Gibraltar entered into an option agreement with Imperial Metals on the Mount Polley copper-gold project in north-central B.C.

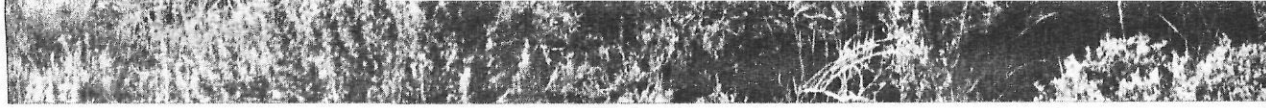
Gibraltar can earn a 50-per-cent interest in Mount Polley by completing a feasibility study and moving to a positive production decision within a year. It is committed to spending $400,000 by the end of next month.

The company is also active in Chile on the Lomas Bayas copper property 100 kilometres northeast of Antofogasta.

Under an agreement with Empresa Minera de Mantos Blancos S.A., Gibraltar must spend $2.84 million US by Oct. 31, 1994, on the Lomas Bayas property. If it exercises its option, Gibraltar will pay a further $14 million US.

"Lomas Bayas together with the Mount Polley property and the reopening of the McLeese Lake mine are the first steps in our new strategy of becoming a lower cost, multi-mine copper company," said Myckatyn.

Gibraltar lost $4.5 million in the fist six months of this year compared with a loss of $3 million in the year-earlier half. Revenues fell to $4.8 million from $25.7 million.



America. Maintenance work will start in early August and full production should be resumed by the end of September. ”

GIBRALTAR, PRINCETON, AFTON

Three Mines Set to Re-Open!

Gibraltar Announces Restart of McLeese Lake Mine

Gibraltar

McLEESE LAKE, BRITISH COLUMBIA—Gibraltar Mines Limited has announced the resumption of full mining and milling operations at its McLeese Lake copper mine. The decision is primarily due to improved copper prices, the lower exchange rate and cost reductions. Operations were temporarily suspended on December 1, 1993.

The decision to re-open is welcome news to employees. Eighty-three hourly workers, currently on lay-off were called back on July 19. Employees will be brought back in stages as the work plan requires. About 127 new staff and hourly-paid employees will be hired. Together with 67 employees retained during the shutdown, the McLeese Lake operation will have 277 employees by October in order to meet the intended production schedule. When operations ceased last December there were 196 employees, down from 280 when production was cut by 50 per cent in September, 1993.

An agreement has been reached with the Government of British Columbia under the BC Job Protection Commission for a deferral of certain government levies. The agreement provides for a deferral in the payment of 50 per cent of hydro rates from October, 1994 to December 28, 1995, and a deferral of 50 per cent in 1995 and 1996 municipal taxes paid to the Cariboo Regional District. The deferred payments for hydro and municipal taxes are to be repaid by the end of 1998. Also included is an agreement with the Ministry of Energy, Mines and Petroleum Resources whereby the Company will fund its environmental bond at a rate of $1,000,000 per year for each of 1994, 1995 and 1996 rather than at the higher rate of 2,700,000 per year as previously agreed. The Company's long-term environmental bonding requirements will be established in October, 1997 at which time a new formal closure plan is to be submitted by the Company.

Fast Facts on Gibraltar

Gibraltar has been operating since June, 1972 (22 years).

Reserves are in excess of 187 million tons, approximately a 14-year mine life.

Gibraltar is located 37 miles north of Williams Lake.

The mine will have a work force of 277 people.

Gibraltar Mines Limited is in the process of establishing its corporate office in Williams Lake where a further 10 people will be employed.

Recruitment of employees and work on recommissioning the mill and mobile equipment will begin immediately with production of concentrate scheduled for October, 1994. A new tailing line and pumping system will be installed before start-up. The Company will incur costs of about $10 million on capital projects and working capital before any cash flow is generated from the property.

Tom Milner has been hired as Mine Manager effective July 18, 1994. Mr. Milner worked at Gibraltar from 1972 to 1976 and later worked on the Equity Silver Mine project and for Placer Dome Inc. at the Marcopper Mine in the Philippines. He worked with Brinco Mining Ltd. from 1981 to 1992 where he took the lead role in the design, construction and operation of the Quinsam Coal property near Campbell River, B.C.

Princeton Mining Corporation to Resume Similco Operation

SIMIL

Princeton Mining Corporation is pleased to announce that it has recently completed all necessary agreements to allow a production decision at the Similco Mine. Similco will recall personnel immediately for the resumption of operations of its copper mine in early August, 1994. The following agreements have recently been completed.

(continued on page two)

Gibraltar

McLEESE MAKES A COMEBACK

Copper production from the McLeese Lake open pit mine in central British Columbia totaled 66.948 million lb. in 1995, reports Williams Lake-based owner/operator Gibraltar Mines Ltd.

The operation's refurbished molybdenum circuit, which last operated in 1992, produced 67,400 lb. of product in 1995, although it operated for only one quarter.

The mine milled 15,273,000 tons in 1995, grading an average 0.27% copper and copper recoveries were 74.94%.

Total production costs, which include smelting and refining charges included in concentrate sales revenues, totaled US$1.02 per lb. in 1995 compared with US$1.21 in 1994. The mine began operations in June, 1972 and was shut down temporarily from December 1993 to October 1994.

Gibraltar reported earnings of $3.4 million on revenues of $100 million compared with a loss of $10 million in 1994 on revenues of $21 million.

The McLeese Lake operation employs 257 people.

COAL CLIMBS

Coal production in Canada, the vast majority of which comes from open pit mines in British Columbia and prairie strip mines, set a new record in 1994. A total of 72.8 million tonnes were produced, of which 31 million tonnes were exported, according to the Coal Association of Canada.

As a whole, the industry contributes $5.8 billion per year to Canada's gross domestic product and employs over 73,000 people.

Canadian producers export some $2 billion worth of coal each year and coal is the largest Canadian commodity exported to Japan — amounting to 17.4 million tonnes in 1994.

YUKON CHALLENGES

Anvil Range Mining Corp., operator of the lead/zinc mine in Faro, Yukon, hopes to move zinc recoveries up into the 78% range from 70% in the second quarter of fiscal 1996 by adding new cyclones to the grinding area of the mill.

Designed to treat ore from the now-depleted Faro deposit, the mill is presently treating ore from the near-by Grum deposit. To liberate the ore minerals, the Grum ore must be ground finer than that from the Faro deposit. Thus the need for an up-graded classification system in the regrind area of the mill.

In the first quarter of fiscal 1996 (ended January 31, 1996), the company mined 8 million tonnes of ore and waste from the Grum open pit; treated 1 million tonnes of ore at a combined grade of 7.74% zinc and lead; and produced 70,500 tonnes of zinc and 38,600 tonnes of lead concentrates, grading 51% and 61%, respectively. Contracts have been signed to sell concentrates for the next seven years.

The company reported net earnings in the first quarter of $756,000 on revenues of $43.7 million. **CMJ**

→ Gibraltar

Copper's big rise prompts reopening of Gibraltar

The Sun Mar. 26/04

BY SCOTT SIMPSON
VANCOUVER SUN

Copper's spectacular performance on world metal markets has finally convinced Taseko Mines to open up the Gibraltar mine after a six-year hiatus, the Vancouver company said Friday.

Taseko Mines chief operating officer Tom Milner, general manager of Gibraltar, said on Friday that digging will resume at the mine in July, with the first copper concentrate shipments expected in October.

Copper concentrate prices have leapt from $0.85 US per pound to $1.35 in the last six months, with every one cent rise above 95 cents worth $1 million to Taseko, said Milner.

The company is looking to add

See FAMILY-SUPPORTING H4

Family-supporting jobs what province needs, minister says

From H1

255 workers to its current team of 15 senior managers, including at least 60 skilled tradesmen to work at the mine located 60 kilometres north of Williams Lake.

Rumours of the reopening have been in circulation since last December, and the company has been making periodic announcements regarding financings associated with the cost of bringing the mine back on line.

But Friday's announcement was the clearest statement to date of Taseko's intentions.

"We've gone out into the concentrate market and secured some attractive terms," said Tom Milner, chief operating officer of Taseko and general manager of Gibraltar.

"Plus we've done some financing, secured some equipment, and we're working on labour issues. So things are coming together."

B.C. Energy and Mines Minister Richard Neufeld was delighted about Taseko's announcement, which was the best news B.C.'s struggling mining sector has received in several months.

Exploration investment has been sluggish, and the province is still fighting a perception that it's not supportive of the industry.

"It's good news to an industry that has faced quite a few tough times, low prices, and a former government that really didn't want it in this province," Neufeld said.

"The best thing about Gibraltar is that these will be family-supporting jobs where you can have some assurance in the future that you will have a job, where you can go to work every day, do your shift, bring home your paycheque, raise a family, have a home and a vehicle.

"Those are the jobs this province needs, and which we want to see this province develop."

Neufeld added that there's a "huge buzz" in the industry in B.C. right now, fuelled in part by solid metal prices on world markets.

Mineral exploration investment has made modest gains since the B.C. Liberals took power, but Neufeld said the government is expecting a major improvement in 2004.

"People are saying we could double the amount of money spent on exploration, from $50 million in 2003 to $100 million in 2004. When you have that kind of front-end investment, it means things are really happening."

Taseko initially estimated it would cost $21 million for refurbished and used mining equipment to make Gibraltar operational. But Milner said they found even used equipment in high demand, with other mines that were marginal at lower prices re-examining their own situations. As a result, Taseko is spending about $12 million on a new mining shovel, for delivery in mid-June. Milner added that the company is mulling a further $10 million for new trucks.

Ultimately, Taseko has a $120-million plan that includes construction of a refinery that would cut production costs by 22 per cent.

African beneficiation

and polishing capacity. The Master Cutters Association of South Africa (MCASA) has pleaded for the introduction of multi-year targets to facilitate capacity building. Meanwhile, quite a large portion of the local rough (including rough supplied by the DTC) is being exported.

Diamdel's South Africa director, Athol Methven, noted that this De Beers-owned rough trading company now serves some 159 clients, 50% of which are HDSAs. However, when pressed, Mr Methven confirmed that less than 10% (by value) of Diamdel's sales actually reach the historically disadvantaged cutters.

The government, under the stewardship of Mrs Mlambo-Ngcuka, has exerted great pressure on De Beers, which mines 83% of the country's diamond production. The government had previously suggested that all diamonds mined in South Africa should be sold through a government-owned central diamond exchange, which would oversee the sales of diamonds to local parties.

The establishment of such a centre is still an inherent part of the government's plans, although the exchange's tasks would mainly be in the areas of promotion, training, education, monitoring and the provision of advisory services.

The draft law requires all the South African diamond producers (De Beers, Trans Hex, Alexkor and various small operations) to sell economically-cuttable rough diamonds to local manufacturers. This equates to 51% (by value) of the diamonds produced by the seven mining operations of De Beers Consolidated Mines (DBCM).

During the recent meeting, Mr Penny demonstrated that, through selling diamonds from the so-called 'London-mix', rather than from the South African run-of-mine material, the De Beers group's allocations exceeded the minimum requirements as set by both the present law and the draft bill.

"We are committing ourselves to ensure that our future supply to the local industry is at least equal to that portion of our DBCM production which is economic to manufacture locally," says Mr Penny, stressing that this commitment is premised on an export-tax-free environment.

MCASA chairman Ori Temkin was more direct in his opposition to an export tax which, he feared, could lead to smuggling. These views were echoed in a statement issued by Ernie Blom, the chairman of the Rough Dealers Association. "An export duty that is too high could cause a depression of prices and drive operators underground."

Although diamond mines must ensure a 26% BEE ownership component, there is no such requirement yet for the secondary industry. Recognising this, DTC is taking the lead in ensuring that the diamond-manufacturing sector becomes BEE compliant.

Mr Even-Zohar notes that there is clearly a need for a strong regulatory body. The South African Diamond Board, under the draft bill, will become purely a regulatory body without participation of 'conflicted parties', ie members from the diamond community.

Many of the 125 participants at the workshop expressed the view that the representative industry associations should continue to be represented on the board.

The need for regulation was stressed when it was highlighted that over 800 rough-dealer licences have been issued to HDSAs, many of whom have little industry experience.

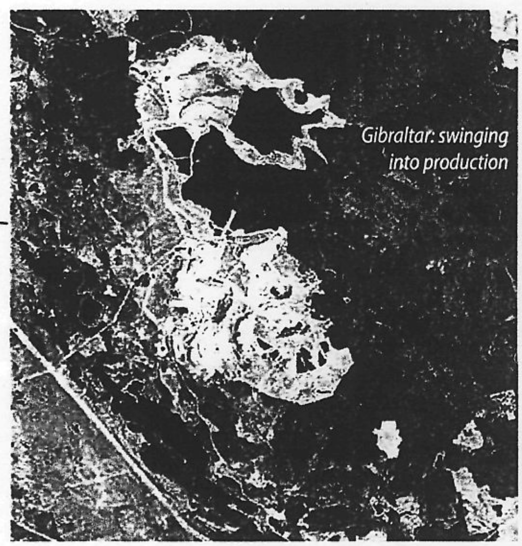
Taseko's Gibraltar copper mine starts up

MINING has started at the Gibraltar copper project in south-central British Columbia, owned by Taseko Mines Ltd of Vancouver.

Ore from the Polyanna open-pit mine is being treated on a seven-days-per week, 24-hour basis, and the first truckload of concentrate has already been despatched.

Taseko's plans involve the mining of 35,000 t/d of ore by contractor Ledcor Mining Ltd, to yield 70 Mlb/y of copper and 980,000 lb/y of molybdenum both in concentrate form. The operation can also produce an additional 10 Mlb/y of copper cathode from a solvent extraction-electrowinning plant when oxide material is accessible.

Taseko has been considering reopening Gibraltar for more than four years. The mine has a history of opening and closing since its initial commissioning in 1972, according to the prevailing state of the copper market.



Gibraltar: swinging into production

Government approves Nalco expansion

THE Indian Government this week approved National Aluminium Co Ltd's US$895 million plan to expand the company's bauxite, alumina and aluminium production.

The expansion will increase Naclo's bauxite production from its mine in Orissa State's Koraput district from the current level of 4.8 Mt/y to 6.3 Mt/y. The mine is based on a resource of 310 Mt containing 45%, primarily gibbsitic alumina.

Output from the company's alumina refinery in Damanjodi will be raised to 2.1 Mt/y from the current level of 1.58 Mt/y.

The company will also expand its 345,000 t/y Angul smelter to 460,000 t/y. The expansions will necessitate Nalco increasing its electricity generation capacity from the current level of 960 MW to 1,200 MW.

Nalco produced 298,000 t of aluminium and 1.56 Mt of alumina in the 2003/04 financial year (April-March). In the current year the company aims to produce around 325,000 t aluminium and 1.58 Mt of alumina. Last year Naclo exported 945,000 t of alumina and expects to export 883,000-900,000 t this year.

The Indian Government has sought to privatise Nalco for sometime. However, thus far it has divested only a 12.85% interest. A number of the world's major aluminium producers have expressed an interest in the company, but there has been sigificant opposition from employees to any sale.

Gibraltar will close this week unless bridge financing found

The Sun Dec. 15/98

Fate of copper mine near Williams Lake depends on management buyout group.

ROD NUTT
SUN BUSINESS REPORTER

The Gibraltar copper mine near Williams Lake will shut down this week if a management buyout group fails to get bridge financing of about $20 million, mine manager Tom Milner said Monday.

But there will be enough work through the end of February for the mine's 270 employees putting the property on a care-and-maintenance basis, he said.

Milner is leading NGMT Resources Ltd., the management group, in an attempt to keep the mine open.

"We signed a letter of intent with Boliden in late September to acquire the mine. But we had only until mid-December to put the financing in place."

Boliden Ltd. of Toronto owns the Gibraltar mine.

Milner conceded there is only a faint hope the mine will keep operating.

"A copper price of 65 cents US a pound isn't helping."

NGMT has cut operating costs by about $20 million a year through such programs as the provincial government's power-for-jobs program as well as a wage accord that tracks the price of copper.

"We've reduced operating costs to about 68 cents a pound from 90 cents a pound," Milner said. "But we need the bridge financing to keep the deal alive."

Boliden also needs government guarantees on a $34-million reclamation liability.

Boliden made the decision to close the Gibraltar mine last March.

"The mine is uneconomic in the short- to medium-term due to low ore grades and historically low metal prices," the company said at the time.

Milner said $6.5 million in severance pay is on its way to employees.

Boliden bought Westmin Resources for about $800 million in cash and debt earlier this year.

It acquired Westmin, which owned Gibraltar, for its Canadian zinc mines and its rich copper deposits in Chile.

Sweden's Trelleborg AB owns 44.89 per cent of Boliden.

Dec. 5/98

Gibraltar's workforce ratifies 3-year contract

ROD NUTT
SUN BUSINESS REPORTER

The unionized workforce at the Gibraltar Mines open-pit copper mine north of Williams Lake has ratified a three-year deal that runs through March 31, 2002.

CAW Local 3018 voted 80 per cent in favour of the new agreement that calls for wage increases of two per cent in each of the final two years as well as improvements to the retirement savings plan.

NGMT Resources Ltd., a company recently formed by Gibraltar management, is negotiating the purchase of Gibraltar from Boliden Westmin Ltd. of Toronto.

Boliden has announced its intention to close Gibraltar in early 1999 because of low copper prices.

The CAW membership also ratified a separate wage accord that tracks metal prices as a temporary measure to assist the low-grade copper mine continue operating.

The sale of NGMT is scheduled to close by Dec. 11.

"With the contract ratification behind us our members are now waiting for confirmation of NGMT's purchase of Gibraltar on or before Dec. 11," said CAW national representative Jef Keighley. "We are cautiously optimistic that our members and the Williams Lake community will be able to enjoy this Christmas season knowing that the mine, the jobs and the economic activity it supports will continue.

"Substantial thanks should go to the provincial government and Employment Minister Dan Miller and Forests Minister David Zirnhelt, MLA for Cariboo South," Keighley added. "While this is not yet a done deal, our future is hopeful.

"Had it not been for the timely assistance from the provincial government we would almost certainly be facing permanent closure and substantial *dislocation for hundreds of employees and their families."*

Gibraltar financing fails, mine to close

CANADIAN PRESS

TORONTO — Boliden Ltd. will go ahead with plans to shut down down its Gibraltar mine in British Columbia after another miner failed to get the financing needed to buy the copper operation.

Boliden announced last spring that it would close the Gibraltar copper mine, 60 km northeast of Williams Lake, by early 1999, putting 278 employees out of work.

The company tried to sell the mine to NGMT Resources Ltd. but said late Wednesday that NGMT couldn't raise the money needed to complete the deal by a Dec. 15 deadline agreed to by both companies.

"As a result, the acquisition agreement has terminated and Boliden will proceed with its previously announced plans to close the mine," the Toronto company said in a release.

Under the acquisition agreement, NGMT was required to raise about $4 million to buy half of Gibraltar's net working capital and to operate the mine for at least the next four years.

Boliden estimated that would have required another $20 million in financing, which the company couldn't get because of depressed global copper prices.

"I very much regret the termination of our agreement with NGMT," Boliden president Anders Bulow said in a release.

"Boliden and NGMT worked long and hard to put together a deal that would see the continued operation of the mine under the new management group and on a viable basis.

"The provincial government, Gibraltar employees and their union and the mine's principal suppliers and customers all gave their active support and are to be commended.

"Unfortunately, due to continued low copper prices, NGMT was not in the end able to raise the financing for continued operations and Boliden has no alternative but to proceed with closure."

Boliden said the Gibraltar operation is expected to be shut down by the end of February.

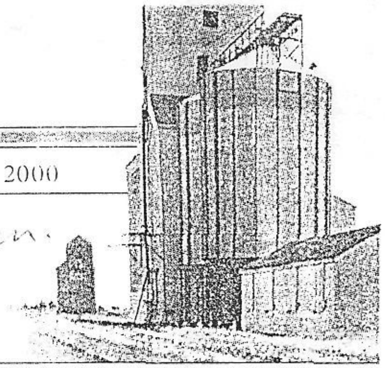
Boliden shares rose 15 cents to $3.75 on the Toronto stock market Wednesday.

CUBIC CHANGE

The designer of the office cubicle has created a new concept. Page D6

GRAIN PAIN The Sun.

CWB demands that Vancouver grain terminals be forced to unload grain. Page D3



Mines revive as copper climbs

B.C. mining industry pleased as tumbling inventories and rising demand push the price of the metal to about 90 cents US a pound.

By ROD NUTT

Copper prices — at their ighest levels in two years — re breathing life into an industry that was threatened with exinction just months ago.

Plummeting inventories and ncreasing demand have ushed up the price of copper o about 90 cents US a pound from 61 cents two years ago.

Revenues at Highland Valley Copper, B.C.'s biggest copper mine, increase by about $5 million for every one cent rise in the price.

"We're really pleased with the stability of the price of copper," Highland Valley superintendent for safety and public affairs Trevor Phelps said. "The usual third-quarter slowdown in consumption didn't happen, resulting in a decline in London Metal Exchange inventories."

This year, Highland Valley Copper near Kamloops will produce about 400,000 tonnes of copper, or more than one million pounds a day.

About a year ago, Highland Valley was negotiating with the B.C. government's jobs protection commissioner for breaks on power rates and taxes in an effort to reopen the mine after a labor dispute.

Highland Valley is owned by Cominco Ltd., Teck Corp. and Rio Algom.

"Copper inventories have been declining through the summer, which is normally a slow period," said IPO Capital partner Dorothy Atkinson. "There's a lot of demand, especially from Asia."

The copper market is expected to be in a small deficit this year and to flirt with small deficits in 2001 and 2002.

As a result, prices are expected to hold steady during the next two years.

Atkinson said the current price levels represent a healthy oper-

SEE COPPER, D2

Many mines benefiting from rise

ating margin for most producers and will likely spark a consolidation in the industry.

"Both Billiton and Noranda are bidding for Rio Algom and I expect more consolidation."

U.S.-based Phelps Dodge has offered $1.8 billion US for Cyprus Amax, also of the U.S., and Grupo Mexico of Mexico has made a $1.2 billion US bid for Asarco of the U.S.

"Major factors for the higher price are the strong North American economy and the recovery in Asia," said David Duval, a Vancouver mining consultant and former technical adviser to the United.

Pacific International Securities analyst Richard Elbl said London Metal Exchange inventories have been falling rapidly.

"Copper consumption is up six per cent over a year earlier whereas production is only 2.5 per cent higher year-over-year," he said.

LME stockpiles, about 800,000 tonnes in September 1999, are now down to about 445,000 tonnes, and falling.

Other B.C. mines benefiting from the higher price are Imperial Metals Corp.'s Mount Polley mine near Williams Lake and Huckleberry mine near Smithers, and Northgate Exploration Ltd.'s Kemess mine north of Mackenzie.

Imperial's operating income increases by $680,000 for every one cent rise in the price of copper.

"Both Huckleberry and Mount Polley are healthy mines on an operating basis," Imperial Metals president Pierre Lebel said. "But they still carry debt that has to be serviced."

Huckleberry and Mount Polley kept operating last year with help from the jobs protection commissioner.

A 10-per-cent rise in the price of copper increases the Kemess mine's operating income by $6 million, based on an average annual production of 55 million pounds of copper and a copper price of 80 cents US a pound.

Gibraltar Mines at McLeese Lake north of Williams Lake plans to reopen early next year, according to Bruce Jenkins, the director of government affairs at parent Taseko Mines.

"We're taking start initiatives and if the copper price holds up, Gibraltar should reopen in the first quarter of next year," he said.

The mine closed two years ago.

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MINING JOURNAL

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WMC eager for more

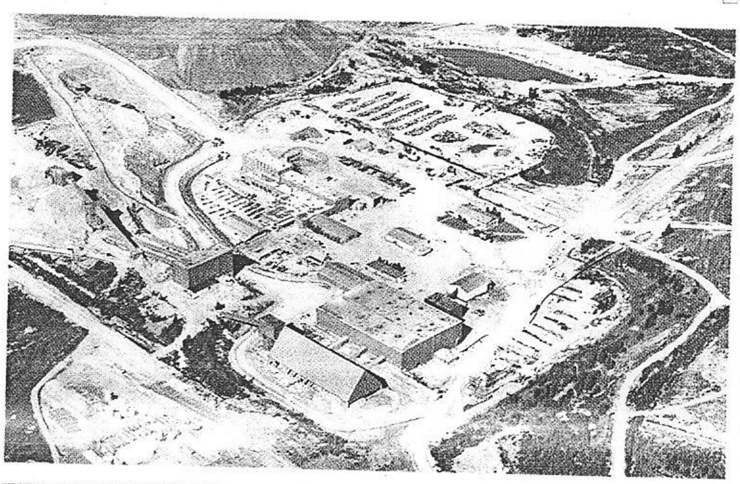
Following the completion last year of its A$1.9 billion expansion programme at the Olympic Dam copper mine in South Australia, WMC Ltd said this Wednesday that a further, albeit more modest, expansion is now planned which would raise copper capacity by an additional 20%. Under the previous expansion programme, refined copper production capacity was increased to 200,000 t and this will now rise to 245,000 t/y. The programme, including working capital, is estimated to be less than A$100 million, and is expected to generate additional annual pre-tax profit of about A$80 million.

WMC's chief executive, Hugh Morgan, says the project will "cement Olympic Dam's position among the world's most competitive minerals operations and also will put it into the top ten copper producers on volume".

Final project approval is expected early next year on completion of feasibility studies and, although a firm schedule has yet to be set out, the company envisages that Olympic Dam will be operational at its increased capacity within three years. The increased copper capacity should also lift output of uranium, gold and silver. Following last year's completion of the major expansion at the mine, the annual production rate of these metals amounts to 4,600 t of U_3O_8, 78,000 oz of gold and 850,000 oz of silver.

In the most recent quarter, copper production at Olympic Dam exceeded capacity, reaching an annual production rate of 211,000 t of refined metal. The operation has state and federal approval to produce up to 350,000 t/y of copper and associated mineral products. □

Inside



The Gibraltar mine. (Photograph courtesy of Hunter Dickinson group.)

Gibraltar BC copper refinery ?

Cominco's wholly-owned subsidiary, Cominco Engineering Services Ltd (CESL), has signed a Memorandum of Agreement with Gibraltar Mines Ltd (GML) to investigate the feasibility of constructing a 35,000 t/y capacity copper refinery at the Gibraltar mine near Williams Lake, British Columbia, utilising CESL's proprietary hydrometallurgical technology. The facility could be up and running by mid-2002 and would cost around C$90 million.

Gibraltar Mines Ltd is wholly owned by Taseko Mines Ltd (a member of the Hunter Dickinson group) which purchased the Gibraltar mine from Boliden in July 1999. The mine commenced production in 1972 as a low-grade copper operation and mining has had to be suspended on more than one occasion as a result of low copper prices. The operation has been mothballed since its acquisition by Taseko but a workforce of key employees has been retained to maintain plant and equipment, and there are plans to begin producing copper concentrates during the first half of 2001.

Preliminary studies already completed by GML and CESL indicate that an onsite refinery, combined with additional onsite savings, could reduce the long-term mine cash operating costs by up to US$0.20/lb of copper. It would be far cheaper to transport copper metal from the site rather than ship concentrates for treatment elsewhere.

According to Keiran Metcalfe, a spokesman for CESL, the proposed refinery would, in effect, convert the Gibraltar mine from being a "classic swing producer" which can only operate when the price of copper is US$0.90/lb or better, to a long-term steady producer.

Under the MoA, GML and CESL will complete a C$3.0 million detailed investigation involving production and bulk testing of six tonnes of concentrate in the existing CESL pilot plant at Richmond, BC, where the environmentally-friendly refining process has been tested for the past nine years. GML and CESL will each be responsible for 50% of the costs of the feasibility work. Completion of the design and engineering phase, followed by construction and commissioning of the refinery, is expected to take a total of 20 months. According to Taseko's chief operating officer, Tom Milner, under the terms of the MoA Cominco would provide financing for the refinery. □

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The Sun Mar. 14/98

TGS → Gibralt.

Gibraltar first casualty of weak copper prices

278 employees at mine near Williams Lake to lose their jobs; other producers seek help.

ROD NUTT
SUN BUSINESS REPORTER

The slumping price of copper has forced the closure of one British Columbia mine and prompted others to seek government assistance.

The first casualty, the Gibraltar copper mine 60 km northeast of Williams Lake, will close at the end of the year, putting 278 employees out of work.

Gibraltar is owned by Boliden Ltd. of Toronto, itself a 44.9-per-cent-owned subsidiary of Trelleborg AB of Stockholm.

Two of the three other B.C. copper producers, Princeton Mining and Imperial Metals, are in talks with the provincial job protection commissioner to develop economic plans to keep the mines running.

There's also a huge question mark over the ability of cash-strapped Royal Oak Mines to open its Kemess copper-gold mine as scheduled at the end of April.

Boliden, which acquired Gibraltar when it purchased Westmin Resources this year for $513 million, blamed the shutdown on low copper prices and poor grades.

"The mine is uneconomic in the short to medium term due to low ore grades and historically low metal prices," Boliden president and CEO Anders Bulow said from Toronto.

"It's a very well run operation and there is no shadow on the previous operators but given the production costs and the consensus for copper prices over the next couple of years, it isn't a viable operation."

SEE COPPER, D4

Mine may reopen if market recovers

He said there is always a chance the mine will reopen if the market turns around.

Copper prices have fallen by about a third since last June as stockpiles soared, mainly the result of weakening currencies and demand in Asia for the metal.

The price recovered slightly Thursday, rising nearly three per cent to 83 cents US for three months delivery on the London Metal Exchange — its highest level in more than three months — in part because of rising demand in China, the world's third-largest consumer.

Last year, Gibraltar produced about 33,000 tons at a cost of more than 90 cents US a pound.

Boliden said it will provide an enhanced severance package for employees based on years of service, which will also include a continuation of medical benefits and re-employment counselling and training as well as relocation subsidies.

Both Imperial and Princeton are in discussion with Job Protection Commissioner Eric van Soeren in an attempt to keep the Mount Polley and Huckleberry mines running in northwest B.C.

"We're looking for a break on the cost of power, property and equipment taxes," said Imperial president Pierre Lebel. "There is a cost to closing a mine and it's very disruptive. But you need to decide how long you can run at break-even and not make a return on the investment.

"Once you have mined a tonne of copper, it's gone for ever. You have to consider shutting down and waiting for better metals prices and generating more revenues."

Princeton president Bill Myckatyn said the company is looking for a similar package.

"We want to keep the jobs but at the ... a juggling ...

Lebel said Mount Polley and Huckleberry are new mines with higher grades of ore than Gibraltar. However, unlike Gibraltar, they have debt to service.

"We're hoping to actually get a reduction in power costs whereas a break on property taxes would take the form of a deferral that would be made up in future years," Van Soeren said. "The mines are concerned that they can pay back loans before they deplete the asset in the ground."

Last month, Imperial agreed to acquire Princeton, subject to shareholder approvals, to save costs through economies of scale.

Royal Oak, which is also talking to the government, said a number of unforeseen construction problems has increased the cost of Kemess by $40 million, or just over nine per cent, to $470 million.

"We are naturally disappointed that the capital cost has increased above our budget estimate but compared to other major projects recently constructed we believe the project team has done an admirable job in minimizing the over-runs to less than 10 per cent," said Royal Oak president and CEO Margaret Witte.

The over-runs occurred on construction of the waste-disposal pond and clearing for the power line.

"We believe the economics of the Kemess project are still excellent even at these depressed gold and copper prices," Witte said. "The project will provide an attractive return to the company and to our shareholders given the long mine life of about 16 years."

She said the capital investment is equivalent to about $60 US an ounce of gold for the estimated six million ounces of gold that exist at Kemess.

Highland Valley Copper president and general manager David Johnson said B.C.'s largest copper mine isn't talking to the jobs commissioner.

"It's a cyclical industry and at these prices we're okay in the intermediate term," he said. "But it does put a constraint on our ability to keep up our