019957

News Release . . . *Drilling suspended at Dixie Lake property*

Mr R.A. Quartermain reports

The company has received results for DL-27 on the company's Dixie Lake property located 15 miles south of Red Lake, Ontario, currently being explored by Teck Corporation.

Teck has completed 27 holes on the property, of which holes 1 through 26 were reported previously. The results for hole DL-27 are as follows: 4.6 ft of 0.096 oz/ton Au from 1442.4 to 1447.0 feet. No significant values were encountered from 1450.5 to 1461.0 feet.

Hole 27 was collared to test the main 88-4 zone at a depth of approximately 1000 feet beneath hole DL-9 which intersected 0.455 ounces of gold per ton across 9.3 feet. Hole 27 intersected the 88-4 zone from 1450.6 to 1461.0 feet and encountered anomalous amounts of gold. A 4.6 foot interval in the adjacent sedimentary rocks averaged 0.096 oz/ton Au.

Teck has suspended drilling for the time being while it continues with geophysical surveys which are being carried out over the 141 claim property. Upon review of the geophysical data, Teck will recommence drilling to test both the faulted extent of the main silicified 88-4 zone south of holes DL-6 and DL-23 as well as geophysical conductors located elsewhere on the property.

Teck can earn a 50% interest by spending $1,000,000 on exploration over three years, subject to a 3% NSR royalty and advance royalties payable to the property vendors.

Norfolk Petroleum Ltd — NFP

Shares issued: 9,390,459 — Sep 14 close: $0.07

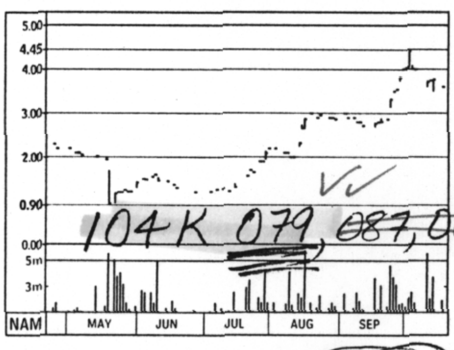
Cease Trade Company

A section 146 cease trading order has been issued against the company on October 19 1989.

Members are prohibited from trading in the securities of the company during the period of suspension or until further notice.

North American Metals Corp — NAM

Shares issued: 7,924,136 — Oct 19 close: $3.60



News Release . . . *Construction at Golden Bear proceeding*

Mr J.E. Thompson reports

Construction at the company's 50%-owned Golden Bear gold project is proceeding on schedule. Commissioning of the plant is scheduled to begin in early November.

Most of the facilities are approaching completion with some portions of the circuit being tested prior to ore feed.

Open pit mining has been in progress most of the summer with production ahead of schedule at a higher grade than anticipated. The open pit mining contractor has mined and hauled to the mill sufficient ore for thls winter's milling. The operations crew is in the process of being hired with some training already underway.

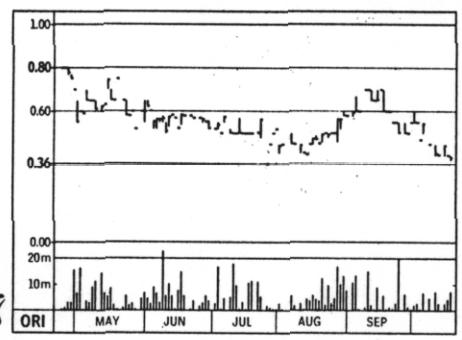
On a negative note, the latest capital cost projection indicates an additional overrun of 12-15% over budget. This latest overrun is due to many reasons. First, the project engineering firm under-estimated the number of construction man hours required to complete the job. Second, higher than anticipated road maintenance and repair costs were incurred to correct deficiencies left by the road contractor. Third, changes in scope such as the addition of a mine haul road added to the project cost. Fourth, site condition problems required additional control measures such as groundwater drainage systems at the mill building and tailings ponds. Similarly, extra cable anchors were required for the aerial tram. Fifth, the drop in gold price has reduced anticipated credits from gold production during construction and commissioning. Finally, the time taken by both partners earlier this year to re-assess project economics impacted project costs more than expected.

The project schedule remained essentially unchanged but construction was compressed leading to higher than expected manning levels, overtime pay, etc.

The project is already burdened by high capital costs. At this late stage our effort is directed at completing construction and reaching production as soon as possible. The Golden Bear mine is expected to produce about 60,000 ounces of gold per year.

Omni Resources Inc — ORI

Shares issued: 8,428,915 — Oct 19 close: $0.39



News Release . . . *Omni to buy Croesus' interest in Wheaton River claims*

Croesus Resources Inc (CWV)

Mr Ernie Bergvinson reports

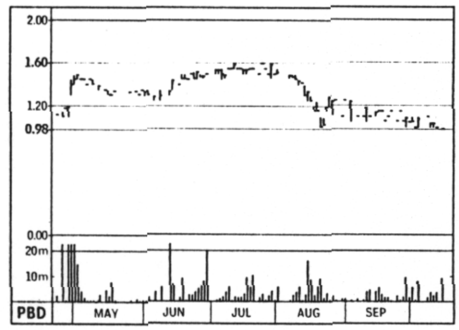
Omni Resources and Croesus Resources have reached an agreement whereby Omni will issue 210,000 shares to purchase Croesus' 10% net profits interest in the WH 1-8 claims located in the Wheaton River area of the southern Yukon.

The WH 1-8 claims contain the Rainbow and Kuhn zones that make up Omni's Skukum Creek property that have total geological reserves of 882,000 tons grading 0.22 oz gold and 8.02 oz silver.

The agreement is subject to regulatory approval.

Pacific Basin Development Corp — PBD

Shares issued: 4,742,600 — Oct 17 close: $1.00



News Release . . . *Interest in Thailand meat processing facility to be sold*

Mr Arthur Young reports

The company has successfully negotiated the sale of its 20% interest in Thai-RFM Co, its meat processing facility located in Bangkok, Thailand. A share purchase agreement has been executed with the purchasers, First Pacific Group of Hongkong and shall be finalized upon completion of documentation on or before November 30 1989. Pacific Basin has maintained its fiduciary responsibility to the remaining shareholders of Thai-RFM who have also agreed to sell their interest under the same terms and conditions.

Proceeds from the sale shall be used to finance ongoing expansion at Pacific Basin's main operating subsidiary, Pacific Semiconductors Inc (Philippines), over a world class semiconductor assembly house employing over 1300 employees in an environmentally controlled 70,000 sq foot facility. Customers include Commodore, Lucky Goldstar, Zenith, Siliconics, IMP and Exar among others. Pacific Semiconductors continues to realize a steady increase in demand for its product line which is one of the most diversified in the industry.

The sale of Thai-RFM is part of a strategic realignment of corporate resources and ongoing asset rationalization.

Pacific Houston Resources Inc — PHR

Shares issued: 5,009,442 — Oct 19 close: $0.05

News Release . . . *New directors appointed*

Mr Adolf Petancic reports

Messrs Edwin Schiller and Hans Zeller have been appointed as additional directors to fill the vacancies created by Messrs J. Michael Mackay and Hugh Ferris from the board.

(1)

104K079

GOLDEN BEAR

Originally scheduled for production in late 1988, the Golden Bear project of Chevron Minerals (50%) and Homestake Mining (50%) was delayed several months in order to address concerns of environmentalists and a Native Indian group. The issues in the conflict have been resolved, road access now exists to the project, and construction is under way. The property is 100 miles west of Dease Lake, B.C.

Chevron staked the property in 1981 and, within a 4-year period, completed 65,000 ft of surface drilling. Three zones were outlined: Bear, Fleece and Totem. North American Metals later optioned the property and completed another 18,000 ft of surface drilling plus 6,700 ft of underground development.

All three zones occur within a fault system five miles long by 1,500 ft wide, most of which is unexplored. This additional potential was one reason why Homestake opted for the project and took over North American Metals. North American had funded and operated a $9-million program on the property for a 50% interest.

Mineable reserves are estimated to be 656,800 tons grading 0.54 oz gold per ton, divided equally between proposed open-pit and underground mining operations. Total proven and probable reserves amount to 1.3 million tons averaging 0.35 oz gold. The Bear deposit, which is open at depth and along strike, probably extends into the Fleece and Totem zones. So there appears to be plenty of reserve potential left.

Underground and open-pit mining are planned to occur simultaneously; based on existing reserves, the open pit should be depleted in approximately five years. The open-pit operation will be seasonal in nature and produce 770 tons of ore per day, with an average strip ratio of 6.4:1 over the reserve life. At an initial production rate of 400 tons per day, the mine's average annual gold output is forecast at 64,000 oz gold and 33,000 oz silver.

Because of poor ground conditions, cut-and-fill mining will be required for the underground operation, which will have a year-round production rate of 175 tons per day. The ore is highly refractory and the mill flowsheet will probably include dry grinding, roasting, cyanidation and carbon-in-pulp for final gold recovery.

Homestake has extensive experience with roasting, and the company has received several awards for maintaining the environmental integrity of its operations — something it intends to do at Golden Bear.

Golden Bear Fact Sheet

Location: .... 140 km west of Dease Lake, B.C.

Major owners: .... Homestake (50%) Chevron Minerals (50%)

Operator: ...... Golden Bear Operating Co.

Reserves and category: ...... 300,830 tonnes grading 16.37 g per tonne gold (open pit); 296,235 tonnes grading 20.94 g per tonne (underground)

Metal to be produced: .... Gold

Discovery date: .... First known mineral claim staked in 1956. Chevron staked 2 claims in 1981.

Production decision: .... August, 1987

Start-up date: .... October, 1989 (commercial production)

Budgeted capital costs: .... $36 million

Actual capital costs: .... N/A

Cash operating costs: .... N/A

Means of access: .... Underground. Hoisting system has two, 5-tonne-capacity skips covering 790 m and ramps.

Extent of horizontal workings: . Ore is divided into 50-m stoping blocks. Mining widths are maximum 4.5 m; crosscuts are 2.75x2.75 m; drifts are 2.5 m high and up to 4.5 m wide, driven 25 m left and right from crosscut.

Mining method: ... Underground, panel cut-and-fill stoping.

Mining equipment: .... Underground, jackleg drills, Caro 310 mucker, mucker 57H, mucker 74H, Alimak raise climber, a 10-tonne and a 4-tonne Loco battery, 4-tonne ore car. Open pit — dozer D9L, loader 988, powder truck, fuel/lube tanker trailer, air track compressor (800 cu ft per min), and maintenance truck.

Production rate: .... Underground — 160 tonnes per day (tpd). Open Pit — 700 tpd, 3 to

WIN MAY 87

Western Investment News.

Golden Bear increases reserves

The portal to the now-completed 4,000-foot underground exploration drift on the Golden Bear Project.

VANCOUVER, BC—Substantially increased ore reserves have been outlined on **North American Metals Corp.'s** (VSE-NAM) Golden Bear Project near Dease Lake, in northwestern British Columbia.

Deposit	Category	Tons	Grade (Oz/Ton)	Contained Gold(oz)
Bear Zone	Proven	738,100	0.45	322,145
Probable	784,000	0.18	141,120	
Subtotal		1,522,100	0.31	473,265
Fleece Zone	Drill Indicated	803,000	0.19	152,570
Total Reserves		2,325,100	0.27	625,835

Robert G. Hunter, president, says that an aggressive underground program currently underway is proceeding to add further reserves to this base. On the Bear Zone, this will be accomplished by drilling from a drift heading north. The drift development is continuing towards a zone where two surface drill holes intersected appreciable widths of gold mineralization. Hunter says this zone, which is some 800 feet north of the current drift position will be reached during May at which time the underground drilling will begin.

Upon the completion of this current work, development drifting will have only tunnelled 2,000 feet through a five mile long geologic structure. This structure is highly anomalous at surface over its entire length indicating potential for reserve expansion far exceeding the current reserve base.

Engineers from North American Metals, joint venture partner Chevron Minerals Ltd. and Wright Engineers expect to table a feasibility study acceptable for project financing sometime in June, when a Stage I project document will also be submitted to the British Columbia government requesting permits for production.

A production cost is estimated at less than US$200 per ounce of refined gold. The Bear deposit will be mined at a rate of between 300 and 500 tons per day using both open-pit and underground mining methods.

104K079(1)

28JAN87 **NORTH AMERICAN METALS CORP.** (NAM-V) GCNL19

UNDERGROUND PROGRAM CONTINUES - TO PROVE UP HIGH GRADE RESERVES

104K079(1)

Robert G.Hunter, president of North American Metals Corp. announces further assay results from the company's underground development and drill program on the Golden Bear property near Dease Lake, B.C. Assay results for crosscut and raise headings in the Bear deposit area and from the initial underground holes UG-4, UG-5, UG-6, UG-7 and UG-8 are shown on the diagram overleaf.

The best new crosscut assay results include 11.2 feet grading 0.90 oz.gold/t and 35.1 feet grading 0.55 oz.gold/t. The best result from a raise is 50.8 feet grading 1.00 oz.gold/t.

The raise at 23926N was driven up-dip and inside the mineralized zone for an inclined distance of 156.8 feet. Detailed panel sampling returned an average grade of 0.74 oz.gold/t. for the 156.8 feet of advance. The raise at 23962N confirmed the continuity of wide, high grade mineralization in adjacent diamond drill holes.

A major underground drill program designed to block out reserves below the 1400 meter level is now in progress. Good results from the initial underground holes include 30.4 feet grading 0.36 oz.gold/t, 11.1 ft. of 1.24 and 18.0 ft. of 0.55.

Further underground development work has begun. It is budgeted at $2,500,000 and is designed to extend the 1400 meter level drift 2000 feet north of the Bear deposit to test a target area having several mineralized drill intercepts. This area is 2800 feet south of the Fleece deposit where joint venture partner Chevron Minerals has inferred reserves of 660,000 tons grading 0.23 oz.gold/t.

NORTH AMERICAN METALS CORP. (NAM-V)

JOINT VENTURERS APPROVE GOLD - PRODUCTION FEASIBILITY STUDY

104K079

Robert G. Hunter, president, reports that North American Metals Corp. (50%) and their joint venture partner, Chevron Minerals Ltds. (50%) have approved a production feasibility study of the Golden Bear project near Dease Lake in north central B.C. that recommends a 360 metric tonnes per day, 115,000 metric tonnes per year underground and open pit gold mine. Average mill feed grade and annual gold production are forecast at 0.60 ounce gold per metric tonne and 64,000 ounces, respectively. Operating costs per ounce of gold produced are projected to be well below average industry costs.

GCNL #155, 1987

The joint venturers are now developing detailed construction plans and schedules. A Stage One study seeking approval for construction has been submitted to the B.C. Ministry of Energy Mines and Petroleum Resources.

104K079

See Page 2

North American Metals sees production potential

N. MINER FEB 9/87.

by David Duval

VANCOUVER – The Golden Bear project near Dease Lake, B.C., is proving to be one of the more exciting exploration plays in the province. **North American Metals** is conducting a major underground drilling program there which it expects will prove up sufficient reserves for production.

A $2.5-million underground development program is also under way on the 1,400 level drift which will be extended some 2,000 ft north of the Bear deposit. The purpose of the program is to test an area that was first intersected by two surface drill holes, one averaging 0.22 oz gold across 6.6 ft and the other 0.14 oz over 26.6 ft. This area is 2,800 ft south of the Fleece deposit where joint venture partner **Chevron Minerals** has established inferred reserves of 660,000 tons grading 0.2 oz.

The current drill program, which is designed to block out reserves below the 1,400 level, is progressing smoothly and indeed has generated some impressive assay

See Page 2

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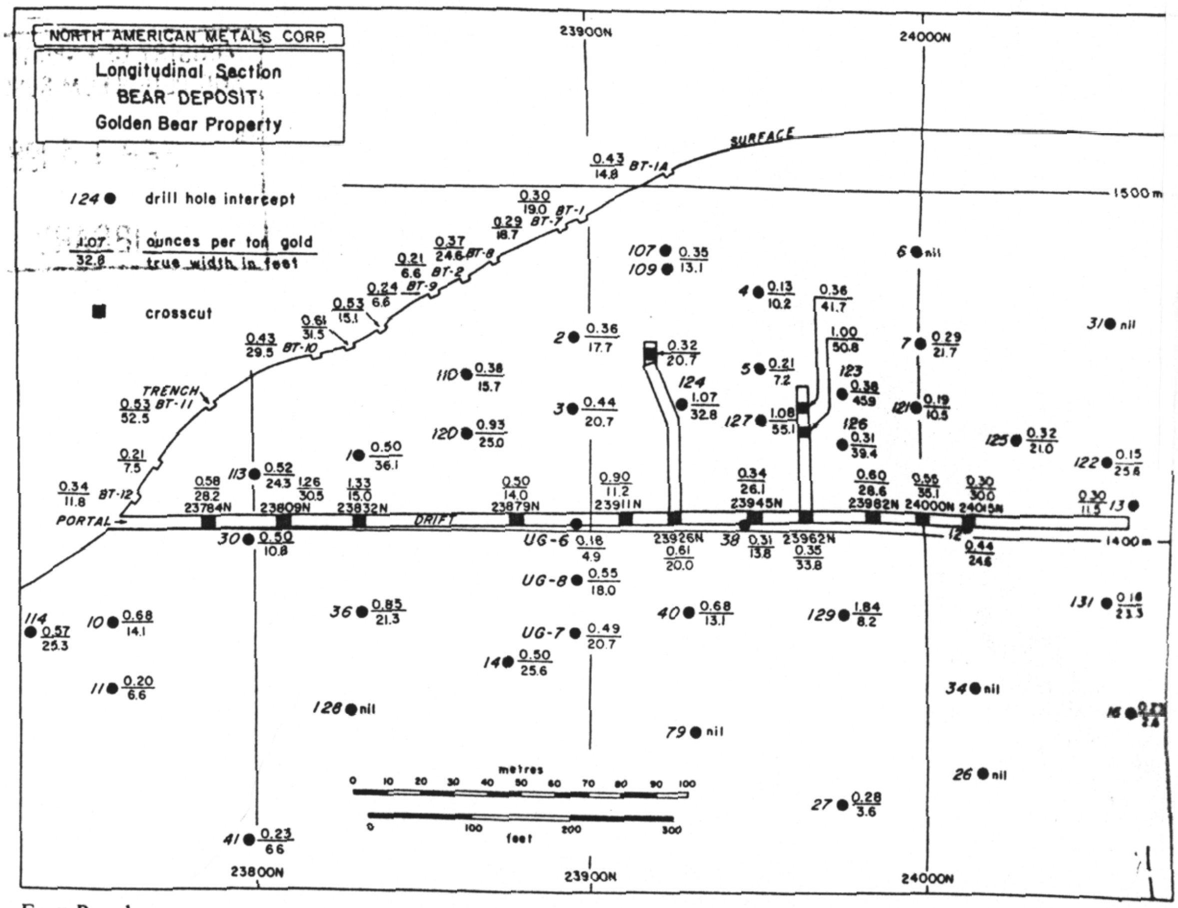
North American Metal



From Page 1

results. These included 11.1 ft of 1.24 oz, 18 ft averaging 0.55 oz; 20.7 ft grading 0.49 oz and 30.4 ft averaging 0.36 oz.

Assay results from crosscut and raise headings have also been encouraging and values included 50.8 ft of 1.0 oz, 11.2 ft grading 0.9 oz, 35.1 ft of 0.55 oz and 41.7 ft of 0.36 oz. The company confirms there appears to be some upgrading of drill hole values with underground development.

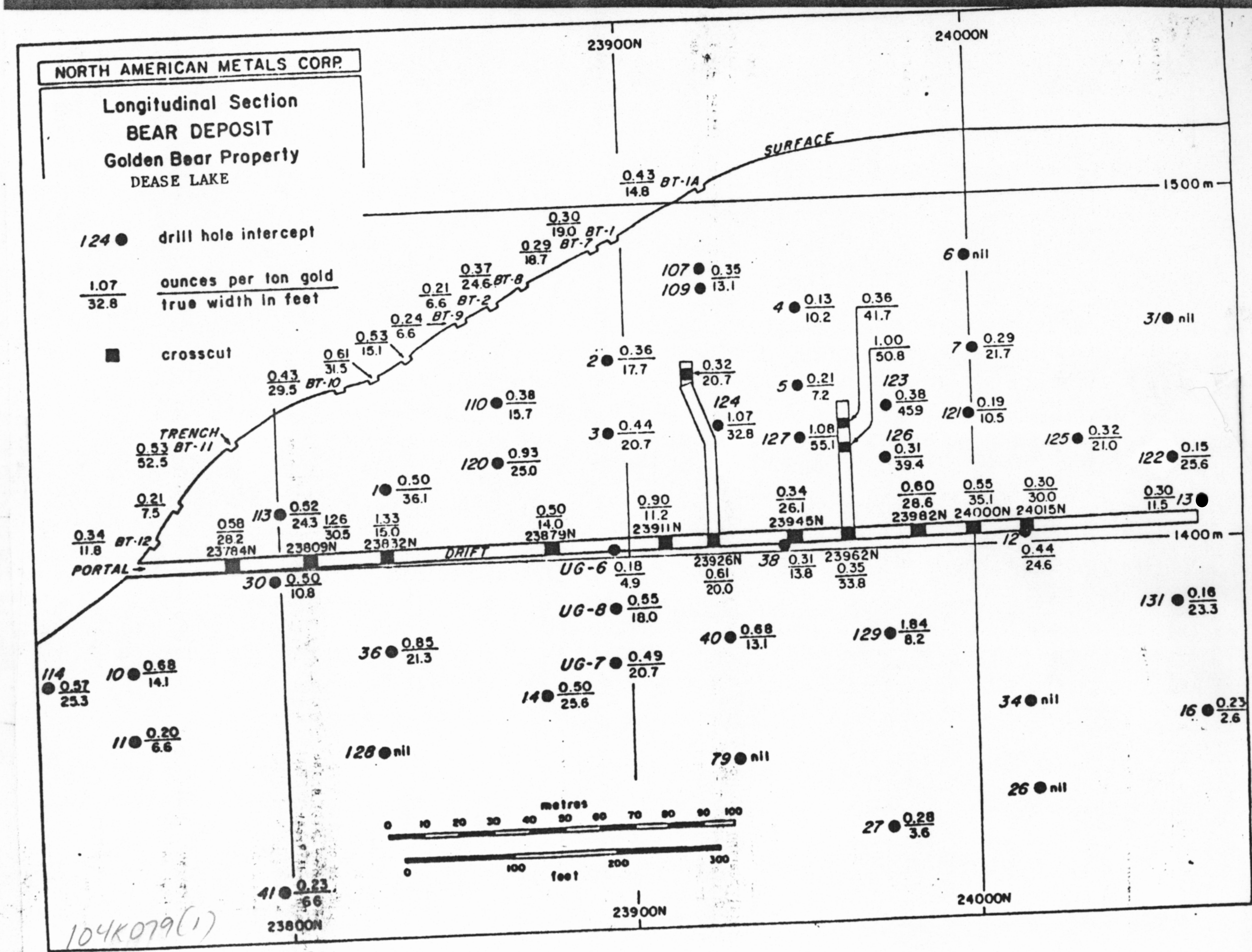
The company drove a drift through the centre of a carbonate unit between the footwall and hangingwall zones, then ran crosscuts into the main mineralized area for sampling purposes. The walls of these crosscuts were tested by percussion drilling and Jeff Franzen, project engineer, claims that "some of the results have been very spectacular."

He says the discovery is basically a vein-type deposit which occurs within a 4.5-mile-long fault structure. Gold has been localized along this structure and some very "broad mineralized structures have been found," he states. The consistency of the grade has been impressive and Mr Franzen feels the "nugget effect has been virtually zero."

North American has spent more than $3 million on the project and this includes 2,800 ft of underground development. Under its agreement with Chevron, North American will earn a 50% interest in the property for $9 million in expenditures. Chevron, which has already put $12.3 million into the project, will have to contribute on a pro rata basis after North American has earned its interest.

The current drill program is designed to establish the pit bottom and move reserves into the proven category. Engineering studies are currently under way and the new results will assist in open pit design work, he states.

The company has sent a 15-ton bulk sample, representing various ore types, to Vancouver for metallurgical test work. Results from this will be used in flow sheet design.



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GCNL#19 28JAN87

N M Sept 7/87 (?)

Chevron, North American venture

Golden Bear mine gets production green light

by Nicholas Tintor 104K079

A green light has been flashed for the Golden Bear project near Dease Lake, B.C. Owned equally by partners **North American Metals** and **Chevron Canada Resources**, the Golden Bear mine will start producing gold by the fourth quarter of 1988.

Speaking to a group of brokers in Toronto, Robert Dickinson, a director of North American, says mine output will be at a rate of 64,000 oz per year. Reserves total 2.3 million tons grading 0.27 oz gold per ton in two deposits. Mr Dickinson emphasized two attributes of the project which are reflected in the low projected operating cost of $136(US) per oz. These are the relatively high grade and low-cost mining methods planned for the mine.

"During the first five and a half years, half of the ore will come from open pit mining," Mr Dickinson says. The remaining ore will come via underground mining. A large part of the reserves in the Bear deposit, the largest of the two, outcrop on the side of a hill overlooking Muddy Lake and are amenable to open pit mining.

Capital costs for a 360-tonne-per-day mining operation are $36 million, of which $18 million must be funded by North American. Payback is estimated at 18 months, Mr Dickenson says. The quick payback will result from processing high grade ore averaging 0.5 oz gold per ton during the first five years of operating life. As a result, the relatively small mining rate of 360-tonnes-per-day will generate a high level of gold output.

Another characteristic of the project has been the rapid progress made from exploration to feasibility. Since completing an option agreement with Chevron in July 1986, North American has spent $9 million to earn its 50% interest. Chevron has spent $12.3 million outlining the deposits.

Exploration of the Bear deposit has outlined many higher-grading sections. Some of the better drill results include 0.62 oz gold per ton across 16.9 ft, 0.5 oz gold across 14 ft and 1.3 oz gold per ton in a 15-ft section. Also, much of this high grade material will be mined from the open pit.

From an exploration prespective, both Chevron and North American have years of work ahead of them. The Golden Bear property covers a 5-mile-long structure which hosts the main Bear and Fleece orebodies. North of the Fleece deposit, the partners have outlined the Totem zone which requires additional work before a reserve calculation can be made. Also, other large sections of the structure remain to be properly examined.

Funding for North American's share of capital costs will come from a 1.5-million common share private placement arranged by Montagu Mining Finance in London. The issue price is $6.75 per share. Also, negotiations are in progress for a 50-million Swiss Franc convertible bond issue.

26

North American Metals Corp NAM
Shares issued: 7,419,500 Aug 12 close: $7.375
Aug13/87 **News Release**
Mr Robert Hunter reports: SW

The company (50%) and joint venture partner, Chevron Minerals Ltd. (50%) have approved a production feasibility study of the Golden Bear project near Dease Lake, B.C. 104K079

The study recommends a 360 metric tonnes per day, 115,000 metric tonnes per year underground and open pit gold mine. Average mill feed grade and annual gold production are forecast at 0.60 ounces gold per tonne and 64,000 ounces respectively. Operating costs per ounce of gold produced are projected to be well below average industry costs.

Detailed construction plans and schedules are currently being developed by the joint venture partners.

A stage one study, which requests construction approval, has been submitted to the B.C. ministry of energy, mines and petroleum resources.

GOLDEN BEAR

***North American Metals Corp** NAM
Shares issued: 5,850,000 Jun 8 close: $7.25
VSW JUNE 9.87 **News Release**
Mr. Robert Dickinson reports: 104K079

The company announces that underground drifting and drilling north of the Bear zone (1,522,000 tons at 0.31 oz Au/ton) continues to develop substantial gold reserves. The new findings confirm the large scale potential of this new B.C. gold camp.

Gold mineralization has been encountered over the entire 2,500 feet of advance of the 1400 m level drift. Underground drilling has located a parallel gold structure called the Footwall zone approximately 75 feet west of the Hanging Wall zone (Bear zone). Appreciable widths of gold mineralization have been intersected. Earlier wide spaced surface drilling by Chevron had returned inconclusive results in these areas.

These and numerous other anomalous structures extend for several miles. An exceptionally long mine life is indicated.

Results compiled north of the Bear zone are:

FOOTWALL ZONE

HOLE NO.	ELEVATION (METRIC)	TRUE WIDTH (FEET)	GRADE OZ/TON
UG 50	1403	5.6	0.46
1-4187	1403	10.3 open	0.28
UG 51	1394	31.2	0.33
UG 53	1381	20.0	0.47
UG 54	1411	9.5	0.19
UG 55	1420	7.0	0.29
1-4112	1403	16.4	0.23
UG 46	1397	9.2	0.21
UG 47	1391	3.0	0.10
UG 48	1423	13.2	0.41
UG 49	1372	3.0	0.10
1-4175	1403	6.0	0.28
UG 55	1413	29.9	0.15
UG 57	1385	16.6	1.02
UG 58	lost		

Drifting and drilling is continuing.

North American Metals Corp. and Chevron Minerals Ltd., joint venture partners in the Golden Bear project expect to receive a project feasibility study from Wright Engineers Limited during the last week of June 1987. A production decision will be based on the Bear zone feasibility study.

High Grade Gold - *Golden Bear*

A $3.3 million work program currently underway at the Golden Bear Project near Dease Lake in northwestern British Columbia - the provinces's largest and possibly most ambitious exploration and development program - is not only progressing "smoothly and on schedule", but has been consistently reporting higher than anticipated widths and gold values.

The Golden Bear Project is being operated by North American Metals Corp. who will earn a 50% working interest in Chevron Minerals's largest Canadian gold asset by investing $9 million in its further development. The Golden Bear property, which has been geologically compared to the world class Comstock Lode deposit, is expected to become one of Western Canada's largest and longest life gold mines.

The projects current probable and inferred ore reserves total 1,900,000 tons averaging 0.27 ounces gold per ton. Exploration and development work is being focused on the Bear Deposit which, with 1,253,00 tons of diluted, probable ore reserves grading 0.31 ounces gold per ton, has immediate potential for production. A further two gold zones named the Fleece and Totem have been located by drilling nearby within the large Golden Bear Property.

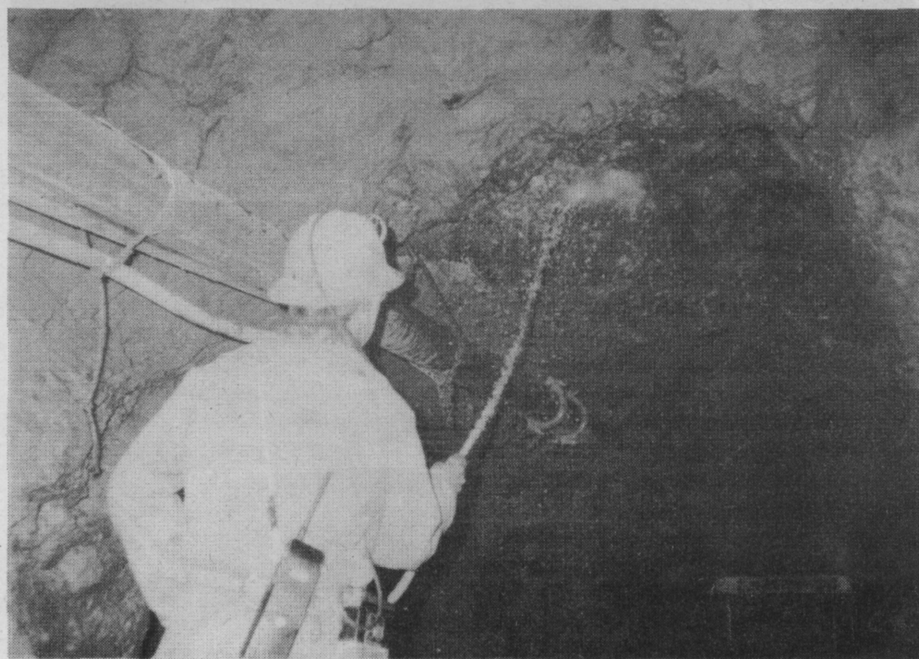
In early October the company reported assay results from the first underground crosscut and the first surface diamond drill hole completed on the property. These results - which got things off to a spectacular start - were 25 ft. of 0.54 oz./ton gold and 35 feet of 0.93 oz./ton gold respectively. A few days later the company announced additional results including: 30 feet of 1.27 oz./ton gold from an underground crosscut and 37 feet of 1.07 oz./ton gold from a surface hole. The holes and crosscuts reported intersected the Bear Zone over a strike length of 900 feet.

More recently, additional excellent gold values were reported which included Hole 29: an 8 ft. section grading 1.84 oz./ton gold. An additional underground cross-cut through the Bear Zone assayed 0.61 oz./ton gold over a 20 ft. width.

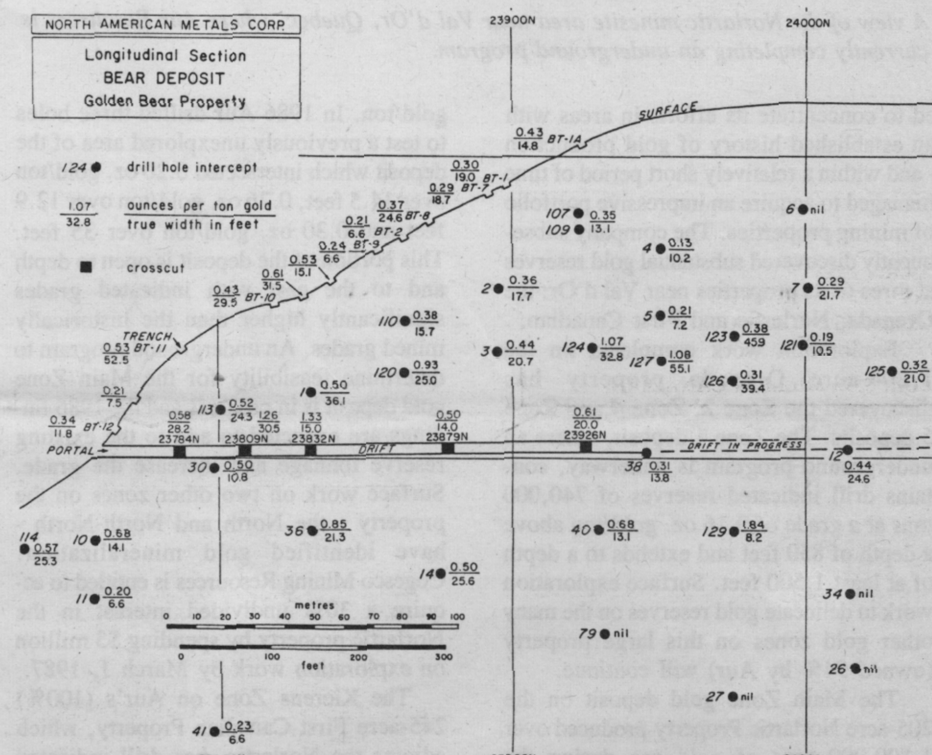
According to North American, the program - consisting of 2800 feet of underground tunnelling and 10,000 feet of diamond drilling is already doing what it was designed to do - to prove and expand the gold reserves of the Bear Deposit.

"Our work is proving up a high grade gold deposit," says company President Robert G. Hunter. "and a substantial portion of the Bear Deposit's reserves are amenable to low cost open pit mining methods."

'Open Pit Deposit Being Proven'



Jeff Franzen, P.Eng., Project Manager, is hosing down the roof in the main Bear deposit drift in preparation for some sampling.



A picture is worth a thousand words or, in this case, drill holes.

Robert Dickinson, B.Sc., M.B.A., North American's managing director says the program "is moving along exceptionally well...and with better than anticipated gold grades from the underground program it looks like North American will have no difficulty to reach its objective to bring the project to the feasibility stage as early as March, 1987."

North American Metals' second precious metals acquisition is the Seal River project near Churchill, Manitoba. An agreement was reached with High D'Or Developments last summer, whereby North American can earn a 50% interest in the project by investing $1 million in its development.

The 122,000 acre property has excellent potential for hosting gold deposits of the world class Homestake type. Drilling of high priority target zones is planned to commence this winter.

North American Metals is headquartered in Vancouver, B.C. and is directed by highly respected Canadian mine financiers and operators with established track records. It shares are traded on the Vancouver Stock exchange; trading symbol NAM.

FROM NORTHWEST PROSPECTOR JAN 28 1987. 104K079 (1W).

George Cross
Reliable K
WESTERN CANADIA

NO.31(1990)
FEBRUARY 13, 1990

NORTH AMERICAN METALS CORP. (NAM-V)

FIRST GOLD BAR POURED-Jack E.Thompson, president, reports North American Metals Corp. has poured the first gold bar at the Golden Bear mine, 75 miles northwest of Telegraph Creek, 145 miles west of Dease Lake in northern B.C. Design capacity 360 tonnes per day as not yet been reached and other difficulties, such as roaster feed system inadequacies, need to be solved. There will be an aggressive search for further ore reserves. A 150 km access road was built to the mine in 1988 and 1989 at a cost of $17,000,000.

Mr. Thompson also reports the proposed shareholder rights issue has been withdrawn. The fall in share price and other complications which would keep the company's American shareholders from participating were cited as reasons for the withdrawal. Alternative financing methods are under consideration.

Mr. Thompson also reports with regret the death of John Parker, a director since 1988. Laurie Curtis, an independent geological consultant, has been named as replacement. (SEE GCNL No. 231, 1Dec89, P.2)

104K 79

George Cross
Newsletter

NO.205(1989)
OCTOBER 25, 1989

NORTH AMERICAN METALS CORP. (NAM-V)

FURTHER BUDGET OVERRUN REVIEWED - Jack E. Thompason, president of North American Metals, which is 73% owned by Homestake Mining Company, has reported construction at the 50% owned Golden Bear Gold project, near Telegraph Creek, and Dease Lake northern B.C., is proceeding on schedule. Commissioning of the plant is scheduled to begin in early November. Chevron Minerals also owns 50% of the project. Open pit mining has been in progress most of the summer with production ahead of schedule at a higher grade than anticipated. The open pit mining contractor, Tahitan-Stewart, primarily staffed by Tahitan tribal members, has mined and hauled to the mill sufficient ore for this winter's milling.

The latest capital cost projection inicates an additional overrun of 12% to 15% over the budget of $39,000,000 to $44,850,000 for the 360 tonne/day plant. This latest overrun is due: to construction manhours overrun; higher than anticipated road maintenance and repair costs incurrent to correct deficiencies left by the road contractor (the 150 km access road had been estimated to cost $9,200,000 and did cost $17,000,000 prior to the recent additions); addition of a mine haul road; additional groundwater drainage systems; extra cable anchors were required for the aerial tram; reduced preproduction gold revenue owing to lower gold price and time loss in project reevaluation.

The plant will use dry grinding, fluidized bed roasting and carbon-in-pulp leaching to recover an estimated 90% of the gold from reserves of 2,400,000 tonnes grading 0.543 oz.gold/ton. (SEE GCNL NO.74, p2, 18Apr89).

The Golden Bear mine is now expected to produce about 60,000 oz.gold per year. Earlier projection had been for 65,000 oz.per year.

104K 79

104K 079

Muscocho still sorting out Magnacon start-up problems

Start-up troubles have tended to slow operations at the Magnacon gold mine near Wawa in northern Ontario but operator **Muscocho Explorations** (TSE) is confident it will succeed in reaching full production.

"Start-ups are never fun times," said Steve Brunelle, vice-president of corporate affairs.

The mine, projected to produce 80,000 oz gold per year, was officially opened at the end of June by 25%-owner Muscocho, 50%-owner **Flanagan McAdam Resources** (TSE) and 25%-owner **Windarra Minerals** (TSE).

The daily production rate is about 600 tons per day, as was planned. The rate will eventually be increased to 800 tons per day, the mill having been designed to treat that tonnage.

The gold recovery rate, Brunelle said, is in the 90% range. Initial feed came from low grade development muck stockpiled on surface. The company has been supplementing the surface muck with underground ore. Because of the current relatively low price of gold, Brunelle said the company has been using more underground feed than expected.

The project experienced a 4-month delay at the beginning of 1989 because of problems associated with hooking up the hydro-electricity.

Reserves at Magnacon stand at 1.4 million tons grading 0.248 oz gold per ton. The grade is expected to increase as the underground workings are mined.

Meanwhile, at Muscocho's other Wawa-area gold producer, the Magino, Brunelle said the mine made money in August and probably (the monthly figures were not available at the time of the interview) showed a profit in September.

Pointing to the current price of gold, in the $360-370(US)-per-oz range, Brunelle said, "It hasn't been very helpful in bringing in a new gold mine." Magino, officially opened in October, 1988, is owned 50% by Muscocho, the operator, and 50% by **McNellen Resources** (TSE).

In a recent press release, J. T. Flanagan, president of both Muscocho and McNellen, said mine costs have been approaching the $65-70-per-ton range as forecast two years ago.

Company officers, Flanagan stated, "regard this as a considerable achievement and anticipate profitable future operations even at the relatively low gold prices now prevailing."

Output at the Magino mine has increased each quarter this year. At the end of September, total production for the year stood at 16,915 oz.

Brunelle said production costs should decline at both the Magnacon and Magino mines, as the companies are able to place more emphasis on reducing expenses.

Golden Bear on schedule, over budget

VANCOUVER – Despite additional cost overruns, construction of the Golden Bear gold mine near Telegraph Creek in northwestern British Columbia is on schedule. Project operator **North American Metals** (TSE) expects mill commissioning will begin in early November.

"After all the project has been through, it's great to be so close to production," said Jack Thompson, president of North American. The mine project, a 50/50 joint venture with **Chevron Resources**, is managed by North American with help from its 73% parent, **Homestake Mining** (NYSE).

Sized at 360 tonnes per day, the plant will use the latest in extraction technology to recover over 90% of the high grade gold contained in the ore. The plant will use dry grinding, fluidized bed roasting and carbon-in-pulp leaching to produce an average of 60,000 oz of gold per year.

Some portions of the circuit are being tested prior to ore feed and sufficient ore has already been mined and hauled to the mill for this winter's milling. Open pit mining by contractor Tahltan-Stewart (primarily staffed by Tahltan tribal members) has been in progress for most of the summer, and production is ahead of schedule at a higher grade than anticipated.

Although encouraged by the progress on site, Thompson was less positive about the latest capital cost projection which indicates an additional overrun of 12-15% over the $70-million budget.

"The project was already burdened by high capital costs," he noted. "At this late stage our effort is directed at completing construction and reaching production as soon as possible."

The partners put construction on hold late in 1988 pending a re-evaluation of the project when it was learned that capital and operating costs would be significantly higher than originally anticipated.

In April of this year the companies decided to proceed with construction of the mine which has proven reserves for five years of operation at a head grade of 0.543 oz gold per ton. At the time, Thompson stated that prospects for finding additional ore along strike and at depth "appear excellent."

The latest overrun was attributed to a variety of reasons. North American said the project engineering firm underestimated the number of construction man hours required to complete the job, and road maintenance and repair costs were increased to correct deficiencies left by the road contractor.

Changes in scope such as the addition of a mine haul road added to costs, and site construction problems required additional control measures.

The drop in gold prices reduced anticipated credits from gold production during construction and commissioning, and the time taken to re-evaluate the project affected project costs more than expected. Though the project schedule was unchanged, the company said construction was compressed and that led to higher manning levels and more overtime pay.

Eastern drill targets

Eastern Goldfields (COATS) has delineated several geochemical soil anomalies on the company's Shamrock property near Notre Dame Bay, Nfld. An anomaly striking for 1,600 ft contains values ranging up to 7,200 parts per billion gold, 7,080 parts per million (ppm) zinc and 10,000 ppm lead.

A trenching program beginning this month will be followed by diamond drilling, Eastern says. A basal till sampling program is also planned next summer for the company's Bayly's Brook property near Cape Ray, Nfld.

Pan East options

by [illegible] Danielson

VANCOUVER — With so much attention focused on new mines that have fallen short of expectations, a modest sized gold mining operation in Saskatchewan's La Ronge district is surprising just about everyone by producing considerably more ounces than originally projected.

The mine is the Jolu, a 400-ton-per-day operation that poured its first gold in November of 1988, ahead of schedule and at a modest capital cost of $18.3 million. **Corona Corp.** (TSE) has a 30% interest and is operator, with the remainder held by **International Mahogany Corp.** (TSE).

During the month of March, Jolu turned out 5,775 ounces of gold from 13,454 tons of ore with an average mill feed grade o[…] period. Recoveries were roughly the same.

If this rate is maintained, […] rate could reach close to the […] would surpass the projectio[…] feasibility study by about 20,000 o[…]

Corona projects, however, that the[…] age 50,000 oz at a direct operating […] $185(US) per oz this year. In January, […] probable reserves at Jolu were reported a[…] tons grading 0.40 oz. The deposit is develop[…] ramp to 875 ft below surface and is still open at d[…]

International Mahogany noted that 8,500 oun[…] (about 25%) of the 35,000-oz project gold loan wa[…] repaid at the end of March.

104K 079

The Northern Miner April 24, 1989

Breakwater talks

Higher cost won't stop Golden Bear

by David Duval

VANCOUVER — Although capital costs have almost doubled to $70 million since the initial feasibility study, **North American Metals** (VSE) and **Chevron Minerals** will proceed with the development of their Golden Bear project near Telegraph Creek, B.C.

Homestake Mining (NYSE), which has a 73% interest in North American, has taken over as operator. Project management was being handled by a jointly-controlled operating company which will still exist; the new arrangement will enable North American to utilize the personnel and technical expertise of Homestake said Jack Thompson, North American's president. (Thompson is also a key executive at Homestake Mining and the president of Homestake International Minerals, a wholly-owned subsidiary).

"I am pleased that the Golden Bear project is back on course," said Thompson. "The Golden Bear mine may prove to be a long-lived success. It is North American's job to see that everything possible is done to facilitate such an outcome."

Homestake acquired control of North American a year ago after a takeover battle with **Pezgold Resource Corp.** (VSE), now a Prime Group Company. Robert Hunter and Robert Dickinson, both of whom are now involved with Continental Gold (VSE), managed to squeeze another $1 per share out of Homestake, bringing the offer to $5 per share, worth approximately $30 million.

At North American's annual meeting, Thompson said he was optimistic the project would recover its capital but he conceded anything beyond that would require additional reserves. In all likelihood, they would be underground reserves which would have a higher recovery cost associated with them.

Referring to the 600,000 tons of proven ore in the Bear zone, Thompson said that reserve occurs along 600 m of strike and they have eight kilometres of total strike length to work with. New exploration areas will require underground drifting for access purposes. He said $750,000 has been budgeted for this on a yearly basis.

Citing the $10-million overrun for road construction, Thompson said that cost was really out of the company's control. Road routing

See Page 27

Golden Bear going ahead

From Page 1

was changed at the last minute by the government and the joint venture didn't have time to complete a new engineering assessment for the road. The original route required eight bridge crossings compared to 22 for the amended route which proved to be expensive, he said.

But Thompson said that several key items were left out of the original feasibility study including electric distribution on surface and in the mill, potable water supply, sewage plant, etc. A number of items were also understated including the cost of the aerial tramway which will service both the underground and open pit from a centralized loading pocket.

"Operating costs have gone up too but they still look good depending on what assumptions you use," he added.

Cash operating costs are expected to range from $210-$240(US) per oz, the higher value associated with the underground operation.

Based on the current construction schedule, commercial production could begin by the end of November although mill tuneup will begin before that, he said. The company has been trying to find used equipment but he said that market is very competitive and they haven't been too successful.

Procurement is nearly complete and $31 million had been spent on the project by the end of March. Orders for another $8 million in equipment are in place. Grinding equipment (semi-autogenous) was among the first things ordered and the roaster is being fabricated. Because of the refractory nature of the orebody, roasting will be required in the recovery process, something Homestake has considerable expertise with. Sized at 360 tonnes per day, the plant will use the latest in extraction technology to recover over 90% of the gold in the ore. The plant will use dry grinding, fluidized bed roasting and carbon-in-pulp leaching to produce an average of 65,000 oz gold per year, he said.

[…]
exc[…]
"A[…] possib[…] crease in […] nickel. We […] signs of a dec[…] […]d,' told the meetin[…] […]emain of 1989 could, th[…] […]re, conti[…] to be very rewarding."

With 34% of the market sh[…] Inco is the world's largest produ[…] of nickel and is reaping the be[…] fits of an unprecedented comm[…] ities boom. The company's av[…] age realized price for nickel […] creased to $4.81 per lb in 1[…] from $2.18 the year before. Dur[…] the first quarter of this year, Inc[…] average realized price climbed […] $6.59 per lb.

The bonanza is helping m[…] Inco' management and board l[…] very good. Late last year, the bo[…] approved a controversial shareh[…] ers rights plan which was coup[…] to a special $10 (US) per share d[…] dend. The plan, which recei[…] shareholder approval, came u[…] attack once again at the meet[…] William Allan, president of Al[…] vest, an institutional fund mana[…] made a proposal to have the […] terminated.

"The board opposes the prop[…] because removal of the rights […] would again expose sharehol[…] to abusive takeovers," Phillips […] the meeting. An American sh[…] holder argued for the propo[…] saying that the plan gave too m[…] power to Inco's board — po[…]

[…]rom stagnating prices

United Keno shuts 6 mines after suffering heavy losses

Toronto-based silver producer **United Keno Hill Mines** (TSE) won't remember 1988 fondly.

The 33%-owned affiliate of nickel giant **Falconbridge Ltd.** (TSE) reported a consolidated net loss of $12.9 million or $3.54 per share after deciding to shut down three silver mines in the Galena Hills area near Elsa, Y.T.

They were placed on a care and maintenance basis Jan 6 pending […]

[…]lion lb lead in 1988, compare[…] 1.5 million oz silver and 3.2 mil[…] lb lead in 1987, silver output […] 360,000 oz below expectations[…]

Most of the problems exp[…] enced by United Keno stem f[…] dipping silver prices.

"A marginal decrease in si[…] revenues during 1988 was […] largely to a decline in the real[…] price of silver to $6.66(US) […] ounce in 1988 from $7.10 in 19[…]

104K079 NM Mar 6 ??

Golden Bear cost doubles putting project at risk

VANCOUVER – The Golden Bear project of **North American Metals** (VSE) and **Chevron Minerals** in northwestern British Columbia could be in jeopardy because of higher than anticipated start-up costs according to North American's annual report. North American is 73%-owned by **Homestake Mining** (NYSE).

The report is signed by Robert Hunter, chairman, and Jack Thompson, president. Thompson is also president of Homestake International Minerals. Homestake's view of the situation, presented in the report, is somewhat less optimistic than Hunter's, who is one of the subsidiary's original shareholders and promoters.

In 1987, North American Metals estimated capital costs for the project at about $36 million, about half the $65-$70 million figure projected recently which the report says "reflects the more advanced engineering and the actual costs to date."

The higher capital cost estimate didn't come as much of a surprise to senior companies familiar with mine development in northern British Columbia nor has the revised operating cost which now stands at $210-$240(US) per oz or $360-$400(US) with capital costs included. Homestake is a relatively high cost U.S. gold producer (largely because of its aging Homestake mine at Lead, S.D.) and its decision to take over North American Metals was, in part, an attempt to leverage those costs down. Ironically though, the net effect might be to drive those costs higher. Before it was taken over by Homestake, North American Metals forecasted cash operating costs of $136 per oz which it said was "one of the lowest in the industry."

The annual report cites a number of factors that contributed to the over-run including a doubling of road costs to $19 million, a 121% rise in the cost of tailings disposal, and tight sulphur emission standards which increased cleaning costs. "But in the simplest of terms, the original feasibility study significantly underestimated costs," the report states.

Both Chevron and North American Metals are examining alternatives to the current development and construction program including alternative flow sheets, modified construction schedules and methods, utilization of used equipment, and the "advisability of further exploration and/or suspension of project construction," the report adds.

In any event, engineering for the project is 70% complete and procurement of equipment and supplies is under way.

Hunter said he "wouldn't be surprised to see Homestake take over Chevron's part (50%) of the project."

Catear suspends production until April

VANCOUVER – Poor weather conditions and heavy snowfall in the Sulphurets area of northwestern British Columbia have led **Catear Resources** (VSE) to suspend operations at its Goldwedge mine until April.

In the meantime, the company is finalizing plans for the construction of an airstrip on the property to better handle expediting activity from nearby Stewart.

The company said the airstrip would reduce associated transportation costs by as much as $500,000 per year and provide a more reliable means of access to the property on a year-round basis. A decision on approval is expected from the government within the month, and construction time is estimated at about six weeks.

Catear has been operating a small 50-ton-per-day mill which it plans to upgrade by the addition of flotation and other mining equipment. The project is reported to have 40,000 tons of proven reserves grading 0.825 oz gold.

Blue Emerald plans surface work for new B.C. projects

VANCOUVER – As soon as weather conditions permit, **Blue Emerald Resources** (VSE) plans to begin a comprehensive exploration program on two recently optioned claim blocks located about four miles west of Calpine Resources and Consolidated Stikine's Eskay Creek project in northwestern British Columbia.

The Vancouver-based company says the adjoining properties have "excellent potential for numerous zones of base and precious metals mineralization." Both were optioned from **Teuton Resources** (VSE) under separate agreements allowing Blue Emerald to earn a 60% interest in the Paradigm and Bonsai claim blocks.

Teuton originally acquired the Paradigm claims on the strength of the old Copper King showing which is reported to contain a fault over 1,000 ft long hosting a dant chalcopyrite and pyrrh Some sites are reported to co good gold values accompanyi copper-iron sulphide miner tion.

Since then, Blue Emerald recent government stream ment survey has identified h anomalous trace element v known to accompany pre metal mineralization in the An airborne geophysical surve completed over the claims wh reported to have indicated fau hydrothermal alteration and p tial sulphide mineralization.

The company plans to carr geological mapping, prospe geochemical sampling, tren and bulk sampling followe drilling.

The Northern Mi

Jan 9/89 104K 079

Road, bad weather add to capital cost at Golden Bear project

by David Duval

Primarily because of a major cost over-run for road access which was largely out of its control, **North American Metals** (VSE), a 73.2%-owned subsidiary of **Homestake Mining** (NYSE), is preparing an internal cost study for its Golden Bear project in northwestern British Columbia. Chevron Minerals and North American each have a 50% interest in the property.

"Preliminary results of the report indicate that significantly higher costs will have to be incurred to complete the project and bring the proposed gold mine into production," said Jack Thompson, North American's president. He also noted the preliminary results were being reviewed "to determine what reductions in costs can be achieved."

Thompson said they have a good idea what the actual costs will be right now but he conceded the best estimate will be available after bids are in for the project. "That would put it into March," he told The Northern Miner.

The joint venture is proceeding with engineering work, underground development, and camp construction. Mill construction wasn't started before winter set in because of inclement weather. That program was also delayed by road access problems.

But Thompson emphasized that "that doesn't effect the completion date, it just means we hit it harder this summer." Parts of the mill are being constructed down south including the dry grinding circuit and the roaster.

"What we are doing now is going back and looking at the whole project and we are trying to see where we can reduce the capital cost without sacrificing operating costs too much," he said, noting that production is scheduled for the last quarter of 1989.

Road access was originally expected to be $9 million but it actually cost $17 million, owing to a change in the anticipated access route. The change was made to alleviate concerns of the provincial government and environmental groups with North American and its joint venture partner, Chevron, footing the bill.

"They are using the road, it's virtually complete, but some graveling will have to be done on it in the spring," confirmed Robert Hunter, the chairman of North American.

The 1,400 level at the mine is virtually complete and they have moved down to the 1,360 level which is in over 300 ft. Collaring the portal proved to be difficult but they are well past the portal entrance and into solid ground. Several stopes are ready to go on the 1,400 level including a test stope

See Page 2

Jascan, Atlantic each get another $6 million(US)

The final payday came in for partners **Jascan Resources** (ASE) and **Atlantic Goldfields Inc.** (COATS). Each company has received $6 million(US) as the final payment from the sale of their interest in the Noxon silver-copper deposit to Montana Reserves Co.

Noxon, located in Montana, hosts reserves of 142 million tons grading 2.1 oz silver and 0.78% copper per ton. Prior to the final payment made on Dec 30, each company had already received cash payments of $4 million(US) from Montana Reserves. In addition to

See Page 2

Inco plans to spend $500 million to cut acid rain emissions

Inco Ltd. (TSE) has advised the Ontario government that it will spend nearly $500 million over the next five years to reduce sulphur dioxide (SO_2) emissions from its Sudbury, Ont., smelter complex. Emissions will be reduced by some 60% to a level of 265,000 tonnes per year by 1994, as called for under the Ontario Ministry of the Environment's "Countdown Acid Rain" regulation.

Details of the SO_2 abatement program are set out in the last of six semi-annual reports to the ministry, submitted by the company at year-end 1988.

The total cost of the program is estimated at $494 million, comprising a previously announced expenditure of $69 million to consolidate and modify milling and concentrating operations and $425 million for smelter SO_2 abatement. The smelter program calls for new oxygen flash smelting furnaces, a new sulphuric acid plant, and additional

See Page 5

Metals tr[…] to win pr[…]

by Peter Kennedy

New York-based metals […] Deak International Inc. is g[…] up for a two-pronged atten[…] become a producing mining […]pany.

After amalgamating wh[…] owned subsidiary Deak Ari[…] with Canadian explorers Se[…] **International** (ASE) and **V[…] Mining** (TSE), Deak is hoping […] initial production will come fr[…] couple of advanced base metal […]jects in Rouyn-Noranda, Que.

Shareholder approval for […] merger comes just weeks after I[…] International purchased **Echo […] Mining's** (TSE) 53.8% stake […] **Nuinsco Resources** (TSE) for $[…] million. Nuinsco's principal as[…] is the Cameron Lake gold depo[…] in northwestern Ontario.

Nuinsco and the amalgamat[…] company (called Deak Internatio[…] Resources Corp.) will contin[…] to act as separate entities wh[…] attempting to get early product[…] decisions at a number of key p[…]erties.

They include Seadrift Inte[…]tional's Aldermac and Hebecc[…] Twp. projects in Rouyn-Nora[…]

Coin Lake ups reserves at Golden Reward min[…]

by Geoff Pearce

Toronto-based **Coin Lake Gold Mines** (TSE) says two important developments have recently enhanced the potential of its Golden Reward project in the Black Hills area of South Dakota.

Based on additional drilling and a revised mining plan, mineable reserves for the Golden Reward deposit have increased sharply to 13.1 million tons of leachable o[…] ore averaging 0.042 oz gold per […] This represents a 58% increas[…] tonnage from the 8.26 million […] of mineable reserves avera[…] 0.045 oz gold reported previou[…]

At the same time that […] reserves have been revised up[…] mining costs have been adju[…] downward. The cost of minin[…] the planned open pit operation […] decrease because of a reductio[…] the proportion of waste to […] removed, the company says.

Under the revised mining p[…] the stripping ratio becomes 2.1[…]

See P[…]

1988 Range Tables

The 1988 stock range tables are included on pages 12-17.

British Columbia bans exploration in all parks

by Vivian Danielson

VANCOUVER – In an effort to reduce escalating confrontations […] with the exceptions of the Purcells Wilderness Conservancy and the Skagit-Cascades Recreation Areas which are currently in a public plan-

The latest changes in exploration policy means nearly 250,000 hectares of recreation area will be upgraded to full park status, while

But other measures announ[…] by the government did meet […] industry approval, notably a m[…] to have the mining industry s Inc.

ts

GERALD PHILLIPS

esources Inc., is pleased to announce the c Planning; William Weymark as General

s a large scale exporter of zinc and lead

with significant silver and gold content. •

peninsula. A $500,000 program involving geophysics and drilling is scheduled to commence in January on the company's Gull Pond property, a polymetallic prospect. Funds for the exploration program are to be raised through a private placement.

In Nevada, Cliff is currently engaged in the production of gold from the Green Hill mine. As of Oct 31, the mine had not achieved its designed capacity of 20,000 oz of gold per year and is currently producing 400-800 oz per month.

Prior to the amalgamation, Canaustra had a 100% interest in the Green Hill placer project, subject to a 10% carried interest by Cliff. Canaustra first bought a 50% stake in the mine from Cliff in 1987, and acquired the remaining 50% last October.

Golden Bear

From Page 1

put in for bulk sampling purposes during the exploration stage. The level has been completely rehabilitated and "we are preparing the stopes right now," said Thompson.

North American has a 50% interest in the project with **Chevron Minerals** holding the balance. Chevron is reported to be interested in selling its share of the project and North American has the right of first refusal. They have formed a joint operating entity and each company is providing input into the project.

Homestake is particularly knowledgeable about open pit and underground mining and also the processing of refractory gold ores, the predominant ore type at Golden Bear. Fluid bed roasting will be utilized at the project, something Homestake is very familiar with. Hunter said the higher cost for mine development will not effect project economics and he added "there is no thought of shutting her down."

Jascan

From Page 1

the final payment, each company was also paid $167,178 in accrued interest. After the final payment, Jascan and Atlantic have a combined cash reserve in excess of $20 million(US) which will be used for acquisitions.

Jascan and Atlantic previously announced a plan to amalgamate subject to shareholder and regulatory approval (**N.M.**, Nov 7/88).

Production at Noxon, which is operated by **Noranda Minerals**, remains subject to permitting, financing and a positive decision from a feasibility study. The project could be in production within a 3- to 5-year period, Jascan says. Annual mining rates will likely range from 3.5 million to seven mil-

reserves to additional mineable reserves is in progress.

The past-producing Golden Reward mine turned out 1.34 million oz of gold during its heyday, between 1888 and 1918. By the time of its closure in 1918, the Golden Reward was honey-combed with 35 miles of underground workings. The current joint venture will mine the oxidized gold mineralization surrounding the many shallow caved workings on the property, as well as develop sulphide and deep Precambrian ore.

Coin Lake Gold has a 33.3% interest in the Golden Reward Mining Co., a U.S. joint venture which is conducting the exploration, development and production on the property.

In other news, the company reports that a recent South Dakota referendum has rejected proposed changes in legislation which would have resulted in increased operating costs for mining companies.

Deak Int'l

From Page 1

a report by Wright Engineers the property contains three zones with combined reserves of 1.15 million tons grading 1.54% copper, 4.43% zinc, 0.91 oz silver and 0.014 oz gold per ton. An additional 623,480 tons of mineralization grading 1.5% copper also lies within the old mine workings.

Wright has recommended that a prefeasibility study should be conducted to determine the viability of mining the massive sulphides at Aldermac.

Further east at Hebecourt Twp. Noranda milled about 103,000 tons of stockpiled ore between 1976 and 1977 after developing a small open pit on the property. Development was postponed due to low metal prices and a small reserve inventory of about 790,000 tons grading 2.7% copper was left behind.

Neither property could stand alone but together the two deposits combined could make a viable mining operation, said Hume.

Nuinsco Chairman Malcolm Slack is also preparing to table a pre-feasibility report on the Cameron Lake deposit which Echo Bay considered uneconomic at a price below $550(US) per oz.

As reported (**N.M.**, Dec 19/88) Echo Bay's projections were based on a 500-ton-per-day milling rate and a mineable reserve inventory which stands at 788,000 tons of grade 0.194 oz gold per ton.

"We have brought similar projects into production for substantially less (than Echo Bay is estimating,)" said Slack.

Deak International Resources has applied to have its shares listed for trading on the Toronto Stock Exchange.

104K079

Final cost of Golden Bear soars

VANCOUVER — The 1989 annual report of **North American Metals** (TSE) reveals a far different picture of the Golden Bear project in northwestern British Columbia than was likely envisioned by **Homestake Mining** (NYSE) prior to gaining control of the company almost two years ago.

At that time, North American Metals and Chevron Minerals were jointly developing the remote gold project near Dease Lake, B.C. A feasibility study by Wright Engineers estimated a total capital cost of $36 million, operating costs at US$136 per oz., and gold production of about 64,000 oz. per year, making the project appear financially attractive.

Homestake made a tender offer to North American Metal shareholders at $5 per share and by deadline, April 15, 1988, 68% of the company's outstanding shares had been tendered. Homestake currently holds about 73.3% of the company's 7.9 million shares.

Subsequent events battered the stock down to a low of 90¢. It currently trades at the $1.50 level.

The first blow to the project came in early 1989 when the company announced that, due to a change in route, the road access cost had jumped to $19 million from $9 million.

By this time last year, the estimated final cost of the project had almost doubled to the $65- to $70-million range and operating cost estimates had risen to US$210-240 per oz., putting the viability of the mine in question.

The group did go ahead with final construction and with the first gold recently poured in January, the joint venture is getting closer to calculating the final tally on the project. North American's annual report notes that the final cost will exceed $80 million and production costs are expected to be in the order of US$270 per ton.

The effect of the higher capital cost can readily be seen on North American Metal's balance sheet as at Dec. 31. Not including the current portion of its gold loan, the company has a slight working capital deficit. Homestake loaned the company $31 million in return for the future delivery of 84,879 oz. of gold; an effective price of C$365 per oz. The loan is to be repaid in minimum installments of 2,000 oz. per quarter commencing on Sept. 30.

In addition, Homestake lent the company about $6 million at prime--plus-one-percent as bridge financing to cover further cost over-runs. The result is a net liability of about $37 million. The company estimates that a further $1-2 million will be required before full production is achieved.

Although the project has poured its first gold, commercial production is yet to be realized. The milling operation involves the dry-grinding and roasting as a pre-treatment of refractory ore before recovering the gold through cyanidation and a carbon-in-pulp circuit. Problems with the roaster feed system have resulted in the roaster section being bypassed until the problem can be solved.

This is made possible by milling only the open pit ore which has a low sulphur content, rather than using a blend with the refractory underground ore. The company expects the roaster to be operational soon.

In an effort to improve ore reserves, which are good for about six years, the joint venture plans a $750,000 exploration program in 1990 to test targets near known mineralization in the Bear Zone. In addition, a regional program is planned for the area surrounding the mine at a projected cost to North American Metals of $230,000.

The companies have indicated that they are optimistic at finding more reserves. Homestake certainly has some money riding on this, because according to the gold loan repayment agreement, it will be owed over 30,000 oz. when current reserves are exhausted.

Teck, Cominco interests boost Metall

The acquisition of a U.S. copper producer and investments in two of Canada's largest mining companies contributed to higher annual earnings for Toronto-based **Metall Mining** (TSE).

Metall, a 62.7% owned affiliate of West German metals giant Metallgesellschaft, holds a 10%

ported in 1988.)

The company's mine production in 1989 was 61,000 tonnes of copper, 62,000 tonnes of zinc, 30,000 tonnes of lead, 102,000 oz. gold and 2.9 million oz. silver.

The company reported fourth-quarter net income of $6.5 million or 17¢ per share, compared with

Tedi increased to $2.04 million from $1.3 million 1988. The operation produced 514,000 oz. gold and 298.3 million lb. copper.

Metall's share of Teck earnings in 1989 was $8.9 million in 1989 compared with $11.1 million a year earlier. The company's share of Cominco earnings also increased to $19.7 million from $18.7 mi

NO.150(1990)
AUGUST 3, 1990

George Cross
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WESTERN CANADIA

NORTH AMERICAN METALS CORP. (NAM-V)

HOLE NO.	TARGET STRUCTURE	FROM MET.	LENGTH METERS	TRUE WIDTH METERS	GOLD G/T	SILVER G/TONNE
90-135	Bear Main Fault	53.46	0.29	0.24	9.33	12.41
	Internal Silver (footwall) + Footwall Fault	75.64	10.09	5.38	11.97	19.7
90-136	Bear Main + Internal Silver (hanging wall)	44.8	3.05	2.38	9.9	6.7
	Internal Silver (footwall) + Footwall Fault	58.56	.53	.44	.14	33.3
90-137	Bear Main Fault	67.33	2.901	2.76	2.4	2.0
	Internal Silver (hanging wall) + Internal Silver (footwall)	76.4	7.12	4.91	14.7	13.02
	Footwall Fault	101.77	.95	.36	13.7	20.2
90-138	Bear Main Fault + Internal Silver (hanging wall)	47.85	3.97	3.63	.4	1.2

DRILLING RESULTS - Robert T. Boyd, director, reports North American Metals Ltd. and 50/50 partner Chevron Minerals Ltd. have received preliminary diamond drilling results from surface drilling at the Golden Bear mine-site exploration program located 75 miles northwest of Telegraph Creek, 145 miles west of Dease Lake, northern B.C.

All drill holes are located above the 1,360-meter and 1,400-meter level portals and have targeted structures immediately parallel to the Bear Main fault which hosts the ore reserves at the Golden Bear mine. The area being tested is geologically complex; hence the economic significance and continuity of the intersections has not yet been established and no mineable inventories have been added from the parallel structures. To date, complete results have been received from four holes, representing 401 meters of drilling, with another 12 holes scheduled of 1,800 meters. (SEE GCNL No.31, 13Feb90, P.1 FOR PREVIOUS INFORMATION)

104K 79

Golden Bear gold project goes ahead

104K 079

Jack E. Thompson, president of **North American Rare Metals Corp** says North American and its 50 per cent joint venture partner, **Chevron Minerals Ltd** have agreed to complete the construction of the Golden Bear Gold Project located near Telegraph Creek, British Columbia.

Completion of the project had been under re-evaluation by North American and Chevron Minerals since the end of 1988 when they learned that capital and operating costs would be significantly higher than originally anticipated.

Thompson also announced that North American has been appointed manager of the project. North American will be assisted in this task by its 73 per cent parent, **Homestake Mining Company**.

Thompson said he was pleased that the Golden Bear Project is back on course. "The Golden Bear Mine may prove to be a long-lived success. It is North American's job to see that everything possible is done to facilitate such an outcome."

The new mine is scheduled to go into commercial production by year-end 1989. The cost of completion is expected to be about $39 million and the total cost is expected to reach $70 million. Forecasted cash operating costs are expected to range from US$210 to US$240 per ounce.

The Golden Bear project has been under re-evaluation since the end of 1988.

Current proven reserves are adequate for five years of operation at a head grade of 0.543 ounces per ton.

Mr. Thompson said prospects for finding additional ore zones along strike and at depth appear excellent. The company believes that it is likely to find additional reserves, thus reducing non-cash costs.

At 360 tonnes per day, the plant will use the latest in extraction technology to recover over 90 per cent of the high-grade gold contained in the ore. The plant will use dry grinding, fluidized bed roasting and carbon-in-pulp leaching to produce an average of 65,000 ounces of gold per year.

First draft feasibility for Big Hurrah

Golden Zone Resources Inc has received the first draft of a mine feasibility study currently being completed on the Big Hurrah gold property near Nome, Alaska.

Preliminary figures indicate that the Big Hurrah open pit mineable reserves total 408,000 tons grading 0.296 oz/ton gold. At an estimated recovery of 90.8%, ...

1 to October 30 and stockpile sufficient ore to feel a 250 tons per day mill continuously for 12 months of the year.

The total mine, milling and overhead costs are estimated at US $53 per ton or US $197.60 per ounce. The capital cost of bringing the mine to production is estimated at US $8.5 million including working capital.

The study indicates that, even at current

Gold Corp, which has an option to earn a 70% interest in the property. Under these terms, Golden Zone Resources has the option to acquire a 17.61% interest, in which event, the latter's share of the capital cost is estimated to be $1,050,000.

Golden Zone intends to work with Solomon to finance the project.

Recreational area claim staking OK

British Columbia's provincial government has created 12 new provincial parks.

Cabinet orders raised 12 recreation areas to full Class A park status and increased the areas of 10 other provincial parks by upgrading recreation areas to full Class A park status. In all, 207,122 hectares are upgraded to Class A status.

At the same time, detailed regulations have been issued, setting out where and how mineral exploration and claim-staking may take place in some designated recreation areas. Both moves follow from policy decision announced last December.

"British Columbia has by far the largest provincial or state park system in North America — 5.4 million hectares, an area the size of Nova Scotia." said Parks Minister Terry Huberts.

"Almost 80 per cent of that is Class A parkland, and we are continually adding to it."

"The process we have established will facilitate a thorough private-sector evaluation of mineral opportunities in these recreation areas before they are considered for Class A park status," said Huberts.

In the 26 recreation areas now open to mineral exploration, claim-staking will follow a new 'one-post' system by which claim areas are preselected on a map grid and mineral rights are claimed by placing a single post in the field.

Mines Minister Jack Davis said: "The 'one-post' claims reduces the amount of ground disturbed by staking activities."

But local prospector said the technique is not popular, and could lead to considerable confusion.

The regulations came into effect on April 17 and include details of the approvals and notices which must be given in these areas. Detailed guidelines will be available in all district mining offices.