008783

Founded 1915

CANADA'S MINERAL RESOURCES NEWSPAPER

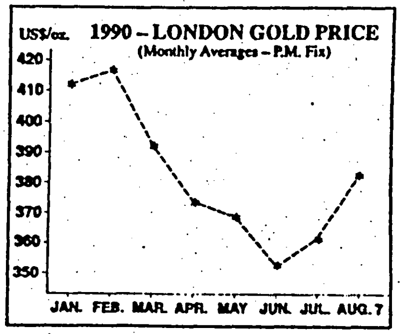
...ons in Middle East send bullion, oil prices soaring

...extremely volatile with the ...g crisis in the Mid-East. ...ek as an armada of U.S. ... forces headed for the ...Gulf, oil hit a 5-year high ...8.31, up nearly 70% from ...2 as of July 2.

...sts said the prospect of sus... ...gher oil prices will most ...bring higher inflation, and ...s caused gold share prices ...ate wildly.

...some observers feel the ... over-reacting, other analysts suggest North American gold equities may now face a period of relative improvement.

"The recent developments in the Middle East are very positive for gold," said Catherine Gignac, an analyst for securities firm McNeil Mantha. "Investors who are not currently holding gold equities may now move into the market," she said, adding there will likely be some heavy selling by profit takers, but some large buyers could also come back into the market.



Gignac is forecasting a gold price of US$400 by year-end and an average price of US$425 in 1991.

"This is an obvious buy signal for investors who have not been holding gold stocks," she said.

Often considered as the last refuge of security in times of economic uncertainty, investors can find plenty of reasons for insecurity these days.

"Gold is an emotional metal," explained Ron Coll, an analyst with securities firm McLean McCarthy. "Probably 50% of what affects the price of gold is emotion."

See GOLD, Page 2

92HSE

...Princeton surveys potential ...r Similco reserve expansion

...ivian Danielson

...nceton, B.C. — When a ...cessor company to Prince... ...ining (TSE) acquired the ...co open pit copper mine ... this picturesque com... ...y in June, 1988, it was ... view to provide a much... ...d diversification from as... ...fibre.

...ving accomplished that ...ive at a bargain basement ...in time to benefit from a ...pswing for the red metal, ...ton is turning its attention ...nding reserves at Similco ...l its current 5-year mine ...t the same time, the com... ...is continuing work to ...e and refit the 30-year-old ...trator to increase its over... ...ciency and availability.

...k on both fronts was in ...ar when *The Northern* ...visited the Similco prop... ...0 miles east of Vancou... ..., in late July. The 1990 ...tion program, funded by ...$2-million flow-through ...sue, is largely focused ...ost Horse Gulch project. ...lefinition drilling is con... ...to return encouraging ...rom the Virginia and Ala... ...posits.

...the end of this year we should have a minable reserve in the Virginia deposit at a higher grade than we initially thought," said Robert Hamaguchi, general manager at Similco. "We now see the kind of potential we need for a 10-year mine plan."

The Lost Horse Gulch project is one of several exploration targets examined by Princeton since it acquired the Similco property from Newmont. Bill Epp, senior exploration geologist, said the targets were selected after a review of previous drilling and exploration work going back to the 1920s when Copper Mountain came to prominence as a result of high-grade copper discoveries.

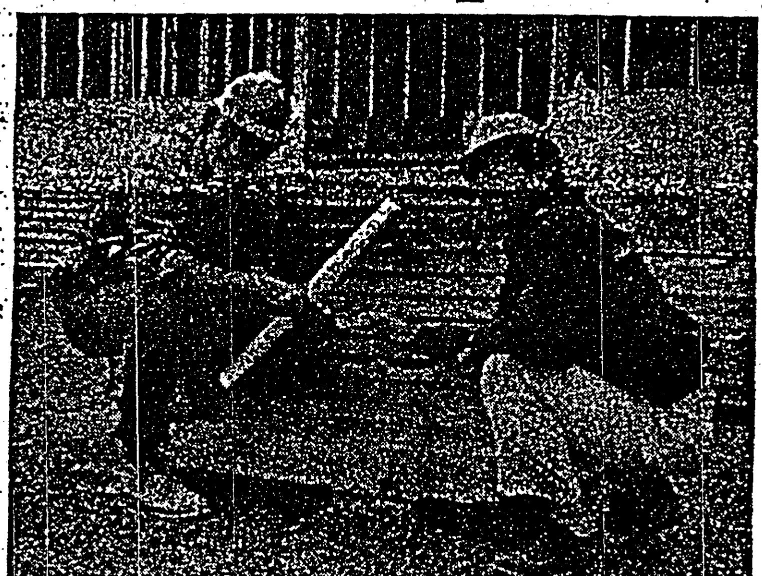


Photo by The Northern Miner

Bill Epp (left), senior exploration geologist, and Robert Hamaguchi, general manager of Similco Mines, examine drill core from an ongoing program to define new reserves at the open pit copper mine near Princeton, B.C.

See PRINCETON, Page 19

Major ready to veto deal at Louvicourt

by Peter Kennedy

A senior official in Noranda Minerals group has told a Quebec business paper that **Noranda (TSE)** is opposed to an agreement designed to end the legal dispute over the massive sulphide discovery of **Aur Resources** (TSE) and **Societe Miniere Louvem** (TSE).

While Noranda has until Aug. 14 to make a decision on the proposed deal, Michel Lefebvre, vice-president of Noranda Minerals' eastern mining group, said his company will exercise its right of veto.

In Quebec's *Finance* magazine, Lefebvre described Louvem's decision to settle the lawsuit by selling to Aur a 10% stake in the Louvicourt Twp. massive sulphide discovery, east of Val d'Or, Que., as unrealistic.

"That would mean the (36-million-ton of 3.11% copper and 1.34% zinc) deposit is worth $50 million," he said.

Under the a proposed agreement that would essentially end all of the litigation relating to the deposit, Aur would end up with a 60% interest in the project while Louvem retains 40%.

In return, Louvem would receive

See AUR, Page 2

...by vanishing Karpa gold find

...s from Ski disappoint investors

VANCOUVER — Assay results released by Adrian Resources for the first two holes drilled on the Ski project north of Stewart, B.C., and adjacent to the Eskay Creek project, owned by Prime Resources Group (VSE) and Stikine Resources (TSE).

The long-awaited results appear to have generally disappointed investors, as the share price of Adrian slipped $1.25 to $7.75 in active trading immediately after the results were announced.

The first hole of the program, 90-1, returned 0.10 oz. gold and 8.93 oz. silver per ton over 4 metres (13 ft.) at 322-326 metres.

The second hole, 90-2, returned an average of 0.11 oz. gold and 6.36 oz. silver over 3 metres at 322-325 metres.

Corrections

Contrary to an earlier story (*T.N.M.*, Aug. 6/90), **Flagship Resources (COATS)** has not changed its corporate name. Another over-the-counter firm, Delbridge Mines, recently changed its name to Hoverspace International.

The employer of project superintendent Ron Koebel, who is stationed at the Eskay Creek gold project in northern British Columbia, was incorrectly identified (*T.N.M.*, Aug. 6/90). Koebel works for Tonto Mining.

Pg. 2 Princeton drilling

From Page 1

Although Epp noted only minimal exploration work was done by Newmont during the 1970s, he said the historical review showed numerous areas where adits and shafts had been driven on 1% copper (or better) by earlier operators only to be abandoned when grades fell to roughly half this level.

"This left us with a tremendous opportunity to evaluate these targets with modern exploration techniques in light of the economics of the day and in view of the fact that our capital costs are paid off," Epp said. (Princeton paid off the costs of its Similco acquisition in less than a year, with the exception of a concentrate return obligation to Newmont that was recently satisfied.)

The Virginia and Alabama deposits are currently reported to each contain possible reserves of 10 million tons grading 0.32% copper. This year's program is focused on infill drilling to better define the geometry, grade and tons in these deposits, although some earlier stage exploration is under way or planned for promising targets elsewhere on the property. All are near or adjacent to existing operations.

The company recently reported that results from the initial 20 diamond drill holes on the Virginia definition drilling program "indicate significant potential to increase both grade and tonnage of the deposit." All holes are vertical, drilled on 100-ft. centres, and average close to 700 ft. deep.

One of the more significant holes drilled in this series, VB90-10, encountered 228 ft. of near-surface mineralization (from 107-335 ft.) grading 0.44% copper, and an additional 306-ft. intersection (from 400-706 ft.) grading 0.59% copper. The deeper intersection in this hole included 56 ft. of massive magnetite-chalcopyrite-pyrite mineralization (558-614 ft.) grading an impressive 2.21% copper, 0.031 oz. gold and 0.14 oz. silver. These intersections are expected to increase potential reserves in the northeast corner of the deposit which remains open.

As an interesting aside, Princeton plans to drill a deep hole (about 2,000 ft.) in this area later this year, after more geological information is compiled, to test a tantalizing theory that a large, deep-seated but higher-grade deposit might be associated with the Lost Horse intrusive, possibly acting as a plumbing system for mineralization in the Copper Mountain area.

Meanwhile, the company is also encouraged by "significant" results from several holes that opened the eastern end of the Virginia deposit, both near surface and at depth. Selected results here include 270 ft. grading 0.39% copper (0.48% copper equivalent after taking into account precious metal assays), 206 ft. of 0.35% copper (0.44% copper equivalent) and 183 ft. of 0.39% copper (0.52% copper equivalent).

"We could be looking at a grade increase from 0.32% copper to about 0.41% copper in the Virginia deposit," said Hamaguchi.

Although precious metal assays are still pending from some holes, Princeton estimates that the average precious metal contributions converted to copper equivalent will add about 25% to the copper grades in this area. The increase in grade at depth noted in this area also prompted a decision to do deeper drilling to determine the extent of mineralization (some holes ended in mineralization), and a number of holes to about 800 ft. have already been drilled.

In addition, recent drilling is revealing a possible connection between the Alabama and Virginia deposits. Two holes drilled in this area, VA90-8 and VA90-9, returned 139.5 ft. grading 0.36% copper and 180 ft. of 0.50% copper respectively.

Based on preliminary investigations, it is also projected that material in this area (Virginia deposit) will have a markedly lower work index and increased recoveries than the pits currently being mined. The strip ratio is also expected to be favorable, at less than 1-to-1.

Hamaguchi expects that the Virginia deposit could be ready for mining sometime in mid-1991. In the meantime, mill feed is being blended from the new pit one and from pit three, which has been the source of feed for the past several years.

The introduction of feed from the new pit one was not without problems, particularly in the first quarter of this year. Recoveries were lower than expected because of oxidation levels in the upper benches, strip ratios were higher than anticipated, and the ore was found to be fine-grained and harder than originally estimated. After some modifications to the mine plan, including the introduction of a more desirable blend of ore feed, Princeton was able to report increased copper output for its most recent quarter ended June 30. Output totalled 14.9 million lb., up from 11.7 million lb. in the first quarter when production was affected by poor copper recoveries and by extra scheduled maintenance in the mill.

Work is still continuing to modernize the concentrator across a valley from the open pits. (Ore is delivered to the mill by a 2,370-ft.-long conveyor system and suspension bridge.) Mill superintendent Tim Smith, whose position appears to be one of the most challenging on site, estimates budgeted mill improvements will total $2 million this year. The concentrator has been averaging about 20,400 tons per day for the year to date. The long-term objective, however, is to increase daily throughput to 30,000 tons.

Princeton also owns a chrysotile asbestos mine near Cassiar, B.C., where a new underground deposit, the McDame, will replace production from open pits early next year. The new deposit will be mined by bulk tonnage, block-caving methods. Both operations generated net earnings of $4.1 million for the company's most recent quarter ended June 30, compared with $10.5 million for the same period in 1989.

First phase complete at Iskut project

VANCOUVER — The initial phase of drilling on the Iskut Joint Venture Project has been completed. The project is an equal joint venture between Prime Resources Group (VSE), American Ore (VSE) and Golden Band Resources (VSE).

The property is immediately ... of Dominion Prime's Snip deposit, 66 miles northwest of Stewart, B.C.

A total of 10 holes have been drilled to date. The first four holes of this year's program were designed to test the strike and dip extensions of the RPX zone discovered in 1989 by hole 189-10 which intersected 10.6 ft. grading 0.43 oz. gold per ton.

INDEX

All significant references to publicly traded mining companies or parent companies mentioned in this issue of *The Northern Miner* are included in this index. Not included are references to companies on the Editorial page, the General News and Comment page or the Stock Markets page.

August 13, 1990

Aber	18	Monika Mining	11
Adrian	19	Moneta	20
Amer Barrick	3	Minnova	20
American Ore	19	MinVen	11
Anglo Canadian	12	Moss-Power	20
Aur	1	Newhawk	5
Black Cliff	11	Noranda	1,3,20
Camber	3	North Amer Rare	20
Central Crude	3	Pagel	11
Cheni Gold	12	Pamorex	17,18
Cominco	2,11	Pamour	17
Conwest	18	Pine Point	20
Corona	3,20	Placer...	11
Crown Butte	1	Prime	19
Dickenson	20	Princeton	1
Euro-Nevada	3	Redfern	11
Falconbridge Gold	12	Repadre	3
Flagship	18,18	Royal Crest	12
Giant Yellow	17,18	Royal Oak	17
Gold Standard	3	Sherritt Gordon	2
Golden Band	19	Silverside	13
Golden Star	11	Soc d'Expl Mazarin	3
Hemlo	3	St. Genevieve	2,11
Home Lake	17	Stikine	19
Hope Brook	12	Stornvin	3
Horsham	2	Tandem	3
Hudson Bay	11	Teck	2
Hydra	18	United Keno	13
Inspiration	11	Uranerz	13
Jascan	13	Welcome North Mines	18
Kerr Addison	20	Welcome North Res	18
La Sarre	20	Wharf	20
LAC	13	Wilanour	11
Louvem	1	Young-Davidson	17
Lyon Lake	11		

REGULAR DEPARTMENTS

Careers	13
Classified Advertising	17
Diamond Drillers	18
Earnings Reports	11
Editorials	4
Insider Trading	11
Letters	5
Metal Prices	6
News & Comment	5
People	5
Professional Directory	14-17
Rights & Warrants	11
Stock Markets	7-11
Subscriber Service	4

MEETINGS

Aug 20, 3 p.m. Starrex Mng — annual, general. Toronto Board of Trade, Toronto, Ont.

Aug 20, 4 p.m. Minefinders — special. 1 Dundas St. W., Toronto, Ont.

COMING EVENTS

Aug 24-26 The Lapidary Rock and Mineral Society of British Columbia — "B.C. Gem and Mineral Show." South Delta Recreational Centre, Delta, B.C. Contact, Wayne Belzer (604) 946-8214.

Aug 26-30 Metallurgical Society of CIM — Int'l Symposium on Extraction, Refining & Application of Light Metals — 29th Annual Conference of Metallurgists, Hamilton Convention Centre, Hamilton, Ont. Contact: Patrick C. Gagnon, CIM Headquarters, Tel: (514) 939-2710 Fax: (514) 939-2714 or Pierre Tremblay, Alcan Int'l Ltd., Arvida Research & Development Centre, 1955 Mellon Blvd., Jonquiere, Que. Tel: (416) 699-3878 Fax: (418) 699-3956.

Classified

Small Ads – One insertion $3.90 per printed line; three or more consecutive insertions, same advertisement, $3.40 per printed line. Minimum charge $23.40 per insertion. Approximately five words to a printed line.

Classified Display – $3.50 per agate line (14 agate lines to the inch). Minimum size 1" ($49.00). Box service $3.00 additional per insertion, replies mailed.
PAYMENT WITH ORDER.
CHEQUE, VISA OR MASTERCARD

TORONTO
7 Labatt Ave.,
Toronto, Ontario M5A 3P2
Phone (416) 368-3483
Fax (416) 861-9564

VANCOUVER
206 - 1200 W. Pender St.,
Vancouver, B.C. V6E 2S9
Phone (604) 688-9908

Equipment for Sale

FOR SALE: 1 Longyear 28 diamond drill Hatz diesel, NQ and BQ, complete with customized trailer and spare parts. $42,000 Jon: 604-683-0466. d

MOBILE CONSTRUCTION camp for sale (skid mounted). Contents: 1 10 x 60 kitchen including appliances, 1 10 x 40 wash house, 2 10 x 50 4 room Porta Builts, 1 10 x 60 room Atco, 1 Portelec 60 kw lite plant 1 10 x 40 soils & first aid trailer, various small items — Linens, blankets, dishes, etc. Located in Whitehorse. For information call (604) 765-1411. e

LARGE QUANTITY 8" Victaulic fittings, new condition. Style 77 $25.00 each. Call Serge Harrison 1-514-637-2566. e

FOR SALE, one EDA 1988 omni plus combined total field and gradeometric magnetometer and 3-channel VLF. Programmable IBM compatible. Latest software, like new condition, $17,500.00. Phone: 604-662-8424 or 604-681-0281. d

LONGYEAR S-38 unitized 3¾ head pumps, 1000 ft BQ rods, bits core barrels, bits, hoses, shoes, BW casing, adaptors, spares plus more. Anytime 705-642-3329. d

RADIO TELEPHONES for sale, used Marconi CP34's CH 100's and Spilsbury Tindale SBX11' complete with crystals, antenna's and carrying cases, etc. Very reasonably priced 500 — 750 dollars. Call 807-767-7011. d

USED ROCK CUTTING & polishing equipment. 1 only 18" Hyland Park — Model J-3-Cut-off diamond saw with automatic feed and shut-off, plexiglass hood and oil bath reservoir. 1 only Hyland Park-Model B-50 five wheel polishing, grinding and buffing unit with electric motor and water cooling connections. 1 only 20" Vibra-Lap Unit — floor model — extra lap with frame and grinding compounds. This equipment is in excellent shape and requires no repairs or maintenance. Please call 416-261-9499 for additional information. d

WAGNER SCOOP TRAM, ST5H (1988) 2373 hours, 5 cu.yd. Deutz V.10, model F10L413, modulated Clark transmission 32,000, Tires L5 slick. Clark Axle 37000 series, Torque 8000 series. Price $155,000 U.S. or best offer. ST3.5 (1988) 1400 hours, Deutz F6L413SW, Clark transmission and Torque. Tires 17.5 x 25 80%. Price 110,000 U.S. or best offer. Call Jacques Simard, tel: 514-630-3128, fax: 514-630-3142. d

DIESEL ENGINE, 6 cyl., Blackstone Lister, turbo charged, 720 RPM driving G.E. gen. KVA375 KW300 60 cycle, 3 phase excitation 125V, 63 amps. Less than 1000 hrs. running time. Located in Campbell River, B.C. Sell or lease or will consider swap for stock. 604-923-6215 or 604-434-8069. e

Equipment for Sale

FOR SALE OR RENT: 2 yd.-10 yd., Scoop Trams, Jumbo Drills, powder, lube, service and personnel scissor lift trucks. 1400 CMS air compressors. B. McDowell Equipment Limited, 2018 Kingsway, Sudbury, Ont. P3A 4R7. 705-566-8190. tf

FOR SALE OR RENT, mining equipment: jumbos, scoop trams, JS220 scoop, Hydrofore Montabert track drill, Mono Matic H451 Tamrock Upper rig long hole. Ready to go: MJM20B 2 boom air jumbo, RBM-11 rock bolt jumbo. Mechanics on loan. Call 705-857-2154. tf

FOR SALE OR RENT — Underground trucks, JC413, 415 & 426. Drills, 2 & 3 boom pneumatic. Scissor lift. Scooptrams 2 yd to 8 yd. 850 cfm compressors. For further particulars 416-677-8515 tf

MINING HOISTS, Ball Mills, Crushers, Generators, Conveyors, all sizes, best prices. Nordberg DD, DC, 8' diameter. Wm. Sims Industries Ltd., 392 Paisley Blvd. W., Mississauga, Ont. L5B 2A6. (416) 272-4983, Fax (416) 842-1470. tf

COMPLETE CAMP, accommodations for 50 men including sleeping, washroom facilities, kitchen, offices, recreation trailer and 60 kw generator, can be leased or sold separately. Ask for Rick or Bill at 705-235-5565. tf

HOISTS (mining & construction). Pumps, motors and lab equipment, base metal plants & equipment. Minroc Inc. Tel: 514-227-4658. Fax 514-227-1472. tf

FOR SALE OR RENT 1 only Wagner ST8 scooptram, fully reconditioned. Parts for ST5 scooptram, 2 only I.R. stationary compressor model XLE, 200 hp elect. motor 1100 cfm at 100 psi. 906-632-1166 or 705-673-0666. d

COMPLETE WINKIE DRILL including spares, hydraulic powered BBP-25 water pump (sell or trade for hydraulic powered Brahma 24 pump). Call 807-767-7011. d

MINING EQUIPMENT FOR SALE or rent: RBM11 rock bolt jumbo air & hydraulic, JB220 Jarvis Clark scoop, jumbos, scoop trams, Hydrofore Montabert track drill, Mono Matic H451 Tamrock Upper Rig long hole, 413 Jarvis Clark mine truck. Mechanics on loan. Tel: 705-857-2154. tf

Equipment Wanted

WANTED, used polarizing microscope, call 604-669-1704. d

Help Wanted

SURFACE COAL MINING companies — The only U.S. manufacturer of continuous surface coal mining machines is looking for sales agents to represent its products to the major U.S. and Canadian surface mines. Desire persons or organizations now calling on this market. Respond to Eugene Diedrich — East-Miner, 422 Dartt Avenue, Owatonna, MN 55060. (507) 455-2665, Fax (507) 451-4215. e

Employment Wanted

TRACTOR TRAILER driver, 42 years' old, 23 years' experience, clear abstract, no accidents, dangerous goods certificate, non smoker. Alan 416-266-0000. d

B.C. INSTITUTE of mining technologist with second diploma in business. Experienced with mining and business computer software, marketing and accounting background. Seeking interesting position with a good work atmosphere and potential career growth. Call 604-563-8849. d

Mining Property Available

DIAMOND DRILL, portable, JKS Boyle Winkie complete with all rods (1" — drills to 400 ft), pumps, tripod (with motor winch) and hoses. Used one season. Asking $18,000. Call 416-234-9264. f

BOSS AND MADRILL MINES in the Sierra Foothills Belt. Oxidized reserves of 1 million tons at .04 OPT. Au are drill proven. Sulphide reserves with 7,000 ft of workings are undefined. Call La Teko Resources, 619-242-2884. d

CONTROL OF VANCOUVER Public Company with mining claims available. Contact Investment Bankers, P.O. Box 99, Adelphia, N.J. 07710. Tel: 201-431-3025. Fax: 201-308-0917. e

UNDERGROUND GOLD property in northern Nevada for lease or purchase by qualified party. 60 claims with easy access, some production in late 1930's. Phone 303-449-9192. g

DOMINION CLAIMS — block of 8 mineral claims, road access, 5 miles west of Wells, B.C. Anderson Creek area. 5297 — 198 St., Langley, B.C. V3A 7Y3. 604-923-7148 or (604) 534-6650. d

Business Opportunities

INVESTORS/PARTNERS needed to evaluate a mineralized shear fault zone associated with known gold occurrences and to acquire ground in the better parts of the break. Exploration work qualifies for flow-through funding (CEIP). Contact Gary M. Archibald, Orefinders Inc., 50 Dutch Myrtle Way, Don Mills, Ontario M3B 3K8. 416-449-9257. f

INVESTORS NEEDED for proven Placer mining start-up. Contact Don Wilson, Triple D Mining, 1007 Park Ave., Escalon, CA 95320. Tel: 209-838-8532. d

Pegasus, Pioneer face off in legal battle

VANCOUVER — Court dates have been set for several ongoing disputes involving Pioneer Metals (TSE) and Pegasus Gold (TSE).

The two companies' falling-out can be traced back to November, 1988, when Pegasus loaned Pioneer $12 million by way of a convertible debenture secured by Pioneer's Stibnite and Bonito gold properties in the U.S.

In November, 1989, Pegasus served Pioneer with a notice of non-monetary defaults under the terms of the convertible debenture and demanded immediate repayment of the debt.

At this point "the gloves were off," with Pioneer responding to the default by commencing action in the Supreme Court of British Columbia. Pegasus in turn began foreclosure action against the Stibnite in Idaho and filed a defence and counterclaim against Pioneer in British Columbia.

The hearing proceeded on April 6, with Pegasus putting its arguments before the court. Pioneer will present its position on June 15. The decision will then rest with the court, which will either grant one company's order or refer the matter to a full trial currently scheduled for May, 1991.

Pegasus's litigation in Idaho to seek a foreclosure of the company's mortgage on the Stibnite mine will be settled in a jury trail set for Oct. 1 in Cascade, Idaho.

Pioneer has made a counterclaim against Pegasus.

As a result of these actions, Pioneer has asked the court to order that the mortgage indebtedness of $12 million be cancelled, that the court award $20 million in damages against Pegasus, and that Pioneer also be awarded punitive damages against Pegasus.

Pioneer notes that it has raised more than 20 defences to Pegasus' foreclosure action.

Pioneer alleges that following a management change at Pegasus in January, 1989, the company was attempting to influence and control Pioneer and that Pegasus was attempting to find a way to acquire Pioneer U.S.'s interest in the Stibnite gold mine in Idaho as early as August, 1989.

Pegasus' primary argument relates to the non-monetary defaults. When the original lending agreement was put in place, Pegasus required that there be certain covenants under the loan arrangement, some of which required Pioneer to keep all of its financial obligations current. Essentially, this means the company must continue to operate as a going concern with sufficient cash flow to pay off its indebtedness.

Pegasus specifically cites Pioneer's inability to meet cash calls made by Westmin Resources (TSE) for the Premier project north of Stewart, B.C. Arrears owed by Pioneer are estimated at more than $11 million.

New mines boost Minnova's profit

Production contributions from the new Ansil and Samatosum mines in the first quarter of 1990 resulted in higher earnings for base metal and gold miner Minnova (TSE). Net income for the quarter increased to $4.5 million (31¢ per share), compared with $233,000 (2¢ per share) in 1989.

Net sales grew to $47.8 million, more than double the $22.6 million at the same time a year ago. The results reflect strong production performances by the company's operations and contributions from its two new mines which began production on July 1, 1989.

Minnova anticipates that a preliminary feasibility study should be available in the third quarter for its 50/50 joint venture with Audrey Resources (TSE) on the Mobrun 1,100 lens polymetallic deposit near Rouyn-Noranda, Que.

The 1100 lens could be in production by the end of 1992, the company said. Underground drilling is nearly half complete and a drift to reach the mineralized zone has commenced with bulk sampling to follow. Preliminary reserves were last reported at 10 million tonnes grading 0.9% copper, 6.2% zinc, 43 grams silver per tonne and 1.6 grams gold.

Cash and short-term securities increased by $3.6 million during the quarter to a balance of $15.4 million at March 31. Capital expenditures, principally on deep development at Lac Shortt, declined to $3.7 million for the quarter.

Minnova (TSE)
$000s except per-share items

Quarter ended Mar. 31	1990	1989
Net sales	$47,755	$22,580
Net income	4,479	233
per share	0.31	0.02

Cal Graphite split

Cal Graphite (VSE), operator of a graphite mine in the startup phase north of Huntsville, Ont., is proposing a 3-for-2 share split. Shareholders will vote on the proposed split June 12 in Vancouver. The company, with about 7.3 million shares outstanding, is currently processing 2,500-3,000 tons of material per day. President John Stirling said the company expects to commence shipping its product by the end of May.

Princeton president confident of healthy balance sheet

92HSE

VANCOUVER — With net earnings of $2.3 million for the 1990 first quarter, Princeton Mining (TSE) is still firmly in the black and paying dividends even though this year's results are off considerably from the 1989 comparable period when earnings totalled $7.3 million.

At the company's first annual meeting of shareholders since a corporate reorganization was completed last winter, President James O'Rourke said the reduced earnings were largely the result of lower copper production and prices and increased costs at the Similco mining operation near Princeton, B.C.

O'Rourke stressed, however, that earnings for the balance of 1990 for all operations are expected to show considerable improvements from first-quarter results at current product prices.

The company produces about 60 million lb. copper each year from its open pit Similco mine near Princeton, and about 100,000 tonnes per year of asbestos fibre from its mine near Cassiar in northwestern British Columbia.

At the Similco mine, earnings were adversely affected in the 1990 first quarter by higher production costs and reduced recoveries resulting from the introduction of ore from the newly developed Pit 1.

O'Rourke said the increased production costs were mainly the result of a temporary accelerated waste stripping program, while the reduced recoveries were the result of higher than expected oxidized ore from the upper benches of Pit 1.

The strip ratio is expected to improve later this year, and recoveries are expected to return to normal levels as the mining progresses below the oxidation.

As part of a new 5-year mine plan implemented in mid-1989, about 30% of the ore mined last year came from the new pit where the ore was found to be fine-grained and harder than originally expected.

In order to keep throughput levels up to target, O'Rourke said the mine plan was "revisited and readjusted" so that mill feed would be an approximate 50-50 blend from the new pit and from Pit 3 which has been the source of mill feed for the past several years.

This year Princeton plans to continue upgrading the mill at Similco and it will also carry out an aggressive exploration program. The 1989 drilling program at Similco outlined a potential deposit which is still open to the west, northwest and at depth. This will be further tested as will other known targets on the property.

Meanwhile, up at the Cassiar operations, Princeton is continuing development of the McDame underground mine which will soon become the primary source of ore into the next century. Production is expected to start later this year.

Having eliminated its long-term debt associated with the 1988 leveraged Similco acquisition, Princeton is now looking to continue its objective of diversification in the mineral business.

The company has set up a subsidiary in Chile to examine a number of base and precious metal targets in that country. Drilling is planned to start shortly on the Holy gold project where preliminary work has already been completed with encouraging results.

Princeton appears satisfied with its approximate 20% equity interest in Rea Gold (TSE) which has a 30% interest and a 5% net smelter return at the producing Samatosum polymetallic mine near Kamloops, B.C.

But O'Rourke said the company may sell its stake (about 2.6 million) shares in Western Canadian Mining (TSE), "if the right opportunity came along."

In a more recent development, Princeton announced plans to gain control of Cliff Resources (TSE) which is building a wet milling process plant to treat asbestos tailings in Newfoundland. A due diligence study is continuing. If the proposed transaction is completed by Princeton, it would be with a view to apply the wet milling technology to treat tailings at its Cassiar operations.

Northern Dynasty involved with Placer

VANCOUVER — Following the acquisition of the WX Syndicate, Placer Dome U.S., a unit of Placer Dome (TSE), is an equal partner with Northern Dynasty Explorations (TSE) in the Little Bald Mountain mine.

The mine, an underground heap leach gold-silver operation in Nevada, produced 5,425 oz. gold and 1,589 oz. silver in 1989.

Placer has also entered an agreement allowing it to earn up to a 60% interest in the property surrounding the mine by spending US$1.5 million over four years. Placer must spend US$350,000 in 1990, and a minimum of US$200,000 in each subsequent year.

Dynasty will retain a 44% interest in the current mining operations and can retain up to 31.6% working interest in the area outside the mine.

Dynasty will remain the operator of the mine while Placer will manage its exploration program. The company notes that the exploration program will likely concentrate on areas of projected mineralization across claim boundaries with Placer's adjacent Bald Mountain property.

Cache to resume Courville drilling

A new drilling program will soon be under way on the Courville gold property in the Val d'Or area of Quebec, the president of Parquet Resources (ME), William Plexman, said at the annual meeting.

Explorations Cache (ME), which is earning a 50% interest in the property, will perform surface work and undertake a drilling program this summer. Plexman said eight holes will test the A zone laterally and at depth.

To date, Cache has completed 24 holes representing 15,000 ft. Plexman said the zone has been traced along a strike length of 1,000 ft. and to a depth of 500 ft.

Cache may earn its interest by spending $3 million on exploration work during a 3-year period and making cash payments to Parquet of $300,000. The option deal was signed near the end of 1989.

Work is also expected to start up shortly at Parquet's Duparquet base metal property in the Rouyn-Noranda area of Quebec. Noranda Exploration, a unit of Noranda (TSE), has an option to earn a 50% interest in the property by spending $500,000 during a 3-year period and making payments to Parquet totalling $80,000.

Shares of Silver Spur Resources Inc (SLC:VSE) have been split on a 5-new-for-1-old basis. Royal Trust is the transfer agent.

Minera to seek funds for development

Toronto-based Minera Rayrock (TSE), a company whose main mining assets are located in Latin America, is gearing up to raise major development funding for two advanced-stage projects in Chile and Costa Rica.

Shareholders at the annual meeting were told Minera could eventually require up to US$50 million to develop its Bellavista gold deposit in Costa Rica and another US$35-$45 million for development of the company's Ivan copper project in Chile.

"Financing the company's projects will be the main objective for 1990," said President David Crombie, who hopes the company can also develop a larger shareholder base.

Minera's parent is Rayrock Yellowknife Resources (TSE), which owns 58.7% of the company's outstanding shares.

Nearly five years after Minera began its first exploration programs in Latin America, the company has successfully outlined two significant orebodies, the Ivan copper deposit in Chile and the Bellavista gold deposit in Costa Rica. Minera's corporate strategy has been to seek low-cost mining projects in the less-developed countries of Latin America where the geological setting and investment policies are favourable.

"We're working in Latin America for geological and economic reasons," Crombie told shareholders, adding that both Chile and Costa Rica have been experiencing a resurgence of foreign investment in recent years.

In Costa Rica, Minera's Bellavista deposit is situated about 112 km northwest of the capital, San Jose. The deposit hosts minable reserves of 14.5 million tons grading 0.05 oz. gold per ton, and operating costs for a proposed open-pit mine are estimated at between US$200-$225 per oz., based on an annual production rate of between 65,000-75,000 oz.

Crombie said Minera's objective is to complete a final feasibility study at Bellavista this year and finalize negotiations with the Costa Rican government regarding foreign exchange policies.

Following a planned merger with Westlake Industries (VSE), which owns 40% of the Bellevista project, Minera will end up with 100% control of the gold deposit. Westlake also holds 3.2 million shares of Minera, which will be cancelled upon completion of the merger. The arrangement is still subject to the approval of Westlake shareholders. Following the merger, Minera would have $4.7 million in cash and nearly 16 million shares outstanding with a float of about 9 million shares.

In Chile, the company's 100%-owned Ivan copper project could receive a positive production decision later this year following completion of a feasibility study. The deposit, which hosts 5.8 million tons grading 2.3% copper, is small but of good grade and is well-located near Antofagasta, northern Chile's largest city.

Minera has also formed a 50/50 joint venture for general exploration in Chile with partner Hecla Mining (NYSE). The joint venture, operated by Minera, is focusing on copper and precious metal properties in northern Chile. About $1 million will be spent during each year of the 3-year exploration agreement.

Shareholders also approved resolutions at the annual meeting reducing the company's stated capital by $11.3 million, as well as increasing its authorized capital to an unlimited number of common shares.

Varitech, Major General agree on Tam copper-gold option terms

Vancouver-based Varitech Resources (VSE) has signed a letter of intent to option a 50% interest in Major General Resources' (VSE) Tam copper-gold-silver property in British Columbia.

The agreement calls for Varitech to make a cash payment of $60,000 as well as issue 150,000 shares to Major General and spend $600,000 on exploration over a 3-year period.

The property, formerly owned by UMEX, is located in the Omineca mining district about 93 miles northwest of Fort St. James, B.C.

Previous drilling by UMEX in 1973-75 outlined a deposit containing preliminary reserves estimated at 7.7 million tons grading 0.55% copper with unknown gold values. The property is situated in a porphyry-copper-gold setting.

Core from some 19 previous drill holes will be reassayed for gold as part of the future work program, Varitech said. Strong exploration potential is indicated on the Tam property by large surface geophysical and geochemical anomalies trending northwest from the Boundary deposit. Additional claims have been staked to cover the northerly extensions.

Some of the better results from previous drilling on the property include 578 ft. grading 0.67% copper, 536 ft. grading 0.38%, 183 ft. grading 0.56% and 170 ft. grading 0.40%.

Varitech said preparations are currently under way to commence field work on the property. The company recently completed two private financings.

Elsewhere, Major General has two drill programs under way on its other gold properties in Ontario and Newfoundland. The first program is on its Rendell-Jackman joint venture with Noranda (TSE) near Springdale, Nfld., the second on its Dorothy Lake gold property near Pickle Lake, Ont.

The 7-hole program at Rendell-Jackman is designed to test the depth and strike extent of the Hammer Down and Rumbullion gold zones where preliminary reserves stand at 429,593 tons grading 0.34 oz. gold per ton (0.57 oz. uncut).

Additional work is also planned this summer for the Lochinvar zinc-silver showing situated half a mile east of the Hammer Down gold zone. The Lochinvar program will test the depth and strike extension of zones which yielded intersections of 16 ft. grading 3.95% zinc and 15 ft. grading 2.3% zinc with silver and lead values. Work will consist of a deep electro-magnetic survey and two drill holes totalling about 1,600 ft.

A deep EM survey is also planned for another copper-gold prospect situated 2.8 miles east of the Hammer Down gold zone.

Melinga Resources completes drill access road in Honduras

Dallas-based Melinga Resources (VSE) has completed construction of a drill access road into its 100%-owned Macuelizo mineral concession in northwestern Honduras.

The 55-square-mile property, which is being re-evaluated by Melinga for its gold potential, hosts a deposit with preliminary reserves estimated previously at around 17.5 million tons grading 0.04 oz. gold per ton.

According to W.F. Johnson, a Melinga director, a preliminary sampling program was initiated last month over portions of the Macuelizo concession, formerly known as the Vueltas del Rio area.

Previous work on the property has indicated a large tonnage of low-grade gold and copper reserves, minable by open pit methods.

Samples from the gold zone were sent to Assayers Ontario Laboratories for confirmation and later forwarded to Lakefield Research for metallurgical testing. Mr. Johnson said the initial five bottle roll tests indicate acceptable levels of cyanide consumption (under 1.7 lb. per ton) with gold recovery averaging 91% in 48 hours. In addition to the metallurgical work, four 30-day column tests are under way with results expected soon. Two of the column tests are using agglomerated material and two are unagglomerated to determine whether that processing phase will be necessary.

Mr. Johnson said "the results to date are encouraging, and it appears that the gold zone is amenable to low-cost, heap-leach gold extraction."

Underlying the gold zone is an 11-million-ton preliminary reserve of copper mineralization averaging about 0.54% copper per ton. The property was examined back in 1974 by an agency of the United

Phoenix dissolution

Shareholders of Phoenix Gold Mines (TSE) and St Andrew Goldfields (TSE) have ratified an agreement under which the latter company has agreed to buy all the property assets of Phoenix for 2.3 million previously unissued shares of St Andrew worth about $3.4 million.

The transaction was ratified by a special resolution passed by a majority of more than two-thirds of the votes cast at the recent annual meeting of Phoenix shareholders. The transaction will be completed by the end of June, the company said.

The shares of St Andrew received by Phoenix will then be distributed

(92HSE012

Princeton encouraged by drill program

VANCOUVER — An exploration program at the Similco copper mine near Princeton, B.C., is turning out "encouraging" results for owner, Princeton Mining (TSE).

The company believes the area of exploration north of the existing mine could be the site of a new pit exceeding 20 million tons with a low strip ratio.

The drilling, part of a $2 million program, points to a link between two zones, the Virginia and Alabama. Copper values in the two zones indicate an average of 0.32% copper, while precious metal values appear to be about three times the mine's present average (Similco produced 17,277 oz. gold and 432,220 oz. silver in 1989).

Drilling in another area, dubbed the Oriole Pits, defined a vertically-dipping linear sulphide zone southeast of Pit 3 grading about 0.5% copper. The average thickness encountered is 150 ft., while the strike length is in excess of 600 ft. with the zone remaining open to depth.

About 3,000 ft. southeast of the Oriole Pits, a drill hole intersected 130 ft. of 0.7% copper in an area where, in 1989, hole 89-3 intersected 53 ft. of 0.97% copper and hole 89-6 returned 217 ft. grading 0.58% copper.

The continuing exploration program will concentrate on delineating the Virginia and Alabama for inclusion in the mine plan. The

92H SE

Result speculation reason for jump in Crown Butte issue

Crown Butte Resources (VSE) says it isn't aware of any reason, other than market anticipation of drill results at its Montana project, why the price of its shares increased by $2.25 recently on heavy trading.

On July 18, the issue climbed to $11.50 after 42,850 shares had changed hands in morning trading.

Crown Butte currently has five drill rigs running on its New World gold-silver-copper prospect in Montana where Noranda (TSE) can earn a 25% interest by funding the project to the feasibility stage.

With reserves standing at 4.64 million tons of grade 0.17 oz. gold (uncut), 0.72 oz. silver per ton and 0.81% copper, a budget of $5.9 million has been set for this year's development program.

"Visual examination of some of the initial holes in the Miller Creek zone has identified good mineralization, but in keeping with past policy only complete assay results will be announced," said President David Rovig.

Complete information on the first set of Miller Creek deposit drill holes is expected to be available soon. Noranda holds a 23% equity interest in Crown Butte.

Durvada looking for reserves

VANCOUVER — With almost no reserve base, Durvada Resources (ASE) has been carrying out an ongoing exploration program as it moves previously stockpiled ore to a leach pad at its small gold mining operation near Sandy Valley, Nev.

That program is now beginning to show results in that Durvada recently encountered gold mineralization during a sampling program in the Condor area.

The sampling program was conducted over a 1,500 ft. long baseline at 50 ft. intervals. Values over a 500-ft. width for the length of the baseline returned an average grade of 0.05 oz. gold per ton and varied from 0.015 oz. to 0.13 oz.

The company plans further sampling to extend the surface grid as well as a trenching program. Durvada expects to follow up the sampling and trenching.

Indigo buys claims at Kitsault, B.C.

103P

Indigo Gold Mines (ASE) has purchased an 8-claim property and two crown grants, covering about 6,130 acres, in the Kitsault Lake area of northwestern British Columbia.

The property is being acquired from International Controlled Investments, formerly Lodestar Mines, for $25,000 in past staking costs and 100,000 shares of Indigo. The property will remain subject to a 2% net smelter royalty with a $1-million buyout at the option of Indigo.

Exploration activity has recently been stepped up in the area as another company — Dolly Varden Minerals — has commenced a major drilling program within one kilometre of the Indigo property boundary. Initial exploration will begin as soon as regulatory approval has been given to the Indigo property purchase deal.

Program begins on SIB claims

104B

VANCOUVER — The first phase of the 1990 exploration program on the SIB claim group in the Eskay Creek area, 50 miles northwest of Stewart, B.C., is under way. The project is a 50/50 joint venture between Silver Butte Resources (VSE) and American Fibre (VSE).

The partners plan to complete a geological mapping and geochemical soil sampling program initiated

Drill results enhance Similco mine potential

VANCOUVER — The second phase of this year's drilling program on the area north of the Similco open pit mine, owned by Princeton Mining (TSE), continues to yield encouraging results for the company. The Similco copper mine is near Princeton, B.C.

The drilling is part of a $1.5-million program to delineate reserves in the Virginia and Alabama zones as well as in the area joining the two zones.

Results from the initial 20 diamond drill holes on the Virginia zone indicate that the area could add substantially to reserve tonnage and grade.

Drilling on the northeast corner of the Virginia zone intersected 228 ft. grading 0.44% copper from 107-335 ft. with an additional intersection from 400-706 ft. grading 0.59% copper. The intersect included a 56-ft. zone of massive magnetite-chalcopyrite-pyrite mineralization grading 2.21% copper, 0.031 oz. gold and 0.14 oz. silver per ton. The company notes that these intersections greatly increase the potential reserves in the northeast corner of the deposit.

Drilling is continuing toward the open, western end of the deposit, and in the zone connecting the Virginia and Alabama deposits.

ER — Impressive as- ... been reported by (TSE) and Delaware (VSE) from under- ...oration and develop- ... Twin zone at their ...t northwest of Stewart,

...ples collected along 213 ...round drifting returned ...tic average (uncut) of ...l over an average true ...f 7.2 ft.

...t venture emphasizes ...omplete zone was not by the drift and it's prob- wider. Visual inspection shows the mineralization extends into the drift walls.

The Twin zone often hosts several mineralized structures, separated by low grade to barren wall rock. This multiple parallel veining has been partially exposed in a short crosscut where raise development is under way into the upper levels of the zone.

The main crosscut exposed a second zone of strong mineralization in the footwall of the Twin zone with an approximate true thickness of 6.6 ft. Detailed diamond drilling of the footwall and hangingwall zones is currently in progress.

Drifting to the east and west ... the Twin zone by June 7 totalled approximately 330 ft. The west drift has been halted to allow raise development and the east drift is continuing through a zone of complex faulting. The east drift located the actual pierce point of hole S-84 which returned 2.4 oz gold over a true thickness of 27.2 ft.

Underground drilling beneath the Twin zone and of related parallel structures below the adit level is continuing from drill stations in the hangingwall drive. This mine working may be extended to allow drilling along strike and further down dip.

Menora placer ...

A letter of intent to option two placer gold properties (the Squaw Creek and O'Donnell) from Menora Resources (ME) has been signed by COATS-listed Black Cliff Mines.

The Squaw Creek property consists of three placer claims in the Yukon and three claims in the Atlin mining district of British Columbia. The O'Donnell property comprises 22 claims and is located 15 miles north of Atlin, B.C.

Black Cliff may earn a 50% interest in the properties by spending $310,000 on exploration work over three years. The agreement is subject to regulatory approval.

92H June 13, 1988
N MINER

...min Corp. ...rts loss

...OUVER — Abermin Corp. ...ported a $355,000 net loss ...quarter ended March 31 ...d to a $202,000 loss a year ...Working capital (cash and ...rm deposits) totalled $1.5 ...at the end of the period. ...ompany is waiting for a re- ...m Strathcona Mineral Ser- ...lating to operational diffi- ...at the Granges/Abermin ...Lake mine in Manitoba. ...ill has resumed production ...mechanical breakdown and ...eviously announced bulk ...ing program from the 260-m ...s in progress. If Strathcona's ...assessment is correct the ...could be run at a significantly ...ed scale and other targets ex- ...d for additional reserves.

...derground development ...d in April at Abermin's Lara ...rty on Vancouver Island. The ...am is expected to take about ...nonths and will provide a bulk ...le for metallurgical test work ...the preparation of a pre- ...bility study by early 1989.

Cassiar negoitating to buy copper mine from Newmont Mines

VANCOUVER — At press time The Northern Miner learned that Cassiar Mining (TSE) was negotiating the purchase of Newmont Mines' Similkameen Copper operation near Princeton, B.C. The move by Cassiar appears to be an attempt to diversify out of asbestos which it mines in the northern part of the province. Newmont has been selling assets to reduce its massive debt.

92HSE 007

1048

Meridor explores Iskut property

First phase of a $500,000 exploration program was started recently by Meridor Resources (VSE) at the Iskut property in the Stewart gold camp in northern British Columbia.

The program consists of ground work and 5,000 ft of drilling. Meridor, a Hughes-Lang company, says that if results from the first phase are favorable, a 10,000-ft drilling program will follow. A soil sampling survey was undertaken on the property in 1987.

Meridor reports the area is swarming with exploration and development activity. Delaware's Snip property claims are staked in a block around Meridor's claims, the company says, and Skyline's Reg property is located about four km to the south.

Continental Gold to drill shear zones at Trophy bet

Crews have been mobilized and drilling is expected to begin in July at Continental Gold Corp.'s (VSE) Trophy property in northwestern B.C. The $2-million exploration program will follow up a successful prospecting program which outlined three gold-silver bearing shear zones with a combined strike length of 20 miles on the claims.

The 60-sq-mile property is located 90 miles southwest of Dease Lake and 12 miles north of the Iskut River area where Delaware Resources and Skyline Explorations are building two gold mines.

Geology on the Continental ground is similar to that occurring in the Iskut camp, Robert Dickinson, managing director of Continental, explained to The Northern Miner. Gold occurs as fracture fillings and disseminations in shear zones proximal to and within syenitic intrusives.

Mapping and sampling of the three zones on the property returned gold values ranging up to 0.94 oz gold per ton across 3.3 ft in the Ptarmigan north extension zone. A continuous 185-ft chip sample across the Ptarmigan A zone assayed 0.07 oz. Included in the zone were several narrower sections of higher grading material. These include 26.1 ft assaying 0.16 oz gold and 14 oz silver. Another 6.5-ft section assayed 0.37 oz gold and 14.68 oz silver.

Based on the width of some of the structures and their length, Dickinson expects the company to receive strong results from the drill program. Homestake Mining Co. is also bullish on the project. The big U.S. gold miner has completed a private placement with Continental, purchasing 500,000 units for $1.5 million. Each $3 unit consists of one common share and a warrant giving Homestake the right to purchase another share at $4.50 until Sept 30.

Homestake's association with Dickinson and Continental President Robert Hunter is not new. Earlier this year, Homestake acquired control of North American Metals from Hunter and Dickinson, who founded the company and remain on North American's board. The latter company is building a gold mine near Dease Lake, B.C., with Chevron.

George Cross News Letter JUL 13 1988

NO.117(1988)
JUNE 17, 1988

092HSE001 92H

WESTERN HARVEST SEAFARMS LTD.(WHS-V)

ITEMAN CREEK GOLD BELT- Western Harvest Seafarms Ltd. has agreed to purchase the ithern 12 units of the 20 unit Why mineral claim rering 740 acres from J. Allan Hilton of Kamloops, B.C. property adjoins to the east the Huntington ources' Brett claims, in the Vernon Mining ision.(SEE PROPERTY LOCATION MAP OVERLEAF P.1, GCNL 115,JUNE 15,1988) ATLANTA GOLD CORPORATION(AAG-V) acquired an option to earn a 50% interest in these ims by spending a minimum of $300,000 on loration. The Why claims were previously under ion to GLITTER GOLD MINES LTD.(GGM-V) which dropped option.

J.D. Blanchflower, geologist, reported the Why ims cover geology and rock formations similar to those which the Brett gold discovery was made. A soil ple from the Why claims assayed 250 parts per billion d.

CLD Financial Opportunities Limited has agreed to chase 150,000 units at 50¢ each of Western Harvest farms, each unit consists of 1 share and one-half rant. One whole warrant can be exercised to purchase hare at 55¢ for one year. The net proceeds of the cement will be applied to the purchase price of the property. All subject to regulatory approval.

FLECK RESOURCES LTD.(FLK-V)

D PROPERTY OPTIONED- John P. McGoran, chairman, reports that Fleck Resources . has reached an option agreement with CONSOLIDATED VER STANDARD MINES LIMITED(CDS-V), whereby Fleck can uire a 65% interest in the Smith claim, 15 km theast of Kemano, B.C. by spending $750,000 over 3 rs and making option payments of $50,000 over 2 years. vious channel sampling indicates an exposed zone 290 t long with an average grade of 0.92 oz.gold/t over average width of 7.2 feet. Work planned for this r will include the construction of a 3/4 mile access d, channel sampling, diamond drilling, stripping and tal preparation.

IFIELD RESOURCES LTD.(ETF-V) and CANARC RESOURCE P.(CCM-V) have staked a 44 unit claim block, the 1 1, 2 and 3 claims near Vernon, B.C. The claims are miles south of the White Elephant/Zion crown grants 8 miles SE of the Brett claims of Huntington/Lacana.

CASSIAR MINING CORPORATION(CSQ-T)

SIMILKAMEEN COPPER MINE PURCHASED- Cassiar Mining Corp. has agreed to pay Newmont Mines Limited $10,000,000 from a portion of future cash flow for a 100% interest in the Similkameen open pit copper mine and mill at Princeton, B.C. Annual production from the mine is 56,000,000 pounds copper, 15,000 oz.gold and 400,000 oz.silver. Annual sales at current metal prices are in excess of $60,000,000. The mine has proven ore reserves of 35,000,000 tons grading 0.46% copper, which is sufficient to sustain 7 years of operation and additional possible reserves of 60,000,000 tons. The operation currently employs 330 people. Tony Kana, vice-president finance of Cassiar stated that at current metal prices this acquisition is expected to be repaid rapidly and have a significant impact on earnings.

Cassiar Mining currently operates an open pit asbestos mine at Cassiar, B.C. with annual sales in excess of $55,000,000, and 313 employees.

The Hon.Claude Richmond, Minister of State for the Thompson-Okanagan, and Hon. Jack Davis, Minister of Energy, Mines assisted with the transaction.

093L

HOUSTON METALS CORPORATION(HML-V)

HOLE NO.	WIDTH	OZ.GOLD/T	OZ.SILVER/T	ZINC %
No.1	33 inches	0.10	24.50	0.42%
No.2	26	.155	22.75	13.80
No.3	30	.17	13.90	1.52
No.4	5	.17	22.60	12.00
No.5	17	.38	21.80	0.78
No.6	36	.52	8.98	3.72
No.7	24	.31	36.17	11.50

SILVER QUEEN ASSAYS REPORTED- The first series of new holes in the No.3 vein above the 2,600 foot level have confirmed significant gold and silver values in the vein. Drilling is continuing to test precious metal values in the extensions of the vein to the north and to depth. The Houston Metals' property is locate 30 miles south of Houston, B.C. Previous operators ignored precious metals and did not assay for gold. The intersections, including No.1-7 on the 1000 foot longitudinal section, returned the values shown in the table above.

Ores indicated in the recent holes can be readily and cheaply mined from the existing 2880' mine level.

Currently drill stations are being slashed on the 2,600 foot level for drilling below this level and to test for ore extension to the north of the 1981 diamond drill program. This drill program will start shortly.

The decline now being driven from 2,590 foot level will intersect the No.3 vein at the 2400 foot level soon. A second level will be established at the 2200 foot level.(SEE MAP OVERLEAF AND A REVIEW OF THE METALLURGICAL PROGRESS IN GCNL NO.113, JUNE 13,1988)

George Cross News Letter

NO.139(1988)
JULY 20, 1988

AIRCHILD RESOURCES INC.(FLD-V) reported that results rom tests on the company's placer properties in orthern Nevada and southern B.C. warrant further exploration. At Gold Bridge, B.C., work on Fairchild's Bridge iver placer claims located sufficient gold in gravels ithin 12 feet of surface to justify continued exploration. The next phase, to include a pilot plant, will est deeper levels of the property and provide information regarding feasibility. On the Tenabo placer claims ear Crescent Valley, Nevada, preliminary exploration ested samples from a broad representation of the claims o depths of up to 20 feet. Several areas have been dentified as targets for a pilot production program. udgets and recommendations for the next phases on both rojects are now in progress.

92H 092H SE 001

CASSIAR MINING CORPORATION (CSQ-T)

IX MONTHS ENDED 30 JUNE	1988	1987 *
evenues	$36,512,000	$28,813,000
et Earnings	5,327,000	2,125,000
Per Share	26¢	11¢ *

* Restated

CQUISITION INCREASES EARNINGS- Cassiar Mining Corporation reported net earnings or the second quarter were $4,038,000 or 20¢ per share ully diluted. The increase in earnings and revenue in he second quarter reflects the June 1,1988 acquisition f Similco Mines Ltd., a large open pit copper mine at rinceton, B.C., which contributed $2,281,000 to net arnings and $6,799,000 to revenue. A total of 3,265,000 was applied to debt service in the second uarter. Long term debt is now $22,059,000.

093L

CANADIAN-UNITED MINERALS, INC. (CUN-V)
TEESHIN RESOURCES LTD. (TEE-V)
TOTAL ERICKSON RESOURCES LTD. (TLE-V,T)

SECTION	HOLE	WIDTH	OZ.GOLD/T	OZ.SILVER/T
1930	1370 UG-3	4.59 feet	1.334	5.56
1940	1370 UG-5	9.55	1.289	6.09
1930	1370 UG-6	4.89	.882	4.59
1950	1370 UG-7	4.49	1.37	8.53
	and	7.61	.986	5.14
1970	1370 UG-8	4.46	.671	7.36

DOME MT. UNDERGROUND DRILLING RESULTS- Canadian-United Minerals, Inc. reports underground drilling results from the 1370 level drift at the Dome Mountain project, 25 miles east of Smithers, B.C. The gold and silver values in the table were obtained over a 130 foot length of the Boulder Creek zone in the Summer 1987 exploration program (See GCNL No.115, p.2, 15Jun88 for previous results from this program). This data has been incorporated into the final feasibility study, which is being reviewed by all the Dome Mountain participants this week.

QUARTZ MOUNTAIN GOLD CORP. (QZM-V,T;QZMGF-Nasdaq)

PROGRESS REPORTED- Quartz Mountain Gold Corp. reports a metallurgical test program is in progress and seven large diameter diamond drill holes have been completed, providing bulk samples for column leach and flotation test. Engineering work is underway as part of the definitive feasibility studies being done on the Crone Hill and Quartz Butte deposits.

Davy McKee Corporation is conducting the two part study. The first part addresses a heap leach mine for the more than one-third of the reserves that are oxidized, and the second examines the viability of a milling process to exploit the remaining sulfide reserves or the entire resource.

Exploration work has begun on the eastern half of the 10,000 acre property. A program of geochemical and geophysical surveys has been carried out over the last month to define drill targets. Road construction is expected to begin next week when permits are in place and drilling will start soon after. Frank J. Mancuso is now in charge of the Quartz Mountain project.

Is this in B.C.?
82F NE 055?
Eleanor Property File.

George Cross

NO.45(1990)
MARCH 5, 1990

Reliable K

WESTERN CANADIA

MINFILE

The Similco copper mine at Princeton, B.C. produced 57,400,000 pounds of copper, 17,277 ounces of gold and 432,220 ounce sof silver in 1989. Copper production was 4% below forecast, due in part to the lower tonnage treated in early 1989 as a result of major repairs on two of three primary grinding mills.

Lower fourth quarter earnings reflected weaker copper prices and lower than anticipated metals output at the Similco mine. Copper production was affected by lower metallurgical recoveries resulting from the mining of oxide ore in the No. 1 pit. Recoveries are expected to improve as mining progresses below the oxide zone.

Princeton's annual general meeting will be held at 10:30 a.m. 24Apr90 in the Harbourside Ballroom, New World Harbourside, 1113 West hastings St., Vancouver, B.C. (SEE GCNL No. 18, 25Jan90, P.1 FOR SIMILCO REVIEW)

26,036,640 kg Cu
489,803 g Au
12,253,437 g Ag

92HSE ~~B~~001

George Cross
Reliable K

NO.230(1989)
NOVEMBER 30, 1989

WESTERN CANADIA

SIMILCO COPPER OPERATION - Cassiar bought the Similco copper mine and concentrator in June 1988 for approximately $18,000,000, virtually all of which has been paid. The mine and plant had an operating capacity of 19,000 tonnes per day when purchased and currently is operating at 25,000 tonnes per day. Among the new equipment purchased to provide the higher mining rate are: an 11 cu.yd. electric shovels; a 12.5 cu.yd. front end loader, bulldozers, graders, plus 4 trucks of 120 ton capacity and 3 trucks with 150 ton capacity.

Ore reserves are estimated at 64,000,000 tons grading 0.55% copper equivalent available to a 1:1 stripping ratio. In addition there are 112,000,000 tons at the same 0.55% copper equivalent grade in the No.2 and No.3 pits at a higher stripping ratio. As well there are a number of geophysical targets currently being drill tested with large tonnage potentials. Total drilled mineral reserves are 170,000,000 tons with a cutoff grade of 0.2% copper which are presently being evaluated to design a 10 year mine life. There are large tonnages of copper mineralization which could be ore depending upon the price of copper at the time of mining. What the current drilling is seeking is slightly higher copper grades in low strip ratio area which will add to mineable tonnages at current or lower copper prices.

Mr.O'Rourke said that because the mine had been scheduled to shut down in 1990, maintenance of equipment and mill facilities had been reduced over the past few years. Consequently, catch up-work in both the concentrator and mine have been underway for over a year. The bull gears on the three 32 foot semi-autogenous mills have been changed, two in 1989 and one in 1986. A ring gear requires a foreward order of 12 to 18 months to replace and one is normally carried in inventory. There are further mill modifications under design and engineering which could provide an additional 10% to 15% increase in daily plant throughput and may improve on current recoveries which average 78% to 80% of the copper. The timing of these capital expenditures on the plant will be conditioned by the near and longer term out look for the price of copper.

One of the company's profit centers which gets overlooked is the deep sea dock, bulk loading and fuel tank farm facilities at Stewart, B.C. and the

1
92HSE ~~13~~

George Cross
Reliable
WESTERN CANADI/

NO.81(1990)
APRIL 26, 1990

PRINCETON MINING CORPORATION (PMC-T)

THREE MONTHS ENDED MARCH 31,	1990	1989
REVENUE	$28,600,000	$33,200,000
NET EARNINGS	2,300,000	7,300,000
EARNINGS PER SHARE BASIC	10¢	40¢
EARNINGS PER SHARE DILUTED	10¢	31¢

James C. O'Rourke, president, told the annual meeting of Princeton Mining earnings for the quarter ending March 31, 1990 were slightly higher than the $1,900,000 for the previous quarter. Earnings for the quarter were below those for the comparable period last year because of increased costs associated with the accelerated waste mining plan and lower production resulting from treating Pit 1 ore at the Similco copper mine at Princeton, B.C. The upgrading of the mine trucks from 100 tons to 120 and 150-ton trucks has reduced unit mining costs from 80¢ to 67¢ per ton. The stripping ratio in the last quarter of 1989 was 2:1 and is now forecast to be 0.8 to 1 for the next five years in the No.3 pit. The ore from the No.1 pit has been fine grained and harder than other mine ores. The recent increase in production from the No.1 pit has provided poor copper recoveries. To improve recoveries No.1 pit production has been adjusted to about 50% of throughput. These factors continued to impact on operations during the first two months of 1990. A significant reduction in waste removal is planned at Similco later in 1990. The $2,000,000 in flow-through funds received for 300,000 shares at $6.50 from CMD are to be used to explore the No.2 pit area and the Virgina and other deposits in the Lost Horse Canyon area. The 1989 diamond drilling program has added geological reserves of 10,000,000 tons grading 0.327% copper. Total mineral inventory at the mine at Jan. 1, 1989, was calculated at 170,500,000 tons grading 0.41% copper.

The Similco milling operation is being upgraded to improve recoveries and sustain copper output at 60,000,000 pounds per year. The operational performance of the plant improved considerably in March. The company has sold forward 59% of the 1990 copper production at a price of $1.10 U.S. per pound.

92HSE VB 1

MAGNETITE IN ALKALINE CU, AU PORPHYRIES: MAGMATIC OR HYDROTHERMAL?

Kenneth M. Dawson
Mineral Resources Division, Geological Survey of Canada
100 West Pender Street, Vancouver, B.C. V6B 1R8

The high magnetite content of British Columbia alkaline porphyry Cu,Au deposits, in addition to being a metallotect of significance in geophysical exploration, may reflect a deep, probable upper mantle source of host alkaline magmas.

Alkaline magmatism was essentially synchronous with amalgamation of the large island arc terranes of Quesnellia and Stikinia with oceanic Cache Creek and Slide Mountain terranes to form Intermontane Superterrane in the Early to Middle Jurassic. Whereas no clear consensus exists on the petrogenesis of these enigmatic plutonic suites, modern tectonic analogues in the southwestern Pacific indicate collisional oversteepening of subduction that accompanies an abrupt transition from calc-alkaline to alkaline, shoshonitic (high K) magmatism signifies the rapid ascent of magma with minimal underplating, assimilation or differentiation. Alternatively, the generation, ascent and high-level emplacement of alkaline magmas may have been due to decompression melting of the upper mantle as a result of deep faulting related to either rapid orthogonal or oblique subduction, coupled with transcurrent displacement and transtensional faulting during superterrane amalgamation. In either case, plutonic control by profound int~~er~~raterrane faults is implied.

Magnetite-rich parts of Copper Mountain, Afton and Mount Polley orebodies demonstrate textures of magmatic origin, ~~similar to classic~~ examples at Kirunavaara, Sweden and El Laco, Chile. Other common magnetite morphologies include primary disseminations in the igneous hostrocks, endo- and exoskarns and hydrothermal veins with or without sulphides. The elevated PGE-content of sulphide ore supports a mantle source similar to that of coeval and possibly cogenetic PGE-rich zoned Alaskan-type intrusions in eastern Quesnellia, i.e. Tulameen complex, Polaris suite.

Magmatic volatiles rich in CO_2 and PO_4 assisted in the segregation of an immiscible magnetite-rich fluid from the viscous felsic melt, its ascent and emplacement as pipes, dykes and breccias early in the mineralization sequence. Magmatic Na+, K+ and Cl- metasomatism accompanied emplacement of magnetite-sulphide skarns. Hydrothermal vein magnetite-sulphide-Au assemblages and accompanying argillic-propylitic alteration result from the interaction of meteoric waters with Cl-rich magmatic fluids.

Reference: Cordilleran Geology and Exploration Roundup 1991; Program and Abstracts of ~~GSC Open File No.~~ ______
Volume.

92ASE1

092HSE 001

NO.30(1992)
FEBRUARY 12, 1992

George Cross News Letter
"Reliable Reporting"

WESTERN ...

PRINCETON MINING CORP. (PMC-T)

CASSIAR MINING RECEIVER APPOINTED - Princeton Mining has reported the appointment of a receiver, for its wholly owned subsidiary Cassiar Mining Corporation, will not affect its other business activities. The receiver stopped the mining operation at Cassiar on 5FEB92, and the province of B.C. decided not to delay the closure.

Princeton's copper mine, Similco, at Princeton, B.C. has continued with normal operations since 15Oct91, following the settlement of the strike by its unionized employees. Copper production is in the 5,000,000 pound per month range where it is scheduled to remain for the balance of 1992.

Teranov Mining Corporation expects to resume operations of its wet mill at Baie Verte, Newfoundland in April. The planned installation of additional equipment prior to start-up will increase production capacity and product quality. Upgrading of the plant is planned to achieve a production rate of 2,500 tonnes of fibre per month.

John York treasurer has assumed the duties of chief financial officer following the resignation of A.T. Kana.

92HSE 1

George Cross

Reliable K

NO.118(1990)
JUNE 19, 1990

WESTERN CANADA

PRINCETON MINING CORP. (PMC-T)

ORE RESERVES INCREASED BY 12% IN CURRENT PROGRAM - David K. Duval, manager, corporate relations, reports encouraging diamond drill results have been received from the first phase of an exploration program on the 100%-owned Similco open pit copper mine Princeton, B.C. SEE RESULTS AND MAP OVERLEAF PAGE 1. Since April, 25,000 feet of drilling has been completed on a large IP anomaly located adjacent to the current mining. The work is being funded by a $2,000,000 flow-through equity issue to CMP Funds Management. About $500,000 has been spent to date.

The results indicate a link between the Alabama and Virginia zones, which could result in a new low strip ratio open pit reserve exceeding 20,000,000 tons. Mine reserves at Jan.1,1990, were estimated at 170,500,000 tons grading 0.41% copper available to a 2.07 waste to one stripping ratio. Copper assays in the Virginia and Alabama zones average 0.32% copper with elevated precious metal values up to three times the present mine average. The mine produced 17,277 oz. of gold and 432,220 oz. of silver in 1989.

Drilling in the Oriole pits defined a vertically dipping linear sulphide zone SE of Pit 3 grading 0.5% copper. Average thickness of the portions drilled is 150 feet with a 600 foot strike length, open to depth.

Some 3,000 feet SE of the Oriole pits, drill hole 0-90-1 cut 130 feet of 0.7% copper. Two 1989 holes on the same section returned 53 feet grading 0.97% copper in hole 0-89-3 and 217 feet of 0.58% copper in hole 0-89-6. Other IP drill targets are about 4,000 ft. east of Pit 2 and will be tested. Definition drilling is planned for the Alabama and Virginia zones. The current program is designed to upgrade reserves for mining. (SEE GCNL No.81, 26Apr90, FOR MINE REVIEW)

92HSE XB 1

p. 1 of 2

George Cross — Reliable K

NO.45(1990)
MARCH 5, 1990

WESTERN CANADIA

The Similco copper mine at Princeton, B.C. produced 57,400,000 pounds of copper, 17,277 ounces of gold and 432,220 ounce sof silver in 1989. Copper production was 4% below forecast, due in part to the lower tonnage treated in early 1989 as a result of major repairs on two of three primary grinding mills.

Lower fourth quarter earnings reflected weaker copper prices and lower than anticipated metals output at the Similco mine. Copper production was affected by lower metallurgical recoveries resulting from the mining of oxide ore in the No. 1 pit. Recoveries are expected to improve as mining progresses below the oxide zone.

Princeton's annual general meeting will be held at 10:30 a.m. 24Apr90 in the Harbourside Ballroom, New World Harbourside, 1113 West hastings St., Vancouver, B.C. (SEE GCNL No. 18, 25Jan90, P.1 FOR SIMILCO REVIEW)

92HSE ~~13~~ 1