

1989 "SNAPSHOT" REVIEW FORM

013825

Property/Project

Name : Mount Polley
 NTS : 93 A/12
 Claims : BJ, Polley, CB1-20
 106 claims (261 units)
 Acreage :
 Commodities: Cu, Au

Authors

Mr. R. PESALJ
Mr. Z.T. NIKIC

Agreements

The project is a joint venture between Imperial Metals Corporation Group (62%) and Corona Corporation (38%). Noramco Mining Corporation has a 22% NPI under an agreement with E&B Inc.

History

Past Exploration

<u>Techniques</u>	<u>By Whom</u>	<u>Amount</u>	<u>Type</u>	<u>Cost</u>
1964-1980	Cariboo Bell Copper M. Highland Crow Res. Teck Corporation	226 holes (91,079 ft)	prospecting, trenching geophysics, drilling	
1980-1988	E&B Inc., Imperial Metals	163 holes (64,075 ft)	geochemistry, mapping geophysics, drilling	\$ 2.5 m

Geology

Regional The deposit occurs in a multiple syenite laccolith emplaced in the upper part of a thick sequence of Upper Triassic trachybasalts and volcanoclastic strata of the Quesnel Trough. A K/Ar age of 184± 7 m.y. supports field evidence that the intrusive is a subvolcanic complex coeval with volcanics.

Local Porphyry type copper-gold mineralization is concentrated in two adjoining intrusive breccias near the top of the laccolith. The breccias are interpreted as a pipe and its sill-like offshoot. Magnetite and chalcopryrite occur as disseminations and veinlets and in cavities in the breccia. A pyrite "halo" is located east of, or above, the breccias.

Alteration/Ore Forming Minerals Hypogene minerals in the ore zones consist of magnetite (4-8%), chalcopryrite (1-3%), minor pyrite and traces of bornite. Supergene minerals include malachite, chrysocolla, native copper, cuprite, chalcocite, digenite and covellite.

Pervasive potash feldspar-biotite-diopside alteration in the breccias is surrounded by garnet-epidote and epidote alteration zones.

Current Exploration Results

1986 - 1988

i) Geology:

The Mount Polley intrusive complex is a tilted laccolith roughly 6 km long and 2-3 km thick at the centre. It consists of six lithologically distinct phases, five comprising one or more stacked lenses concordant with the northeast dipping host strata and the sixth an intrusive breccia. Two out of the three main breccia bodies host economic porphyry copper-gold mineralization. Supergene minerals account for about 25% of the copper contained. Oxidation of sulphides, produced no significant leaching or secondary enrichment of copper.

ii) Geochemistry:

Soil surveys indicate good correlation of Cu and Au with peak values of 3,800 ppm and 500 ppb respectively. Values of 200 ppm Cu and 50 ppb Au are considered anomalous. The two mineralized zones are centrally located within a Cu anomaly extending over 5 km.

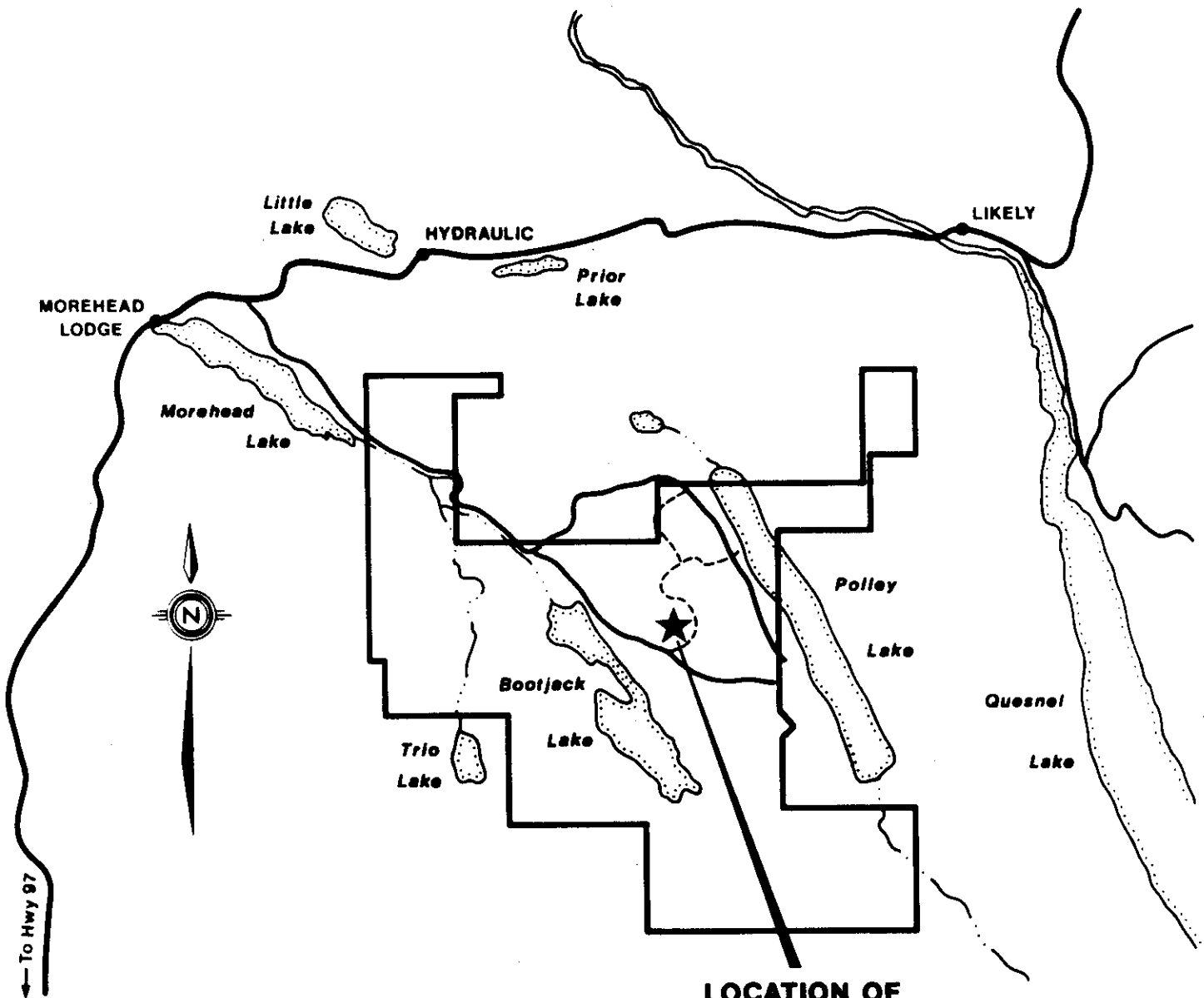
iii) Geophysics:

An aeromagnetic survey and prospecting in 1964 led to discovery of copper minerals at Mount Polley. Subsequent ground surveys revealed close correspondence between magnetic and induced polarization anomalies and copper mineralization.

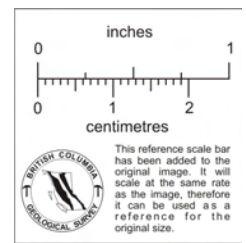
iv) Sampling:

Approximately 21,000 feet of trenching along 400 ft. spaced lines has been completed over geophysical anomalies on the property in the earlier days of exploration. In 1988 trenching was done over the southern part of the Central Zone in order to sample mineralization in bedrock.

Reserves:	Geological, possible, probable and/or proven	
	Number of zones	Two
	Number of sample points	250
	Average grade	
	Average thickness	
	Cut-off grade	
Costs :	Recent exploration costs, i.e. (relating to above)	\$2.5 million
	Projected exploration costs of program to development (if any)	\$1.5 million
	Projected development costs given positive economics	\$135 million
	Projected operating costs given positive economics	

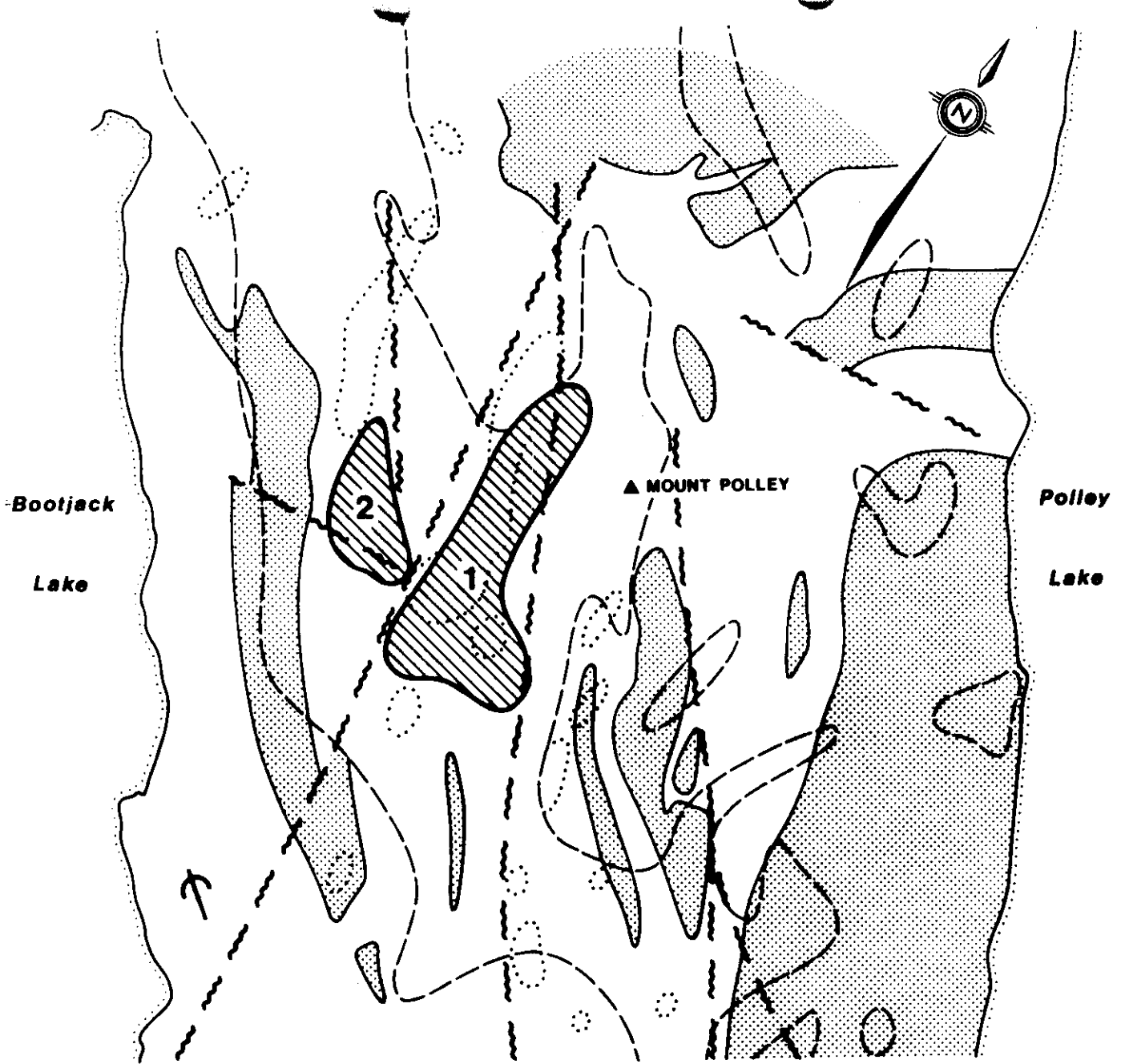


**LOCATION OF
COPPER - GOLD DEPOSIT**





**IMPERIAL METALS CORPORATION
CORONA CORPORATION
MOUNT POLLEY PROJECT
CARIBOO MINING DIVISION, B.C.**





LEGEND

MOUNT POLLEY LACCOLITH

-  Monzonite Porphyry, Syenodiorite
Pyroxenite, Gabbro, Intrusion
-  Breccia, Augite Porphyry Dykes

UPPER TRIASSIC

-  Green Lapilli and Crystal Tuff

-  Mineralized Zone (> 0.30 % Cu,
> 0.012 oz Au/t)

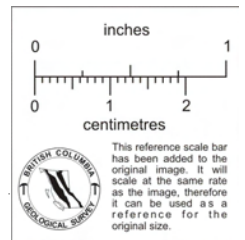
- 1** Central Zone
- 2** West Zone

-  Cu Soil Anomaly (> 200 ppm)

-  Magnetic High

-  Glacial Trend

-  Fault



MOUNT POLLEY - COMPILATION MAP

CARIBOO - BELL PROPERTY, QUESNEL AREA

REPORT OF FIELD EXAMINATION

NTS: 93A - 12, 13

This follows recommendations made in a previous report dated May 22, 1969 by R. A. Dujardin.

The field examination was carried out on the Cariboo - Bell property during the days July 8 - 10 inclusive. The examination was made by W. G. Robinson, W. Rainboth and the writer. Conclusions reached are summarized as follows:

1. The attitude of the ore bodies is probably very steep.
2. The ore bodies are situated within a zone of intense K-Spar alteration within a zone of syenitic rocks.
3. Careful relogging of the core and mapping of the trenches would almost certainly reveal a clearer picture of the ore zone than is presently known. In particular, attention should be paid to barren zones within the ore and the extent of the K-Spar alteration.
4. Although geological knowledge would be advanced by further studies, we decided that in all probability the grade and tonnage would not be changed as a result. The present drilling that Cariboo - Bell are carrying out is badly directed and if any new finds are made it will be as a result of good luck rather than good judgement.
5. We did decide, however, that there are at least four excellent exploration targets on the property. Three are geochemical anomalies in the NE, SE and NW corners of the property, respectively. (See geochemical map in the Cariboo - Bell file.) The fourth target is a definite magnetic anomaly in the SW corner of the property along the shore of Bootjack Lake which is important since the ore zones have definite magnetic correlation. All four targets were examined on the ground and were found to be unexplored to date and are areas of complete overburden cover except in the case of the geochemical anomaly in the NE corner of the property where one small outcrop upslope from the anomaly was found to be syenite containing traces of chalcopyrite. It was, therefore, decided that we should allow the present drilling to run its course and then approach Cariboo - Bell to see if a working option could be obtained over a short period to give us time to explore the targets noted above. We will not tell Cariboo - Bell of our plans prior to the signing of an agreement with them and have written to them merely expressing our interest in reviewing the situation at the conclusion of their drilling. If we make them aware of our interest in the targets at this time it will only serve to encourage them to explore them themselves.

PROPERTY FILE



R. A. Dujardin,
Chief Geologist.

BA008

RAD:bz

Vancouver, B.C.
16 July 1969.

PRELIMINARY REPORT

NTS: 93A-12,13

CARIBOO-BELL PROPERTY - QUESNEL LAKE AREA

Basic data on the Cariboo-Bell property is summarised in the accompanying report by Cariboo-Bell Copper Mines dated December, 1968. These notes summarise the writer's impressions to date gained through discussions with Messrs. John Springer, La Prairie and Kikuchi and a study of the cross-sections through the ore-body, copies of which are now on file. A detailed study of the drilling data was first intended and Mr. Kikuchi (consultant) was in mind to do this but after this preliminary examination of the data I have reached the conclusion that there are too many important questions to be answered before detailed calculations could lead to meaningful figures.

The key problems I have encountered so far are tabulated below:

1. Although the ore-body is in places capped by an oxide zone, averaging 50 feet in thickness, I have yet to see any profiles showing this zone in relation to the ore-values, etc., i.e., as far as I know the zone has not been carefully recorded in the geological logs. Apparently, the Japanese consortium previously financing the work on this property dropped the option on account of metallurgical difficulties encountered in metallurgical tests on the oxide material. I think this may have been a convenient excuse to publicize as there appear to be much more serious considerations. No company would be short-sighted enough to abandon a property through such a problem which diminishes in importance as the tonnage of total ore increases.
2. The pit outlines used by C-B in calculating the average grade and tonnage are highly theoretical and in a way meaningless! At the stage at which this property has reached it is premature to project pit boundaries too far from or between drill holes - this must await close drilling. The pit outline varies in depth from section to section in an impractical way.
3. The C-B method of calculating grade/tonnage is very much open to question. The method is one that I have encountered many times as it is one that gives the highest grade figures possible! A 0.3% copper cut-off grade

is first established - this is reasonable as it would equate to about \$2 in net smelter value and is a realistic break-even grade for this type of operation. In each drill hole, sections exceeding the 0.3% cut-off ore are then blocked out - the holes are all vertical and the blocks are horizontal extending halfway to the adjacent hole or for 150 feet where there is no adjacent hole. Sections as thin as 30 feet and grading less than 0.3% copper are classified as waste and blocked out in the same way as the ore. The pit is outlined and the waste and ore blocks summed separately to give a waste to ore ratio and an average ore-grade figure. It is thus assumed that all the waste blocks greater than 30 feet (? assumed bench height) can be sorted during mining either visually or by blast hole sampling. In many mines this can be done but the disposition of the ore lenses within the pit has to be known. In the present case, the ore sections cannot be correlated from hole to hole even at the relatively close spacing of 200 feet - as a matter of fact, the ore blocks are drawn as horizontal slices but I get the impression that the ore-lenses dip very steeply since the values cut off so suddenly horizontally - within 200 feet. At Bethlehem and Phoenix high waste rejection is practiced, of course, but the geological control and disposition of the ore lenses is known in detail. Maybe this will be possible at C-B but at the moment nothing is known about the shape, dip and other physical factors of the ore-lenses.

In view of the above criticism, I have re-averaged the drill hole intersections including this time all intra-ore waste as a dilutant to the ore. All supra-ore waste I have excluded. I have not drawn a pit outline for the reasons already expressed; the grades given are for only those holes intersecting ore so that the overall average is a conservative estimate of the grade of the ore-body in place, making no allowance for dilution and no calculation of the waste:ore ratios. The individual holes are tabulated in table "A", attached. Assuming that each hole has an equal area of influence, which is a fairly reasonable assumption, the average grades of Zones 2 and 3 weighted by the thickness of ore intersected are both 0.43% copper as compared with the C-B figures of 0.46% and 0.52% for Zones 2 and 3 respectively. There is a Zone 4

also, but I have not obtained data on this - it is just over 1 million tons but averages 0.66% copper. In view of its small size it is not important in this preliminary discussion.

The arithmetic average thickness of ore in the 16 holes of Zone 2 is 243 feet and for the 9 holes used in Zone 3 is 364 feet. This calculation again assumes equal area of influence for each hole.

Having defined the "ore-holes", I outlined the potential lateral extent of the two main Zones without any regard for practical pit limits. Zone 2 has a rough shape equivalent to 750,000 square feet which, with an average ore thickness of 243 feet equates to some 18.7 million tons (say, 19) - at 10 cubic feet per ton. Zone 3 has a potential extent of 825,000 square feet which, with a thickness of 364 equates to 29.7 million tons (say, 30). The dimensions of Zone 2 are in the order of 2,000 feet long by 400 feet wide; Zone 3 is about 1,000 feet long by 900 feet wide.

In summary, therefore, I predict that the potential tonnage grade of the two zones is:

ZONE 2	19 million tons averaging 0.43% copper
ZONE 3	30 million tons averaging 0.43% copper
TOTAL 2 + 3	49 million tons averaging 0.43% copper
	as compared with C-B's figures:
ZONE 2	15.5 million tons averaging 0.46% copper
ZONE 3	20.4 million tons averaging 0.52% copper
TOTAL 2 + 3	35.9 million tons averaging 0.49(5)% copper

Included in C-B's total are some 10 million tons of oxide ore averaging 0.46% copper but I have yet to see the basis for this and, of course, I have not separated oxide from sulphides in my calculations.

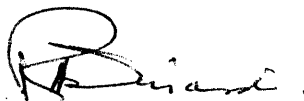
RECOMMENDATIONS:

The potential tonnage-grade of the two main zones is in the order of, say, 50 million tons averaging 0.43% copper. Before further studies are made, I believe we should carry out a careful examination of the property in the field, particularly with a view to determining the disposition of the mineralised zones - the drill core should be carefully studied and adequate time allowed for this. We must have at least an idea of the disposition of the ore lenses before considering the property seriously. The exploration possibilities must also be examined since, if the prediction

of tonnage-grade is supported by field evidence, then we obviously will require new discoveries:

- 0.43% copper @ 90% recovery = 7.74 lbs/ton
- 7.74 lbs @ say, 40 cents 1 lb. net smelter = \$3.10
- if operating costs are, say, \$2 ton the operating profit on 50 million tons is \$50 million which, is not enough to repay capital investment and yield a risk-rate return.

Some geochemical anomalies on the property remain to be tested and deeper drilling in cases may yield more ore but first things first - the character of the ore zones found to date must be determined. To this end I recommend that we contact John Springer (Vice-President) to see if we can put someone on the property to carefully review the core and other data - this could be done during their planned drilling programme which is to begin shortly.



R. A. Dujardin,
Chief Geologist.

Vancouver, British Columbia.

22 May 1969.

CARIBOO-BELL

Check on Grade-Reserves by R. A. Dujardin

TABLE "A"

<u>SECTION NO.</u>	<u>HOLE NO.</u>	<u>ZONE 2</u> <u>THICKNESS</u>	<u>% Cu</u>	<u>PRODUCT</u>
14400	S-12	250	.34	85.00
14200	S-104	340	.35	119.00
14000	S-10	330	.37	122.10
	S-11	350	.40	140.00
13800	S-107	220	.34	74.80
13600	S-8	150	.42	63.00
13400	S-106	260	.51	132.60
13200	S-6	180	.41	73.80
	S-5	280	.43	120.40
	S-4	260	.47	122.20
13000	S-110	250	.35	87.50
12800	S-28	110	.74	81.40
	S-3	230	.46	105.80
	S-2	370	.38	140.60
	S-1	70	.71	49.70
12550	S-105	<u>240</u>	.60	<u>144.00</u>
TOTALS		3,890		1,661.90
		<u>ZONE 3</u>		
14000	S-21	410	.62	254.20
13800	S-112	250	.41	102.50
13600	S-220	620	.32	198.40
	S-201	400	.36	144.00
	S-202	730	.34	248.20
	S-48	150	.85	127.50
13400	S-111	380	.52	197.60
13200	S-39	270	.46	124.20
	S-49	<u>70</u>	.31	<u>21.70</u>
TOTALS		3,280		1,418.30

536 HOWE
SUITE
VANCOUVER
MU

NO. 157
JULY 16, 1969



George Cross News Letter

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WESTERN CANADIAN INVESTMENTS

CARIBOO-BELL COPPER MINES LIMITED

ORE AREAS EXTENDED BY - New drilling on the Cariboo-Bell Copper Mines Limited property
CURRENT DRILLING PROGRAM 45 miles northeast of Williams Lake has revealed economic grade copper ore in areas where expected.

One 70-foot section-from 460 to 530 feet-of an angle hole in a previously-drilled area which had shown lesser grades, assayed at an average of 1.13% copper. Another 60-foot section in the same hole(from 600 to 660 feet) assayed at an average of 1.06% copper. These sections were in a 280-foot length from 390 to 670 feet)which averaged 0.75% for the full distance.

The 1,173-foot hole carried economic mineralization through almost its entire length and is considered significant in extending Zone 3, previously estimated to contain 17,300,000 tons.

"Although much work remains to be done, "said John Springer, executive vice-president, "indications are that we can expect to extend the orebody. In every instance, the drills have hit ore where expected, so our studies toward discovering the "attitude" of the orebody-vital to re-assessing and expanding it-are proving out."

The new development program laid out by C.O. "Cece" Coveney, P.Eng., consultant on the project, and Jules LaPrairie, Cariboo-Bell engineer, is designed to increase the known orebody of 37,000,000 tons. This involves running new holes both in the previously explored and unexplored areas, checking old holes and drilling some of these to greater depth.

An angle drill in Zone 3 hit ore immediately after going through the overburden, and the first 100 feet revealed ore assaying from 0.35 to 0.49% copper which grade is above economic grade; said Mr.Springer.

Crews are also probing an area north of Zone 2 which earlier had shown disappointing results. This area had previously been drilled only with shallow percussion holes. A 45-degree angle hole is going down 200 feet away from previous drilling. It is now at nearly 500 feet and showing good mineralization.

"As a result of our engineers' intensive studies of the property", said Mr. Springer, "we believe the "attitude" of the orebody has now been determined. The ore is being found where expected, even in completely new ground and I am confident we will be able to indicate significant tonnage."

Cariboo-Bell is controlled by Highland-Bell Limited.

Working with a fracture density analysis done by D.A.Chapman, P. Eng., Cariboo-Bell staff are studying previously unexplored areas of the large property. The drill sites are being plotted, which will help determine the full extent of the orebodies.

Indications now are that the orebodies may be much greater than the original estimate of 37,000,000 ton grading 0.50% copper, 0.015 oz. gold, 0.50 oz. silver.

AMERICAN URANIUM LIMITED

DIRECTOR CONTROL SHIFTS. - The property of prime current interest to American Uranium
CURRENT INTEREST IS ATLIN Limited is the 72-claim copper-silver prospect 12 miles S of
COPPER/SILVER PROSPECT King Salmon Lake in Atlin M.D. of B.C. It comprises the
Sutlahine property(Lin 1-8 and Ink 1-10 claims) optioned from
Montana Mines Ltd. plus 54 contiguous claims staked by American Uranium. Following extensive prospecting and geological mapping in the past month, a report by Cordilleran Engineering is expected in about three weeks. Assays of some grab and chip samples have indicated impressive values in copper and silver. It is likely that the report will recommend induced polarity and geochemical surveys and then drilling as warranted.

Consideration for the option on the Lin and Ink claims was \$6,000; work commitments of \$50,000 by 1Dec69 plus \$100,000 by 1Dec70 plus \$100,000 by 1Dec71 and 30% of a new company to be formed by 1Jan72. American Uranium would retain 70% interest in the property.

No work is currently planned on other properties .

At the annual meeting 14July69, shareholders approved the transfer within escrow of 139,500 shares to G.A.Armstrong, 139,500 to B.K.Baldwin, 10,000 to N.Frankel, 5,000 to D. Gallen and 2,000 to A.F.Newton. Of these 296,000 shares. 178,000 would be transferred by E.Sonnenberg, 81,000 by D.E.Arden, 35,000 by L.Ostensoe and 2,000 by E.A.Hartley. The information circular presented to the meeting states that consideration for the transfer from Messrs Sonnenberg, Arden, Ostensoe to Messrs. Armstrong, Baldwin, Frankel and Gallen is valuable services rendered to the company and assistance in future developments. The consideration received by Mr. Hartley from Mr. Newton was \$1.00.

Directors elected are: G.A.Armstrong(pres.), Nathan Frankel(sec. tres.), B.K.Baldwin, L.Vannier, and Leif Ostensoe. All are of Vancouver. Ostensoe held 130,500 shs. on 2July69, the others held none.

After spending \$40,846 on exploration and \$9,983 on administration in the year ended 31Mar69, working capital was \$3,148.

Title.....ANN. REPT.....

Author.....ASB.....

Date and Typist.....MAY 2-67 jm 1.....

Copper

(52° 121° N.W.) (~~93-11172~~)

Cariboo Bell ^{*Copper*}
(Cariboo-Bell Mines Limited)
(By A. Sutherland Brown.)

^{*Copper*}
Cariboo-Bell Mines Limited owns
the BJ 1 to 168 recorded claims

which lie along both sides of Bootjack Lake extending to Polley Lake on the east and to Trio Lake on the west. Bootjack Lake is 6 miles southwest of the village of Likely. The claims were located and explored by Mastodon-Highland Bell Mines Limited, 1200 West Pender Street, Vancouver 1, but, in January, 1966, a new company, Cariboo-Bell Copper Mines Limited was formed to continue exploration and development. Camp superintendent of the property is G. M. Newcombe, and geologist Dr. Toru Kikuchi. In October, 1966, an agreement regarding further development was signed with three Japanese companies, Mitsui Mining & Smelting Co. Ltd., Sumitomo Metal Mining Co. of Canada Ltd., and Nippon Mining Company, Limited. In the agreement development was to progress in two stages with preparation for production a third stage.

During 1964 and 1965 a large amount of geochemistry, geophysics, and bulldozer stripping was done on the property. This was followed *wireline drills and one Copes drill and, in addition detailed geological, geochemical, and ground* in 1966 by a large amount of drilling with two BX magnetometer surveys.

PROPERTY FILE

93A008-02

Title..... ANN. REPT.
Author..... A.
Date and Typist..... MAY 2-67 jm 2

Drilling started in February, 1966, and most holes were drilled to 400 feet. The percussion holes were drilled wet to an equivalent depth.

Total footage to the end of the first development stage in

March, 1967, was: Diamond drilling, 48,301 feet, 123 holes; percussion

drilling, 6,585 feet, 32 holes. At the time of the writer's visit in

June only some 13,000 feet had been drilled. The following account

depends largely on information gathered by the writer at that time but is

augmented by company information of more recent date.

Geology

The property is in a strip between Horsefly and the Quesnel

River at Moorehead Creek in which outcrop, although scarce, is almost

entirely Lower Jurassic purple and green andesite tuffs, breccias, and

flows. In the vicinity of the property, at Mount Polley and Bootjack

Mountain these volcanic rocks are intruded by a sequence of fine,

quartz-free granitoid rocks and porphyries ranging from syenodiorite to

syenite. Outcrop is fairly common on hill tops and steeper slopes but is

rare elsewhere--hence the overall outline of the intrusions is not well

known. Two centres that are not entirely separate are apparent, one on

Title.....ANN. REPT.
Author.....ASB
Date and Typist.....MAY 2-67 jm 3

Bootjack Mountain and one on Polley Mountain. The following description is concerned only with the Mount Polley stock and principally with the central area of this stock. There natural outcrop and extensive trenches reveal evidence of a sequence of intrusion, brecciation, metasomatic alteration, and mineralization so involved that only a most thorough study could unravel the details. This report is preliminary.

The Mount Polley stock is formed of a suite of ~~basely~~ ~~saturated~~ rocks that have so many characteristics in common that a family relationship can be assumed. In particular all rock types contain similar augite as the main mafic mineral; all contain about 5 per cent magnetite, most specimens have some stubby apatite phenocrysts and an abnormal amount of sphene, and none contain quartz or feldspathoids. In composition they range from syenodiorite through at least three types of monzonite porphyries to syenite and pyroxene lamprophyre. Inclusions and screens of metavolcanic rocks, skarns, and early phases are abundant. Multiple intrusion, brecciation, intense alteration, and mineralization form part of the plutonic sequence. Unaltered rocks are either fine grained or have a fine matrix, and vugs and drusy cavities are abundant

in the breccias and former miarolitic cavities occur in some specimens of porphyry; therefore the intrusions occurred at shallow depth.

—————→ *Fig. 20*

Figure 20 shows an interpretation of the geology of the central area. The oldest rocks are dark green slightly porphyritic massive or clastic andesites which occur in greatest amount in Trench 19 in the southeast, however, as metavolcanic skarns these are common as inclusions and screens particularly within the breccia areas. In such settings they are commonly irregularly banded or mottled rocks composed of varying amounts of garnet, pyroxene, magnetite, potash feldspar with clinozoisite, calcite, chalcopyrite, muscovite, plagioclase, apatite, and rarely some zeolites. Some volcanic rocks are so metasomatized in the breccia areas that they are distinguishable from intrusive porphyries in the same setting only by the rocks into which they grade.

The relative age of the various intrusive phases, the brecciation, and alteration are not fully known. The intrusive phases included a granitic textured syenodiorite, three monzonite porphyries, and a lamprophyre dyke phase. The main element of doubt is where the syenodiorite fits in the sequence.

The following table
Table

shows the mineral composition of all fresh intrusive rocks. The porphyry phases will be described first from oldest to youngest. These are all similar and will be called monzonite porphyries although this name is not entirely suitable for the first phase^e (1). This is typically a foliated crowded porphyry with prominent plagioclase laths in an aphanitic matrix of grey, brown, or pink. On casual inspection it may look as if it is granitic textured. Normally the augite is fresh but may be partly altered to chlorite or hornblende. The plagioclase occurs in laths up to 5 millimetres long and stubby compound grains with complex twinning. It is nearly completely sericitized. It appears to have been zoned over the interval An₅₀₋₃₀. Potash feldspar occurs as rare phenocrysts and forms half the fine-grained matrix together with plagioclase. Magnetite is partly in large grains. Biotite is absent. Accessories include stubby phenocrysts of apatite and prisms of sphene. Common alteration minerals in small amounts include clinozoisite and prehnite.

The second phase (2) is also a crowded porphyry with an even smaller percentage of matrix and even less obviously a porphyry. It is normally grey with a fine intersertal texture. Occasional large white

(3 by 2 millimetres) plagioclase phenocrysts are characteristic. Augite may be fresh or partly altered to biotite or more rarely prehnite, chlorite, and epidote. Biotite is present also as a primary mineral as ragged middle-sized grains. The plagioclase was zoned andesine but is almost completely sericitized except for a thin rim. Potash feldspar occurs chiefly in the matrix. Accessory sphene and apatite are common. Zeolites occur in addition to the alteration minerals mentioned.

The third phase (3) as far as is known is a minor dyke phase. It is similar to (1) but contains fewer phenocrysts in a finely aphanitic, chocolate-coloured matrix. It is generally quite fresh but plagioclase may be partly altered to muscovite or prehnite. It appears to be a post-mineral phase.

The syenodiorite is a fine-to fine-medium-grained (0.5 to 2 millimetres) granitic-textured rock that is normally dark grey but without being greatly altered may be pinkish. Occasionally large mafic phenocrysts are common. At many localities it has a fair foliation, at others a lathy intersertal texture. Plagioclase was zoned from An₇₀₋₃₀ but is now highly sericitized. Potash feldspar generally is interstitial. Mafic minerals

other than the magnetite are associated in a characteristic manner.

Fresh pyroxene may be mantled by hornblende or biotite, and either one may extend away from the mantle as a large poikilitic grain with inclusions of small plagioclase laths. Biotite is more common than hornblende and all three may occur in one specimen. The biotite may be partly altered in an interleaved fashion to chlorite. Sphene and apatite are common accessories. Prehnite is a rare alteration after plagioclase.

The lamprophyre is an unusual rock of prominent zoned augite (1.5 millimetres) in a finer matrix of highly zoned sericitized plagioclase (An₇₅₋₅₀) and magnetite with interstitial potash feldspar. The rocks weather rapidly to a dark sand and some dykes can be identified in the trenches by this means. In addition a number of small post-mineral dykes occur that are unrelated to the main plutonic suite. These are mostly sugary textured, light greenish grey andesites.

On the geological map an additional unit is shown called breccias. This is a simple term for the complex of breccias and altered rocks that are of major importance in regard to the economic mineralization. The range of types present is large and the commonest feature is the

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salmon colour of most rocks resulting from extensive potash metasomatism.

The original rock type of many specimens cannot be definitely identified

but amongst those that have been are the following:

(1) Metavolcanic skarns and breccias of these in a plutonic matrix.

(2) Breccias of porphyry in ^adifferent igneous matrix.
^

(3) Breccias of porphyry only slightly expanded with a drusy matrix filled with potash feldspar, biotite, amphibole, magnetite, chalcopyrite, and stilbite.

(4) Highly altered porphyry with or without many inclusions and with or without large poikilitic porphyroblasts of potash feldspar.

Where alteration is least it is the crowded porphyry (1) that

is generally recognizable as the main type that occurs as breccia

is entirely converted into a syenite or even an orthoclase rock with just fragments or original host. In some cases this porphyry ^{palimpsest plagioclase,} is augite, or

magnetite. This altered salmon porphyry may be contained in a greyer

matrix composed chiefly of large irregular orthoclase or rarely microcline

crystals with biotite. The porphyry (2) is present in lesser amounts and

may contain definite fragments of porphyry (1).

Rocks of normal mineralogy and alteration may, upon brecciation,

be subjected to further alteration in ^{which} much plagioclase in the

matrix is replaced by potash feldspar and phenocrysts may be either only sericitized, or mantled, or entirely replaced by orthoclase. Augite may be fresh or replaced by clinzoisite, talc, serpentine, biotite, sphene, carbonate, or some combination. Prehnite is relatively common and apatite and sphene more common than in original porphyries. Many of the breccias and altered rocks are also fairly porous and most contain some chalcopyrite preferentially in the breccia matrix as well as in small seams and disseminated. Late zeolite veinlets are common.

The geological map, Figure , is partly diagrammatic. The geology in the breccia areas is very complex. The plutonic sequence that seems most likely is as follows:

- (1) Intrusion of porphyry (1).
- (2) Intrusion of porphyry (2) overlapped or followed by brecciation and main alteration and mineralization. Closely followed by,
- (3) Intrusion of syenodiorite.
- (4) Dykes of porphyry (3),
- (5) Dykes of lamprophyre.

The cause of brecciation is most likely tectonic in that the belts of breccia are fairly linear, trending generally northward but

seeming to diverge about a "core" of syenodiorite. Brecciation may have occurred in advance of intrusion of one of the later phases, either porphyry (?) or the syenodiorite. One of the unexplained complexities is that foliation in the syenodiorite appears disconformable with the contacts. This could be taken to indicate it was an early phase, later truncated although dykes of the porphyries have ^{not} been identified in the main syenodiorite masses, and alteration of the syenodiorite is slight. Both of the latter facts strongly ^{suggest} the syenodiorite was a late phase.

The lamprophyre dykes follow late small northerly trending steep faults. One fairly important shear zone follows the altered rocks in this same orientation. S

Mineralization

The Mount Polley stock is extensively mineralized with chalcopyrite particularly in the breccia zones. Pyrite occurs as in a partly peripheral halo. Chalcopyrite is chiefly distributed in the matrix of breccia very commonly within biotite or in drusy cavities. It also coats dry fractures and occurs as disseminated grains. Extensive replacement has also occurred of some metavolcanic inclusions in breccia zones in which case calcite is the most readily replaced mineral. Bornite is present

in very minor amounts. Pyrite either in the ore zone or peripheral halo tends to be more truly disseminated than chalcopyrite.

Many secondary copper minerals notably malachite, azurite, traces of cuprite and ^lcrysocolla^l, and native copper, occur in the outcrop and trenches, and in the upper part of drill holes.

company has stated that

The ^ldrilling has outlined approximately 37,000,000 tons of ore of an average grade of copper, 0.50 per cent, and gold, 0.015 ounce^l per ton before dilution. This reserve is in three blocks that will be mined as separate open pits, two main pits and one small one. Block A contains 15,549,000 tons averaging 0.458 per cent copper with a waste to ore ratio of approximately ^{to} 1:1, but has 3,700,000 tons assaying 0.65 per cent copper and 0.015 gold with a waste to ore ratio of ^{to} 1:1 that can be mined in the first years of production. Block B, contains 20,432,000 tons averaging 0.524 per cent copper with a waste to ore ratio of 1.9 ^{to} 1. Block C ^c contains 1,184,000 tons averaging 0.664 per cent copper with a waste to ore ratio somewhat in excess of ^{to} 2:1. The proposed pits for blocks A and B, pit 1 and 2 respectively, are outlined on the Geological Map. Block C is ^{cc} a small area about Trench 14.

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→ Fig. 21

The writer collected samples for analysis by a lemaire S41 uc
57
Mercury Detector along a line from Trench 19 to Trench 16, then by
Trench 7 to the access road and on down to Bootjack Lake. The profile
is shown as Figure 21. A peak of 0.10 to 0.11 was recorded from a
sample from the west end of Trench 16. (See Annual Report,

~~Reference: Minister of Mines, B.C., Ann. Rept. 1965, pp. 140-141.)~~

MINERAL COMPOSITION, FRESH INTRUSIVE ROCK, CARIBOO BELL

	Volume Per Cent							Average of
	Plagioclase	Potash Feldspar	Augite	Biotite	Magnetite	Other	Total Phenocrysts	
Crowded porphyry (1)	60.1	14.2	17.5	-	4.8	3.4	55	4
Porphyry (2)	44.4	25.6	16.2	5.8	6.8	1.2	65	5
Porphyry (3)	12	2	14	0.5	2	69.5 matrix	30.5	2
Syenodiorite	46.2	18.7	19.4	8.0	6.4	1.3	-	8
Lamprophyre	28	30	35	-	7	-	-	1

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 Date and Typist April 11, 1967 rm _____

CARIBOO-BELL COPPER MINES LIMITED - Mt. Pollie

93A 008

Aug/69

1. The property is owned by Mastodon-Highland Bell Mines Limited.
2. The property is located at the 3700 foot elevation on Mt. Pollie, 11 miles from Hydraulic.
3. Current activity consists of continued diamond drilling by Connors Drilling Limited to delineate ore bodies.
4. Twelve men are employed.

unknown source

2.4 Teck Corporation - Cariboo Bell Mines Ltd.

The Cariboo-Bell property is located 50 miles northeast of Williams Lake. Copper mineralization with gold values is contained in three zones amenable to open pit mining. The orebody has not been adequately explored to warrant a feasibility study, but 10,000 tons per day is a hypothetical milling rate that might be reasonable. Further exploration has added unspecified reserves to those quoted in Table 4 (8).

The Statement of Estimated Earnings is given in Table 10. In comparison with the properties already examined, the Gross Revenues here reflect the difference that a small amount of precious metal content can make. While it could not pay off its loan at current copper prices, it would probably be satisfactory with copper at 90 cents per pound. Royalties could affect a production decision at marginal copper prices. The major constraint preventing production at the moment is the proving in detail of sufficient ore to permit a feasibility study to be done. An increased copper price would encourage the company to complete this phase as quickly as possible.

The estimated service and supply requirements and annual tonnage of concentrate produced are given in Table 6. This property is sufficiently remote that a townsite would need to be constructed. A substantial road and power line would be required.

2.5 Teck Corporation - Afton Mines Ltd.

The Afton property is a relatively high grade copper deposit suitable for open pit mining. It is located adjacent to the Trans-Canada Highway 8 miles southeast of Kamloops. The orebody has been delineated and a 1974 feasibility study recommended the establishment of a 7,000 tons per day mill at the site.

The Statement of Estimated Earnings is given in Table 11. Gross Revenues were based on a copper content of 1%. It is known that there is some gold and silver content, but the grades have not been published. These would increase the Gross Revenues if they were accounted for. This project would be attractive at 70 cents copper. Teck decided not to put the property into production on completion of the feasibility study because of the uncertain taxation and royalty situation (8).

The estimated service and supply requirements are given in Table 6. Employees would live in nearby Kamloops. Little road construction is required due to the proximity of the Trans-Canada Highway. Power will be purchased from a B.C. Hydro and water will be pumped from Kamloops Lake. Concentrate would possibly be trucked to a rail terminal most likely on the CPR.

*Source: Wright Engineers Report, March 1975
Central Region: Forecast of Developments in the Mineral
Sector*

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TABLE 10

**STATEMENT OF ESTIMATED EARNINGS FOR
 CARIBOO-BELL**

(Per Ton Ore)

	Copper =	<u>58¢</u>	<u>70¢</u>	<u>90¢</u>
Gross Revenue		7.56	8.58	10.28
Less: Allowable Costs -				
Smelting and Refining		1.28		
Concentrate Transportation		<u>0.14</u>		
		(1.42)	(1.42)	(1.42)
Net Value		6.14	7.16	8.86
Basic Royalty, 5% of "Net Value"		(0.31)	(0.36)	(0.44)
Incremental Royalty, Gold		(0.41)	(0.41)	(0.41)
Net Value, Less Royalties		5.42	6.39	8.01
Operating Costs (Per Table 5)		(4.00)	(4.00)	(4.00)
Capital Cost Write-off		(2.19)	(2.19)	(2.19)
Interest at 10% on half the Capital		(1.10)	(1.10)	(1.10)
Net Return		(1.87)	(0.90)	<u>0.72</u>

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TABLE 10

**STATEMENT OF ESTIMATED EARNINGS FOR
 CARIBOO-BELL**

(Per Ton Ore)

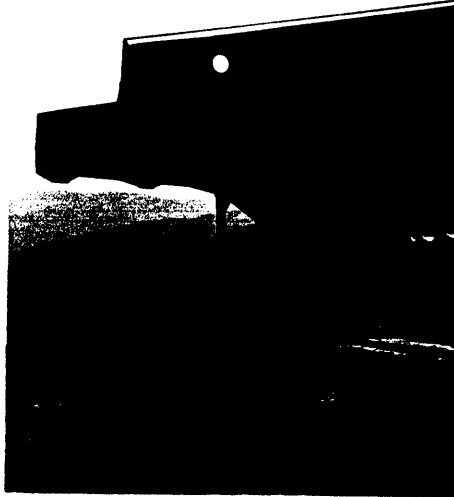
	Copper =	<u>58¢</u>	<u>70¢</u>	<u>90¢</u>
Gross Revenue		7.56	8.58	10.28
Less: Allowable Costs -				
Smelting and Refining		1.28		
Concentrate Transportation		<u>0.14</u>		
		(1.42)	(1.42)	(1.42)
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Net Return		(1.87)	(0.90)	<u>0.72</u>

1986 Company Release Mascot Gold Mines

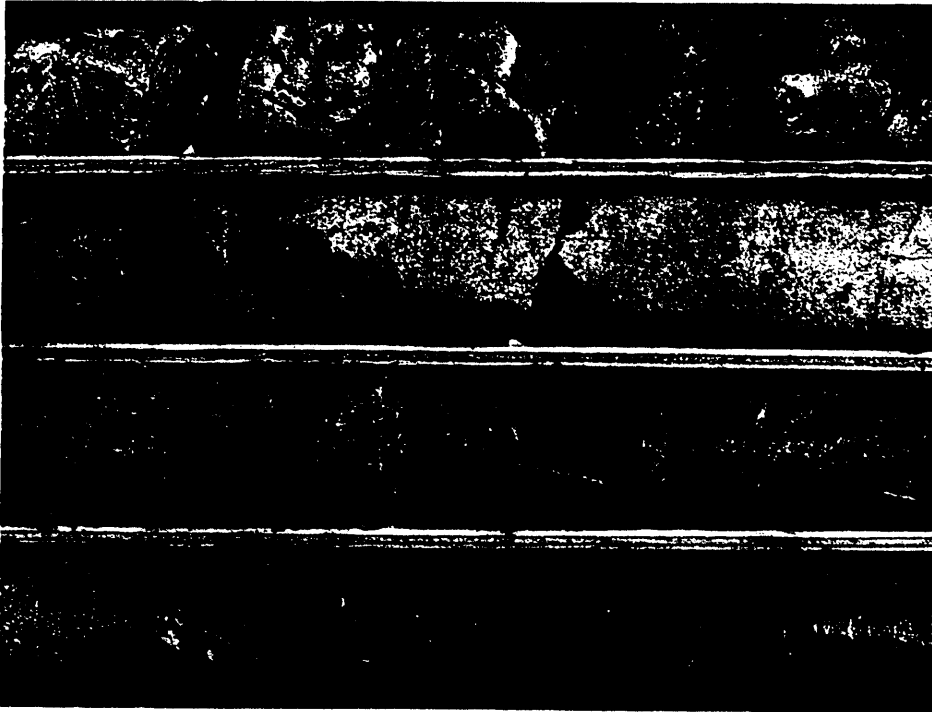
Operations were stopped because of the low price of gold, increasing costs and declining reserves. All of the machinery and equipment was removed, sold and the mine abandoned. By 1955, production from the mines amounted to 3,967,350 short tons yielding 1,556,750 ounces of gold, more than 4 million pounds of copper and 188,750 ounces of silver. Gold values averaged 0.392 ounces a ton.

The open pit area covers the upper portions of the ore bed systems, which as currently known extend 4,500 feet southwest from the old Nickel Plate workings. For safety and to ease pillar recovery, the old mine workings will be filled with lower grade material before the open pit breaks through. The low grade will then be recovered, along with the stope pillars and open pit ore, as benching proceeds downward through the old workings. The resulting blend will be processed as run of the mill ore.

Broken ore in the pit will be loaded by two P&H 1600 electric shovels and a "Cat" 992 diesel loader into Wabco 65 ton diesel trucks



Mascot President and C.E.O. H.G. Ewanchuk and Chairman of the Board Peter Steen stand beside a Wabco 65 ton truck during a pause in mine site inspection



Oxidation of sulphide minerals provides colourful evidence of polymetallic mineral deposit.

for the short haul to the crushing plant and stockpiles. Waste rock will be transported to the dump by the same equipment.

At the crushing plant, the mine run ore will be reduced in two stages of crushing to minus 5/8 inch particles for transfer to the fine ore stockpile adjacent to the mill. Also during its passage through the crushing plant 2 inch to 4 inch pebbles will be screened out and stockpiled for use in the following grinding circuit. The ore is hard and savings will result by using pebbles for grinding media.

The particles of gold in the ore at Nickel Plate are very small and fine grinding will be necessary to free them for optimum gold recovery. Grinding to minus 400 mesh is indicated.

Test work has shown that optimum gold recovery will be obtained by the use of well-proven cyanidation techniques. Dissolved gold

will be precipitated from solution by the use of zinc dust in the Merrill-Crowe process. The barren solution will be returned to the process. Tailings from the plant will be piped to the storage impoundment approximately one mile downslope from the mill. Process water will be obtained from wells, recycling from the tailings pond and mine drainage.

Though Mascot is concentrating on the Nickel Plate it also has other significant interests in Canada and the United States. Mascot's other principal Canadian target is the Bralorne property in the Bridge River Gold Camp, 100 miles north of Vancouver. Under the terms of a 1980 agreement, Mascot, together with joint venture partners, spent approximately \$6.83 million to the end of 1983 to earn Mascot a 21% interest. Completion of a 1984 program and further expenditures in 1985 and 1986 have increased Mascot's interest

to over 36%.

The 1984 program defined additional reserves at near historic grades and indicated important extensions of major vein systems all above the surface main haulage level. This will reduce production costs as hoisting will not be required.

The two mines making up this property are responsible for more than 90% of the lode gold produced from this historic gold region. Proven and possible reserves at Bralorne currently total 1,037,538 tons averaging 0.27 ounces of gold per ton diluted, this includes 142,853 tons of new ore grading 0.41 ounce per ton above the adit level. Resumption of exploration will further increase the gold inventory.

Mascot's main interests in the United States are the Sterling Mine in Nevada and the El Plomo property in Colorado.

The Sterling Mine, 90 miles northwest of Las Vegas started production in 1980 as a heap leach operation, mining 200 tons a day at a grade of 0.19 ounces of gold per short ton. Production which had been curtailed due to the price of gold has now been resumed with a crew of 25 adding to the leach piles. Mascot's interest in the Sterling is 10.4%.

The El Plomo property, 175 miles south of Denver has 1.35 million tons of open pit reserves grading 0.053 ounces of gold per ton, amenable to heap leaching. Mascot's interest is currently 28.25%. *93A008(12E)*

* Principal exploration targets in Canada are the Cariboo Bell, a copper-gold property 36 miles northeast of Williams Lake, British Columbia, where reserves of 128 million tons of 0.31% copper with 0.012 ounces of gold per ton have been identified. Further exploration is being carried out on this joint venture in which Mascot has a 38.41% interest and acts as operator. The Cariboo Property, 43 miles north-northeast of Williams Lake is adjacent to the QR Deposit of Dome Mines. The property contains an attractive geochemical anomaly that is coincident with significant EM, VLF and I.P. results. Mascot holds a 90% interest in this property and is planning a drill program for the 1987 season. *92-52004*

The formerly producing Giant Nickel property is wholly owned by Mascot. The property is being evaluated for its poly-strategic and platinum group metals potential. During the period 1958 to 1974, 4.75 million tons were mined for its nickel, copper and cobalt content. The mine was closed in 1974 because of the lack of a continuing market for the concentrates. Substantial low grade reserves are indicated along with exploration potential. *92-52004*

At the Mica property, 57 miles north of Revelstoke, B.C., a large lead-zinc anomaly was identified and confirmed by diamond drilling in 1985. More drilling will be required to establish reserves. Mascot's interest is 82%.

The company has also carried out recent programs on some of its other 25 properties. These are being reviewed in an ongoing process. Mascot also participates in the management of key exploration programs across Canada and the western United States for International Corona Resources Ltd., Royex Gold Mining Corporation and associated companies.

93A008-03

PROPERTY FILE

PROPERTY FILE
93A008

CARIBOO-BELL MINES LIMITED

+ First Phase of Exploration to end June 15, 1967 - First Phase Drilling Now Finished

In the text of the March 28, 1967, press release from Cariboo-Bell Copper Mines Limited it is pointed out that the drilling of the first phase of the exploration program has now been completed and that the other items of the first phase of exploration which include, metallurgical tests, geological study, engineering and pit designs will be completed by June 15, 1967. The text of the press release is as follows:

"Effective 15th October, 1966 Cariboo-Bell Copper Mines Limited entered into a financing agreement with three Japanese mining companies - Mitsui Mining & Smelting Company Ltd., Nippon Mining Co. Ltd., and Sumitomo Metal Mining Co. of Canada Ltd. - for the development and bringing into production of its copper property located approximately 50 miles north east of Williams Lake in the Cariboo Mining Division.

"This program was divided into three stages, the first consisting of the spending of \$300,000.00 on development work, the second the spending of \$500,000.00 on further development work, and the third stage financing the mine into production. The second and third stages are predicated on favourable results in the initial stages.

"The exploratory drilling of the first stage has been completed. In the year March 1966 to March 1967, a total of 48,301 feet of diamond drilling using BX wireline equipment (123 holes) and 6,585 feet of percussion drilling (32 holes) was finished.

"This drilling has indicated approximately 37,000,000 tons of an average grade of 0.50% copper and 0.015 oz. gold before allowance for dilution.

"Three separate blocks are included in this total: Block (a) contains 15,549,000 tons averaging 0.458% copper with a waste to ore ratio of approximately 1:1; Block (b) 20,432,000 tons averaging 0.524% copper with a waste to ore ratio of approximately 1.9:1 and Block (c) 1,184,000 tons averaging 0.664% copper with a waste to ore ratio some what in excess of 2:1.

"The above three blocks of ore will be mined by separate pits. Block (a) contains approximately 3,700,000 tons assaying 0.65% copper and 0.015 oz. gold with a waste to ore ratio of 1:1, which can be mined during the first years of production.

"The remainder of the first development stage is being devoted to metallurgical tests and geological and engineering problems related to proposed open pit designs. Composite samples of the drill cores have been made up and sent for analysis and metallurgical testing to Mitsui Mining & Smelting Company Ltd. and Sumitomo Metal Mining Co. Ltd. in Tokyo, and to the Department of Energy, Mines and Resources in Ottawa. The results from these tests should be available by the end of the first stage of development on 15th June, 1967.

"With further reference to the first stage, two more geochemical anomalies on the property remain to be tested by drilling.

"An abundant water supply, good transportation and available power are very favourable factors when considering bringing the property into production.

"The Annual Meeting of Cariboo-Bell Copper Mines Limited will be held April 28, 1967 and the report issued for that meeting will further inform shareholders and other parties interested in the company's development."

FAR EAST MINERALS LTD.

MEETING APPROVES ACQUISITION OF A NUMBER OF VARIOUS INTERESTS - The general meeting of Far East Minerals Ltd. approved a number of resolutions the results of which are tabulated below. As a result of the meeting and when the legal work is completed, Far East Minerals Ltd. will hold:

A block of claims in the Golden area of B.C. where roads have been built and 12,000 feet of drilling has been done and some \$75,000 has been spent on exploration. Further work is planned for this area.

A block of claims in the Greenwood, B.C., area which cover a drilled silica deposit for which a market is being sought.

A block of 356,500 escrowed shares of Cambri Mining & Development Ltd. at a cost of \$3,565.00.

A block of 528,000 escrowed shares of Admiral Mines Ltd. received as consideration for a 50% interest in the Bell claims in the Golden area, which covers 107 claims on which road work has been carried out and four drill locations established.

An option on 100,000 shares at 50¢ and an option on a further 100,000 shares at 60¢ of Admiral Mines, with the option exercisable for 12 months.

An option to purchase 90,000 shares of Columbia River Mines Ltd. at a price of \$1.25 from August 10, 1967 to August 10, 1968, from Plymouth Developments Ltd.

A block of 40,000 shares of Norco Mines Ltd. purchased from J.J. Timmins for \$4,000.

A block of 500,000 shares in escrow of Norco Mines Ltd. which were purchased for \$1.00 from Transworld Explorations Ltd.

The meeting approved the conversion of advances in the amount of approximately 60,000 which were borrowed by Far East Minerals on behalf of Carbonate Mountain Mines, into shares of Carbonate Mountain Mines at 10¢ per share.

The meeting elected Percy Sheppard, P.Eng., as director and general manager. Other directors are: R.R. Angle, M.G. Kemp, John Kilby.

Consideration to re-listing on the Calgary Exchange will be given when the Golden property matters are cleared up.

93A008-03

B.C. WELL DRILLING AUTHORITIES

Col Skwat b-85-J/94-A-16 will be drilled as an exploratory wildcat well on Lease 2510 held by Cigol which company will be operator and Contractor is not determined. Objective will be the Traissic formation at 4,000 feet and ground elevation 2,510 feet. Co-ordinates are N 756.1 E 629.4 from SW corner Unit 85.

Pacific SR CanDel Wolf d-27-G/94-A-15 will be drilled as an exploratory outpost well on Lease 2132 held by Pacific which company will be operator and General the contractor. The objective will be the Triassic formation at 4,000 feet and co-ordinates and ground elevation are not determined.

B.C. COMPANIES ACT

Cariboo-Bell Copper Mines Limited is a recently incorporated B.C. company with registered office at 502 - 1200 West Pender St., Vancouver 1, and authorized capital of 3,000,000 shares of no par value.

Reachland Explorations Ltd. is a recently incorporated B.C. company with registered office at 10th Floor, 850 West Hastings St., Vancouver, and authorized capital of 10,000 shares of \$1.00 par value.

Pyramex Developments Ltd. is a recently incorporated B.C. company with registered office at 325 - 1155 West Georgia St., Vancouver, and authorized capital of 3,000,000 shares of 50¢ par value.

Western Standard Silver Mines (1966) Ltd. is a recently incorporated B.C. company with registered office at 10th Floor, 850 West Hastings St., Vancouver, and authorized capital of 3,000,000 common shares of 50¢ par value.

DIVIDEND

Centennial Mortgage Corp Ltd. will pay a regular quarterly dividend on the common shares of 3¢ on February 15, record Feb.1,1966; the company will pay 15¢ on the 6% cumulative redeemable preferred shares series A on March 15, record March 1, the company will also pay 15¢ on the 6% cumulative redeemable convertible preference shares series B on March 15, record March 1,1966.

ALSCOPE CONSOLIDATED LTD.

DRILLING CONTINUED AT COQUIHALLA PASS GROUND - In December 1965,Alscope Consolidated Ltd. reported acquisition of an 80% interest in 50 claims in the Coquihalla Pass area of B.C. through the purchase of control of Dorian Mines Ltd., the operating coppany. The property is located 32 miles northeast of Hope and 25 miles southwest of Aspen Grove,B.C. The acquisition was made by the purchase of vendors shares and by advance of funds in exchange for fully paid shares.

Work on the property is under the direction of Bruce C.MacDonald, P.Eng., who reported that three soil sampling anomalies have been further tested by 5,000 feet of trenching which showed consistent zinc content over 1,000 feet of length and a maximum width of 600 feet. He states that the results of the very limited drilling to date can be considered encouraging. Although no ore has yet been outlined, ore-grade values are being cut and it is believed that they will continue to be cut throughout the anomalous area. The most significant information proved by the drilling so far is the fact that the host rocks appear to be entirely intrusive. If the anomalous area is entirely intrusive,depth chances are considerably enhanced.

Heavy drilling equipment has been moved to the property and a program of drilling on 100 foot centres to a 300 foot depth has started. The company plans to drill through the winter.

Alscope Consolidated has released the following results:

	Zinc	Silver		Zinc	Silver	Copper
Hole No.1 - 55' - 60'	6.20%	0.30 oz,	Hole No.4 - 67.5'-75'	-24.41%	- 1.62 oz.	0.26%
81' - 83'	16.75	0.80	67.5'-89.5'	- 9.6%	- 0.87 oz.	0.19%
97' - 99'	18.25	0.70	Hole No.5 - 64' -65'	- 9.8	- 0.95 oz.	0.02%
Hole No.2 - 0' - 11'	4.04%	0.50	118' - 119'	- 8.4	- 0.2 oz.	0.14
73' - 76'	10.15	0.75	Hole No.7 - 25' -43.5'	- 6.9%	- 0.29 oz.	0.20%
			67' -76'	- 9.16%	- 0.22 oz.	0.07%

SLOCAN OTTAWA MINES LTD.

ANNUAL REPORT - Reviewing financing which since Sept.30,1965, the date of the audited statement of Slocan Ottawa Mines, had put \$160,000 in the treasury with a further \$90,000 in prospect if options are exercised, J.L.Wilson, president, said consideration would be given to putting back in operation the mill on its silver mine and enlarging its capacity when ore reserves are adequate. Recent purchase of 63 claims in Pine Point area and 24 in Dynasty area,he said,gave a new aspect to the outlook. The statement at Sept.30,1965 showed current assets at \$60,493 and current liabilities at \$13,231. Of 3,000,000 shares authorized following a consolidation on May 31,1965, there were 567,187 outstanding at Sept. 30, including 100,000 underwritten by Mr. Wilson personally during September. In the period June 1,1964 to Sept.30,1965 income from sale of ore was \$103,195 and from equipment rental was \$1,013. After \$128,105 for operating expenses and \$29,581 for administrative expense, loss for the period was \$53,479.

93A008

MACMILLAN, BLOEDEL AND POWELL RIVER LIMITED

FURTHER MOVES INTO EUROPEAN MARKET INCLUDE - Further evidence of the declared policy
 PAPER PLANT IN SPAIN, EXPANSION IN HOLLAND to expand its business in Western Europe
 - one of the world's great markets -

is afforded by the announcement that MB&PR will participate in a coated paper plant to be built in Algeciras, across the bay from Gibraltar, in Spain, and that the Netherlands firm in which it has a substantial interest will build a similar plant in Belgium of much larger capacity. Facilities in Holland will be expanded. Altogether, the Vancouver-based company, largest manufacturer of forest products in Canada, which also owns four corrugated container plants in Britain, will participate in new projects involving total expenditures of some \$50,000,000.

The new coated paper plant in Algeciras will involve initially an investment of \$10,500,000 and will have a capacity of 15,000 to 20,000 tons yearly. MB&PR's investment will be 30% of the equity, and a new company will be established to build and operate the plant. Associates in this venture are the Dutch firm in which MB&PR acquired, last October, a substantial interest - Koninklijke Nederlandsche Papierfabriek, and a Barcelona group, Riva Y. Garcia. The Dutch firm (KNP) is a leading supplier of coated and uncoated printing, writing and specialty papers to European Common Market countries.

In announcing the new projects, J.V. Clyne, chairman and chief executive officer of MB&PR, said they represent the second stage of the company's entry into continental Europe.

The expansion plans for KNP, he said, include a new \$25,500,000 coated paper plant at Lanaken, Belgium, and new facilities at KNP's large existing paper complex at Maastricht, Holland.

The new mill in Belgium will have annual capacity of 60,000 tons, and the new facilities at Maastricht will be for production of new paper products, and will include a new administration building.

The three-phase program - Spain, Belgium, Holland - calls for expenditures totalling approximately \$50,000,000.

Last fall when MB&PR acquired the KNP interest, Mr. Clyne said its participation in KNP would enable the Dutch company - which already was producing at capacity level - to expand its manufacturing facilities.

CARIBOO-BELL COPPER MINES LIMITED

HIGHLAND-BELL LIMITED

LEITCH GOLD MINES LTD.

FINANCING ARRANGED AND \$300,000 - Substantial copper bearing zones on the property of PROGRAM PLANNED FOR NEW COMPANY Cariboo-Bell Copper Mines Limited, new company, will be the scene of a follow-up program recommended by J.A.C. Ross, P. Eng, consulting mining engineer, estimated at \$300,000. The 160-claim property, located in the Bootjack Lake-Polley Lake area, Cariboo district of B.C., is north-east of Williams Lake.

Cariboo-Bell Copper Mines has authorized capital of 3,000,000 shares, no par. Vendors were Mastodon-Highland Bell Mines, wholly owned by Highland Bell Ltd. and Leitch Gold, these two companies dividing equally the 750,000 shares allotted for the claims. Additional consideration was \$50,000 cash and an agreement by the new company to pay all expenses of incorporation and organization. The two vendor companies agreed to buy 200,000 new company shares at 50¢ per share which would be pooled until an underwriting was completed. By prospectus dated Jan. 24, 1966, Brink, Hudson & Lefever Ltd. offer 500,000 Cariboo-Bell shares at 60¢ per share which they acquired by an underwriting agreement at a price of 50¢ per share. The two vendor companies agreed not to sell any shares held or subscribed for by each of them on the public market for 90 days after January 24, 1966, the date the prospectus was accepted for filing.

Directors of Cariboo-Bell are K.J. Springer, J.J. Crowhurst, Frederick Earl Hall, W.A. McElmoyle, R.E. Purvis, R.J. Springer.

The consultant, in a report dated Jan. 7, 1966, says that three of several zones of copper mineralization discovered on the property, were explored by 17 surface trenches located to expose the mineralization at 400-foot intervals. Most important is No. 2 zone which extends for 3,400 ft. with maximum width of 694 ft. In this zone, the central portion, which averages 452 ft. over a strike length of 1,400 ft., assayed 0.356% copper in the form of chalcopyrite and malachite, representing 52,733 tons per vertical foot. The remainder of the zone contains lower grade mineralization. Zone 3 averaged 0.325% copper over a width of 455 ft. for a strike length of 600 ft. Tons per vertical foot amount to 22,750. Zone 1 averaged 0.476% copper over 80 ft. in width for a strike length of 600 ft., indicating 4,000 tons per vertical foot. These 3 zones are not delimited. Other possibilities for similar mineralization exist as indicated by geochemical and geophysical work. Zone 2 is near the crest of a ridge and a low ratio of waste to ore is indicated. Open-pit mining methods could be carried out cheaply. The other zones are similarly located with respect to favorable topography. The mineralogy is simple and copper recovery should be relatively high. Mr. Ross says the areas of copper mineralization are extensive and possess the usual geological features associated with disseminated copper deposits. The location is conducive to low operating costs. He recommends that the company carry out an intensive drilling program to explore the mineralization already trenched and probe other areas considered favorable on basis of geochemistry and geophysics.

93A008

B.C.SECURITIES ACT

Takla Silver Mines Limited has received registration under the B.C.Securities Act covering the sale of 100,000 shares at 60¢ per share.

SILVER KEY MINES LIMITED

EXPLORATION WORK CURRENTLY UNDERWAY ON YUKON PROPERTY - A recently issued progress report from Silver Key Mines Limited states that a field crew is currently engaged in a surface exploration program on the Galena vein zones.

The horizontal strike distance between the Upper and Lower Galena veins is over 1,600 feet, with an apparent vertical range of 600 feet. The immediate program will consist of rock trenching across both the Upper and Lower veins to establish the full mineralized widths and to determine the structural trends of the zones in preparations for diamond drilling and eventual underground adit development.

The Silver Key property is located near Ross River, about 160 miles northeast of Whitehorse, Yukon. The progress report summarizes the exploration work on the property to date as follows:

"During 1965 some 30 miles of mine and work roads were built and an airstrip was constructed adjacent to the main camp.

"The Silver Ridge Key 3 showing, made accessible by road, was stripped and appreciable quantities of high grade silver-lead mineralization were uncovered.

"The south fault zone, a newly-found structure lying $3\frac{1}{2}$ miles south of the Silver Ridge showing was uncovered, disclosing silver-lead-zinc-copper mineralization along a 1350 foot strike length. Work on this zone will be resumed this spring. The initial program will be stripping by bulldozer.

"The Galena Vein zones are steeply dipping mineralized contacts between quartzites and dolomitic limestones. Trenching on the Upper Galena vein during 1965 disclosed mineralization assaying 17.9 oz. silver and 23.7% lead across a width of 36 feet. This mineralization was traced for 450 feet.

"The Lower Galena vein consists of a series of parallel mineralized veins over a width of 30 feet. Initial stripping across a 4 foot sulphide face assayed 22.38 oz. silver and 13.38% lead. The zone appears to be continuous along strike.

"Eleven other silver base metal bearing veins and fault zones are known to occur and will be explored during the coming field season."

In the Ross River area, Silver Key has a 10% interest in 18 claims staked by Stump Mines and a 15% interest in 16 claims held by the Ross River Mines Ltd. In addition, Silver Key holds a concession covering 15 square miles in Limerick, Ireland.

Following recent financing, Silver Key has \$270,000 in the treasury with which to continue exploration.

CROYDON MINES LTD.

NEW CARIBOO PROPERTY AND FURTHER PINE POINT PROPERTY NOW ACQUIRED - C.M.Manning, president of Croydon Mines Ltd., states in a Feb.24,1966, progress report that on the firm's northern Pine Point 54 claim block, 60 miles of lines have been cut on 500 foot spacing and approximately 25% of this block has been covered by the induced polarization survey. Line cutting is now underway on the larger southern block of claims with induced polarization survey to start here as soon as line cutting is sufficiently advanced.

The president also states that a reasonable price has been paid for a block of 24 claims, previously believed to be owned by Pine Point Mines, which are located along the northern boundary of the southern Croydon block of claims.

In the Cariboo area, the company has acquired a 50% interest in 92 claims which adjoin along strike of the copper property of Cariboo Bell. Madrona Mines holds the other 50% interest in this property.

Croydon Mines is in a strong financial position, the president states.

MCKAY-CORMACK LTD.

PROGRESS REPORT - McKay-Cormack Ltd. states in a Feb.25,1966, letter to shareholders that since August, the company has experienced an upswing in repairs and new construction. Results for the full year are expected to be gratifying despite the difficulties experienced early in the year.

The company recently received a major conversion job from the C.P.R. The recent re-introduction of the federal ship building subsidy is expected to help in the future.

ARLINGTON SILVER MINES LTD.

MEETING APPROVES CAPITAL INCREASE - The annual meeting of Arlington Silver Mines Ltd. approved special resolutions increasing the authorized capital of the company by 2,000,000 shares to 5,000,000 shares of \$1.00 par value. At last report, there were 2,679,605 shares issued and two blocks of 100,000 shares each under option.

With regard to the work on the company's 56 claim block in the Vangorda-Dynasty area, the meeting was told that a road has been completed to the claims, a camp has been established, and a crew is now cutting lines in preparation for geophysical surveys. The reports of lead-zinc showings on the ground will be followed up when the snow is off the ground.

B.C.SECURITIES ACT

Tekmol Mining Co.Ltd. has received registration under the B.C.Securities Act covering the sale of 100,000 shares at 60¢ per share.

Sterling Pacific Mortgage Corporation Ltd. has received registration under the B.C. Securities Act in the form of a Feb.4,1966 prospectus.

B.C.WELL DRILLING AUTHORITIES

Cdn Sup et al Nig d-53-J/94-A-13 will be drilled as an exploratory outpost with an objective of the Triassic formation at 4,000 feet on lease 1464 held by Union Oil with Canadian Superior as operator and Arrow as contractor. Ground elevation will be 2786 and co-ordinates N2283 E 1871 from SW corner Unit 53.

CDR Sun Evergreen d-54-J/94-H-2 will be drilled as an exploratory outpost well with an objective of the Triassic formation at 4,000 feet on lease 1316 held by Sun Oil with CDR as operator and Hi Tower as contractor. Co-ordinates and ground elevation have not yet been determined.

GIANT YELLOWKNIFE MINES LIMITED

DIVIDEND DECLARED - A March 3,1966 report to shareholders of Giant Yellowknife Mines Limited states that the net earnings for 1965 were 84¢ per share and dividends including extras totalled \$1.00.

With rising costs and increased income taxes, forecasts for 1966 indicate at this time that earnings will support quarterly dividends of 15¢ per share. Any consideration of an extra dividend payment will be deferred until later in the year. The directors have declared a dividend of 15¢ payable March 31, record March 14,1966.

GREAT NATIONAL LAND & INVESTMENT CORP.LTD.

NINE MONTHS EARNINGS REPORTED - Great National Land & Investment Corp.Ltd. has reported net profit before income taxes for the nine months ended January 31,1966, are up 40% at \$69,473 over the previous years results.

The consolidated profit and loss statement includes earnings from Nanaimo Realty Co.Ltd. for just the three months since that company was acquired on Oct.31,1965. If Nanaimo Realty net earnings for the entire 9 months had been included,the net profit would have been up 12%.

At January 31,1966, company assets were \$3,034,155.

Frank Ney, company president,has announced that wholly-owned subsidiary,Nanaimo Trading Exchange Ltd.,has been set up to permit expansion of the company's real estate trading activities. One of the few companies active in this field in western Canada, Great National's real estate sales increased 22% over comparable 1964 periods since the trading plan was instituted last November.

Based on its success with residential properties, Great National is now exploring the possibilities of adapting this trading plan to commercial and industrial properties. Such plans are currently in use in the U.S.

The company is currently offering a 7% ten year convertible debenture series B, dated Feb.15,1966 to mature Feb.15,1967, and convertible into common shares at \$1.00 per share for the life of the debentures. (See GCNL NO.25, Feb.4,1966, for further details)

VANCOUVER STOCK EXCHANGE NOTICES

Peace River Mining & Smelting Limited shares will be called for trading on the Vancouver Stock Exchange on March 14,1966. Of the 3,000,000 shares authorized,1,650,731 shares are issued.Canada Permanent Trust is the transfer agent. The ticker symbol is PRM.

Buchanan Mines Ltd. shares will be called for trading on the Vancouver Stock Exchange on March 14, 1966. Of the 3,000,000 shares authorized,1,516,000 shares are issued and 750,000 shares are in escrow. Canada Permanent Trust is the transfer agent. The ticker symbol is BMX.

Cariboo-Bell Copper Mines Limited shares will be called for trading on the Vancouver Stock Exchange on March 14,1966. Of the 3,000,000 shares authorized,1,450,005 shares are issued.

Adera Mining Limited shares will be called for trading on the Vancouver Stock Exchange on March 14,1966. Of the 3,000,000 shares authorized,1,450,002 shares are issued and 750,000 shares are in escrow. Ticker symbol is ADR.

New Indian Mines Ltd. has reported that West Coast Securities has exercised its option to purchase 100,000 shares at 22½¢ per share being the option due March 10,1966.

MacMillan, Bloedel and Powell River Limited has announced that its subsidiary,Martin Paper Products Ltd. will add 17,200 square feet to its Edmonton plant at a cost of about \$225,000. The expansion will increase manufacturing, shipping and service facilities. Work will be done by Dominion Construction and will be completed by May 31,1966.

George Cross News Letter

MAR. 31.1966

MARCH 31, 1966
NO. 64(1966)

"Reliable Reporting"

MARCH 31, 1966
NO. 64(1966)

WESTERN CANADIAN INVESTMENTS

NORTH CANADIAN OILS LIMITED

OIL AND GAS INTERESTS, PLUS 50%
IN PULP FIRM, ENHANCE POSITION

- If North Canadian's share of net earnings of North Western Pulp & Power, amounting to \$1,647,500, are added to the company's net cash income of \$1,057,176, the total of \$2,704,676 compares with a total of \$1,802,109 in 1964 made up of cash earnings in that year of \$684,109 from oil and gas and \$1,118,000 as the company's 50% of the Pulp firm's net earnings.

Year to Dec. 31,	1965	1964
Revenue	\$2,467,838	\$2,095,838
Net cash income	1,057,076	684,109
NET INCOME	359,781	189,755
Working capital	941,575	1,028,559
50% interest North-		
Western Pulp & Pr.	6,390,000	6,390,000
Fixed assets, cost	9,573,896	8,564,327
Mortgage payable	205,000	225,000
Funded debt	6,938,525	7,205,125
Deferred taxes	957,394	616,864
Earned surplus	268,362	55,007
Shares issued		
Pref. stock, \$50	\$2,662,300	\$2,662,300
Common shares	5,417,425	5,330,945

North Western, which does not as yet contribute to North Canadian income, reports a net income for 1965 of \$3,295,000 and an accompanying cash flow of \$6,317,000, both company peaks. During 1965, North Western, owned 50% by St. Regis Paper Co., added \$671,000 to capital assets and increased its net working capital from \$8½ million to just under \$14 million.

Negotiations have been virtually completed for the funding of North Western's indebtedness which has from the company's inception been on a relatively short term basis. Completion of this refinancing will enable the pulp company

to give consideration to enlargement of its facilities at Hinton, Alberta. It is stated in the North Canadian report that North Western has for several years been unable to fill the demand for Alberta Hi-Brite, which is the trade name of its product. Originally designed for production of 147,000 tons, the Hinton mill last year produced 190,104 tons, and is producing at a higher rate the first quarter of 1966.

MACMILLAN, BLOEDEL AND POWELL RIVER LIMITED

MAJOR STEPS TAKEN TO STRENGTHEN
SALES POSITION IN U.K. MARKET

- Continuing to follow a now well-established pattern to hold and improve overseas markets for products, MB&PR is joining with a British firm of timber and plywood importers, Montague L. Meyer Limited, to improve and extend the U.K. market.

A new firm will be set up to handle all MB&PR lumber sales in U.K. It will use three wharves, each capable of mooring bulk carriers up to 30,000 tons. This new firm will have exclusive use of a total of 48 or more acres of storage space, including a considerable amount of covered space, adjacent to the wharves, on which to maintain lumber stockpiles. U.K. lumber users will not have to order from B.C. months in advance, nor maintain large inventories themselves. It is pointed out by J.V. Clyne, chief executive of MB&PR, that the new method will give U.K. buyers a measure of protection against fluctuations in market demand, will eliminate the risk of demurrage and diversion costs and will ease the space and storage problems of customers.

The company expects that by start of 1968, at latest, all its lumber for U.K. will be packaged and carried in bulk carriers. This trend will be extended to other major overseas markets. The move demonstrates MB&PR's confidence in the growth of its traditional U.K. market. Wharves will be Berth No. 42, New Extension Tilbury Docks, Newport Docks, Monmouthshire, and King George Dock at Hull, providing, respectively, storage of 20 acres, 20 acres and 8 acres.

CARIBOO-BELL COPPER MINES LIMITED

ANNOUNCEMENT OF FIRST DRILLING - K.J. Springer, president of Cariboo-Bell Copper Mines RESULTS EXPECTED IN NEXT DAYS Limited, has reported that one diamond drill is presently working on the company's copper property, located 36 miles northeast of Williams Lake, B.C. A second diamond drilling machine will be moved to the property in the next few days, the president stated.

He also stated that five holes have been drilled with partial assay results having been received from three of these holes. It is expected that complete results will be available in a few days and an announcement will then be made.

The first holes were to depths of approximately 300 feet but were stopped in copper mineralization. As a result, it has now been decided to drill some deeper holes on the property. The total depth will be determined as the drilling advances.

There are 1,450,005 shares issued of the 3,000,000 shares authorized.

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93A008

CROWN ZELLERBACH CANADA LIMITED

NET CASH INCOME HIGHER - R.G.Rogers, president of Crown Zellerbach Canada, in reporting IN YEAR OF HIGHER SALES an increase in net cash income and a decrease in net profit after writeoffs says 1965 sales gain to \$164.6 million from \$141.8 million in 1964, says the main factors in higher sales were: 1. Sales of lumber and plywood from a newly acquired subsidiary, S.M. Simpson Limited. 2. Additional kraft pulp from recently installed facilities; 3. Generally higher production levels in most divisions. Adverse factors were a reflection of the cost-profit squeeze as exemplified by the lower sales price for newsprint, in effect for all 1965, and the higher cost of purchased wood chips used in pulp manufacture. Also, adverse weather hampered both logging and manufacturing operations. Labor costs increased at mid-year and total cost of producing logs was higher. An important element in this latter increase is the continued upward trend of timberland taxes.

Sources of Working Capital

Year to Dec. 31	1965	1964
Net income	\$12,784,000	\$15,148,000
Non cash allocations	13,963,000	10,732,000
Prov'n for def. taxes	2,880,000	2,508,000
Funds made available	29,627,000	28,388,000
Other sources:		
Long-term notes	10,350,000	14,000,000
Miscellaneous, net	(72,000)	497,000
	<u>48,905,000</u>	<u>42,885,000</u>

Uses of Working Capital

Added to properties	26,468,000	41,410,000
Less: financed by term debt and Class A shares	<u>1,675,000</u>	<u>3,580,000</u>
	24,793,000	37,830,000
Term debt retirement	656,000	427,000
Dividends declared	<u>19,411,000</u>	<u>481,000</u>
	<u>44,860,000</u>	<u>38,738,000</u>
Working capital gain	<u>4,045,000</u>	<u>4,147,000</u>
Working capital at yearend	\$45,400,000	\$41,300,000

share were declared on both the ordinary and A shares. These higher dividend payments reflect the increase in the quarterly dividend rate from 25¢ to 30¢ as from the second quarter.

Net income of \$12,784,000 was equal to \$1.68 per share on the combined A and ordinary shares. The reported net profit of \$15,148,000 for 1964 was equal to \$2.02 per share.

CARIBOO-BELL COPPER MINES LIMITED

CONSULTANT RECOMMENDS DEEPER DRILLING - By an agreement dated April 1, 1966, Brink Hudson FUNDS FOR THE DEEP PROGRAM PROVIDED and Lefever Ltd. has firmly underwritten 50,000 treasury shares of Cariboo-Bell Copper Mines Ltd. at \$2.75 per share and in consideration have been granted an option covering 50,000 shares at \$3.25 per share due June 30, 1966.

There are now 1,500,000 shares issued of the 3,000,000 shares authorized.

A March 30, 1966, report from J.A.C. Ross, consultant, states that the drilling has confirmed that the surface values carry to a depth of at least 300 feet and that therefore more extensive and deeper diamond drilling is recommended. The expanded program is estimated to cost an additional \$300,000, over and above the original program recommended.

A report to the shareholders states that five holes have been completed, each to a vertical depth of 300 feet, at the south end of Zone No. 2 on the company's 160 claim property in the Bootjack Lake-Pooley Lake area situated in the Cariboo Mining Division of B.C. The report states that Zone No. 2 which is not delimited to the north, was exposed by trenching during the 1965 program over a strike length of 1,400 feet and an average width of 452 feet. The average surface assay was 0.356% copper.

The following results have been obtained from hole No. 1, 2 and 3.

Hole No.	Trench No.	Depth	Intersection	% Cu	Oz. Gold/ton	Oz. Silver/Ton
1	7	316 ft.	0 - 236	0.44%	0.01	0.07
			236 - 316	0.11	trace	0.07
2	7	304 ft.	0 - 60	0.14	trace	0.04
			60 - 190	0.47	0.02	0.07
			190 - 270	0.13	0.01	0.07
			270 - 304	0.39	*	*
3	7	300 ft.	0 - 230	0.51	*	*
			230 - 300	0.21%	*	*

* Assays not completed.

The holes were drilled at 200 foot intervals with BX wireline equipment and each stopped in mineralization. Core recovery was 95%. Drilling is continuing northerly and holes Nos. 4 and 5 drilled vertically in trench No. 8, which is parallel to and 400 feet from trench No. 7, encountered similar material.

A second diamond drill is now on the property and percussion equipment is being studied.

HIGHLAND-BELL LIMITED

STRONG LIQUID POSITION AND GOOD BASIS FOR - Taking marketable securities and short term
FUTURE INCREASED INCOME FEATURE REPORT investments at cost of \$997,324, Highland
Bell had net current assets of \$1,180,638

at Dec. 31, 1965. The report shows that marketable securities and short term investment holdings at that date had market value of \$7,744,315. At end of 1964, when net current assets were \$1,566,413, including marketable securities at cost of \$1,248,066, the latter had market value of \$9,245,726. A profit of \$12,305 was realized on investments sold during 1965.

The main investment holdings at end of 1965 were:

Mattagami Lake Mines Limited	320,000	shares
Leitch Gold Mines Limited	300,000	shares
Canada Tungsten Mining Corp. Ltd.	250,465	shares

K.J. Springer, Highland Bell president, points out that Mattagami had profits before writeoffs of \$20,107,000 or \$3.04 per share in 1965, and that the Mattagami zinc plant in which Mattagami owns 62.5%, is being doubled. A new acid and roasting plant will also substantially increase the zinc plant earnings. All debts should be paid and a cash surplus accumulated by end of 1966, which will enable the company to initiate dividends in 1967.

At end of 1965, when Leitch Gold ceased production at its 30-year old gold mine, the company had investments with a book value of \$1,950,675 and a quoted market value of \$9,059,332.

Canada Tungsten, he notes, had an excellent year in 1965, fulfilling its early promise as an important producer of high quality tungsten concentrates. (GCNL NO. 72.)

Mr. Springer advises that October 3, 1966 has been set for start of the trial of the Highland-Bell-Leitch action against Texas Gulf Sulphur claiming certain lands, claims and mining rights and interest thereon and right thereto, or as an alternative, damages aggregating \$450,000,000.

The report discloses the broad nature of Highland-Bell's participations in exploration.

Burnaby Iron Mines Ltd. (534,750 shares held) did more drilling at its southern Queen Charlotte Islands property in 1965. Reasonably assured ore, before dilution, is now estimated at 3,571,000 tons grading 49.5% iron and 4,640,000 tons of the same grade of speculative ore indicated. Discussions are continuing with outside interests to provide capital for more development.

Newfoundland Zinc Mines Ltd. (528,018 shares) is now estimated to have 1,562,900 tons averaging 8.36% zinc before dilution in 5 separate areas with more work planned in 1966.

Cariboo-Bell Copper Mines Limited (420,625 shares) is investigating large areas of copper mineralization, 36 miles N.E. of Williams Lake, B.C.

Pine Bell Mines Limited (387,500 shares) is exploring 316 claims south of Pyramid Mines property in N.W.T.

Highland Mercury Mines Ltd. (326,623 shares) will develop this year four groups of claims on the strike of and adjoining the Pinchi Mercury Mine of Cominco.

Exploration, in addition, resulted in staking 2 groups of claims in Alice Arm area to cover significant molybdenum discoveries. Molybdenum and copper mineralization in southern B.C. coastal area will be developed in 1966. Options were taken on a prospect in B.C. and one in Yukon on which detailed examination in 1966 is planned. Three groups were staked by Highland-Bell and Leitch to cover uranium occurrences in N. Saskatchewan and N.W.T.

At Highland-Bell Mine, Beaverdell, B.C., operating profit declined in 1965 to \$290,054 from \$617,375 in 1964, and \$808,586 in 1963, due mainly to lower grade ore and increased appropriation for exploration and development. Income from other sources was \$180,645. The grade in silver has been declining with depth and averaged 27.92 oz. per ton in 1965 vs 32.28 oz. in 1964 and 46.43 oz. in 1961. Mr. Springer says it is possible this tenor will continue as mining continues to depth. Highland-Bell's consolidated net profit for 1965 was \$105,614 vs \$260,100 in 1964. The company paid \$489,887 or 30¢ per share in 1965 compared with \$325,591 or 20¢ per share in 1964, in both cases as tax paid distributions in the form of redeemable preference shares. There were 1,632,960 shares issued at end of 1965, five more than at end of 1964.

CINOLA MINES LTD.

ROSSLAND, B.C. AND DYNASTY - W. Thompson, president of Cinola Mines Ltd., has reported that the company's consultants, A.C.A. Howe & Associates have stated that the underground diamond drilling on the gold-silver property, three miles west of Rossland, has intersected several vein structures ranging in width from four to eight feet. Hole A-1 cut eight feet of quartz vein mineralized with sulphides. Assays are awaited.

The consultants recommend the continuation of drifting to explore the faulted extension of the vein picked up in one of the drill holes along with additional drifting to outline the lateral extension of the vein.

The company is presently carrying out a program of line cutting on the Dynasty claims in preparation for geophysical surveys which will be carried out as soon as the snow is gone.

On March 3, 1966, the company reported the underwriting of 100,000 treasury shares of the company at 30¢ per share by Toslin Securities Ltd.

93A008

declared a stock dividend of
preferred share, \$1 par for each 10 common
per common share to shareholders of record May 6, 1966. The preferred
redeemed soon after the allotment and it is expected cheques will be mailed on
May 20, 1966. (See GCNL No. 77, Page 3.)

The Granby Mining Co. Ltd. will pay 25¢ p/s U.S. payable June 17, record May 20.

Kelly Douglas & Co. Ltd. will pay 6¢ p/s on Class "A" May 31, record May 6.

Matt Berry Mines Limited is a recently incorporated B.C. company with registered office
at 850 West Hastings St., Vancouver, and authorized capital of
5,000,000 shares of \$1.00 par value. The company has administrative offices at suite 801-
347 Bay St., Toronto 1, Ont. phone 366-0705. Directors of the company are: Matt Berry,
president; Lionel York, P. Eng., vice-president; Leon La Prairie, P. Eng., managing director;
Albert Manifold, P. Eng., and Ronald Dickson, P. Eng.

CARIBOO-BELL COPPER MINES LIMITED

FIRST SIX HOLES GIVE 8,400,000 TONS 0.52% - Estimates by Cariboo-Bell Copper Mines Limited engineers show that
8,400,000 tons of reasonably assured ore averaging 0.52% copper and
carrying approximately 0.02 oz. gold and 0.04 oz. silver are indicated
by the first six holes. The holes were vertical and drilled in an area about 600 feet by 800
feet on the south end of No. 2 zone at the Bootjack-Polley Lake property in the Cariboo.
These holes are along trenches 7 and 8.

No. 2 hole carried favourable mineralization at 660 feet with minor copper from there
to the bottom of the hole at 1,096 feet.

Ten holes have been completed to date on zone No. 2 with one drill proceeding northerly
on a 200 by 400 foot grid basis. Similar mineralization is being encountered in trenches 9
and 10 which are 400 and 800 feet northerly from trench No. 8. Core recovery continues to be
excellent. Although trenches 11 and 12 still farther north showed 695 feet of 0.13% copper
and 604 feet of 0.11% copper respectively from surface sampling in 1965, and were therefore
not considered in the original estimates, possibilities of similar mineralization continuing
through out the entire 2,000 feet strike length of the zone are now thought to be good.

A less than one to one stripping ratio is indicated. A second drill has started in the
Zone No. 2 area where trenching returned 570 feet of 0.34% copper and 340 feet of 0.30% copper.
Three substantial induced polarization anomalies will be drilled. Line cutting and soil
sampling will start on other interesting copper zones located in the 1965 program.

NO. 80 (APRIL 26, 1966) + GEORGE CROSS NEWS LETTER + NINETEENTH YEAR OF PUBLICATION +

LORNEX MINING CORPORATION LTD.RIO ALGOM MINES LIMITEDYUKON CONSOLIDATED GOLD CORP.

PROGRESS REPORT - Lornex Mining Corporation Ltd. has reported it is continuing the diamond drill program on its Highland Valley property in south-central British Columbia.

Drill hole no. 11 has recently been completed. This hole is located on the "north zone" approximately 200 feet west of hole no. 10, the last reported diamond drill hole. It was drilled at a 70° angle to the west and reached a depth of 1,110 feet.

Results of the drilling have been most encouraging. Mineralization in hole 11 proved to be relatively uniform throughout, consisting mainly of chalcopyrite, bornite and molybdenite both disseminated throughout the core and associated with hairline fractures.

Assay results for hole 11 are as follows:

<u>Footage</u>	<u>Drilled Length</u>	<u>% Total Copper</u>	<u>% MoS₂</u>
288 ft. to 1,110 ft.	822 feet	0.54%	0.03%

The diamond drill has been moved further west on the same section line and will continue to test the mineralized zone as indicated by the induced polarization survey results. In the meantime, a rotary drill has been moved on the property to drill several test holes. The purpose is to establish the most economical and efficient drilling technique for the continuing exploration program on the north zone.

Rio Algom Mines Limited and its partner Yukon Consolidated Gold Corp., through the purchase of shares, will control 60% of the Lornex Mining Corporation Ltd. when the final option has been exercised.

HIGHLAND-BELL LIMITED

- + Future Of Investments Very Bright - Particularly Mattagami Lake Mines
- + Future Of the Silver Mine Hinges On Exploration Now Underway

K.J.Springer, president, and O.S.Perry, mine manager, spoke to the annual meeting of Highland Bell Limited with regard to the geology and prospects of the silver mine at Beaverdell, B.C.

The president stated that silver mines tend to work to lower grades at depth. In the Slocan, the grades are 400 to 500 feet deep and in parts of the Coeur d'Alene area they run to 4,000 feet in good grade. The general rule is lower silver grades at depth and the Beaverdell mine is following this rule. The work recently has located a new fault which tends to indicate a new zone of potential. The grades have been lower at the increased depth and it will be necessary to increase milling rate to perhaps the 150 tons per day range if a grade of 20 oz. silver is to return a profit.

The exploration and testing of this area is now underway and the next two or three months will provide a great deal of important information, the meeting was told.

With regard to Pine Bell exploration program, the meeting was told that line cutting is completed on the 320 claims and the induced polarization survey is between 40% and 50% completed. It was pointed out that the survey has been done on a basis of work where good contacts can be made and leaving gaps where frost is a problem. These gaps will be tested later. The work has located no worthwhile anomalous areas so far but there is still more than 50% of the ground to be tested.

Financing is being sought at the present time for a \$900,000 to \$1,000,000 program on the Burnaby Iron Mines Limited property. The program, if the financing program is kept on schedule, will see the start of shaft sinking, drifting, crosscutting and underground diamond drilling in the Summer of 1966. The form the financing will take will depend upon who joins Highland Bell and Leitch as partners in this mine. It is too early to say if a public offering will be made in Burnaby Iron Mines in the near future. Present reserves are 8,000,000 tons and the prospects of developing between 20 and 25 million tons of 45% to 50% Fe are quite good. If these could be established, a feasibility study would be undertaken on a 3,000 ton per day plant. The Japanese market for iron concentrates is much firmer currently than in the recent past.

The meeting heard a review of the exploration at the Cariboo Bell property. (See GCNL No. 80, page four for most recent results) The meeting was also told that the potential of the three areas to be tested in the immediate program is between 35,000,000 and 40,000,000 tons and probably of the current 0.5% grade with an important gold credit. In addition to these areas, the property includes a number of I.P. anomalies that are yet to be tested plus a large area of unexplored ground.

Other exploration projects of the company include a large copper prospect on Rodonda Island east of Campbell River, two molybdenum prospects in the Alice Arm area near the B.C. Molybdenum Mine, uranium prospects in the Northwest Territories, the Pinchi Fault mercury properties where a \$50,000 program is planned for the 1966 season and the Newfoundland zinc properties where a \$90,000 program is planned for 1966.

With regard to the Texas Gulf Sulphur case the president stated that the trial been set to start Oct. 3, 1966, and that examination for discovery is expected to be completed by the end of May, 1967.

NO. 83 (APRIL 29, 1966)

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MAY 18, 1966

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George Cross News Letter

"Reliable Reporting"

NO.96(1966)
MAY 18, 1966

WESTERN CANADIAN INVESTMENTS

CANADIAN UTILITIES, LIMITED

FIRST QUARTER CASH EARNINGS GAIN 6.8% -- Revenue from sales of electric energy in first
DESPITE HIGHER EXPENSES AND INTEREST quarter of 1966 was 3.8% more than in the like
period of 1965, the report of Canadian Utilities,
Limited shows. This was sufficient to give the company a gain of 6.8% in cash earnings
and a gain of more than 3% in net income after depreciation.

The improvement was made despite the fact that operating expenses and taxes were
higher and the total funded debt interest charge was \$357,546 for the quarter compared
with \$198,076. The higher interest cost reflects the issue and sale of \$12,000,000 in
first mortgage 5 5/8% sinking fund bonds dated June 1, 1965, and due June 1, 1990.

First Quarter	1966	1965
Sales of electric energy	\$3,418,670	\$3,292,575
Operating expenses, taxes:		
Operating	1,247,633	1,118,292
Maintenance	151,110	122,953
Taxes - income	395,279	510,242
Taxes - other than income	113,545	113,485
Depreciation	466,584	412,169
	<u>\$2,374,151</u>	<u>\$2,277,141</u>
Net operating income	1,044,519	1,015,434
Other income	97,559	15,650
	<u>1,142,078</u>	<u>1,031,084</u>
Interest, etc. net	<u>352,839</u>	<u>266,110</u>
NET INCOME	789,239	764,974
Dividends paid on preferred	66,050	66,050
Earned on common shares ...	\$ 723,189	\$ 698,924
Per common share	82¢	81¢
Shares outstanding	877,902	858,918

Canadian Utilities, Limited, serving
areas in Alberta and Yukon with total
population of 167,000, is controlled
by International Utilities Corp. Pub-
lic interest in the common shares has
been increasing somewhat through the
gradual exercise of the conversion
privilege attaching to the 5 3/4%
convertible debentures, Series "A".
During 1965, \$558,500 of debentures
were converted into 22,322 common
shares. The amount outstanding of
these debentures at Dec. 31, 1965, was
\$351,500.

In commenting on the 3.8% increase
in first quarter 1966 operating rev-
enues, J.C. Dale, president, points
out that revenues for the correspond-
ing period of 1965 included \$117,000
from non-recurring emergency sales

to another power company. Excluding such emergency sales, revenues from normal sales of
power in the first quarter of 1966 show an increase of 7.6% over the comparable period
of 1965. Expenses, including provision for depreciation, were up \$97,010, an increase of
4.3%.

The president reports also that the capital construction program for 1966, estimat-
ed to cost over \$9,000,000, is proceeding as planned. Site work is underway on a new
20,000 kilowatt gas turbine generator plant in the Simonette oilfield. This unit is
scheduled for commissioning this coming fall.

DIVIDEND - Great-West Life Assurance Company has declared a quarterly dividend of 22¢
per share payable July 1, record June 15. This repeats the 22¢ per share
distribution made in the preceding quarter, prior to which Great-West Life paid 20¢ per
share quarterly.

CARIBOO-BELL MINES LIMITED

DRILLING PROCEEDING - J.J. Crowhurst, manager and director of Cariboo-Bell Mines Limited,
NEW ESTIMATE SOON has reported that diamond drilling is proceeding on the company's
property near Likely, 60 miles from Williams Lake, B.C., with two
rigs. A percussion drilling rig will be on the property in the next few days. There is
a 25 to 30 man crew on the property working the drills on a three shift basis and
producing between 4,000 and 5,000 feet of core per month. The results of the recent
drilling have been along the lines of the previously announced drilling results.
On April 22, 1966, the company reported 8,400,000 tons of reasonably assured ore
averaging 0.52% copper and approximately 0.02 oz. gold per ton plus 0.04 oz. silver.
Some of the significant results have been the location of similar grade material
in stepout holes well beyond the original test areas.

By the month end, the company expects to have a new ore reserve calculation prepared.
This will include a grade calculation for the gold and silver which are believed to be
of considerable importance.

BURNABY IRON MINES LIMITED

NEGOTIATIONS CONTINUING - Negotiations are continuing for the financing of the next
FOR NEW FINANCING stage of exploration at the Burnaby Iron Mines of Highland-
Bell. The company needs \$900,000 for a shaft, crosscut and diamond drilling.

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93A008

MACMILLAN, BLOEDEL AND POWELL RIVER LIMITED

FURTHER MOVES INTO EUROPEAN MARKET INCLUDE - Further evidence of the declared policy
 PAPER PLANT IN SPAIN, EXPANSION IN HOLLAND to expand its business in Western Europe
 - one of the world's great markets -

is afforded by the announcement that MB&PR will participate in a coated paper plant to be built in Algeciras, across the bay from Gibraltar, in Spain, and that the Netherlands firm in which it has a substantial interest will build a similar plant in Belgium of much larger capacity. Facilities in Holland will be expanded. Altogether, the Vancouver-based company, largest manufacturer of forest products in Canada, which also owns four corrugated container plants in Britain, will participate in new projects involving total expenditures of some \$50,000,000.

The new coated paper plant in Algeciras will involve initially an investment of \$10,500,000 and will have a capacity of 15,000 to 20,000 tons yearly. MB&PR's investment will be 30% of the equity, and a new company will be established to build and operate the plant. Associates in this venture are the Dutch firm in which MB&PR acquired, last October, a substantial interest - Koninklijke Nederlandsche Papierfabriek, and a Barcelona group, Riva Y. Garcia. The Dutch firm (KNP) is a leading supplier of coated and uncoated printing, writing and specialty papers to European Common Market countries.

In announcing the new projects, J.V. Clyne, chairman and chief executive officer of MB&PR, said they represent the second stage of the company's entry into continental Europe.

The expansion plans for KNP, he said, include a new \$25,500,000 coated paper plant at Lanaken, Belgium, and new facilities at KNP's large existing paper complex at Maas-tricht, Holland.

The new mill in Belgium will have annual capacity of 60,000 tons, and the new facilities at Maastricht will be for production of new paper products, and will include a new administration building.

The three-phase program - Spain, Belgium, Holland - calls for expenditures totalling approximately \$50,000,000.

Last fall when MB&PR acquired the KNP interest, Mr. Clyne said its participation in KNP would enable the Dutch company - which already was producing at capacity level - to expand its manufacturing facilities.

CARIBOO-BELL COPPER MINES LIMITED

HIGHLAND-BELL LIMITED

LEITCH GOLD MINES LTD.

FINANCING ARRANGED AND \$300,000 PROGRAM PLANNED FOR NEW COMPANY - Substantial copper bearing zones on the property of
 Cariboo-Bell Copper Mines Limited, new company, will
 be the scene of a follow-up program recommended by
 J.A.C. Ross, P. Eng, consulting mining engineer, estimated at \$300,000. The 160-claim prop-
 erty, located in the Bootjack Lake-Polley Lake area, Cariboo district of B.C., is north-
 east of Williams Lake.

Cariboo-Bell Copper Mines has authorized capital of 3,000,000 shares, no par. Vendors were Mastodon-Highland Bell Mines, wholly owned by Highland Bell Ltd. and Leitch Gold, these two companies dividing equally the 750,000 shares allotted for the claims. Additional consideration was \$50,000 cash and an agreement by the new company to pay all expenses of incorporation and organization. The two vendor companies agreed to buy 200,000 new company shares at 50¢ per share which would be pooled until an underwriting was completed. By prospectus dated Jan. 24, 1966, Brink, Hudson & Lefever Ltd. offer 500,000 Cariboo-Bell shares at 60¢ per share which they acquired by an underwriting agreement at a price of 50¢ per share. The two vendor companies agreed not to sell any shares held or subscribed for by each of them on the public market for 90 days after January 24, 1966, the date the prospectus was accepted for filing.

Directors of Cariboo-Bell are K.J. Springer, J.J. Crowhurst, Frederick Earl Hall, W.A. McElmoyle, R.E. Purvis, R.J. Springer.

The consultant, in a report dated Jan. 7, 1966, says that three of several zones of copper mineralization discovered on the property, were explored by 17 surface trenches located to expose the mineralization at 400-foot intervals. Most important is No. 2 zone which extends for 3,400 ft. with maximum width of 694 ft. In this zone, the central portion, which averages 452 ft. over a strike length of 1,400 ft., assayed 0.356% copper in the form of chalcopyrite and malachite, representing 52,733 tons per vertical foot. The remainder of the zone contains lower grade mineralization. Zone 3 averaged 0.325% copper over a width of 455 ft. for a strike length of 600 ft. Tons per vertical foot amount to 22,750. Zone 1 averaged 0.476% copper over 80 ft. in width for a strike length of 600 ft., indicating 4,000 tons per vertical foot. These 3 zones are not delimited. Other possibilities for similar mineralization exist as indicated by geochemical and geophysical work. Zone 2 is near the crest of a ridge and a low ratio of waste to ore is indicated. Open-pit mining methods could be carried out cheaply. The other zones are similarly located with respect to favorable topography. The mineralogy is simple and copper recovery should be relatively high. Mr. Ross says the areas of copper mineralization are extensive and possess the usual geological features associated with disseminated copper deposits. The location is conducive to low operating costs. He recommends that the company carry out an intensive drilling program to explore the mineralization already trenched and probe other areas considered favorable on basis of geochemistry and geophysics.

Big But Low Grade Copper Bet Intrigues Leitch Gold Interests

VANCOUVER — A huge, low grade copper development is indicated for the Cariboo district of central British Columbia in the formation of Cariboo-Bell Copper Mines Ltd. to acquire 160 contiguous claims, 36 miles northeast of Williams Lake, B.C. The property was staked in 1964 by prospectors employed by Mastodon-Highland Bell Mines and Leitch Gold Mines after geochemical reconnaissance and later detailed geochemical surveys had outlined several anomalous zones.

Mastodon-Highland Bell and Leitch Gold each received \$25,000 cash and 325,000 escrowed shares as vendors of the property. The two companies are also each purchasing 100,000 shares of Cariboo-Bell at 50¢ to provide funds for the immediate program. In addition, 500,000 shares have been underwritten by a Vancouver broker to net the treasury \$250,000.

An induced-polarization survey was conducted over part of the property in 1965 on areas selected largely on the basis of the geochemical results. The claims cover the area between Bootjack Lake and Polley Lake and extend one mile southwestward beyond Bootjack Lake.

During Sept., 1965, two large tractors cut 19 trenches aggregating 21,000 lineal feet on east-west lines spaced at 400-ft. intervals. These were cut across both the geochemical and three of the induced-polarization anomalies. A ripper attachment was used to tear the top 10 to 12 ins. of copper mineralization exposed.

The new company will proceed with an exploration program estimated by J. A. C. Ross, consulting engineer, to cost \$300,000.

The Cariboo-Bell copper claims cover a poorly-exposed plug of granitic rocks, Mr. Ross notes.

Trenching has partially exposed three mineralized zones that trend north-south. In addition to chalcopyrite and malachite, pyrite and magnetite are locally conspicuous. The better-mineralized sections, on assay, have been found to contain 0.02 oz. gold per ton.

Some evidence of leaching is apparent in the trenches and it is considered a good possibility that the grade will improve below the zone of oxidation. The latter is not expected to extend beyond a depth of 50 ft.

Exploration results are given by Mr. Ross as follows:

Zone No.	Length (ft.)	Width (ft.)	Copper (%)	Tons/vt. ft. (indic.)
1	600	80	0.478	4,000
2	1,400	452	0.356	52,733
3	600	455	0.325	22,750

Possible Extension

The deposit is obviously of huge proportions if depth persistence is established. The boundaries of the zones are not as yet defined. The consulting engineer summarizes that Zone No. 1 may be delimited to the north but is open to the south. Zone No. 2 is probably delimited to the south but is open to the north. Zone No. 3 is open in both directions.

Mr. Ross recommends the following program for 1966, stating it is feasible to commence diamond drilling in late February or early March: diamond drilling, 13,000 ft. at \$10 — \$130,000; percussion (or rotary) drilling, 25,000 ft. at \$2.50 — \$62,500; diamond drilling to check percussion-drilling results, 2,700 ft. at \$10 — \$27,000; prospecting, geochemical, and geophysical surveys — \$35,000; trenching by tractors — \$20,000; sampling and assaying — \$10,000; and administration, head-office expense — \$15,500; total \$300,000.

Cariboo-Bell Copper Mines Ltd. was incorporated Dec. 23, 1965, with authorized capital of 3,000,000 shares of a par

See LOW GRADE Page Twenty-Two

Record Earnings For Patino Mining Dividends Higher

Estimated net earnings of \$2,160,000, equivalent to 56¢ per share on the 3,862,000 shares issued at year end, in 1965 set a new record for Patino Mining Corp., E. R. E. Carter, president and managing director, advises. Net profit in 1964 was \$1,976,045, or 54¢ per share.

Gross revenue from metal shipments in 1965 amounted to \$11,788,000 compared with \$11,915,366 in the previous year. Operating profit was \$4,067,000, equal to \$1.05 per share. In the previous year operating profit was \$3,894,751.

Net funds generated from operations and dividends during the year (after

New Cronin Babine Asarco Agreement

VANCOUVER (Staff) — New Cronin Babine Mines has entered an agreement with American Smelting and Refining Co., under which the latter will carry out an exploration program on its Pine Point area claims in the Northwest Territories.

Under the agreement, Asarco will carry out a geophysical survey and test any targets it indicates on the Cronin Babine group of 35 claims to earn a 50% interest in the property. In the event that the property is brought to production, Asarco will provide the necessary funds, to be repaid out of 80% of the profits. Thereafter, profits would be shared on a 50-50 basis.

In addition, Asarco underwrote 100,000 New Cronin Babine shares at 50¢ per share, providing funds with which New Cronin Babine may continue with other exploration projects.

Brunswick Profit Gains In Quarter Tops \$1.50 In 1965

Indicted net profit of Brunswick Mining and Smelting for the final quarter, 1965, was \$3,212,235, or 37.5¢ per share, up from \$2,667,664, or 31.1¢ per share for the preceding quarter. Net profit for the second quarter was equivalent to 35.5¢ per share and for the first three months 47.8¢ per share.

Earnings for the full year came to \$13,042,623, \$1.52 per share. Mine operating profit totalled \$17,224,827 with gross value of production at \$45,050,525. Mine operating costs amounted to \$8,137,321 or an average of \$4.91 per ton on treatment of 4,541 tons per day.

Gross value of production for the December quarter, 1965, was \$11,364,730, an increase of \$624,034 over the previous quarter. Mine operating profit gained \$340,271 to \$4,100,085, while mine operating costs increased by \$95,241 to \$2,157,485, an average of \$5.07 per ton milled.

Tonnage treated during the quarter averaged 4,632 tons per day, up from 4,567 tons for the previous three months.

Operating Results, 1965			
	4th Quart.	12 Mos.	
Tons per day	4,632	4,541	
Mine oper. costs, ton \$	5.07	4.91	
Production:			
Zinc, tons	25,804	103,155	
Lead, tons	9,685	37,712	
Silver, ozs.	554,830	2,264,023	

Detailed Drilling Tests New Concept At Probe Mines

More detailed diamond drilling is to be carried out on the Val d'Or area gold property of Probe Mines in an attempt to outline substantial tonnages of medium grade ore.

Recent work, which is being concentrated at the east end of the property, has already returned numerous gold bearing intersections within a large granodiorite dike. Some of these look decidedly interesting.

The new approach, which follows an independent examination and report by Prof. W. H. Gross of the University of Toronto, could lead to an entirely new

concept of the property's mine-making potential, officials feel.

Distribution of gold within the dike, while widespread, is quite erratic. Actual values appear to be mostly in weak fractures within the granodiorite mass. For example, one of the better core sections was picked up in hole No. 65-13.

See PROBE MINES Page Twenty-Two

Rambler Has Profit In First Full Year

Consolidated Rambler Mines had a net operating profit, before depreciation, taxes and development expenses, of \$626,103 in its first full year of operation, M. J. Boylen, president, advises.

This reflects progressively better results from the Baie Verte, Nfld., mine which began operations in Aug., 1964.

See RAMBLER Page Twenty-Two

93A008 (DE)

FEBRUARY 17TH, 1966

Low Grade Copper

(Continued from Page Seventeen)

value of \$1 each, to acquire the property from Mastodon-Highland Bell Mines and Leitch Gold Mines, which companies had expended approximately \$54,000 in prospecting, geochemistry, surface mapping, magnetometer and induced polarization surveys, followed by trenching. The consideration was \$50,000 cash and 750,000 shares of Cariboo-Bell which have been placed in escrow.

Directors are: K. J. Springer, president; F. E. Hall, vice-president; J. J. Crowhurst, W. A. McElmoyle, R. E. Purvis, and R. J. Springer. The secretary-treasurer, J. D. Munroe, is located at the executive office of the company, 502-1200 W. Pender St., Vancouver 1, B.C.

Brink, Hudson & Lefever Ltd., a Vancouver broker, has underwritten 500,000 shares to net the treasury \$250,000 and Mastodon-Highland Bell and Leitch each have purchased 100,000 shares at 50¢.

K. J. Springer, president of Cariboo-

Bell and one of Canada's best known and successful prospectors and mine operators, comments on the company's project:

"The areas of widespread mineralization, consisting of copper carbonates, copper sulphides and iron sulphides, occur in a geological environment considered favorable for large economic copper orebodies. In fact, the setting is similar to that embracing other large disseminated copper deposits elsewhere in the world such as those in the Highland Valley of B.C. and the Southwestern U.S.A.

"Evidence of surface leaching is present, and good possibilities exist for an increase in grade with depth. Furthermore, the simple association of copper sulphide and iron sulphide minerals in a granitic matrix indicates excellent metallurgical recoveries."

Gen Explorations Gets Claims At Pine Point

Gen Explorations has acquired three claims at Pine Point.

To calculate an indicated possible body of 25,000,000 tons with an average grade of 0.155% MoS₂. With the exception of drill hole No. 5, which was located 1,800 ft. to the northwest of No. 1, the holes have given progressively better intersections in

GCNL #142 24 JULY 1984
 MASCOT GOLD MINES LIMITED (MSG-V,T)

CAMPBELL RESOURCES INC. (CCH-V,T,M,NY)

ROYEX GOLD MINING CORP. (RGM-T & London)

Zone	Hole Number	Depth Ft.	Interval Ft.	Gold Oz/Ton
Sunnyside	110	188.3-227.0	38.7	0.470
250 Zone	2909	1.5- 67.0	65.5	2.029
	2908	130.0-132.7	2.7	3.281
Silverside Zone	104	0.0- 34.6	34.6	0.253
		45.3- 57.0	11.7	0.266
	105	33.0- 59.0	26.0	0.200
		72.8- 80.0	7.2	0.091
	108	50.0- 51.0	1.0	1.650
		125.0-145.0	20.0	0.134
	109	194.0-202.0	8.0	0.153
Sunnyside	2904	46.0- 51.5	5.5	0.181
No.1 Zone	2905	45.0- 53.3	8.3	0.123

ACQUISITION COMPLETES CREATION OF
 GOLD MINE EXPLORATION DIVISION

Richard L. Lister, president of Campbell Resources Inc. made a presentation to a group of representatives of the mining and investment industry in Vancouver, B.C. following the amalgamation meeting of Mascot Gold Mines Limited and Ebex Resources Ltd. -E & B Explorations Limited Partnership. He told the meeting that Campbell Resources Inc. with its \$350,000,000 in assets is very good at mining metals and coal as well as finding and producing oil and gas. Campbell has not been good at finding gold, therefore the company sought a relationship with an entrepreneurial group good at locating gold reserves. The result is the Mascot Gold/E & B amalgamation and

funding. When the program now underway is completed Campbell Resources will continue to hold a 51% interest in Royex Gold Mining and Royex Gold will hold 51% of Mascot Gold.

Mascot Gold Mines Limited has five main projects: Nickel Plate gold property at Hedley, B.C., 100% owned; Bralorne gold property, 20% interest, plus an option to increase this interest to 60%; Sterling heap leach project, Nevada 10.4% interest; El Plomo heap leach project, Colorado; Cariboo Bell huge tonnage copper gold project, Williams Lake, B.C.; Mica lead zinc project, Mica, B.C. and 40 other projects. At the Nickel Plate reserves are at 498,000 tons grading 0.288 oz.gold/t, 140,000 oz.gold. In addition there are the targets in other zones indicated by the drill hole intersection shown in the table above.

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WILKINSON NOV 1983

Imperial Metals expanding after E&B merger

Take a youthful growing company with an experienced management team and a history of widespread participation in joint ventures, and combine it with an international company with similar aspirations, assets and abilities, and a promising result is virtually assured. Such a description could easily be applied to the takeover by Imperial

Metals of E&B Canada Resources Ltd in May 1983

E & B Canada Resources Ltd, Calgary, Alberta, was the largest of the three companies in the E & B group. These companies had common shareholders and also shared a connection with Sedimex. Sedimex GmbH, a West German corporation, acts in Europe as

the German general partner for the Geomex group of limited partnership drilling funds. The Geomex funds, 14 exploration and development funds originated by Sedimex, were managed by the three E & B companies. Any company or companies in combination with each other or their subsidiaries participated in ventures utilizing these funds

Each of the E & B companies has evolved along a unique path. The decision to join Imperial Metals is the latest stage in the evolution of E & B Canada Resources Ltd. Public company status and access to Canadian funds was a desirable step for E & B. Careful planning and the right opportunity were also important.

Imperial Metals Corporation combines the assets and income of several predecessor companies. These companies were drawn together through the efforts of Invox Resources Limited between 1978 and 1981.

A steady building process is illustrated by the chronology of events which led to the formation of Imperial Metals Corporation. Invox Resources Ltd, incorporated 16 Feb 1978 acquired 100% of Resourcex Ltd in Jan 1979. It also acquired voting control of Imperial Metals and Power Ltd and Western Rolling Hills Mines and Oils Ltd during the spring and summer of 1979. Invox and Western amalgamated in September 1980 and Invox changed its name to Invox Resources Limited.

Both Imperial Metals and E & B Resources Canada have legacies of extensive participation in joint ventures with other companies and individuals, both as financiers and as operators. Partners range from multi-national corporations to individual prospectors. The formation of a link between West German financed limited partnerships and access to the Canadian capital market was desirable also.

In January 1983 Imperial Metals entered into negotiations with the principal shareholders and directors of E & B Canada Resources Ltd with a view to combining E & B with Imperial by means of an exchange of Imperial shares for E & B shares. Agreement was reached in March and the transaction was concluded 26 May 1983.

Imperial issued 3.3-million common shares and 1-million 6% convertible preferred shares converting into an additional 4-million common shares in return for 100% of the issued E & B common shares.

NEW CORPORATE STRUCTURE

A new corporate structure was set up. Imperial Metals is an operating mineral resource company which also functions through several wholly-owned subsidiaries, prominent among which is E & B Canada Resources Ltd. That company in turn operates through two subsidiary companies — E & B Mines Ltd for its own account and E & B Explorations Ltd as general partner for the Geomex I, II, III, IV, V and IX limited partnerships have interests in over 150 separate mineral properties, and have liquid financial assets of approximately \$16-million. E & B's net participating interest in each of the Geomex funds differs, but averages 36% over-all.

Diversity is the key to the future of Imperial Metals. In addition to its affiliation with E & B, Imperial Metals has controlling interests in two Vancouver public companies, Mintek Resources and Circa Resources, and substantial interests in several other listed companies. The corporation is now involved in almost all aspects of the mineral resource industry.

The company's holdings are widespread and varied; more than 3 million acres of joint ventured mineral lands. Oil and gas production in Alberta and Texas provide Imperial Metals with half of its cash flow. Coal in BC and

Alberta (See CM March 83) is also important.

Large uranium acreages in Saskatchewan, BC and the US were inherited from E & B. The company has an interest in reserves at Dawn Lake and Waterbury Lake, Saskatchewan. The company also has an interest in the Blizzard property which has drill-indicated mineral reserves of 4.5-million kilograms.

In 1983 geophysical and geochemical studies were undertaken at two properties in which Imperial Metals has an interest, the Anyox area and Vancouver Island. Early results from the Vancouver Island property suggest the area is favourable for hosting volcanogenic massive sulphide deposits. Detailed ground investigation is underway and drilling of the property is planned for 1983 or early 1984.

The company has interests in precious metal properties at all stages of development. Among these is the Cariboo Bell copper gold property southwest of Quesnel, BC and the Bralorne gold mine, Bralorne, BC. Preparations for commercial production are underway at El Florio, a Colorado gold property in which the company has an interest.

When the infrastructures of two companies integrate, their ability to blend into an effective new team is an

important concern. Imperial Metals appears to have met this challenge successfully. Five staff geologists serve the corporation's exploration needs around the world. The management team and support staff work together closely charting the company's future.

Dr Hugh Morris, chairman of the board and chief executive officer, brings a blend of technical and managerial expertise, gained during twenty years with Cominco, to the company. He has served on the boards of directors for each of the original E & B group and for Feomex, the Canadian arm of the Sedimex Group. Alan Savage, the company's president, has a creative background in mining finance which is evident in the evolution of Imperial Metals.

The new Imperial Metals holds a portfolio of resource, investment and financial assets who's diversity rival that of many larger companies. Such a combination of property and personnel, essential catalysts in any successful venture, make Imperial Metals a company to watch.

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N MINER 17 MARCH 1983

Highland-Crow plans active year

Highland-Crow Resources is planning an active year in mineral exploration in Canada and the United States. With a working capital of \$244,163 at its Sept. 30, 1982, fiscal year-end, the company sees itself in a good financial position to pursue drilling programs on at least two properties.

The company generated revenue of \$130,526 in fiscal 1982, of which \$106,600 came from producing oil and gas interests, but after expenses and write offs, there was a net loss of \$1,125,378. In the previous fiscal year, a loss of \$232,213 was sustained on revenue totalling \$105,017.

On Sept. 30, Highland-Crow completed an amending agreement with **E & B Explorations** on the **Cariboo-Bell copper-gold property in British Columbia**. The company sold its working interest in the property to E & B and simultaneously increased its net profit interest from 15% to 22%. E & B paid \$300,000 cash to Highland-Crow and is required to make further cash payments totalling \$225,000 in 1983-84.

E & B conducted further drilling and surface exploration at Cariboo-Bell in 1982, enhancing the gold value of the proven copper-gold deposit there. "It is now felt that the deposit contains 82 million tons of proven minable reserves and that the better gold mineralization will result in a higher average grade," Highland-Crow's president, Gordon A. Keevil, states in his company's annual report. E & B will continue its program in 1983.

Jointly with **Copperfields Mining Corp.**, Highland-Crow has been drill-testing the Golden Rose property northeast of Sudbury, Ont. Four holes drilled in November-December all intersected gold values along a zone, the dimensions of which are to be probed further this year. The two companies are also teamed up 50-50 on a silver prospect northwest of Cobalt, Ont. To fully test the 75-claim group, extensive further drilling is required, and to

this end, joint venture capital is to be sought.

Highland-Crow has also been doing some rotary drilling on a gold bet known as the Golden Cross property in southeastern California. The 1982 program confirmed the presence of gold mineralization but did not increase the area previously defined by surface sampling. Additional drilling is contemplated.

The company has interests in a number of other properties, for which exploration plans have been drawn up. In addition, it retains a stake in the Beacon gold property being worked by **D'Or Val Mines**; in the event of production, Highland-Crow is entitled to a 20% net profit interest or 4% of net smelter returns, whichever is greater.

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NEW PUBLIC FUNDING SOUGHT - Gordon A. Keevil president of Highland-Crow Resources Ltd.
) CONTINUE EXPLORATION has reported that the company plans a public offering through the Vancouver Stock Exchange with the proceeds for further exploration. In the six months ended March 31, 1982 the company received \$63,305 as petroleum royalties, \$97,308 as interest income for a total of \$160,613 and spent \$189,972 on exploration and administration for a loss of \$29,359. The working capital deficit at March 31, 1982 was \$50,191.

In 1982 exploration will continue on the sedimentary gold program that has been conducted in north central Ontario for the past two years. Field studies will concentrate on two properties, one near Elliot Lake, and one in Shakespeare township where mineralization has been discovered in a favourable sedimentary environment. Highland-Crow has a 31% working interest and is the operator of the program.

The company will continue exploration on the Island Lake property where several zones of copper mineralization are present within a large hydrothermally disturbed area. Exploration will include surface trenching, detailed geology and geophysics in preparation for diamond drilling.

The company also has a 33.3% working interest in a regional geochemical program in Ontario that was started in 1981 in search of silver-base metal mineralization. Five anomalies were delineated as the result of this initial program. These anomalies will be followed up during 1982.

Exploration will also be conducted on the Golden Rose Mine, Ontario which produced 40,000 tons of 0.32 oz. gold per ton between 1936 and 1941, and has been idle since 1941. The work will include detailed geology, bulk sampling of outcrop exposures of the mineralized horizon and perhaps diamond drilling.

E & B Explorations has committed to spend \$650,000 on the company's Cariboo-Bell copper-gold prospect during 1982. This work will include diamond drilling and metallurgical studies.

Esso Minerals and D'Or Val Mines are continuing exploration on the Beacon gold property near Val D'Or, Quebec. Recent announcements have indicated that the Beacon No.2 Leroy zone is continuing to develop favourably and that Esso intends to continue work.

THE NORTHERN MINER October 14, 1982

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E & B contemplates decision on Bralorne

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VANCOUVER - E & B Explorations says the recently completed feasibility study on the Bralorne gold project "is now undergoing detailed assessment" and is examining all possible methods of financing the project to production.

Several companies, both large and small, are reported to be interested in participating as well. E & B admits that although discussions have been held with a number of banks and financial institutions, no financial arrangement is expected until early 1983.

Since beginning the work program on the property in July 1980 the company has spent \$6 million, mainly on underground rehabilitation, exploratory drilling and feasibility studies. And this was done in close co-operation with Geomex Development of Denver and Bralorne Resources of Calgary. E & B adds that "the findings and recommendations contained in the feasibility study have been very encouraging," especially with gold prices on the rise.

Company president, Henry G. Ewanchuk, claims that in three years of operation E & B has been one of the more active mineral

exploration firms in Canada, noting that since 1979 \$22.5 million has been spent on exploration projects under its control.

Most of E & B's exploration dollars are funnelled in from West German investors through drilling funds which offer a combination of tax advantages and capital gains, says the company.

High on E & B's list of mineral properties is the Cariboo-Bell located in the Cariboo region of B.C. - a joint venture with Highland-Crow Resources (38.7% Teck Corp.). By the end of 1981 E & B had spent \$500,000 of the \$1.7 million committed for payments and exploration work there prior to 1984. Mineral reserves, which are quoted in copper equivalent and include some gold, are 81 million tons grading 0.487% copper.

Further evaluatory work and a bulk sampling program will be necessary on the property.

Described as a "promising new venture," E & B has taken an option on the New Pass gold property in central Nevada. For expenditures of \$US410,000 it will obtain a 66.7% interest in the prospect which has already produced 25,000 oz. gold

from three main veins.

In central Colorado, E & B can earn a 50% undivided interest in the El Plomo gold property for \$US1.8 million in expenditures by August 1983. A reserve tonnage of 1.09 million tons grading 0.057 oz. gold has been located in two separate zones and the material may be amenable to heap leaching.

A metallurgical evaluation is currently under way involving approximately 3,000 tons of ore-grade material from the El Plomo deposits and hauling it six miles to the plant site to determine gold recoveries. The program should continue until late November, with E & B acting as operator.

A final production decision, however, isn't expected until early 1983 and will be dependent on conditions at that time.

Meanwhile, at the Sterling gold mine in Nye County, Nev., where E & B is heading up a joint venture, the company reports approximately 9,300 oz. gold was recovered in 1981 and both mining and leaching activities were expanded. The recent surge in precious metal prices will undoubtedly enhance this project further.

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YEAR ENDED 30 SEPTEMBER	1981	1980
Petroleum Revenue, Net	\$ 23,714	\$ 19,190
Interest, Other Income	81,303	128,601
Total Revenue	<u>\$105,017</u>	<u>\$147,791</u>
Petroleum Operating Costs	3,854	1,592
Exploration Costs: Mining	175,280	820
Petroleum	74,104	102,595
Admin. General Expense	141,581	53,824
Depreciation, Amortiz'n	10,411	8,448
Income Tax Recovery	<u>68,000</u>	<u>12,000</u>
Loss Bef. Extra. Item	<u>232,213</u>	<u>7,488</u>
Extraordinary Item:	-	<u>20,692</u>
Net Loss	<u>232,213</u>	<u>28,180</u>
Loss Per Share	10¢	1¢
Working Capital (Deficit)	\$174,388	\$827,438
Shares Outstanding	2,412,609	2,412,609

OIL/GAS AND MINERAL
ACTIVITIES REVIEWED

In their fiscal year ended 30 Sep 81, Highland-Crow Resources Ltd. expanded their oil and gas and mineral activities. In mineral exploration, the company continued to combine grass roots regional exploration and property evaluation. Development work continued on a number of the company's existing mineral properties with special emphasis on the Cariboo-Bell copper property in B.C., where E & B Explorations are working under an option agreement with Highland-Crow, and on the Beacon property in Quebec where D'Or Val Mines Ltd. have continued developing the gold deposits in recent months in association with Essc Minerals. In the oil and gas sector, the company have concentrated on low risk development programs in the United States to generate an immediate cash flow with which to expand the company's exposure in the U.S. in both mining and oil and gas.

In reporting this, president Gordon A. Keevil indicates that, in the near future, most of the company's mineral exploration will be conducted in Ontario and Quebec where the company has recently been involved in a number of regional and property projects. The company's Golden Cross property in S E California will also be explored as soon as the land situation has been clarified by the Bureau of Land Management. Cash flow from mining operations will be derived from the Beacon property being developed by D'Or Val and Esso and potentially from the Golden Cross and Golden Rose properties were old mining operations have defined relatively productive gold reserves. Mr. Keevil feels that the Cariboo-Bell property could soon develop into a significant ore deposit and an important long term asset.

Mr. Keevil says management are looking forward to 1982 which will see a dramatic increase in cash flow from recent oil and gas exploration and a continuation of positive developments on several mineral properties.

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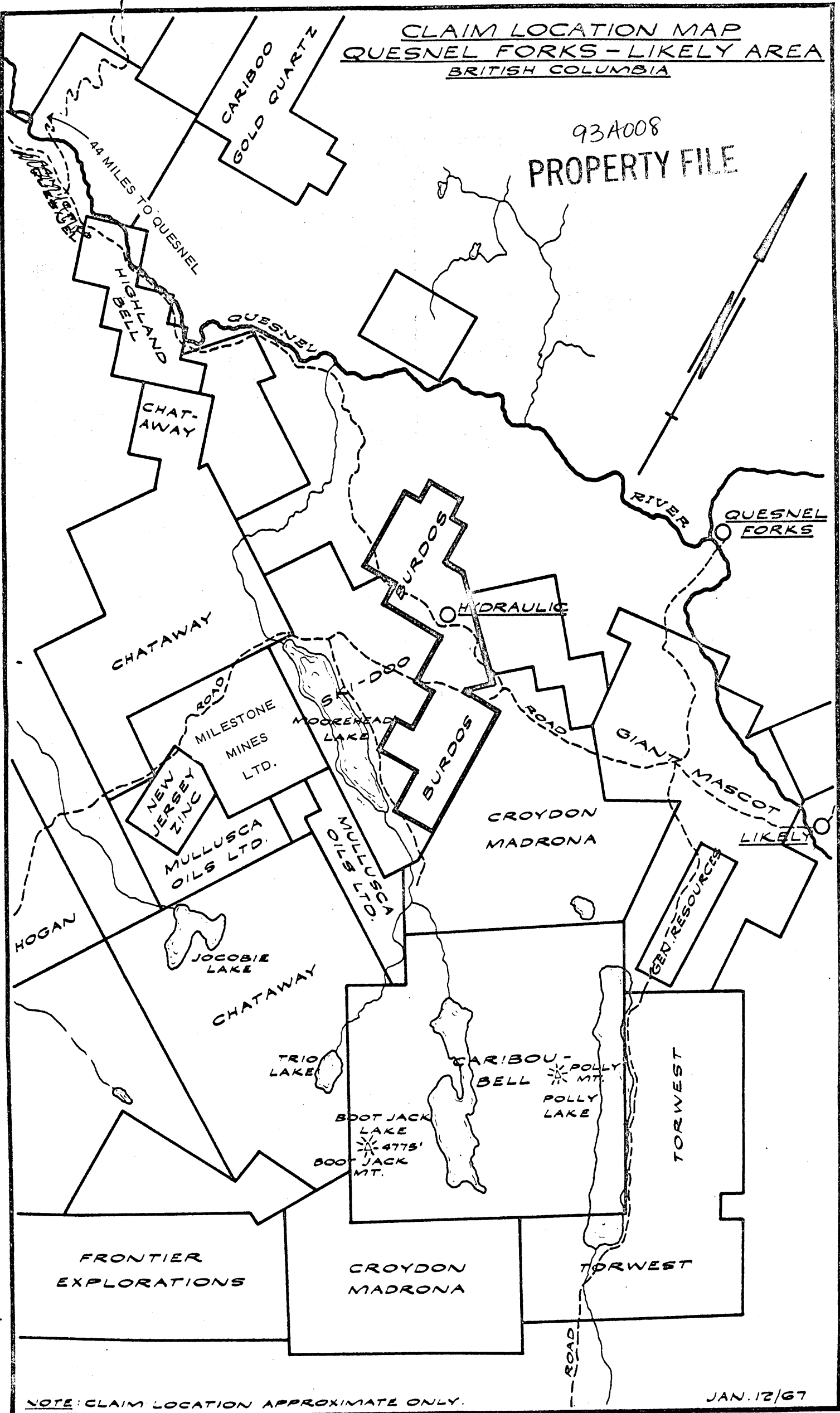
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E & B Explorations, a private mining concern, has agreed to spend \$1.5 million over the next three years to evaluate the Cariboo-Bell copper property in central British Columbia owned by **Highland-Crow Resources**.

In return for the \$1.5 million spending and \$200,000 in supplementary payments to Highland-Crow by the end of 1983 E & B will earn a 50% working interest in the property. Highland Crow is about 40% owned by Teck Corp.

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CLAIM LOCATION MAP
QUESNEL FORKS - LIKELY AREA
BRITISH COLUMBIA

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PROPERTY FILE



NOTE: CLAIM LOCATION APPROXIMATE ONLY.

JAN. 12/67