

824179

A

SUMMARY REPORT

on the

COPPER MOUNTAIN PROPERTY

GREENWOOD MINING DISTRICT

N.T.S. 82E/2W

49° 08' N.

118° 48' W.

by

ALEXANDER J. BORONOWSKI, B.Sc., F.G.A.C.

July 15, 1990.

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MINFILE DATA & MAPS

- Minfile Report No. 082ESE053 - BIG COPPER, COPPER MINE
- Minfile Report No. 082ESE054 - KING SOLOMON, COPPER QUEEN
- Mineral Inventory Map - 82E/SE (M1) - 1 inch = 2 miles.

AIRBORNE MAGNETIC SURVEY MAPS

- Airborne Magnetic Survey-Penticton, Map 7686G, 1 inch.=4miles
- Airborne Magnetic Survey-Greenwood, Map 8497G, 1 inch.=4miles
- Aeromagnetic and Scintillometer Survey of Bodie Mountain Quadrangle, Okanogan and Ferry Counties, Washington, R.I.20, 1:62,500

GEOLOGY MAPS

- Kettle River (East Half), Map 6-1957, geology by H.W. Little, 1 inch = 4 miles.
- Greenwood, Map 10-1967, geology by J.W.H. Monger, 1 inch = 1 mile.
- Penticton, Map 1736, geology by D. Tempelman-Kluit, 1:250,000.

TOPOGRAPHICAL MAP

- Greenwood, 82 E/2, 1:50,000

COMPILATION MAP OF THE ASSESSMENT REPORT DATA; MISCELLANEOUS DATA

- Compilation of diamond drilling, geophysics, structural interpretation, Assessment Map 8823,

SUMMARY

The following points summarize the important features of the Copper Mountain property, which indicate the potential of the property for hosting an economic epithermal gold deposit and associated skarn mineralization.

1. The Copper Mountain property is spatially associated with a major northeasterly trending graben fault zone and a coincident magnetically anomalous trend. The Crown Jewel, a gold skarn deposit being developed by Battle Mountain at Buckhorn Mt., Washington, is located only 812 miles southwestward along this trend. As of January 1990 the Crown Jewel's geologic ore reserve is an uncut 7.4 million tons averaging 0.103 opt.gold. The Midway property which is being explored by Minnova for an epithermal-type gold deposit is adjacent to the Copper Mountain property and along the same magnetic trend.
2. The northeasterly trending Republic Graben system is developing into a prominent gold mining province. Two types of deposits have been identified within the province:
 1. *Epithermal gold deposits*
 - Recently, Echo Bay has commenced production on their Kettle and Overlook deposits with a combined reserve in excess of 3.9 million tons of ore averaging 0.189 opt. gold. Hecla's Republic Mine has produced in excess of 2.5 million ounces of gold. These deposits are classified by the companies as epithermal deposits.
 2. *Gold skarn deposits*
 - Past production from skarn deposits in the Greenwood Camp has yielded gold as a byproduct of the copper mining. The Phoenix mine has produced in excess of 1 million ounces gold (30,225 kg.) from a single large skarn deposit. Although these skarns were significant producers, the distribution of the gold in relation to skarn alteration and lithology is poorly understood. I would like to suggest that the gold mineralization is related to the Eocene age intrusive and volcanic activity.

3. The Copper Mountain property has a past production history from skarn deposits.

Big Copper, Copper Mine

2,431 tons averaging 3.22% Cu, 0.56 opt. Ag, no credit was received for the gold but statistics for the Greenwood Camp (1% copper yields approximately 0.04 opt. gold) suggests that the grade was approximately 0.120 opt. gold.

King Solomon, Copper Queen

1,375 tons averaging 4.74% Cu, 1.24 opt. Ag, 0.183 opt. Au.

The economically favourable sharpstone conglomerate and Brooklyn limestones which host the significant skarn mineralization in the Greenwood Camp are not widely distributed. The Copper Mountain property is underlain by these favourable formations and therefore may represent an area which has depositional, structural, and ore controlling features similar to those at the Greenwood Camp. To date, all of the mineralization discovered on the Copper Mountain property occurs within the Upper Limestone unit. Therefore, the highly prospective Lower Limestone unit has been essentially unexplored.

4. The Copper Mountain property may have epithermal gold mineralization as indicated by a petrographic study of a mineralized sample and by DDH 77-1 which tested an I.P. anomaly with a surface expression of approximately 300 metres by 100 metres. The diamond drill hole conclusions stated that *"the 100 metres of pyrite-bearing rocks, together with the two samples with significant values of gold, one of which contains significant zinc, indicate that the rocks intersected at the bottom of DDH 77-1 are within part of a sulphide system of some magnitude"*. The drill hole intersected a Tertiary dyke swarm, then the pyritiferous zone which yielded two significant intersections of which one assayed 0.31 opt. Au. 3.16% Zn, and the other intersection assayed 3550 ppb gold, and then bottomed in 125 metres of Tertiary dyke. The I.P. anomaly was explained by the pyrite and graphite in the cherty rocks. Follow-up testing of this drill hole or the remaining I.P. anomalies has not been conducted. A petrographic study of a mineralized sample identified copper sulphides within the central portion of a second set of quartz veinlets. Certainly, this information suggests strongly the presence of an epithermal-type system.

4. To date, exploration has defined a core area of interest measuring 1400 metres by 1400 metres. This core area contains the past production, several geophysical anomalies, favourable rock types and structures, and indications of epithermal-type mineralization such as veined fluorite and gold assays within a pyritiferous zone. The volume of rock underlying the IP anomaly tested by DDH 77-1 to 100 metres depth represents approximately 8 million tonnes of material. Therefore, the core area has the potential of hosting a large epithermal gold deposit.
5. Previous exploration programs on the Copper Mountain property have been designed to explore for relatively small high-grade copper skarn deposits. The search for these type of deposits have very strict lithological controls. I propose a program designed to continue this search but also view the results for indicating an epithermal gold deposit. Briefly, the program would include:
 - Establishing a grid at 100 metre spacing over the eastern portion of the property.
 - Geological mapping and sampling of mineralized zones along northeasterly trending (graben) faults and their cross cutting related faults.
 - Conducting a magnetic survey. Both epithermal and skarn deposits have magnetic signatures. No magnetic survey data has been filed for assessment.
 - Conducting an I.P. chargeability and resistivity survey over select portions of the grid. Only a small portion of the property has been tested by a deep looking I.P. survey.
 - Geochemical soil sampling on the grid at 50 metre intervals and 100 metre line spacing. No geochemical survey data has been file for assessment.
 - Backhoe trenching of delineated targets and follow-up geochemical soil and rock sampling of target areas.
 - A 6,000 ft. NQ size diamond drilling program to test anomalous zones and follow up the significant intersection in diamond drill hole 77-1.

GENERAL

The Copper Mountain property, 8 km northwest of Greenwood, is underlain by high-grade copper, silver, gold skarn mineralization hosted in limestones. The deposits occur within the Middle and Lower Triassic(?) age Brooklyn Limestone and Sharpstone Conglomerates. These units are underlain by Carboniferous or older rocks of the Anarchist Group and Carboniferous or Permian age rocks of the Knob Hill Group. This sequence of rocks have been intruded by the Middle Jurassic Nelson plutonic rocks. This entire package was then intruded and are overlain unconformably by volcanic flows of Eocene age. The Eocene age intrusive and volcanic activity is related to a major tectonic event which can be traced from the Chalis Group in Idaho along the Lewis-Clark fault zone to the Hozameen fault zone and then along the Yalakom fault zone. The Republic Graben is related to this extensional tectonic event.

The targets on the Copper Mountain property are the high-grade skarn deposits such as occurring in the remainder of the Greenwood Camp and at the Crown Jewel property and epithermal gold deposits such as found at Echo Bay's Kettle and Overlook (Key) Mines and Hecla's Republic Mine. A common feature in the epithermal deposits in Nevada is for skarn-type mineralization to occur within the epithermal system when limy rocks or limestones are present. In fact, this high-grade ore often sweetens the mill feed and if mined early in the life of a deposit can reduce the pay-back period considerably.

The geology and skarn mineralization at the Greenwood Camp and the Copper Mountain property are very comparable.

- Both host the skarn deposits within the Brooklyn Limestones. These limestones were deposited within very restricted deep basins.
- Both areas contain the Rawhide shale, which only occurs locally at the Phoenix Pit as a lens 400 feet thick and extending for 2,000 feet southeast of the pit. Probably, the Rawhide shale was deposited within a deep graben generated? basins. The Sharpstone Conglomerates, which lie unconformably above the Rawhide shale may have been deposited as a result of tectonic activity along the scarp faults of the graben structures.
- Both areas are intruded by Tertiary age dykes. The Phoenix camp reports the presence of palaskite and augite porphyrite dykes, while at the Copper Mountain property the dykes are collectively named the Tertiary dykes.

- Both contain similar mineralization. The Phoenix Mine reports that chalcopyrite with pyrite and hematite occurs in a garnet-epidote-calcite-quartz-chlorite gangue in the limy rocks and to a lesser extent in massive magnetite lenses. Gold and silver occur in solid solution and as minute blebs in pyrite and chalcopyrite grains.
- Both areas have comparable metal ratios. The following production figures demonstrates that approximately 0.04 opt.gold occurs with every one percent of copper.

Copper Mountain property

Big Copper, Copper Mine

2,431 tons averaging 3.22% Cu, 0.56 opt. Ag, no credit was received for the gold but statistics for the Greenwood Camp (1% copper yields approximately 0.04 opt. gold) suggest that the grade was approximately 0.120 opt. gold.

King Solomon, Copper Queen

1,375 tons averaging 4.74% Cu, 1.24 opt.Ag, 0.183 opt.Au.

Greenwood property

Phoenix Mine

25 M. (million) tons averaging 1.0% Cu, 0.043 opt.Au.

Motherlode Mine

3.8 M. tons averaging 1.14% Cu, 0.044 opt. Au.

- Both areas may have features which are epithermally derived. The Knob Hill deposit of the Phoenix Mine reports two lenses of ore occurring in *jasperoid* and limestone of the Brooklyn Formation and siliceous rocks of the Knob Hill Group. Drill hole 77-1 encountered 60 metres of pyritiferous cherts with significant gold intercepts. Assessment report (A.R.) 2453 states that a quartz-filled breccia located within 100 metres of the property contains fluorite, which is further evidence of hydrothermal activity in the area. As well, a petrographic study of a hand specimen described in A.R. 6436 indicated that chalcopyrite grains occur within a second vein set mainly in quartz in the central parts of the vein.

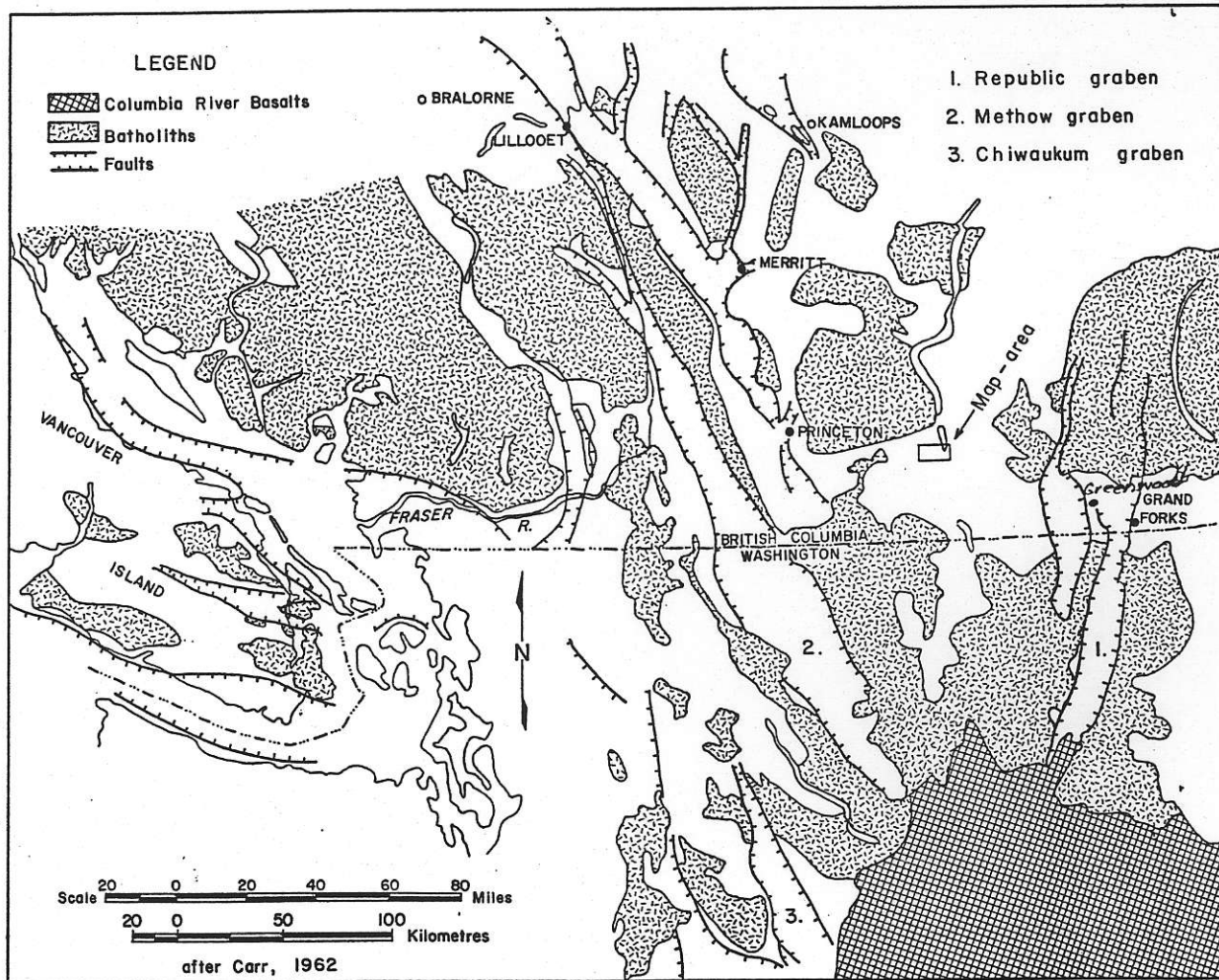


Figure 1. Grabens of southwestern British Columbia and northern Washington State, after Carr, 1962.

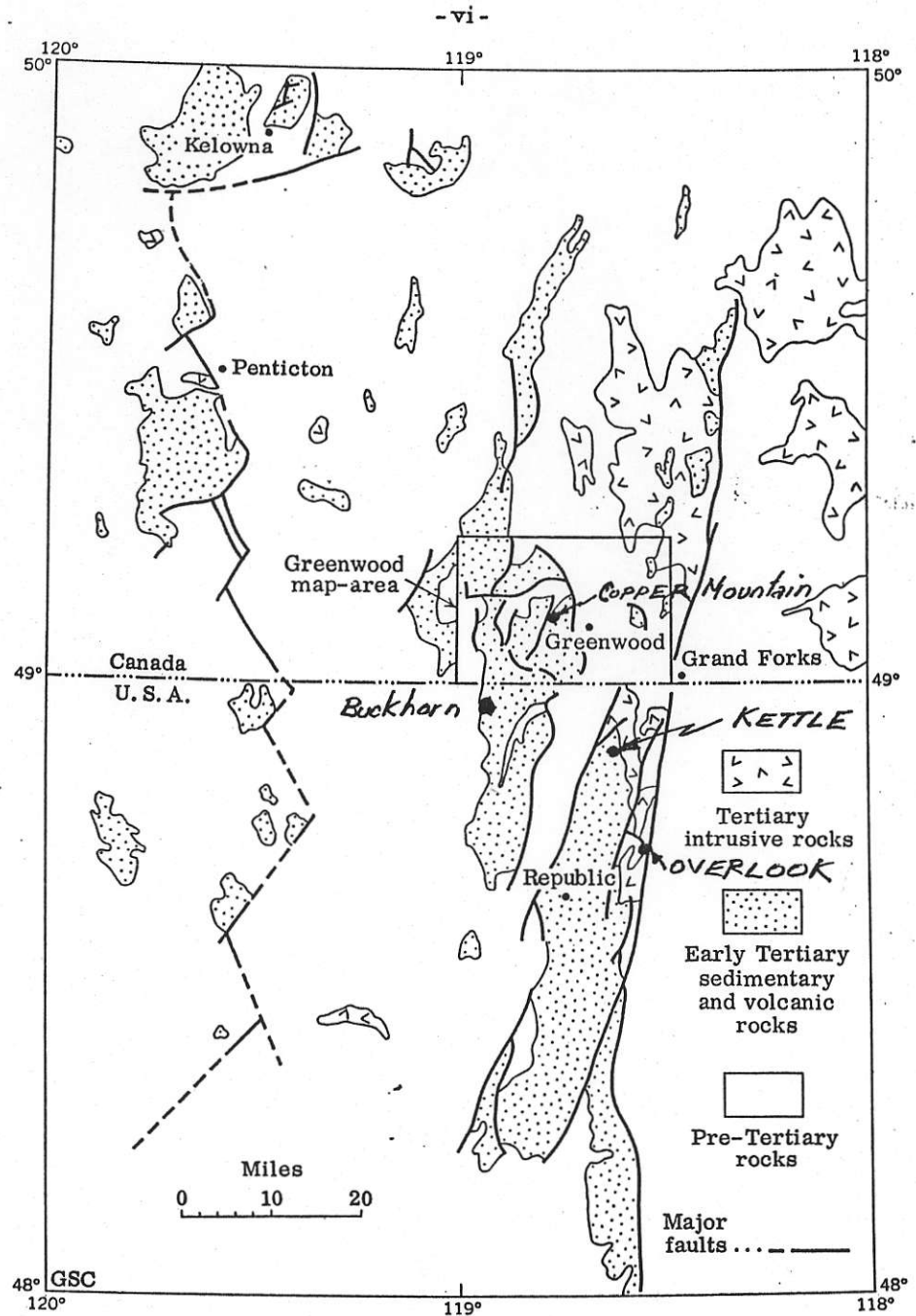


Figure 2. Distribution of early Tertiary rocks in parts of south-central British Columbia and northern Washington

LOCATION OF
 COPPER Mt. Property
 Buckhorn deposit
 Kettle Mine
 OVERLOOK MINE
 REPUBLIC MINE

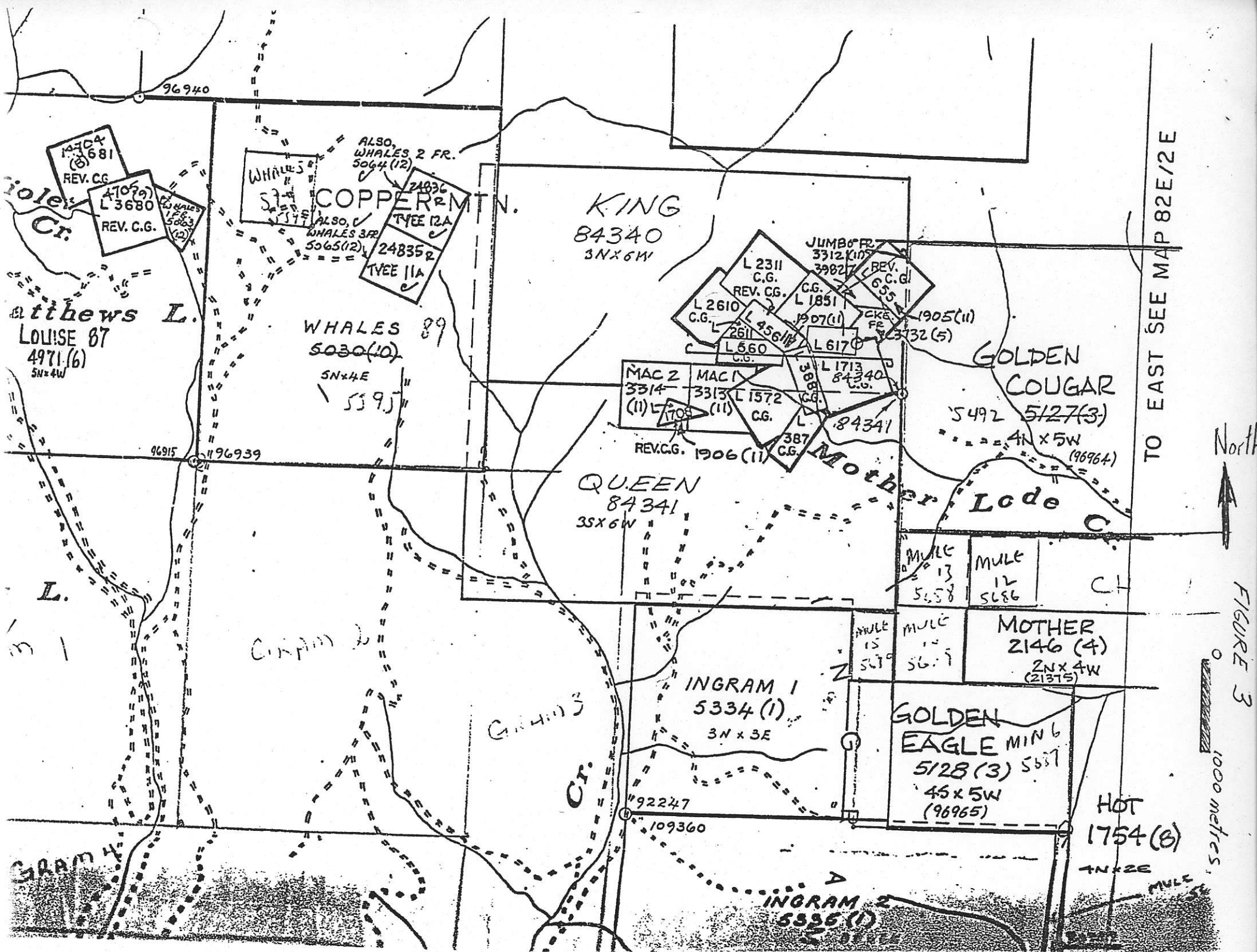


FIGURE 3

TO EAST SEE MAP 82E/2E

PROPERTY TENURE

The ownership and tenure data for the Copper Mountain property is as follows:

ALEX BORONOWSKI

NAME	UNITS	RECORD #	RECORD DATE	DUE DATE	AREA(Ha.)
KING	18	5858	APRIL 4/90	APRIL 4/91	450
QUEEN	18	5859	APRIL 4/90	APRIL 4/91	450

Mrs. M. McARTHUR

NAME	UNITS	RECORD #	RECORD DATE	DUE DATE	AREA(Ha.)
MAC 1	1	3313		NOV. 12/90	25
MAC 2	1	3314		NOV. 12/90	25

REVERTED CROWN GRANTS

JUMBO FR.		3312		NOV. 12/90	
CKE		3732		MAY 18/90 (CASH-IN-LIEU)	
JUMBO (RCG. 655)		1905		NOV. 20/90	
COPPERMINE (RCG. 456)		1907		NOV. 20/90	
COMMANDER FR. (RCG. 1708)		1906		NOV. 20/90	

CROWN GRANTS

COPPER KING	LOT 1713	TAXES DUE
ENTERPRISE	LOT 617	TAXES DUE
HONOLULU	LOT 1572	TAXES DUE

*MESSRS. K. & D. SANDNER*CROWN GRANTS

UTE FR.	LOT 2611	TAXES DUE
INDEPENDENCE	LOT 2311	TAXES DUE
LAST CHANCE	LOT 560	TAXES DUE
MAGNOLIA	LOT 1851	TAXES DUE

*MESSRS. E. & W. ROBERTS*CROWN GRANTS

COPPER QUEEN	LOT 387	TAXES DUE
KING SOLOMON	LOT 388	TAXES DUE

*MR. P. HEALY*CROWN GRANTS

WHITE HORSE	LOT 2610	TAXES DUE
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PREVIOUS WORK AND IMPLICATIONS

The following information has been compiled from assessment reports and the bibliographies listed on Minfile Reports 082ESE053 & 054. Information obtained directly from other sources will be in *italic* form in this section.

- 1894 *B.C. Dept. of Mines reported that an 18 ft. shaft and a 40 ft. tunnel had been developed on the Copper Mine. Mineralized widths are reported to have been 40 ft. at the Copper Mine showing and 26 ft. at the King Solomon showing in which grades are reported to have ranged between 15% and 20% copper.*
- 1901-02 *The B.C. Dept. of Mines report 850 tons of ore shipped in 1901 and "about 1,000 tons" in 1902.*
- 1903-17 *Tunnelling (probably amounting to three or four hundred feet), shaft sinking (tens of feet), and mining of a few thousand tons of oxidized copper ore from the Upper Brooklyn limestone.*
- 1917 *The King Solomon and Big Copper (Copper Mine) shipped 950 tons of ore.*
- 1950 *Mr. W.E. McArthur conducted a program of strip trenching and diamond drilling.*
- 1953-54 *Mr. W.E. McArthur conducted a program of trenching and diamond drilling on King Solomon and Copper Mine claims. Two carloads of ore were shipped to the Tacoma Smelter.*
- 1954 *Noranda tested for the extension of the roughly-conformable mineralized zone passing through the King Solomon and Copper Queen claims. A total of four holes? were drilled. Information may be available from Noranda.*
- 1955 *Consolidated Mining & Smelting Company (Cominco Ltd.) drill tested for the extension of this conformable orebody with another four diamond drill holes. Low-grade mineralization in limestone was encountered. More information may be available from Cominco Limited. Of particular interest would be an indication of epithermal vein system in the tested area.*

1967

McIntyre Porcupine Mines conducted geological mapping, soil sampling, I.P. surveying, bulldozer stripping, and four diamond drill holes.

DDH M-1 was drilled at an angle of -50° towards the IP anomaly on Line 19. According to Longe's interpretation the drill hole was directed down-dip. This conclusion is in accordance with the drill logs which indicate that the "Knob Hill" unit was intersected. The conformable ore bodies within the Brooklyn Limestone lie unconformably above the Knob Hill unit.

DDH M-2 was drilled on line 18 at an angle of -60° towards the I.P. anomaly. The drill hole intersections included sharpstone and cherts.

DDH M-3 was drilled vertically on Line 13. The 520 ft. long drill hole intersected only Tertiary volcanic rocks. Possibly the sudden increase in thickness of the Eocene age volcanics is due to normal faulting along graben structure.

DDH M-4 was drilled vertically on Line 16. After penetrating 557 feet of Tertiary volcanic rock the drill intersected massive white limestone. According to Longe the last 53 feet of the hole were in skarn including a rock described as "green epidote brecciated sections in fine grained dense purplish rock (hornfels), 587-590 limestone, 1-2% finely disseminated pyrite". The limestone intersected in this hole was very possibly the Lower Limestone but the hole was stopped too soon for an answer to this question. Equally certainly, the base of this limestone unit was not reached. The skarn rock described from the bottom of the hole sounds remarkably similar to the purple skarn rock found in the vicinity of the Phoenix orebody.

Assessment Report # 1082 describes the I.P. and Resistivity Surveys conducted over the Crown Granted claims and immediate area. Three areas were outlined where *increases in frequency effect were found with accompanying drops in apparent resistivity to values similar to those on the test profiles.* The test profiles were collected over the Greyhound deposit with a battery powered I.P. system. The results indicated lower apparent resistivities in the test area when compared to the Copper Mountain property. If the Copper Mountain I.P. survey utilized a battery powered I.P. survey, then the depth penetration of the survey can not be very great (<50 metres?). The IP measurement were made with a X = 200 feet electrode interval. The three anomalous areas are described as follows:

1. *The east end of lines 15 & 16 showed best on closer separations, indicative of a narrower, and probably shallow zone. It lies immediately to the east of the Copper Queen workings in limestone. This area should be trenched and sampled since it may represent an epithermal vein system reaching surface.*
2. *The zone at the west end of line 16 was difficult to define as sandy overburden and rock debris to the west gave serious contact problems. This zone has never been tested but lies in the vicinity of the exposures of the Rawhide formation. The Rawhide Shale was deposited in a deep basin environment. Very few exposures of the shale exist and one of them is beneath and within 2,000 feet of the Phoenix Pit.*
3. *The zone around 15E on lines 18, 19 and 20 has the best chance of indicating an economic copper deposit. The source of the anomaly may not outcrop, or if it does, only on line 18. A weak, deep response on line 17 may also be related to this zone. DDHs 77-1, M-1 and M-2 tested these I.P. responses. The conclusions for DDH 77-1 stated that "the 100 metres of pyrite-bearing rocks, together with the two samples with significant values of gold, one of which contains significant zinc, indicate that the rocks intersected at the bottom of DDH 77-1 are within part of a sulphide system of some magnitude". The drill hole intersected a Tertiary dyke swarm, then the pyritiferous zone containing two significant intersections which assayed 0.31 opt.Au. 3.16% Zn, and 3550 ppb gold, and then bottomed in 125 metres of Tertiary dyke. The I.P. anomaly was explained by the pyrite and graphite in the cherty rocks. Follow up testing of this drill hole or the remaining I.P. anomalies has not been conducted.*

Several other possible anomalies occur throughout the tested area. Particularly, interesting is that during 1980 Rio Tinto conducted an I.P. orientation survey over lines 18, 19 and 9A and a strong anomaly on line 9A picked up by Rio Tinto had not been identified by the earlier McIntyre survey. This anomaly would lie along the extrapolated Ingram fault zone a major graben structure? extending southwestward to the Crown Jewel deposit and the Midway property. The Copper Queen and King Solomon deposits lie along this trend. Once again, possibly the battery powered I.P. survey failed to identify all the massive and disseminated sulphide zones deeper than approximately 50 metres from surface.

1970

Assessment Report 2453 by Pechiney Development Ltd describes a geological, geophysical and geochemical survey conducted to the east of the Copper Mountain property. The report refers to a *limestone which has been nearly fully replaced by pyroxene-garnet-fluorite bearing skarn*. The report states that the fluorite is a yellow variety. The author also noted that the "pulaskite" dykes are trending NNE to NE which is in agreement with the trend of the Tertiary age graben structures. Also of interest is that the units within one kilometre of the eastern Copper Mountain property are dipping to the NW rather than to the SW as on the Copper Mountain property. This abrupt change may be a synform or more likely deformation due to normal faulting. The Pechiney geologist has problems correlating units over short distances and concludes that NE trending faults must be present to explain these enigmas. The only significant showing on the property occurs within non-replaced limestone. *This showing is located in a fractured zone and consists of chalcopyrite plus bornite and chalcocite. The fracture trends north-east, but has not been traced for more than 50 ft. eastward whereas westwards it proved to be connected to an identical showing previously discovered on the adjoining property.* The adjoining property is the Copper Mountain property.

1975

Assessment Report 5842 by Rio Tinto Canadian Exploration Ltd. reports on a drill program conducted on the Pen claims. The main pyrite-sphalerite showing which was tested by two diamond drill holes is located 2 km. north of the northern boundary of the Copper Mountain property. A total of 1,302 feet of drilling, geological mapping and an I.P. survey were conducted on the main showing. The diamond drilling did not reach the base of the limestone unit. *The main showing occupies a near-vertical, north-striking, fault system cutting the limestone of probable Brooklyn age.* No significant economic mineralization was encountered.

- 1976 Assessment Report 6017 by Rio Tinto reported the results of a geological mapping and geochemical (copper, zinc) soil sampling program conducted on the Joe claims, which were situated 2 km. northeast of the Copper Mountain Property. *A minor anomaly was detected but did not warrant retention of the claims. Geological mapping indicated a belt of sharpstone conglomerate, quartzite, and limestone belonging to the Brooklyn formation overlying metamorphic rocks of the Knob Hill Group.*
- 1976 Assessment Report 6394 by Rio Tinto describes a geological and geochemical program conducted on the Pen, AB, and Joe claims located adjacent to and north of the Copper Mountain Property. The program continued to explore for conformable zinc or copper sulphide in limestone. The Brooklyn Limestone was not found to outcrop on the property.
- 1977 Assessment Report 6436 by Rio Tinto reports on a drilling program consisting of 304.19 metres within DDH 77-1. The drill hole tested the I.P. anomaly which had been tested previously by McIntyre's holes M1 & 2. *The drill hole intersected a Tertiary dyke swarm, then the pyritiferous zone which yield two significant intersections of which one assayed 0.31 opt.Au. 3.16% Zn, and the other intersection assayed 3550 ppb gold, and then bottomed in 125 metres of Tertiary dyke. Sulphide average between 1% and 2% in the sharpstone and related cherts and are most abundant between 175 metres and 190 metres, providing an adequate explanation for the I.P. anomaly. Although DDH 77-1 was drilled to a depth of 304 metres, it intersected only 140 metres of the Triassic sediments it was designed to test. The remainder of the hole penetrated Tertiary intrusive, in the form of dykes or sills, which appear to have expanded the thickness of the Triassic sediments more than twofold. If graben-style structures are considered to have been active in the area, then the abundant dykes and sills in the area may have intruded along these structures and the apparent thickening of the sediments can be explained by drilling into several individual fault blocks. Such an extensional tectonic setting is an ideal environment for the deposition of an epithermal gold deposit. The presence of limestone and massive to fragmental chert in chlorite, biotite, graphite rich matrix would make an ideal host for an epithermal Carlin-type deposit. In the discussion section of the report, the geophysical anomaly was accounted for by the sediments which below a depth of 130 metres contained in excess of 1% pyrite with patches of graphite. The drill hole stopped in a pyritiferous zone at least some of which contained significant values in zinc and gold. The last 125 metres of the hole*

intersected a Tertiary intrusive. Extending the depth of this diamond drill hole was recommended in order to test the sulphide system at depth, test the theory that the pyrite zone may represent a "pyrite halo" such as occurs surrounding the Phoenix orebody, and test for the economically favourable Brooklyn Limestone at depth.

Other interesting comments contained within the report are descriptions and assays from the Copper Mine (Big Copper), Copper Queen and King Solomon claims. The ore at the Copper Mine appears to have consisted of an oxidized cap with native copper, chalcocite and hematite lying as a ledge, presumably sub-horizontal, underneath Tertiary volcanics. *Reported grades are improbably high (in one case 8% Cu was described as "low grade"). The width in 1894 was described as 26 feet, the strike length 750 feet.* During the exploration program the showing was sampled and grades range between 0.64% and 2.75% Cu. The Copper Queen and King Solomon claims also contain oxidized mineralization with limestone. These oxidized pods may have been originally mineralization which had ponded beneath a volcanic capping during the hydrothermal event which introduced the mineralization. A petrographic examination of sample Q-1 by J. Payne of Vancouver Petrographics Ltd. indicated that chalcopyrite grains occur within a second vein set mainly in quartz in the central parts of the veins. This certainly suggests that the copper is related to a late (Eocene?) epithermal event and that the hydrothermal solutions may have been confined by a volcanic cover.

An inter-office memorandum by J. McCance on the Queen claims - Geophysics made the following remarks, *It is quite permissible to assume from these IP results that both disseminated and massive sulphide mineralization as tabular bodies and intermittent lenses are present near both the upper and lower contacts of a basal (Brooklyn) Limestone unit and the surrounding Sharpstone lithologies. Unfortunately the evidence is complex and alternatives to the following interpretation such as mineralized zones in the overlying volcanic rocks should not be dismissed lightly. Certainly drilling is warranted to test both the geological hypothesis and geophysical anomalies as a next and perhaps final stage of exploration.* His report recommends a total of 6 holes on lines 18 and 19 to test anomalies A through D, and one hole on line 9 to test a McIntyre response. I recommend and IP and magnetic survey over the entire property prior to collaring any holes. The proposed IP survey should have sufficient depth penetration to test a large area of influence beneath the property in order to test the potential of the property for hosting an epithermal and related skarn deposit.

1977 Assessment Report 6378, describes Rio Tinto's geophysical IP survey conducted as an orientation survey over lines 18, 19, and 9A. The test survey on Line 18 and 19 was made using $X = 30$ metres (100 feet). The survey confirmed McIntyre's anomalies on Lines 18 & 19. *On Line 18S, the anomalous pattern suggests a narrow, more definite source, at depth, within the broad, weaker anomaly.* This may represent a skarn deposit surrounded by an epithermal deposit. The report recommended a drill hole to test this anomaly, which was later executed by DDH 77-1. *The drill hole intersected a Tertiary dyke swarm, then the pyritiferous zone which yielded two significant intersections of which one assayed 0.31 opt. Au. 3.16% Zn, and the other intersection assayed 3550 ppb gold, and then bottomed in 125 metres of Tertiary dyke.* The geophysicists state that, *If the drill hole is drilled on Line 18S, and sulphide mineralization of economic interest is intersected, further work would be warranted in this area, and also in the area from Line 9A to Line 11, surrounding the Pasco showing.* The Pasco showing is reported to contain hydrothermal fluorite mineralization.

1980 Assessment Report 8497 (8823), describes a diamond drilling and geological mapping program conducted by Utah Mines Ltd. and W.R. Financial Consultants Ltd. The introduction to this report reiterates that the *Triassic Brooklyn rocks of the Greenwood area contained two separate limestone beds and that the Phoenix and probably the Motherlode orebodies occurred in the lower of these two limestone units.* At the Copper Queen camp, 8 km. NW of Greenwood, copper showings occur in the upper limestone unit.

By analogy with Phoenix, where small relatively high grade orebodies occur stratigraphically above the main orebody, the Copper Queen camp was thought to be prospective on account of indications of the lower limestone beneath the upper, copper-bearing units.

Therefore the highly prospective lower limestone at the Copper Mt. property remains essentially unexplored. If the concept of graben structures and an epithermal system occurring in the area is considered, then the potential of the property for hosting a deposit increases substantially since now one would explore for both skarn and epithermal deposits in the limy units. Once again, the petrographic examination by Vancouver Petrographics which identified copper sulphide mineralization within the centres of late stage quartz veins and the high-grade gold mineralization within DDH 77-1 suggest the presence of an epithermal system.

Two holes were drilled in 1980 totalling 502 metres. DDH 80-1, intersected 45 metres of Tertiary dyke and then a fault followed by grey siliceous sediment with chlorite and carbonate. The top of the hole contained massive white crystalline limestone and sections of grey white chert. The report concluded that the rocks represent the Knob Hill "basement rocks". This could easily be the case since the northwestward directed hole intersected a fault zone and then may have passed in to a "graben fault block" of lower stratigraphy (refer to sketch on the bottom of the accompanying compilation map). DDH 80-2 extended McIntyre M-3 to 298.09 metres. The hole intersected either the Knob Hill rocks or the Brooklyn chert. Either may be the case if faulting is considered.

The report concludes that the Upper Sharpstone lies on basement (Knob Hill) and not on the Lower Limestone as found directly to the north, west, and 400 metres southwest in DDH M-4. Rather the Lower Limestone is probably present, but the holes passed into fault blocks containing lower stratigraphy. Possibly a combination of magnetics and IP would define both skarn and epithermal gold targets within the property.

No core was split for assaying. The drill logs indicate pyrite and chalcopyrite along fractures and disseminated pyrite locally up to a visual estimate of 10% pyrite. This core is available for sampling.

1981 Assessment Report 9742, is a report on a diamond drill program conducted by D.F. Pasco on the Jr. 1 & 2 claims, which are situated to the east of the Copper Mt. property. The "hydrothermal" fluorite showing is located approximately 100 metres east of the Copper Mt. claim boundary. The showing consists of massive pods of bornite with some sphalerite and carrying good silver values hosted by white crystalline limestone. A total of 76.5 metres of drilling was completed in two holes. Both holes were collared in white crystalline limestone of the Brooklyn Formation and were stopped in palaskite dike. No core was split for assaying.

1983 Assessment Report 12,328, is a diamond drilling report by McKinney Resources Incorporated. A total of 652 feet (198.73 m.) were completed in two drill holes. The purpose of this drilling program was to try and intersect the projected extensions of the zones of mineralization that had been found on the King Solomon and Copper Mine claims. The two diamond drill holes that were drilled did not intersect any mineralization.

The first drill hole tested a zone between two past producing open cuts on the King Solomon claim. The drill hole was drilled at -50' in the N15W direction. The first 115 feet encountered 5 feet of overburden and then 110 feet of casing. If the drill hole was collared on or close to the assumed extension between the open cuts, then the possibility exists that the mineralized horizon was cased.

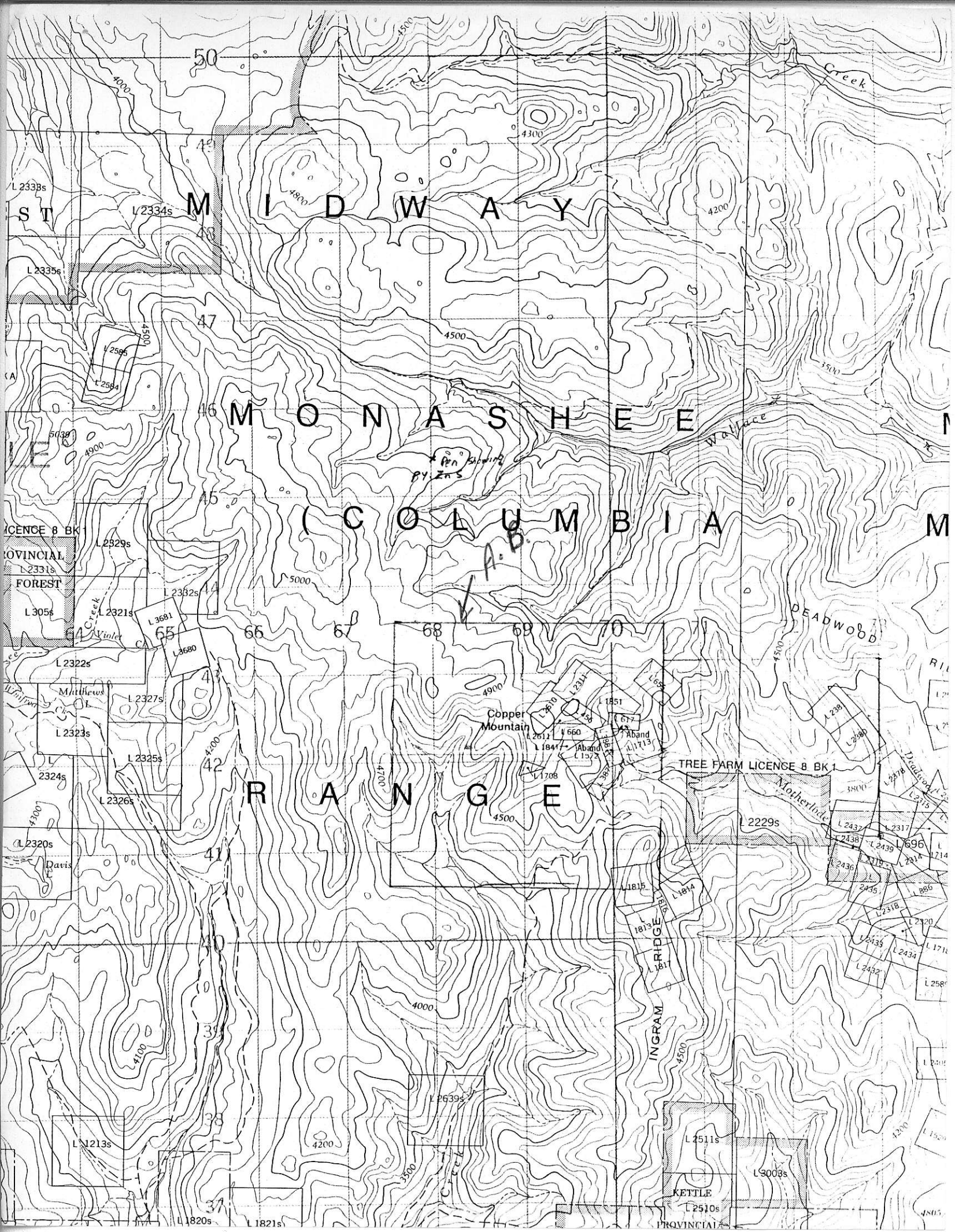
The second drill hole was a vertical hole designed to test the *downward extension of the open cut that produced high grade ore in early in the century. A small intersection of red bed was intersected at 75.5 to 82 feet. This section was assayed for copper, gold and silver but the results were very low. The logs indicate a Copper zone? brecciated where the best 2 feet intersection assayed 0.20 opt Ag., 0.08% Cu., and 0.003 opt. gold. This drill hole should be located and the dip of the open cut mineralization should be measured in order to determine whether the above intersection represents the extrapolated extension of the mineralized zone.*

In summary, all of the previous exploration has been directed at small high-grade copper (zinc, silver, gold) skarn deposits. To date, the data collected suggests that the property also has the potential for hosting an economic epithermal gold deposit with associated skarn mineralization.

COSTS - PROPOSED EXPLORATION PROGRAM

Line Cutting		
58.2 km. x \$400/km.		\$21,120.00
Geophysics		
Magnetic survey		
52.8 km. x \$125/km.		6,600.00
I.P. chargeability and resistivity		
25.0 km. x \$2,000/km		50,000.00
Geochemistry		
(Cu,Pb,Zn,Ag,As,Sb,W,F,Mo,Ba,Hg,B, + Au)		
1,056 soil samples x \$12/sample		12,672.00
500 rock samples x \$12/sample		6,000.00
Backhoe Trenching		
10 days x \$1200/day		12,000.00
Labour		
1 project geologist		
\$350/day x 30 days		10,500.00
2 assistants		
\$150/day x 2 men x 20 days		6,000.00
1 camp labourer		
\$100/day x 20 days		2,000.00
Accommodation and Food		
100 man days x \$50/day		5,000.00
Truck Rental		
20 days x \$50/day		1,000.00
mileage		500.00
Miscellaneous equipment		1,000.00
Travel Expenses		<u>608.00</u>
	TOTAL COST	\$135,000.00

THE NEXT PHASE OF EXPLORATION WOULD INCLUDE FOLLOW-UP GEOCHEMICAL SAMPLING AND 6,000 FEET OF NQ SIZE DIAMOND DRILLING.



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