092H/15

GEOLOGICAL SUMMARY REPORT
ON THE
BELL, BELL I, RED STAR AND ANNACONDA CLAIMS
PROJECT 821044

Located in the Princeton Area
Similkameen Mining Division, British Columbia
NTS 92H/017
46°9' North Latitude, 120°36' West Longitude

- Prepared by -
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April, 1991

GEOLOGICAL SUMMARY REPORT ON THE BELL, BELL I, RED STAR AND ANNACONDA CLAIMS

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SUMMARY

The Red Star property consists of 30 mineral claim units and 1 reverted crown grant. The claims are located approximately 250 kilometres east of Vancouver on the Hope-Princeton Highway.

Precious and base metal mineralization was discovered and mined in the early 1900s and again in 1964 on the Red Star property. During the 1960s exploration focussed on the copper potential of the area. During the 1980s programs were initiated to investigate potential for volcanogenic massive sulphide and lode gold deposits.

During the 1990 program, efforts were expended to become familiar with known massive sulphide mineralization on the Red Star and Annaconda reverted crown grants and its host stratigraphy. This knowledge was then used to assess favourability on the Bell, Bell I and Sailor-Jack claims. Stratigraphy hosting the Red Star massive sulphide mineralization was traced along strike onto the Bell claims for approximately 1 kilometre.

1.0 INTRODUCTION

From October 10th to 17th, 1990 a program of geological mapping, prospecting and sampling was carried out on the Red Star property by Pamicon Developments Ltd., of Vancouver, B.C.

The program was initiated to locate and assess mineral showings on the Red Star property which is located approximately 45 km west of Princeton, B.C.

Geological mapping was performed at 1:10,000 and 1:2,500 scales over limited areas of the property. Trace element and whole rock geochemical sampling was initiated in conjunction with mapping and prospecting.

2.0 PROPERTY STATUS

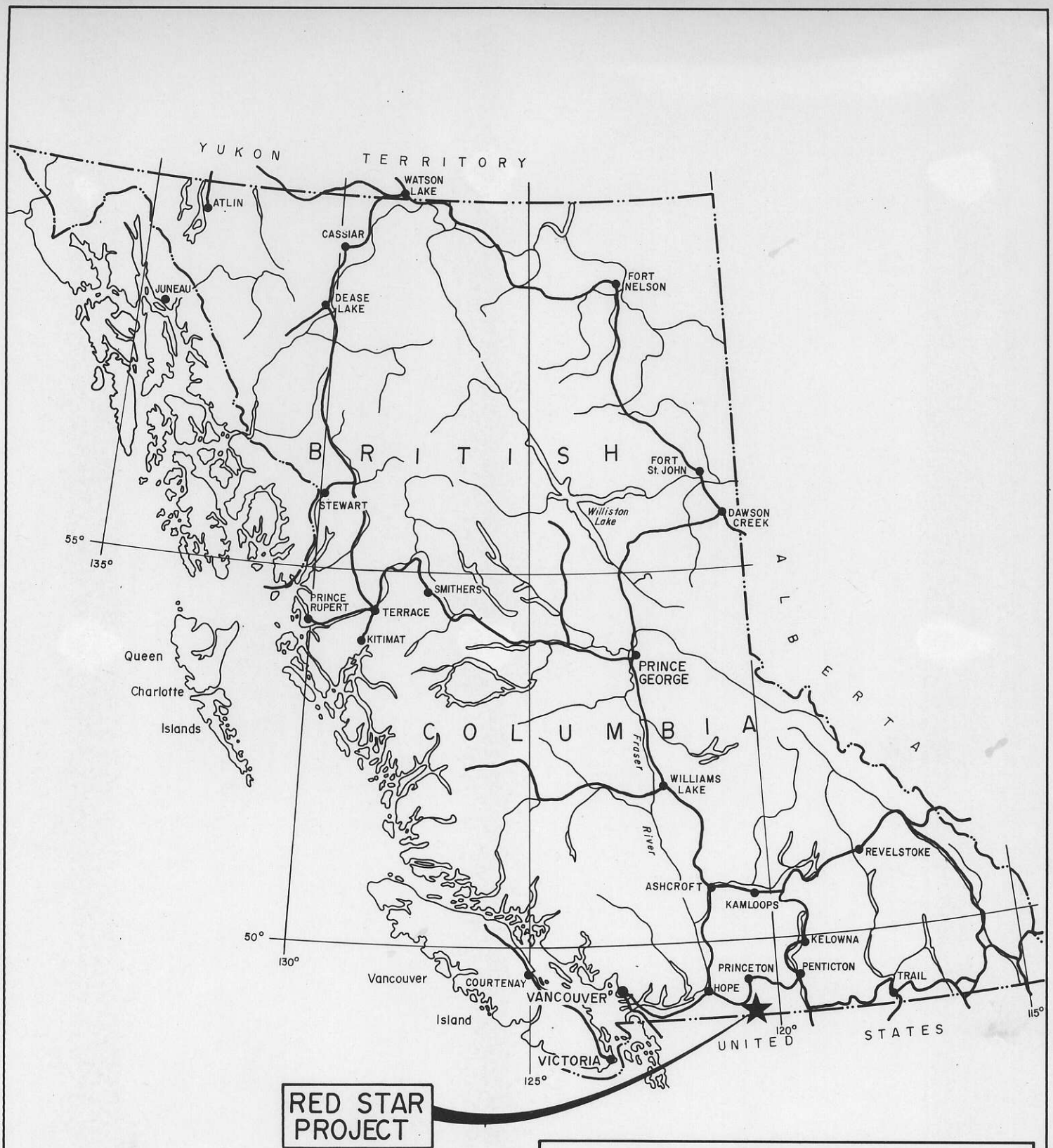
The Red Star property consists of three modified grid claims and two 2-post claims, for a total of 44 units. The property, located in the Similkameen Mining Division, is shown on British Columbia NTS Maps 92H/017 and 92H/018 (Figure 2).

The following table summarized all details of the claims:

Name	Record No.	Expiry Date	Units	Owner
Bell	3667	April 11, 1994	15	Al Montgomery
Bell 1	3703	July 1, 1994	15	Steve Todoruk
Bell 2	pending	April 16, 1992	12	Steve Todoruk
Bell 3	pending	April 14, 1992	1	Steve Todoruk
Bell 4	pending	April 14, 1992	1	Steve Todoruk

3.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Red Star property is located approximately 45 km southwest of Princeton, B.C. or 250 km east of Vancouver, B.C. on Provincial Highway #3 (Figure 1).



Km 0 100 200 300 400 Km

Miles 0 50 100 200 300 Miles

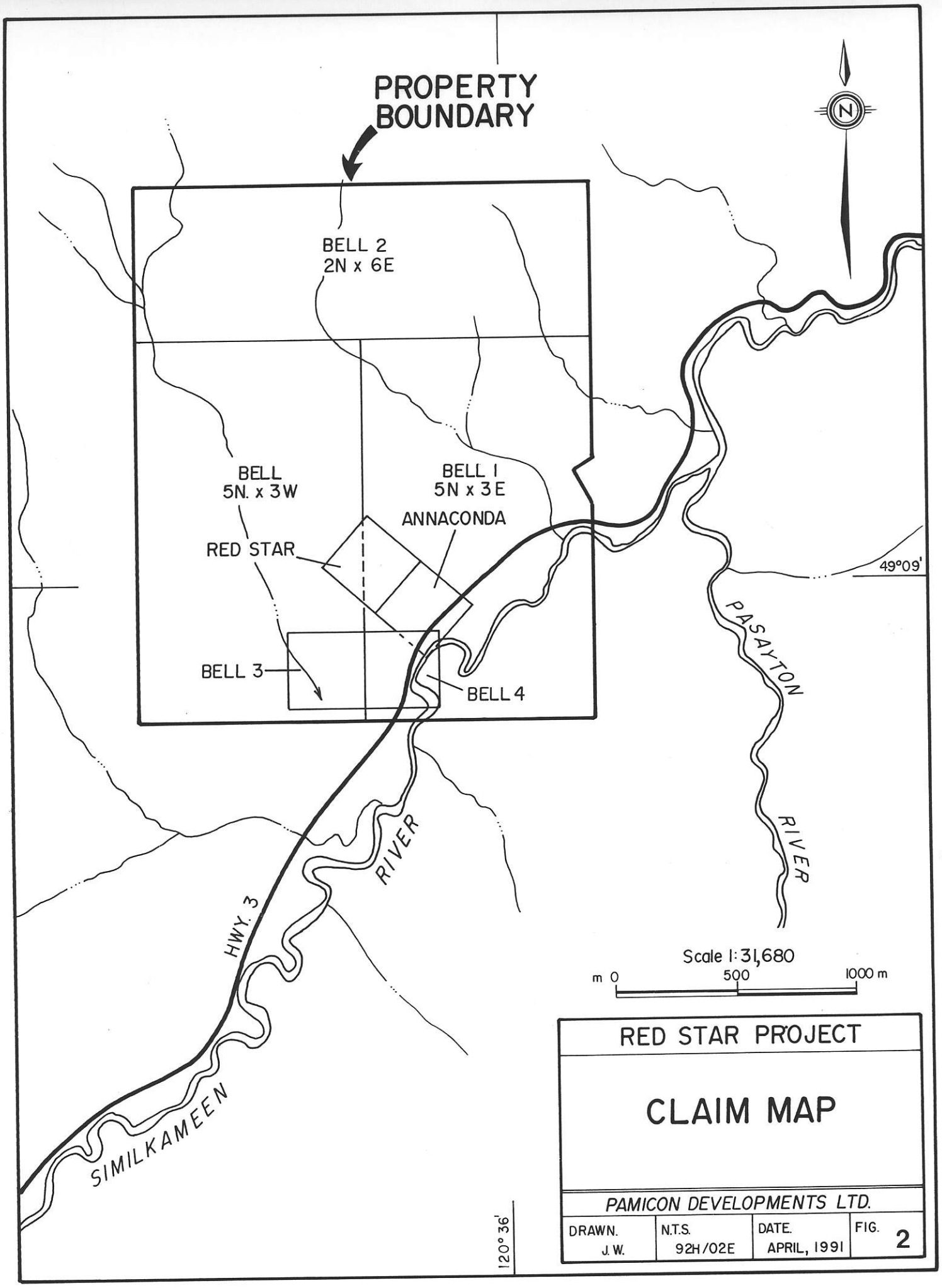
RED STAR PROJECT

PROPERTY LOCATION MAP

SIMILKAMEEN MINING DIVISION, B.C.

PAMICON DEVELOPMENTS LTD.

DRAWN.	N.T.S.	DATE.	FIGURE.
J.W.	92H/02E.	April, 1991	1



RED STAR PROJECT

CLAIM MAP

PAMICON DEVELOPMENTS LTD.

DRAWN.	N.T.S.	DATE.	FIG.
J. W.	92H/02E	APRIL, 1991	2

The property straddles the Similkameen River at a point approximately 1 km south of the confluence with the Pasayton River.

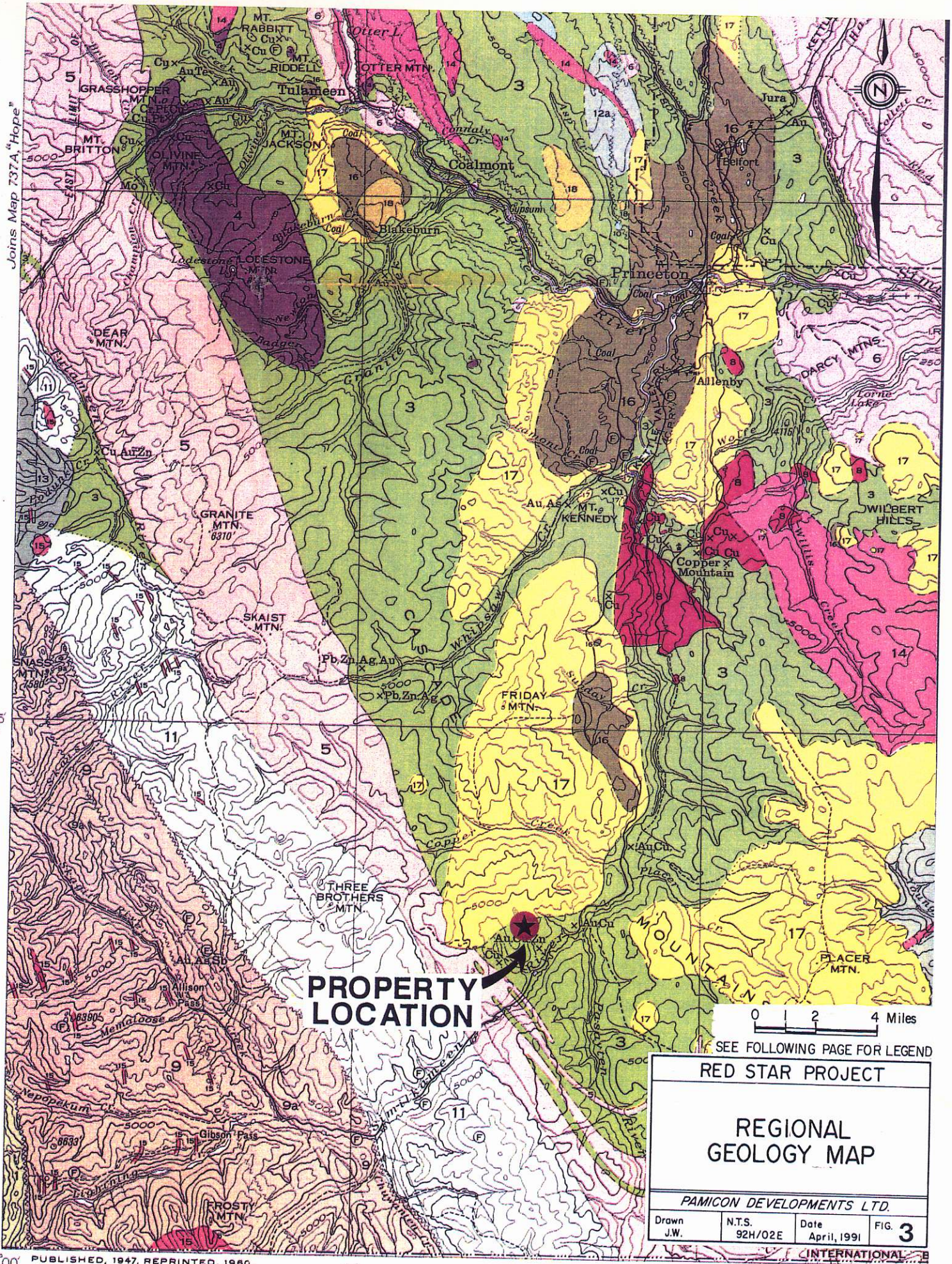
Access is via the Hope-Princeton highway (Highway #3) which crosses the property. A series of secondary roads provide access to the western parts of the claims area while access to the eastern parts of the property is gained via the Pasayton River forest access road.

4.0 REGIONAL GEOLOGY

The property area is underlain by rocks of the Upper Triassic Nicola Group, an island arc sequence belonging to Quesnellia terrane, which is itself within the Intermontane Belt of the Cordillera. The Tulameen Ultramafic complex (Figure 3) located some 24 miles northwest of the property is inferred to be the sub-arc basement to the Nicola Group. Some 3 km to the west of the property intrusive rocks of the Middle to Late Jurassic Eagle Complex are found in an apparent gradational contact with the Nicola Group (Greig, 1989). In a 3 km wide zone paralleling this contact strong west dipping penetrative foliation defines the northwest trending Eagle Shear Zone. Examination, by the author, of stratigraphy from the property area, south to the US-Canada border revealed a submarine sequence of limestone, cherts, turbiditic sediments and mafic to felsic volcanics. In general volcanic input appears to increase to the north, toward the property.

The following is a tectono-stratigraphic overview of the western Nicola Group and its overlying strata:

In late Triassic-Early Jurassic time the Nicola Group, a series of calc-alkaline to alkaline volcanic rocks and subordinate sediments, were deposited and coeval and possibly comagmatic calc-alkalic and alkalic plutons were emplaced. The Nicola Group and associated plutons were part of a west facing magmatic arc built on deformed Paleozoic to early Triassic rocks (Read and Okulitch, 1977). Pervasive greenschist facies metamorphism of the Nicola



RED STAR PROJECT

REGIONAL GEOLOGY MAP

PAMICON DEVELOPMENTS LTD.

Drawn	N.T.S.	Date	FIG.
J.W.	92H/02E	April, 1991	3

PUBLISHED, 1947. REPRINTED, 1960.
INTERNATIONAL B
U.S.A.

LEGEND

CENOZOIC

TERTIARY

MIOCENE OR LATER

19 — *Valley basalt: vesicular, varicoloured basalt*

18 — *Plateau basalt: amygdaloidal, brown basalt*

MIOCENE OR EARLIER

PRINCETON GROUP

16, 17

16. *Mainly shale, sandstone, and conglomerate; coal*
17. *Varicoloured andesite and basalt*

CRETACEOUS OR TERTIARY

UPPER CRETACEOUS OR LATER

14,15

14. *OTTER INTRUSIONS: pink and grey granite and granodiorite*
15. *LIGHTNING CREEK INTRUSIONS: grey quartz diorite*

CRETACEOUS

LOWER CRETACEOUS

KINGSVALE GROUP

12a-b,13

12a, *mainly volcanic breccia;* **12b,** *mainly andesite and basalt porphyry*
13. *Andesite and basalt porphyry and volcanic breccia*

PASAYTEN GROUP

11

Mainly grit and shale; **11a,** *mainly purple lava, tuff, and breccia*

SPENCE BRIDGE GROUP

10

Hard, reddish andesite and basalt

MESOZOIC

JURASSIC (?) AND CRETACEOUS

UPPER JURASSIC (?) AND LOWER CRETACEOUS

DEWDNEY CREEK GROUP

9

Tuff, volcanic breccia, grit, argillite; **9a,** *mainly conglomerate*

JURASSIC OR LATER

8

COPPER MOUNTAIN INTRUSIONS: syenogabbro, augite diorite, pegmatite

5,6,7

COAST INTRUSIONS: **5,** *grey, slightly gneissic granodiorite;* **6,** *mainly reddish, coarse-grained, siliceous granite and granodiorite;* **7,** *light coloured granodiorite, quartz diorite, and gabbro*

4

Peridotite, pyroxenite, gabbro

TRIASSIC

UPPER TRIASSIC

NICOLA GROUP

3

Varicoloured lava; argillite, tuff, limestone; chlorite and sericite schist

PALÆOZOIC

CARBONIFEROUS OR LATER

2

BRADSHAW, INDEPENDENCE, SHOEMAKER, and OLD TOM FORMATIONS: cherty and slaty argillite, green andesite, limestone; quartz-mica schist and gneiss

HOZAMEEN GROUP

1

Chert, green andesite, limestone

Fault

Fossil locality (F)

Mineral occurrence ×

SYMBOLS FOR METALS

Silver	Ag
Arsenic	As
Gold	Au
Cobalt	Co
Chromium	Cr
Copper	Cu
Iron	Fe
Manganese	Mn
Molybdenum	Mo
Lead	Pb
Platinum	Pt
Antimony	Sb
Tellurium	Te
Zinc	Zn

RED STAR PROJECT

REGIONAL GEOLOGY MAP

PAMICON DEVELOPMENTS LTD.

Drawn	N.T.S.	Date	FIG.
J.W.	92H/02E	April, 1991	3

Group, absent of penetrative fabric, is likely associated with shallow burial during this period. Development of the Eagle Shear Zone (ESZ), possibly due to failed rifting, likely occurred during the Middle Jurassic. The ESZ constitutes a belt of pervasively deformed rocks of greater than 100 km in length and marks the western margin of Quesnellia and the Nicola Group.

During the Middle to Late Jurassic, the Nicola Group was intruded by the elongate Eagle Complex along the southwest dipping ESZ (Greig, 1989). A slight increase in metamorphic grade, to upper greenschist-lower amphibolite facies, is evident along the width of the ESZ and is likely due to contact metamorphic effects of the intruding Eagle complex.

During the mid-Cretaceous, uplift and erosion of the Nicola Group and the Eagle Complex was accommodated by oblique-slip (east side up) movement on the Pasayton fault (Greig, 1989).

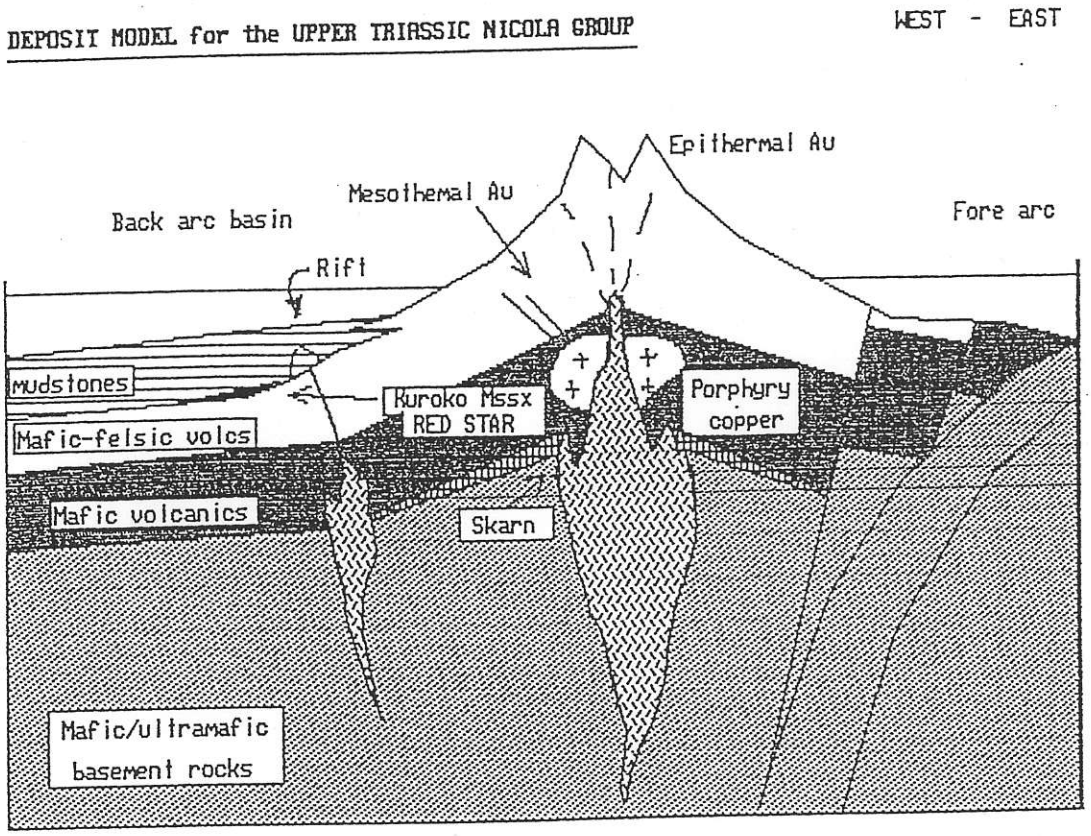
Crustal extension during the Tertiary was chiefly confined to pre-existing Mesozoic structures (Greig, 1989). Subsequent, depositions of Eocene volcanics and sediments of the Princeton Basin unconformably overly the Nicola Group and are extensive in the area of the property.

4.1 DISCUSSION

Regionally, the Nicola Group is well known for hosting large alkaline and calc-alkaline associated porphyry copper deposits of the Highland Valley and Copper Mountain. Base metal skarn deposits at Ingerbelle and Craigmont (possible skarned VMS deposit ?) are regionally proximal to these porphyry deposits. Skarn hosted gold at Hedley and mesothermal vein deposits at Elk (Placer Dome/Fairfield) are also important economic deposits within the Nicola Group. Spatially these deposits are confined to the internal regions of the Triassic island arc (Figure 4).

Figure 4

Island Arc Complex Related Deposits of the Nicola Group



Exploration for volcanogenic massive sulphide deposits within the Nicola Group has, historically, been limited and confined to its westernmost flanks. This has been in part due to the difficulty in determining submarine as opposed to subareal volcanic stratigraphy. Combined with terrane modelling, regional geology indicates that the extreme southwestern flanks of the Nicola Group represent a rift type environment within a Triassic submarine back arc basin. As such this area is considered a perfect environment for Kuroko style volcanogenic massive sulphide deposits.

5.0 PROPERTY GEOLOGY

The Bell, Red Star and Anaconda claims are underlain by moderately deformed mafic, felsic and sedimentary rocks of the Upper Triassic Nicola Group (Figure 5). Regional deformation of these rocks is attributed to the west dipping northwest trending Eagle Shear Zone. Local metamorphism is upper greenschist with a lower amphibilite overprint in discrete areas. In general, units appear to be stratigraphically upright and form a monoclinal west dipping package.

5.1 LITHOLOGY

Interpretation of primary lithologies on the property is hampered by the absence of primary fabrics especially in the volcanic units. Intense, closely spaced penetrative cleavage is best developed in altered rocks of presumably rhyodacitic-rhyolitic composition. Foliation planes within these units are defined by sericite and chlorite thus leading to the conclusion that hydrothermal alteration occurred prior to the deformation of these units and intimately linking highly deformed zones with potential massive sulphide mineralization.

UNIT 1 ARGILLITE, TUFFACEOUS ARGILLITE

This unit was not examined during the 1990 field program. Descriptions from previous workers conclude that the package is a series of interfingering mudstones and sandstones derived from a distal continental source. Volcanic derived sediments were not indicated within this package.

UNIT 2 INTERMEDIATE TO FELSIC VOLCANICS/CHEMICAL SEDIMENTS

Unit 2 has been broken into two subunits. Generally pristine textures distinguish this unit from the strongly deformed surrounding lithologies.

Subunit 2.1

A quartz porphyritic phase forms the base to Unit 2 and can be easily distinguished by its red and less commonly blue quartz eyes. Penetrative fabrics are not well developed. Interfingering lapilli tuffs to crystal tuffs appear to grade upward supporting a stratigraphic upright model.

Subunit 2.2

Overlying subunit 2.1 is a sequence of finely laminated red to brown ferruginous cherts (?). Only one outcrop of this rock type was observed on the road below the Main Zone.

UNIT 3 QUARTZ-SERICITE, SERICITE-CHLORITE SCHISTS

This unit was broken into two subunits which more adequately defines the package based on alteration and intensity of deformation.

Subunit 3.1

Quartz-sericite schists overly the ferruginous cherts (?), separated by an apparent fault contact. Locally well developed ferrocrete bounds this contact. Faulting may be the result of competency contrasts between the

altered and unaltered volcanics/sediments during deformation. Thus a type of bedding slip is proposed for this contact.

Primary volcaniclastic textures were not noted within subunit 3.1 other than in unaltered outlyers which contained quartz eyes. Abundant white sericite commonly surrounds lenticular quartz boudins. Whole rock geochemistry reveals an unusually high percentage of SiO_2 in the rock. This is likely due to syn-hydrothermal silicification. Up to 10% fine grained disseminated pyrite, or boxwork is ubiquitous throughout. Associated iron sulphates are also common.

Metamorphic textures and the stratigraphic position of subunit 3.1 support the conclusion that it is in fact an altered equivalent of basal felsic volcanics (subunit 2.1).

Subunit 3.2

Sericite-chlorite schists overly the quartz sericite schists in an apparent gradational and conformable contact. This subunit is defined by the intense development of dark green magnesium chlorite and lesser sericite in intense penetrative fabrics. Massive sulphide mineralization is hosted within this rock type. In general the sericite-chlorite schist is similar in texture to quartz-sericite schist with a marked increase in chlorite. An intermediate volcanic tuff is the likely protolith for this lithology.

UNIT 4 HANGINGWALL SEDIMENTS

Carbonaceous sediments and lesser cherts conformably overly highly deformed intermediate and felsic volcanic rocks. Examination of the contact exposed by trenching during previous programs revealed a fault contact. Once again it is believed that competency contrasts between these two units induced bedding slip on a pre-deformational conformable contact. Penetrative foliation is greatly reduced in this unit.

UNIT 5 PAW MAFIC VOLCANICS

Greenstones or mafic volcanics stratigraphically overly the sediment package. This unit bears remarkable similarity to the mafic package seen at the Pasayton showings and on the east side of the Similkameen River (Figure 5). The unit also hosts the Paw showings. Increases to amphibolite grade metamorphism were noted and attributed to localized effects of the Eagle Intrusion. Local bedding and lapilli textures were noted.

UNIT 6 FELSIC-INTERMEDIATE VOLCANICS

Competent quartz porphyritic units were noted in a position stratigraphically above the mafic volcanics. Contact relations between this unit and surrounding stratigraphy were not observed.

UNIT 10 PRINCETON GROUP VOLCANICS

Princeton Group volcanics and epiclastics unconformably overlie all rock types previously described. While not studied in detail, this package appears to have a shallow southerly dip and is comprised of intermediate flows and related epiclastic facies.

5.2 SUMMARY OF STRATIGRAPHY

The property is underlain by a monoclinal package of mafic to felsic submarine volcanics and intercalated allocthonous sediments. Gradations within the volcanic units indicate an upright sequence. The ore horizon is defined by the contact between the altered felsic to intermediate volcanics (subunits 3.1 and 3.2) and the overlying sediments (Unit 4). This is coincidentally close to the actual position of the outcropping massive sulphide mineralization.

5.3 ALTERATION

Alteration on the property is related to two events, the first, primary sericite-chlorite hydrothermal alteration associated with massive sulphide deposition. Secondly, carbonate epidote alteration associated with greenstone hosted quartz veins as at the Paw showings.

Quartz-sericite-chlorite alteration is exposed in a 100 metre true width exposure beneath the sulphide lense. This alteration has been traced 800 m along strike to the northwest to the contact with the overlying Tertiary volcanics. Pyritization is also associated with primary hydrothermal alteration. Cross cutting bull quartz veins are common within sericite schist units but did not display marked alteration envelopes.

5.4 STRUCTURE

As previously mentioned intense penetrative fabrics are present and best developed near the Main Zone. Penetrative foliation consistently trends at 170° and dips 65° to the west. Bedding attitudes taken in overlying sediments appear to parallel foliation indicating a position on the extreme limb of an open fold. Localized warping of foliation is apparent close to the main zone and is attributed to late (pre-Tertiary ?) faulting. The absence of foliation in some units can be related to a coincidental absence of primary hydrothermal alteration.

The repetition of geological units within the map area may suggest structural repetition either by folding or faulting. In any case both scenarios deserve more study to check for repetition of massive sulphide stratigraphy.

6.0 PROPERTY HISTORY

Earliest records of the property area indicate free gold was discovered on Pasayton River about 1897.

In June, 1900, Bonnevier and Pouwels located the Red Star mineral claim. These men would spend many years to come developing the property. Trenching and underground development began on various showings. At approximately this time as well, it is reported Bonnevier also began work on the Annaconda mineral claim immediately southeast of the Red Star.

In 1908 the district geologist reported that Bonnevier and Pouwels had opened by a drift tunnel an excellent showing of copper-gold ore.

By 1917 it is reported that a cross-cut tunnel had been driven in 300 feet at the foot of the hill with a shaft driven to a depth of 60 feet within the tunnel. The shaft was abandoned due to noxious gases. Mineralization reported to this time consisted of quartz veins and talc schists which hosted copper carbonates, melaconite, cuprite, bornite, chalcopyrite, pyrite, arseno-pyrite, siderite and some zinc blende. Some native copper occurs as sheets in little slip planes in the schist.

In 1921 the district geologist reports that the lower cross-cut tunnel was abandoned at 500 feet for the present time because of bad air. The targeted vein had not yet been intersected. Instead, a program of surface trenching was undertaken to try and better follow the structure on surface so as to better project it in underground workings. As well, three tunnels, 250, 450 and 65 feet respectively were driven and were referred to as the upper workings. These tunnels attempted to follow lenses of chalcopyrite carrying gold and silver varying in thickness from a few inches to 4 feet in a gangue of quartz. Copper carbonates were seen in the fractures of the schist over an area about 500 feet in length and 200 feet wide.

In 1924 the Minister of Mines reports that Bonnevier continued work once again on the initial lower crosscut. At a location 600 feet from the portal, a vein 16 feet wide mineralized with chalcopyrite and pyrite was intersected. It was suggested that this was probably a lower expression of a vein developed some 150 feet up hill. No samples were reportedly taken across the 16 foot vein.

As reported by the minister in 1927, most of the old underground workings were caved and as a result could not be accessed. Previous visits to the property indicated that mineralized quartz veins occurred as veins, lenses and stringers conforming to the strike of the schist trending 165° and dipping 51° to 61° SW. It is also indicated that at least two mineralized veins occur parallel to each other. The 16 foot wide vein is probably the same one as is developed in a short 60 foot tunnel to the north while a second vein was developed in one of the short western adits. A sample of the mineralized vein in this adit assayed 0.04 oz/ton Au, 1.0 oz/ton Ag, 0.8% Cu and 18.0% Zn. Heavy pryite-chalcopyrite ore assayed 0.04 oz/ton Au, 2.0 oz/ton Ag and 5.5% Cu. The resident geologist figured the downward extension of this westernmost vein would lie beyond the face of the lowermost adit yet to be developed.

In his 1938 report the resident engineer again indicated the presence of caving in most adits. He reported that in the westernmost and uppermost adit (No. 1 Adit) a vein 8 to 16 inches wide consisted of pyrite-chalcopyrite-sphalerite. As well, he reported that a raise was driven from the No. 2 Adit up to the No. 1 Adit, 100 feet higher up in elevation. A sample of heavy sulphide mineralization found at the higher dumps assayed 0.06 oz/ton Au, 7.3 oz/ton Ag, 17.0% Cu and 4.0% Zn. A grab sample of heavy sulphide from the next lower dump assayed 0.14 oz/ton Au, 5.7 oz/ton Ag, 19.0% Cu and 2.5% Zn. Bonnevier also continued driving the lowermost tunnel to a distance of 1,090 feet from the portal. Work apparently ceased because of poor ventilation.

A compass survey indicated that the line of projection of the vein in the uppermost, western adits had been crossed with the face of the lowermost adit 330 feet beyond this point. The resident geologist figured that if the mineralization encountered in the upper adit (No. 1) occurs strictly parallel

to the strike and dip of the schists then rough calculations indicate the vein to be approximately 140 feet beyond the face of the lowermost 1,090 foot adit.

No further work on the property is reported until 1954 when William Fraser leased the claims and cleaned out and rehabilitated the uppermost two adits (No. 1 and No. 2).

In 1955, Woodburry Mines Limited optioned the property and using a D-7 bulldozer undertook a program of trenching in the area of the upper adit (No. 1 Adit).

In 1956, Woodburry Mines Limited again utilized a D-7 bulldozer opening up trenches in the immediate vicinity of portals at the No. 1, 2 and 3 Adits. As well, about 700 to 800 feet south of the caved No. 3 Adit, a new tunnel was started and driven 470 feet in an attempt to intersect the downward extension of the eastern vein (seen to be 16 feet wide in 1,090 foot adit in lowest adit). No mention was made of whether or not the vein was intersected.

During 1964, the property was leased by A.W. Hendrickson and H. Hopkins of Brackendale, B.C. A road was built to the property from the highway as well as considerable trenching and a new adit started. Mining was attempted using a trackless method. Apparently the mineralized vein was intersected because the men shipped 28 tons of hand-cobbed copper-silver-gold ore which yielded 1 ounce gold, 84 ounces silver, 5,171 lbs. copper and 6,465 lbs. zinc. The average grades of this material was 2.1 oz/ton Ag, 6.5% Cu and 8.1% Zn.

In 1966, Spheno Mines Ltd. carried out a program of grid establishment, geological mapping, soil sampling and a magnetometer geophysical survey. Soils were only tested for copper content using the Rubeanic Acid Test. Spheno noted the presence of disseminated pyrite and sphalerite in various outcrops. Two diamond drill holes (and possibly five) were completed on the property. Only weak mineralization was intersected. As well, only selective sections of the core were analyzed for copper and zinc content.

The next era of work on the property is not reported until 1980 when Cominco optioned the claims from Carl Wabnegger of Keremeos, B.C. The property was being investigated for Kuroko-type rhyolite associated stratiform massive sulphide deposits. Cominco interpreted the main zone mineralization historically worked on the Red Star and Annaconda reverted crown grants to be hosted in strongly sheared intercalated dacite and rhyolite and minor andesite pyroclastics and their related chemical and clastic sediments. Cominco reported that while mapping they were only able to see minor disseminated sphalerite and chalcopyrite. At that time underground workings and trenches were probably caved or sloughed in. A program of mapping, soil geochemistry and geophysics was carried out that year. Soil samples were analyzed for copper, lead and zinc (not gold) while geophysics consisted of IP, VLF-EM and magnetometer surveys. A broad Cu and Zn soil anomaly was defined which coincided with a prominent induced polarization/VLF-EM anomaly. The geophysical conductor extended for 900 metres along strike with the underlying lithology consisting of pyritiferous quartz-sericite schist, chlorite-sericite schist and/or graphitic argillite. (Later work in 1986 uncovered a massive sphalerite + pyrite + chalcopyrite $\pm$ barite lens up to 1.2 metres wide within this area.) Mapping indicated that highly folded and boudinaged quartz veins with trace to local pods of chalcopyrite and sphalerite were hosted within the schists. These veins developed pre or early metamorphism and are interpreted to represent silica remobilized during metamorphism. The sulphide mineralization and alteration observed were interpreted to have developed in conjunction with submarine hotspring-fumarolic activity associated with the waning stages of the dacite-rhyolite volcanic activity and are genetically related to that activity.

Cominco's conclusions and recommendations for the project were that the property does have potential for hosting a volcanogenic massive sulphide deposit and that areas underlain by the favourable geology in conjunction with coincident Cu and/or Zn soil anomalies, or any significant IP anomalies are recommended for drilling.

Geophysics consisted of 16.5 km of induced polarization, 17 line kilometres of VLF electromagnetics and 10 line kilometres of magnetometer surveying. Three distinct zones of anomalously high chargeability response were detected on the survey with a VLF conductor occurring at the strongest IP response.

During 1986 and 1987, Bukara Resources Inc. carried out a program of geological, geochemical and geophysical work followed by trenching and induced polarization/resistivity surveying. This program was directed at evaluating the pyritiferous quartz-sericite schist as a gold-bearing shear zone. Trenching totalled 1100 metres of excavation with 550 rock chip samples being collected. It was during this program that a massive sphalerite + pyrite lens was uncovered while attempting to re-open an old adit. It is believed that this style of mineralization has volcanogenic massive sulphide affinities. Highly anomalous zinc values were obtained in samples of this material with elevated values also in silver, barium and cadmium.

7.0 SUMMARY OF PROPERTY DEVELOPMENT

Exploration and development work on the Red Star property has been ongoing from 1897 to the present day. At least six different adits have been worked with a minimum total of 2,125 feet of development. Recorded information is not complete for all tunnel work carried out.

Interpretation of present data suggests historical mining efforts focussed on following two subparallel mineralized quartz veins hosted within the same chlorite-sericite schist unit.

Ministry of Mines annual reports vaguely and sporadically refer to discontinuous lenses of sulphide encountered in underground workings. It is not clear whether these lenses are related to quartz veining or are possibly tectonically disrupted or fragmented volcanogenic massive sulphide bands.

8.0 MINERALIZATION

Two types of mineralization occur on the property: volcanogenic massive sulphide mineralization; and mesothermal style quartz veins. The following is a detailed discussion of these occurrences. Small chalcedonic quartz veins were also noted and sampled in Tertiary volcanics. However, to date, no significant values have been obtained.

8.1 MAIN ZONE

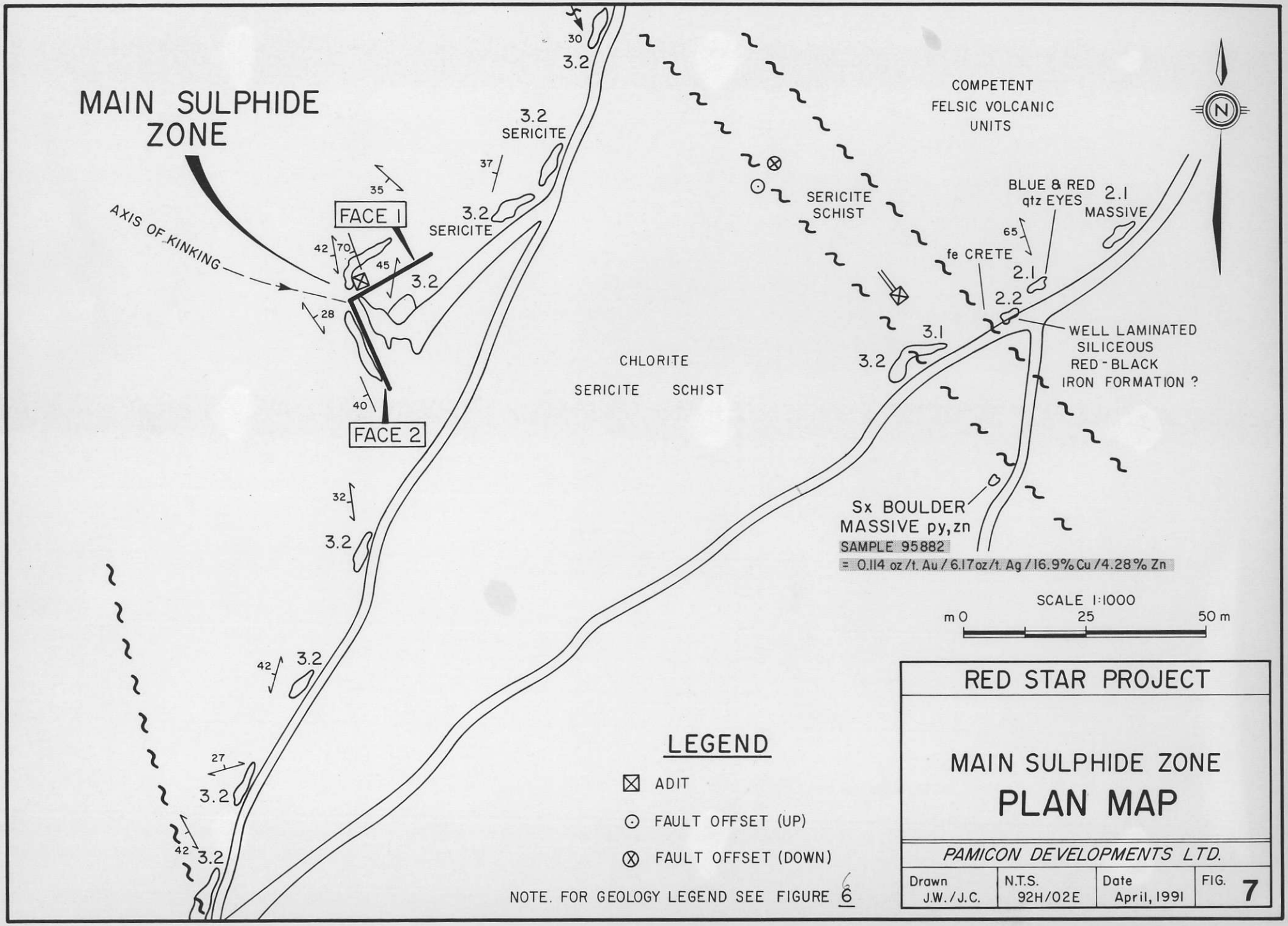
Geological mapping at 1:500 and 1:2,500 displays the relationship of the zone to surrounding stratigraphy (Figures 7 and 8). The zone was channel sampled at approximately 2 m intervals along strike. Assay results are summarized below.

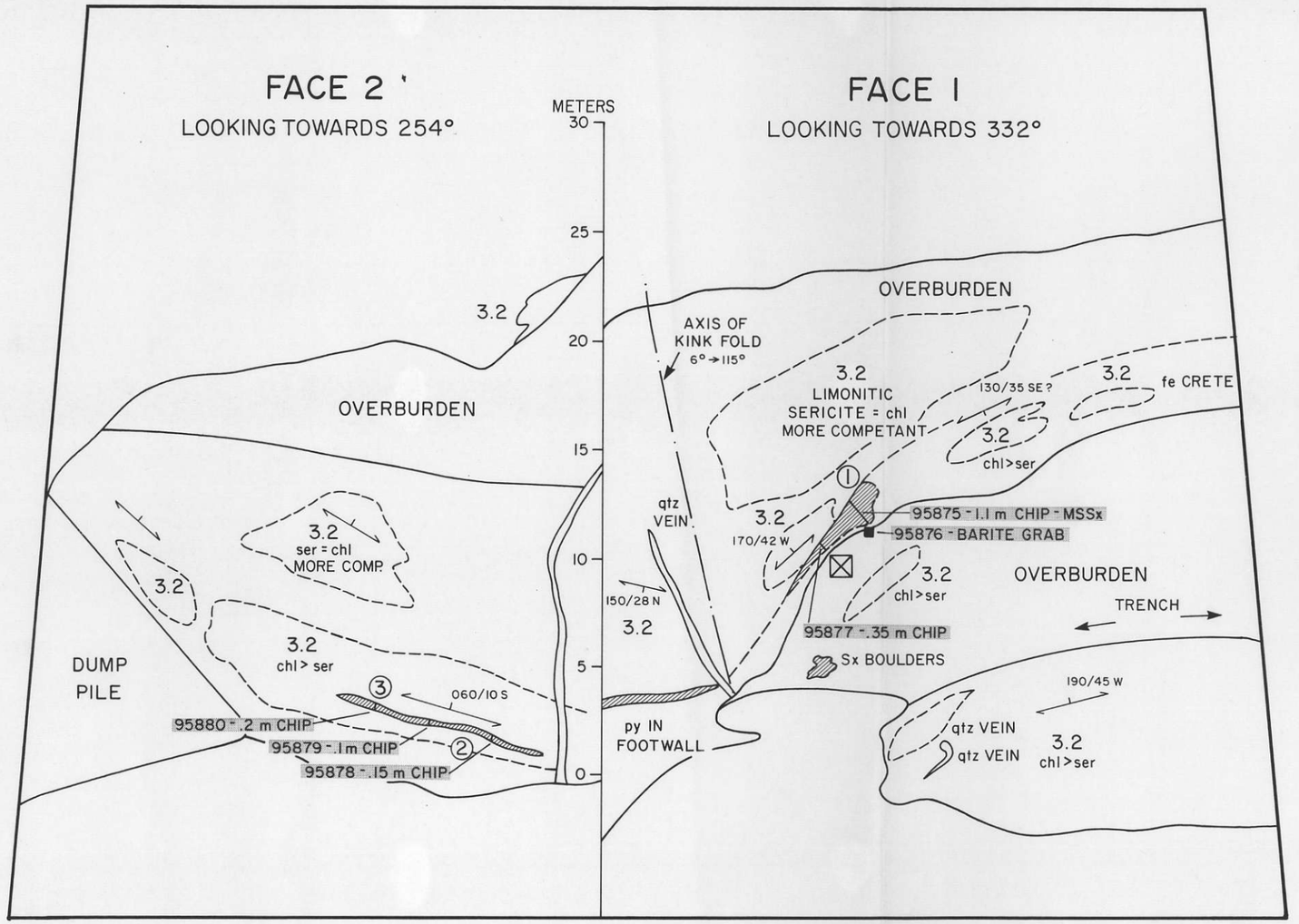
Red Star Property - Main Zone

Sample	Width (m)	Cu (%)	Pb (ppm)	Zn (%)	Ag (ppm)	Au (ppb)	Ba (%)	Hg (ppb)
95875	1.1	3.72	42	40.00	1.12*	950	1.56	na
95876	grab	1.13	68	17.50	14.20	290	30.70	17,000
95877	.35	0.73	72	32.60	14.10	260	0.35	10,000
95878	.15	0.35	60	28.10	6.20	220	0.05	9,000
95879	.1	0.73	22	18.90	7.10	270	0.23	9,000
95880	.2	0.69	17	18.60	6.80	310	0.11	12,000

*values in oz/st

The Main Zone massive sulphide showing was traced over a strike length of 16 metres. Widths on the zone ranged from 0.1 to 1.2 metres. The zone appears to closely parallel foliation trends and occurs within highly pyritized sericite chlorite schists. Local boudinage of sulphides and barite combines with small scale folding. Coarse grained sulphides dominated by sphalerite,


MAIN SULPHIDE ZONE
AXIS OF KINKING
FACE 1
FACE 2
3.2 SERICITE
3.2 SERICITE
COMPETENT FELSIC VOLCANIC UNITS
SERICITE SCHIST
BLUE & RED qtz EYES
2.1 MASSIVE
fe CRETE
2.1
2.2
3.1
3.2
WELL LAMINATED SILICEOUS RED-BLACK IRON FORMATION ?
CHLORITE SERICITE SCHIST
Sx BOULDER MASSIVE py, zn
SAMPLE 95882
= 0.114 oz/t. Au / 6.17 oz/t. Ag / 16.9% Cu / 4.28% Zn
SCALE 1:1000
m 0 25 50 m
N
LEGEND
ADIT
FAULT OFFSET (UP)
FAULT OFFSET (DOWN)
NOTE. FOR GEOLOGY LEGEND SEE FIGURE 6
RED STAR PROJECT
MAIN SULPHIDE ZONE
PLAN MAP
PAMICON DEVELOPMENTS LTD.
Drawn J.W./J.C.
N.T.S. 92H/02E
Date April, 1991
FIG. 7



① CONTACT-GOUGY - 160/70 SE

② CONTACT-GOUGY - 165/40 W

③ CONTACT-GOUGY - 155/35 SW

☒ POSSIBLE PORTAL

MASSIVE SULPHIDES Py, Sph, Cpy, Tr. Gn
(TOTAL STRIKE = 16 METERS)

NOTE: FOR LEGEND SEE 1:2500 MAP
FOR FACE LOCATION SEE PREVIOUS FIGURE 6

ASSAY RESULTS

SAMPLE No.	Au (ppb)	Ag (ppm)	Cu (%)	Zn (%)
95875	950	42.0	20,000	20,000
95876	290	14.2	9027	20,000
95877	260	14.1	6581	20,000
95878	220	6.2	3536	20,000
95879	270	7.1	6959	20,000
95880	310	6.8	6338	20,000

SCALE 1:500
m 0 10 20 m

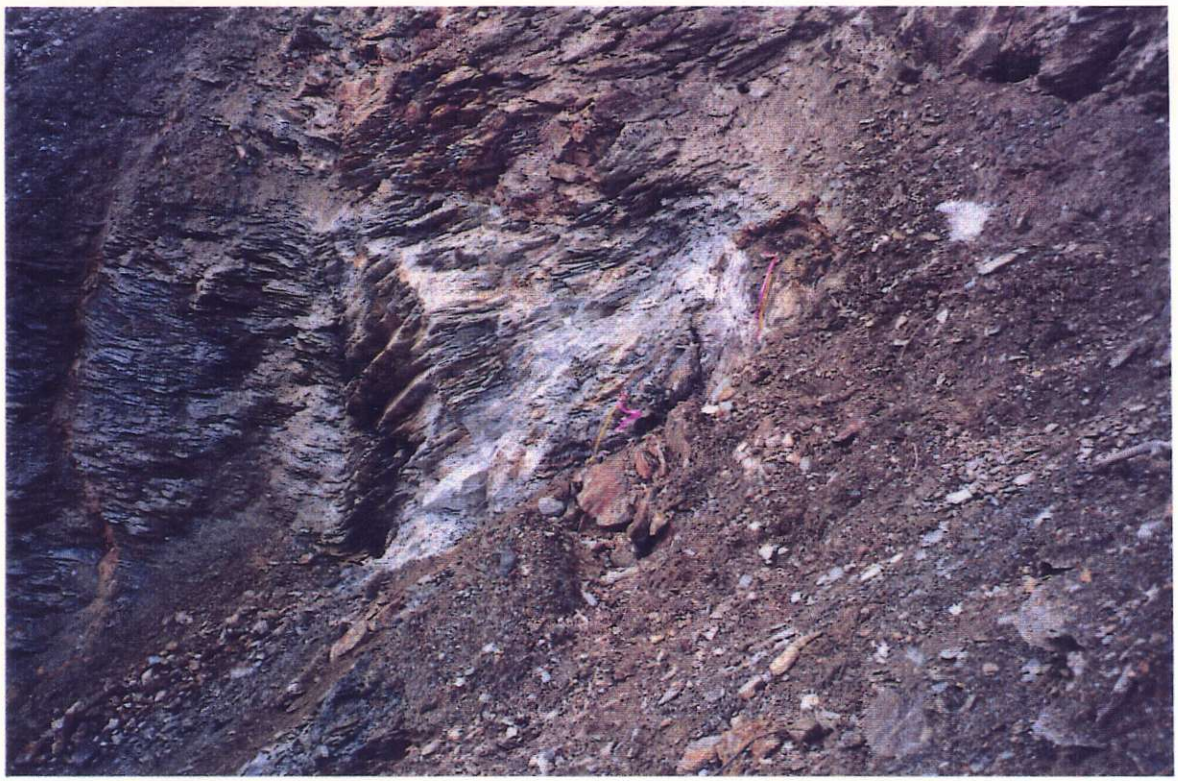
RED STAR PROJECT

MAIN SULPHIDE ZONE
DETAILED SKETCH MAP & SAMPLE LOCATION MAP

SIMILKAMEEN MINING DIVISION, B.C.

PAMICON DEVELOPMENTS LTD.

Drawn	N.T.S.	Date	FIG.
J.W./J.C.	92H/02E	April, 1991	8



MAIN ZONE MASSIVE SULPHIDE MINERALIZATION
sphalerite + pyrite ± chalcopyrite ± barite ± anhydrite
photo shows sample numbers 95875 and 95876

recrystallized banded (?) sphalerite + pyrite
± chalcopyrite ± barite mineralization

Sample 95882 chalcopyrite + sphalerite quartz vein mineralization

pyrite and chalcopyrite display weak banding (see photo). Lesser sulphide phases include bornite, galena, molybdenite and pyrrhotite. Gangue minerals include quartz, barite, kaolinite and sericite. Strongly anomalous mercury values (up to 17,000 ppb Hg) were obtained from the massive sulphide lens.

As well, near the bottom of the dump below the main massive sulphide lens, one boulder measuring 40 x 30 cm was found hosting massive chalcopyrite with pyrite and sphalerite (Sample #95882). Gangue minerals consist of quartz and sericite. It is believed that this boulder possibly came from the old underground workings and this was the main target of development at that time. Other smaller mineralized boulders similar to this along with hundreds of other more barren quartz vein boulders were also found throughout the dump. Assays for Sample #95882 are summarized below with others from this dump.

Sample	Type	Cu		Pb	Zn		Ag	Au
		(%)	(ppm)	(ppm)	(%)	(ppm)	(ppm)	(ppb)
95882	select grab	16.90	--	<2	4.28	--	6.17*	0.114*
461552	select grab	0.81	--	18	--	2,040	17.8	140
461553	select grab	--	6,480	10	--	4,640	5.6	110
461556	select grab	5.30	--	10	1.48	--	81.0	1,320
461558	select grab	2.10	--	4	--	>10,000	33.8	605
461559	select grab	3.77	--	8	7.15	--	39.2	450
461560	select grab	--	1,375	4	3.21	--	3.8	35

*values on oz/st

8.2 PAW SHOWINGS (Figure 5)

The Paw showings consist of a series of mineralized quartz veins hosted in foliated mafic volcanics. Extensive trenching was carried out over the showings by Spheno Mines in the 1960s.

Bull quartz veins up to 0.5 m thick carry tetrahedrite, malachite, bornite and chalcopyrite in selvages. Mineralization is extensive but to date significant widths have not been recognized. Grab samples of mineralization yielded up to 9.23% Cu, 0.57 oz/ton Ag, and 0.056 oz/ton Au.

8.3 KNOB HILL (Figure 5)

The Knob Hill showings are located approximately 1.2 km west of the Main Zone. Extensive workings consisting of adits, trenches and drill pads dating to the 1960s were noted. Sampling of pyritic, sericitic material in a dump pile yielded 7.43% Cu, 2.34 oz/ton Ag, and 0.030 oz/ton Au. The abundance of quartz sericite schist in this locality suggests a setting similar to the Main Zone. No access was possible into the old underground workings to allow for an examination of reported mineralized copper shear zones. Ministry of Mines geologists report assays up to 4% Cu from blue clay gouge material near the stronger sulphide mineralization.

8.4 PASAYTON SHOWINGS (Figure 5)

The Pasayton showings are located approximately 1.5 km east of the Main Zone. While not on the property the occurrence was visited to further clarify mineralization types in the area.

The showings consist of numerous, narrow bull quartz veins hosted in foliated mafic volcanics. Previous work on the showings consisting of trenching and underground development appears to have been initiated during the early 1900s. Tetrahedrite, chalcopyrite, bornite and malachite appear as disseminations throughout these veins. Strong carbonate alteration was also noted. Grab samples of selected material yielded values of up to 0.894 oz/ton Au and 1.36% Cu.

CHARACTERISTICS COMMON TO VMS TYPE DEPOSITS AND OCCURRENCES

	submarine back-arc environment	bimodal volcanics	chemical sediments	pyritiferous sericite schists (feeder vent ?)	barite	Cu	Pb	Zn	Ag	Au	Hg	Na depletion of units	K enrichment of units	Mg enrichment	anhydrite (sulphates)	Na enrichment of sulphides	quartz eye phenocrysts in felsic volcanics	quartz veins (stringer zone)	recrystallized sulphides	stratiform quartz/ sulphide boudins or porphyroblasts
RED STAR	X	X	X	X	X	X	tr	X	X	X	X			X	X	X	X	X	X	X
BRITTANIA	X	X	-	X	X	X	X	X	X	X		X	X	X	X		X	X	X	-
SENECA	X	X	-	-	X	X	X	X	X	X							X	X	-	X
BRALORNE AREA/ CHIP PROSPECT	X	X	-	X	-	X	X	X	X	X							X		X	
SAMATOSUM/REA GOLD	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X
HOMESTAKE	X	X		X	X	X	X	X	X	X	X	X	X	X	X	-		X	X	X
LARA	X	X	-	X	-	X	X	X	X	X		X	X		-	-	X	X	X	-
BUTTLE LAKE (H.W., Lynx, Myra, Price)	X	X		X	X	X	X	X	X	X							X	X	X	
ECSTALL RIVER	X	X	-	X		X	X	X	X	X									X	
KUTCHO CREEK	X	X	X	X	-	X	X	X	X	X	X	X	X	X	-		X	X	X	
TULSEQUAH CHIEF	X	X		X	-	X	X	X	X	X	-				-			-	X	
TULSEQUAH AREA - MAPLE LEAF & RIZZ PROSPECTS	X	X				X	X	X	X	X									X	
ESKAY CREEK	X	X	mudstones ?	-	X	X	X	X	X	X								X	X	
BLACK DOG	X		carbonaceous argillite ?	-	-	X	X	X	X	X	-				-	-	-		X	X
GECO	Archean			X	-	X	X	X	X	X		X	X	X	-		-	X	X	
BLUE MOON	X	X		X	X	X	X	X	X	X					X				X	
LOCKWOOD PROSPECT	X	X		X	-	X	-	X	X	X	-				-		-		X	
ROSEBURY (AUST)	X	X		X	X	X	X	X	X	X		X	X	X				X	X	X

X = characteristic present - = characteristic not present (blank) = characteristic not known

9.0 EXPLORATION POTENTIAL AND DISCUSSION

As has been drawn out of several case example studies and by the definition of a Kuroko-type VMS deposit, the Red Star project appears to be one of merit:

> "one that consists of laminated or bedded lenses of massive sulphide minerals hosted by fragmental submarine volcanic rocks of dacitic to rhyolitic composition"

The Red Star prospect possesses many similarities and characteristics seen at numerous other well documented volcanogenic massive sulphide prospects and deposits in British Columbia and is therefore worthy of a comprehensive exploration and evaluative field program.

Historically, the Upper Triassic Nicola volcanic and sedimentary package of rocks have been interpreted as not being favourable to hosting VMS-type deposits because of the inference of not being a submarine environment and its lack of felsic volcanic stratigraphy. However, in the area of the Red Star property and northward along the eastern border of the Eagle diorite complex, bimodal (felsic to intermediate) volcanic flows, tuffs, pyroclastics and their metamorphosed equivalents (chlorite-sericite and quartz-sericite schists) form distinctive units.

These units (especially quartz-sericite and chlorite-sericite schists) host or are intimately associated with the Homestake, Rea Gold, Buttle Lake, Lara, Brittania, Ecstall River and Kutcho Creek, massive sulphide deposits in British Columbia. Commonly, the schistose units contain 1 to 20% pyrite throughout as disseminations or stringers of quartz vein material as does the Red Star. Quartz veins up to metres wide, both mineralized and barren, of any number of phases of veining may also be present which is again seen on the property. Development work on the claims in underground workings is interpreted to have focussed on two individual quartz-chalcopyrite-sphaleriate veins hosted within the chlorite-sericite schist. One vein was reported to be 16 feet wide. Veins of this nature are proving to be of economic size, grade

and significance (Samatosum ?). Earlier stages of veining are often broken or fragmented and as a result produce porphyroblastic or boudinaged textures of vein material. Barite and calcite veining may also be subjected to the same processes.

These schistose zones of structural weakness have been repeatedly interpreted as stockwork feeder zone vent centres at other VMS deposits. Deposits can either occur within these feeder zones, proximal to the vent or distally slumped and brecciated away from the feeder.

While development on the property has focussed on quartz vein mineralization, one massive sulphide lens consisting of sphalerite + pyrite + muscovite/ sericite with elevated values in barium, mercury and sodium has been exposed on surface within recent history also being hosted within the chlorite-sericite schist. The lens varies in width from 15 to 120 cm and extends for 16 metres along strike. White sulphate alteration (anhydrate ?) envelopes the lens. Although not positively verified, old literature suggests similar zones may have been encountered in underground workings.

Chemical alteration enveloping VMS-type sulphide deposits generally exhibits Na depletion (breakdown of sodium feldspars) and K enrichment (sericite enrichment). Although no analytical studies of this nature have been carried out to date, initial analysis of massive sulphide mineralization yields highly anomalous sodium with zinc values. Visual examination of the host chlorite-sericite schists indicates the likelihood of elevated potassium values. Sodium/potassium ratios in zones of favourable altered host rock can be useful in more closely pin-pointing areas of target definition. Anomalous values in Hg are known to be associated with sulphide bodies at Kutcho Creek, Homestake, Rea Gold, Samatosum and at Eskay Creek.

Exploration and development work has been carried out almost exclusively within the chlorite-sericite schist which is 100 metres wide and can be traced for 1000 metres along strike. With the wealth of knowledge obtained in the past ten years pertaining to volcanogenic massive sulphide environments, the

quartz-sericite schist adjacent to the chlorite-sericite schist remains to be evaluated for its potential as does overlying sedimentary units. Most known VMS deposits associated with these schistose units appear to be preferentially hosted within the more felsic member. As well, fresher felsic rhyolite-dacite volcanic units bound the schists on the hangingwall and footwall sides.

Respectfully submitted,

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K.M. Curtis, Geologist

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S.L. Todoruk, Geologist

APPENDIX I

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BIBLIOGRAPHY

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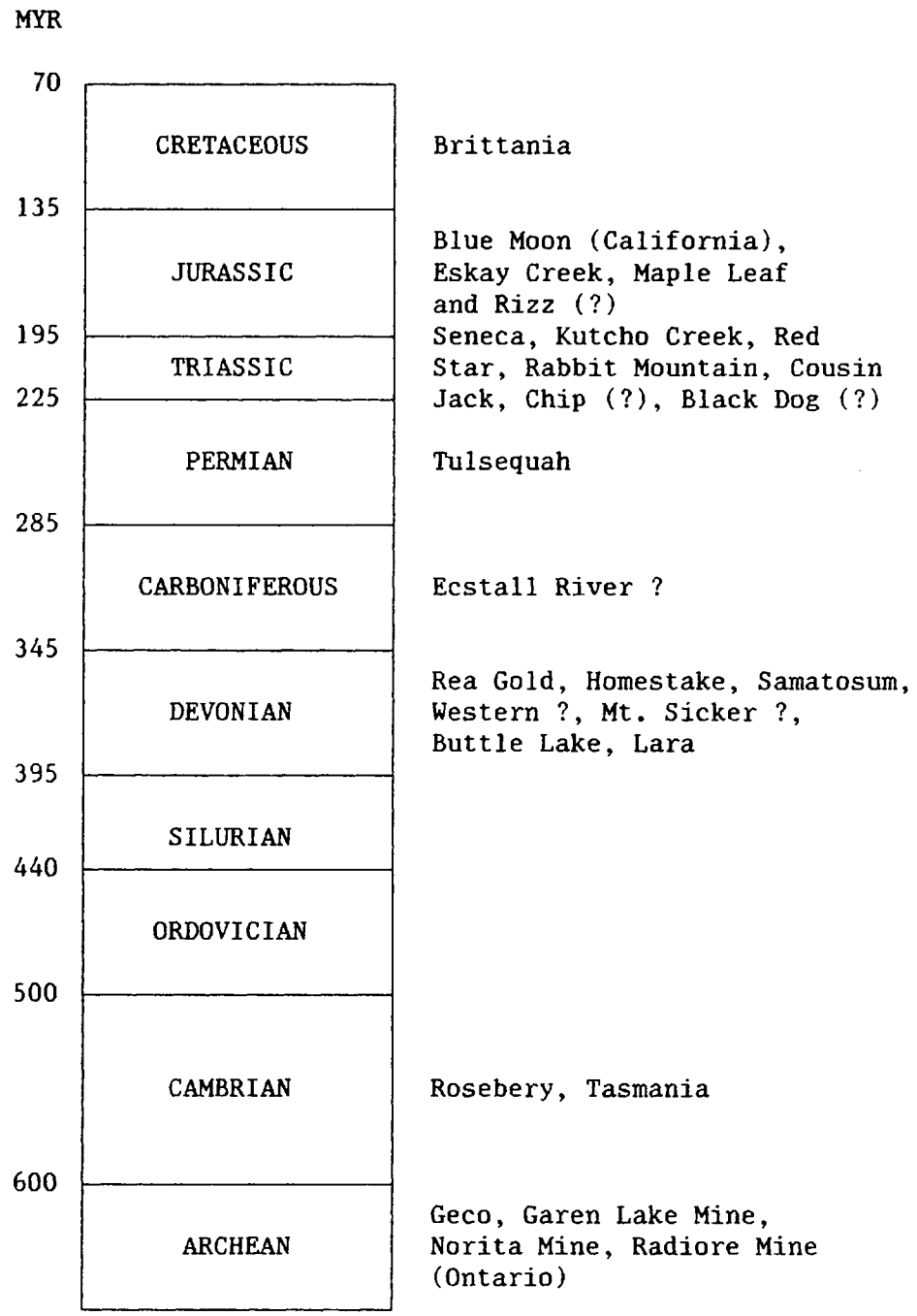
APPENDIX II

CASE EXAMPLES
OF
VMS OCCURRENCES AND DEPOSITS

Approximate Ages for Host Rocks
of Deposits and Occurrences of Interest



BRITTANIA

At the Brittania Mine 10 volcanogenic massive sulphide ore bodies are localized within the upper part of a 160 metre thick volcanic unit correlative to the Gambier Group that was deposited as coarse lapilli tuffs and flows, with intercalated epiclastic and tuffaceous sedimentary rocks. These original units have now been altered through repeated deformation to chlorite schists and quartz sericite schists. The schists are believed to be a footwall vent stringer area as is hypothesized in the Kuroko model of sulphide exhalation. These rocks occur within the Brittania roof pendant occurring within intrusive rocks of the Coast Plutonic Complex.

The Brittania ore deposits occur within a calc-alkaline submarine volcanic environment.

Ore bodies consist of pyrite, chalcopyrite and sphalerite with minor galena and tetrahedrite occurring in a quartz, barite, gypsum and carbonate gangue. A zone of alteration (Si, K, and Mg enrichment and Na depletion) surrounds and encloses stringer-type ore and often underlies massive ore. From 1905 to 1974, 55 million tons of ore were milled which graded 1.3% Cu, 0.5% Pb, 1.65% Zn, 0.18% Cd, 5.8 g/ton Ag and 0.58 g/ton Au.

The age of the Brittania host rocks is Middle Jurassic to early Cretaceous.

BRALORNE AREA - CHIP PROPERTY

Two hundred and twenty-five kilometres northwest of the Red Star property and 13 km south-southwest of the Bralorne mine, possibly associated with the regional structural trend and association with the Coast Plutonic Complex on its eastern border, mineralization in float and outcrop occurs in two areas on the property and is inferred to be of Kuroko-type volcanogenic massive sulphide origin.

Roof pendants of various lithologies are bound up within the Coast Plutonic Complex in this area. Approximately 10 to 15 km south of Bralorne the Cadwallader Group consists of the Noel, Pioneer and Hurley Formations of Upper Triassic age. The Neol and Hurley Formations are predominantly sedimentary successions while the Pioneer Formation north of Pemberton Includes thin, widespread horizons of rhyolite, rhyolite breccia, dacite, siliceous tuff, and andesite feldspar porphyry.

Mineralization appears to consist of pyrite, chalcopyrite, sphalerite and galena. In at least one of the two known occurrences on the property, mineralization occurs within quartz-sericite schists. The width of the sulphide mineralization varies form 2 to 30 metres. Grab samples from the first massive sulphide occurrence grade: 0.05 oz/ton Au. 0.55 oz/ton Ag, 1.45% Cu; 0.06 oz/ton Au, 0.34 oz/ton Ag, 0.91% Cu, 3.81% Pb, 10.60% Zn; 0.02 oz/ton Au, 0.79 oz/ton Ag, 2.52% Cu, 14.25% Pb and 7.65% Zn. Samples from the second zone located 1 km to the southwest grades up to 0.097 oz/ton Au, 5.89 oz/ton Ag, 13.65% Cu and low values in Pb and Zn.

References: Stockwatch - December 6, 1990 - by High Frontier Resources Ltd./Kennecott Canada

SAMATOSUM AND REA GOLD

Four zones of polymetallic massive sulphide-barite mineralization occur on the property hosted within a thick sequence of mafic to felsic volcaniclastic rocks belonging to the Eagle Bay Formation. These sulphide lenses and host succession are interpreted to be inverted or overturned, and as such a footwall alteration zone consisting of a highly altered feeder quartz vein stockwork system now forms the structural hanging wall overlying the sulphide lenses. Massive barite caps the sulphide lenses. Intense regional deformation and greenschist facies regional metamorphism have altered the host rocks to sheared chlorite phyllites, quartz-sericite schists and chert which were derived from felsic to intermediate volcanic rocks.

The parent magma source for the host rocks is interpreted to have originally been alkaline basaltic tuffs formed in a failed rift that developed in a volcanic arc setting.

The ore bodies consist of two thin, laterally continuous sulphide bodies comprised of pyrite, arsenopyrite, sphalerite, galena, chalcopyrite, and tetrahedrite-tennantite. Sulphides are fine grained and massive, crudely banded or brecciated. Non-sulphide gangue minerals include albite, anglesite, jarosite, celsian, cymrite, barite, chlorite, goethite and trace amounts of quartz and ilmenite. Thin to thick mineralized quartz veins cut the volcanic pile and sulphide lenses. Sulphide deposition at the waning stages of mafic volcanic activity was accompanied by silicification, pyrite enrichment, Na enrichment (massive albite and paragonite), barite deposition (barite and celsian), and carbonitization (dolomite, iron-rich magnesite and calcite). It is hypothesized that the brecciation and intense alteration of the mafic volcanic rocks to sericite and chlorite may be indicative of the close proximity to a fumarole vent area.

Intense alteration close to the mineralization is evidenced chemically by an increase in SiO_2 and K_2O and depletion of Na_2O_3, MgO, CaO and Al_2O_3.

Proximal to the Samatosum deposit, elevated values of 2,000 to 3,000 ppm As and 1,000 to 5,000 ppb Hg are found.

The Rea Gold reserves as defined by drilling include 242,870 tonnes grading 6.5 g/tonne Au, 73.3 g/tonne Ag, 2.25% Zn, 2.14% Pb and 0.53% Cu. Mineralized ore is elevated in arsenic. Samatomsum ("Silver Zone") reserves before mining commenced in 1989 were estimated at 1,020,000 tonnes grading 1.4 g/tonne Au, 727 g/tonne Ag, 2.9% Zn, 3.2% Pb and 1.2% Cu.

Devono-Mississippian Eagle Bay Formation rocks host the massive sulphide and sulphide-barite mineralization at the Samatosum-Rea Gold property.

HOMESTAKE

At lease three sulphide-barite lenses occur on the property hosted within what is called a sericite-quartz "paper" schist belonging to the Eagle Bay Formation. The unit is easily discernible by its fissile appearance and by its weathered coating of yellow ferric sulphate. Abundant disseminated pyrite occurs throughout the schist. It is interpreted to be an intensely altered felsic tuff. A more massive phase of the sericite-quartz paper schist contains lenticular, quartz porphyroblasts up to 6 cm in length. Within the paper schist, a number of quartz-pyrite veins varying in width up to one metre are found, below the barite lenses. This unit is correlative to that which also underlies the host rocks of the nearby Rea Gold and Samatosum massive sulphide-barite deposits. Unlike at Rea Gold, stratigraphy is interpreted to be 'right-way up' at Homestake.

The original host lithologies of the Homestake deposit are interpreted to be of calc-alkaline andesite to rhyolite tuffs deposited in a mature volcanic arc - being tectonically different from the Rea Gold-Samatosum failed rift environment, that formed in a volcanic arc.

The Homestake sulphide-barite lenses range in thickness from less than a metre to at least 10 metres in thickness and in underground workings have individually been followed for several hundred metres. A sulphide assemblage consists of tetrahedrite, galena, sphalerite, pyrite, chalcopyrite, argentite, minor native silver, and trace ruby silver and native gold. The lenses may consist of either massive to banded barite with only patchy mineralization dispersed throughout, or interlayered barite, schist and sulphides. Metasomatically altered footwall rocks to the Homestake deposits are enriched in potassium, silica and iron. Elevated values of 3,000 to 4,000 ppb Hg and 3,000 to 20,000 ppm As are reported close to the sulphide lenses with extreme values up to 100,000 ppm Hg.

Recorded production between 1935 and 1941 totalled approximately 6,965 tonnes which yielded 12,400 grams of gold, 9,565,900 grams of silver, 11,080

kilograms of copper, 171,325 kilograms of lead and 246,520 kilograms of zinc.

During the 1980s reserves were estimated to be 1,010,800 tonnes with an average grade of 240 g/tonne Ag, 2.5% Pb, 4.0% Zn, 0.55% Cu and 28% barite.

Devona-Mississippian Eagle Bay Formation rocks host the Homestake sulphide-barite mineralization.

LARA DEPOSIT

Several volcanogenic polymetallic massive sulphide horizons (Coronation Zone, Coronation Extension Zone, Hanging Wall Zone, Randy North Zone and Randy Zone) occur within and associated with rhyolite and andesite volcanic rocks of the late Devonian McLaughlin Ridge Formation (Myra Formation) belonging to the Sicker Group. Immediate host rocks to the sulphide bodies are coarse grained rhyolite crystal tuff and ash tuff, quartz-eye porphyry and feldspar porphyry rhyolite, and minor lapilli tuff, andesite and argillite. Host rocks along the mineralized trends commonly display a moderate to strongly developed schistocity which can be bleached, locally silicified, containing up to 5% disseminated pyrite and termed a sericite-quartz schist.

Sulphide bodies have been drill tested along strike lengths of approximately two kilometres and downdip for 450 metres and 180 metres (the Coronation Trend and Randy Zone, respectively).

The mineralized zones appear as sulphide lenses or horizons consisting of bands, laminae and stringers of sulphide mineralization in strongly silicified felsic host rocks. Considerable variation in width and grade occurs along the trend of the various horizons being up to 16 metres thick and averaging 5.24 metres. Sulphide mineralogy consists of sphalerite, chalcopyrite, galena and pyrite with minor tetrahedrite and tennantite. Gangue minerals consist of quartz and calcite.

Estimated reserves have been calculated as total probable 172,000 tons grading 0.113 oz/ton Au, 3.08 oz/ton Ag, 0.88% Cu, 0.99% Pb and 4.86% Zn. Possible reserves are estimated as 239,000 tons grading 0.092 oz/ton Au, 2.24 oz/ton Ag, 0.82% Cu, 1.04% Pb and 4.23% Zn.

BUTTLE LAKE DEPOSITS (H.W., Lynx, Myra, Price)

At least four Kuroko-type massive sulphide bodies occur associated with pyritic quartz sericite schists which are interpreted to have originated from calc-alkaline massive rhyolite flows, breccias and tuffs belonging to the Myra Formation of the Sicker group volcanic rocks. It is argued that the sulphide deposits formed in these felsic schists which acted as feeder zone vents along a linear northwesterly trending ridge of eruptive centres. Although feeder zones are hypothesized, most ore sheets formed on the flanks of rhyolite flow rock. The Lynx, Myra and Price ore bodies are believed to occur in the same stratigraphic horizon whereas the H.W. ore body is found in a stratigraphically lower rhyolite unit.

Three separate 'feeder' stringer zones have been recognized within the sericite schist below the Lynx, Myra and H.W. ore bodies. Up to 30% disseminated pyrite occurs in the schist below the H.W. In this area, pyrite-quartz stringers/vein can be up to at least two feet in width. Commonly these veins are of uneconomic grade. Below the Myra deposit, stringers have been enriched in copper content.

Ore bodies are primarily lensoidal beds of massive sulphide comprised of pyrite, sphalerite, chalcopyrite, galena and barite with minor amounts of tennantite, bornite and pyrrhotite. Ore textures are primarily fine grained and massive or banded.

Between 1966 and 1982, underground production from Lynx and Myra mines totalled 5,204,300 tons averaging 0.06 oz/ton Au, 3.2 oz/ton Ag, 1.5% Cu, 1.1% Pb and 7.6% Zn.

Geological reserves in the H.W. mine at the end of 1982 totalled 15,232,000 tons of probable plus possible averaging 0.07 oz/ton Au, 1.1 oz/ton Ag, 2.2% Cu, 0.3% Pb and 5.3% Zn.

Host rocks to the H.W., Lynx, Myra and Price deposits are Late Paleozoic to Lower Mid-Paleozoic in age.

ECSTALL RIVER

Two massive cupriferous pyrite lenses measuring 300 x 40 metres and 400 x 5 metres are hosted within strongly foliated metamorphosed chloritic quartz biotite and quartz hornblende schists which were most likely originally derived from a felsic volcano-sedimentary succession. These lenses are concordant with an elongate north-south trending section of granitoid gneiss and occur within a roof pendant within intrusive rocks of the Coast Plutonic Complex.

The massive sulphide deposits consist of pyrite with minor sphalerite, chalcopyrite and galena.

The age of the hosts at Ecstall River is Late Paleozoic.

KUTCHO CREEK

Three massive sulphide deposits occur along one felsic lapilli tuff section of the Kutcho Creek Formation along a trend of 3.5 kilometres. Immediately below the massive sulphide ore bodies, the footwall lapilli (LT) tuff is altered to quartz-sericite-dolomite-chlorite schist. Hangwall rocks to the deposits consist of quartz-feldspar-sericite-chlorite-dolomite schist and/or sericite-quartz schist. This volcanic pile is interpreted to be a subaqueous pyroclastic flow deposit which characterizes wide aerial extent. The parent magma was likely formed from one calc-alkaline source.

The sulphide deposits occur in an en echelon pattern with gaps of up to 300 metres between them and are referred to as the Kutcho deposit, Sumas West deposit and Essa West deposit. The three massive sulphide deposits may have formed from several centres of exhalation along a linear fumarole field along a fissure zone. The individual lenses consist of multiple layers of massive sulphide, disseminated sulphide and quartz-sericite schist and dolomite-quartz-sericite rock. Sulphide minerals consist of pyrite, sphalerite, chalcopyrite, bornite, minor chalcocite, trace tennantite, galena, digenite and djurleite. Gangue mineralogy consists of dolomite, quartz and calcite. No barite, gypsum, anhydrite has been found associated with the deposits. The Kutcho deposit contains 17,000,000 tons of open pit mineable reserves of 1.62% Cu, 2.32% Zn, 29.2 g/t Ag, and 0.3 g/t Au. The Sumac West deposit is estimated to contain 10,000,000 tons grading 1.0% Cu and 1.2% Zn while the Esso West deposit contains approximately 1,000,000 to 1,500,000 tons grading about twice that of the Kutcho deposit.

Chemical evidence of alteration halos peripheral to the Kutcho deposits utilizing $Na_2O/Na_2O + K_2O$ ratios is useful as a tool in defining proximity to the ore horizons because it defines a much smaller area that the zone of sericite alteration. Near the sulphide bodies Na_2O depletion is evidenced by replaced sodic plagioclase while K_2O enrichment is partly the result of sericite development.

Metal content ranges or averages of massive sulphides from the Kutcho deposits are 1.70% Cu, 2.40% Zn, 400 to 800 ppm Pb, 27 to 41 ppm Ag, 200 to 900 ppb Au, 90 to 120 ppm Cd, 100 to 1,200 ppm As, 30 to 200 ppm Bi, 100 to 300 ppm Sb, 100 to 200 ppm Se, 100 ppm Co, 50 to 100 ppm Mo and 4,100 to 7,000 ppb Hg.

Host rocks for the Kutcho Creek deposits are Upper Triassic.

TULSEQUAH CHIEF

Several lenses of massive sulphide mineralization are hosted within moderate to strongly sericitized dacite-rhyolite tuff volcanic rocks of probable Mississippian-Permian age. These felsic volcanics are bound by intermediate volcanics of andesite composition. At present, the ore bearing horizon has been mapped along a 3,000 foot strike length and drilled downdip 4,000 feet. Ore mineralization averages 25 feet in thickness with individual true width intersections as great as 130 feet. No stockwork feeder system has been identified below the mineralized system as yet.

Ore grade mineralization occurs in massive sheet-like lenses with fine-grained pyrite-chalcopyrite occupying the central part of the shoots, surrounded by sphalerite, pyrite, galena and minor tennantite in a dense carbonate-barite-anhydrite gangue. Mineralization is marked by the absence of arsenic and mercury.

From 1951 to 1957, 1 million tons of ore were mined which graded 2.6 gm/tonne Au, 84 gm/tonne Ag, 1.3% Cu, 1.3% Pb, 6% Zn and 0.02% Cd.

Current reserves estimated by Cominco/Redfern Resources Ltd. are 5,300,000 tons grading 1.6% Cu, 1.31% Pb, 7.02% Zn, 2.74 gm/tonne (0.08 oz/ton) Au, 101 gm/tonne (2.94 oz/ton Ag).

Near the north end of the Rizz property, prospecting has also identified numerous talus blocks containing bands of medium grained zinc and lead mineralization within altered metasediments. A composite chip sample from the boulders assayed 0.10 oz/ton Au, 16.4 oz/ton Ag, 7.30% Zn and 8.20% Pb.

Both the Maple Leaf and Rizz properties appear to host polymetallic mineralization within felsic volcanics of Jurassic age.

ESKAY CREEK (CALPINE) DEPOSITS

Three separate massive sulphide lenses or sheets occur stratigraphically subparallel to one another within and near a contact unit of mudstones and felsic volcanics near the top of the Lower to Middle Jurassic Hazelton Group (21A and 21B, Pumphouse and 21C Zones). Host rocks to the deposit comprise a lower sequence of dacitic tuffs and wackes; a middle sequence of rhyolitic tuffs and breccias; and an upper sequence of andesitic pillow breccias and flows, intercalated with carbonaceous mudstones. The lower felsic volcanically derived package belongs to the Dilworth Formation while the upper sequence of intermediate volcanics and mudstones belongs to the Salmon River Formation. The transition zone between these two facies is referred to as the contact unit which is dated as late Early to Early Middle Jurassic.

The primary sulphide body of interest (21A and 21B) has been tested along a strike length greater than 1400 metres, downdip for 250 metres and varies from 5 to 45 metres in width. Stratabound and stratiform mineralization occurs within the carbonaceous mudstones of the contact unit, and underlying felsic volcanics.

Mineralized quartz stockwork systems which may be indicative of sulphide exhalitive vent centres occur within the acid volcanic rocks. Mineralization is characterized by laminae and bands of disseminated, semi-massive and massive sulphide, up to 12 metres thick, that appear to parallel bedding in the mudstones. In stockwork zones, mineralization can be associated with massive chlorite-gypsum-barite assemblages or quartz-muscovite-sulphide breccia. Sulphides in massive ore display a wide variety of clastic to laminated textures.

Sulphide mineralogy consists of sphalerite, tetrahedrite, galena, pyrite, arsenopyrite, boulargerite, bournonite, chalcopyrite, stibnite, realgar, orinent, cinnabar, native gold and native silver. Gangue minerals comprise magnesium chlorite (locally enriched in barium), muscovite, chalcedonic silica, barite, calcite and dolomite.

Geological reserves total 5,023,000 tonnes grading 15.6 gm/tonne Au and 441 gm/tonne Ag with a higher grade core of 1,223,000 tonnes averaging 49.4 gm/tonne Au, 1,392 gm/tonne Ag, 5.5% Zn and 2.2% Pb.

BLACK DOG (Thios Resources Ltd./Eurus Resource Corp.)

This newly discovered occurrence was discovered in mid-1990 and is situated within the Iskut River Gold Camp 50 kilometres east of the polymetallic Eskay Creek deposit which is interpreted to be of volcanogenic and epithermal origin.

The Black Dog mineralization occurs within a graphitic argillite sequence hosting several zones of strata-controlled, disseminated to well laminated semi-massive and massive sulphides containing pyrite, pyrrhotite, sphalerite, galena, chalcopyrite and tetrahedrite. The mineralized zones are separated by narrow andesite flow units. A probable Mesozoic age is inferred belonging to the Stuhini Group.

Drilling to date along the Black Dog Horizon has followed mineralization for over 700 metres along strike and 200 metres down dip, remaining open in all directions. Better drilling results include 31.7 feet grading 0.080 oz/ton Au, 25.7 oz/ton Ag, 2.07% Pb, 5.35% Zn and 0.58% Cu and 9.8 feet grading 0.459 oz/ton Au, 0.65 oz/ton Ag, 0.02% Pb, 1.26% Zn and 1.68% Cu. Geophysical surveys indicate that conductive responses associated with the Black Dog stratigraphy can be traced over a strike length of 2500 metres.

Preliminary geological reserves calculated comprise a total of 640,000 tons grading 0.34 oz/ton Au equivalent from average grades of: 0.072 oz/ton Au, 9.8 oz/ton Ag, 3.08% Zn, 0.79% Pb, 0.64% Cu.

GECO (Manitouwadge, Ontario; Noranda)

The deposit is hosted within a package of highly metamorphosed Archean volcanics and sediments known as the Manitouwadge Synform. The deposit is enveloped by sericite schist.

The orebody is a lenticular, continuous zone of mineralization extending from surface to a vertical depth of 3,200 feet. The width varies from 10 to 250 feet with an average of 65 feet. The core consists of massive pyrite, pyrrhotite, sphalerite, chalcopyrite and galena. In addition to copper and zinc, the orebody carries silver and minor quantities of gold and tin. The massive core is surrounded by an envelope of disseminated and stringer pyrite, pyrrhotite and chalcopyrite in the sericite schists. Several subparallel lenses of mineralization occur in a stacked form in the hanging wall and footwall of the main ore body.

The deposit has undergone multiple periods of deformation and has been subjected to regional metamorphism of up to almandine-amphibolite grade. It is stratigraphically underlain by anthophyllite-cordierite-garnet gneisses (granite gneiss group), enveloped by ore related sericite schist alteration (sericite schist group) and overlain by quartz-biotite-feldspar gneisses containing both silicate and oxide facies iron formations (grey gneiss group).

Geco is interpreted as an Archean overturned, deformed, syngenetic, stratiform, volcanogenic massive sulphide deposit.

From 1957 to the present, Geco has produced 46.8 million tons grading 1.87% Cu, 3.83% Zn and 1.68 oz/ton Ag. Remaining reserves are estimated to be 11,821,000 tons grading 1.61% Cu, 2.90% Zn, and 1.13 oz/ton Ag.

BLUE MOON (Mariposa County, California; also Iron Mountain and Peachys Creek)

The Blue Moon deposit is a Kuroko-type VMS situated on the western edge of the Sierra Nevada foothills in Mariposa County, California.

The deposit is hosted within the north-northwest trending Gopher Ridge Volcanic Belt which consists of a western belt of greenstone and chlorite schist, a central (and ore hosting) belt of felsic volcanics and an eastern sequence of black slates. These rocks are Upper Jurassic in age.

Mineralization predominantly is characterized by numerous interfingering massive sulphide lenses inferred to be on the flank of a rhyolite dome. A sulphide mineral assemblage consists of sphalerite, pyrite, tetrahedrite, galena and chalcopyrite in a gangue of sericite, quartz, barite and calcite with lesser gypsum and anhydrite.

Reserves in 1988 were calculated as 3,814,000 tons grading 1.03% Cu, 0.47% Pb, 7.96% Zn, 2.61 oz/ton Ag and 0.067 oz/ton Au.

The Iron Mountain and Peachys Creek occurrences are also Kuroko-type prospects located within the same felsic volcanic package 35 miles to the north. Mineralization and alteration are reported to be similar to the Blue Moon.

Colony Pacific Explorations ltd. owns all three of these properties.

LOCKWOOD PROSPECT owned by Island Arc Resources Corp. (Washington State)

The Lockwood prospect is a Kuroko-type prospect located in Snohomish County near Sultan, Washington. The area is underlain by northwest trending rocks of late Jurassic or Early cretaceous age consisting of basal greywackes overlain by a thick succession of intermediate volcanic rocks which enclose the polymetallic mineralization. Quartz sericite pyrite schists form an alteration envelope in close proximity to the massive sulphide mineralization and have been followed along strike for over 500 metres.

At least two separate sulphide horizons have been intersected in drilling carried out in 1990. Mineralization consists of pyrite, chalcopyrite and sphalerite.

Of nine holes drilled in 1990, the best results include 16.1 feet grading 3.30% Zn, 3.37% Cu, 0.073 oz/ton Au, 2.65 oz/ton Ag.

ROSEBERY (Tasmania, Australia)

The Rosebery deposit is a Kuroko-type pyrite-sphalerite-galena-chalcopyrite-barite volcanogenic massive sulphide deposit located in western Tasmania, Australia. The deposit occurs within a relatively narrow belt of dominantly calc-alkaline felsic volcanics termed the Mt. Read Volcanics of Cambrian age. Several other similar but smaller deposits occur within this same stratigraphic horizon for 8 km to the south and 9 km to the north. This package of rocks has been divided into the Primrose Pyroclastics which hosts the deposit and an overlying unit referred to as the Mt. Black Volcanics. Primrose Pyroclastics consist of a uniform >1000 metre thick footwall package of vitric-crystal lapilli tuff with phenocrysts of albite and/or K-feldspar. Common alteration minerals in the footwall rocks are chlorite, carbonate and epidote. As well, sericite is ubiquitous and noticeably increases in content toward zones of mineralization where the rock grades into quartz-sericite schist. The mine sequence Rosebery host consists of pale grey siltstone and slate with minor lenses of quartz-albite crystal tuff and lithic tuff. The host rock is overlain mainly by a dark grey, finely banded slate of biogenic origin up to 30 metres thick with thin bands of pyrite either parallel to the cleavage or bedding. Within this unit is a marker bed of turbiditic sandstone inferred to be of marine origin. Overlying the black slate is a thick sequence of massive pyroclastics consisting of aphyric ryholite breccia, quartz-plagioclase-bearing breccia, quartz-feldspar crystal tuff, banded fine-grained felsic tuff and green pumice tuff and agglomerate. The Mt. Black Volcanics overlay all older rocks and consist of felsic flow-banded to autobrecciated lava and dacitic, andesitic and rare basaltic crystal tuff and lava.

Mineralization at the Rosebery deposit occurs in two distinct tabular sheets dipping 45° with an overall strike length of 1500 metres and downdip projection of 800 metres. Where not continuous, the orebody tends to split into a number of lenses separated by carbonate- or sericite-rich host rocks. The mineral assemblage is comprised of pyrite, sphalerite, galena, chalcopyrite and pyrrhotite with minor tetrahedrite, tennantite, arsenopyrite, magnetite, electrum, enargite, gold, bournonite, hematite and cutile. Gangue minerals

include chlorite, muscovite, quartz, spessartine, albite and coarse-grained barite. One distinct lens is characterized by banded barite with sphalerite, galena and minor tetrahedrite, tennantite, chalcopyrite, pyrite and hematite where it occurs as laminae interspersed with barite-sulphide or barite-carbonate bands. Sulphide ore throughout the mine is commonly fine compositional banding from 0.1 to 10 cm thick. This layering is concordant with the ore-host rock contacts and with bedding in the host rock and black slate, suggestive of primary origin. The sulphide lenses comprising the Rosebery deposit are interpreted to represent fragments of a once continuous sheet. A history of deformation and annealing is suggested as evidenced by metamorphic porphyroblastic textures of ore and cataclastic brecciation of sulphides.

At least one instance occurs where a quartz vein hosting chalcopyrite and carbonate cuts the footwall quartz-sericite-pyrite schist. Noticeably absent is the depletion of pyrite adjacent to the vein in the schist while secondary albite occurs as vein selvage.

Chemical alteration near the sulphide bodies indicates an enrichment in Mg, Mn, Rb, and K (MgO = 1.08 - 3.70 wt %, K_2O = 1.32 - 3.50 wt %) while Na and Sr are strongly depleted (Na_2O = 0.08 - 1.47 wt %, Sr = 4 - 35 ppm). Ba is enriched in most altered samples (685 to 2,360 ppm Ba) (albite is usually only found in sulphide poor bands or in sphalerite-rich bands poor in pyrite). Cobalt values in pyrite range up to 1,010 ppm Co. Highest Co values commonly occur in areas enriched in chalcopyrite. Though not proven, it is suspected that the high Co zone loosely defines a hydrothermal conduit (feeder vent). This assemblage has also been seen at the Mt. Lyell (Australia) mine 35 km to the south. SiO_2 analyses of altered and unaltered footwall pyroclastics range from 68.2 to 73.40 wt %.

It is hypothesized that ore solutions were generated by convective circulation of sea water within the underlying volcanic pile following the intrusion of a large Cambrian pluton. The occurrence of several massive sulphide deposits (of varying sizes) at possibly the same stratigraphic horizon indicates uniform heating over an extensive area. Major deposits like Rosebery probably

formed from cells several kilometres wide and two or three kilometres deep whereas the small deposits elsewhere may have formed at approximately the same time, but may represent early, small-scale, short-lived cells.

Up to 1979, the Rosebery massive sulphide deposit had produced 10,000,000 tons grading 18.0% Zn, 5.5% Pb, 0.8% Cu, 14.9% Fe, 187 g/t Ag and 2.8 g/t Au. Reserves remaining are about 8,000,000 tons of similar grade.

PAMICON DEVELOPMENTS LIMITED — Geochemical Data Sheet - ROCK SAMPLING

Sampler DeBock Ex | Project Red Star | NTS
Date Oct 12/90 | Property Bell 192 | Location Ref | Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION: Rock Type	Alteration	Mineralization	ADDITIONAL OBSERVATIONS	ASSAYS: Ag	Au
	Bell 192	Grab							
95805	"	"		QV		Chalco pyrite blebby pyrite	Float on spill pile	150	150
06	"	"		"		"	" "	1160	.030 1160
07	"	"		Qtz		minor pyrite	frothy qtz float	140	140
08	"	"		"	sericite	VL	on spill pile	~~nd~~	
08	"	"		qtz	sericite	minor pyrite	Laminar QTZ	nd ~~140~~	nd
09	"	"		schist		malachite seams	Subcrop	140 ~~nd~~	140
						tetra			
10	"	"		"	QV	tetra	4-6 cm QV - float	ND ~~140~~	130
11	"	"		"	"	tetra bornite	30cm QV in hand trench	140 ~~130~~	nd
12	"	"		Green stone	QV	tetra bornite massive	QV 45-30 cm fractured zone 3 cm	130 ~~nd~~	.056 1630
13	"	"		"	Epidote	malachite	wall rock beside QV		70
14	"	"		"	QV	tetra bornite	float from spill pile		530
15	"	"		"	QV	Malachite	very sheared		810
16	"	"		"		malachite	- soil stained green by malachite		80
17	"	"		"		malachite bornite	sheared to gouge		.046 1730

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DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

Sampler DeBerk L

Date Oct 13/90

Project

Property East Bell .5 K.

NTS

Location Ref

Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
	.5K East Bell	Grab						Au					
95818				Schist	QV	Tetra Chalco	Float at mouth of old adit	710000 .894					
19				"	"	"	" "	.062 2656					

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RAMICON DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

Sampler DeBock K Project Redstar NTS _____

Date Oct 11/90 Property Bell 192 Location Ref _____

Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au					
	Bell 192	Grab						ND					
95801	"	"		Volcanic		Chyococlo?	2-3 m long	ND					
02	"	"		"		"	subcrop below OC	ND					
03	"	"		"		-	Dark green siliceous material	ND					
04	"	"		Schist	QV	Limonitic	20 cm x 5-6 m	ND					

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DAMICON DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

Sampler DeBockle
Date 14/10/90

Project Red Star
Property Psayatan

NTS
Location Ref
Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
	Psayatan	Grab											
95820	"	"		Schist	QV	chalco bornite tetra molybdite	QV 6-40cm to 2cm long in shear around small adit	4800					
								1620					
21	"			"	"	"	QV float on spill pile of open cut	1510					
22	"	"		"	Altered schist	chalco tetra	- wall rock along vein - float	1760					
~~23~~	~~"~~	~~"~~		~~"~~	~~QV~~	bornite	~~float~~						
23	"	"		"	QV	"	float on spill pile	310					
24	"	"		"	"	Bornite chalco	float in hand trench	690					
						tetra							
25	"	"		"	"	"	" "	110					
26	"	"		"	"	"	" "	40					
27	"	"		"	"	chalco tetra	4-15cm - 2cm long						

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DAMSON
DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

Sampler DeBock E
Date Oct 15/90

Project Red Star
Property Bell 1a 2

NTS
Location Ref
Air Photo No

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
	Bell 1a2	Grab											
958 28	"	"		Green Stock	QV	Bornite Chalco	25 cm thick 95 cm long float	250					
							Boulder. Follow veins						
29	"	"		"	"	"	" " "	210					
							vein						

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PAMICON
DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K CURTIS Project RED STAR Location Ref _____

Date OCT 11 1990 Property R. STAR C.G. Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	
95851		CHIP	3m	QTZ-SER SCHIST	STAUROLITE SERICITE	PY	Ag VALUES PREVIOUSLY STRONGLY LIMONITIC	nd	4.4	87	88	37	
95852		GRAB		QTZ VEIN	—	—	NO SX'S, BULL QTZ	nd	0.2	33	17	17	

DAMSON
DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K. CURTIS Project RED STAR Location Ref _____

Date OCT 12/90 Property BELL 1, 2 CLAIMS Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	
95853	KNOB HILL	GRAB		SER. SCHIST	SERICITE	SEMI MASSIVE PY.	SAMPLE FROM DUMP.	270	7.1	9211	34	748	
95854	KNOB HILL	CHIP	2m	"	"	5-10% PY	SAMPLE FROM SMALL ADIT.	10	0.5	255	22	395	

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Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K. CURTIS Project RED STAR Location Ref _____

Date 13/10/90 Property BELL #1 CLAIM Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	
95855		GRAB		TERT. VOLCS.	–	–	CHALCEDONIC VEINS	nd	0.1	100	<2	55	
95856		GRAB		SER-CHL SCHIST	–	–	QTZ VEIN	nd	<0.1	40	4	31	
95857		"		CHL. SCHIST	–	–	QTZ VEIN	nd	<0.1	47	<2	48	
95858		"		"	–	–	QTZ VEIN	nd	<0.1	17	12	64	
95860		"		"	–	–	BULL QTZ VEIN	nd	0.2	108	9	1108	

DAMICON DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K. CURTIS Project RED STAR Location Ref _____

Date 14 + 15/10/90 Property BELL # CLAIM / PASAYTON Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	
95861		GRAB		CHL SCHIST		MAL, TT?	SHEAR ZONE	nd	3.0	703	<2	2093	
95862	PASAYTON C.G.	"		"		CPI, TT, GN	SMALL 2cm QTZ STRINGER	30	7.6		1428	74	
95863	EAST OF BELL #1	"		"		TT, MAL PY	QTZ VEIN OFF GROUND	nd	0.4	1003	5	78	
95864	BELL # 1	"		"		TRACE MAL	QTZ VEINS ON RIVER	nd	0.9	348	27	212	

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DAMICON
DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K. CURTIS Project RED STAR Location Ref _____

Date 12/10/90 Property RED STAR C.G. Air Photo No _____

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			SEE 1:500 FACE MAPS ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		ppb Au	Au g/t				
95875	MAIN ZONE	CHIP	1.1m	MSSX	SER,	CPY, SPH Cφ, Bφ, TT	WKLY BANDED MASSIVE SX CHLORITIC/SERICITIC GANGUE	950					
95876	"	GRAB		MSSX/Ba?		SPH, GN?	BARITE ICP ?	290					
95877	"	CHIP	.35m	MSSX	SER	PY, CPY Bφ, CC	MSSX.	260					
95878	"	CHIP	.15m	MSSX	SER+CHL	PY, CPY GN, Bφ	MSSX	220					
95879		CHIP	.1m	MSSX	"	"	MSSX.	270					
95880	"	CHIP	.2m	MSSX	"	"	MSSX	310					
95882	ROAD	GRAB		MSSX	QTZ RICH	CPY, PY SPH	FLOAT BOULDER - 25×40 cm size, on road at base of dump from main Red Star adit. From main workings ??	4200	0.114				

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DEVELOPMENTS LIMITED

Geochemical Data Sheet - ROCK SAMPLING

NTS _____

Sampler K. CURTIS Project RED STAR Location Ref _____

Date _____ Property _____ Air Photo No _____

LITHO SAMPLES.

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width / True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization							
95881	TRENCH	LITHO		QTZ-SER SCHIST	SER	TR PY	Ba, SR, Na ?						
95891	ROAD	"		"	"	"	SAME LOCH AS 95851						
95892	TRENCH	"		"	"	"	Ba, SR, Na ?						

APPENDIX IV

ASSAY CERTIFICATES

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: PAMICON DEVELOPMENTS LTD.
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: NOV 30 1990
REPORT#: 900752 AA
JOB#: 900752

PROJECT#: RED STAR
SAMPLES ARRIVED: NOV 20 1990
REPORT COMPLETED: NOV 30 1990
ANALYSED FOR: Ba

INVOICE#: 900752 NA
TOTAL SAMPLES: 5
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: 5 ROCK PULP

SAMPLES FROM: PREVIOUS JOB #900693
COPY SENT TO: PAMICON DEVELOPMENTS LTD.

PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: Raymond Chan

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900752 AA JOB NUMBER: 900752 PAMICON DEVELOPMENTS LTD. PAGE 1 OF 1

SAMPLE #	Ba %
95877	.35
95878	.05
95879	.23
95880	.11
95882	.07

DETECTION LIMIT .10

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

GEOCHEMICAL ANALYTICAL REPORT

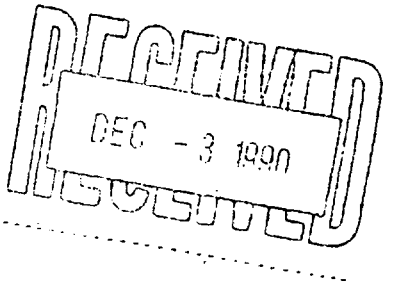
CLIENT: PAMICON DEVELOPMENTS LTD.
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: NOV 30 1990
REPORT#: 900752 GA
JOB#: 900752

PROJECT#: RED STAR
SAMPLES ARRIVED: NOV 20 1990
REPORT COMPLETED: NOV 30 1990
ANALYSED FOR: Hg

INVOICE#: 900752 NA
TOTAL SAMPLES: 5
SAMPLE TYPE: 5 ROCK PULP
REJECTS: DISCARDED

SAMPLES FROM: PREVIOUS JOB #900693
COPY SENT TO: PAMICON DEVELOPMENTS LTD.



PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: VGC Staff

SIGNED: _____

GENERAL REMARK: None

COMINCO LTD.

EXPLORATION
NTS 92H/2W

WESTERN DISTRICT
May 29, 1980

ASSESSMENT REPORT
OF LINECUTTING AND GEOLOGICAL
AND SOIL GEOCHEMICAL SURVEYS
ON THE RED STAR PROPERTY

(Red Star Claim and Anaconda and Red Star
Reverted Crown Grants)

Similkameen-Paysaten River Area, Similkameen M.D., B.C.

(work performed May 1-9 and May 12-16, 1980)

LATITUDE: 49°09'

LONGITUDE: 120°35'

REPORTED BY: M.J. CASSELMAN

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CORPACO LTD.

EXPLORATION
NTS 92H/2W

WESTERN DISTRICT
May 29, 1980

ASSESSMENT REPORT

OF LINECUTTING AND GEOLOGICAL

AND SOIL GEOCHEMICAL SURVEYS

ON THE RED STAR PROPERTY

(Red Star Claim and Anaconda and Red Star

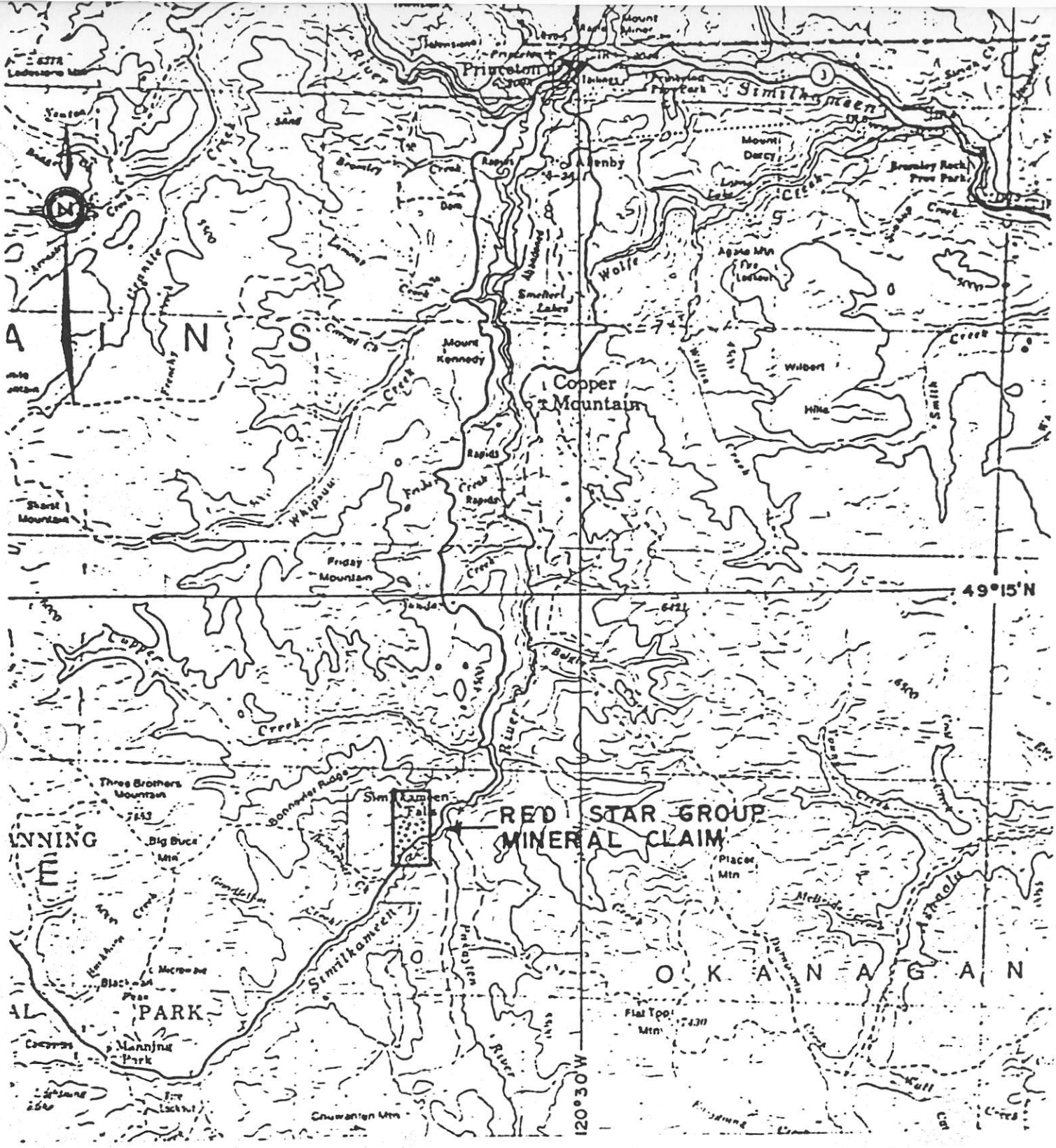
Reverted Crown Grants)

SUMMARY

The Red Star property is situated on the west margin of the Quesnel Trough Structural Province, 34 km SSW of Princeton, in Triassic and Tertiary rocks. The property comprises the Red Star claim and the Anaconda and Red Star reverted crown grants. The Red Star claim was staked in June 1979 and the Anaconda and Red Star reverted crown grants were optioned in May 1980. The southern two-thirds of the property has been mapped on a scale of 1:5,000 and soil sampled, with the soil samples analyzed for Cu, Zn and Pb.

The southern two-thirds of the property covers Triassic, Nicola Group metavolcanics of the calc-alkaline andesite to rhyolite association and their related chemical and clastic metasediments. These volcanic and sedimentary units have been intruded locally by andesite dykes interpreted to be subvolcanic equivalents of the Nicola Group andesite volcanics. The northern one-third of the property covers Tertiary, Princeton Group basalt-andesite flows and pyroclastics. The Nicola Group rocks occur as a north-south striking, west dipping, monoclinal sequence that has been metamorphosed to the mid-upper greenschist facies. The Princeton Group rocks are flat lying and unconformably overlie the Nicola Group rocks. No attempt was made to subdivide or describe the Princeton Group rocks as they were not considered to be economically important.

The property is being investigated for rhyolite associated stratiform massive sulphide deposits. The most significant mineralization located to date occurs in the Main Zone which is situated on the Red Star and Anaconda reverted crown grants. The mineralization in this zone is hosted by strongly sheared intercalated dacite and rhyolite and minor andesite pyroclastics and their are related chemical and clastic sediments. These rocks have been variably hydrothermally leached, silicified and pyritized. The best mineralization observed in the Main Zone during the mapping was minor disseminated sphalerite and chalcopyrite. Significant concentrations of sphalerite, chalcopyrite, silver and gold mineralization have been reported in the Main Zone in the old underground workings, in trenches and diamond drilling, but were not observed.



Scale 1:250,000

Miles 5 0 5 10

Kilometres 5 0 5 10

RED STAR GROUP

NTS 92 H

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP

SIMILKAMEEN M.D., B.C.

Scale: 1:250,000 | Date: JULY 1980 | Plate: 176-80-1

The package of rocks which hosts the Main Zone mineralization strikes north and south into areas covered by overburden. It is felt that stratiform base metal bearing massive sulphide concentrations may exist along strike or down dip from the Main Zone and the present geological geochemical and geophysical surveys were designed to test these possibilities.

The soil sampling program conducted over the southern two-thirds of the property collected 725 samples which were analyzed for Cu, Zn and Pb. One large, and three smaller Zn anomalies and two large, weak, Cu anomalies were defined. The large Zn anomaly and one of the Cu anomalies are roughly coincident and correspond with the projection of the mineralized stratigraphic package.

IP, VLF and Mag surveys have been conducted over the southern two-thirds of the property. The results of these surveys are covered in a separate report.

INTRODUCTION

This report describes the results of geological mapping and geochemical soil sampling surveys on the Red Star property. The work was conducted during the periods of May 1-9 and 12-16, 1980, by M. Morrison and B. Ames and supervised by M.J. Casselman. Data is presented at a scale of 1:5,000.

LOCATION AND ACCESS

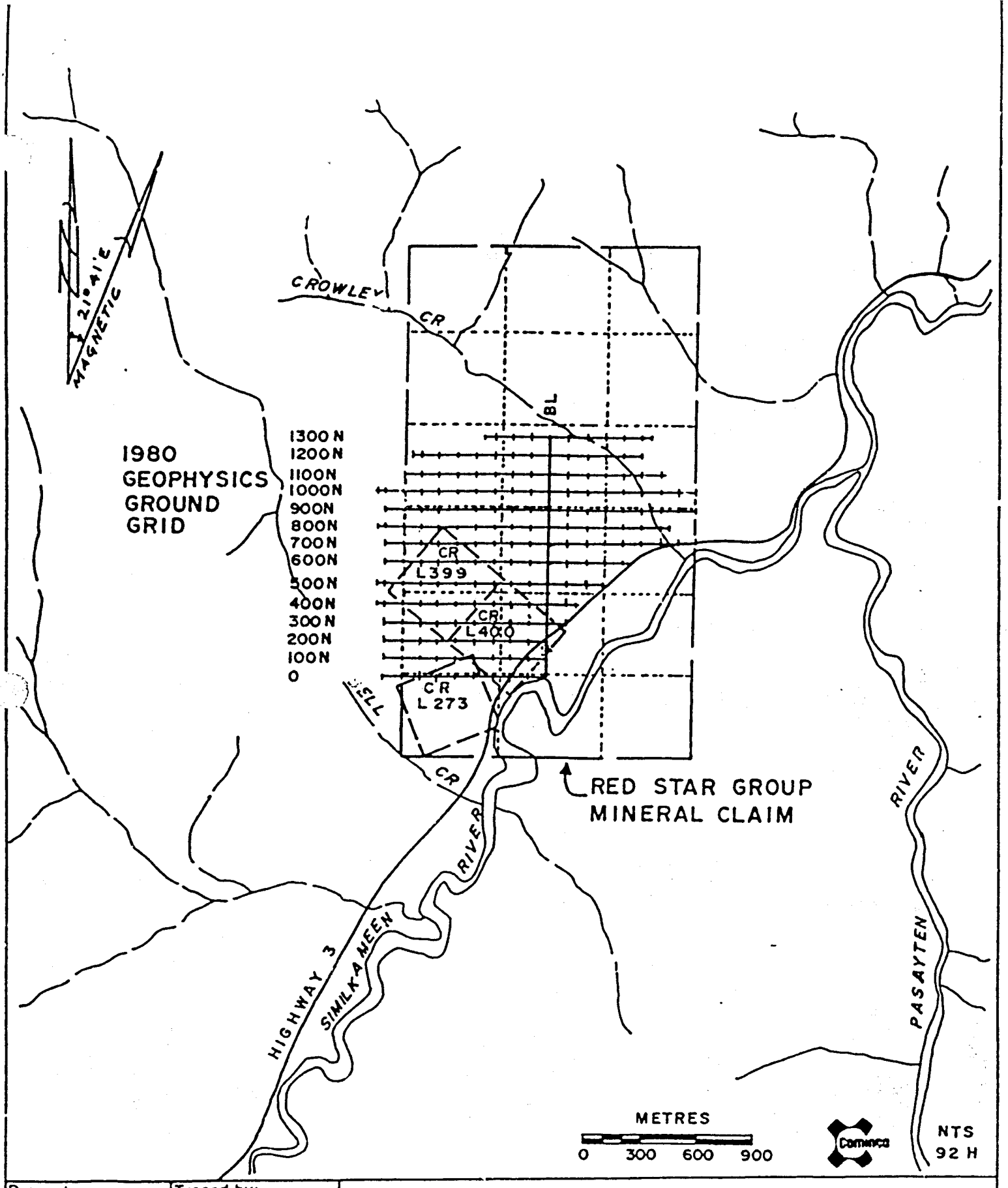
The Red Star property comprises the Red Star claim and the Anaconda and Red Star reverted crown grants. It is situated 34 km SSW of Princeton on the north side of the Hope-Princeton Highway in the area just SW of the intersection of the Pasayten and Similkameen Rivers. The property is roughly bounded by Bell Creek on the west and Crowley Creek on the east. The property is readily accessible from the Hope-Princeton highway and by a network of gravel roads extending from this highway.

TOPOGRAPHY AND VEGETATION

The Red Star property lies between 1000 and 1450 meters above sea level on a south facing slope with the greatest elevation occuring at the north end of the property. Most of the property is "parklike" and covered by spruce, pine and fir trees. Outcrop constitutes about 5% of the map area.

PREVIOUS WORK

The Red Star property has undergone various stages of exploration since the early 1900's. Initial work (dates unknown) consisted of trenching and driving 3 adits (250, 480 and 1090 feet; Minister of Mines 1902, 1927, 1938 and GSC Memoir 243). The adits are now caved and inaccessible. In 1964-65, 40 tons of material was shipped from the property to the Tacoma smelter (Minister of Mines, 1969). During the period 1966-1970, Spenho Mines Ltd. mapped and trenched the property and conducted magnetometer, EM and soil geochemical surveys and diamond drilled 5 holes. Results of this work are reported in assessment reports 878 and 2807.



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Revised by	Date	Revised by	Date

CLAIM AND GRID MAP

SIMILKAMEEN M.D., B.C.

Scale: 1:30,000 | Date: JULY 1980 | Plate: 176-80-2

CLAIMS

The Red Star property comprises the Red Star claim (18 units) and the Anaconda and Red Star reverted crown grants. The Red Star claim, which encloses the two reverted crown grants, is 100% owned by Cominco Ltd. The reverted crown grants are optioned from Carl Wabnegger and Maurice Parsons of Keremeos, B.C.

GEOLOGY

The Red Star property is located on the west side of the Quesnel Trough Structural Province in Triassic, Nicola Group and Tertiary, Princeton Group rocks. The property was mapped at a scale of 1:5,000. Mapping control was provided by a north-south oriented grid system.

The southern two-thirds of the property comprises a north striking and west dipping monoclinal sequence of Nicola Group metavolcanic and related chemical and clastic sediments. These rocks have been locally cut by andesite dykes interpreted to represent the subvolcanic equivalent of the Nicola Group andesite volcanics. The Nicola Group metavolcanics include primarly andesite, dacite and rhyolite pyroclastics flows and tuffites. The Nicola Group metasediments consist of argillites, carbonaceous argillites, cherty argillites and tuffaceous argillites.

The Tertiary, Princeton Group rocks, which covered the northern one-third of the property, are flat lying and unconformably overlie the Nicola Group rocks. No attempt was made to map or describe the Princeton Group rocks as they were not considered to be economically important.

The rock types were defined primarily on the basis of field observations with colour index and quartz-eye phenocryst concentrations being the most useful compositional indicators. The Nicola Group rocks have been divided into 9 units. Each unit comprises one dominant rock type, but commonly several minor rock types occur intercalated within it.

The only mineralization located during the mapping consists of minor desseminated sphalerite and chalcopyrite and occurs in the old trenches and dumps exposed in the Main Zone. The rocks in this zone comprise primarily rhyolite, dacite and andesite pyroclastics which have been highly-sheared and variably hydrothermally leached, silicified, and pyritized. However, significant concentrations of sphalerite-chalcopyrite-silver-gold mineralization have been reportedly exposed in the Main Zone by the previous trenching and underground workings and by diamond drilling. This mineralization was not observed. The mineralized and altered stratigraphy exposed in the Main Zone and its north-south extensions is being investigated as a possible host for rhyolite associated stratiform base metal bearing massive sulphide deposits.

STRATIGRAPHY

NICOLA GROUP

Unit 1 - Andesite Flows

This unit was only observed in one outcrop. It is an andesite flow that is dark green, massive, fine to medium grained and contains 10-15% feldspar phenocrysts and 15-25% pyroxene crystals.

Unit 2 - Andesite Pyroclastics

This unit comprises dominantly andesite lapilli tuff and tuff phases with minor intercalated dacite lapilli tuff and tuff horizons. Argillaceous andesite tuffites and argillites occur as thin horizons in the andesites on the west side of the unit.

The andesite pyroclastics are mid to occasionally dark green, weakly to moderately foliated, medium grained and contain 15-25% pyroxene grains (variably altered to chlorite and minor biotite and sericite) and 10-30% feldspar phenocrysts. The argillaceous andesite tuffites are distinguished from the andesite pyroclastics by the presence of 5-15% disseminated and/or banded biotite.

The dacite pyroclastics are light green, moderately sheared, medium grained and contain 1-3% quartz-eyes, 10-25% feldspar phenocrysts, 3-10% biotite and/or biotite-chlorite-(sericite) clots and 3-10% tiny disseminated chlorite grains.

The argillites are grey to grey-black, moderately sheared and fine grained (1-3% pyrite). They are locally carbonaceous to graphitic and/or cherty.

Unit 3 - Argillite, Tuffaceous Argillite

This unit comprises primarily intercalated argillites and tuffaceous argillites although locally thin andesite tuff horizons were noted. Contorted and boudinaged quartz veins (5 to 30 cm thick) are common throughout this unit, especially in the argillite phases.

The argillites are similiar to those discussed in Unit 2. The tuffaceous argillites are greenish-black, weakly sheared and slightly coarser grained than the argillites. Locally they contain minor feldspar and/or pyroxene grains.

The andesite tuffs are dark green, moderately foliated and fine grained (resemble chloritic schists).

Unit 4 - Andesite Pyroclastics

This unit comprises primarily andesite lapilli tuffs and tuffs, although locally, andesite tuffite horizons and, expecially on the west side of the unit, dacite and occasionally rhyolite lapilli tuff and tuff horizons, were noted. Locally the rhyolite, dacite and andesite pyroclastics are intermixed rather than as distinct horizons.

The andesite pyroclastics, although variable in composition, are generally darker coloured and finer grained than the andesite pyroclastics discussed in Unit 2. They are dark to occasionally mid green, weakly to moderately foliated, fine to occasionally medium grained and contain 10-25% pyroxene grains and usually 1-10% feldspar phenocrysts. Locally andesite tuffite horizons were noted and distinguished by the presence of 5-15% biotite.

The dacite pyroclastics are similiar to those discussed in Unit 2 except that they contain 1-5% opalescent blue quartz-eyes.

The rhyolite pyroclastics are white, weakly to moderately foliated, fine grained, and contain 2-10% quartz-eyes (often blue), 5-10% feldspar phenocrysts and 1-5% disseminated biotite (locally chloritized).

Unit 5 - Mineral Horizon

This unit comprises mainly unaltered and altered rhyolite and dacite pyroclastics and tuffites with variable proportions of unaltered and altered andesite pyroclastics and tuffites. The proportion and spatial distribution of the various rock types in the package is difficult to ascertain due to limited outcrop.

The rhyolite pyroclastics comprise both lapilli tuff and tuff phases. They are similiar to those discussed in Unit 4. Locally cherty rhyolite tuffite and rhyolite tuffite horizons occur intercalated within the rhyolite pyroclastics. The cherty rhyolite tuffites are distinguished by the presence of disseminated and thinly bedded chert horizons and the rhyolite tuffites are characterized by the presence of 5-10% biotite.

The dacite pyroclastics are mainly lapilli tuffs and tuffs. They are similiar to the dacite pyroclastics discussed in Unit 2. Locally minor dacite tuffites occur in the dacite pyroclastics and are distinguished by the presence of 5-10% biotite.

The andesite pyroclastics are mainly tuffs. They are similiar to the andesite pyroclastics discussed in Unit 4, except that they are usually finer grained and often more distinctly bedded. Locally andesite tuffite horizons occur in the andesite pyroclastics and are distinguished by the presence of biotite(5-15%).

The hydrothermally altered rocks comprise 50% of the unit and dominate toward the west side. They have been moderately to intensely leached, silicified, sericitized and pyritized, usually to a degree where the progenitor rock type is rarely recognizable. Only the andesite pyroclastic parent rock is recognizable due to its chlorite content(dark green-now a quartz-sericite-chlorite schist). The moderately altered rocks are light green to white, strongly foliated, fine-medium grained, moderately silicified, leached and sericitized and contain 3-10% pyrite. The intensely altered rocks are white, strongly foliated(quartz-sericite schist), to massive "sponge like" rocks comprising mainly quartz and pyrite grains(10-20% pyrite). They have been intensely silicified, leached and sericitized. Various sized, highly deformed and boudinaged quartz veins 2 to 30 cm thick commonly occur within the altered rocks. These veins formed pre or during early metamorphism. They often contain pods of pyrite and/or chalcopyrite and sphalerite.

Unit 6 - Hangingwall

This unit comprises variable proportions of rhyolite tuffs and tuffites and cherty rhyolite tuffites with minor intercalated dacite and andesite tuffs and tuffites and thin carbonaceous argillaceous horizons. Only the argillite horizons have been distinguished in the mapping. They range from 15 to 50 cm in thickness and are locally carbonaceous to tuffaceous. The argillites are grey to grey-black, weakly to moderately foliated, fine grained and contain 1-5% pyrite. The carbonaceous argillites are black and locally graphitic(1-5% pyrite). The tuffaceous argillites are grey, weakly to moderately foliated and fine to medium grained (1-3% pyrite). Feldspar phenocrysts and locally quartz-eyes can be distinguished in this unit and represent a tuffaceous component probably derived from a rhyolite source rock. The rhyolite, dacite and andesite tuffs and tuffites are similiar to those discussed in Unit 5.

Unit 7 - Andesite Pyroclastics and Flows

This unit comprises primarily andesite lapilli tuffs, tuffs and flows with minor intercalated dacite lapilli tuff and tuff and rhyolite tuff and tuffite horizons. The andesite pyroclastics are similiar to those discussed in Unit 4. It is difficult to distinguish the andesite flows from the andesite tuff horizons except that the tuffs are commonly more sheared and somewhat compositionally banded(bedding). Locally actinolite rich andesites were noted and also epidote veins and spots, especially toward the west side of the unit. The dacite pyroclastics are similiar to those discussed in Unit 2 and the rhyolite tuff is similiar to the rhyolite pyroclastics duscussed in Unit 4. The rhyolite tuffites are distinguished by the presence of 5-10% disseminated and banded biotite.

Unit 8 - Mixed Dacite and Andesite Pyroclastics

This unit comprises intercalated and intermixed andesite and dacite pyroclastics and tuffites. The dacite pyroclastics are similiar to those discussed in Unit 2 except that they contain 2-10% opalescent quartz-eyes. The dacite tuffites are distinguished by the presence of 10-15% disseminated and/or banded biotite. The andesite pyroclastics are similiar to those discussed in Unit 4. Where these two units are intermixed they consist of 3-10% blue quartz eyes contained in a medium to dark green matrix.

Unit 9 - Rhyolite Pyroclastics

This unit comprises dominantly rhyolite lapilli tuff and tuff phases. The rhyolites are similiar to those discussed in Unit 4. Locally rhyolite tuffites distinguished by the presence of 5-10% biotite were noted.

PRINCETON GROUP

Unit 10 - Basalt - Andesite Flows and Pyroclastics

No attempt was made to distinguish the various phases of the Princeton Group as this unit was not considered to be economically important.

STRUCTURE

The Nicola Group rocks on the Red Star property comprise part of a monoclinal package which generally strikes N-S and dips 45-65°W. Locally small folds were observed in outcrops, but no indications of major folding were noted. Faulting is locally present, but no major faults were defined. The offset on the smaller faults is not known, but a north-south fault just south of the Main Zone is thought to have locally offset Unit 5. Primary textures, although often disrupted to various degrees by deformation, are generally recognizable in most outcrops except in parts of Unit 5, where the combination of a hydrothermal alteration and strong shearing have destroyed most textures. Primary textures most commonly observed include lithic fragements and porphyry textures and more rarely amygdules, vesicles, pillows and bedding planes. Bedding was most commonly observed in the argillite and tuff and tuffite phases. Foliation is indicated by stretched lithic fragments or aligned chlorite and/or sericite grains. In all cases the foliation parallels bedding. Foliation is generally fairly equally developed throughout the property with exceptions occuring locally on the west side of the property and in the altered phases of Unit 5, when it was more intensely developed. The locally increased areas of shearing on the west side of the property are thought to be related to the nearby Eagle Granodiorite. The intense shearing in the altered phases of Unit 5 is interpreted to relate to the fact that the rocks in this zone are both altered and contain sulphides which made them more susceptible to deformational stresses.

Although the rock units have been subjected to varying degrees of deformation, the metamorphic grade does not exceed the greenschist facies.

MINERALIZATION

The Red Star property is being evaluated for rhyolite associated stratiform massive sulphide mineralization. The only mineralization located during the mapping, occurs in what is now designated the Main Zone which extends N-S for 480 meters and is exposed in trenches and entrances to the caved adits. The rocks in this zone include primarily unaltered and altered dacite and rhyolite and andesite pyroclastics (Unit 5). The mineralization observed in the Main Zone during mapping includes minor disseminated sphalerite and chalcopyrite and variable concentrations of pyrite (3-20%). Locally within this zone 3-40 cm thick, highly folded and boundinaged quartz veins with trace to local pods of chalcopyrite and sphalerite were noted. These veins developed pre or early metamorphism and are interpreted to represent silica remobilized during metamorphism. Previous underground development, trenching and diamond drilling in the Main Zone reportedly intersected much greater concentrations of sphalerite-chalcopyrite-silver-gold mineralization than is presently observed. The 1938 Minister of Mines Bulletin reports a 3 meter chip sample from the underground workings which assayed 1.0% Cu and 1.0 oz/ton Ag and three grab samples from the dumps which assayed 0.06 oz/ton Au, 7.3 oz/ton Ag, 17.0% Cu, 4.0% Zn;/ 0.14 oz/ton Au, 5.7 oz/ton Ag, 19.0% Cu, 2.5% Zn;/ 0.04 oz/ton Au, 1.0 oz/ton Ag, 0.8% Cu, 18.0% Zn. In 1964-65, 40 tons of sorted material from the Main Zone grading 6.5% Cu, 8.1% Zn and 2.1 oz/ton Ag was shipped to the Tacoma smelter. In the late 1960's two diamond drill holes, 210 meters apart in the Main Zone returned 249 feet and 149 feet of 1.15% Zn and 0.65% Zn, respectively.

did the hole assay this or was a sample taken at 149' in hole 1 running 0.65% Zn as in Assessment 870

The mineralized stratigraphy (Unit 5) strikes both north and south from the Main Zone into areas largely covered by overburden. The only exposure along Unit 5 outside of the Main Zone is in a trench and an adit 200 and 310 meters, respectively, north (the trench intersected only the upper part of Unit 5 and the lower part of Unit 6 and the adit, as indicated by the samples from the dump, intersected at least parts of Unit 5). No base metals were observed in the trenches and it is not known if the adit intersected any mineralization. The quartz veins observed in the altered rocks of the Main Zone were also observed in the northern trench and adit. No outcrop was found south of the Main Zone on the property.

The sulphide mineralization and alteration observed in Unit 5 are interpreted to have developed in conjunction with submarine hotspring-fumarolic activity associated with the waning stages of the dacite-rhyolite volcanic activity and are genetically related to that activity.

GEOCHEMISTRY Cominco Lab

The southern two-thirds of the property was covered by a soil sampling survey. The soil samples were collected from the B horizon at 25 meter intervals along lines spaced 100 meters apart. 725 soil samples were collected and analysed for Cu, Zn and Pb. Cumulative frequency diagrams suggest that the thresholds of anomaly for Cu, Zn and Pb are 40, 100 and 10, respectively.

One large and 3 smaller Zn anomalies and 2 large weak Cu anomalies were defined by the survey. The Zn anomalies range from 100 to 307 ppm and the Cu values range from 40 to 210. Only anomalies comprising more than one anomalous value have been contoured. Individual spot Cu/Zn highs are though to relate to mineralized boulders in the overburden. The one large Zn anomaly and the western Cu anomaly are roughly coincident and correspond with the projection of the Mineral Horizon (Unit 5). The eastern Cu anomaly enclosed the 3 smaller Zn anomalies and the east side of the large Zn anomaly and primarily overlies andesite pyroclastics, argillites and tuffaceous argillites of Units 3 and 4. The Pb values were not plotted as there was only one spot anomaly (11 ppm). The majority of the Pb values were <4.

CONCLUSIONS

The Red Star property appears to have potential for hosting rhyolite associated massive sulphide deposits. The best potential exists in Unit 5 either down dip or along strike from the Main Zone. Areas underlain by Unit 5 and containing coincident Cu and/or Zn soil anomalies, or any significant IP anomalies are recommended for drilling.

Reported by: _____

M.J. Gisselman

Project Geologist

Endorsed by: _____

F.L. Wynne

Senior Geologist

Approved for Release by: _____

for G.Harden, Manager Western District, Exploration

Distribution:

Minister of Mines
Western District Files
Vernon Files

MJC/sf

APPENDIX "A"

Statement of Expenditures for linecutting and geological and soil geochemical surveys on the Red Star Property.

Geology -	Murray Morrison - May 1-9 and 12-16, 1980 (14 days @ $150/day)	$ 2,100.
	Brian Ames - May 1-9 and 12-16, 1980 (14 days @ $111/day)	1,554.
Supervision -	M.J. Casselman - May 1, 14, 27, 1980 (3 days @ $179/day)	537.
Report Writing and Drafting -	M.J. Casselman (4 days @ $179/day)	716.
Domicile -	Accomodation and food at Gateway Lodge, Manning Park for Brian Ames at $30/day for 14 days	420.
Transportation -	Truck for 14 days plus gas	225.
Linecutting -	Crosslines, 39.5 km at $125/km	4,937.
Assays -	725 soil samples analysized fo Cu, Zn, Pb @ $3.25/sample	2,356.
		$ 12,845.

APPENDIX "B"

COMINCO LTD.

EXPLORATION WESTERN DISTRICT

I, MICHAEL J. CASSELMAN, OF THE CITY OF VERNON, BRITISH COLUMBIA, HEREBY CERTIFY:

1. THAT I AM A GEOLOGIST, RESIDING AT 8901 CHERRY LANE, VERNON, BRITISH COLUMBIA, WITH A BUSINESS ADDRESS AT 4405 - 28 STREET, VERNON, BRITISH COLUMBIA.

2. THAT I GRADUATED WITH B.Sc. AND M.Sc. DEGREES IN GEOLOGY FROM THE UNIVERSITY OF BRITISH COLUMBIA IN 1969 AND CARLETON UNIVERSITY IN 1977.

3. THAT I HAVE PRACTISED GEOLOGY WITH COMINCO LTD. FROM 1969 TO PRESENT.

DATED THIS 29th day of May at Vernon, British Columbia.

SIGNED Michael J. Casselman

Michael J. Casselman, M.Sc.

COMINCO LTD.

EXPLORATION
NTS: 92H/9E

WESTERN DISTRICT
15 JULY 1980

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION, VLF, AND MAGNETICS SURVEYS

RED STAR PROPERTY

PRINCETON AREA, B.C.

SIMILKAMEEN MINING DIVISION

LATITUDE: 49°10' N - LONGITUDE: 120°35' W

FIELD WORK PERFORMED:

10 TO 20 JUNE 1980

ON CLAIM:

RED STAR CLAIM (18 UNITS)

REPORT BY: ALAN R. SCOTT

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ATTACHMENTS

COMINCO LTD.

EXPLORATION | WESTERN DISTRICT

NTS: 92H/2E | 15 JULY 1980

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION, VLF, AND MAGNETICS SURVEYS

RED STAR PROPERTY

SIMILKAMEEN MINING DIVISION

INTRODUCTION

The Red Star mineral claim straddle the Hope-Princeton Highway (#3) about one kilometer west of the confluence of the Pasayten and Similkameen Rivers. The present survey work was restricted to the portion of the claims immediately north of the highway. Plate 176-80-1 shows the general location of the property, and Plate 176-80-2 the location of the grid relative to the claims.

The work was done during the period 10-20 June 1980, and consisted of 16.5 line kilometers of induced polarization survey, 17 line kilometers of VLF electromagnetics survey, and 10 line kilometers of magnetics survey.

The exploration target is the massive sulphide volcanogenic type deposit. This report describes the procedures of the various geophysical surveys, presents the data, and discusses the results of those surveys.

GEOPHYSICAL SURVEYS

The geophysical surveys were done by a Cominco in-house crew. The party chief on the survey was S. Holland, geophysicist in training.

Induced Polarization

A Huntec Mk IV LOPO portable induced polarization transmitter, in combination with a Scintrex IPR-8 receiver, were used on the Red Star IP survey. Readings were taken in the time domain using a 2 second current on / 2 second current off alternating square wave signal. The chargeability values plotted are those for the M232 window from 650 to 1170 milliseconds after cessation of the current pulse. Units for the IPR-8 receiver are in millivolts per volt.

The Wenner electrode array was used on the survey with "a" spacings of 50 m and 150 m. This array was chosen primarily to ensure adequate signal strength from the relatively low power LOPO transmitter.

The apparent resistivity values are given in units of ohm meters and were calculated from the relation:-

$$\text{Apparent resistivity} = (V/I) \cdot K,$$

where V is the voltage across the measuring electrodes during the current on a period (I), and K is a constant dependant on the "a" spacing and array geometry.

VLF Electromagnetometer

A Crone Radem VLF electromagnetometer was used for the VLF survey. The plotted values are the in phase dip angle of the resultant field and the horizontal component of the field strength. The dip angle data is plotted so as to give a right wave crossover over conductive bodies. The survey was looped to obtain drift corrections for the field strength values.

Magnetometer

A Scintrex MP-2 proton precession magnetometer was used on the magnetics survey. The instrument has a digital display which gives the value of the earth's total magnetic field to the nearest gamma. The data was corrected for diurnal changes by the standard base station looping method.

DISCUSSION OF RESULTS

The geophysical survey results are presented on accompanying Plates 176-80-3 to 16 inclusive (survey lines 0 to 13N). The numerical values of the chargeability (IP) and apparent resistivity are given in pseudosection format. This is a schematic form of presentation and no target depth or geometry is implied by it. In addition, the chargeability values are plotted as line profiles with anomalies coded as follows:-


Chargeability anomaly; a=50 m and a=150 m

Chargeability anomaly; a=150 m only

The VLF and magnetic field data are plotted as line profiles. The dip angle values are plotted so as to give a right wave crossover over a conductive body. The location of such conductors is noted on the profiles by a heavy vertical line. The magnetometer survey was conducted only on lines 300 to 1000N. Magnetic field highs are indicated on the profiles by a heavy horizontal line between inflection points. (Note that this does not imply a width of the magnetic body. More data points would be required to obtain width and dip estimates).

Of the three geophysical surveys performed, IP, VLF, and magnetics, the IP (chargeability) is considered the most important parameter. Therefore the following discussion is biased towards the chargeability response.

Three distinct zones of high chargeability were detected on the survey. These are labelled A, B, and C on the profiles. Line to line correlation of these zones is very clear.

Zone A, the westernmost zone, is a relatively narrow anomaly and was detected at both the a=50 meter and a=150 meter electrode separations. The anomalous zone can be traced from line 100N; 575W to line 1000N; 600W. The near separation peak amplitude varies from 12.8 $\frac{mV}{V}$ on line 600W to 39.0 $\frac{mV}{V}$ on line 300N. On lines 200N to 700N, where the chargeability response is strongest, there is a coincident VLF conductor. Zone A lies immediately east of a magnetic field high. There is a weak magnetic high coincident with Zone A on line 600N (525W).

Zone B, the central chargeability high, was detected only at the a=150 meter separation. The zone is defined on the profiles from line 300N to 1200N. The peak a=150 meter response of 37.0 $\frac{mv}{v}$ is at line 600N; 275W. Zone B does not have a coincident VLF conductor but is coincident with a distinct magnetic field high.

Zone C, the easternmost chargeability high, is a very broad response zone and was detected at both the a=50 meter and a=150 meter separations. The anomaly is defined on the sections from line 400N; 100W-75E (open to east) to line 1200N; 275W-275E. The anomaly also gives a weak response on line 1300N. The strongest response from anomaly C is 59.5 $\frac{mv}{v}$ (a=150 meters) at line 800N; 25W. Anomaly C lies in an area of low magnetic field values.

CONCLUSIONS

Portions of the Red Star mineral claims were surveyed with time domain IP, VLF electromagnetics, and total field magnetics in the summer of 1980.

Three distinct zones of anomalously high chargeability response were detected on the survey, and have been labelled as Zones A, B, and C on the profiles which accompany this report.

Zone A is relatively narrow zone which lies on the east side of the contact of high magnetic susceptibility (on the west) to lower susceptibility (on the east and including Zone A). The strongest response of 39.0 $\frac{mv}{v}$ is at line 300N; 525W. It is coincident with a VLF conductor on those lines where the IP response is strongest. Zone A was detected at both the a=50 meter and a=150 meter separations.

Zone B was detected only on the a=150 meter separation. The peak value of 37.0 $\frac{mv}{v}$ is at line 600N; 275W. Zone B does not have a coincident VLF conductor, but is coincident with a distinct magnetic field high.

Zone C is a very broad anomaly, and was detected at both the a=50 meter and a=150 meter separations. The peak value of 59.5 $\frac{mV}{V}$ (a=50 meter) is at line 800N; 25W. Anomaly C is coincident with low (background) magnetic field values.

Respectfully Submitted By: _____

Alan R. Scott, Geophysicist

Endorsed For Release By: _____

G. Harden, Manager
Exploration, Western District

ARS:hmr

Attachments.

Distribution.

Mining Recorder (2) ✓
Western District Files (1)
Geophysics Files (1)

APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT

AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME

CARRIED OUT ON PORTIONS OF THE RED STAR MINERAL CLAIM

ON THE RED STAR PROPERTY

LOCATED 35 KM SOUTHWEST OF PRINCETON IN THE SIMILKAMEEN MINING DIVISION

OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 92H/9E

S T A T E M E N T

I, Alan R. Scott, of the City of Vancouver, in the Province of British Columbia, make oath and say:-

1. THAT I am employed as a geophysicist by Cominco Ltd. and, as such have a personal knowledge of the facts to which I hereinafter depose;

2. THAT the annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the Red Star mineral claim;

3. THAT the said expenditures were incurred for the purpose of mineral exploration of the above noted claim between the 10th day of June and the 20th day of June, 1980.

Alan R. Scott, Geophysicisit

15 July 1980.

APPENDIX II

RED STAR PROPERTY

STATEMENT OF EXPENDITURES

(Induced Polarization, VLF-EM, and Magnetics Surveys)

1.	SALARIES			
	S. Holland, geophysicist in training 10-20 June	11 days @ $105.	$1,155.	
	D. Milne, geophysical technician 10-20 June	11 days @ $105.	1,155.	
	E. Bernshaw, IP crewman 10-20 June	11 days @ $ 83.	913.	
	Y. Fortin, IP crewman 10-20 June	11 days @ $ 83.	913.	
	D. Campbell, IP crewman 10-20 June	11 days @ $ 83.	913.	
	J. Allen, IP crewman 10-20 June	11 days @ $ 83.	913.	
				$ 5,962.00
2.	EQUIPMENT RENTALS			
	LOPO/IPR-8 IP Survey System, Mag, Radem VLF		1,665.10	
	4X4 Truck and Equipment Trailer		470.60	
				$ 2,135.70
3.	OPERATING CHARGES			
	(Towards report, drafting, supervision) Geophysical Survey	10 days @ $175/day		$ 1,750.00
4.	MISCELLANEOUS			
	Food, Lodging, Gas, Consumables			$ 2,510.30
		TOTAL EXPENDITURES		$12,358.00

Alan R.Scott, Geophysicist

APPENDIX III

C E R T I F I C A T I O N

I, Alan R. Scott, of 4013 West 14th Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:-

1. THAT I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics;

2. THAT I am a member of the Association of Professional Enginners of the Province of Saskatchewan, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society.

3. THAT I have been practising my profession for the past ten years.

Alan R. Scott, Geophysicist

15 July 1980.

8170

LINE O

Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY PROFILE — a = 50 m; - - - a = 150 m

CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only

CHARGEABILITY

a = 150 m

a = 50 m

60 40 20 0 Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

+20 DIP ANGLE FIELD STRENGTH 0 -20

VLF CONDUCTOR (RIGHT WAVE CROSSOVER)

CROWE RADEM
STATION NLK (SEATTLE)
FACED S W

V. L. F.

+20° 0 -20° -40° -60° DIP ANGLE

POWER LINE

DIP ANGLE

FIELD STRENGTH

320% 240% 160% 80% 0 RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

N.T.S. 92 H 2E DWG. NO. 176-80-3

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. O

WENNER
ELECTRODE CONFIGURATION

a = 50 m
a = 130 m

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8170 Part 2 of 2

SCALE 1:5000

DATE SURVEYED JUNE 11,12,13, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

* INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION.

LINE — O

8170

LINE 100 N — Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY PROFILE a = 50 m / a = 150 m

CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only

CHARGEABILITY

a = 150 m

a = 50 m

60 40 20 0 Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

A

DIP ANGLE FIELD STRENGTH VLF CONDUCTOR (RIGHT WAVE CROSSOVER)

+20 0 -20

CROWE RADEM
STATION NLK (SEATTLE)
FACED S W

V. L. F.

+20° 0 -20° -40° -60° DIP ANGLE

POWER LINE

DIP ANGLE FIELD STRENGTH

320% 240% 160% 80% 0 RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

N.T.S. 92 H 2E DWG. NO. 176-80-4

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 100 N

WENNER
ELECTRODE CONFIGURATION

I V a a a

a = 50 m
a = 150 m

SCALE 1:5000

DATE SURVEYED JUNE 11,12,13,14,1980

CONTOUR INTERVALS:

APP RES — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 100 N

8170

LINE 200 N — *Apparent Resistivity Ohm metres*

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 8000W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY ANOMALY
a = 50 m and 150 m

CHARGEABILITY ANOMALY
a = 50 m only

CHARGEABILITY

a = 150 m

a = 50 m

60 40 20 0 Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

A

+20 0 -20 DIP ANGLE FIELD STRENGTH

VLF CONDUCTOR (RIGHT WAVE CROSSOVER)

CRONE RADEM
STATION NLK (SEATTLE)
FACED S W

V. L. F.

+20° 0 -20° -40° -60° DIP ANGLE

POWER LINE

DIP ANGLE

FIELD STRENGTH

320% 240% 160% 80% 0 RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

N.T.S. 92 H 2E DWG. NO. 176-80-5

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 200 N

WENNER
ELECTRODE CONFIGURATION

I V a a a

a = 50 m
a = 150 m

SCALE 1:5000

DATE SURVEYED JUNE 11,12,13, 1980

CONTOUR INTERVALS:
APP. RES.—1,1.5,2,3,5,7.5,1.0 Ohm metres
APP CHARG.—5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 200 N

8170

LINE 300 N

Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 8000W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY

CHARGEABILITY PROFILE a = 50 m
a = 150 m

CHARGEABILITY ANOMALY
a = 50 m and 150 m

CHARGEABILITY ANOMALY
a = 150 m only

CHARGEABILITY

a = 150 m
a = 50 m

60 40 20 0 Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

A B

+20+ DIPANGLE FIELD STRENGTH
0+
-20+
VLF CONDUCTOR
(MIGHT WAVE CROSSOVER)

ORIENTATION
STATION N.W. (SEATLE)
FACED S.W.

V. L. F.

+20° 0 -20° -40° -60° DIP ANGLE

DIP ANGLE POWER LINE FIELD STRENGTH

320% 240% 160% 80% 0 RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

MAGNETOMETER SURVEY

59,000 58,500 58,000 57,500 57,000 56,500 GAMMAS

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

SCINTREX MP-2 PROTRON PROCESSION
TOTAL FIELD MAGNETOMETER

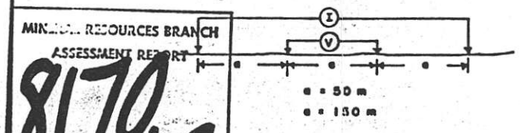
MAGNETIC FIELD HIGH

N.T.S. 92 H 2E DWG. NO. 176-80-6

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 300 N

WENNER
ELECTRODE CONFIGURATION



SCALE 1:5000

DATE SURVEYED JUNE 11,12,14, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 300 N

8170

LINE 400 N — *Apparent Resistivity Ohm metres*

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

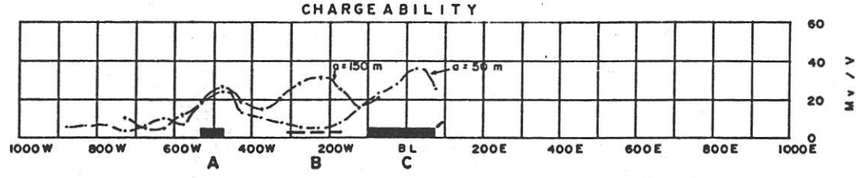
Apparent Chargeability Mv / V

1000W 8000W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY



CHARGEABILITY ANOMALY a = 50 m and 150 m

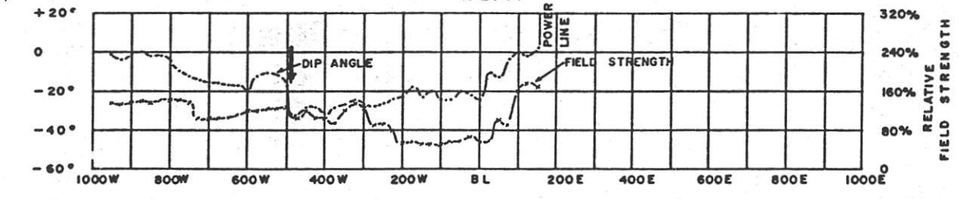
CHARGEABILITY ANOMALY a = 50 m only

DIPANGLE FIELD STRENGTH

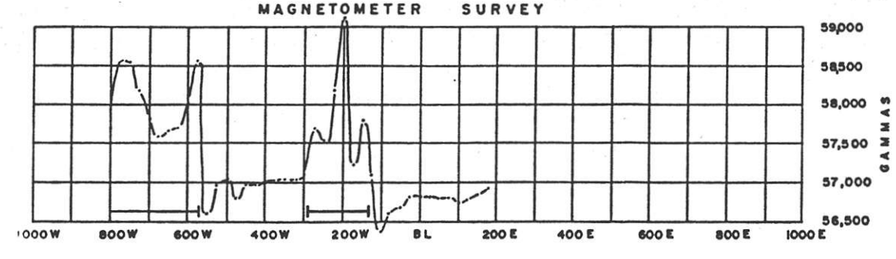
VLF CONDUCTOR (HIGH WAVE CROSSOVER)

CPONE RADIO STATION NLK (SEATTLE) FACED S.W.

V. L. F.



MAGNETOMETER SURVEY



SCINTREX MP 2 PROTRON PROCESSION TOTAL FIELD MAGNETOMETER

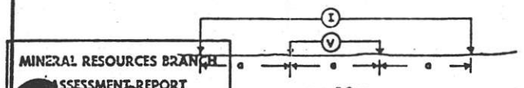
MAGNETIC FIELD HIGH

N.T.S. 92 H 2E DWG. NO. 176-80-7

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 400 N

WENNER
ELECTRODE CONFIGURATION



8170 Part 2 of 2

SCALE 1:5000

DATE SURVEYED JUNE 11,12,15, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

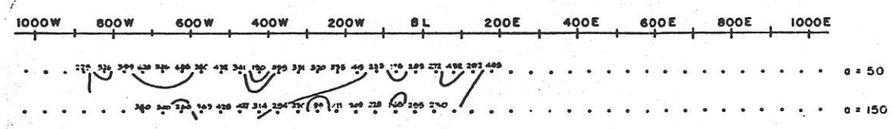
TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

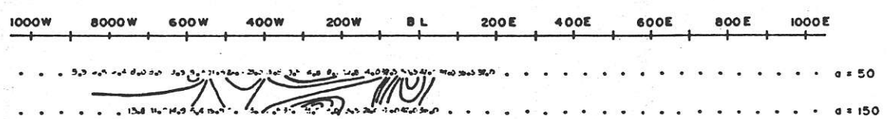
LINE 400 N

LINE 500 N

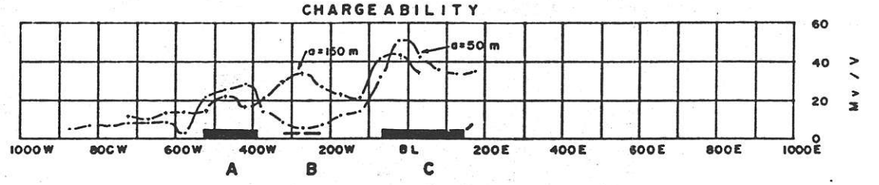
Apparent Resistivity Ohm metres



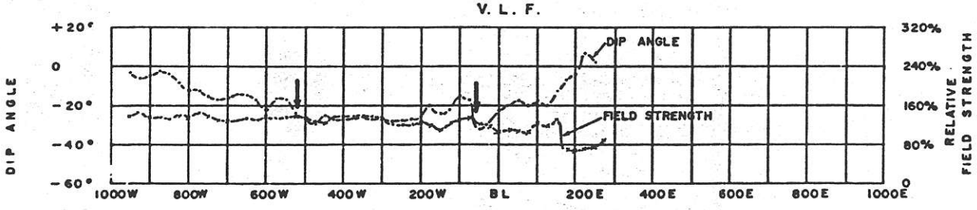
Apparent Chargeability Mv / V



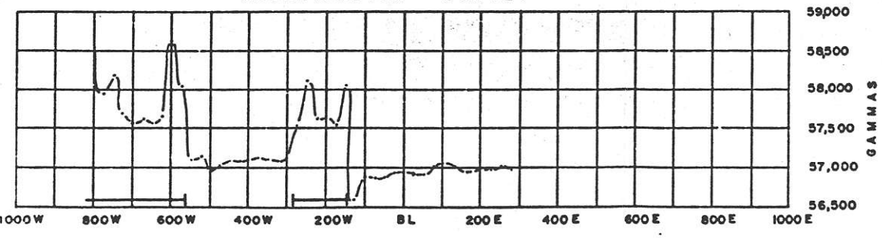
CHARGEABILITY



V. L. F.



MAGNETOMETER SURVEY



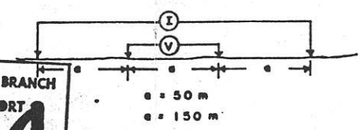
N.T.S. 92 H 2E

DWG. NO. 176-80-8

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 500 N

WENNER
ELECTRODE CONFIGURATION



SCALE 1:5000

DATE SURVEYED JUNE 11,12,15, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 500 N

8170

8170

LINE 600 N

Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 8000W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY

CHARGEABILITY ANOMALY
a = 50 m and 150 m

CHARGEABILITY ANOMALY
a = 50 m only

+20 DIP ANGLE FIELD STRENGTH
0
-20 VLF CONDUCTOR (RIGHT WAVE CROSSOVER)

CRUISE RADEM
STATION [illegible] (SEATTLE)
FACED S W

CHARGEABILITY

a=50
a=150

60
40
20
0
Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E
A B C

V. L. F.

DIP ANGLE

+20°
0
-20°
-40°
-60°

DIP ANGLE
FIELD STRENGTH
ROAD
POWER LINE

320%
240%
160%
80%
0
RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

MAGNETOMETER SURVEY

59,000
58,500
58,000
57,500
57,000
56,500
GAMMAS

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

SCINTREX MP 2 PROTRON PROCESSION TOTAL FIELD MAGNETOMETER

MAGNETIC HIGH

N.T.S. 92 H 2E DWG. NO. 176-80-9

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 600 N

WENNER
ELECTRODE CONFIGURATION

I
V
a a a
a = 50 m
a = 150 m

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8170
part 2
of 2

SCALE 1:5000

DATE SURVEYED JUNE 11, 12, & 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 600 N

8170

LINE 700 N — Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

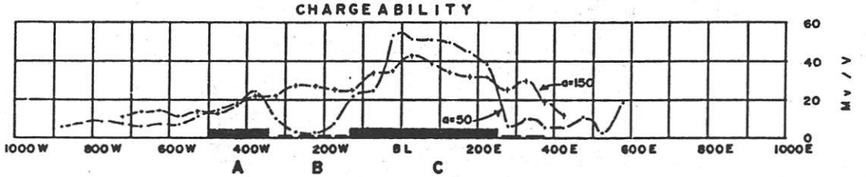
Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

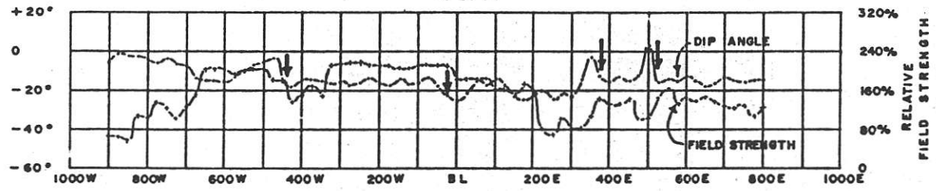
a = 50

a = 150

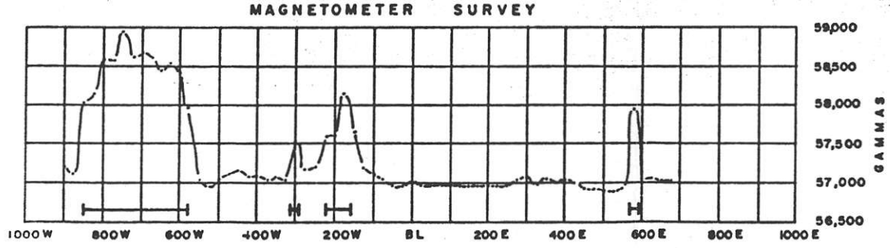
CHARGEABILITY



V. L. F.



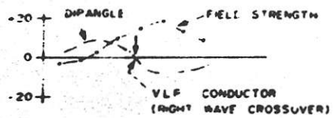
MAGNETOMETER SURVEY



CHARGEABILITY PROFILE — a = 50 m, a = 150 m

CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only



CRUNE RADEM
STATION NLK (SEATLE)
FACED S W

SCINTREX MP 2 PROTRON PROCESSION
TOTAL FIELD MAGNETOMETER
MAGNETIC FIELD HIGH

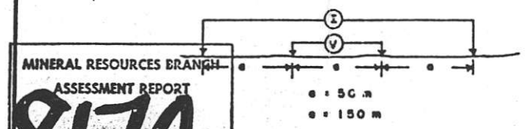
N.T.S. 92 H 2E

DWG. NO. 176-80-10

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 700 N

WENNER
ELECTRODE CONFIGURATION



8170
Part 2
of 2

SCALE 1:5000

DATE SURVEYED JUNE 11, 12, 17, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

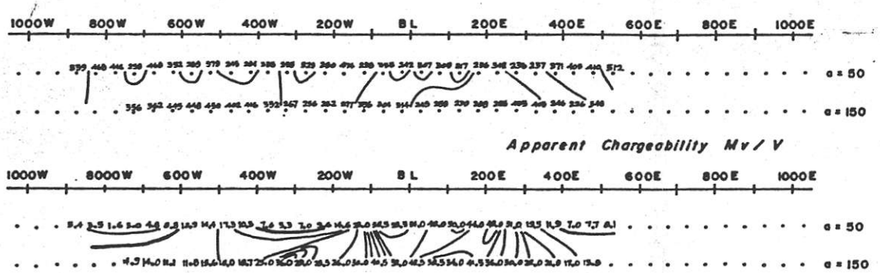
TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 700 N

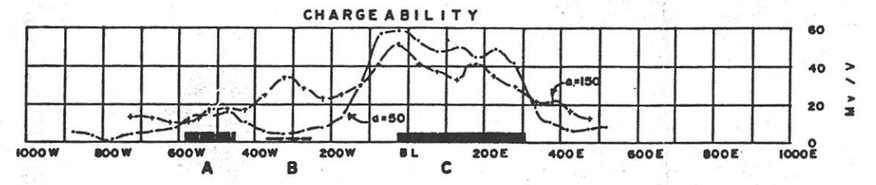
8170

LINE 800 N — *Apparent Resistivity Ohm metres*



Apparent Chargeability Mv / V

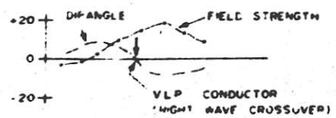
CHARGEABILITY



CHARGEABILITY PROFILE a = 50 m
a = 150 m

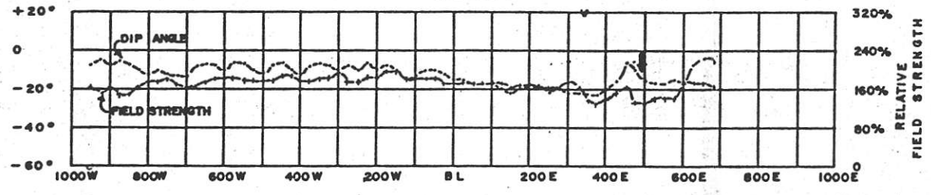
CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only

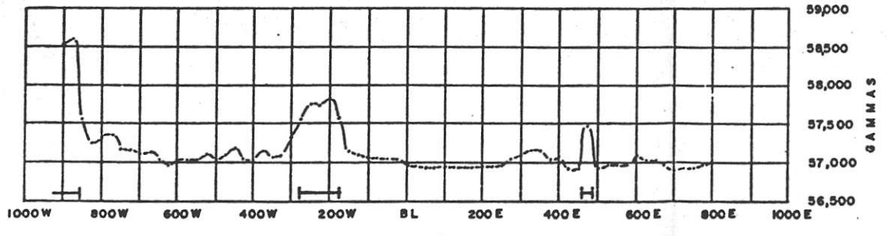


CRONE RADEM
STATION NAA (SEATLE)
FACED S.W.

V. L. F.



MAGNETOMETER SURVEY



SCINTREX MP 2 PROTRON PROCESSION
TOTAL FIELD MAGNETOMETER

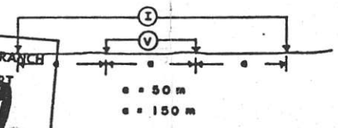
MAGNETIC FIELD HIGH

N.T.S. 92 H 2E DWG. NO. 176-80-11

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 800 N

WENNER
ELECTRODE CONFIGURATION



SCALE 1:5000

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

DATE SURVEYED JUNE 11, 12, 17, 1980

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 800 N

8170

LINE 900 N — *Apparent Resistivity Ohm metres*

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

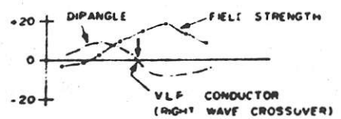
a = 50

a = 150

CHARGEABILITY PROFILE — a = 50 m, a = 150 m

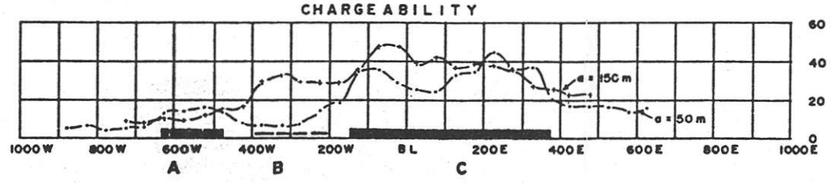
CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 50 m only

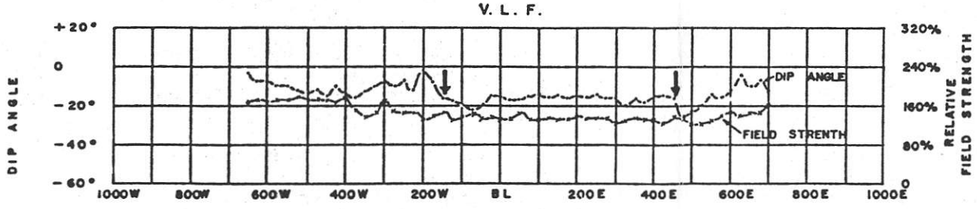


CRONE RADEM
STATION NLK (SEATLE)
FACED S W

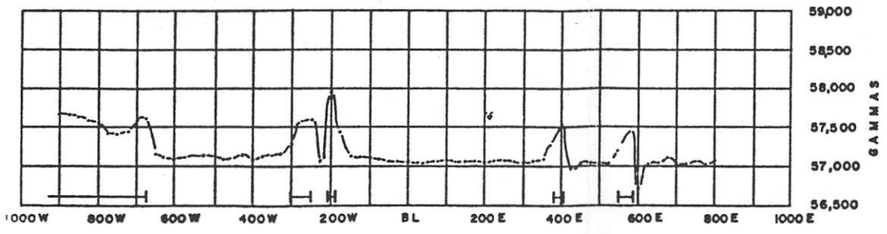
CHARGEABILITY



V. L. F.



MAGNETOMETER SURVEY



SCINTREX MP-2 PROTRON PROCESSION
TOTAL FIELD MAGNETOMETER

MAGNETIC FIELD HIGH

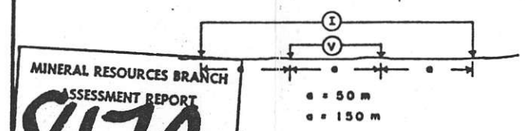
N.T.S. 92 H 2E

DWG. NO. 176-80-12

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 900 N

WENNER
ELECTRODE CONFIGURATION



SCALE 1:5000

DATE SURVEYED JUNE 11,12,18, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

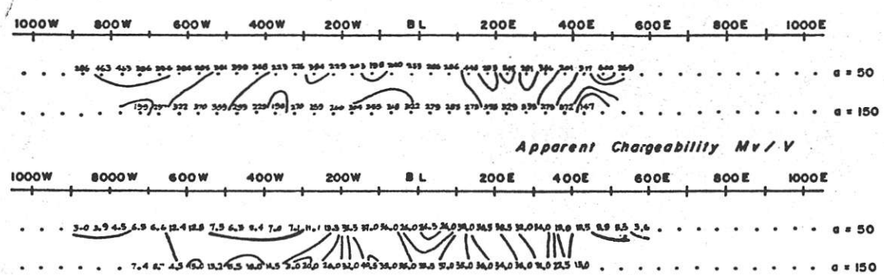
TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 900 N

8170

LINE 1000 N — *Apparent Resistivity Ohm metres*

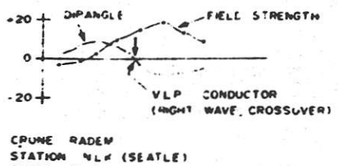


Apparent Chargeability Mv / V

CHARGEABILITY PROFILE a = 50 m, a = 150 m

CHARGEABILITY ANOMALY 3-5L m' 1nd 5 m

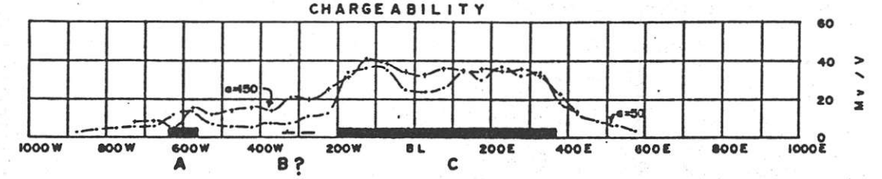
CHARGEABILITY ANOMALY a = 150 m only



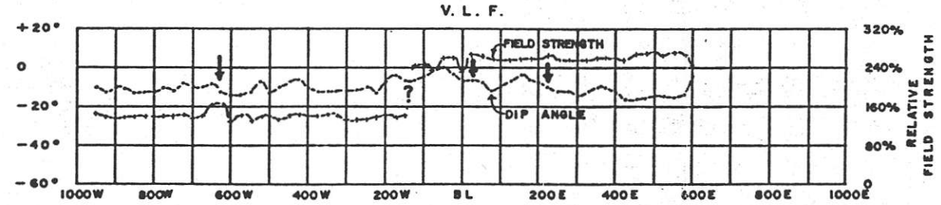
CRUNE RADEM
STATION NLK (SEATLE)
FACED S W

SCINTREX MP-2 PROTRON PROCESSION
TOTAL FIELD MAGNETOMETER
MAGNETIC FIELD HIGH

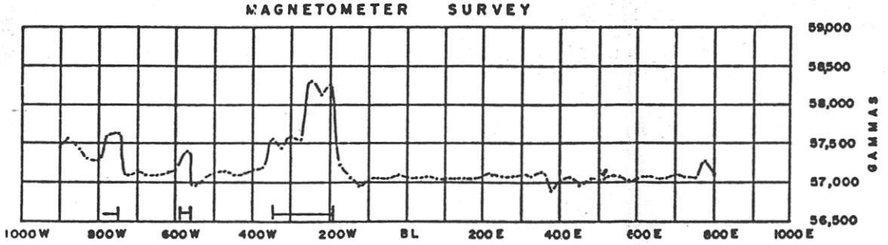
CHARGEABILITY



V. L. F.



MAGNETOMETER SURVEY



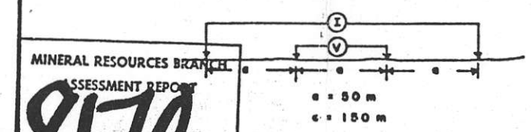
N.T.S. 92 H 2E

DWG. NO. 176-80-13

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 1000 N

WENNER
ELECTRODE CONFIGURATION



8170 Part 2 of 2

SCALE 1:5000

DATE SURVEYED JUNE 11,12 &, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 1000 N

LINE 1100 N — *Apparent Resistivity Ohm metres*

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

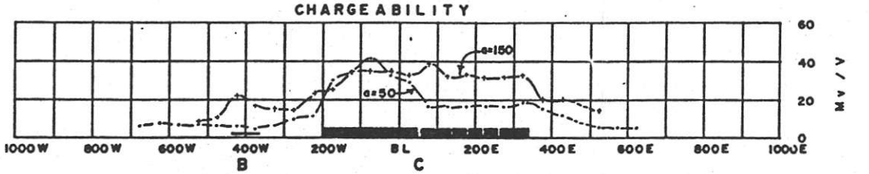
Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

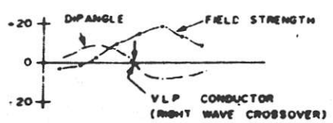
CHARGEABILITY



CHARGEABILITY PROFILE — a = 50 m; a = 150 m

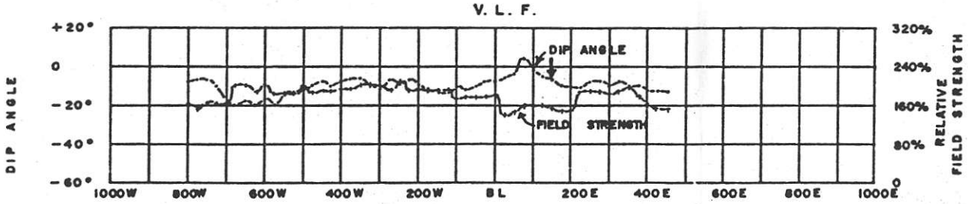
CHARGEABILITY ANOMALY (1.5k – 2nd – 5.0 m)

CHARGEABILITY ANOMALY a = 150 m only



CROSS RADEM
STATION NLK (SEATLE)
FACED S W

V. L. F.



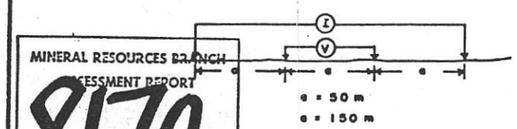
N.T.S. 92 H 2E

DWG. NO. 176-80-14

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 1100 N

WENNER
ELECTRODE CONFIGURATION



8170 Part 2 of 2

SCALE 1:5000

DATE SURVEYED JUNE 11, 12, 13, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 1100 N

8170

8170

LINE 1200 N

Apparent Resistivity Ohm metres

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

Apparent Chargeability Mv / V

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

a = 50

a = 150

CHARGEABILITY PROFILE — a = 50 m; a = 150 m

CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only

CHARGEABILITY

60
40
20
0
Mv / V

a=150
a=50

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

B ? C

+20 DIP ANGLE FIELD STRENGTH
0
-20

VLF CONDUCTOR (RIGHT WAVE CROSSOVER)

CROWE RADEM
STATION NLK (SEATLE)
FACES S W

V. L. F.

+20°
0
-20°
-40°
-60°
DIP ANGLE

FIELD STRENGTH
DIP ANGLE

320%
240%
160%
80%
0
RELATIVE FIELD STRENGTH

1000W 800W 600W 400W 200W BL 200E 400E 600E 800E 1000E

N.T.S. 92 H 2E DWG. NO. 176-80-15

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 1200 N

WENNER
ELECTRODE CONFIGURATION

I
V
a a a

a = 50 m
a = 150 m

SCALE 1:5000

DATE SURVEYED JUNE 11,12,13, 1980

CONTOUR INTERVALS:

APP. RES. — 1, 1.5, 2, 3, 5, 7.5, 10 Ohm metres
APP. CHARG. — 5.0 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

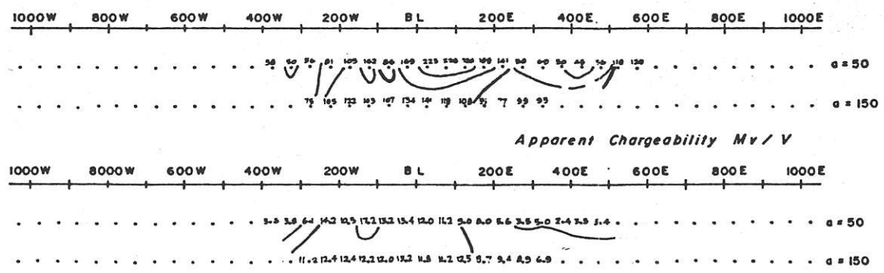
INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 1200 N

8170

LINE 1300 N

Apparent Resistivity Ohm metres



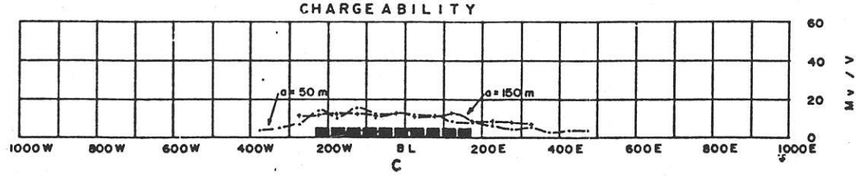
Apparent Chargeability Mv / V

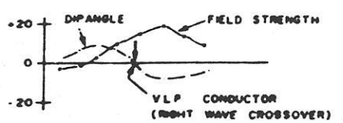
CHARGEABILITY PROFILE a = 50 m, a = 150 m

CHARGEABILITY ANOMALY a = 50 m and 150 m

CHARGEABILITY ANOMALY a = 150 m only

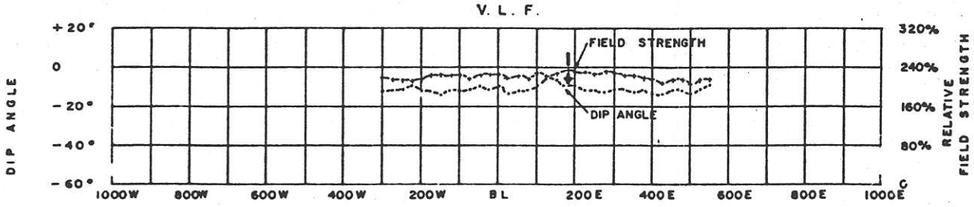
CHARGEABILITY





CRONE RADEM
STATION NLK (SEATLE)
FACED S W

V. L. F.



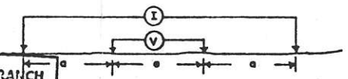
N.T.S. 92 H 2E

DWG. NO. 176-80-16

COMINCO LTD.
RED STAR GROUP
SIMILKAMEEN M.D., B.C.

LINE NO. 1300 N

WENNER
ELECTRODE CONFIGURATION



SCALE 1:5000

DATE SURVEYED JUNE 11,12,20, 1980

CONTOUR INTERVALS:

APP RES — 1, 1.5, 2, 3, 5, 7.5, 1.0 Ohm metres
APP CHARG. — 5.0 Mv/V

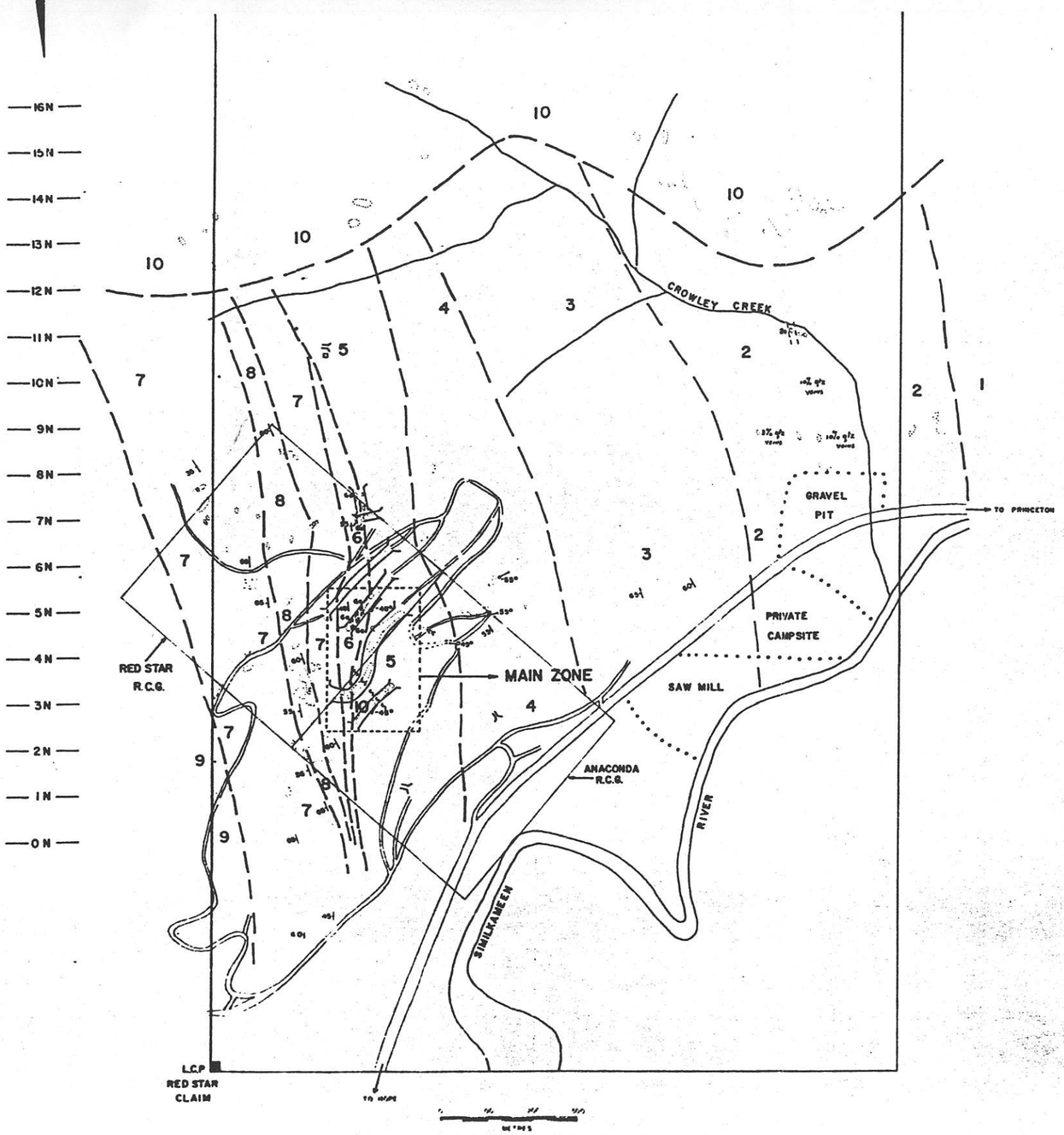
APPROVED

DATE

TRANSMITTER — HUNTEC LOPO MK IV
RECEIVER — SCINTREX IPR 8

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 1300 N



Legend

Tertiary - Princeton Group

Basalt - Andesite Flows and Pyroclastics

Triassic - Nicola Group

9 Rhyolite Pyroclastics - locally rhyolite tuffites

8 Mixed Dacite and Andesite Pyroclastics - locally dacite and andesite tuffites

7 Andesite Pyroclastics and Flows - locally dacite and rhyolite pyroclastics and tuffites

6 Hangingwall - intercalated rhyolite tuffs and tuffites, cherty rhyolite tuffites, argillites and tuffaceous argillites; locally dacite and andesite tuffs and tuffites
6a) Argillites, locally carbonaceous, 15-30 cm thick, 1-2% pyrite

5 Mineral Horizon - unaltered and altered rhyolite and dacite pyroclastics and tuffites; locally andesite pyroclastics and tuffites; altered rocks moderately to intensely leached, silicified and pyritized (3-20% pyrite) - vary from quartz-sericite-(chlorite) schists to massive quartz-pyrite(sparaqs-like) rock; locally disseminated to massive sphalerite, chalcopyrite, pyrite

4 Andesite Pyroclastics - locally andesite tuffite and dacite and rhyolite pyroclastics

3 Argillites, Tuffaceous Argillites - locally andesite tuffs

2 Andesite Pyroclastics - locally dacite pyroclastics, argillaceous andesite tuffites and argillites

1 Andesite Flows

Symbols

- Outcrop
- Geologic contact, inferred
- Bedding, strike, dip
- Fault
- Level portal, adit
- Road, bulldozer, gravel road
- Diamond drill hole
- Adit
- Trench
- Shaft
- R.C.G. - Reverse circulation drilling

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT NO. 870

RED STAR PROPERTY 92H/2

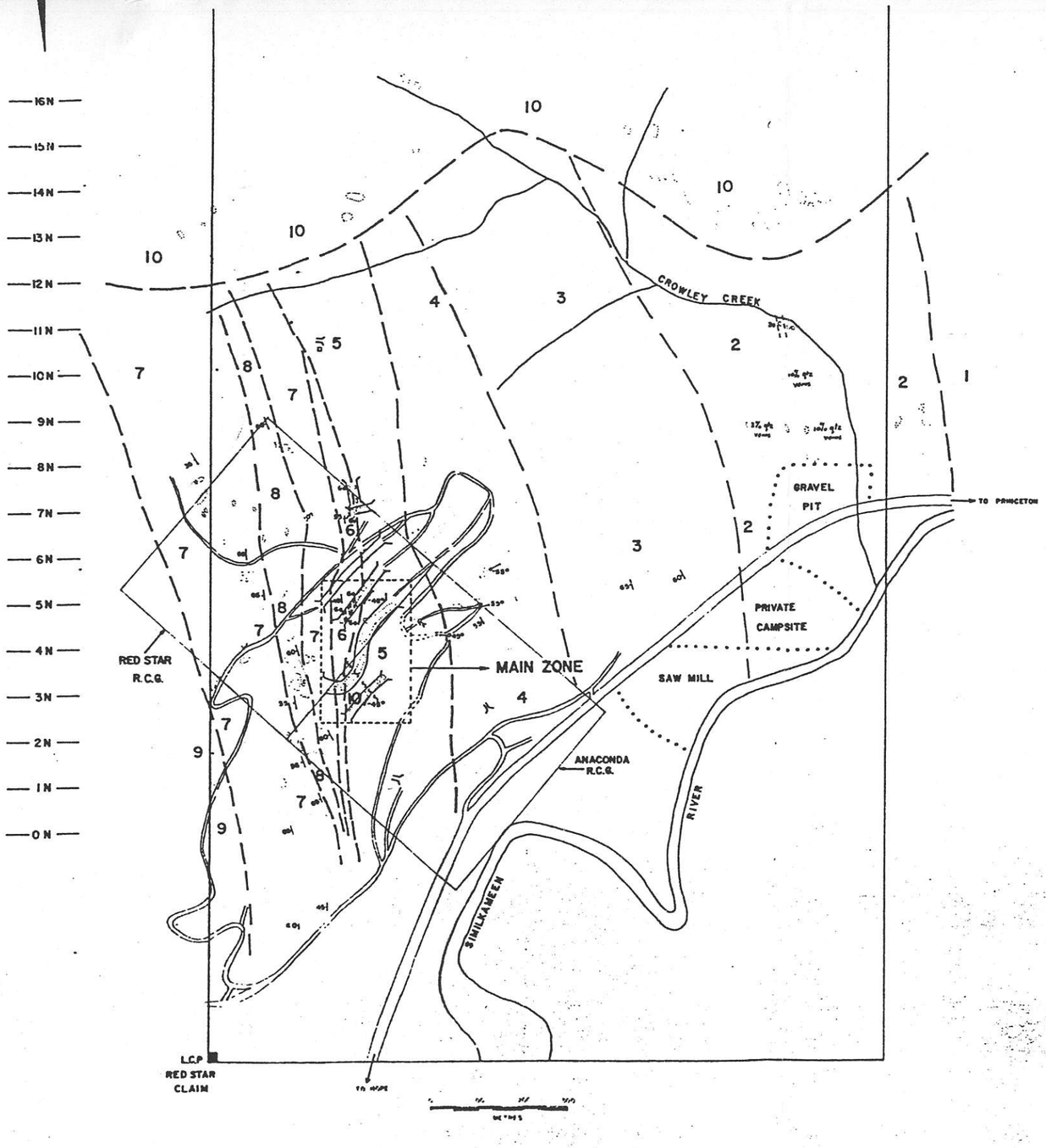
GEOLOGY

Drawn by G.A.B. Traced by

Scale: 1:5,000 Date: 28 MAY 1980 Plate: 80-2

8-170

8170
Part 1
of 2



Legend

Tertiary – Princeton Group

[10] Basalt – Andesite Flows and Pyroclastics

Triassic – Nicola Group

[9] Rhyolite Pyroclastics – locally rhyolite tuffites

[8] Mixed Dacite and Andesite Pyroclastics – locally dacite and andesite tuffites

[7] Andesite Pyroclastics and Flows – locally dacite and rhyolite pyroclastics and tuffites

[6] Hangingwall – intercalated rhyolite tuffs and tuffites, cherty rhyolite tuffites, argillites and tuffaceous argillites; locally dacite and andesite tuffs and tuffites
6a) Argillites, locally carbonaceous, 15-30 cm thick, 1-2% pyrite

[5] Mineral Horizon – unaltered and altered rhyolite and dacite pyroclastics and tuffites; locally andesite pyroclastics and tuffites; altered rocks moderately to intensely leached, silicified and pyritized (3-20% pyrite)-vary from quartz-sericite-(chlorite) schists to massive quartz-pyrite(sponge-like) rock; locally disseminated to massive sphalerite, chalcopyrite, pyrite

[4] Andesite Pyroclastics – locally andesite tuffite and dacite and rhyolite pyroclastics

[3] Argillites, Tuffaceous Argillites – locally andesite tuffs

[2] Andesite Pyroclastics – locally dacite pyroclastics, argillaceous andesite tuffites and argillites

[1] Andesite Flows

Symbols

- contact
- geologic contact, inferred
- bedding, strike, dip
- fault
- LCP ■ legal corner post
- power line, travel road
- diamond drill hole
- adit
- trench
- shaft

R.C.G. – Reverted Crown Grant

8170

MINERAL RESOURCES BRANCH
ASSESS. REPORT NO.

8170
part 1
of 2

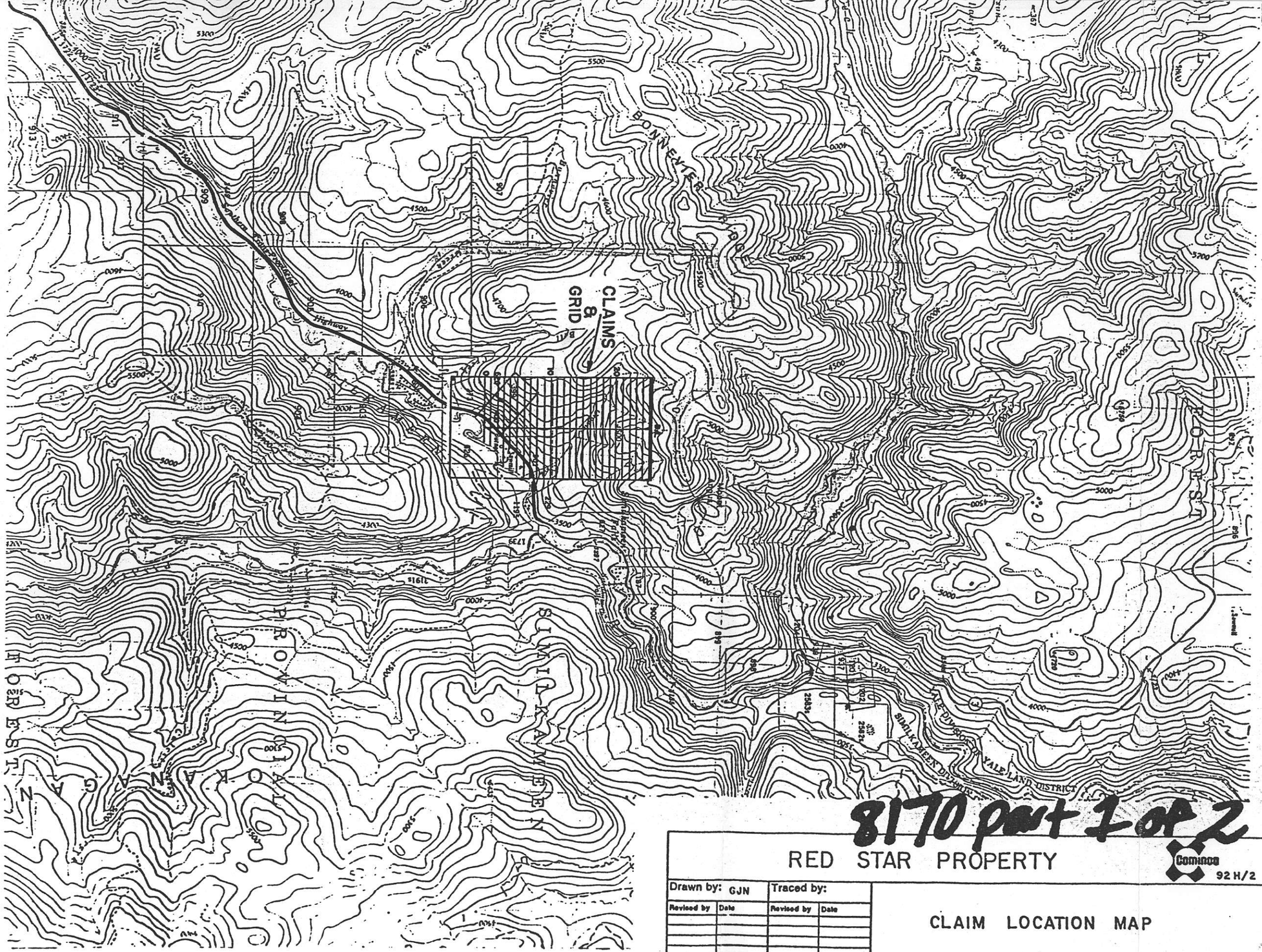
RED STAR PROPERTY

Drawn by E.A.N. | Traced by

GEOLOGY

Scale: 1:5,000 Date: 26 MAY 1980 Plate: 80-2

8170



8170 part 1 of 2

RED STAR PROPERTY

Cominco 92 H/2

Drawn by: GJN		Traced by:	
Revised by	Date	Revised by	Date

CLAIM LOCATION MAP

Scale: 1:50,000 | Date: 27 MAY 1980 | Plate: 80-1

MINERAL ENVIRONMENTS LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

THUNDER BAY LAB.:
TELEPHONE (807) 622-8958
FAX (807) 623-5931

SMITHERS LAB.:
TELEPHONE/FAX (604) 847-3004

Red Star.

Assay Certificate

1V-0745-RA2

Company: MINNOVA INC.
Project: 602
Attn: G.WELLS

Date: AUG-01-91
Copy 1. MINNOVA INC., VANCOUVER, B.C.

AUG 6 1991

Ans'd

We hereby certify the following Assay of 1 ROCK samples submitted JUL-30-91 by GARY WELLS.

Sample Number	BA %
10297	42.46

Certified by _____

COMP: MINNOVA INC.
PROJ: 602
ATTN: G.WELLS

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-0745-RJ2
DATE: 91/08/01
* ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM
10297	2.5	7	3839	65	25	1	109

COMP: MINNOVA INC.
PROJ: 602
ATTN: G.WELLS

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-0745-RJ1
DATE: 91/07/30
* ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU-WET PPB
10296	.4	8	6	28	5	1	51	5

COMP: MINNOVA INC.
PROJ: 602
ATTN: G.WELLS

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-0745-RL1
DATE: 91/07/30
* ROCK * (ACT:F26)

SAMPLE NUMBER	AL2O3 %	BA %	CAO %	FE2O3 %	K2O %	MGO %	MNO2 %	NA2O %	P2O5 %	SIO2 %	TIO2 %	S %	TOT(%) %
10296	9.37	.005	.01	1.63	.05	.78	.03	6.12	.01	80.72	.08	.04	98.82

MIN-EN LABORATORIES
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-0745-RA1

Company: MINNOVA INC.
Project: 602
Attn: G.WELLS

Date: JUL-30-91
Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Assay of 1 ROCK samples submitted JUL-26-91 by G.WELLS.

Sample Number	LOI %
10296	.10

Certified by _____

MIN-EN LABORATORIES

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900752 GA JOB NUMBER: 900752 PAMICON DEVELOPMENTS LTD. PAGE 1 OF 1

SAMPLE #	Hg ppb
95877	10000
95878	9000
95879	9000
95880	12000
95882	30

DETECTION LIMIT 5
nd = none detected -- = not analysed is = insufficient sample

VGC VANGEOCHEM LAB LIMITED

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BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

GEOCHEMICAL ANALYTICAL REPORT

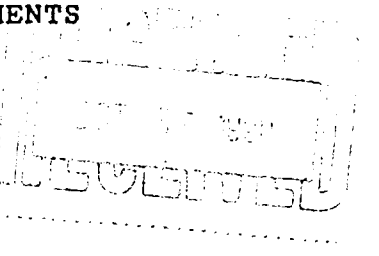
CLIENT: **PAMICON DEVELOPMENTS LTD.**
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: OCT 23 1990
REPORT#: **900693 GA**
JOB#: 900693

PROJECT#: RED STAR
SAMPLES ARRIVED: OCT 19 1990
REPORT COMPLETED: OCT 23 1990
ANALYSED FOR: Au (FA/AAS) ICP

INVOICE#: 900693 NA
TOTAL SAMPLES: 50
SAMPLE TYPE: 50 ROCK
REJECTS: SAVED

SAMPLES FROM: MR. S. TODORUK - PAMICON DEVELOPMENTS
COPY SENT TO: PAMICON DEVELOPMENTS LTD.



PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: VGC Staff

SIGNED: _____

GENERAL REMARK: None

VGC VANGEOCHEM LAB LIMITED

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RENO, NEVADA, U.S.A.

REPORT NUMBER: 900693 GA JOB NUMBER: 900693 **PANICON DEVELOPMENTS LTD.**

SAMPLE #	Au ppb
95801	nd
95802	nd
95803	nd
95804	nd
95805	150
95806	1160
95807	140
95808	nd
95809	140
95810	130
95811	nd
95812	1830
95813	70
95814	530
95815	810
95816	80
95817	1730
95818	> 10000
95819	2050
95820	4800
95821	1020
95822	1510
95823	1760
95824	310
95825	690
95826	110
95827	40
95828	250
95829	210
95851	nd
95852	nd
95853	270
95854	10
95855	nd
95856	nd
95857	nd
95858	nd
95859	nd
95860	nd
DETECTION LIMIT	5

nd = none detected -- = not analysed is = insufficient sample

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REPORT NUMBER: 900693 GA JOB NUMBER: 900693 PANICON DEVELOPMENTS LTD. PAGE 2 OF 2

SAMPLE #	Au ppb
95861	nd
95862	30
95863	nd
95864	nd
95875	950
95876	290
95877	260
95878	220
95879	270
95880	310
95882	4200

DETECTION LIMIT 5
nd = none detected -- = not analysed is = insufficient sample

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BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: PAMICON DEVELOPMENTS LTD.
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: OCT 24 1990
REPORT#: 900693 AA
JOB#: 900693

PROJECT#: RED STAR
SAMPLES ARRIVED: OCT 19 1990
REPORT COMPLETED: OCT 24 1990
ANALYSED FOR: Au

INVOICE#: 900693 NA
TOTAL SAMPLES: 10
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: 10 ROCK

SAMPLES FROM: MR. S. TODORUK - PAMICON DEVELOPMENTS
COPY SENT TO: PAMICON DEVELOPMENTS LTD.

PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: Raymond Chan

SIGNED: _____

Registered Provincial Assayer

GENERAL REMARK: RESULTS FAXED TO VANCOUVER OFFICE.

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
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FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900693 AA JOB NUMBER: 900693 PANICON DEVELOPMENTS LTD.

SAMPLE #	Au oz/st
95806	.030
95812	.056
95817	.046
95818	.894
95819	.062
95820	.108
95821	.052
95822	.050
95823	.052
95882	.114

DETECTION LIMIT .005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

1630 Pandora Street, Vancouver, V5L 1L6
Ph:(604)251-5656 Fax:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO_3 to H_2O at 95 °C for 90 minutes and is diluted to 10 ml with water.
This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST:

REPORT #: 900693 PA | PAMICON DEVELOPMENTS LTD. | PROJECT: RED STAR | DATE IN: OCT 19 1990 | DATE OUT: OCT 26 1990 | ATTENTION: MR. STEVE TODORUK | PAGE 1 OF 2

Sample Name	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sn ppm	Sr ppm	U ppm	W ppm	Zn ppm
95801	0.3	1.42	<3	104	<3	0.85	0.9	19	62	31	2.42	0.12	0.76	380	7	0.14	63	0.08	<2	<2	<2	175	<5	<3	55
95802	0.2	1.00	<3	40	<3	0.61	<0.1	15	56	31	2.30	0.11	0.92	237	8	0.14	28	0.09	<2	<2	<2	110	<5	<3	69
95803	0.2	1.91	<3	471	<3	0.79	<0.1	12	89	31	1.62	0.13	0.34	318	9	0.36	19	0.07	<2	<2	<2	157	<5	<3	43
95804	<0.1	0.13	16	30	<3	0.05	<0.1	5	175	15	1.27	<0.01	0.02	643	5	0.01	249	0.02	9	<2	<2	4	<5	<3	33
95805	8.5	0.75	<3	27	<3	0.02	3.5	4	168	6000	2.49	0.03	0.67	207	21	0.04	13	<0.01	<2	<2	<2	1	<5	<3	197
95806	>50.0	0.45	<3	7	<3	0.14	100.9	18	138	>20000	>10.00	0.34	0.38	126	28	0.58	128	<0.01	<2	<2	<2	1	<5	<3	6923
95807	5.7	0.24	10	32	<3	<0.01	2.8	2	132	6105	1.61	<0.01	0.16	54	15	0.02	184	<0.01	<2	<2	<2	<1	<5	<3	231
95808	0.6	0.33	13	37	<3	<0.01	<0.1	1	124	192	1.21	<0.01	0.23	70	18	<0.01	118	<0.01	11	<2	<2	2	<5	<3	22
95809	1.5	1.78	<3	97	<3	1.84	0.4	13	76	3966	1.77	0.16	1.37	758	11	0.02	51	0.02	<2	<2	<2	50	<5	<3	53
95810	3.0	1.35	<3	11	<3	6.85	1.2	16	105	2523	2.54	0.28	1.01	2894	13	0.04	15	0.02	<2	<2	<2	50	<5	<3	64
95811	1.2	0.10	28	8	<3	0.05	<0.1	2	171	364	0.58	<0.01	0.08	431	3	<0.01	283	<0.01	5	<2	<2	<1	<5	<3	9
95812	27.0	0.04	22	2	<3	0.43	1.0	5	216	>20000	0.32	0.03	0.03	353	19	0.08	15	<0.01	<2	<2	<2	3	<5	<3	176
95813	1.2	1.99	<3	11	<3	0.89	2.2	21	112	4263	2.02	0.11	1.90	1740	11	0.04	109	0.02	<2	<2	<2	26	<5	<3	68
95814	4.7	0.11	29	15	<3	0.26	0.4	2	200	16472	0.35	<0.01	0.13	213	16	0.02	14	0.02	<2	<2	<2	2	<5	<3	59
95815	5.4	0.40	17	59	<3	0.07	0.1	5	114	15036	0.64	<0.01	0.38	477	7	0.02	171	0.02	<2	<2	<2	3	<5	<3	59
95816	3.5	2.59	<3	30	<3	0.79	1.5	19	63	14150	2.22	0.12	2.25	736	16	0.06	29	0.03	<2	<2	<2	23	<5	<3	149
95817	16.0	3.00	<3	133	<3	0.33	1.7	22	98	>20000	2.62	0.10	2.66	943	17	0.08	121	<0.01	<2	<2	<2	18	<5	<3	248
95818	13.6	0.08	44	5	<3	0.21	<0.1	1	196	1386	0.59	<0.01	0.15	177	14	<0.01	10	<0.01	16	<2	<2	7	<5	<3	17
95819	10.5	0.08	112	5	<3	0.72	0.2	5	158	7610	1.61	0.07	0.41	230	5	0.01	205	<0.01	13	<2	<2	25	<5	<3	46
95820	6.0	0.23	70	7	<3	2.19	0.7	7	181	2940	2.03	0.17	1.10	735	14	0.02	16	<0.01	18	<2	<2	61	<5	<3	43
95821	5.3	0.16	25	19	<3	1.80	1.1	9	137	12123	2.94	0.17	0.75	540	6	0.04	184	0.04	3	<2	<2	47	<5	<3	72
95822	7.0	0.28	186	22	<3	1.08	1.0	9	112	12041	2.36	0.13	0.50	569	13	0.05	21	0.02	<2	<2	<2	25	<5	<3	75
95823	1.5	0.06	47	5	<3	<0.01	<0.1	4	158	1577	1.07	<0.01	0.03	128	2	<0.01	254	<0.01	10	<2	<2	<1	<5	<3	22
95824	4.4	0.06	44	5	<3	0.80	0.1	3	183	7217	0.57	0.05	0.42	130	14	<0.01	14	<0.01	7	<2	<2	15	<5	<3	25
95825	2.9	0.08	53	7	<3	<0.01	<0.1	2	154	1213	0.67	<0.01	0.04	98	2	<0.01	263	<0.01	14	<2	<2	<1	<5	<3	11
95826	1.1	0.37	3	4	<3	1.94	1.1	10	180	1359	2.06	0.15	1.11	1133	15	0.02	20	<0.01	15	<2	<2	31	<5	<3	22
95827	10.3	0.23	<3	32	<3	2.17	1.7	5	145	5915	2.14	0.16	0.96	781	6	0.02	233	<0.01	1578	<2	<2	87	<5	<3	30
95828	3.2	0.41	38	2	<3	0.07	0.7	8	216	3147	1.64	0.01	0.32	177	17	0.02	15	<0.01	27	<2	<2	<1	<5	<3	43
95829	2.3	0.53	88	3	<3	0.47	1.4	7	154	2908	1.79	0.05	0.42	258	6	0.02	217	0.02	11	<2	<2	3	<5	<3	43
95851	4.4	0.24	<3	70	<3	<0.01	0.2	1	143	87	7.03	0.17	0.02	<1	26	0.10	5	0.04	88	<2	<2	149	<5	<3	37
95852	0.2	0.14	25	5	<3	<0.01	<0.1	3	161	33	0.54	<0.01	0.10	30	2	<0.01	15	<0.01	17	<2	<2	<1	<5	<3	17
95853	7.1	0.08	<3	3	<3	0.07	10.2	2	130	9211	>10.00	0.39	0.02	<1	44	0.15	17	<0.01	34	21	<2	<1	<5	<3	748
95854	0.5	3.51	<3	70	<3	<0.01	2.2	19	136	255	8.22	0.20	3.06	1038	33	0.08	43	0.02	<2	<2	<2	<1	<5	<3	395
95855	0.1	1.52	<3	406	<3	0.71	<0.1	12	118	100	1.72	0.10	0.65	310	6	0.12	43	0.06	<2	<2	<2	293	<5	<3	55
95856	<0.1	0.50	13	13	<3	<0.01	0.2	3	165	40	0.65	<0.01	0.32	64	3	<0.01	10	<0.01	4	<2	<2	3	<5	<3	31
95857	<0.1	0.96	<3	9	<3	<0.01	0.2	7	192	47	1.56	<0.01	0.65	186	5	0.01	18	0.03	<2	<2	<2	2	<5	<3	48
95858	<0.1	0.18	31	16	<3	<0.01	<0.1	<1	198	17	0.42	<0.01	0.14	18	2	<0.01	11	<0.01	12	<2	<2	<1	<5	<3	64
95859	<0.1	0.62	<3	69	<3	<0.01	0.2	<1	117	20	1.76	0.02	0.31	13	5	0.02	11	<0.01	4	<2	<2	<1	<5	<3	84
95860	0.2	0.43	14	200	<3	<0.01	6.3	1	183	108	1.08	<0.01	0.33	19	5	0.07	12	<0.01	9	<2	<2	<1	<5	<3	1108
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000

< - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested

VANGEOCHEM LAB LIMITED
1630 Pandora Street, Vancouver, B.C. V5L 1L6
Ph:(604)251-5656 Fax:(604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO_3 to H_2O at 95 °C for 90 minutes and is diluted to 10 ml with water.
This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST:

REPORT #: 900693 PA | PAMICON DEVELOPMENTS LTD. | PROJECT: RED STAR | DATE IN: OCT 19 1990 | DATE OUT: OCT 26 1990 | ATTENTION: MR. STEVE TODORUK | PAGE 2 OF 2

Sample Name	Ag	Al	As	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sn	Sr	U	W	Zn
	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
95861	3.0	2.54	<3	176	<3	0.17	15.0	24	106	703	5.22	0.13	2.51	1310	29	0.17	17	0.07	<2	<2	<2	6	<5	<3	2093
95862	7.6	0.11	<3	24	<3	1.08	1.8	3	158	10446	1.87	0.11	0.46	386	4	0.02	2	<0.01	1428	<2	<2	39	<5	<3	74
95863	0.4	0.93	<3	7	<3	>10.00	1.5	10	80	1003	3.18	0.32	0.92	1608	7	0.04	2	0.04	5	<2	<2	50	<5	<3	78
95864	0.9	0.24	<3	162	<3	7.89	2.7	3	94	348	1.77	0.28	1.20	3147	6	0.06	1	0.02	27	<2	<2	251	<5	<3	212
95875	42.0	0.76	<3	95	<3	0.05	>1000.0	15	103	>20000	4.83	0.09	0.32	226	75	>10.00	10	<0.01	42	<2	<2	14	<5	<3	>20000
95876	14.2	0.48	<3	56	<3	<0.01	761.3	8	45	9027	1.36	<0.01	0.26	57	49	>10.00	<1	<0.01	68	<2	<2	54	<5	<3	>20000
95877	14.1	0.77	<3	48	<3	0.02	>1000.0	14	128	6581	8.06	0.15	0.32	166	60	>10.00	20	<0.01	72	<2	<2	4	<5	<3	>20000
95878	6.2	0.86	<3	18	<3	0.03	>1000.0	12	120	3536	>10.00	0.20	0.41	168	62	>10.00	18	<0.01	60	12	<2	<1	<5	<3	>20000
95879	7.1	1.08	<3	33	<3	<0.01	838.7	8	114	6959	4.84	0.08	0.70	123	72	>10.00	10	<0.01	22	<2	<2	<1	<5	<3	>20000
95880	6.8	0.92	<3	22	<3	0.04	900.5	9	139	6338	9.27	0.18	0.57	125	85	>10.00	16	<0.01	17	<2	<2	1	<5	<3	>20000
95882	>50.0	0.64	<3	21	<3	0.09	259.6	13	94	>20000	>10.00	0.44	0.42	37	82	2.67	7	<0.01	<2	<2	<2	<1	<5	<3	>20000
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000

< - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested.

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BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

CLIENT: PAMICON DEVELOPMENTS LTD.
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: OCT 31 1990
REPORT#: 900693 AC
JOB#: 900693

PROJECT#: RED STAR
SAMPLES ARRIVED: OCT 19 1990
REPORT COMPLETED: OCT 31 1990
ANALYSED FOR: Cu

INVOICE#: 900693 NC
TOTAL SAMPLES: 6
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: 6 ROCK PULP

SAMPLES FROM: MR. S. TODORUK - PAMICON DEVELOPMENTS
COPY SENT TO: PAMICON DEVELOPMENTS LTD.

PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: Raymond Chan

SIGNED: _____

Registered Provincial Assayer

GENERAL REMARK: RESULTS FAXED TO VANCOUVER OFFICE.

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
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BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900693 AC JOB NUMBER: 900693 PAMICON DEVELOPMENTS LTD.

SAMPLE #	Cu %
95876	1.13
95877	.73
95878	.35
95879	.73
95880	.69
95882	16.90

DETECTION LIMIT .01

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

ASSAY ANALYTICAL REPORT

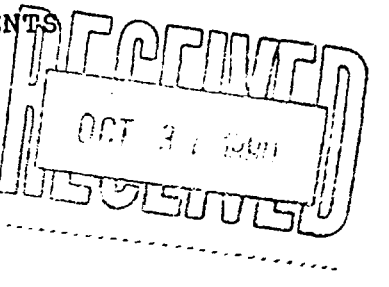
CLIENT: PAMICON DEVELOPMENTS LTD.
ADDRESS: 711 - 675 W. Hastings St.
: Vancouver, BC
: V6B 1N4

DATE: OCT 30 1990
REPORT#: 900693 AB
JOB#: 900693

PROJECT#: RED STAR
SAMPLES ARRIVED: OCT 19 1990
REPORT COMPLETED: OCT 30 1990
ANALYSED FOR: Cu Zn Ag

INVOICE#: 900693 NB
TOTAL SAMPLES: 16
REJECTS/PULPS: 90 DAYS/1 YR
SAMPLE TYPE: 16 ROCK PULP

SAMPLES FROM: MR. S. TODORUK - PAMICON DEVELOPMENTS
COPY SENT TO: PAMICON DEVELOPMENTS LTD.



PREPARED FOR: MR. STEVE TODORUK

ANALYSED BY: Raymond Chan

SIGNED: _____
Registered Provincial Assayer

GENERAL REMARK: RESULTS FAXED TO VANCOUVER OFFICE.

VGC VANGEOCHEM LAB LIMITED

MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A.

REPORT NUMBER: 900693 AB JOB NUMBER: 900693 PAMICON DEVELOPMENTS LTD.

SAMPLE #	Cu %	Zn %	Ag oz/st
95806	7.43	--	2.34
95812	9.23	--	.57
95814	1.97	--	--
95815	1.77	--	--
95816	1.50	--	--
95817	5.26	--	--
95821	1.39	--	--
95822	1.36	--	--
95862	1.83	--	--
95875	3.72	--	1.12
95876	--	17.50	--
95877	--	32.60	--
95878	--	28.10	--
95879	--	18.90	--
95880	--	18.60	--
95882	--	4.28	6.17
DETECTION LIMIT	.01	.01	.01

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N4

Project :
Comments: ATTN: KERRY CURTIS

Invoice Date: 15-NOV-90
Invoice No. : I-9025999
P.O. Number :

CERTIFICATE OF ANALYSIS A9025999

SAMPLE DESCRIPTION	PREP CODE	Hg ppb	Ba %	Zn %
95875	214 --	-----	1.56	40.3
95876	214 --	17000	30.70	-----

CERTIFICATION: W. Stan Jessiman

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N4

Project : RED STAR
Comments: ATTN: STEVE TODORUK

Invoice Date: 15-NOV-90
Invoice No. : I-9025997
P.O. Number :

CERTIFICATE OF ANALYSIS A9025997

SAMPLE DESCRIPTION	PREP CODE		Au ppb FA+AA	Cu ppm	Pb ppm	Zn ppm	Ag ppm Aqua R	Hg ppb	Ba %
95876-B	208	294	-----	-----	-----	-----	-----	6900	33.21
95881	208	294	25	49	1	590	1.8	-----	-----
95891	208	294	15	16	1	190	1.1	-----	-----
95892	208	294	70	18	1	144	6.0	-----	-----

CERTIFICATION: Ian R. Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N4

Project : RED STAR
Comments: ATTN: STEVE TODORUK

Page Number : 1
Total Pages : 1
Invoice Date: 08-NOV-90
Invoice No. : I-9025998
P.O. Number :

CERTIFICATE OF ANALYSIS A9025998

SAMPLE DESCRIPTION	PREP CODE		Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	
95881	299	200	10.67	0.21	0.04	1.10	3.18	0.37	< 0.01	0.30	0.05	83.66	0.18	1.56	101.35	
95891	299	200	10.42	0.23	< 0.01	3.59	2.72	0.25	< 0.01	0.37	0.05	80.87	0.15	2.71	101.40	
95892	299	200	8.09	0.07	< 0.01	0.91	2.37	0.18	< 0.01	0.18	0.04	87.52	0.12	1.42	100.90	

CERTIFICATION: B. Caughlin

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221

To: PAMICON DEVELOPMENTS LIMITED

711 - 675 W. HASTINGS ST.
VANCOUVER, BC
V6B 1N4

A9025998

Comments: ATTN: STEVE TODORUK

CERTIFICATE A9025998

PAMICON DEVELOPMENTS LIMITED

Project: RED STAR
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-NOV-90.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	3	Sample split from other certif
200	3	Whole rock fusion
* NOTE	1:	

Code 1000 is used for repeat gold analyses
It shows typical sample variability due to coarse gold effects. Each value is correct for its particular subsample.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	3	Al2O3 %: Whole rock	ICP-AES	0.01	99.99
542	3	BaO %: Whole rock	ICP-AES	0.01	99.99
588	3	CaO %: Whole rock	ICP-AES	0.01	99.99
586	3	Fe2O3(total) %: Whole rock	ICP-AES	0.01	99.99
821	3	K2O %: Whole rock	ICP-AES	0.01	99.99
593	3	MgO %: Whole rock	ICP-AES	0.01	99.99
596	3	MnO %: Whole rock	ICP-AES	0.01	99.99
599	3	Na2O %: Whole rock	ICP-AES	0.01	99.99
597	3	P2O5 %: Whole rock	ICP-AES	0.01	99.99
592	3	SiO2 %: Whole rock	ICP-AES	0.01	99.99
595	3	TiO2 %: Whole rock	ICP-AES	0.01	99.99
475	3	L.O.I. %: Loss on ignition	FURNACE	0.01	99.99
540	3	Total %	CALCULATION	0.01	N/A

APPENDIX V

PETROGRAPHIC ANALYSES

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph.D. Geologist
CRAIG LEITCH, Ph.D. Geologist
JEFF HARRIS, Ph.D. Geologist
KEN E. NORTHCOTE, Ph.D. Geologist

P.O. BOX 39
8080 GLOVER ROAD,
FORT LANGLEY, B.C.
V0X 1J0
PHONE (604) 888-1323
FAX. (604) 888-3642

Report for: **Steve Todoruk,**
Pamicon Developments Ltd.,
711 - 675 West Hastings Street,
VANCOUVER, B.C., V6B 1N4

Job 133
December 1990

Samples: Red Star Property: RSMZ 1 to 4

The samples are of metamorphosed and recrystallized massive and semi-massive sulfides. Some are slightly to well banded, with bands varying moderately to widely in mineral abundances. Sulfides are dominated by sphalerite, chalcopyrite, and pyrite in widely varying amounts. Non-sulfides are dominated by quartz, muscovite, barite, and chlorite, also in widely varying proportions. Sulfides present in trace amounts include molybdenite, pyrrhotite, bornite, and galena. In samples RSMZ-3 and RSMZ-4, late replacement patches are dominated by kaolinite.

Sample RSMZ-1 is a well banded, recrystallized massive sulfide, with layers rich in one or more of sphalerite, barite, pyrite, and muscovite.

Sample RSMZ-2 is a massive sulfide dominated by chalcopyrite, with patches and lenses of one or more of quartz, muscovite, and chlorite. Sphalerite is concentrated in one main patch, where it is intergrown with chalcopyrite. The texture suggests that the rock was folded tightly and recrystallized.

Sample RSMZ-3 is a patchy, recrystallized, semi-massive sulfide dominated by quartz, sphalerite and chalcopyrite, with less muscovite. A quartz-rich patch is bordered by a zone rich in chalcopyrite- sphalerite. Further away from the quartz patch the rock is dominated by sphalerite, muscovite, and quartz. Kaolinite forms late replacement patches.

Sample RSMZ-4 is a slightly banded, recrystallized, massive sulfide dominated by pyrite, sphalerite and quartz, with less muscovite and minor chlorite and chalcopyrite. Sphalerite is concentrated moderately to strongly in a few bands up to 2.5 mm wide. Kaolinite forms minor late replacement patches.

John G. Payne

John G. Payne
(604)-986-2928

Sample RSMZ-1 **Metamorphosed Banded Massive Sulfide: Sphalerite-Barite-Muscovite-Pyrite-(Quartz-Chalcopyrite)**

The sample a well banded, recrystallized massive sulfide, with layers rich in one or more of sphalerite, barite, pyrite, and muscovite.

sphalerite	55-60%
barite	20-25
muscovite	10-12
pyrite	5- 7
quartz	2- 3
chalcopyrite	0.2
Ti-oxide	trace

Sphalerite forms anhedral grains averaging 0.5-2.5 mm in size intergrown coarsely with barite and muscovite. It is pale brown in color and lacks exsolution blebs of chalcopyrite.

Barite forms equant, submosaic grains averaging 0.3-0.8 mm in size. It is concentrated in a few layers and in one main barite-rich pod up to 1 cm across.

Muscovite forms flakes and clusters of flakes averaging 0.2-0.7 mm in size, and locally up to 1 mm long. These are concentrated in lenses parallel to foliation. In a few lenses, much of the muscovite forms interlocking aggregates of feathery to anhedral grains averaging 0.02-0.07 mm in size. One lensy seam parallel to foliation and averaging 0.5 mm wide is dominated by very fine grained muscovite and barite.

Quartz forms patches of anhedral grains averaging 0.3-0.8 mm in size, mainly concentrated in a diffuse layer at one end of the section beside the pyrite-rich layer.

Pyrite is concentrated strongly in one layer, in which it is intergrown with sphalerite, as subhedral to anhedral grains averaging 0.7-2 mm in size. A few pyrite grains contain inclusions of chalcopyrite and sphalerite averaging 0.03-0.07 mm in size. One pyrite-rich patch contains two inclusions up to 0.4 mm across of chalcopyrite.

Chalcopyrite forms a few grains from 0.1-0.3 mm in size intergrown with barite, and slightly to locally moderately abundant grains averaging 0.05-0.1 mm in size intergrown with sphalerite.

Ti-oxide forms a few patches up to 0.1 mm long intergrown with muscovite.

Sample RSMZ-2 **Recrystallized Massive Sulfide: Chalcopyrite-(Quartz-Muscovite-Chlorite-Sphalerite)**

The sample is a massive sulfide dominated by chalcopyrite, with patches and lenses of one or more of quartz, muscovite, and chlorite. Sphalerite is concentrated in one main patch, where it is intergrown with chalcopyrite. The texture suggests that the rock was folded tightly and recrystallized.

chalcopyrite	77-80%
quartz	8-10
muscovite	5- 7
chlorite	4- 5
sphalerite	4- 5
barite	0.3
pyrite	minor
Ti-oxide	trace
molybdenite	trace
galena	trace
veinlets	
limonite	minor

Chalcopyrite forms medium to coarse grained aggregates.

Quartz forms patches up to a few mm across of submosaic grains averaging 0.7-2 mm in size. Some coarser grains are strained and recrystallized slightly into finer subgrain aggregates.

Muscovite forms aggregates up to a few mm across of subparallel flakes averaging 0.1-0.5 mm long. In some patches, flakes are warped around tight folds.

Chlorite forms aggregates up to 1 mm across of equant to elongate flakes averaging 0.1-0.5 mm in length. Most aggregates occur along borders of quartz against chalcopyrite, and a few occur between muscovite and chalcopyrite. A few chlorite patches contain subradiating to radiating flakes up to 0.7 mm long.

Sphalerite forms disseminated anhedral grains averaging 0.2-0.5 mm in size enclosed in chalcopyrite. In the sphalerite-rich patch it forms grains from 1-2 mm in size, intergrown with less abundant chalcopyrite. Sphalerite is pale brown in color. Many larger sphalerite grains contain a few equant blebs up to 0.01 mm across of chalcopyrite, probably of exsolution origin. One large sphalerite grain contains two blebs 0.03 mm across of galena-chalcopyrite. A few irregular patches less than 0.07 mm in size of sphalerite in chalcopyrite are of exsolution origin.

Barite forms a few equant grains up to 2 mm in size associated with a zone rich in quartz and muscovite.

Pyrite forms subhedral to euhedral grains averaging 0.03-0.07 mm in size enclosed in chalcopyrite.

Molybdenite forms a few equant to slightly elongate flakes up to 0.06 mm long in muscovite-rich patches, and a few up to 0.08 mm long in quartz.

Ti-oxide forms minor lenses up to 0.15 mm long in muscovite, mainly along cleavage planes of muscovite.

A few wispy veinlets up to 0.02 mm wide are of orange limonite.

Sample RSMZ-3 **Patchy Recrystallized Semi-Massive Sulfide: Quartz-Sphalerite-Chalcopyrite-Muscovite-Chlorite; Kaolinite Patches**

The sample is a patchy, recrystallized, semi-massive sulfide dominated by quartz, sphalerite and chalcopyrite, with less muscovite. A quartz-rich patch is bordered by a zone rich in chalcopyrite-sphalerite. Further away from the quartz patch the rock is dominated by sphalerite, muscovite, and quartz. Kaolinite forms late replacement patches.

quartz	35-40%	replacement patches	
sphalerite	30-35	kaolinite	3- 4%
muscovite	12-15	veinlets	
chalcopyrite	10-12	pyrite	trace
chlorite	1- 2		
pyrite	0.3		
molybdenite	trace		
Ti-oxide	trace		

Quartz is concentrated strongly in a large patch (or vein) at one end of the section, where it forms very coarse grains, commonly containing abundant dusty inclusions. Elsewhere, it forms equant, submosaic grains averaging 0.3-0.7 mm in size in patches interstitial to sulfides; these grains generally are free of dusty inclusions.

Sphalerite forms equant grains averaging 0.7-2 mm in size. It commonly contains minor, irregular inclusions of chalcopyrite averaging 0.02-0.05 mm in size.

Chalcopyrite is concentrated in a zone up to 1 cm wide bordering the quartz-rich patch. In this it forms intimate, coarse intergrowths with sphalerite. On a small scale, some of these have smooth borders, and others have very strongly interlocking borders. Elsewhere, chalcopyrite forms anhedral grains ranging widely in size, commonly concentrated along borders of sphalerite patches.

Pyrite forms anhedral grains averaging 0.05-0.2 mm in size, and a few elongate grains up to 1.5 mm long, mainly associated with chalcopyrite, and commonly in aggregates along borders of chalcopyrite patches.

Muscovite is concentrated in seams and patches of anhedral to locally subhedral flakes averaging 0.1-0.3 mm in grain size. Interstitial to sulfides, it forms scattered flakes and clusters of a few flakes up to 1.2 mm long. Pale green chlorite forms flakes averaging 0.1-0.3 mm in size intergrown intimately to coarsely with muscovite. The distribution of muscovite-rich patches intergrown with sphalerite suggests that the rock was warped broadly.

Molybdenite forms slender flakes averaging 0.07-0.1 mm long and a few clusters up to 0.12 mm across of equant to slender flakes in muscovite and locally in sphalerite.

Ti-oxide forms a few grains up to 0.15 mm long associated with muscovite.

A few replacement patches averaging 1-2 mm across are dominated by extremely fine grained kaolinite, with minor flakes of very fine grained muscovite and light green chlorite, corroded grains of quartz, and angular fragments averaging 0.02-0.03 mm in size of chalcopyrite, sphalerite, and galena(?). The fragments suggest that the rock was brecciated slightly and then replaced in the brecciated zones by kaolinite.

Pyrite forms wispy, discontinuous veinlets averaging 0.01-0.03 mm wide cutting chalcopyrite.

Sample RSMZ-4 **Recrystallized, Moderately Banded Massive Sulfide: Quartz-Pyrite-Sphalerite-(Muscovite)**

The sample is a slightly banded, recrystallized massive sulfide dominated by pyrite, sphalerite and quartz, with less muscovite and minor chlorite and chalcopyrite. Sphalerite is concentrated moderately to strongly in a few bands up to 2.5 mm wide.

quartz	43-48%
pyrite	28-32
sphalerite	17-20
muscovite	3- 4
chlorite	1
chalcopyrite	0.1
barite	minor
bornite	trace
molybdenite	trace
pyrrhotite	trace
replacement patches	
kaolinite	1
veinlets	
limonite	trace

Quartz forms submosaic aggregates averaging 0.3-1 mm in grain size, with a few up to 1.5 mm across. In several patches, grains are recrystallized to subgrain aggregates with sutured grain borders.

Pyrite forms subhedral to euhedral grains averaging 0.3-0.8 mm in size. Several grains contain inclusions of chalcopyrite and sphalerite, and a few contain inclusions of bornite or bornite-chalcopyrite. One large inclusion 0.25 mm across is dominated by chalcopyrite with minor pyrrhotite. Another inclusion of chalcopyrite 0.17 mm long contains a veinlet or exsolution tablet of pyrrhotite 0.01 mm across. Many pyrite grains are fractured moderately to strongly.

Sphalerite forms patches up to 1.7 mm in size interstitial to pyrite and intergrown slightly to moderately with quartz and muscovite. It also forms equant grains averaging 0.2-0.4 mm in size in submosaic to irregular aggregates with quartz. It is pale brown in color and lacks exsolution blebs of chalcopyrite.

Muscovite and less pale green chlorite are concentrated in patches and seams as grains averaging 0.1-0.3 mm long. In a few patches, flakes are up to 0.7 mm long.

Chalcopyrite also forms equant grains averaging 0.05-0.1 mm in size in quartz, and a few seams up to 0.02 mm wide between pyrite grains.

Barite forms a few equant grains up to 0.4 mm in size in quartz.

Molybdenite forms flakes up to 0.08 mm long in muscovite-rich patches and seams.

A few patches up to 1 mm across are dominated by cryptocrystalline kaolinite.

Limonite forms a few wispy veinlets averaging 0.01 mm wide.

APPENDIX VI

STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, KERRY M. CURTIS, of 5, 3636 West 16th Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employment of Pamicon Developments Limited, with offices at Suite 711, 675 West Hastings Street, Vancouver, British Columbia.

2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.

3. THAT my primary employment since 1985 has been in the field of mineral exploration.

4. THAT my experience has encompassed a wide range of geologic environments and has allowed considerable familiarization with prospecting, geophysical, geochemical and exploration drilling techniques.

5. THAT this report is based on data collected by myself under the supervision of Steve Todoruk.

6. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.

DATED at Vancouver, B.C., this _____ day of _____, 1991

_____

Kerry M. Curtis, Geologist

STATEMENT OF QUALIFICATIONS

I, STEVE L. TODORUK, of 6323 Piccadilly Place, West Sechelt, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employment of Pamicon Developments Limited, with offices at Suite 711, 675 West Hastings Street, Vancouver, British Columbia.

2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.

3. THAT my primary employment since 1979 has been in the field of mineral exploration.

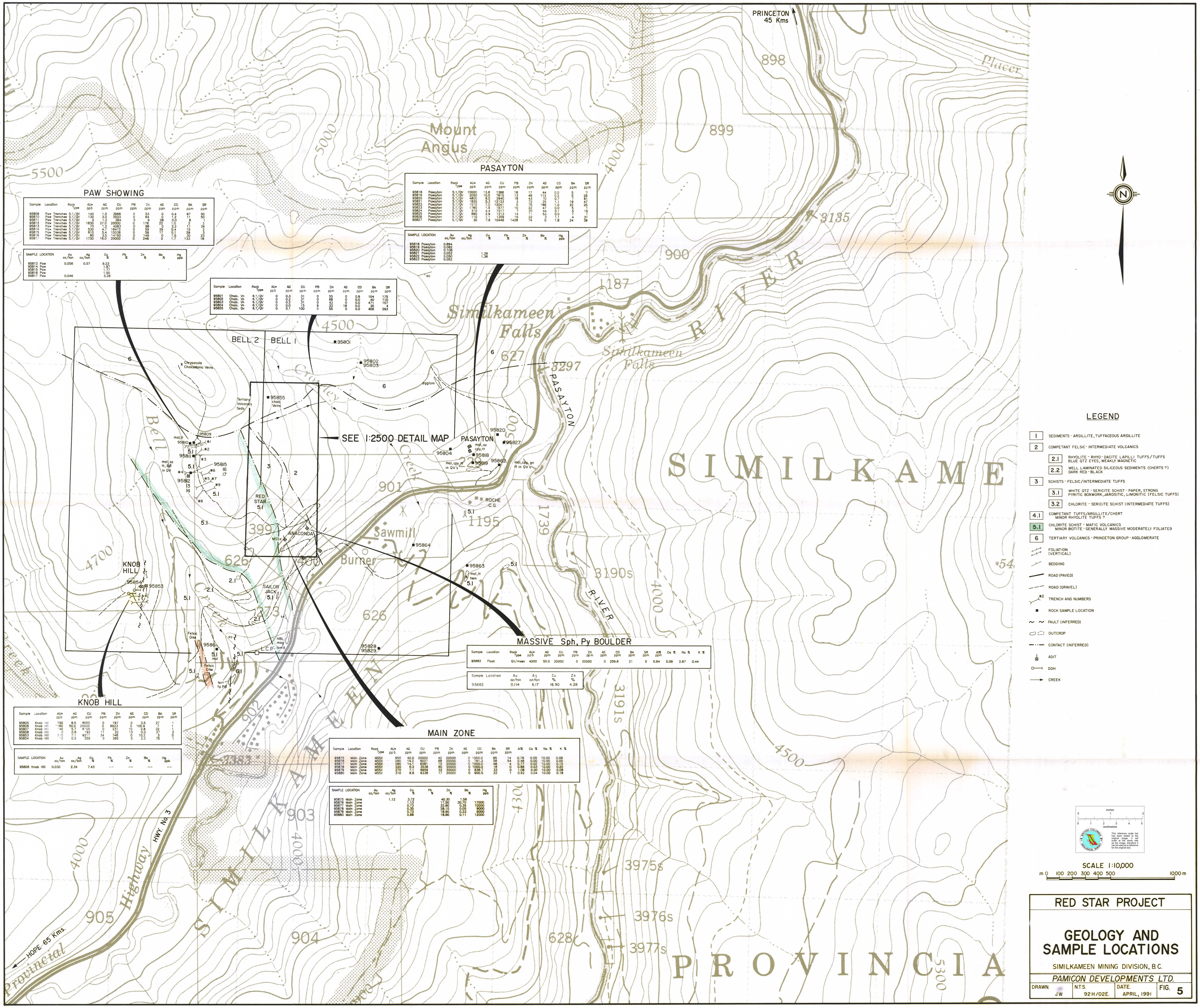
4. THAT my experience has encompassed a wide range of geologic environments and has allowed considerable familiarization with prospecting, geophysical, geochemical and exploration drilling techniques.

5. THAT this report is based on data and information collected by the authors of this report.

6. THAT I have no direct or indirect interest in the property described herein or the securities of the company nor do I expect to receive any such interest.

DATED at Vancouver, B.C., this 10th day of July, 1991.

Steve L. Todoruk, Geologist



PRINCETON 45 Kms
HOPE 65 Kms.
Mount Angus
PAW SHOWING
PASAYTON
KNOB HILL
MAIN ZONE
MASSIVE Sph, Py BOULDER
BELL 2
BELL 1
SEE 1:2500 DETAIL MAP
RED STAR
ANACONDA
SAILOR JACK
ROCHE C.G.
Similkameen Falls
Sawmill Burner
Bell Creek
Crowley Creek
PASAYTON RIVER
SIMILKAMEEN RIVER
SIMILKAMEEN
Highway HWY. No. 3
Provincial
Placer
SIMILKAME
PROVINCIA
LEGEND
1 SEDIMENTS - ARGILLITE, TUFFACEOUS ARGILLITE
2 COMPETANT FELSIC - INTERMEDIATE VOLCANICS
2.1 RHYOLITE - RHYO - DACITE LAPILLI TUFFS/TUFFS BLUE QTZ EYES, WEAKLY MAGNETIC
2.2 WELL LAMINATED SILICEOUS SEDIMENTS (CHERTS ?) DARK RED - BLACK
3 SCHISTS - FELSIC/INTERMEDIATE TUFFS
3.1 WHITE QTZ - SERICITE SCHIST - PAPER, STRONG PYRITIC BOXWORK, JAROSITIC, LIMONITIC (FELSIC TUFFS)
3.2 CHLORITE - SERICITE SCHIST (INTERMEDIATE TUFFS)
4.1 COMPETANT TUFFS/ARGILLITE/CHERT MINOR RHYOLITE TUFFS ?
5.1 CHLORITE SCHIST - MAFIC VOLCANICS MINOR BIOTITE - GENERALLY MASSIVE MODERATELY FOLIATED
6 TERTIARY VOLCANICS - PRINCETON GROUP - AGGLOMERATE
FOLIATION (VERTICAL)
BEDDING
ROAD (PAVED)
ROAD (GRAVEL)
TRENCH AND NUMBERS
ROCK SAMPLE LOCATION
FAULT (INFERRED)
OUTCROP
CONTACT (INFERRED)
ADIT
DDH
CREEK
SCALE 1:10,000
m 0 100 200 300 400 500 1000 m
RED STAR PROJECT
GEOLOGY AND SAMPLE LOCATIONS
SIMILKAMEEN MINING DIVISION, B.C.
PAMICON DEVELOPMENTS LTD.
DRAWN J.W
N.T.S. 92H/02E
DATE APRIL, 1991
FIG. 5

RED STAR MAIN ZONE

Sample	Location	Rock Type	AU* ppb	AG ppm	CU ppm	PB ppm	ZN ppm	AS ppm	CD ppm	BA ppm	SR ppm	Al%	Ca %	Na %	K %
95875	Main Zone	MSSX	950	42.0	20000	42	20000	0	1000.0	95	14	0.76	0.05	10.00	0.09
95876	Main Zone	MSSX	290	14.2	9027	68	20000	0	761.3	56	54	0.48	0.00	10.00	0.00
95877	Main Zone	MSSX	260	14.1	6581	72	20000	0	1000.0	48	4	0.77	0.02	10.00	0.15
95878	Main Zone	MSSX	220	6.2	3536	60	20000	0	1000.0	18	0	0.86	0.03	10.00	0.20
95879	Main Zone	MSSX	270	7.1	6959	22	20000	0	838.7	33	0	1.08	0.00	10.00	0.08
95880	Main Zone	MSSX	310	6.8	6338	17	20000	0	900.5	22	1	0.92	0.04	10.00	0.18

SAMPLE	LOCATION	Au oz/ton	Ag oz/ton	Cu %	Pb %	Zn %	Ba %	Hg ppb
95875	Main Zone		1.12	3.72		40.30	1.56	
95876	Main Zone			1.13		17.50	30.70	17000
95877	Main Zone			0.73		32.60	0.35	10000
95878	Main Zone			0.35		28.10	0.05	9000
95879	Main Zone			0.73		18.90	0.23	9000
95880	Main Zone			0.69		18.60	0.11	12000
95882	Main Zone	0.114	6.17	16.90		4.28	0.07	30

MASSIVE Py, Sph BOULDER

Sample	Location	Rock Type	AU* ppb	AG ppm	CU ppm	PB ppm	ZN ppm	AS ppm	CD ppm	BA ppm	SR ppm	Al%	Ca %	Na %	K %
95882	Float	QV/mssx	4200	50.0	20000	0	20000	0	259.6	21	0	0.64	0.09	2.67	0.44

Sample	Location	Au oz/ton	Ag oz/ton	Cu %	Zn %
95882		0.114	6.17	16.90	4.28

LEGEND

- 1 — SEDIMENTS - ARGILLITE, TUFFACEOUS ARGILLITE
- 2 — COMPETANT FELSIC - INTERMEDIATE VOLCANICS
  - 2.1 — RHYOLITE - RHYO - DACITE LAPILLI TUFFS / TUFFS BLUE QTZ EYES, WEAKLY MAGNETIC
  - 2.2 — WELL LAMINATED SILICEOUS SEDIMENTS (CHERTS ?) DARK RED - BLACK
- 3 — SCHISTS - FELSIC/INTERMEDIATE TUFFS
  - 3.1 — WHITE QTZ - SERICITE SCHIST - PAPER, STRONG PYRITIC BOXWORK, JAROSITIC, LIMONITIC (FELSIC TUFFS)
  - 3.2 — CHLORITE - SERICITE SCHIST (INTERMEDIATE TUFFS)
- 4.1 — COMPETANT TUFFS/ARGILLITE/CHERT MINOR RHYOLITE TUFFS ?
- 5.1 — CHLORITE SCHIST - MAFIC VOLCANICS MINOR BIOTITE - GENERALLY MASSIVE MODERATELY FOLIATED
- 6 — TERTIARY VOLCANICS - PRINCETON GROUP - AGGLOMERATE

FOLIATION (VERTICAL)
BEDDING
30 MINOR FOLD (PLUNGE, VERGENCE)
ROAD (COMPASS AND HIP CHAIN)
ROAD (FROM 1987 MAPS)
TRENCH
OLD GRID STATION
QV QUARTZ VEIN
MASSIVE SULPHIDES
SAMPLE LOCATION
I.D. POST
ADIT
MINE DUMP OUTLINE

ser	SERICITE	fe cret	FERRICRETE
lam'd	LAMINATED	fe stain	LIMONITE
biot	BIOTITE	sph	SPHALERITE
arg	ARGILLITE	QV	QUARTZ VEIN

SCALE 1:2500
m 0 50 100 200 m

RED STAR PROJECT

GEOLOGY AND SAMPLE LOCATIONS
MAIN ZONE AREA

PAMICON DEVELOPMENTS LTD.

DRAWN.	N.T.S.	DATE.	FIG.
J.W.	92H/02E	APRIL, 1991	6