

MineQuest
Report 22a

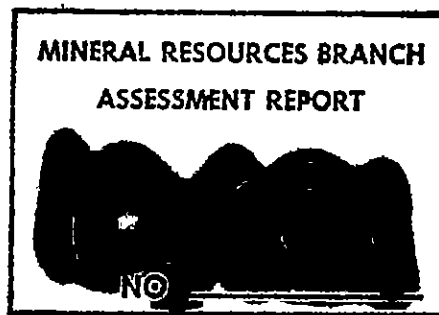
JAKE CLAIM
COMPILATION OF PREVIOUS WORK
AND RESULTS OF MAGNETOMETRY SURVEY

NTS 82 E 1

Latitude 49° 8'N
Longitude 118°28'W

Greenwood Mining Division

by
R.V. LONGE
MineQuest Exploration Associates Ltd.



Claim Name: JAKE
Record No.: 2739
Owner: MineQuest Exploration Associates Ltd.
Operator: MineQuest Exploration Associates Ltd.
Report Submitted: May 1982

February 1982

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1. INTRODUCTION

During the summer of 1980, MineQuest Exploration Associates operated a regional mapping program in the vicinity of Greenwood, B.C. on behalf of Utah Mines Ltd. and W.R. Financial Consultants Ltd. This mapping program was directed at identifying stratigraphic units equivalent to those containing the Phoenix ore body.

One of the outcomes of this program was the staking of the JAKE claims over a zone of magnetite-chalcopyrite skarn known as the SEATTLE showing. It soon became apparent that the limestone containing the skarn did not correlate with that at Phoenix and that the skarn body, unlike the Phoenix orebody was adjacent to a diorite and was of demonstrably contact metasomatic type.

The width of the skarn zone (up to fifteen metres) was attractive as were some moderately high values in gold indicated by initial sampling. Subsequent sampling, however, failed to indicate that better gold values were persistent and in fact suggested that the deposit was of sub-economic grade. Following a compilation by MineQuest of previously-performed work, Utah Mines and W.R. Financial decided against further work on the property.

In 1981 MineQuest carried out a magnetometer survey to test for extension of the skarn zone. This report incorporates the compilation of previous work, the sampling in 1980, and the magnetometer survey in 1981.

2. LOCATION AND ACCESS (Figure 1)

NTS 82E 1

Latitude: 49°08'N Longitude: 118°28'W

The property is accessible by one kilometre of gravel road which joins the paved road on the west of the Granby River, 15 kilometres north of Grand Forks, B.C.

3. CLAIM STATUS AND OWNERSHIP (Table I)

Figure 3 shows the area covered by the JAKE claim (formerly two claims) and the location and ownership of neighbouring crown grants and reverted crown grants.

The JAKE claim is owned by MineQuest Exploration Associates Ltd.

For the purposes of this report the crown grants and reverted crown grants in the vicinity of the JAKE claim are divided into three groups: a southern group, termed the SEATTLE group, a HUMMINGBIRD group in the north-east, and SAILOR BOY - SHICKSHOCK on the north-west.

The registered owner of the five reverted crown grants referred to as the SEATTLE group is G. Allen of Calgary, Alberta. The crown grants have been under option to Green Bluff Copper Mines Ltd. which is believed to have acquired ownership.

Four of the reverted crown grants within the HUMMINGBIRD group are registered under W.J. Coulter of Vancouver, the others by various individuals listed in Table I.

The two reverted crown grants forming the SAILOR BOY-SHICKSHOCK group are owned by Noranda Exploration Co. Ltd.

As can be seen from Figure 3, the northern part of the JAKE claim is free of ground held by others.

TABLE I

STATUS OF CLAIMS, CROWN GRANTS AND REVERTED CROWN GRANTS WITHIN OR NEAR JAKE CLAIMS

<u>Type*</u>	<u>Name</u>	<u>Grant #</u>	<u>Record #</u>	<u>Due Date</u>	<u>Registered Owner</u>	<u>Other Parties With Interest</u>
Rev CG	Seattle	L652	1861	Nov/86	G. Allen	Optioned to Green Bluff Copper Mines Ltd., ownership believed to have been transferred.
Rev CG	Loyal Canadian	L1608	1994	Jan/82	G. Allen	
Rev CG	Bunker Hill	L1609	1995	Jan/82	G. Allen	
Rev CG	Virginia City	L1606	1997	Jan/82	G. Allen	
Rec CG	No. 1	L1362	1996	Jan/82	G. Allen	
Rev CG	Hummingbird Fr	L1249	36999	Mar/89	W.J. Coulter	
Rev CG	Mammie	L1246	37000	Mar/89	W.J. Coulter	
Rev CG	OK	L1478	36997	May/83	W.J. Coulter	
Rev CG	Hummingbird	L1369	36998	Mar/89	W.J. Coulter	
CG	Jennie May	L1248	Held by Title		L.V. Shannon, 3912 9th Street, Dawson Creek	
Rev CG	Blacktail	L2284	2546	Dec 11/81	Keith George, Box 376, Keremeos	
Rev CG	No. 3 Fr	L2286	2552	Dec 11/81		
Rec CG	Sailor Boy	L1093	36732	Aug 81	Noranda Exploration Co. Ltd.	
Rev CG	Shickshock	L992	36731	Aug 81		
LC	Jake 1		2379	Aug 12/81	MineQuest Exploration Associates Ltd. Claims held for Utah Mines Ltd. and W.R. Financial Consultants Ltd.	
	Jake 2		2380	Aug 12/81		

* LC: Located Claim
CG: Crown Grants
Rev CG: Reverted Crown Grants

4. HISTORY AND PREVIOUS WORK

Figure 4 shows the areas covered by Assessment reports.

Seattle Group

Table II summarizes previous work reported for the area of the SEATTLE group. Work appears to have begun on the SEATTLE showing itself in 1896 with 30 feet of tunnel. Later the Canadian Smelting Company of Trail carried out a further 270 feet of drifting. The information derived from this work is not available in the public domain, although records may exist in Cominco files. Several shipments of copper were made in 1923. By this time additional tunnels had been dug. A further 21 feet of drifting were carried out in 1928. Thereafter, the property remained dormant until 1969 when geological mapping magnetometry and geochemistry were performed over the skarn zone on the north boundary of L652 (Assessment Report 2073).

A gap in the record is indicated by the mention in Assessment Report 2073 of three holes drilled by Ryslo Silver Mines Ltd. Major Resources which took over the records of Ryslo Silver Mines have no record of those drill holes. The then owner of the crown grants, Mr. Isaac Wiebe of Grand Forks, remembers the drilling and recollects seeing the core but has no record of any assays. The Registrar of Companies in Victoria remains a possible source of information on the drilling.

The area was mapped for the Texas Gulf Sulfur Company in 1969 by Reinsbakken (see Appendix I). In 1972, 2½ line miles of I.P. were surveyed (Assessment Report 4424). Peatfield (1978) mapped the SEATTLE showing (Figure 2) and wrote a brief summary on this and other mineral showings in the area (Appendix II).

Both the magnetic survey in 1969 (Assessment Report 203) and the I.P. survey in 1972 (Assessment Report 4424) outline features which, although described as anomalies, and although recommended for follow-up, do not appear to have been tested. The significance of these various features is not understood.

TABLE II
SEATTLE GROUP

Names

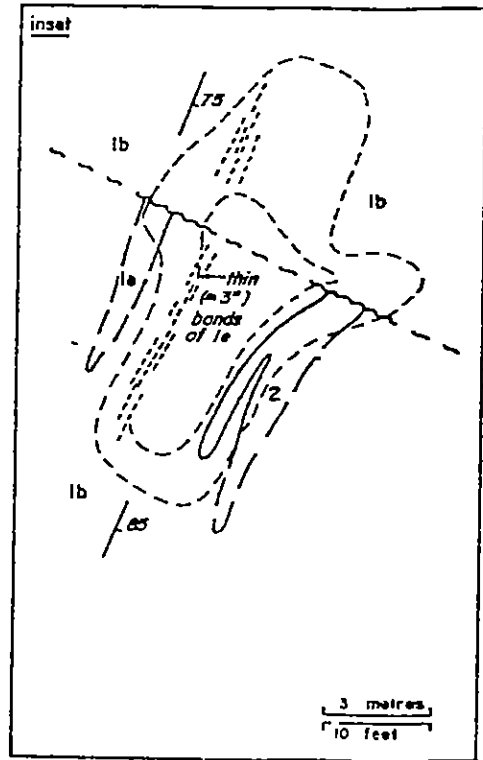
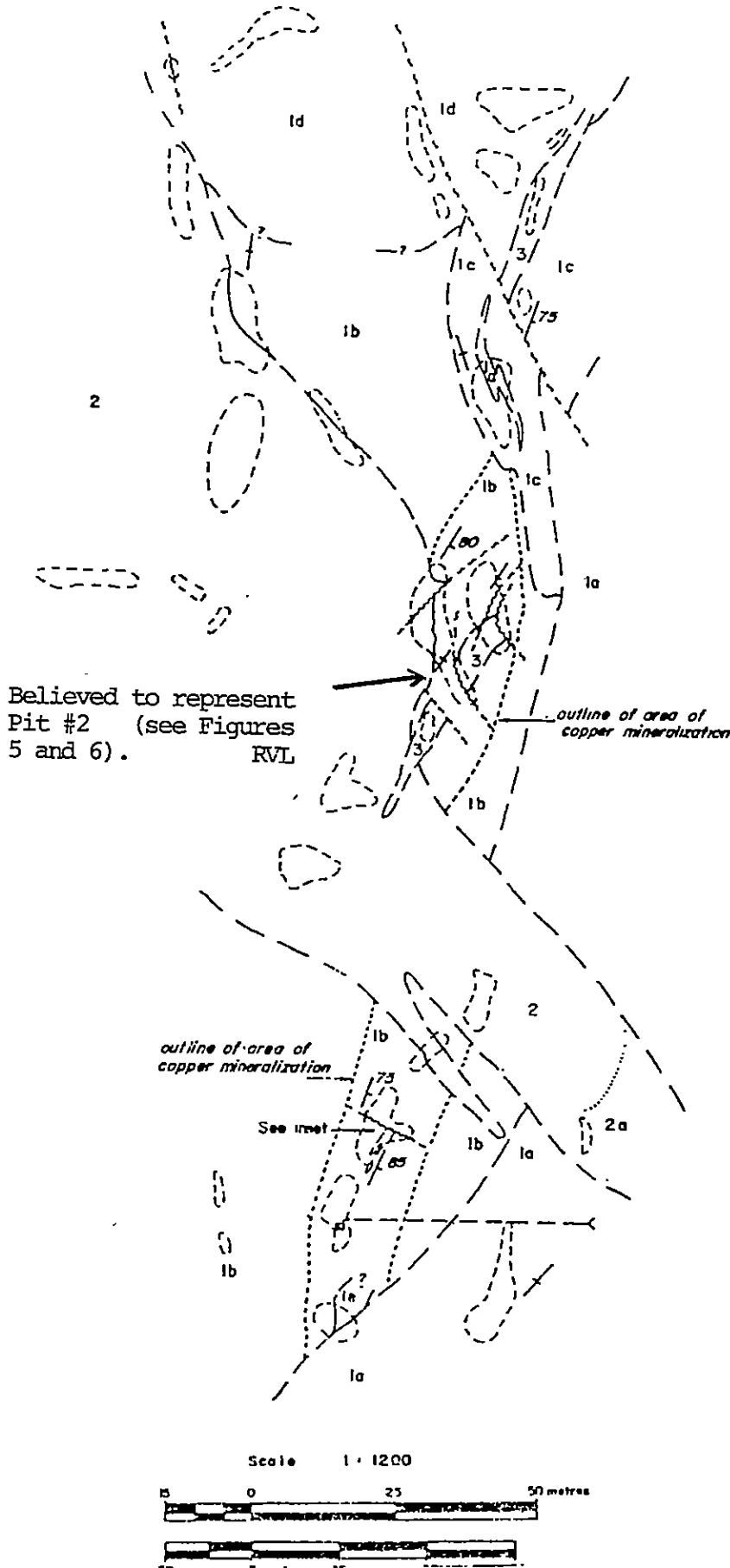
Seattle (L652)	}	Minfile no. 082ESE158
Loyal Canadian (L608)		
Bunker Hill (LL609)	}	Minfile no. 082ESE078
IKE located claim		
Virginia City (LL606)	}	None
No. 1 (LL362)		

Previous Work

<u>Year</u>	<u>Source Document</u>	<u>Type of Work Performed</u>	<u>Document Containing Results</u>
1972	GEM 1973 p 36	2.5 line mi IP	B.C. Assessment Report 4424
1969	GEM 1969 p 309	Geological mapping, geochemical surveys, and magnetometry.	B.C. Assessment Report 2073
1928	BCDM MMAR 1928 p 236	21 ft drifting	
1923	BCDM MMAR 1923 p 179	"several shipments of copper" work performed previously: 321 ft cross cut 180 ft drifts 75 ft raises 2 glory holes	
1905	BCDM MMAR 1925 p 189	Reports 30 ft of tunnel dug in 1896 and 270 ft drifting and raising by Canadian Smelting Co. at Trail	

The remainder of the references listed in the Minfile contain little information.

Geology of
SEATTLE Showing
by
G.R. Peatfield, 1978



LEGEND

- 3** Tertiary alkalic dyke
- 2** Cretaceous (Nelson) qtz. dior
- 2a** - dioritic phase

Brooklyn Formation

- 1e** Massive magnetite
- 1d** Chlorite - epidote skarn
- 1c** Light garnet - calcite skarn
- 1b** Garnet & garnet - epidote skarn
- 1a** Marble

Figure 2

Hummingbird Group

Previous work on the HUMMINGBIRD is summarized in Table III. References listed in the B.C. Department of Mines Minfile give little information.

The Department of Mines annual reports mention tunnelling in 1899 and minor shipments of ore in 1900, 1901 and 1943.

Work in later years has been directed mainly at uranium. Drilling in 1978 was unsatisfactory and recovery was very poor.

Beyond brief accounts of narrow width of material in limestone, one obtains no indication from documents in public domain on the type of occurrence underlying these claims. Appendix II contains a capsule account.

Sailor Boy - Shickshock

Work on these claims is summarized in Table IV. Pyrite, pyrrhotite, magnetite and chalcopyrite are exposed in a skarn zone in Brooklyn rocks. These crown grants, the greater part of which falls outside the JAKE claim, are held by Noranda Exploration Ltd. Gold values reported in Assessment Report 5057 suggest that further work could be justified.

TABLE III
HUMMINGBIRD

<u>Name</u>		
Hummingbird (L1369)	I	Minfile no. 082ESE057
Hummingbird FR (L1249)	}	Not listed in Minfile
Mammie (L246)		
OK (L1478)		
No. 3 FR		

Previous Work

<u>Year</u>	<u>Source Document</u>	<u>Type of Work Performed</u>	<u>Document Containing Results</u>
1978		3 drill holes	B.C. Assessment Report 6895
1977		Scintillometer survey	B.C. Assessment Report 6225
1975		Geophysics, geo-chemistry, geology	B.C. Assessment Report 5396
1943	BCDA MMAR 1943 p 63	63 tons ore shipped to Trail	
1942	BCDA MMAR 1942 p 59	65 tons ore shipped to Trail	
1925	BCDA MMAR 1925 p 193	dewatering of tunnel	
1901	BCDA MMAR 1901 p 1065	500 feet of drifting, some ore shipments	
1900	BCDA MMAR 1900 p 878	reported to have shipped 600-700 tons ore	
1899	BQM MMAR 1899 p 755	approx. 170 ft of tunnel. 2-4 ft wide sulphide body dipping into mountain	

The remainder of the references listed in the Minfile contain little information

TABLE IV

SAILOR BOY - SHICKSHOCK

Name

Sailor Boy (L1093)
 Shickshock (L992)
 Ike Located Claim

)

Minfile no. 082ESE077

Previous Work

<u>Year</u>	<u>Source Document</u>	<u>Type of Work Performed</u>	<u>Document Containing Results</u>
1974	BCDM GEM 1974 p 32	Magnetometry, trenching and sampling	B.C. Assessment Report 5057
1972	BCDM GEM 1972 p 34	VLF, EM	B.C. Assessment Report 3780

5. WORK PERFORMED BY MINEQUEST
DURING 1980 and 1981

The vicinity of the JAKE claim was geologically mapped during 1980 as part of a regional mapping program at 1:10,000 scale. The stratigraphic position and the major features were established but no detailed mapping was undertaken.

Some of the pits within the SEATTLE crown grant were chip sampled and analyses run for Cu, Ag, Au, and (not all samples) for Pb, Zn and Co (see Section 7 below and Figure 5).

In 1981 a magnetometer survey with readings at 25m spacing on lines 100m apart was carried out over a 1km square area within the JAKE claim (Figure 6).

6.

GEOLOGY

The JAKE claim covers upper members of the Triassic Brooklyn Formation, principally the Upper Limestone and Volcaniclastic members. The sequence dips steeply to the west and is repeated by at least one strike fault. Dioritic intrusives of Jurassic or Cretaceous age are common.

Appendix I contains an interpretation¹ of the regional geology by Reinsbakken (1969) of Texas Gulf Sulfur Co.

The mineral showings on the SEATTLE reverted crown grant lie in a conformable skarn zone developed in limestone at a contact with a diorite. The mineral occurrences in the HUMMINGBIRD and the neighbouring crown grants have not been seen by the writer but are known to occur in a similar, possibly the same, limestone near a similar intrusive. The SAILOR BOY and SHICKSHOCK showings also occur near the contact between limestone and dioritic intrusive.

¹For an alternative interpretation of the regional geology, see MineQuest Report #3, Figure 8.

7.

MINERALIZATION

The SEATTLE mineral occurrences consist of a magnetite-epidote-garnet-chalcopyrite skarn with low copper grades, small quantities of gold, negligible silver and no tungsten.

The skarn zone is exposed in four pits over a strike length of approximately 110 metres. The width ranges from 4 to 15 metres. The results of chip sampling (Figure 5) indicate that, apart from two adjacent 1 metre samples (881 and 882), the values are too low to be economic. These two higher values occur in samples taken from near a Tertiary dike which may (but it is thought unlikely) have been responsible for enhancing grades.

The auriferous zone represented by samples 881 and 882 does not appear to persist to the south side of the trench except as a much thinner (0.5m) band covered by sample J-02-07.

8. 1981 GEOPHYSICAL SURVEY

Ten line kilometres of magnetometer survey were carried out with readings at 25m spacing on lines 100m apart. The instruments used were a Scintrex MF-2 Proton Precession Magnetometer and a CMG MR20 Base Station. Results are shown in Figure 6 contoured to 100 gammas.

The magnetic zone associated with the magnetite skarn appears to continue to the north at a similar width but at considerable less magnetic intensity. A discontinuity, possibly a fault, is suspected between lines 105 and 106N. The zone is open to the north beyond line 109N.

9.

DISCUSSION

The SEATTLE crown grant itself appears to have been well explored by trenches, tunnels, shafts and drill holes. Information from the underground work is not available but recent surface sampling suggests that while the greater part of the skarn zone is sub-economic, small pods with moderate grades in gold may be expected.

The recently outlined, still untested, northward extension of the skarn can be expected to have a similar distribution of gold values. Its lower magnetic response indicates less magnetite but as gold is more likely to correlate with sulphide than with magnetite this is not an unfavourable feature.

The ground position is considered adequate as the north part of the JAKE claim between the SEATTLE crown grant and the HUMMINGBIRD crown grant provides some 1,000 metres in which to further extend the magnetic feature already outlined. Although it would be desirable to have the SEATTLE and neighbouring crown grants included with the JAKE claim, this is not considered essential.

In the light of results from sampling the SEATTLE crown grant, it must be recognized that the chances of the extension to the skarn zone containing significant gold values over the greater part of its width, are very small. A deposit of that type does not constitute a valid exploration target. On the other hand the existence of small pods and lenses containing moderate grades of gold (approximately one third of an ounce per ton) is sufficiently likely to make a small tonnage of moderate grade an acceptable target.

The first step in further exploration of the property is to complete delineation of the magnetic feature which appears to represent the extension of the skarn zone. Its continuity as far as the group of crown grants at the north end of the JAKE claim seems

likely. Once the feature is outlined, it will then be necessary to identify those parts of it containing the greatest quantities of sulphide. Induced potential would be the best tool, but the much cheaper Horizontal Loop EM seems likely to be effective.

After identification of the geophysical targets and prior to the decision to drill, a limited amount of field work will be necessary to check for outcrops over the extension of the skarn zone (none is expected), to locate the relative positions of the pits and the boundary of the SEATTLE crown grant (position shown in Figures 5 and 6 are from government topographic maps and assessment reports) and to resample the auriferous zone in Pit #2.

10. CONCLUSIONS

1. The SEATTLE reverted crown grant (L652) contains a north-trending magnetite-garnet-chalcopyrite skarn, up to 15m wide containing copper and gold in sub-economic grades with a 2m section where initial sampling indicates gold grades of 1/3 ounce per ton.
2. A magnetometer survey carried out in 1981 indicates that the skarn zone continues at least 600m to the north of L652 into ground covered by the JAKE claim.
3. Apart from some old workings near the boundary of L652, published information contains no mention of drilling or trenching of the area covered by the north part of the JAKE claim.
4. There exists an acceptable chance of finding within the north part of the JAKE claim, a small tonnage of skarn with gold grades of approximately 1/3 of an ounce (10 grams) per ton over narrow (approximately 2m) mining widths.

11.

RECOMMENDATIONS

That the extension of the skarn zone exposed in the SEATTLE crown grant be further explored as follows:

Phase I

March or April: completion of magnetometer survey to the north end of the JAKE claim followed by Horizontal Loop EM survey over the magnetic feature which appears to represent the extension of the SEATTLE skarn zone.

This to be followed by: geological mapping of the north end of the JAKE claim in the vicinity of the magnetic feature, checking for evidence of un-reported drill sites or exposures, re-sampling of anomalous zones from Pit #2, checking the reported location of the skarn zone exposure in relation to position of SEATTLE crown grant.

Cost: \$15,000

Phase II

June: drilling of four 90m holes

Cost: Drilling \$70,000

R.V. Loun

12.

REFERENCES

Carswell, H.D., 1957
The Geology and Ore Deposit Summit Camp,
Boundary District, B.C.
Unpublished MSc thesis, University of B.C.

Longe, R.V., 1980
Greenwood Joint Venture 1980 Regional
Programme. MineQuest Report #3.

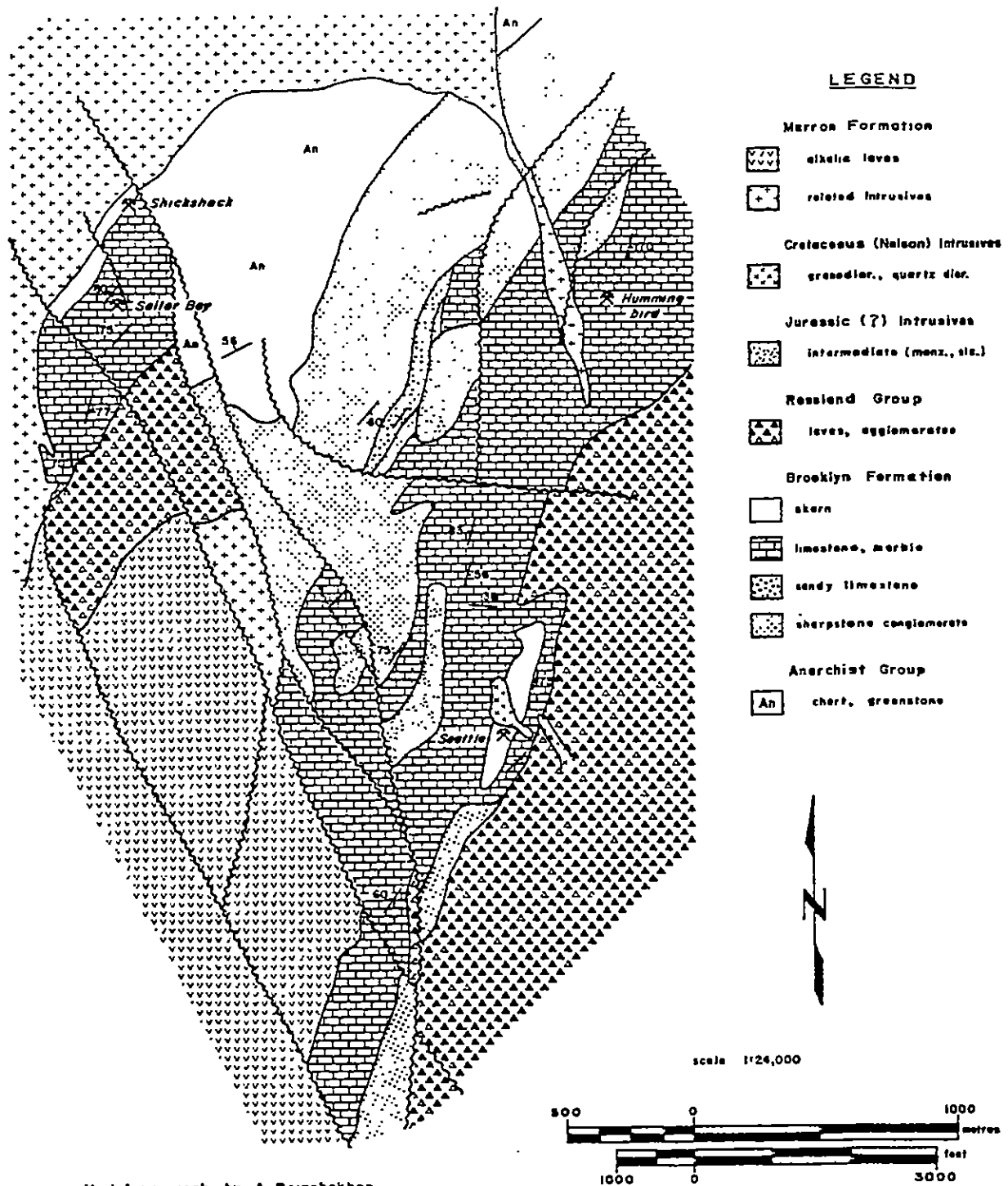
Peatfield, G.R., 1978
Geologic History and Metalogeny of the
Boundary District, Southern British
Columbia and Northern Washington.
Unpublished doctoral thesis, Queens
University, Kingston, Ontario.

See also Tables II, III, IV, and Appendix III.

A P P E N D I X I

Part of Geological Map by
A. Reinsbakken

Appendix I



map compiled from work by A Reinsbakken
for Texas Gulf Sulphur Co., 1969

Part of Geologic Map by Reinsbakken, 1969
As Reproduced in Peatfield (1978)

A P P E N D I X I I

Capsule Account of Mineral Occurrences

APPENDIX II

Capsule Accounts of Mineral
Occurrences within the SEATTLE camp
from Peatfield (1978)

Deposits

Synopses

Seattle
This is a small showing of copper mineralization consisting of disseminated chalcopyrite and pyrite in garnet and garnet-epidote skarn, and some small lenses of massive magnetite - chalcopyrite. The skarn lies within a limestone succession, probably toward the top of the Brooklyn Formation, and has been cut by a tongue of Nelson quartz diorite. Refer to Figure V-C (1) - 6 for details of geology.

Shickshock
This very small showing consists of "massive magnetite replaced and cut by chalcopyrite and calcite," in a "gangue of fine-grained garnet skarn." No production has been recorded.
The showing is in skarn near the contact of a Tertiary intrusive body, and probably near the top of the Brooklyn Formation.

Sailor Boy
This showing consists of mineralization which is made up of "large euhedral crystals of pyrite in a gangue of skarn." The host is a fine-grained foliated light-brown garnet skarn," which is probably "metasomatized Brooklyn limestone." No production is recorded, but "some strongly pyritized skarn was stockpiled."
The showing is probably near the top of the Brooklyn Formation.

Hummingbird
This anomalous deposit consists of very small apparently strata-bound lenses of coarse, dark sphalerite in banded Brooklyn Formation limestone, with some very small amounts of chalcopyrite associated with quartzose bands.

A P P E N D I X I I I

Minfile Listings

082 ESE 158	SEATTLE LOYAL CANADIAN
082 ESE 078	BUNKER HILL SEATTLE IKE
082 ESE 057	HUMMINGBIRD
082 ESE 077	SAILOR BOY SHICKSHOCK IKE

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082ESE078

NAME(S) = BUNKER HILL (L. 1609)
SCATTLE
IKE
H.L. 360

N.T.S. = 082E01W

MI = 082ESE078

01702

LAT = 4907.9 (DEG. MIN)
LONG = 1078.5
ELEVATION = 1133 M.
MINING DIVISION = GRWD
LOCATION ACCURACY = 1

UTM ZONE = 18Q
UTM EASTING = 454300
UTM NORTHING = 492300

CAPSULE GEOLOGICAL COMMENT =
PYRITE, MAGNETITE, AND CHALCOPYRITE IN SKARN IN
LIMESTONE AND LIMY GRIT NEAR A DIORITIC INTRUSION.

COMMODITIES PRESENT = CU

MINERALS PRESENT =

CLCP
MGNT

BIBLIOGRAPHY

C001A BCDM MMAR 1905-254
C002A BCDM GEN 1969-309, 1971-374
C003A BCDM ASS RPT 3199

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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082ESE158

NAME(S) = SEATTLE(L.652)
LOYAL CANADIAN(L.1608)

N.T.S. = 082E01W

MI = 082ESE158

01751

LAT = 4907.9 (DEG. MIN)
LONG = 1028.2
ELEVATION 1000 N.
MINING DIVISION = GRWD
LOCATION ACCURACY = 1 FROM
CENTRE OF "SEATTLE", L.652

UTM Z = 182
UTM N = LE5443100
UTM E = LE0392750

CAPSULE GEOLOGICAL COMMENT =

GREY AND WHITE LIMESTONE IS INTRUDED BY SHALL
DIOIRITE DYKES AND BOUNDED TO THE NORTH BY GRAND-
DIOIRITE, AND TO THE SOUTH BY GREENSTONE. LENTICU-
LAR SHAPED SKARN ZONES CARRY CHALCOPYRITE, CHALCO-
PITE, PYRITE, MAGNETITE AND COPPER CARBONATES.

COMMODITIES PRESENT = CU

MINERALS PRESENT =

CLCP
CLCC
MGNT

BIBLIOGRAPHY

CO01A BCDM MMAR 1897-597, 1899-754, 1903-172, 1905-185, 1923-179, 1928-23600
CO02A BCDM GEM 1972-34, 1973-36 000
CO03A BCDM ASS RPT 2073, 4424, 3780 000

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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082ESE077

NAME(S) = SAILOR HOY (L. 1093)
SHICKSHUCK (L. 992)
IKE

N.T.S. = 082E01W

NI = 082ESE077

01432

LAT = 4909 1 (DEG. MIN)
LONG = 1829 2
ELEVATION = 1033 M.
MINING DIVISION = GARD
LOCATION ACCURACY = 1

UTM Z = 102
UTM N = LE9445100
UTM E = LF0391700

CAPSULE GEOLOGICAL COMMENT =

A WEDGE OF BROOKLYN LIMESTONE, ARGILLITE, AND SHARPSTONE CONGLOMERATE HAS BEEN ENVELOPED BY NELSON DIORITE AND EXTENSIVELY REPLACED BY SKARN. THE SKARN CONTAINS IRREGULAR BODIES OF MASSIVE MAGNETITE AND PYRRHOTITE CARRYING MINOR PYRITE, CHALCOPYRITE, AND SPHALERITE.

COMMODITIES PRESENT = FE CU AG AU

MINERALS PRESENT =

CLCP
SPLR

BIBLIOGRAPHY

CO01A BCDM MMAR 1899-850, 1900-992, 1906-163
CO02A BCDM GEN 1972-34, 1974-32
CO03A BCDM ASB RPT 3780, 3057

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MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES
RESOURCE DATA SECTION

082E5E057

NAME(S) = HUMMINGBIRD(L.1369)

N.T.S. = 082E01W

41 = 082L5E057

01417

LAT = 4908.7 (DEG. MIN)
LONG = 1827.9
ELEVATION 0767 M.
MINING DIVISION = GRWD
LOCATION ACCURACY = 1

UTM ZONE = 18P
UTM X = LE5444500
UTM Y = LE0393100

CAPSULE GEOLOGICAL COMMENT =

BEDDED LIMESTONE, REPLACED BY SILICA ALONG
FRACTURES, CARRIES PYRITE, PYRRHOTITE, MARCASITE,
SPHALERITE, ANSENOPYRITE, GALENA, AND MINOR CHALCO
PYRITE IN STRINGERS AND AS ISOLATED SEGREGATIONS
ALONG BEDDING-PLANES. TO THE N SEDIMENTS HAVE BEEN
INTRUDED BY A DARK, FINE-GRAINED DIABASE DYKE.
SULPHIDES IN VEIN-FISSURES IN LIMESTONE AND AT
CONTACT WITH ANDESITE. GOLD 37 G PER TONNE, SILVER
74 G PER TONNE.

VEIN
PROS

COMMODITIES PRESENT = AU AG IN PB

MINERALS PRESENT =

SPLR
GLEN
CLCP

BIBLIOGRAPHY

CO02	GCNL NO 158, 1978	000
CO01A	BCDM MHAR 1897-597, 1899-603, 755, 1900-370, 073, 991, 1901-1065, 1905-185	000
CO01B	1906-163, 1916-517, 1925-193, 1926-447, 1939-36, 1940-24, 1941-25,	000
CO01C	1942-28, 59, 1943-63	000
CO02A	HCDF GEM 1975-E12, 1977-E14	000
CO03A	BCDM ASS RPT 6895	000
CO04A	GSC MAP 828	000

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A P P E N D I X I V

Selections from
Published Material

Selections from B.C. Government
publications on the SEATTLE reverted
Crown Grant and neighbouring mineral
properties.

BCDM MMAR 1905 p. 185

On the west side of the river, from 10 to 12 miles up, there are three
The Seattle. claims worthy of notice, viz., the *Strawberry*, the *Humming Bird* and the
Seattle. The two former are meritorious properties with considerable
development work done and good values, the lack of transportation being the cause of cessation
of further work. The *Seattle* is another mineral claim which has merits. The proposition is
a copper-gold one with large bodies of magnetic iron. A 30-foot tunnel was driven as far
back as 1896. Later a bond was taken by the Canadian Smelting Co., at Trail, which did
270 feet of drifting and raising, and then threw up the bond. In 1905, W. T. Hunter and
Mr. Pemberton, of Greenwood, took a bond on the *Seattle* at a high figure, and after 130 feet
of tunnelling ceased work.

BCDM MMAR 1923 p. 179

This claim is situated $9\frac{1}{2}$ miles from Grand Forks and three-quarters of a
Seattle. mile west of the Granby river. Twenty years ago a company was formed by
a Mr. Clark, of Grand Forks, and the property developed by tunnels and open-
cuts. Several shipments of copper ore were made to the smelter, although no figures as to
values are to hand.

The formations are limestone of a grey and white variety, intruded by small granite-
porphyry dykes and bounded on the north by granite and on the south by greenstone. The
limestone is highly altered and traversed by siliceous bands, which are mineral-bearing.
The width of the banding varies from a fraction of an inch to 18 inches and forms lenticular-
shaped ore-bodies. The mineralized area varies from 4 to 20 feet in width and 85 feet in
length.

This claim was staked on what probably is an extension of a mineral-zone, traceable over
several claims to Volcanic mountain across the Granby river and containing the same formations
and minerals. No large ore-bodies have ever been discovered in this locality up to the present.
and exploration of the properties has been spasmodic owing to the exorbitant prices and short
terms asked by the owners.

The development done in the *Seattle* claim consists of a crosscut tunnel 321 feet long, with
two drifts 60 feet to the south and 120 feet to the north and an upraise to the surface 75 feet
above. There are two glory-holes, 40 by 10 feet and 43 by 8 feet and approximately 15 feet
deep, besides several shallow pits and trenches.

The ore-minerals are chalcopryrite, chalcocite, pyrite, and magnetite carrying gold and silver.
Sorted ore from the glory-holes assayed 0.18 oz. in gold, 1.60 oz. in silver to the ton, and 7.10
per cent copper.

GRANBY RIVER SECTION.

These claims, owned by Robert Clark, of Grand Forks, are situated about 7 miles up the Granby river on the west side. Work done recently amounted to 21 feet of drifting on the ore-zone in the lower tunnel. A sample of this ore assayed: Gold, trace; silver, 0.20 oz. to the ton; copper, 0.3 per cent. In the older workings above and to the north better-grade ore was found. The country-rocks on these claims are chiefly greenstones and limestones intruded by porphyry dykes. About 1 mile to the north the granodiorite batholith outcrops. Segregations of copper carbonates occur in the fractures of the limestone between the old workings and the Canadian Pacific Railway above. Further prospecting and development along the limestone-contact seems to be warranted.

SEATTLE (No. 267, Fig. 34)

LOCATION: Lat. 49° 08' Long. 118° 28' (82E/1W)

On west side of north fork of Granby River, 8 miles north of Grand Forks.

CLAIMS: SEATTLE (Lot 652), VIRGINIA CITY (Lot 1606), IKE 1 to 25, LOYAL CANADIAN (Lot 1608), No. 1 (Lot 1362), BUNKER HILL (Lot 1609).

ACCESS: By road, 8 miles from Grand Forks.

OPERATOR: RYSLO SILVER MINES LTD., 534, 789 West Pender Street, Vancouver 1.

METAL: Copper.

WORK DONE: Geological, magnetometer, and geochemical surveys were made by J. Sullivan on the VIRGINIA CITY, SEATTLE, and IKE 1 to 6 claims.

REFERENCE: Assessment Report No. 2073.

DESCRIPTION: Pyrite, magnetite, and chalcopyrite in skarn near dioritic intrusion into limestone and limy grit.

IKE (No. 54, Fig. G)

LOCATION: Lat. 49° 08.7' Long. 118° 29' (82E/1W)

GREENWOOD M.D. On west side of north fork of Granby River, 8 miles north of Grand Forks.

CLAIMS: IKE 1 to 25, LOYAL CANADIAN (Lot 1608), NO. 1 (Lot 1362), BUNKER HILL (Lot 1609).

ACCESS: By road from Grand Forks, 8 miles.

OWNER: RYSLO SILVER MINES LTD., 837 West Hastings Street, Vancouver 1.

METALS: Copper, silver, gold.

DESCRIPTION: Chalcopyrite is found in skarn.

WORK DONE: Ground magnetometer survey and surface geological mapping covering Ike 16-25.

REFERENCES: *B.C. Dept. of Mines & Pet. Res., G.E.M., 1969, pp. 309, 310 (Seattle). Assessment Report 3159.*

IKE (No. 10, Fig. A)

LOCATION: Lat. 49° 08.7' Long. 118° 29' (82E/1W)
GREENWOOD M.D. On west side of north fork of Granby River, 8 miles north of Grand Forks.

CLAIMS: IKE 1 to 25.

ACCESS: By road from Grand Forks, 8 miles.

OWNER: Ryslo Silver Mines Ltd.

OPERATOR: THE GRANBY MINING COMPANY LIMITED, Box 490, Grand Forks.

METALS: Copper, silver, gold.

DESCRIPTION: Chalcopyrite occurs in skarn.

WORK DONE: Magnetometer and electromagnetic survey covering 11.3 line-miles on the Ike 7, 8, and 22 to 25.

REFERENCES: *B.C. Dept. of Mines & Pet. Res.*, G.E.M., 1971, p. 374; Assessment Report 3780.

IKE, SEATTLE (82E/SE-156, 158) (Fig. A, No. 21)

LOCATION: Lat. 49° 08' Long. 118° 28.5' (82E/1W)
GREENWOOD M.D. Eight miles north of Grand Forks, on the west side of Granby River.

CLAIMS: IKE 1 to 25, 30 to 36 plus Mineral Leases M-330 comprising SEATTLE (Lot 652) and VIRGINIA CITY (Lot 1606), M-331 comprising LOYAL CANADIAN (Lot 1608), M-332 comprising NO. 1 (Lot 1362) and M-360 comprising BUNKER HILL (Lot 1609).

OWNER: RYSLO SILVER MINES LTD., 418, 837 West Hastings Street, Vancouver.

METAL: Copper.

DESCRIPTION: Chalcopyrite occurs in skarn.

WORK DONE: 1972 — IP survey, 2.5 line-miles.

REFERENCES: *B.C. Dept. of Mines & Pet. Res.*, GEM, 1972, p. 34; Assessment Report 4424.

Selections from B.C. Government
publications on the HUMMINGBIRD
reverted Crown Grant and neighbouring
properties.

BCDM MMAR 1899 p. 755

This claim is situated on the main waggon road, which runs up the Humming Bird. west side of the valley of the North Fork of Kettle River, and is about a quarter of a mile above Neil Hardy's hotel at Lime Creek. The property is owned by the Humming Bird Gold Mines, Ltd., of which J. L. G. Abbott, of Rossland, is secretary and Smith Curtis is superintendent and general manager.

In the limestone bluff which at this point rises precipitously from the waggon road, and at an elevation of about 50 feet above such road and valley bottom, there shows on the surface a body of iron sulphides, chiefly pyrrhotite, carrying gold values, with a small percentage of copper pyrites. This ore body is about 4 feet wide at the surface, of solid ore, dipping into the hill at a flat angle, and not being well defined. On this showing an irregular tunnel or incline had been run in for some 15 feet, disclosing for that distance a fair body of ore. This work was here stopped and a working tunnel started, some few feet lower and slightly to the north of the other. This tunnel was run westward into the hill, nearly at a level, for some 90 feet. At about 20 feet in the tunnel struck the ore body, which was here about 2 feet thick, cutting across the tunnel and dipping to the north-west. The tunnel then continued for the remaining

756

REPORT OF THE MINISTER OF MINES.

1899

60 or 70 feet without encountering py ore. At a point 20 feet within the tunnel a drift had been started to the right (or north), following the ore, which practically cut out in a few feet. After running north-west for some 15 feet, this drift turns to the right, going in a direction about parallel to the main tunnel, but 12 feet or so to the north, and following an apparent foot-wall, with a little mineral, which dips to the west on an average angle of from 10° to 15°. The drift was, at the time of my visit, about 50 feet in from the turn, and within the last few feet the foot-wall mentioned appeared to drop off abruptly, and to be making ore in the face. I returned to the property within two days and found that, on the north side of the drift, the face showed solid ore for at least four or five feet, with ore still in the bottom. I have not since heard how far this ore continued. The ore is a compact pyrrhotite, with copper, probably 2 to 3%, and with gold values said to be about \$12 to the ton.

The ore and rock from the inclined drift has to be shovelled up in two or three lifts, and it is finally taken out in a wheelbarrow and dumped into a bin on the hillside, on the upper side of the road, the waste being wheeled above the road on an open trestle and dumped on the lower side. There were no buildings on or belonging to the property, the six or eight men employed living in tents.

NORTH FORK OF KETTLE RIVER.

The shipment of a little ore during the past six months from two or three mining properties situate on the north fork of Kettle river has had the effect of once more directing attention to several groups of claims distant 10 to 15 miles from Grand Forks. The best known of these are the *Earthquake*, *Golden Eagle*, *Volcanic*, *Pathfinder*, and *Little Bertha*, on the eastern side of the river, and the *Seattle*, *Humming Bird*, and *Strawberry* on the western side. Quite recently a short switch was put in on the Columbia and Western Railway, its location being on the Grand Forks side of Eholt and between the latter place and Fisherman station. As there is only room for three or four cars at a time on the switch, it is evident that it is not expected that immediate shipments will be large. However, it is the intention to send ore to one or other of the smelters from the *Humming Bird*, which has already made several small shipments to the Granby smelter at Grand Forks, and, after a bridge shall have been built across the river, from the *Golden Eagle*, *Pathfinder*, and *Little Bertha*. Of the above claims, the *Humming Bird* and *Pathfinder* appear likely to make the best showing as regards early output. Of the former, which is reported to have shipped 600 or 700 tons of ore, only this passing mention will at present be made, no reliable particulars of it being just available to the writer.

BCDM MMAR 1901 p. 1065

The *Humming Bird* (Humming Bird (B. C.) Gold Mines, Ltd.) was leased last year by Messrs. Shannon and Layeux, who have worked the property continuously and have been shipping ore. They have advanced the tunnel about 40 feet, besides doing considerable stoping, and a total of about 500 feet of drifting and cross-cutting has been done.

BCDM MMAR 1925 p. 193

This claim, situated directly west of the *Bonanza Fraction* group and about Humming Bird, three-quarters of a mile across the valley, was leased to J. McDonald *et al.*, of Grand Forks, and the old workings unwatered and sampled, with the idea of making a shipment to the smelter. These old workings consisted of a shaft 150 feet deep and a tunnel 144 feet in length. An exploration of the shaft and upraise disclosed the fact that there were no minable ore-bodies or veins developed.

The formation is a bedded limestone, which has been tilted about 12° to the west and into the hillside. The ore is pyrite and marcasite, containing gold and silver, and occurs in stringers and isolated segregations along the bedding-planes of the limestone. A considerable amount of alteration has taken place along the fractures; the limestone being replaced by silica.

To the north the sedimentaries have been intruded by a dark, fine-grained diabase dyke, which has apparently cut off the ore on that side. Further development along the strike, southwest (mag.) of the limestone, might discover other ore-bodies, seeing that swelling and pinching of a vein is characteristic in sedimentary rocks.

A shipment was made from this mine about twenty-five years ago, which was reported to contain values of \$25 a ton in gold and silver. A sample of the ore from the shaft assayed 1.08 oz. in gold and 0.70 oz. in silver to the ton.

BCDM MMAR 1942 p. 59

This property, about 12 miles from Grand Forks, is owned and operated by A. Anderson, of Grand Forks. It is equipped with a complete small mining plant. A total of 65 tons was mined and shipped to Trail. Fifty feet of drifting was done during the year.

BCDM MMAR 1943 p. 63

GRAND FORKS.

(49° 118' S.E.) This property is about 12 miles north of Grand Forks. It is owned and operated by C. A. Anderson, of Grand Forks. It is equipped with a small complete gasoline-driven mining plant. A total of 62 tons of ore was mined and shipped to Trail. This yielded 13 oz. of gold and 85 oz. of silver.

BCDM GEM 1975 p. E12

GRAND (Fig. E-1, NTS 82, No. 1)

LOCATION: Lat. 49° 11' Long. 118° 26.5' (82E/1W)
GREENWOOD M.D. Sixteen and one-half kilometres north of Grand Forks, along the east bank of the Granby River, between 540 and 800 metres elevation.

CLAIM: GRAND 1.

OWNER: W. B. CHANG, 1063 Balfour Avenue, Vancouver.

DESCRIPTION: The claim area is predominantly underlain by andesitic greenstones of the Anarchist Group and granodiorite of the Nelson intrusive rocks. Mineralization (?) is found in shear zones or contacts between volcanic and intrusive rocks. Sulphides, mainly pyrite, carry low values in gold, cobalt, and copper.

WORK DONE: Surface geological mapping, 1:2400 and geochemical soil survey, 1.6 line-kilometres, 60-metre grid spacing covering Grand 1.

REFERENCE: Assessment Report 5701.

Selections from B.C. Government
Publications on Sailor Boy - Shickshock properties

BCDM GEM 1972 p. 34

SHICKSHOCK-SAILOR BOY (82E/SE-77) (Fig. A, No. 1)

LOCATION: Lat. 49° 09' Long. 118° 29' (82E/1W)
GREENWOOD M.D. Eight and one-half miles north of Grand Forks at the head of Lime Creek, 1.4 miles west of the Granby River, at approximately 3,000 feet elevation.

CLAIMS: SHICKSHOCK (Lot 992), SAILOR BOY (Lot 1093) plus BAC 31 and 32 Fractions, IKE 7, 8, 22 to 25.

OWNER: GRANBY MINING CORPORATION, Box 490, Grand Forks.

METALS: Iron, copper, silver, gold.

DESCRIPTION: A wedge of Brooklyn limestone, argillite, and sharpstone conglomerate has been enveloped by Nelson diorite and extensively replaced by skarn. The skarn contains irregular bodies of massive magnetite and pyrrhotite carrying minor pyrite, chalcopyrite, and sphalerite.

WORK DONE: Linecutting and magnetometer survey, 2.5 line-miles of grid; six trenches totalling 1,300 lineal feet; geological mapping of trenches, 1 inch equals 20 feet; 106 chip samples taken over most of the length of trenching covering Shickshock, Sailor Boy, and Ike 24, 25.

REFERENCES: *B.C. Dept. of Mines & Pet. Res.*, GEM, 1972, p. 34 (Ike); Assessment Reports 3780, 5057.

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BCDM GEM 1974 p. 32

IKE (No. 10, Fig. A)

LOCATION: Lat. 49° 08.7' Long. 118° 29' (82E/1W)
GREENWOOD M.D. On west side of north fork of Granby River, 8 miles north of Grand Forks.

CLAIMS: IKE 1 to 25.

ACCESS: By road from Grand Forks, 8 miles.

OWNER: Ryslo Silver Mines Ltd.

OPERATOR: THE GRANBY MINING COMPANY LIMITED, Box 490, Grand Forks.

METALS: Copper, silver, gold.

DESCRIPTION: Chalcopyrite occurs in skarn.

WORK DONE: Magnetometer and electromagnetic survey covering 11.3 line-miles on the Ike 7, 8, and 22 to 25.

REFERENCES: *B.C. Dept. of Mines & Pet. Res.*, G.E.M., 1971, p. 374; Assessment Report 3780.

A P P E N D I X V

Assay Reports



CHEMEX LABS LTD.

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TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : MINE QUEST EXPLORATIONS & ASSGC. LTD.
311 WATER ST;
VANCOUVER, B.C.
V6B 1B9

CERT. # : A8011303-001-A
INVOICE # : 41280
DATE : 18-DEC-80
P.O. # : NONE

Sample description	Prep code	Cu percent	Ag oz/t	Au oz/t			
J-01-01	207	0.74	0.20	0.016	--	--	--
J-01-02	207	0.04	0.14	<0.003	--	--	--
J-02-01	207	1.20	0.42	0.042	--	--	--
J-02-02	207	0.26	0.15	0.030	--	--	--
J-02-03	207	0.34	0.16	0.016	--	--	--
J-02-04	207	0.12	0.29	0.008	--	--	--
J-02-05	207	0.13	0.10	0.005	--	--	--
J-02-06	207	0.39	0.18	0.038	--	--	--
J-02-07	207	0.40	0.34	0.116	--	--	--
J-02-08	207	0.70	0.41	0.050	--	--	--
J-02-09	207	0.35	0.19	0.032	--	--	--
J-02-10	207	0.38	0.17	0.022	--	--	--
J-02-12	207	0.44	0.23	0.034	--	--	--
J-02-13	207	0.31	0.27	0.030	--	--	--
J-02-14	207	0.25	0.17	0.005	--	--	--
J-02-15	207	0.29	0.18	0.005	--	--	--
J-03-01	207	0.82	0.14	<0.003	--	--	--
J-03-02	207	0.45	0.11	0.028	--	--	--
J-03-03	207	0.72	0.17	0.010	--	--	--
J-03-04	207	0.17	0.08	0.003	--	--	--
J-03-05	207	0.25	0.07	0.012	--	--	--
J-03-06	207	0.33	0.11	0.028	--	--	--
J-03-07	207	0.44	0.15	0.036	--	--	--
J-03-08	207	0.61	0.16	0.034	--	--	--
J-03-(17-19)	207	0.35	0.14	0.022	--	--	--
J-03-20	207	0.77	0.22	0.042	--	--	--
R-01-00	207	0.01	0.02	<0.003	--	--	--
R-01-01	207	<0.01	0.06	<0.003	--	--	--
R-01-02	207	<0.01	0.08	<0.003	--	--	--
R-01-03	207	<0.01	0.04	<0.003	--	--	--
R-01-04	207	<0.01	0.10	<0.003	--	--	--
R-02-01	207	<0.01	0.10	<0.003	--	--	--
R-02-02	207	<0.01	0.06	<0.003	--	--	--
T-01-01	207	2.61	0.58	0.003	--	--	--
T-01-02	207	4.22	0.74	0.003	--	--	--
T-01-03	207	2.44	0.58	0.003	--	--	--
T-01-04	207	2.80	0.92	0.005	--	--	--
T-01-DUMP	207	0.34	0.14	<0.003	--	--	--
T-02-01	207	1.46	0.50	<0.003	--	--	--
T-02-02	207	2.00	0.58	<0.003	--	--	--

B. Swales

Registered Assayer, Province of British Columbia





CHEMEX LABS LTD.

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TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : MINE QUEST EXPLORATIONS & ASSOC. LTD.
311 WATER ST.
VANCOUVER, B.C.

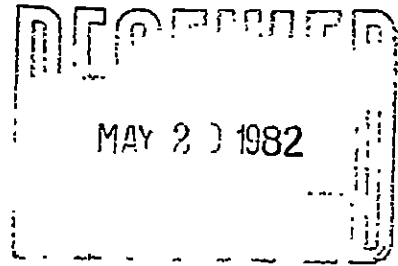
CERT. # : A8C10159-C01-3
INVOICE # : 38734
DATE : 12-SEP-80

PROJECT GJV

Sample Description	Co ppt	Au -(AA) ppt	H ppm	
881	56	780	1	--
882	265	>10000	2	--
883	66	1200	1	--
884	24	900	1	--
885	26	500	1	--
886	8	100	2	--
887	20	280	1	--
888	12	40	1	--
889	8	30	1	--
890	14	1740	1	--
891	8	460	1	--
892	8	220	1	--
893	10	220	1	--
894	20	300	1	--

Certified by *Harold Biddle*





GEOCHEMICAL PREPARATION
AND
ANALYTICAL PROCEDURES

1. Geochemical samples (soils, silts) are dried at 80°C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve. Rock geochemical materials are crushed, dried and pulverized to -100 mesh.
2. A 1.00 gram portion of the sample is weighed into a calibrated test tube. The sample is digested using hot 70% HClO₄ and concentrated HNO₃. Digestion time = 2 hours.
3. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analyzed by atomic absorption procedures.
4. Detection limits using Techtron A.A.5 atomic absorption unit:

Copper	- 1 ppm
Zinc	- 1 ppm
*Silver	- 0.2 ppm
*Lead	- 2 ppm
5. *Ag & Pb are corrected for background absorption.
6. Elements present in concentrations below the detection limits are reported as one half the detection limit, ie Ag - 0.1 ppm.

RECEIVED

MAY 29 1982

GEOCHEM PROCEDURES

PPB Gold: 5 gm samples ashed @ 800°C for one hour,
digested with aqua regia - twice to dryness - taken up
in 25% HCL⁻, the gold then extracted as the bromide complex
into MIBK and analyzed via A.A.

Detection limit - 10 PPB

RECEIVED

MAY 20 1982

ASSAY PROCEDURE:

Silver & Gold: Fire Assay Method

0.5 assay ton sub samples are fused in litharge, carbonate and silicious fluxes. The lead button containing the precious metals is cupelled in a muffle furnace. The combined Ag & Au is weighed on a microbalance, parted annealed and again weighed as Au. The difference in the two weighing is Ag.

A P P E N D I X VI

Cost Estimates

JAKE CLAIMS
Cost Estimate

PHASE I - Geophysical Survey

Fees and Labour		
P.D. McCarthy,		
Geophysical operator	10 days @ \$250	2,500
Labour	10 days @ \$100	1,000
Geophysicist	2 days @ \$425	850
R.V. Longe	5 days @ \$425	2,125
Food and accommodation	25 days @ \$ 45	1,125
Travel and Transport		
Airfares		500
Truck		500
Rental car		250
Rental		
Geophysical equipment		1,900
Materials and Supplies		
Fuel		200
Pickets		100
Analyses		
Assay		175
Drafting and Reprographics		600
Over-ride on disbursements @ 10%		<u>500</u>
	TOTAL	\$12,325
	Allow	<u>\$15,000</u>

JAKE CLAIM
Cost Estimate

PHASE II - Drilling

Fees and Labour

Fees: R.V. Longe	10 days @ \$425	4,250
Geologist	20 days @ \$250	5,000
P.D. McCarthy	4 days @ \$250	1,000

Travel

Air fares		400
Truck rental		750
Food and accommodation	25 days @ \$45	1,125
Expense accounts: travel, taxis, meals		400

Sub-contractor

Drilling	360m @ \$100/meter	36,000
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Materials and Supplies

Fuel for truck		200
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Analyses

Assays	150 x \$20	3,000
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Communications

Telephone, courier, etc.		300
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Drafting and Reprographics

Drafting		600
Reprographics		200

Over-ride on disbursements @ 10%

4,300

TOTAL \$56,725

Allow \$70,000

A P P E N D I X V I I

C O S T S T A T E M E N T

COST STATEMENT

JAKE Claim

Fees, Salaries and Wages

MineQuest Personnel

R.V. Longe	.5 d @ \$400.	\$ 200.00	
	4.505 d @ \$425.	<u>1,914.63</u>	\$2,114.63
G.D. Hodgson	.113 d @ \$325.		42.25
P.D. McCarthy	10.67 d @ \$250.		<u>2,542.50</u>
			\$4,699.38

Consultants, External

Canadian Mining Geophysics			
-Contilg re Mag ground			
survey:	1/2 hr.		25.00

Temporary Staff

0

Casual Staff

Peter Phillion	7 days @ \$80.		<u>560.00</u>
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Total Labour Costs/Fees

\$5,284.38

Travel, Transport

Transporation

P..McCarthy - Visa	118.60	
P. McCarthy - Exp.	<u>1.50</u>	120.10

Rental Vehicles - Casual

Carter Car Rental		
Inv. 11062 - Nov. 3/81 - 5.8 days		487.00

Rental Vehicles - Term

0

Meals & Accommodation

P.D. McCarthy - Meals	239.38	
P.D. McCarthy - Accommodation	<u>254.40</u>	493.78

Freight

Canadian Mining Geophysics		
Inv. 21008 - Shipping chgs. - Survey		<u>10.70</u>

Total Travel, Transport

1,111.58

Geophysical Equipment

Canadian Mining Geophysics

LMR20, Magnetometer, 30 meter sensor cable		
rental period Sept. 18 - Oct. 1/81		<u>976.10</u>

Total Geophysical Equipment - Rental

976.10

Supplies

General Supplies	\$ 124.52	
Total Supplies		\$ 124.52

Communications Reporting

Telephone	41.96	
Courier	<u>94.08</u>	
Total Communications Reporting		136.04

Drafting, Reprographics, Reports

Drafting			
J.W. Drafting Services -			
Feb. '82 Inv. #24897 - Draft results-contour maps			
Insert composite claim map			
& trench detail - 220.00			
Feb. '82 Inv. #54427 - Drafting	<u>31.32</u>	251.32	
Reprographics		4.91	
Xerox - in house		7.00	
Maps, Reports, Publications		15.36	
Report Prep - Outside Services		<u>0</u>	
Total Drafting, Reprographics, Report			<u>278.59</u>

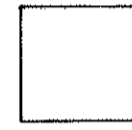
TOTAL PROJECT COSTS	<u><u>\$7,911.25</u></u>
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A P P E N D I X V I I I

STATEMENT OF QUALIFICATIONS

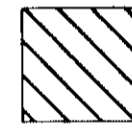
LEGEND

JAKE CLAIMS



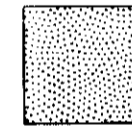
Held by Minequest Exploration Associates Ltd. on behalf of Greenwood Joint Venture.

SEATTLE GROUP

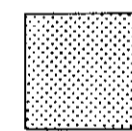


Owned by G. Allen now under option to Green Bird Copper Mines Ltd.

HUMMINGBIRD GROUP

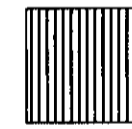


Owned by B. ... Ltd.

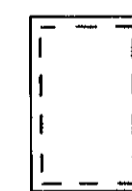


see Table 1

SAILOR BOY - SHICK SHOCK GROUP



Owned by The Grand ... Ltd.



Area recommended for magnetometer survey.

544000

542000

49°08'
115°30'

3000

TH ... M ...

3500

392000

SAILOR BOY SHICK SHOCK GROUP

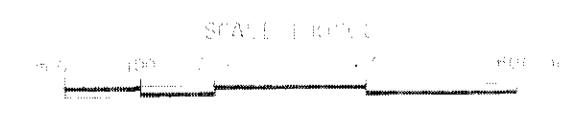
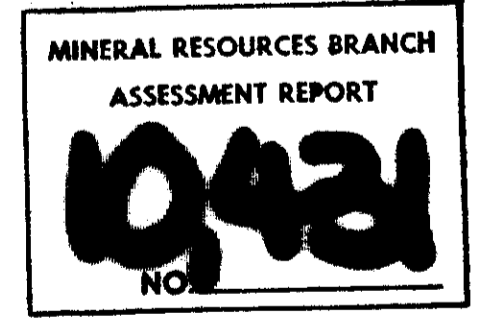
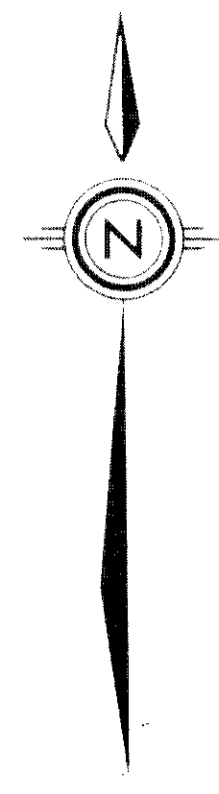
HUMMINGBIRD GROUP

SEATTLE GROUP

L 2286

L.C.P. JAKE No 2

L.C.P. JAKE No 1



UTAH MINES LTD
W.R. FINANCIAL CONSULTANTS LTD
GREENWOOD JOINT VENTURE

JAKE CLAIMS OWNERSHIP

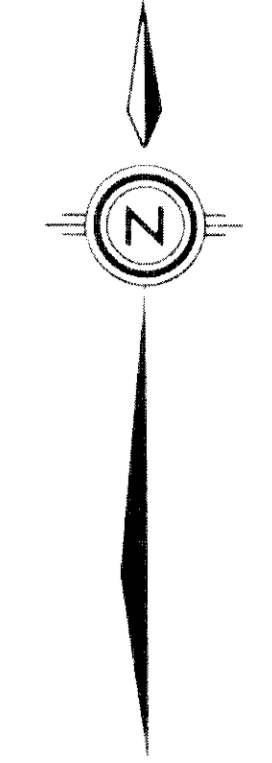
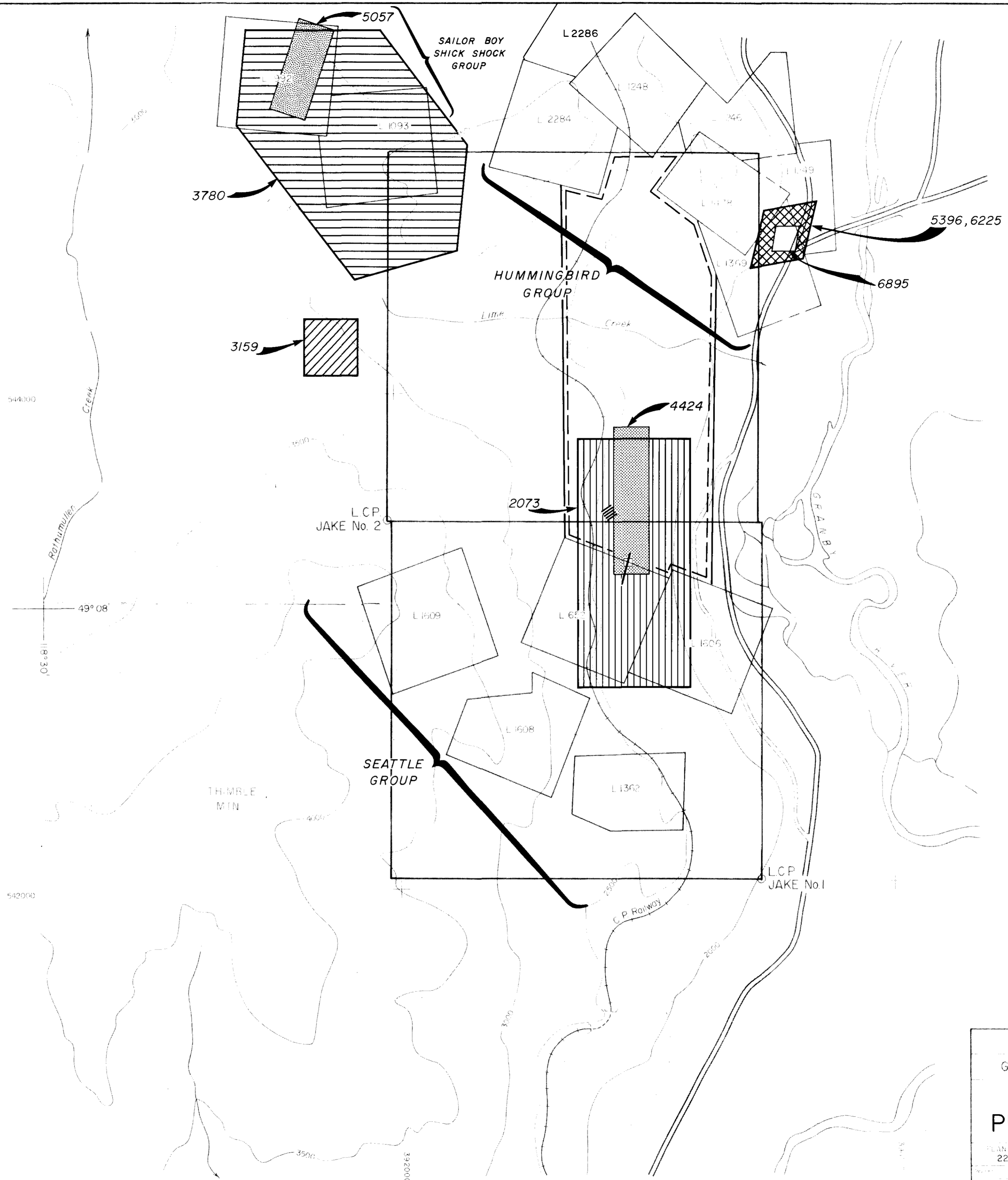
AN. NO. 223	DRAWN EXCLUSIVE	DATE FEB. 1981	FIGURE 3
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MINEQUEST EXPLORATION ASSOCIATES LTD

ASSESSMENT REPORT NO.	TYPE OF WORK	DATE	COMMENTS
2073	Geology, Geochemistry & Geochemistry	1969	Indications that exist to continuation of skarn zone exist northwest of pit. Map shows location of three previous drill holes.
3159	Magnetometry	1971	Weak cherty alteration zone which responds well to magnetic surveys.
3780	VLF, EM	1972	Includes geological mapping, mineral test in skarn zone.
4424	I.P.	1972	Moderate chargeability on east side of surveyed area.
5057	Magnetometry, trenching and sampling	1974	Positive magnetic, magnetic, cherty, quartzite skarn. Assay values suggest further work could be justified.
5196	Geochemistry, Geochemistry, Geology	1975	No maps, no encouragement.
6273	Scintillation Survey	1977	No encouragement.
6895	Three drill holes	1978	Very narrow and shallow intersect zone associated with limestone and diabase. Poor recovery.



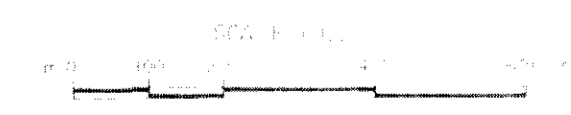
Location of drill holes shown on map in report 2073



LEGEND

- Magnetic feature possibly indicative of fault-offset skarn zone
- Skarn Zone
- Location of drill holes shown on map in report 2073

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,431
No.



UTAH MINES LTD
W R FINANCIAL CONSULTANTS LTD
GREENWOOD JOINT VENTURE
JAKE CLAIMS
PREVIOUS WORK
PLAN No 222 DRAWN EXCLUSIVE DATE FEB. 1981 FIGURE 4
MINEQUEST EXPLORATION ASSOCIATES LTD.
EXCLUSIVE DRAFTING SERVICES LTD.

ASSAY RESULTS

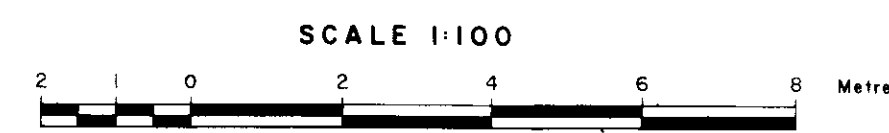
Sample number	Cu %	Ag oz/ton	Au oz/ton
J-01-01	0.74	0.20	0.016
J-01-02	0.04	0.14	0.001

Sample number	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Co ppm	Au-(AA) ppb	W ppm
881	4000	0.87	225	6.3	0.12	56	780
882	4000	2.24	280	16.0	0.44	245	10000
883	4000	1.86	280	15.0	0.43	66	1300
884	4000	0.36	179	1.4	24	900	900
885	4000	0.36	154	4.2	26	500	1
886	500	1	58	0.6	8	100	2
887	4000	0.36	280	3.5	20	280	1
888	750	4	540	1.0	12	40	1
889	500	10	78	1.0	8	30	1
890	4000	0.98	184	9.1	14	1740	0.078
891	2700	1	62	2.1	8	460	1
892	1250	1	54	1.5	8	220	1
893	1250	1	78	0.9	10	220	1
894	1200	1	138	1.0	20	300	1

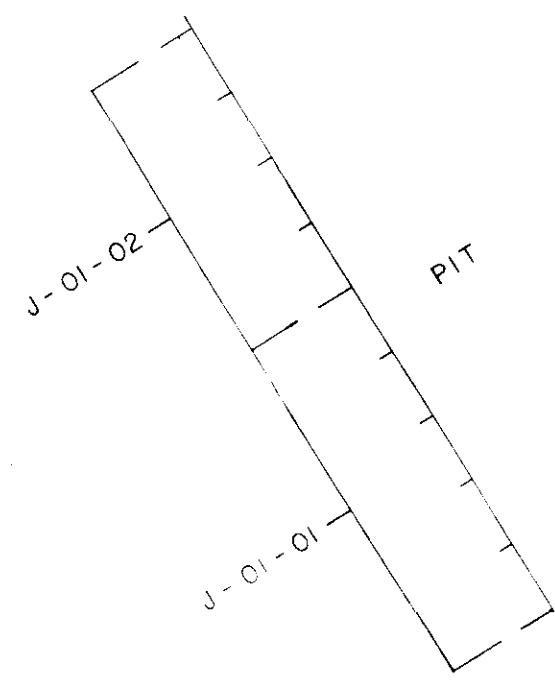
Sample number	Cu %	Ag oz/ton	Au oz/ton
J-02-01	1.20	0.42	0.042
J-02-02	0.26	0.15	0.030
J-02-03	0.34	0.16	0.016
J-02-04	0.12	0.19	0.008
J-02-05	0.13	0.10	0.005
J-02-06	0.39	0.18	0.038
J-02-07	0.40	0.34	0.116
J-02-08	0.10	0.41	0.050
J-02-09	0.35	0.19	0.032
J-02-10	0.38	0.17	0.022
J-02-12	0.44	0.23	0.034
J-02-13	0.31	0.27	0.030
J-02-14	0.25	0.17	0.005
J-02-15	0.29	0.18	0.005

Sample number	Cu %	Ag oz/ton	Au oz/ton
J-03-01	0.82	0.14	0.003
J-03-02	0.55	0.11	0.028
J-03-03	0.72	0.17	0.010
J-03-04	0.17	0.08	0.003
J-03-05	0.25	0.07	0.012
J-03-06	0.35	0.11	0.038
J-03-07	0.44	0.16	0.036
J-03-08	0.61	0.16	0.034
J-03-(17-19)	0.35	0.14	0.032
J-03-20	0.22	0.22	0.042

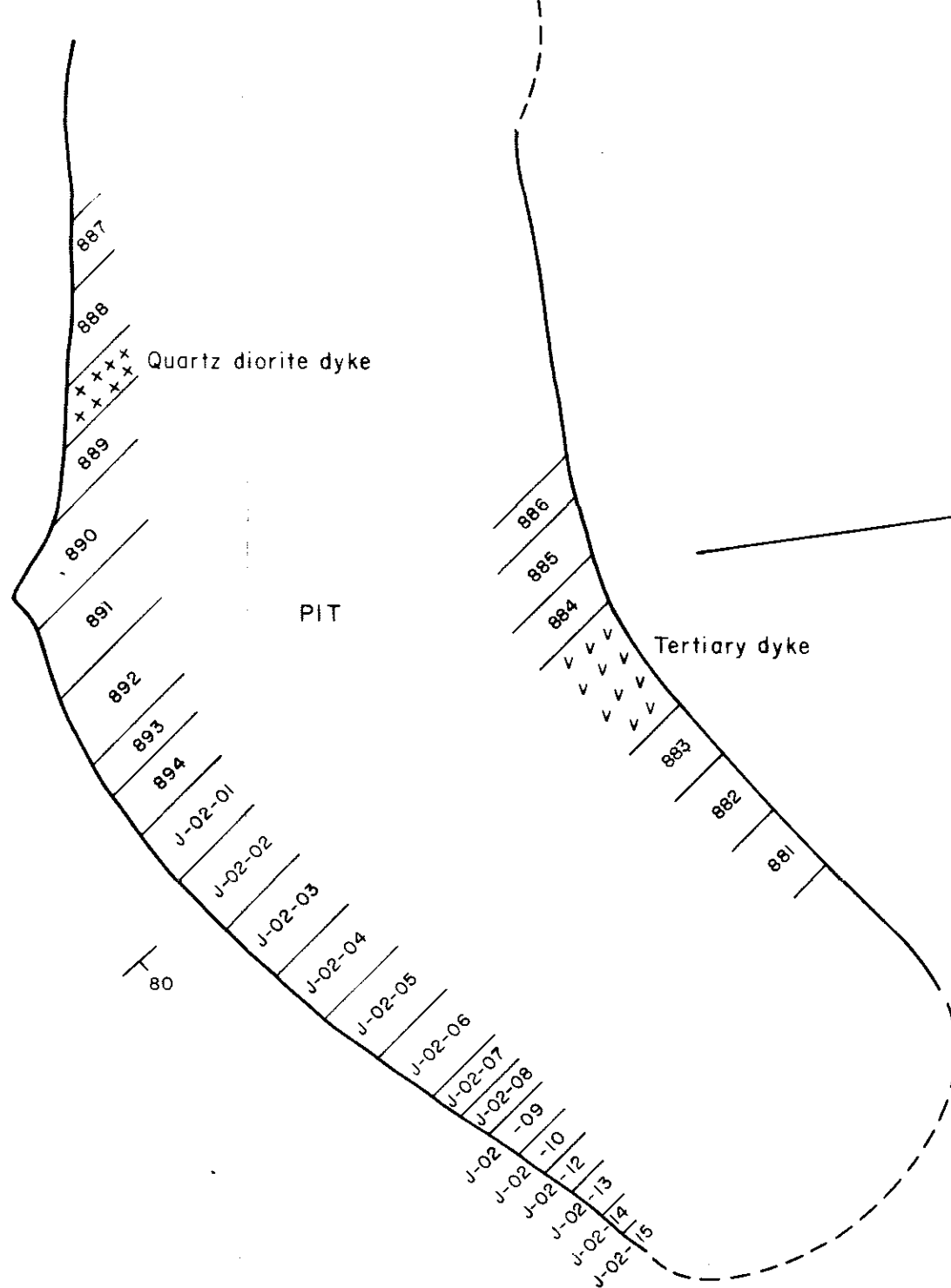
SAMPLE LOCATIONS



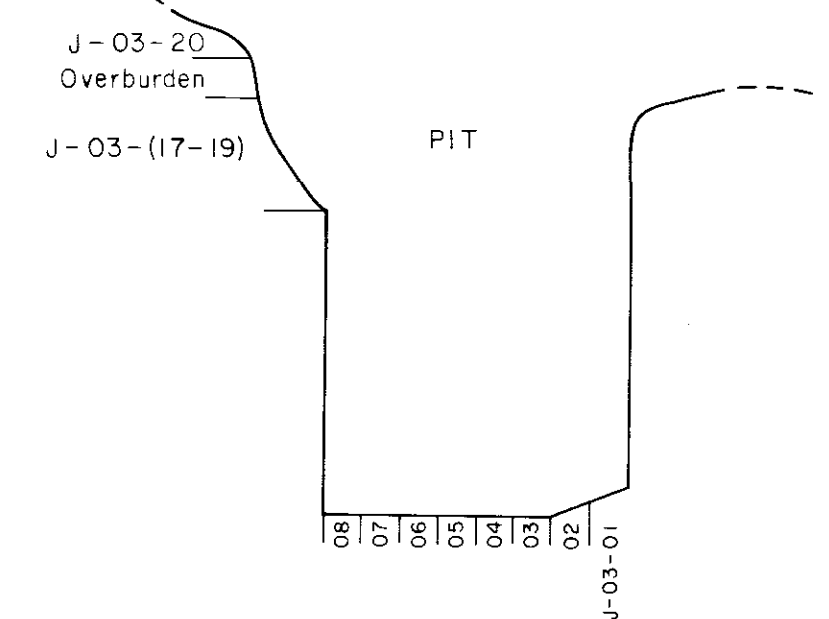
JAKE PIT #1



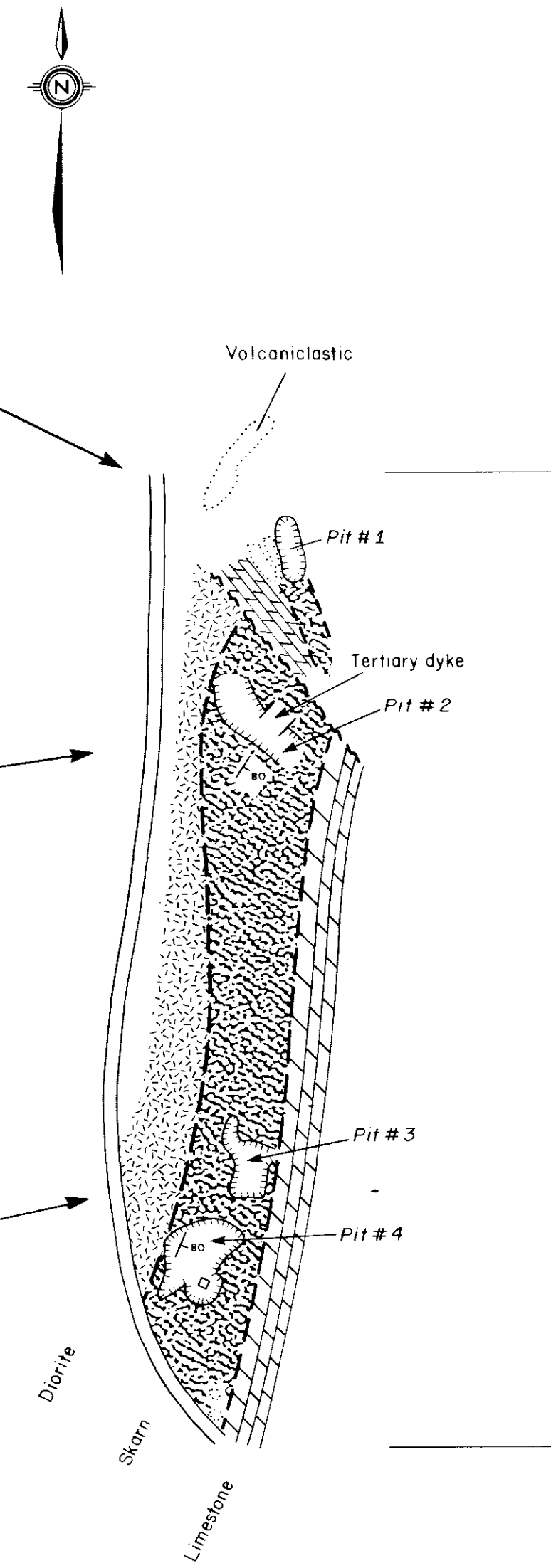
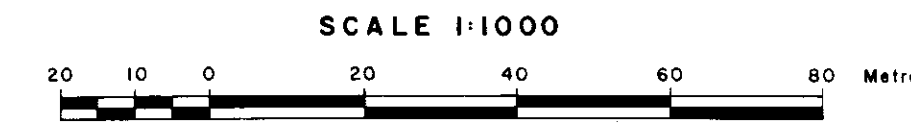
JAKE PIT #2



JAKE PIT #3



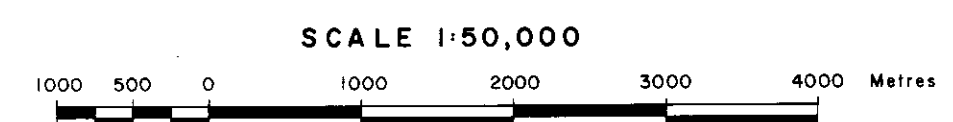
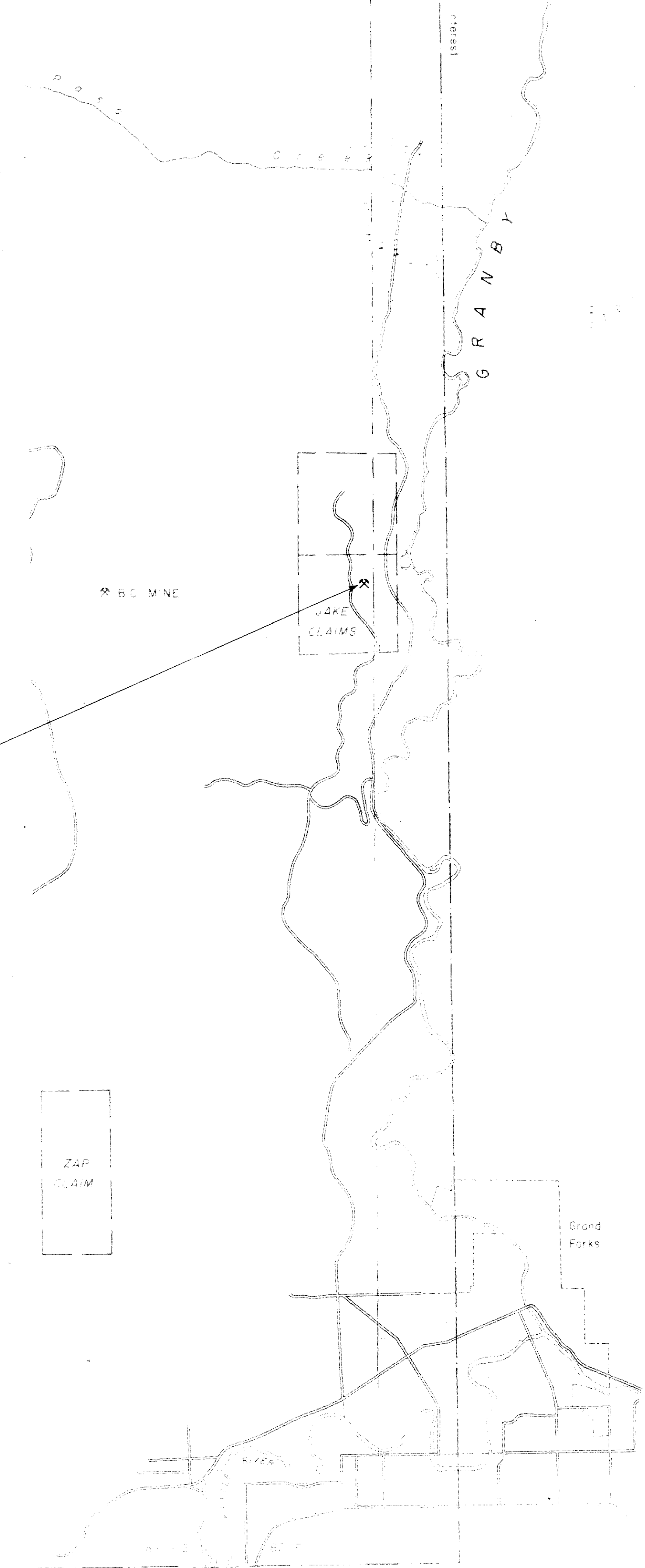
LOCATION OF PITS AND GEOLOGY OF SKARN ZONE



LEGEND

- Geologic Contact
- Pit

LOCATION OF JAKE CLAIMS



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,431
NO.

UTAH MINES LTD. AND
WR. FINANCIAL CONSULTANTS LTD.
GREENWOOD JOINT VENTURE

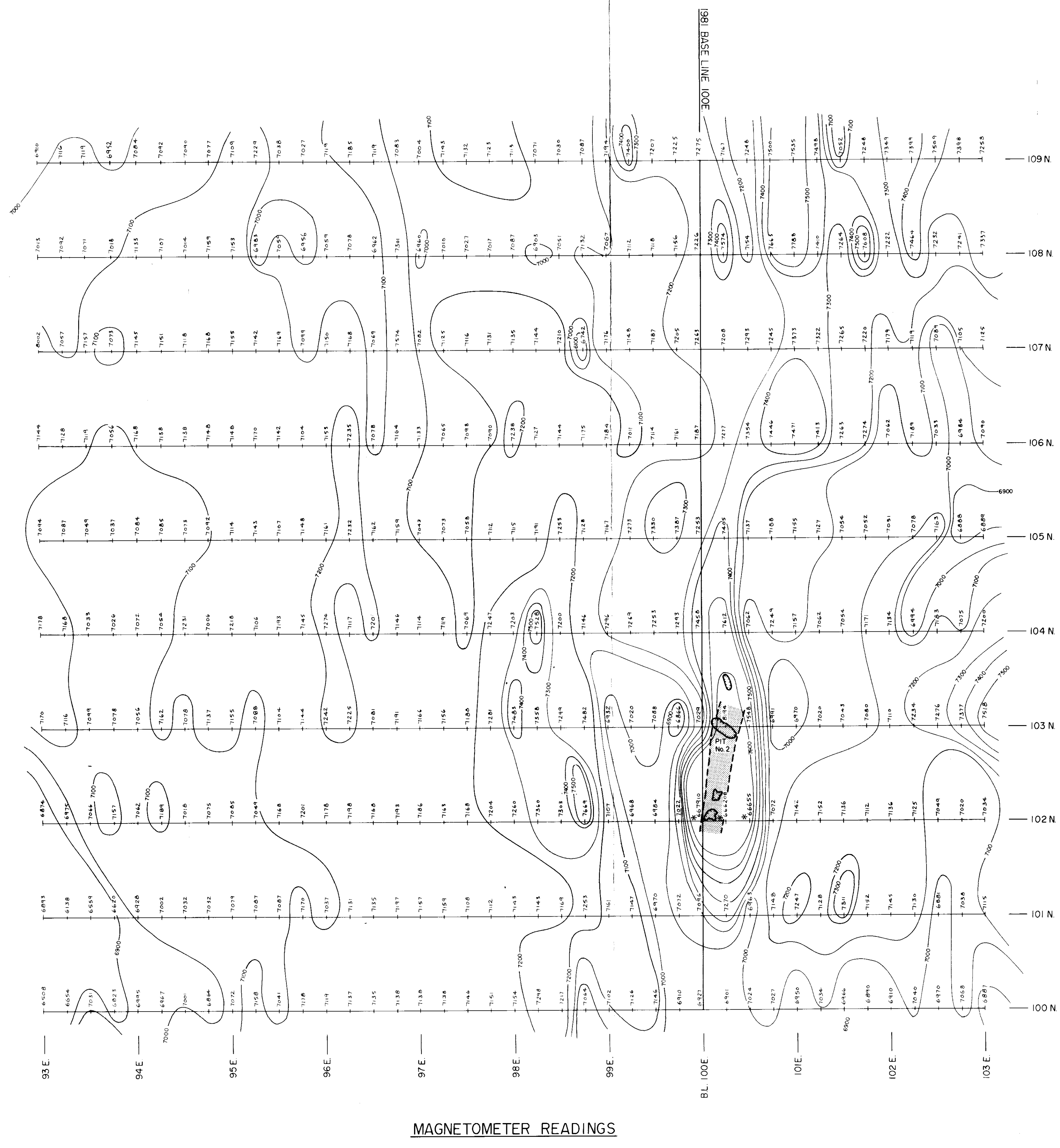
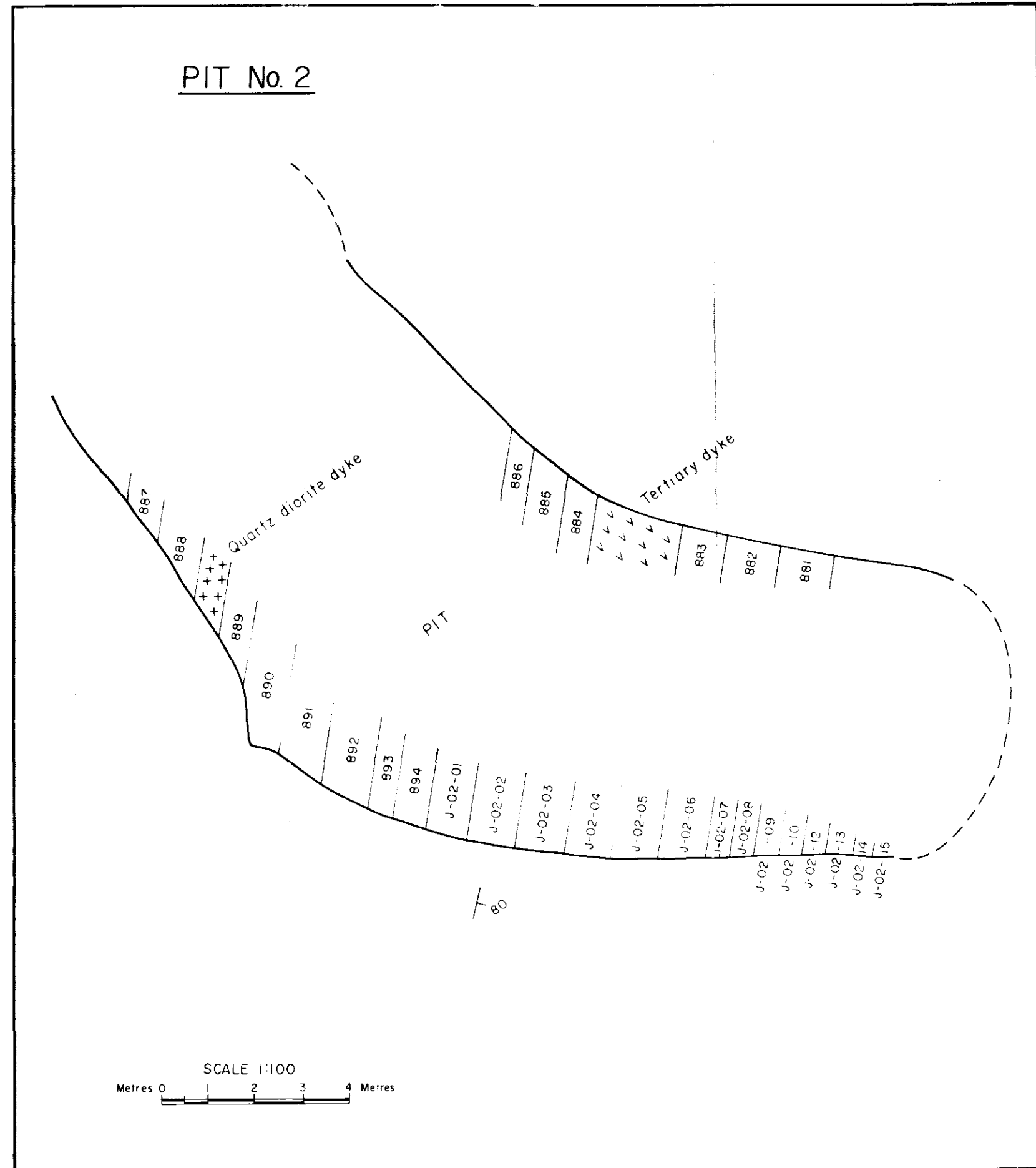
JAKE CLAIMS
SAMPLE LOCATIONS
AND RESULTS

PLAN No 150	DRAWN R.L. / Exclusive	DATE DEC. 1980	FIGURE 5
REVISED	N T S 82 E1		

MINEQUEST EXPLORATION ASSOCIATES LTD.

Sample number	Cu	Zn	Pb
881	0.87	0.11	0.13
882	1.21	0.14	0.16
883	1.86	0.17	0.20
884	0.36	0.04	0.05
887	0.36	0.04	0.05
888	0.36	0.04	0.05
889	0.36	0.04	0.05
890	0.92	0.12	0.15
891	0.36	0.04	0.05
892	0.36	0.04	0.05
893	0.36	0.04	0.05
901	1.21	0.14	0.16
902	0.12	0.02	0.03
903	0.13	0.02	0.03
904	0.13	0.02	0.03
905	0.13	0.02	0.03
906	0.13	0.02	0.03
907	0.13	0.02	0.03
908	0.13	0.02	0.03
909	0.13	0.02	0.03
910	0.13	0.02	0.03
911	0.13	0.02	0.03
912	0.13	0.02	0.03
913	0.13	0.02	0.03
914	0.13	0.02	0.03
915	0.13	0.02	0.03

Indicates results from preliminary analysis by atomic absorption were low and did not justify assays. See Plan 150 for further details.



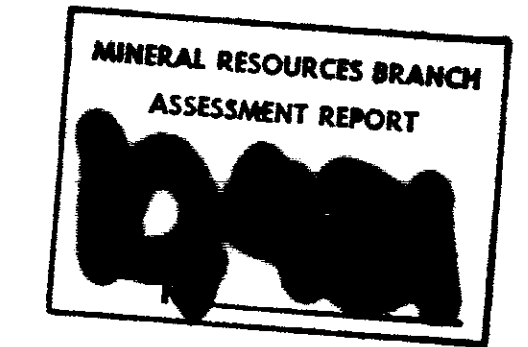
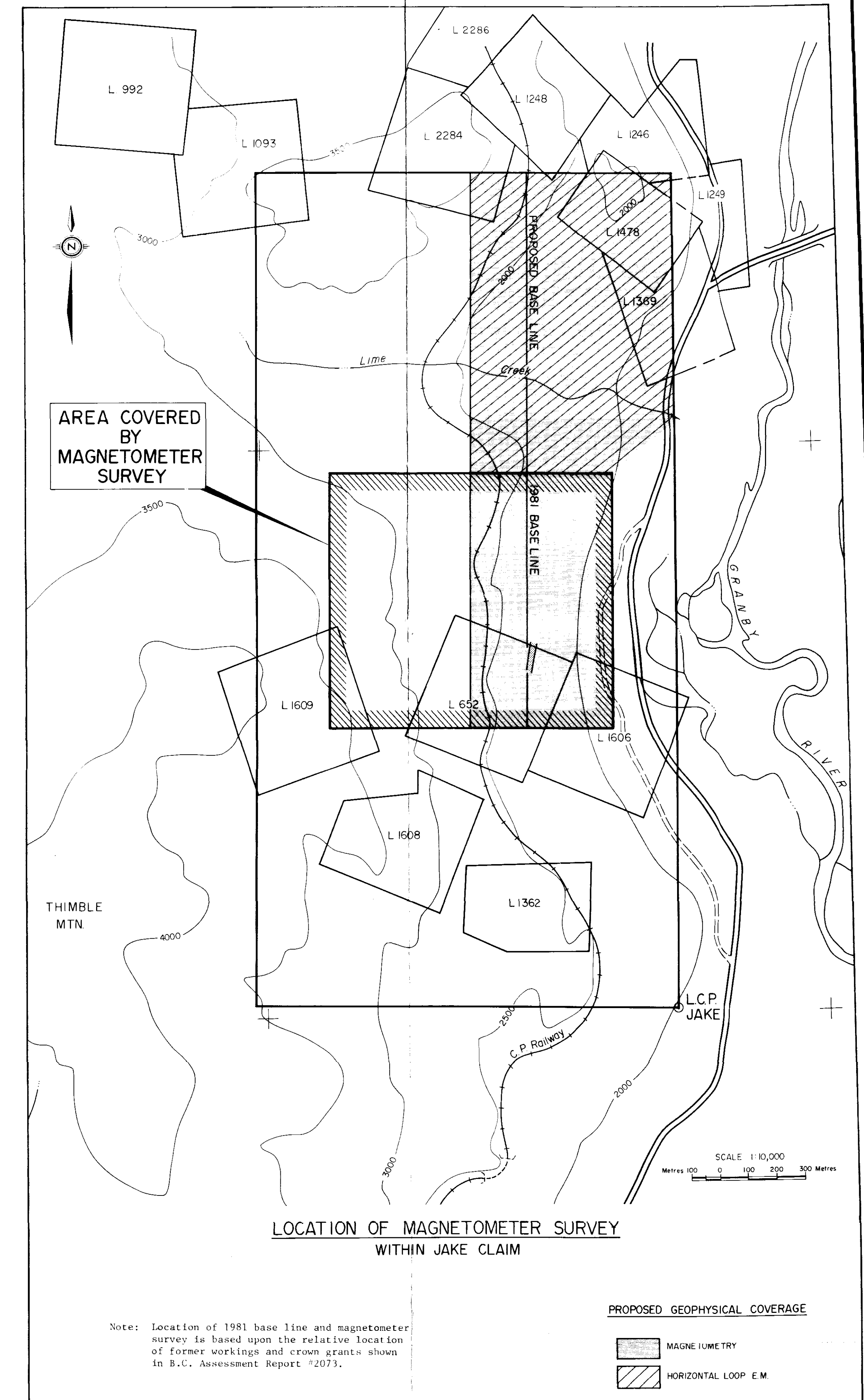
NOTE: All numbers preceded by "5" Thus 6927 = 56927 gammaes, excepting those asterisked, which are written in full.

Survey done September 1981 by P. D. McCarthy Instrument: Scintrex MP-2 Proton precession Magnetometer and Canadian Mining Geophysics MR 20 base station

SCALE 1:2500

TRENCH OR PIT

MAGNETITE - CHALCOPYRITE SKARN



JAKE CLAIM

MAGNETOMETER SURVEY

AND AREA PROPOSED FOR FURTHER WORK

PLAN No. 370	DRAWN P.D. McC./J.W.	DATE OCT. 1981	FIGURE 6
REVISED		N.T.S. 82 E 1	

MINEQUEST EXPLORATION ASSOCIATES LTD.