GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

JACKPINE MOLYBDENUM PROPERTY

Maurice No.1 to 4, Jackpine 1 to 4

owned by M. Chaplin and Brenda Mines Ltd.

Located in the Osoyoos and Vernon Mining Districts

N.T.S. 82 E/13

Lat. 49°55' Long. 119°47'

by

P.C. Bankes

Brenda Mines Limited

Exploration Group

April 1979

7363

CONTENTS

FIGURES

CHAPTER ONE

INTRODUCTION

1-1 Location and Access

The Maurice No. 1 to 4 claims are located to the northwest of Jackpine Lake. The Jackpine 1 to 4 claims consist of four, twenty unit blocks which surround Jackpine Lake and the original Maurice claims.

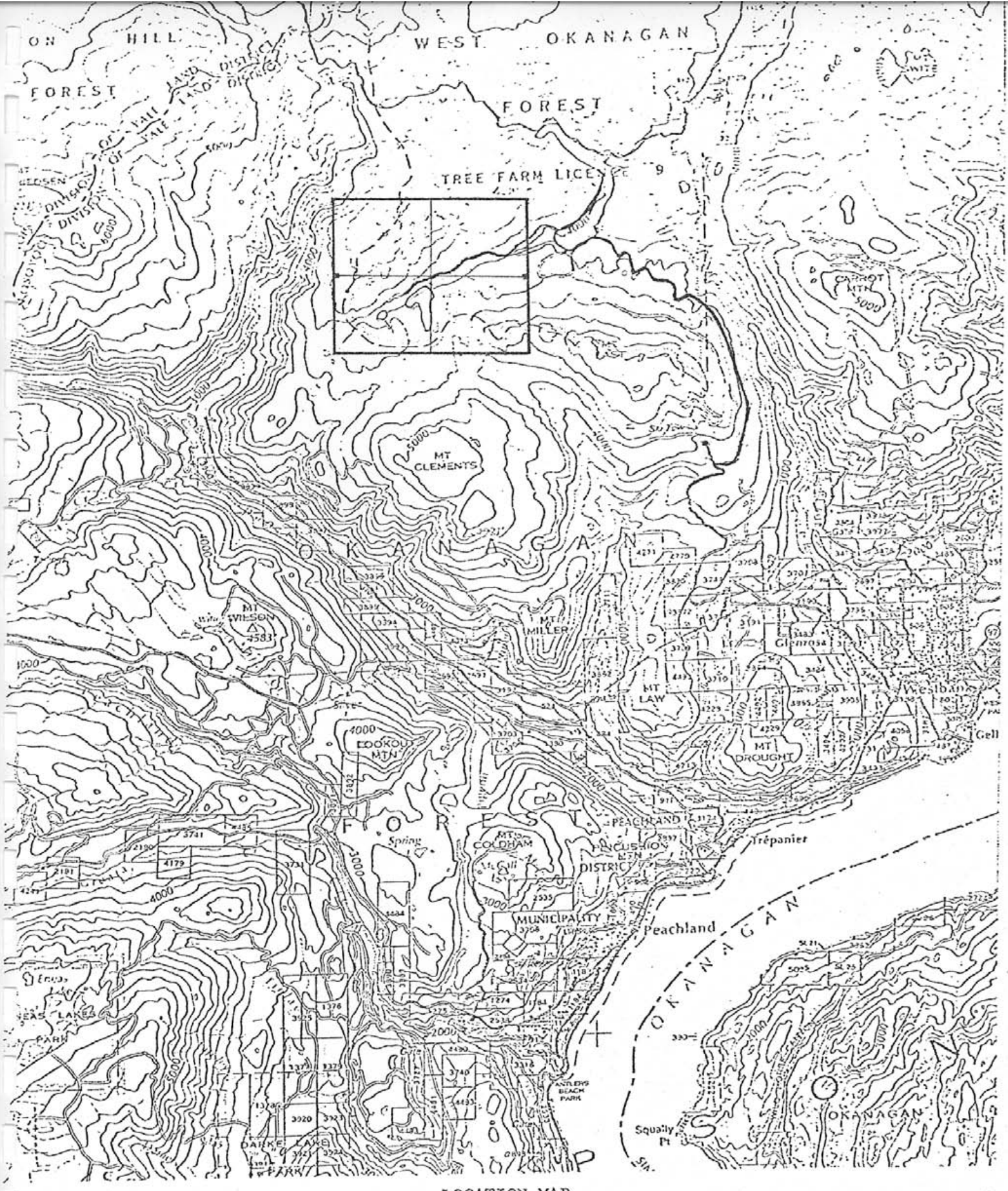
These claims are situated 17 kilometres northwest of the town Westbank, and 23 kilometres west of Kelowna (Figure 1).

Access to the property is via the road to Last Mountain Ski Resort, leaving Highway 97 at Westbank. One kilometre before the resort entrance a gravel road leads north to Jackpine Fishing Camp. From this point a four wheel drive road provides access to Banana Lake, Gallatly Lake and the main mineral showings (Figure 2).

1-2 Property Definition (Figure 3)

The main mineral occurrence was staked by Maurice R. Chaplin following the observation of quartz veins hosting molybdenite rosettes. A consortium of local business people formed Jackpine Mines Limited, and did extensive trenching exposing the mineral showings, followed by a five hole diamond drill program. This partnership was later dissolved and the claims allowed to lapse. Mr. Chaplin restaked the ground as the Maurice No. 1 to 4 claims.

In June 1978 Brenda Mines Limited optioned the four claims from Mr. Chaplin and surrounded them by eighty additional claims.



LOCATION MAP

0 2000 4000 6000 8000 10,000 metres

Figure 1

1-3 Claim Statistics

Claim Name	Record No.	Group No.	Units	Record Date	Mining District
Maurice No.1	17822)		1	August 13/74	Vernon
Maurice No.2	17823)	17 822-25	1	August 13/74	Vernon
Maurice No.3	17824)		1	August 13/74	Vernon
Maurice No.4	17825		1	August13/74	Vernon
Jackpine 1	470 (7)		20	July 5/78	Osoyoos
Jackpine 2	471 (7)		20	July 5/78	Osoyoos
Jackpine 3	489 (7)		20	July 5/78	Vernon
Jackpine 4	490 (7)		20	July 5/78	Vernon

See figure #2 for claim locations.

1-4 Summary of Work Done, 1978

Work was performed on the property from June to November. Crew members were,

A.R. Pollmer	Senior Geologist
P.C. Bankes	Party Chief
M. Foster	Senior Assistant
J. Knapp	Junior Assistant
G. Hallam	Junior Assistant

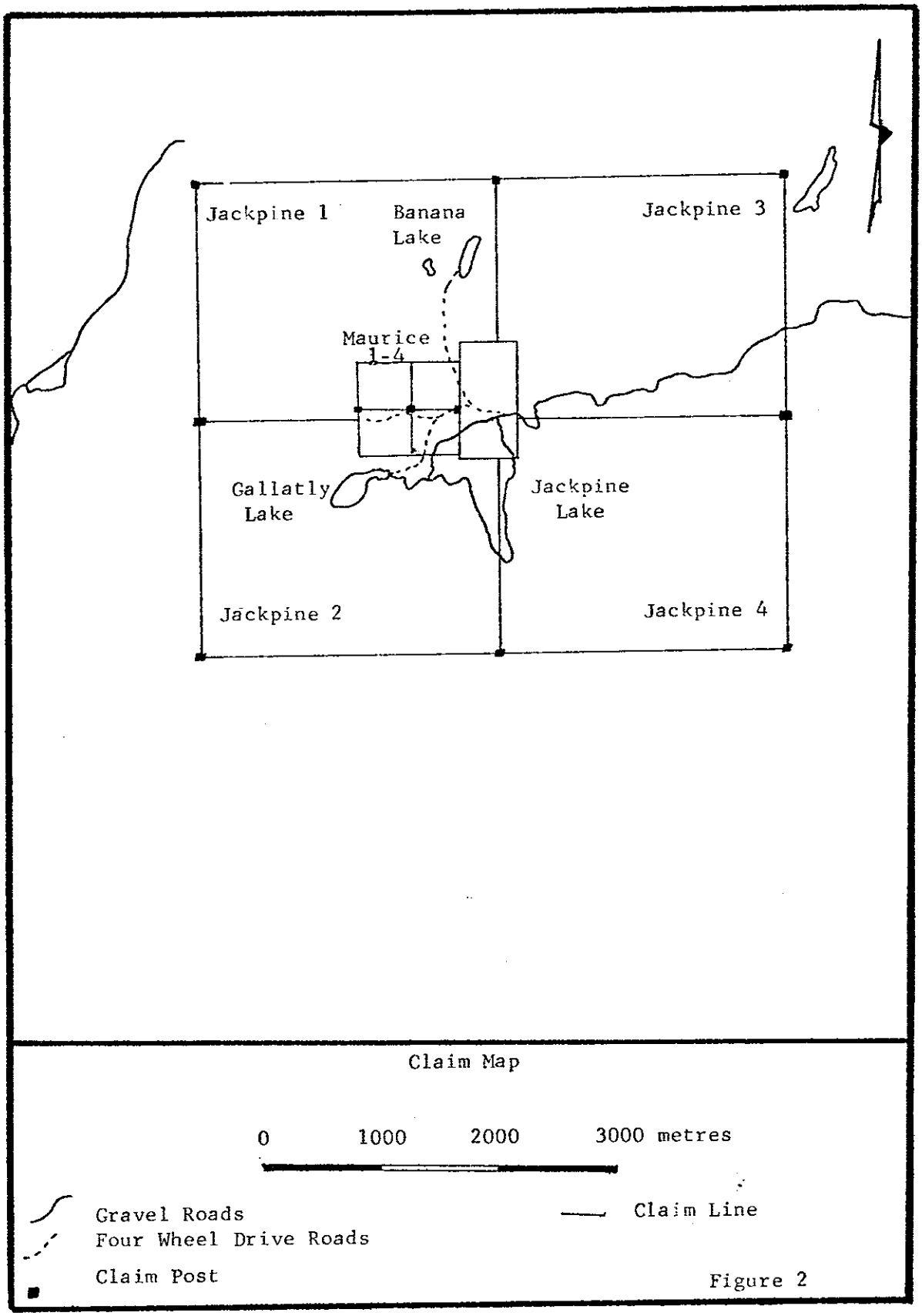

Jackpine 1
Banana Lake
Jackpine 3
Maurice 1-4
Gallatly Lake
Jackpine Lake
Jackpine 2
Jackpine 4
Claim Map
0
1000
2000
3000 metres
Gravel Roads
Four Wheel Drive Roads
Claim Post
Claim Line

Figure 2

1-4-1 Grid Establishment

A five kilometre base line running east-west approximately through the middle of the property, was established by surveying the Jackpine access road and by cutting a picket line west from where the road terminated. Surveying along the road was done by Standard Stadia and an AGA Laser Geodimeter (Model 710).

North-south compass lines marked by blazes and flagging were run at 200 metre intervals across the property, with sampling stations every 50 metres.

Additional control was established by two east-west tie lines, one at 1200 + 00 N and the other at 1100 + S (Figure 13). A total of 94 kilometres of line was established across the property.

1-4-2 Geochemistry Survey

Soil samples of the "B(f)" horizon, were taken at 50 metre intervals over the entire grid. On lines 700, 800 and 900 + 00 W, between 700 and 1300 + 00 S sample intervals were decreased to 25 metre intervals.

Silt samples were taken wherever grid lines intersected streams. A total of 1847 samples were taken and analyzed for Mo, Cu, and Zn.

1-4-3 Geophysical Survey

A fluxgate magnetometer survey was done over ; line 800 + 00 W between 150 +00 N and 1600 + 00 S, and line 1000 + 00 W between 150 + 00 N and 1800 + 00 S. Readings were taken at every 50 metre station.

1-4-4 Geological Survey

All available outcrops were mapped on a scale of 1:2500 (1 cm. to 25 m.) with emphasis on rock type, alteration, fracture frequency and orientation. All veining was mapped noting strike dip and mineralization.

1-4-5 Diamond Drilling

Four exploration holes were drilled to establish whether the mineralization extended southward, where no outcrop was available.

Tonto Drilling Limited was contracted to drill 305 metres (1000 feet) of NQ core (4.7 cm., 1 7/8 inch). A total of 512 metres (1680 feet) were drilled.

CHAPTER TWO

GEOLOGY

2-1 Regional Geology

The Jackpine property consists largely of a coarse grained quartz monzonite which is believed to be part of the Pennask Batholith, a composite intrusive ranging in composition from quartz diorite to quartz monzonite, described in the side notes G.S.C., Map 15-1961, Kettle River (west half) by H.W. Little.

Near the northeast corner of the property outcrops of greenstone and argillite were mapped and identified as part of the Cache Creek Group of Permian age.

To the southeast outcrops of Tertiary basalts are found in the vicinity of Last Mountain.

2-1-1 Quartz Monzonite

Quartz monzonite and quartz monzonite porphyry are the only rock types mapped within the property boundaries. On weathered surfaces it appears as buff colored, relatively massive, and glacially polished outcrops.

Texture; is generally medium grained granitic with coarser grained porphyritic zones to the north and south.

Composition; is approximately 60% feldspar, 30% quartz, and 10% biotite. Hornblend is common but always subordinate to biotite. Minor concentrations of finely disseminated pyrite is present near mineralization zones.

Fracturing; is consistant throughout and generally have three predominant orientations; striking 160°, 260°, and 200° with corresponding dips 80° south, 90° and 10° south. Fractures are slightly iron stained on weathered surfaces.

Fine grained aplite dykes, ranging up to 10 centimetres in width, occur in the western portion of the map area.Within the quartz monzonite there are numerous fine to medium grained mafic zeoliths ranging in size from 5 to 10 centimetres.

2-1-2 Alteration

The quartz monzonite is fresh with only minor prophylitic alteration and kaolinization of feldspars directly adjacent to the fractures and quartz veins, near mineralized zones. K- feldspar flooding seen to the south in diamond drill hole #2 has given the quartz monzonite a strong pinkish color.

The development of minor biotite and abundant chlorite is seen along shear and fault zones which cut acress the mineralized area.

Several gauge zones logged in diamond drill hole #2 ranging up to 75 centimetres show intense kaolinite alteration.

2-1-3 Structure

Along the 1000 meter strike length of the exposed mineralized quartz veins, several fault zones appear to cut across and offset the parallel quartz veining. Another set of faults run parallel to the veins. Faults are post-mineral and appear to have shifted and divided the veining structures into several large blocks, thereby offsetting the continuity of the quartz veins. A general southward movement of the quartz veins from the eastern exposure is evidenced.

The largest fault zone occurs near 10 + 00 N 1000 + 00 W, striking 85^{o} east and dipping 88^{o} south. Minor brecciation occurs along the fault.

Fault zones mapped generally showed the presence of abundant chlorite and slicken s ides. Parallel and radial fracturing was also noted along faulted areas (Figure 10).

2-1-4 Diamond Drilling

Four exploration holes were drilled on the western half of the property, totalling 512 meters (1680 feet) of NQ core. Because of the lack of outcrop and the extensive overburden cover to the south and east, holes were located largely to the south to determine whether the the veining continued in that direction. The most southerly hole (JP-2) was drilled on a small geochemical soil anomaly occurring across the valley.

2-1-4-1 Drill Descriptions

D.D.H. JP-1

Location- 845 + 00 W 90 + 00 S

Bearing- North, Angle- 45°

Total Depth- 160.7 metres (527 feet), Depth of Overburden- 7 metres (23 feet)

The quartz monzonite in JP-1 shows only slight prophylitic alteration. Several guage zones ranging up to 30 centimetres show kaolinite and sericite alteration. Sub-economic mineralization is seen as zones of finely disseminated molybdenite throughout the quartz monzonite host.

D.D.H. JP-2

Location- 840 + 00 W 1500 + 00 S

Bearing- North, Angle- 45°

Total Depth- 106.7 metres (350 feet), Depth of Overburden- 61 metres (200 feet)

The quartz monzonite is pinkish to reddish in color due to an increase in K-feldspar alteration. Along most of the fractures K-feldspar was noted. Several gauge zones were intersected, ranging up to 70 centimetres and exhibiting intensive kaolinite-chlorite alteration. Only minor pyrite mineralization was seen.

D.D.H. JP-1
Cross Section

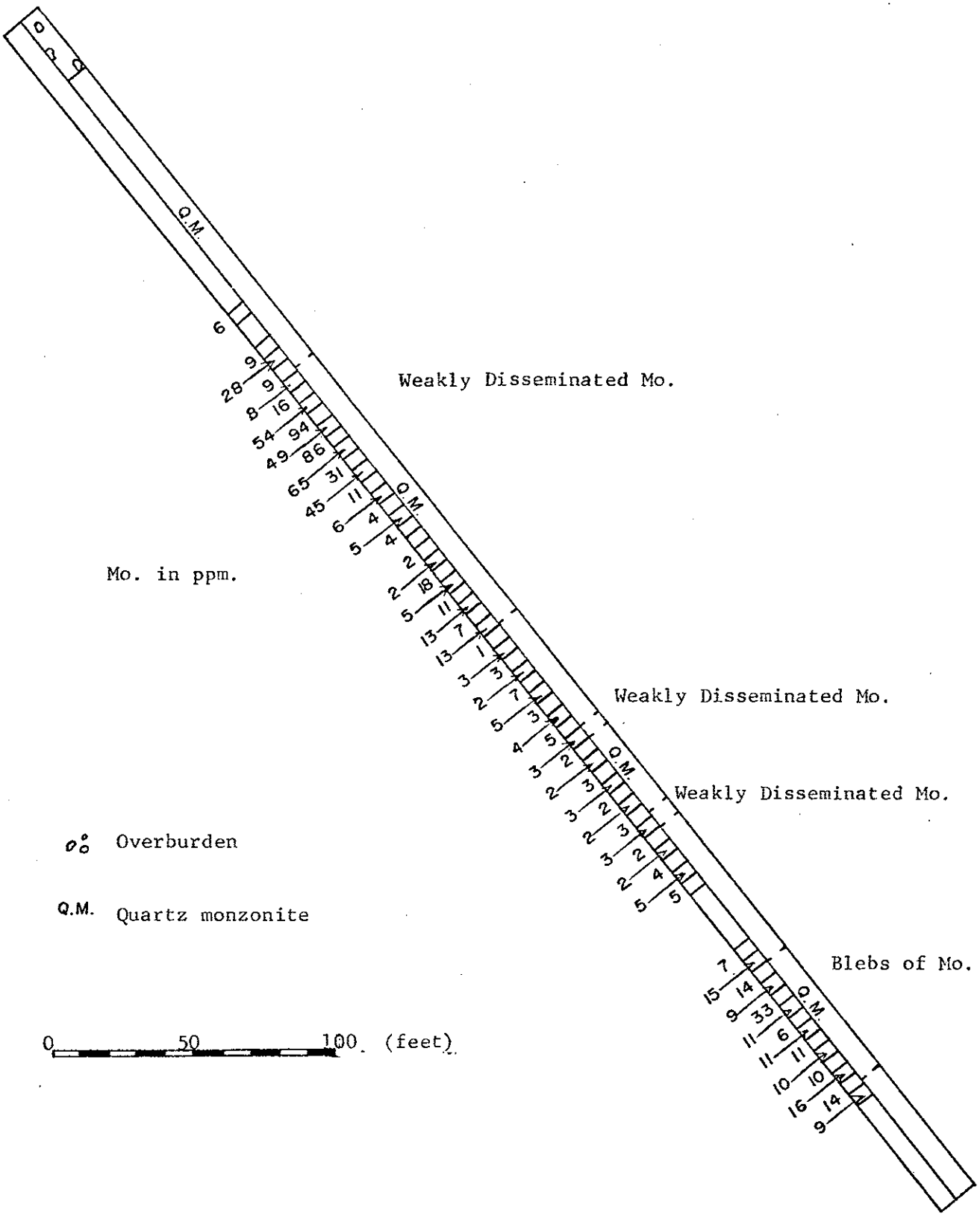


Figure 3

D.D.H. JP-2
Cross Section

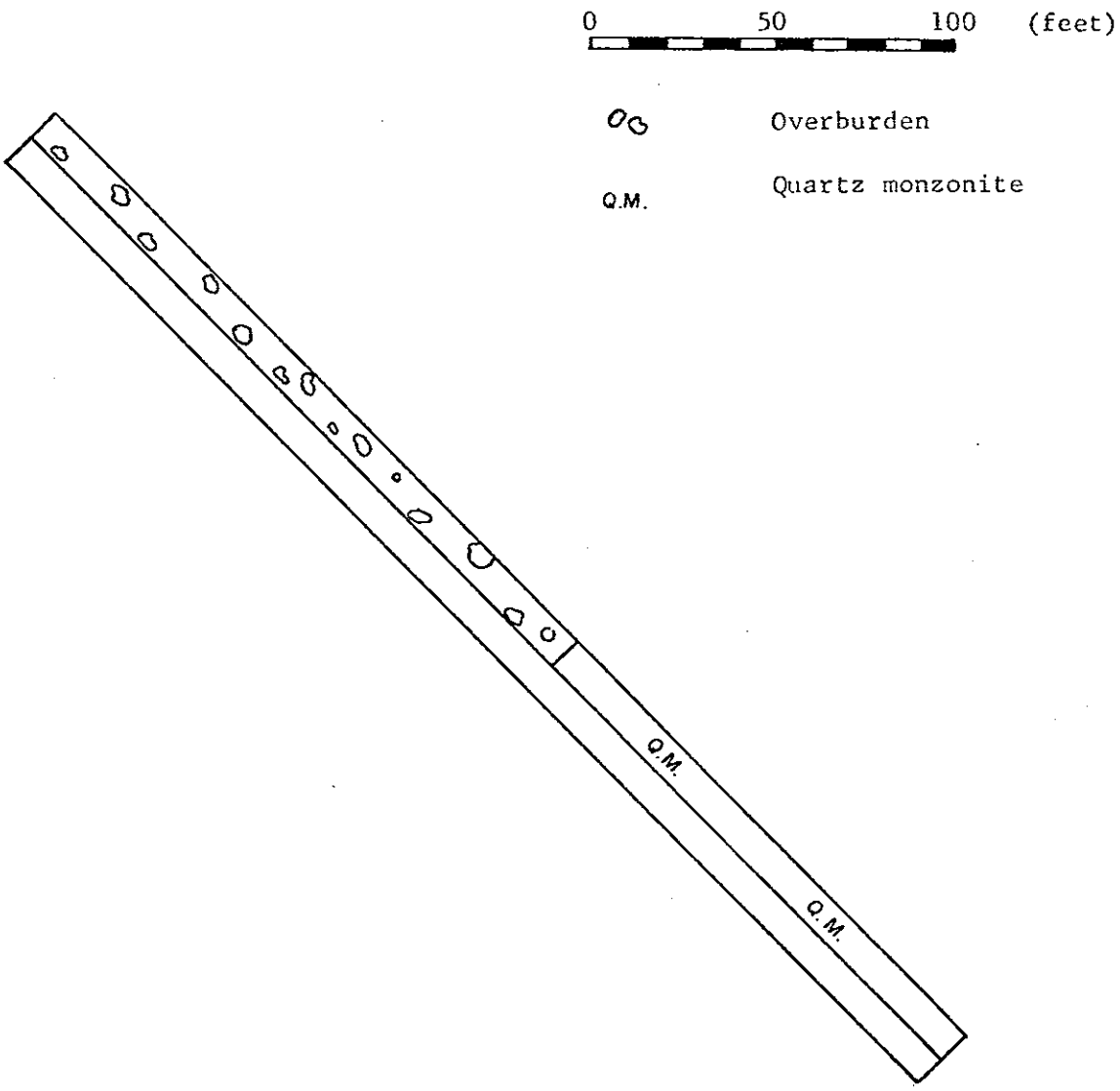


Figure 4

D.D.H. JP-3

Location- 840 + 00 W 1500 + 00 S

Bearing- North, Angle- 45°

Depth of Hole- 107.9 metres (354 feet), Depth of Overburden- .3 metres (1 foot)

The quartz monzonite shows only slight prophylitic alteration and numerous chlorite slips at 80° to the core axis. No mineralization was seen in the diamond drill hole #3.

D.D.H. JP-4

Location- 860 + 00 W 10 + 00 N

Bearing- North, Angle- 45°

Total Depth- 92 metres (301 feet), Depth of Overburden- 4.6 metres (15 feet)

The quartz monzonite in this drill hole shows only slight prophylitic alteration. Several gauge zones ranging up to 40 centimetres with chlorite and kaolinite alteration.

Non-economic mineralization occurs as finely disseminated molybdenite throughout the quartz monzonite, or as minor molybdenite rosettes in a few quartz veins ranging between 1 and 30 centimetres.

D.D.H. JP-3
Cross Section

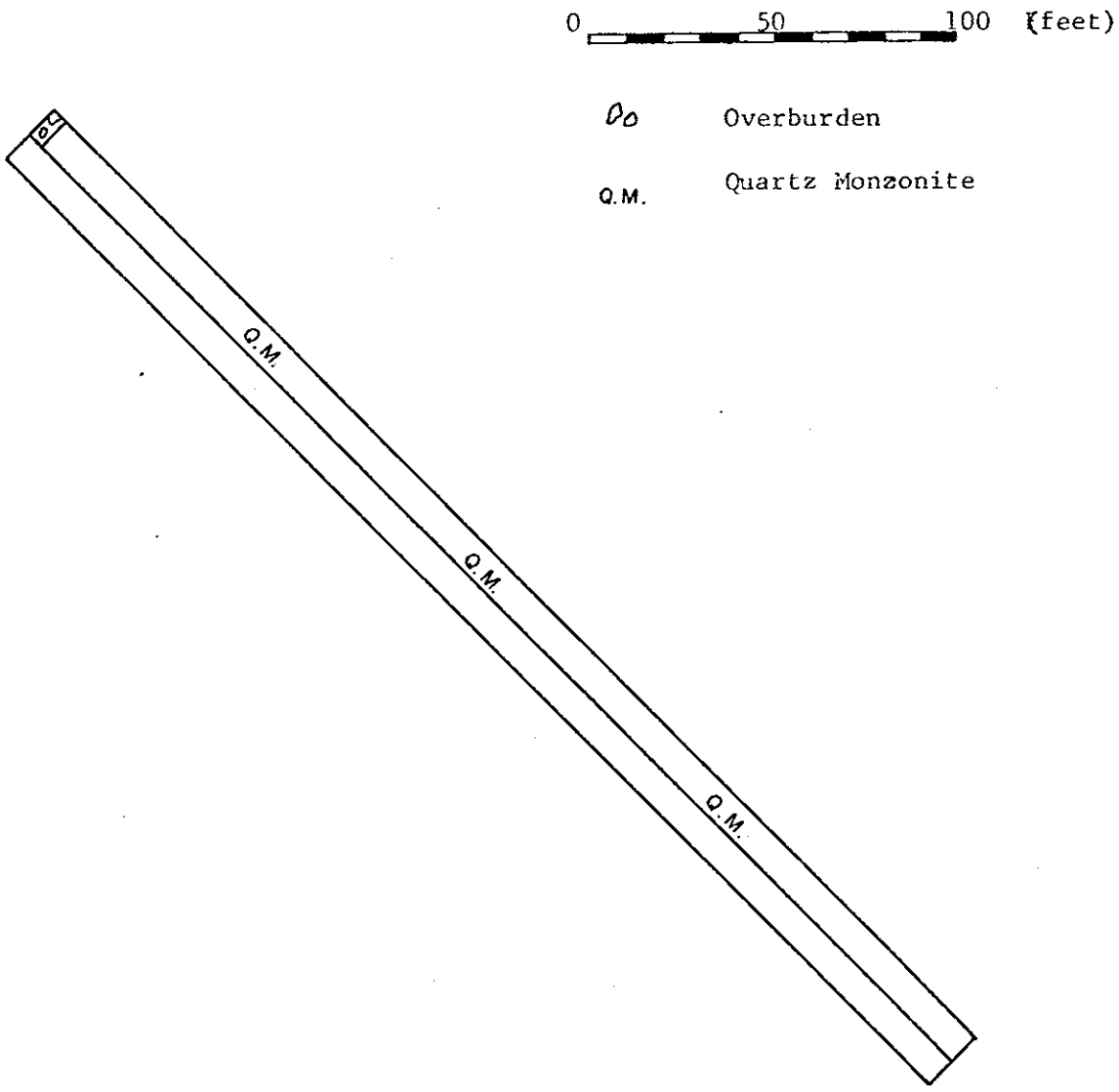


Figure 5

D.D.H. JP-4
Cross Section

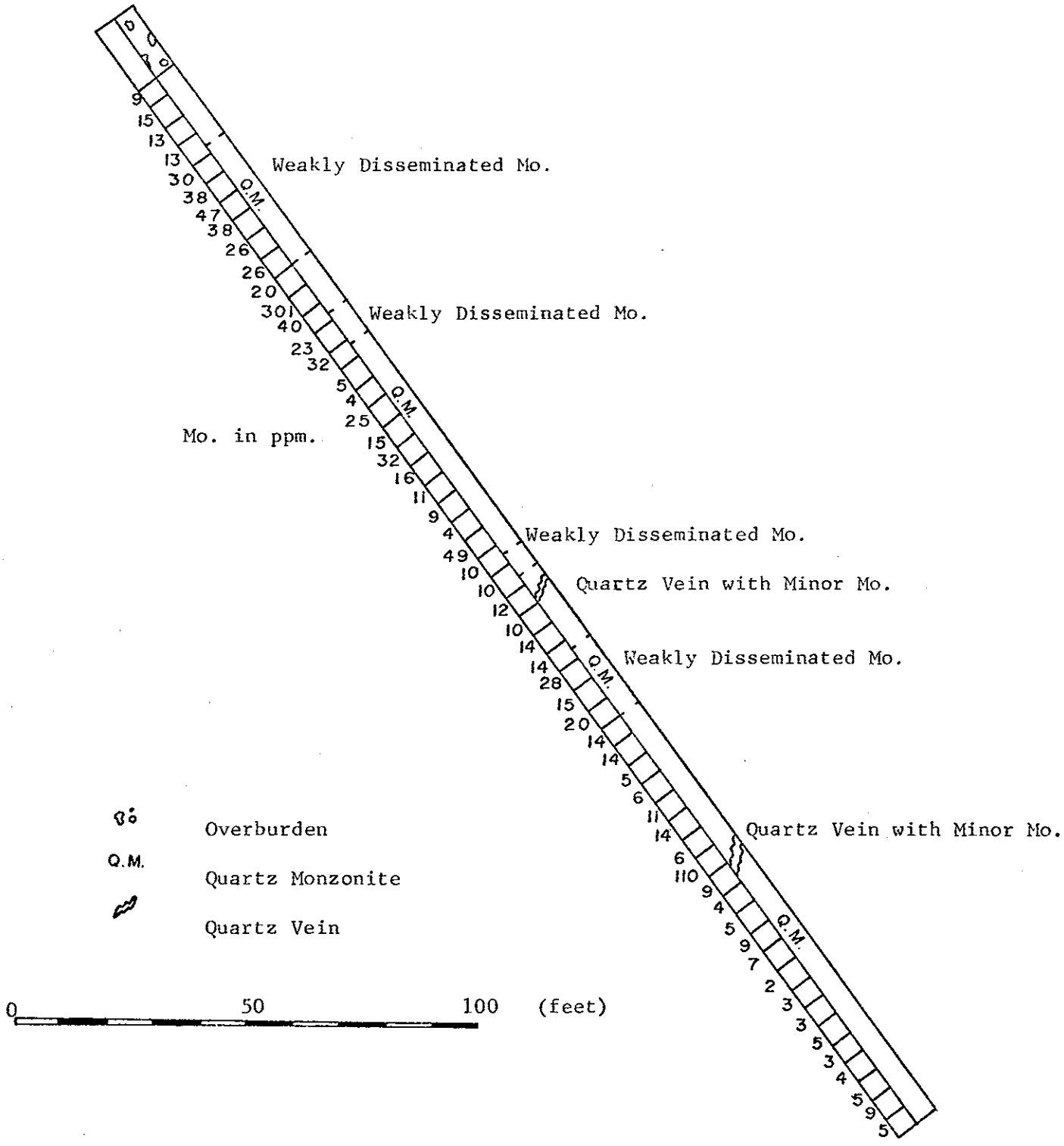


Figure 6

2-1-5 Mineralization

A series of parallel, east-west striking, subvertical quartz veins are hosted by quartz monzonite between lines 800 and 1800 + 00 W (Figure 10). These veins host coarse rosettes of molybdenite, minor pyrite and occasional chalcopyrite. The most eastern outcrop of this zone exposes 8, 2 to8 centimetre quartz veins with an accumulated width of 32 centimetres over a distance of 19 metres. Quartz veins further west are less frequent and generally one centimetre or less in width.

For the most part, parallel veining ends abrubtly along fault zones to the north and west.

In addition to the east-west veins four one centimetre veins, with random orientation were mapped north of the main mineral showings, along line 1000 + 00 W between 100 and 150 + 00 N. These veins also host small rosettes of molybdenite, and minor pyrite (Figure 10).

In a small trench at 900 + 00 W and 150 + 00 N a small one metre zone of pink, moderatly altered quartz monzonite, is well mineralized by disseminated small rosettes of molybdenite, and minor pyrite.

Several zones of finely disseminated molybdenite were located in D.D.H.'s JP-1 and JP-4 (as described in figures 3 and 6).

CHAPTER THREE

GEOPHYSICAL SURVEY

3-1 Magnetometer Survey

A ground flaxgate magnetometer survey was done over; line 800 + 00 W between 150 + 00 N and 1600 + 00 S, and line 1000 + 00 W between 150 + 00 N and 1800 + 00 S, with readings taken at 50 metre intervals.

In order that these readings could be corrected two base stations were set up, where readings were taken at less than two hour intervals. Fluctuations in these base stationreadings were used to calibrate corrections for the survey data. The corrected data was plotted on Figure 14.

3-2 Magnetometer Results

In summary the results of the magnetometer survey were dissappointing. The survey failed to confirm a distinct east-west magnetic depression across the central map area as indicated by an airborne magnetic survey produced by Geoterrex Limited, for the Department of Energy Mines and Resources Ottawa (Map 8522G).

CHAPTER FOUR

GEOCHEMICAL SURVEY

4-1 Field Method

Soil sampling was carried out at 50 metre intervals over the entire grid.

Samples were taken at a depth of approximately 5 centimetres from the red brown "B(f)" soil horizon.

Organic rich samples and stream samples were distinguished from standard soil samples by the following abbreviations:

Organic rich sample - Or.

Stream sample - St.

All samples were analyzed for copper, zinc, and molybdenum in parts per million (ppm).

4-2 Statistical Treatment of Data

Cumulative frequency graphs were drawn for each element, background values were established at the 50% level and anomalous values at the 90% level, see figures 3, 4 and 5. Results are as follows:

Element	Background	Anomalous
Copper	15 ppm	30 ppm
Molybdenum	3 ppm	6 ppm
Zinc	52 ppm	90 ppm

All geochemical values were plotted on Figures 7, 8 and 9, with anomalous zones contoured at 20 ppm intervals for copper and zinc and 2 ppm intervals for molybdenum.

Cumulative Frequency Graph for Copper

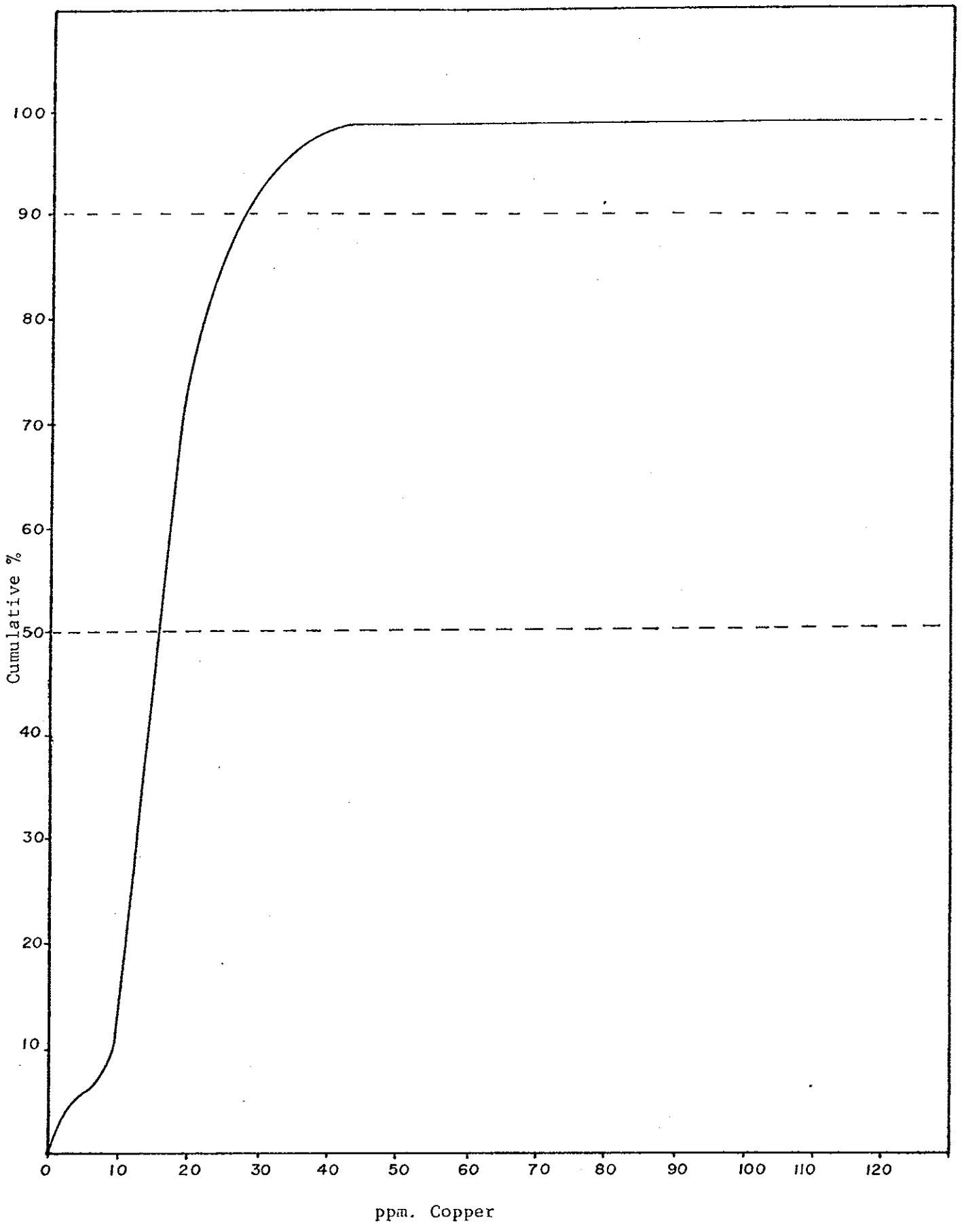


Figure 7

Cumulative Frequency Graph for Molybdenum

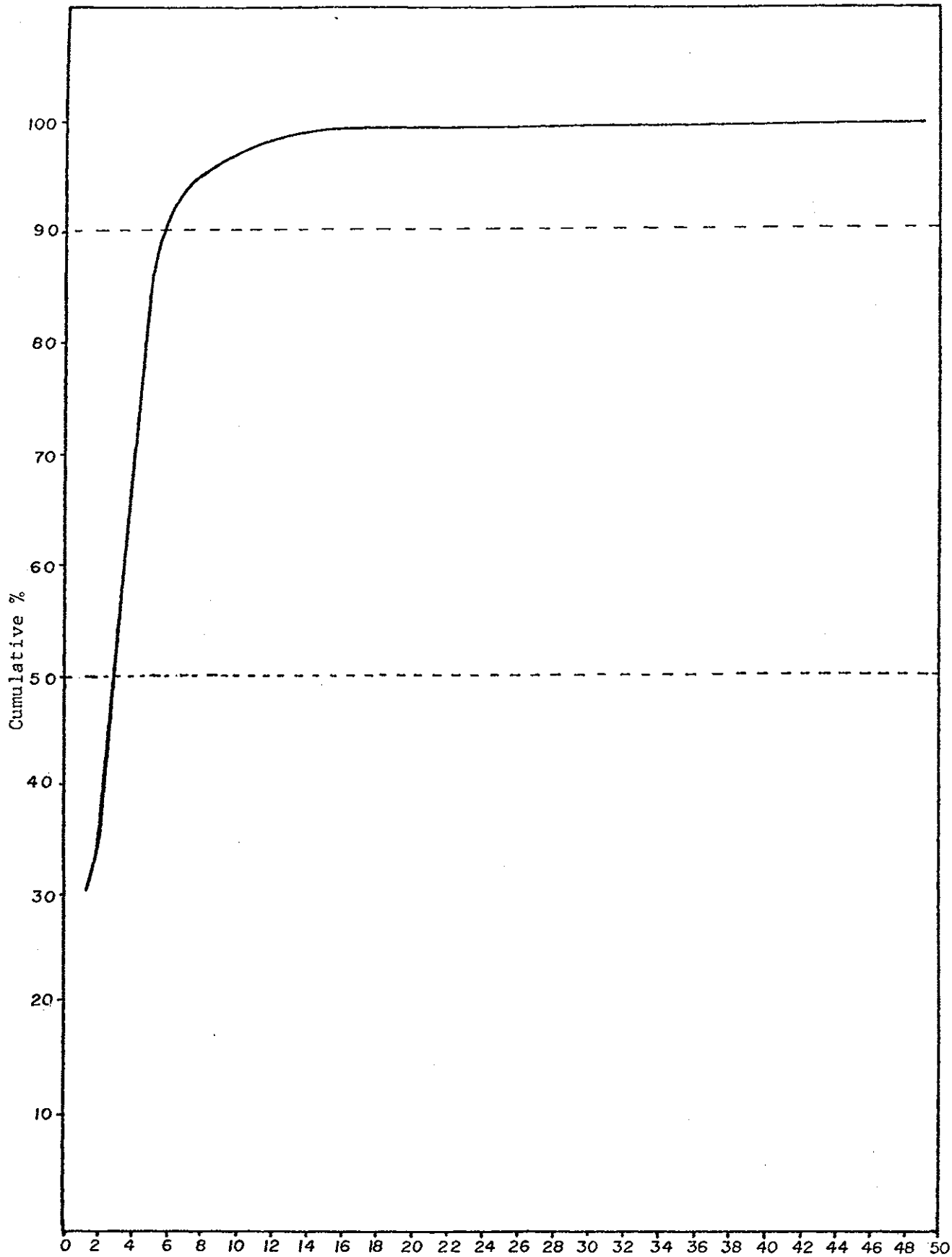


Figure 8

Cumulative Frequency Graph for Zinc

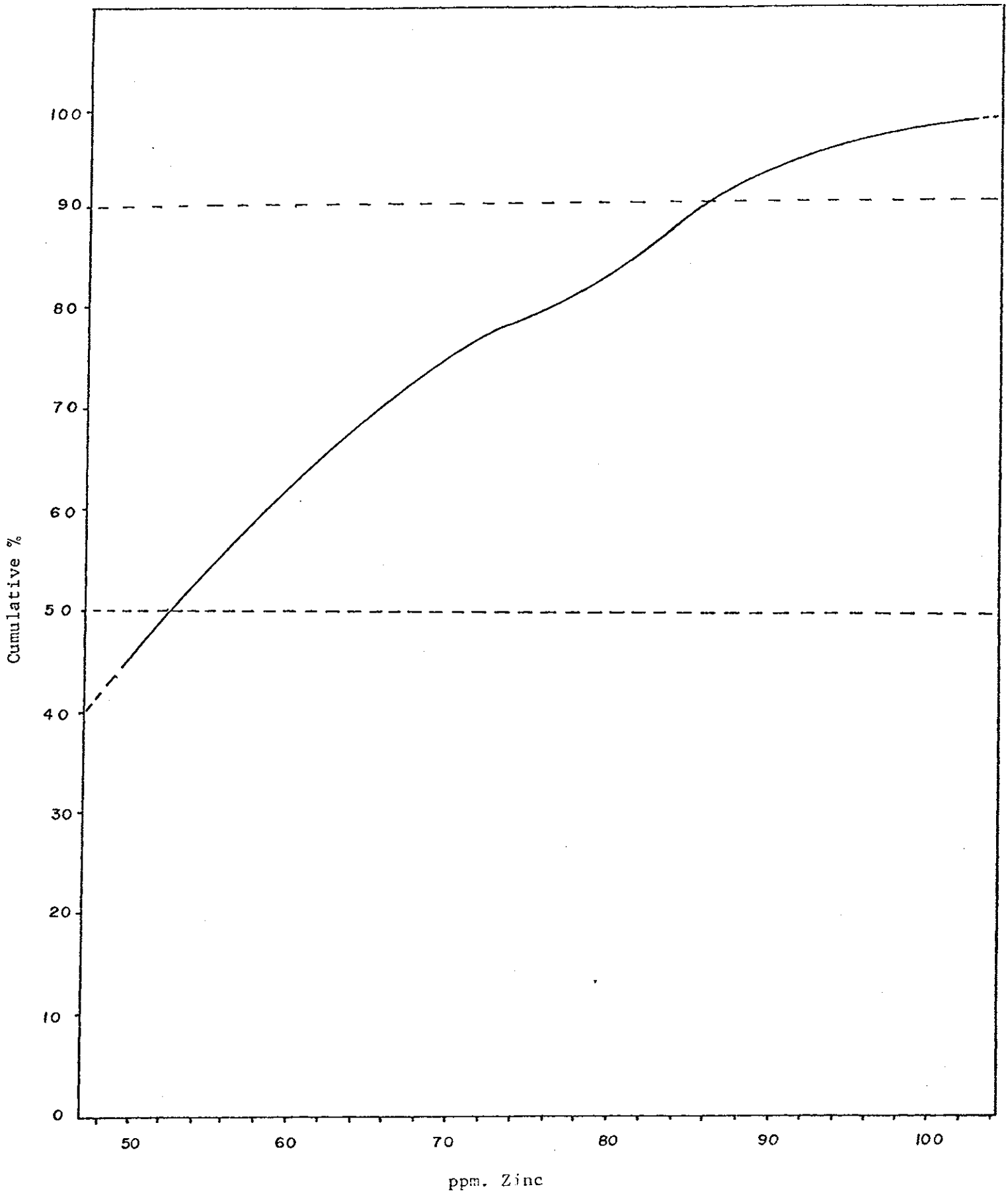


Figure 9

4-3 Geochemistry Results

In summary the results of the geochemical survey were disappointing and of little value toward the definition of target areas. The molybdenite values obtained in the soils surrounding the quartz-molybdenite veins showed only a very low value anomaly which does not appear to conform with the visible mineral occurrences.

This maybe a result of very extensive overburden cover as experienced by drilling south of the mineralized area. Such extensive cover would have a masking effect on any mineralization beneath.

The poor soil geochemistry may also indicate that the Jackpine molybdenite showing is an isolated small occurrance which does not extend beyond the known limits of the mapped mineralized zone.

CHAPTER FIVE

CONCLUSIONS

The Jackpine molybdenite property consists of a series of parallel quartz-molybdenite veins which are exposed over a 1000 metre strike length and a maximum width of 250 metres. Geologic mapping over the available exposure showed no continuation of veining north of the main trenched area and a gradual termination to the west. The outcrop to the south and east is totally covered by overburden and therefore little is known of the geology over most of the Jackpine claims. For this reason it was hoped that the geochemical survey would provide some indication as to whether the mineralization extended in either or both directions.

The soil survey produced only a very subtle, low value anomaly over the main showing with only a nominal southernly downhill trend. Several erratic Cu. and Mo. highs were investigated but no corresponding mineralization or supporting geology was found.

Diamond drilling showed the veining does not appear to have greater width than what is exposed on surface and the quartz monzonite host rock continues across the valley to the south. The one hole drilled directly into the mineralized outcrop showed the molybdenite mineralization to be well below economic values.

In conclusion the work done to date on the property provides little support for a deposit of economic potential. However, two possibilities remain unknown and should be investigated to finalize our evaluation. An eastern extension is possible but goes unsupported by soil values in that direction. An increase in mineral concentrations with depth may exist. The presence of the minor disseminated molybdenite - pyrite within the host rock may be due to leakage of the mineralizing solutions, or it may indicate a more volatile hydrothermal system than indicated by the alteration present in the quartz monzonite host.

5-1 Recommendation

The following program is recommended for 1979 :

1. A closer geological examination of the surface geology in the mineralized area.
2. A limited diamond drill program to consist of these holes;
   a) One hole to the west of the mineralized trenched area 92 metres (300 feet)
   b) An extension of D.D.H. JP-4 (casing still in place) from 92 metres (301 feet) to 304 metres (1000 feet).
   c) One hole placed halfway between D.D.H. JP-1 andD.D.H. JP-2 to the south of the showing 92 metres (300 feet).

Diamond drilling locations subject to change based on geological examination.

Estimation of costs:

Diamond Drilling

Crew and equipment mobilization	$1,000
Crew and equipment demobilization	$1,000
1300 feet of drilling @ $16/foot	$20,800
Supply and assay costs plus 35%	$7,280
Option Payment June 1, 1979	$9,000
TOTAL	$39,080

APPENDIX I DIAMOND DRILL HOLE LOGS

Core Size : NQ

Date :

Elevation :

Logged by : A.R. Pollmer

Angle : 45°

Bearing : North

Depth : 160.6 m.

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
0-23	0-7.0	Overburden
23-33	7.0-10.1	Quartz Monzonite, very slight propylitic alteration minor disseminated pyrite, mafics mostly biotite
33-33.5	10.1-10.2	6" gouge zone with bleaching along contact
33.5-83	10.2-25.3	Small disseminated Mo. rosettes
-95	-29.0	Broken core
96-97	29.3-29.6	12" zone kaolinite, chlorite and biotite alteration
101-108	30.8-32.9	7" moderate propylitic
108-142	32.9-43.3	Q.M.
-117	-35.6	Mo. rosette
142-	43.3-	Broken core
-149	-45.4	¼" Quartz vein, Mo. rosettes, minor Chalcopyrite, Pyrite
143-165	43.6-50.3	Highly altered zone - mud; poor recovery
165-	50.3-	Q.M., minor Py.
-175	-53.3	¼" Quartz vein, Py.,minor Mo. right angle to core
179-191	54.6-58.2	Q.M., disseminated Mo., minor Cpy. within host rock, no alteration visible
191-195	58.2-59.4	Q.M. with propylitic alteration moderate, minor disseminated Mo., Cpy., Py.
-195	-59.4	Q.M. with minor disseminated Mo. and Py., 10" gouge
196-197	59.7-60.0	Q.M. with minor disseminated Mo. and Py.
197-215	60.0-65.5	Q.M.
215-216	65.5-66.8	Alteration zone, minor sericite, kaolinite
216-222	66.8-67.7	Q.M. slight siliceous, very minor Py., very finely disseminated Mo.
225-	68.6-	Q.M., no Py. no alteration
-235	-71.6	Small chlorite shear, siliceous alteration, increase propylitic alteration
241-250	73.5-76.2	1' gouge zone, broken core ; 50% recovery
250-252	76.2-76.8	Q.M. propylitic and siliceous alteration
252-273.5	76.8-83.4	Q.M. , very minor disseminated Mo. and Py.
273.5-277	83.4-84.4	Q.M. kaolinite alteration
277-290	84.4-88.4	Gouge zone, chlorite, kaolinite, calcite alteration
290-	88.4-	Q.M. very broken areas of kaolinite alteration, small shears
-303	-92.4	Q.M., minor K-spar alteration
-315	-96.0	Minor Py.
-316	-96.3	1.5' K-spar alteration
321-325	97.8-99.1	Q.M. very minor Py., very fine grained disseminated Mo.
325-330	99.1-100.6	Q.M.
330-331	100.6-100.9	K-spar alteration zone
331-350	100.9-106.7	Q.M. propylitic alteration, small chlorite shears

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
350-354	106.7-107.9	Gouge zone
354-365	107.9-111.3	Q.M. very minor Py. suspect very minor Mo.
365-369	111.3-112.5	Chlorite gouge zone
369-374	112.5-114.0	Q.M. chlorite alteration
374-414	114.0-126.2	Intense alteration zone, feldspar alt. biotite fresh
414-	126.2-	Q.M. propylitic alteration, minor Py.
420-476	128.0-145.1	Mo. bleb and Py.
527-	160.6-	E.O.H.

D.D.H. # JP-2 Page 1 of 1

Core Size : NQ Date :

Elevation : Logged by : A.R. Pollmer

Angle : 45°

Bearing : North

Depth : 106.7 m

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
0-200	0-61.0	Overburden, glacial till with numerous boulders
200-210	61.0-64.0	Coarse grained Quartz Monzonite, several fractures with K-spar flooding
210-210.8	64.0-64.3	10" altered zone, kaolinized, chlorite slicken-slide at 45° to core
210.8-261	64.3-79.6	Q.M. abundant K-spar alteration
-261	-79.6	Minor epidote on fracture
261-263.5	79.6-80.3	30" gouge zone, kaolinite alteration
263.5-276	80.3-84.1	Q.M. broken core
276-350	84.1-106.7	Q.M. zones of K-spar alteration, K-spar flooding
		No mineralization seen.

D.D.H. # JP-3 Page 1 of 1

Core Size : NQ

Elevation : _____

Angle : 45°

Bearing : North

Depth : 107.9 m

Date : _____

Logged by : P. Bankes

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
0-1	0-0.3	Overburden
1-84	0.3-25.6	Quartz Monzonite, very minor trace Py., mafics mostly biotite, minor limonite on some fractures and surfaces, slight propylitic alteration.
-38	-11.6	1/8" Quartz vein
64-66	19.5-20.1	Moderate propylitic alteration zone, minor chlorite slips
84-85	25.6-25.9	Moderate propylitic alteration zone, minor chlorite slips
85-94	25.9-28.7	Chlorite rich, gouge zone very broken, chlorite slips at 80°
94-95	28.7-29.0	Zone of moderate propylitic and chlorite alteration, minor chlorite slips
95-95.5	29.0-29.1	Gouge zone, chlorite rich
95.5-99	29.1-30.2	Zone of moderate propylitic and chlorite alteration, minor chlorite slips
99-354	30.2-107.9	Q.M., trace of disseminated Py., mafics mostly biotite, no alteration
-157	-47.9	Minor kaolinite in 4" zone
-186	-56.7	Minor kaolinite in 4" zone
-214	-65.2	Minor kaolinite in 6" zone
-354	-107.9	E.O.H.

Core Size : NQ

Elevation : _____

Angle : 45°

Bearing : North

Depth : 91.7 m

Date : _____

Logged by : P. Bankes

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
0-15	0-4.6	Overburden
15-20	4.6-6.1	Quartz Monzonite, very slight propylitic alteration, minor disseminated Pyrite, mafics mostly biotite
20-20.5	6.1-6.2	Q.M. minor diss. Mo. and Py.,slight propylitic alteration
20.5-21	6.2-6.4	Q.M. slight propylitic alteration, minor Py.
21-26	6.4-7.9	Q.M. moderate propylitic alteration and kaolinite alteration, diss. Py.
26-27	7.9-8.2	Q.M. minor Py.
27-35	8.2-10.7	Q.M. moderate propylitic, chlorite alteration, minor kaolinite, diss. Py.
35-37	10.7-11.3	Si. rich Q.M., low Py., mafics, minor chlorite and kaolinite alteration
37-47	11.3-14.3	Q.M., minor propylitic alteration, plag phenos up to 1 cm.
-47	-14.3	Minor diss. Mo.
47-49	14.3-14.9	Q.M. minor propylitic alteration, plag phenos up to 1 cm., diss. Py.
-49	-14.9	Minor diss. Mo.
49-53.5	14.9-16.3	Q.M. minor propylitic alteration, plag phenos up to 1 cm., diss. Py.
-53.5	-16.3	Minor diss. Mo.
53.5-57	16.3-17.4	Q.M. minor propylitic alteration, plag phenos up to 2 cm.
-57	-17.4	Minor diss. Mo.
57-60	17.4-18.3	Q.M. diss.Py., plag phenos up to 1 cm., minor propylitic alteration, minor zones of kaolinite
-60	-18.3	Minor diss. Mo.
60-61.5	18.3-18.7	Q.M. (same as 57-60;17.4-18.3)
-61.5	-18.7	Minor diss. Mo.
61.5-63	18.7-19.2	Q.M. (same as 60-61.5;18.3-18.7)
-63	-19.2	Minor diss. Mo.
63-64.5	19.2-19.7	Q.M. (same as 60-61.5;18.3-18.7)
-64.5	19.7	Minor diss. Mo.
64.5-70	19.7-21.3	Q.M. (same as 60-61.5;18.3-18.7)
70-74	21.3-22.6	Q.M. high propylitic and chlorite alteration, two or three ¼" quartz veins well mineralized with Mo. rosettes;very poor recovery
75-76.5	22.9-23.3	Q.M. high propylitic and chlorite alteration, seaveral chlorite shears (10°), Mo. rosettes along closed fractures
76.5-83	23.3-25.3	Q.M. moderate propylitic alteration, diss. Py., Mo., and Cu.
-95	-29.0	Small Quartz veinlet

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
85-95	25.9-29.0	Poor recovery (approx. 40%)
95-100	29.0-30.5	Several chlorite slips, recovery 70%
100-	30.5-	Q.M. moderate propylitic alteration
-104	-31.7	½" Quartz vein, 50° to core, minor Cpy.
-104.5	-31.8	½" Quartz vein, 75° to core, minor Cpy., some K-spar flooding
-105	-32.0	Broken core, recovery 85%
115-125	35.1-38.1	10' of core lost, 1% recovery
125-126	38.1-38.4	Chlorite shears, minor Mo. shear
-134	-40.8	1' chlorite gouge zone
-143	-43.6	Kaolinite slip
-144	-43.9	Kaolinite alteration zone
144-146	43.9-44.5	Kaolinite alteration zone
146-154	44.5-46.9	Q.M. minor diss. Py.and Cu., mafics mostly biotite, slight propylitic alteration
-146	-44.5	Minor diss. Mo.
-152	-46.3	Minor diss, Mo.
154-155.3	46.9-47.3	Milky Quartz vein , only minor diss. Mo.-45°
155.3-157	47.3-47.9	Q.M. (same as 146-154;44.5-46.9)
-157	-47.9	2" Quartz vein, 45°
157-161	47.9-49.1	Q.M. (same as 155.3- 157;47.3-47.9)
-161	-49.1	1" Quartz vein, 35°
161-167	49.1-50.9	Q.M. (same asl55.3-157;47.3-47.9)
-163.5	-49.8	Small Mo. rosette
167-187	50.9-57.0	Q.M., diss. Py., moderate to high propylitic and chlorite alteration, many chlorite slips, 10°, minor Cu.
-167.5	-51.1	Mo. rosette on slip
-168	-51.2	Diss. Mo.
-173.5	-52.9	Mo. Rosette
-177	-54.0	Mo. rosette in highly altered Q.M.
-178	-54.3	Mo. diss. in highly chlorite Q.M.
-178.3	-54.4	2" milky Quartz vein, Py. rich, 45°
-179	-54.6	Mo. diss. in chlorite rich Q.M.
-184	-56.1	Mo. diss. in chlorite rich Q.M.
-186	-56.7	Mo. diss. in chlorite rich Q.M.
187-189	57.0-57.6	Gouge zone
189-215	57.6-65.5	Zone of high propylitic and chlorite alteration, several 10° to 20° chlorite slips
-207.5	-63.2	2" milky Quartz vein at 45°
-208.5	-63.6	2" milky Quartz vein
215-226	65.5-68.9	Q.M. minor propylitic and chlorite alteration, minor diss. Py.
226-229	68.9-69.8	Milky Quartz, Py. in veins, approx.30°
229-238	69.8-72.5	High chlorite, kaolinite, propylitic alteration, gouge zone
238-257	72.5-78.3	Q.M., High chlorite and propylitic alteration, minor kaolinite alteration, many chlorite slips at approx. 20° to 50°, minor diss. Py.,core badly broken
-245	-74.7	¼" Quartz vein, 50°
-247	-75.3	¼" Mo. rosette in ¼" Quartz vein at 30°
257-258	78.3-78.6	Gouge zone
258-260	78.6-79.2	Q.M., moderate propylitic and chlorite alteration , minor Py.
260-262	79.2-79.9	Q.M., high propylitic and chlorite alteration, very broken core
262-278	79.9-84.7	Q.M., moderate propylitic and chlorite alteration, minor Py.

FROM/TO FEET	FROM/TO METERS	DESCRIPTION
278-291	84.7-88.7	Q.M., high propylitic and chlorite alteration, minor Py.
291-301	88.7-91.7	Q.M. (same as 262-278 ; 79.9-84.7)
-301	-91.7	E.O.H.

APPENDIX II DIAMOND DRILL HOLE ASSAYS

SAMPLE DESCRIPTION

ROCK = RX SOIL = SL

SILT = ST ORGANIC = OR

BATCH NO. _____

J P-1

SAMPLE NUMBER	SAMPLE DESCRIPTION	ASSAY INSTRUCTIONS Cu. ppm	No. ppm			REMARKS
125-130	Core	18	6			
140-145		11	9			
150		16	28			
155		20	9			
160		19	8			
165		20	16			
170		23	54			
175		31	94			
180		21	49			
185		18	86			
190		18	65			
195		26	31			
200		21	45			
205		20	11			
210		10	6			
215		9	4			
220		10	5			
225		7	4			
235		7	2			
240		10	2			
245		14	18			
250		12	5			
255		9	11			
260		10	13			
265		10	7			
270		21	13			
275		8	1			
280		13	3			
285-290		43	2			
295		10	7			
300		7	5			
305		9	3			
310		10	4			
315		9	5			

SAMPLE DESCRIPTION

ROCK = RX SOIL = SL

SILT = ST ORGANIC = OR

BATCH NO. _____

JP-1

SAMPLE NUMBER	SAMPLE DESCRIPTION	ASSAY INSTRUCTIONS Cu. ppm	Mo. ppm			REMARKS
320	Core	7	3			
325		10	2			
330		7	2			
335		10	3			
340		14	3			
345		8	2			
350		10	2			
355		15	4			
360		12	5			
365		12	5			
410-415		25	7			
420		14	15			
425		19	14			
430		17	9			
435		17	33			
440		18	11			
445		17	6			
450		19	11			
455		15	11			
460		17	10			
465		12	10			
470		15	16			
475		13	14			
480		19	9			

ROCK = RX SOIL = SL

SILT = ST ORGANIC = OR

PATCH NO. _____

JP-4

SAMPLE NUMBER	SAMPLE DESCRIPTION	ASSAY INSTRUCTIONS Cu. ppm	Mo. ppm			REMARKS
15-20	Core	29	9			
20-25		28	15			
25-30		25	13			
30-35		26	13			
35-40		24	30			
40-45		21	38			
45-50		25	47			
50-55		21	38			
55-60		28	26			
60-65		26	26			
65-70		23	20			
70-75		30	301			
75-80		22	40			
80-85		38	23			
85-90		14	32			
90-95		17	5			
95-100		15	4			
100-105		21	25			
105-110		22	15			
110-115		11	32			
115-125		19	16			
125-130		13	11			
130-135		21	9			
135-140		21	4			
140-145		12	49			
145-150		15	10			
150-155		32	10			
155-160		36	12			
160-165		34	10			
165-170		24	14			
170-175		35	14			
175-180		65	28			
180-185		36	15			
185-190		31	20			
190-195		26	14			

ROCK = RX SOIL = SL

SILT = ST ORGANIC = OR

BATCH NO. _____

JP-4

SAMPLE NUMBER	SAMPLE DESCRIPTION	ASSAY INSTRUCTIONS Cu. ppm	Mo. ppm			REMARKS
195-200	Core	37	14			
200-205		40	5			
205-210		45	6			
210-215		40	11			
215-220		22	14			
220-225		39	6			
225-230		92	110			
230-235		40	9			
235-240		29	4			
240-245		42	5			
245-250		31	9			
250-255		29	7			
255-260		13	2			
260-265		18	3			
265-270		14	3			
270-275		11	5			
275-280		14	3			
280-285		15	4			
285-290		9	5			
290-295		20	9			
295-301		14	5			

APPENDIX III STATEMENT OF QUALIFICATION

STATEMENT OF QUALIFICATIONS

I, Arnold R. Pollmer of Peachland, Province of British Columbia, do certify that:

1) I have been employed as a geologist by Noranda Mines Limited from December 1973 to June 1977, I have been employed as the senior exploration geologist by Brenda Mines Ltd. since June 1977.

2) I am a graduate of the University of Wisconsin with a Bachelor of Science Degree in Geology (1972).

3) I am a member of the Canadian Institute of Mining and Metallurgy.

4) I am a fellow of the Geological Association of Canada.

Arnold R. Pollmer
Senior Exploration Geologist
Brenda Mines Ltd.

CERTIFICATE

I, Paul Bankes, of the town of Peachland, Province of British Columbia, do hereby certify that:

1. I am a geologist residing in Peachland with Post Office Box 9 as my address.
2. I am a graduate of the University of Western Ontario, with a BSc in geology (1978).
3. I have worked within the profession for four field seasons.

Paul C. Bankes

P. C. Bankes, BSc

Dec 10 / 78

Date

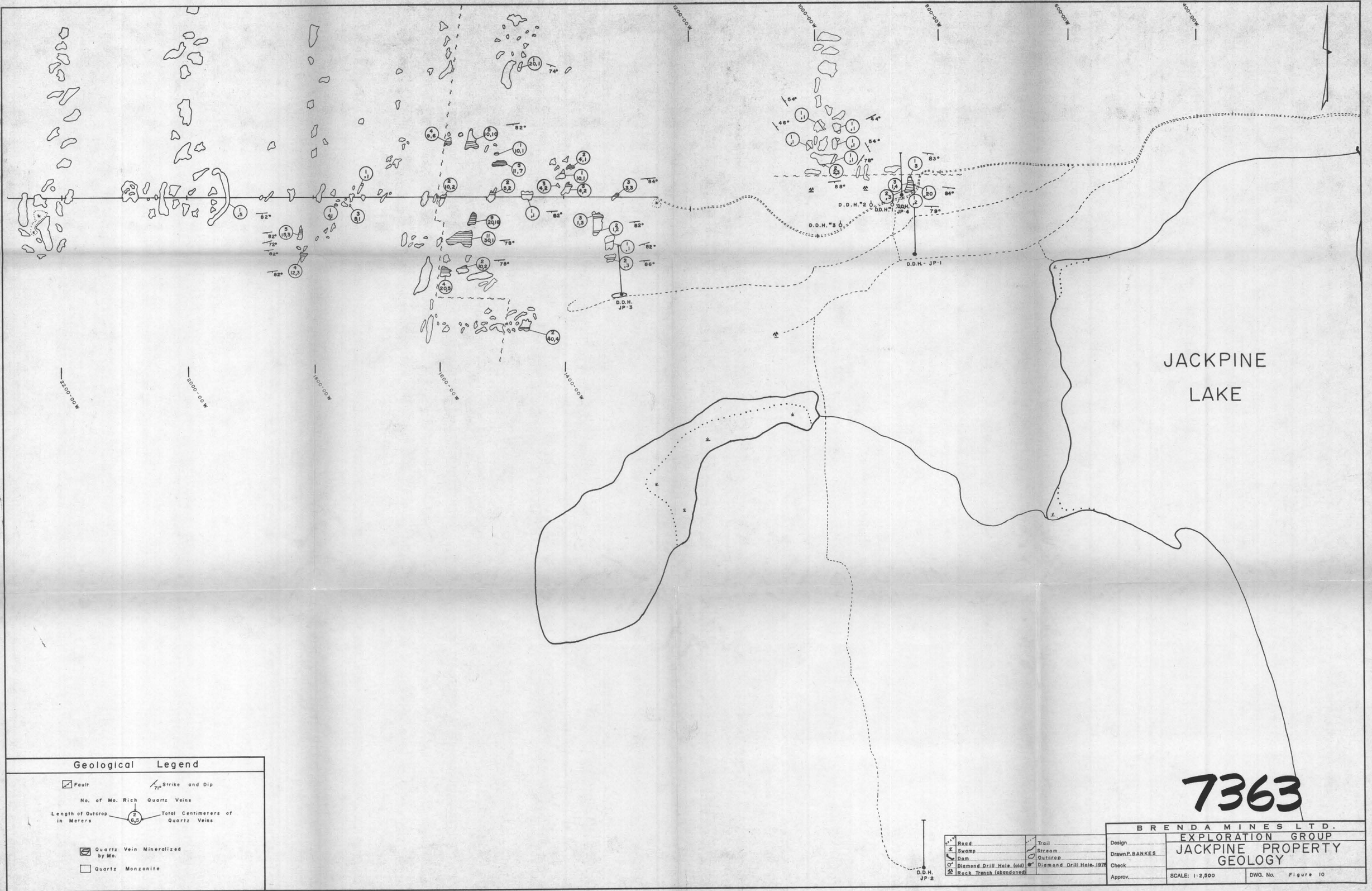
APPENDIX IV STATEMENT OF COSTS

STATEMENT OF COSTS

Work Description	Supplies	Labour	Contract
Line Cutting/Survey		1855.93	
Geochemical Survey	104.00	3148.85	
Geophysical Survey	27.50	227.26	
Geological Mapping		2207.91	
Assay Costs		6878.30	
Diamond Drilling			23,391.89
Drafting		125.00	
	$131.50	$14,443.25	$23,391.89

TOTAL EXPENSES 1978 = $37,966.64

TOTAL ASSESMENT RECORDED 1979 = $14,400



Geological Legend

- Fault
- 71° Strike and Dip
- No. of Mo. Rich Quartz Veins
- Length of Outcrop in Meters — 2 / 6.5 — Total Centimeters of Quartz Veins
- Quartz Vein Mineralized by Mo.
- Quartz Monzonite

Road	Trail
Swamp	Stream
Dam	Outcrop
Diamond Drill Hole (old)	Diamond Drill Hole- 1976
Rock Trench (abandoned)	

7363

BRENDA MINES LTD.

EXPLORATION GROUP

JACKPINE PROPERTY GEOLOGY

Design

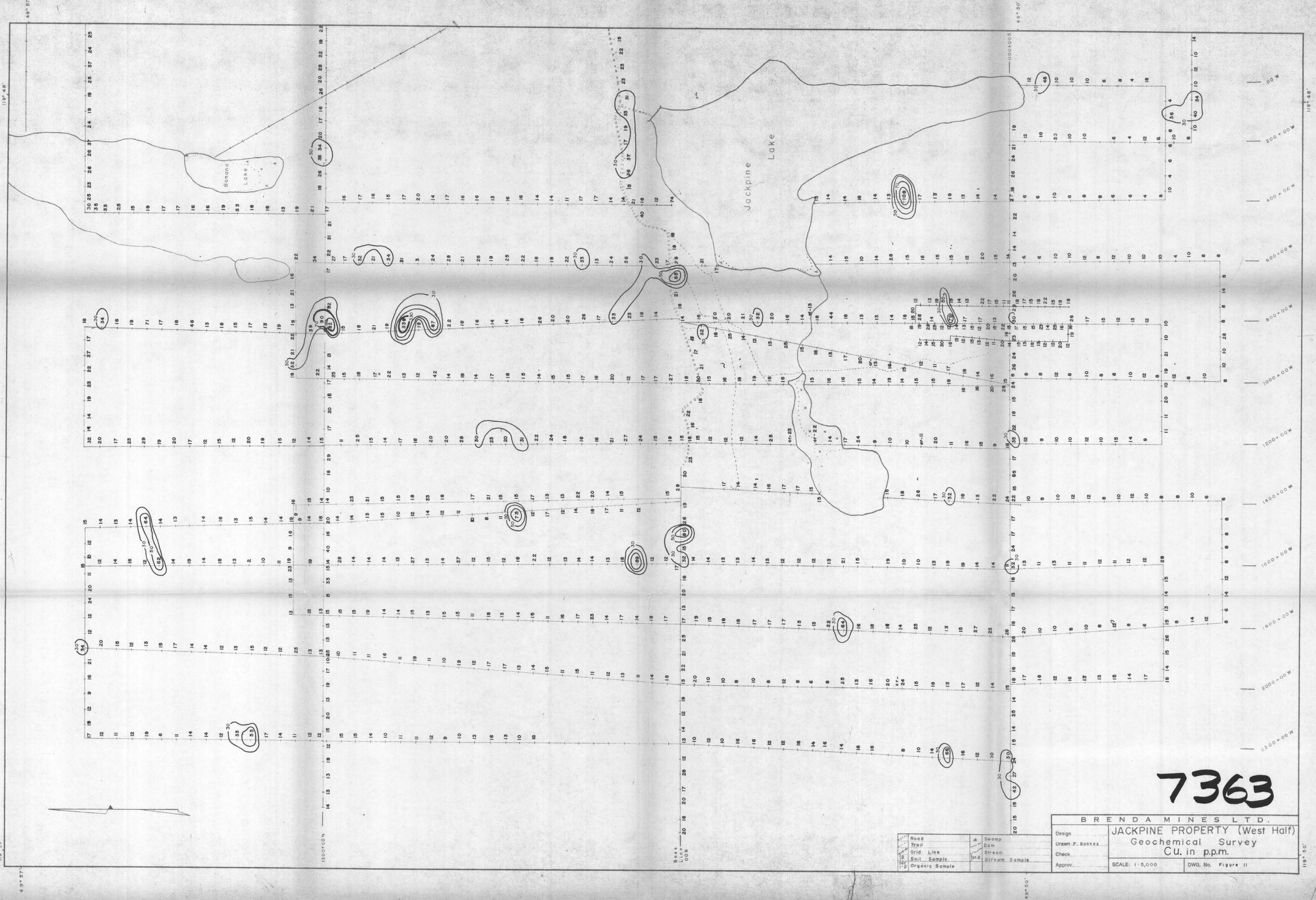
Drawn P. BANKES

Check

Approv.

SCALE: 1:2,500

DWG. No. Figure 10



7363

BRENDA MINES LTD.

JACKPINE PROPERTY (West Half)

Geochemical Survey

Cu. in p.p.m.

Design

Drawn P. Bankes

Check

Approv.

SCALE: 1:5,000

DWG. No. Figure 11

119°46'

49°51'

49°50'

150+00N

100+00E

200+00E

300+00E

400+00E

500+00E

600+00E

700+00E

800+00E

900+00E

1000+00E

Jackpine Lake

Road	Swamp
Trail	Dam
Grid Line	Stream
Soil Sample	Stream Sample
Organic Sample	

BRENDA MINES LTD.

JACKPINE PROPERTY (East Half)
Geochemical Survey
Cu. in p.p.m.

Design	
Drawn P. Bankes	
Check	
Approv.	
SCALE: 1:5000	DWG. No. Figure 11

Bonanza Lake

Jackpine Lake

Base Line 0+00N

1200+00N

1400+00W

1600+00W

1800+00W

2000+00W

2200+00W

7363

Road	Swamp
Trail	Dam
Grid Line	Stream
Soil Sample	Stream Sample
Organic Sample	

BRENDA MINES LTD.

JACKPINE PROPERTY (West Half)

Geochemical Survey

Zn. in p.p.m.

Design

Drawn P. Bankes

Check

Approv.

SCALE: 1:5,000

DWG. No. Figure 12

49° 51'

119° 46'

150+00N

200+00E

180+00E

160+00E

140+00E

120+00E

100+00E

80+00E

60+00E

40+00E

20+00E

00W

Jackpine Lake

7363

Road	Swamp
Trail	Dam
Grid Line	Stream
12 Soil Sample	ST-2 Stream Sample
OR 2 Organic Sample	

BRENDA MINES LTD.

Design	JACKPINE PROPERTY (East Half)
Drawn P. Bankes	Geochemical Survey
Check	Zn. in p.p.m.
Approv.	SCALE: 1:5,000 — DWG. No. Figure 12

Banana Lake

Jackpine Lake

49°57'

49°50'

119°48'

119°50'

1100+00S

0+00

200+00S

400+00S

600+00S

800+00S

1000+00S

1200+00S

1400+00W

1600+00W

1800+00W

2000+00W

2200+00W

1200+00N

Base Line 00N

7363

	Road		Swamp
	Trail		Dam
	Grid Line		Stream
12	Soil Sample	S1-2	Stream Sample
OF-2	Organic Sample		

BRENDA MINES LTD.

Design	JACKPINE PROPERTY (West Half)
Drawn P. Bankes	Geochemical Survey
Check	Mo. in p.p.m.
Approv.	SCALE: 1"=5,000 / DWG. No. Figure 13

119°46'

49°51'

49°50'

150+00N

100+00N

50+00N

00

200+00E

400+00E

600+00E

800+00E

1000+00E

1200+00E

1400+00E

1600+00E

1800+00E

2000+00E

2200+00E

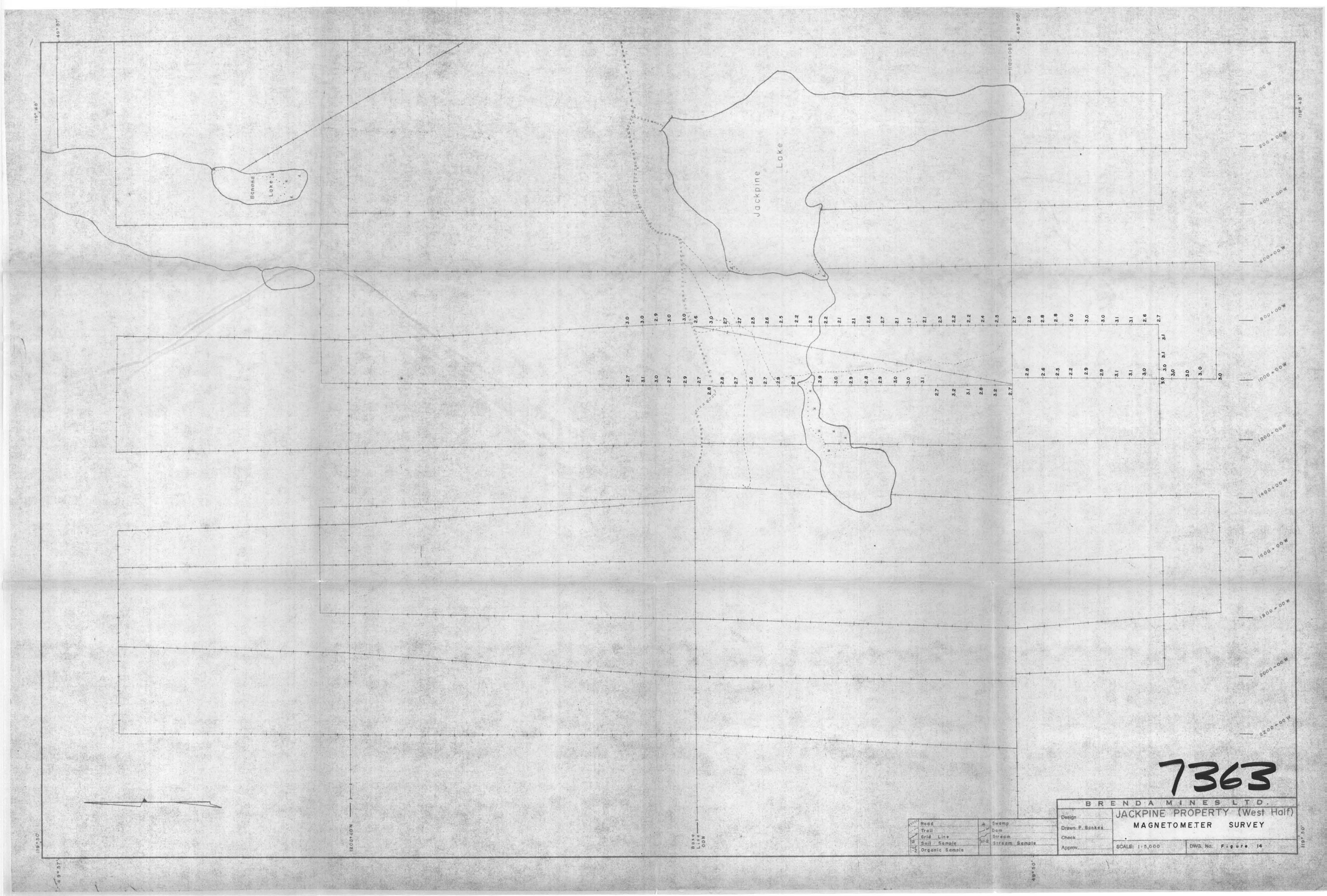
Jackpine Lake

7363

Road		Swamp	
Trail		Dam	
Grid Line		Stream	
Soil Sample	T2	Stream Sample	T61-2
Organic Sample	T or -2		

BRENDA MINES LTD.

Design	JACKPINE PROPERTY (East Half)
Drawn P. Bankes	Geochemical Survey
Check	Mo. in p.p.m.
Approv.	SCALE: 1:5000 — DWG. No. Figure 13


Jackpine Lake
Bonanza Lake
1200+00N
Base Line 00N
00 W
200+00W
400+00W
600+00W
800+00W
1000+00W
1200+00W
1400+00W
1600+00W
1800+00W
2000+00W
2200+00W
Road
Trail
Grid Line
Soil Sample
Organic Sample
Swamp
Dam
Stream
Stream Sample
BRENDA MINES LTD.
JACKPINE PROPERTY (West Half)
MAGNETOMETER SURVEY
Design
Drawn P. Bankes
Check
Approv.
SCALE: 1:5,000
DWG. No. Figure 14

7363