

BRENDA MINES LTD.  
EXPLORATION GROUP

Report on the  
SOIL GEOCHEMISTRY and GEOLOGY (1980)  
over the  
McCALL PROPERTY

Latitude 49° 46' 20", Longitude 119° 47' 20"  
Osoyoos Mining Division  
N.T.S. 82E/13

Del W. Ferguson

December 1980

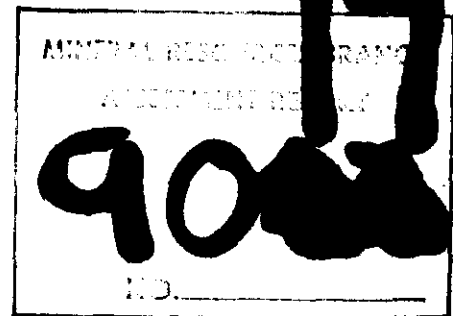


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## I INTRODUCTION

### a) History of Property

The MacCall #1 claim was staked by Brenda Mines Ltd. over a part of the previous Collex Group of claims (1967) in the spring of 1979. The adjoining F & B claims to the south of this property was optioned to Brenda Mines Ltd. in the summer of 1980. This area has been previously known as the Zn claims, operated by Vega Mines and as the Lakeview property, held under joint ownership by R. Fulks and C. MacDonald. It is presently owned by R. Fulks and C. Brett of Kelowna, B.C.

### b) Topography and Vegetation

All claims are situated on the hillsides immediately west of Peachland, B.C. The MacCall #1 claim is situated over rolling hilltop terrain, while the F & B claims are situated to the south of this, over relatively steep south-facing slopes. Vegetation is generally sparse, consisting of well-spaced Pond-erosa pines. Intermittent, densely covered, swampy areas are situated in local topographic depressions throughout the property.

## II PROPERTY DESCRIPTION

### a) Location and Access

The McCall property is situated approximately 4 kilometres west of Peachland, B.C. It is bounded on the south by the Brenda Mines access road and on the north by McCall Lake. Access to the property is via two gravel roads which branch

north off the Brenda Mines road. One road supplies access to the MacCall #1 claim and northern F & B claims, while the other provides access to the southern-most F & B claims.

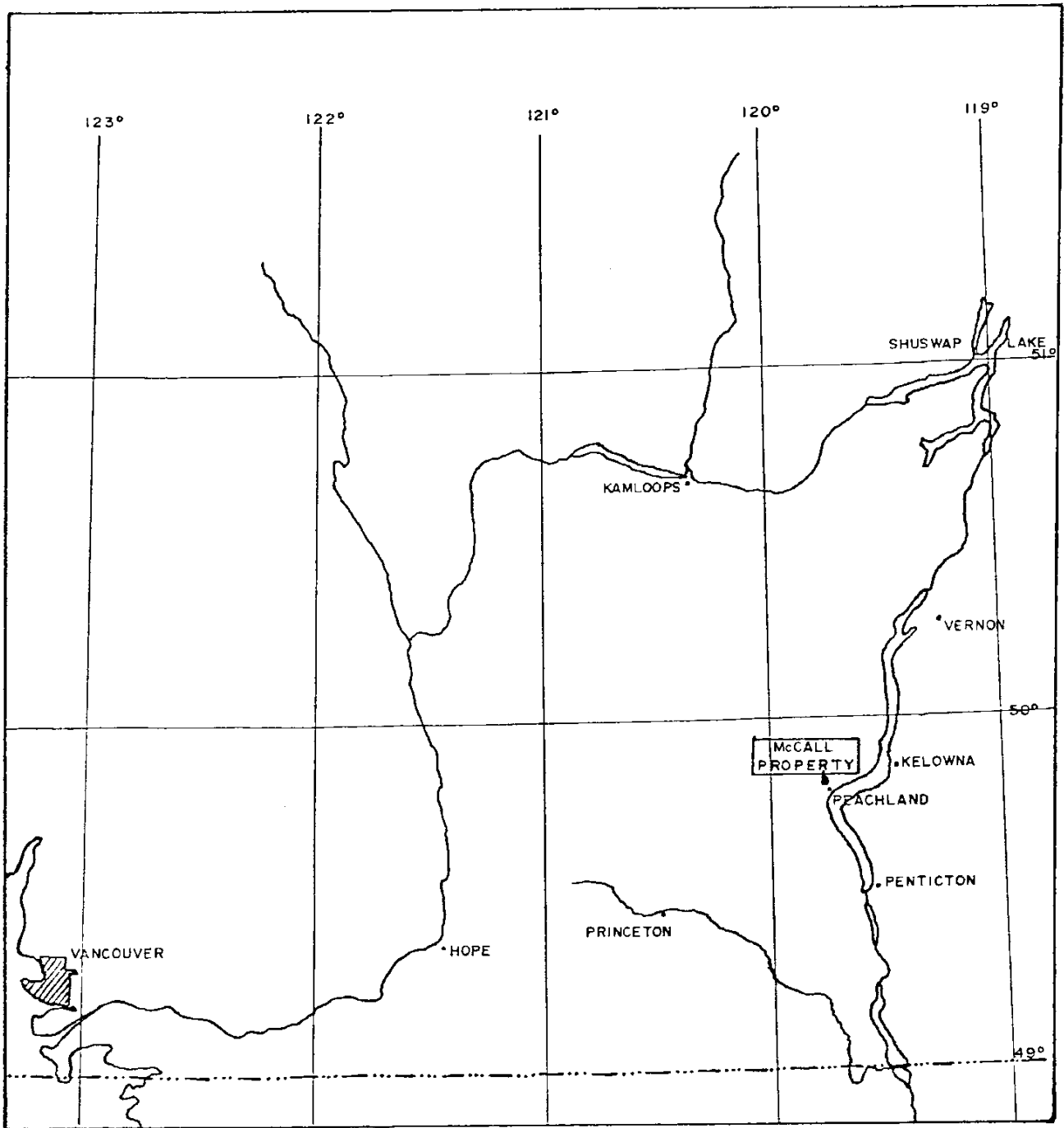
b) Claim Inventory

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Assessment Date</u>
MacCall #1	787	6 MG	Apr. 18/79	May 2/81
F & B No. 1	744	1/2P	May 22/79	May 22/81
F & B No. 2	745	1/2P	May 22/79	May 22/81
F & B No. 3	1034	1/2P	Mar. 26/80	Apr. 25/81
F & B No. 4	1035	1/2P	Mar. 26/80	Apr. 25/81
F & B No. 7	1070	1/2P	May 2/80	May 15/81
F & B No. 8	1073	1/2P	May 2/80	May 15/81
F & B No. 9	1071	1/2P	May 2/80	May 15/81
F & B No. 10	1074	1/2P	May 2/80	May 15/81
F & B No. 11	1075	1/2P	May 15/80	May 15/81
F & B No. 12	1072	1/2P	May 15/80	May 15/81

III REGIONAL SETTING

The McCall property is underlain predominantly by granodiorites and diorites referred to locally as the Okanagan Intrusives. These have intruded volcanic rocks and metasediments of the Nicola Group. Younger syenite and quartz monzonite intrusives occur locally throughout the region.

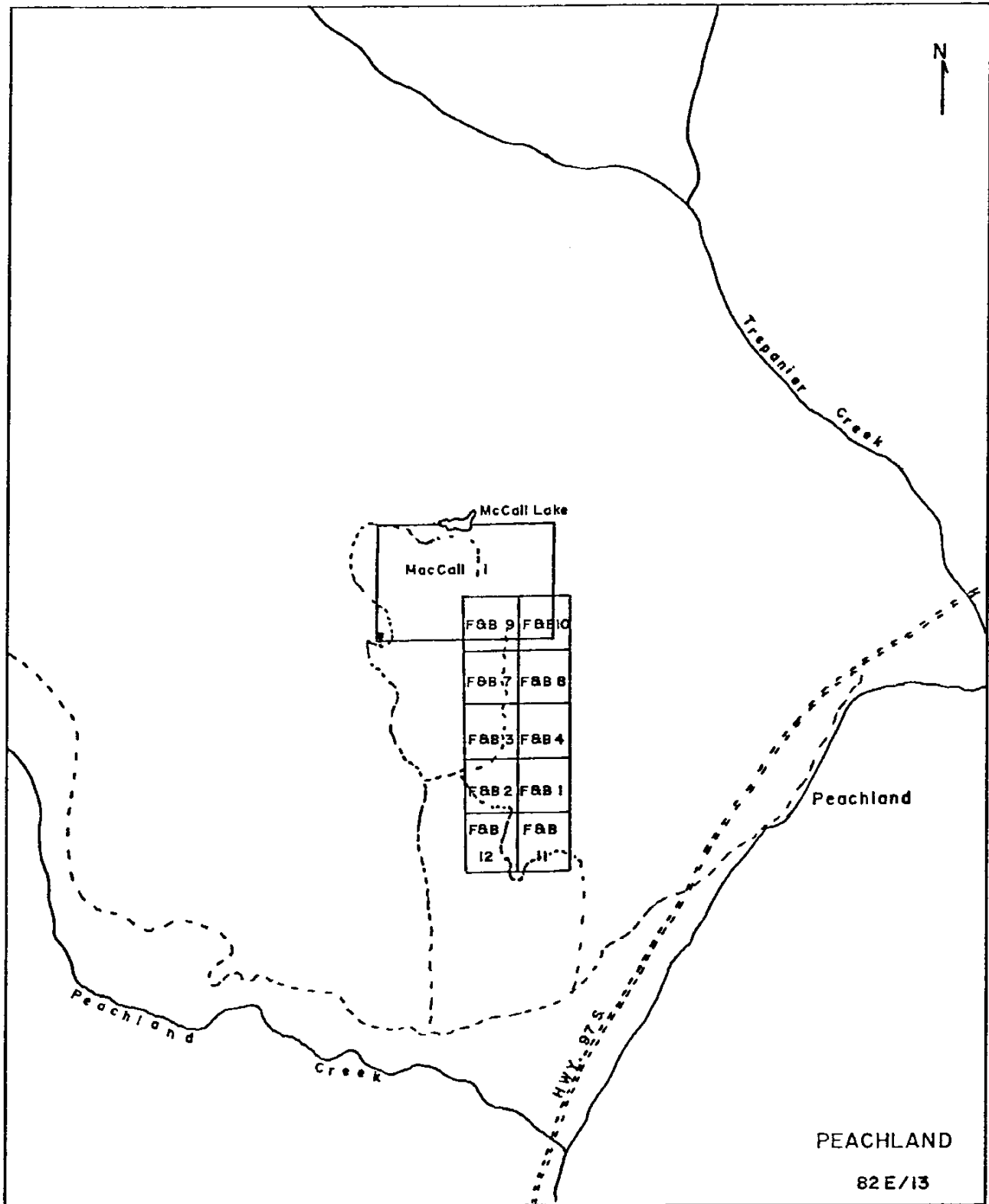
Figure 1 - Location Map



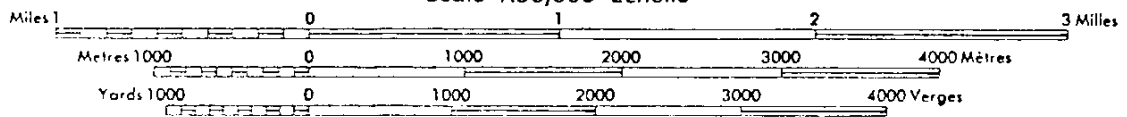
SCALE 1:2 000 000

KILOMETRES 50 0 50 100 150 200 KILOMETRES

Figure 2 - Claim Map



Scale 1:50,000 Échelle



IV WORK PROGRAM DESCRIPTION

a) Geochemical Survey

1) Description

A geochemical soil survey over a large part of the McCall property was accomplished during the summer of 1980. A total of 134 soil samples were collected for analysis. Samples were collected at 100 metre intervals along established north-south grid lines. Mattocks were implemented to obtain soils from Bf horizons where possible. Samples were sent to the Brenda Mines Assay Lab for preparation and analysis for the elements Cu, Mo, Pb, Zn (Appendix 1).

2) Treatment of Results

All element values have been plotted on separate map sheets and contoured accordingly, using background and respective anomalous values, previously obtained over the region. These values are:

	<u>Background</u>	<u>Low Anomalous</u>	<u>Anomalous</u>
Cu	29	46	74
Mo	3	5	12
Pb	18	40	89
Zn	112	225	452

3) Discussion of Results

Pb and Zn soil values appear to be relatively strong and co-existent throughout the property. A large area of high corresponding Pb-Zn anomalies occurs in the vicinity of the F & B

claims. This anomaly centres over granodiorite outcrop adjacent to its contact with syenite and quartz monzonite. Low anomalous values occur peripheral to this "high", extending and open to the southwest and northeast.

Corresponding moderate anomalous values of Pb-Zn cover a large area of granodiorite over the western portion of the MacCall #1 claim. Zn values extend over a much larger area than do Pb values. This behaviour is consistent with the fact that Zn is generally a more mobile element than Pb.

A weak anomalous zone of Pb is present over the granodiorite in the extreme eastern portion of the MacCall #1 claim. Few isolated low anomalous Pb and Zn anomalies occur over the property.

Cu and Mo values are generally low over the property. Only isolated anomalies occur over the granodiorite, and out of these, only a few Cu anomalies show any significant values.

#### 4) Conclusions

Two corresponding Pb-Zn anomalous areas occur in: 1) the southeast of the F & B claims and 2) the west of the MacCall #1 claim. Cu and Mo soil geochemistry over the property appears to be of little significance. A geochemical survey should be run over the eastern half of the F & B claims in order to complete this study.



b) Geological Survey

1) Geology

A wide-spaced, reconnaissance-type geological survey was run over the McCall property during the summer of 1980. Granodiorite, exhibiting moderate to strong propylitic alteration (chlorite-epidote-calcite), outcrops over most of the property. Locally, the granodiorite is often strongly mafic in composition, exhibiting a closer affinity to diorite. This unit is bounded on the north and northeast by older Nicola Group assemblages, consisting predominantly of andesite volcanic rocks. Rhyolite volcanics and metasediments, of this group also occur in the northern portion of the property.

In the south end of the property, dykes of amphibolite to gabbro composition cut through the granodiorite unit. Small syenite and quartz monzonite plugs are present in the southern-most claims. Two other small felsic plugs have been observed in the northern half of the property.

2) Mineralization

The strongest and largest area of mineralization noted to date occurs in the southern-most F & B claims. This zone, approximately 100 metres wide by 300 metres in length, encompasses an area of granodiorite, exhibiting strong propylitic alteration. Amphibolite units are present along the north side of the body and the south side is bounded by younger syenite intrusions. In order of abundance, the minerals present are; sphalerite, chalc-

pyrite, pyrite, malachite, galena and molybdenite.

Two other showings located within the granodiorite occur in the central area of the MacCall #1 claim and exhibit small amounts of chalcopyrite and molybdenite. Coincidentally, a small felsic plug is also present nearby.

3) Conclusions

Mineralization appears to be associated with areas of strong propylitic alteration, and may be a result of hydrothermal activity associated with late stage felsic intrusives.

## APPENDICIES

APPENDIX I

BRENDA MINES LTD.  
ASSAY LABORATORY

PREPARATION of SOILS and SILTS for GEOCHEMICAL ANALYSIS

1. Empty soil sample into the pan and then place the sample packet into the pan with the sample.
2. Place the pan containing the sample into the oven (Temp=105 C) and leave until dry approx. 2 hours.
3. Remove from the oven when dry and remove rocks and twigs etc.
4. Break up the clay lumps with a rubber bung and then transfer the sample to an 80 mesh screen.
5. Screen approx. 50 - 100 grams of sample through the screen and transfer to the original packet and seal.
6. Discard the +80 mesh fraction of the sample.

ANALYSIS by A.A. for Cu, Pb, Zn, Ag and Mo.

1. Weigh 2.00 GM on the top pan balance into a 150 ML beaker (check that beaker No. is the same as written on work sheets)
2. Add 15 MLS Nitric Acid, cover with watchglass and heat on low heat until brown Nitrous fumes are gone.
3. Remove beakers from hot plate, cool for 5 minutes.
4. Add 10 ML Hydrochloric Acid. Place on hot plate. When all brown Nitrous fumes are gone, remove watchglasses and take just to dryness on a low plate.
5. Remove from plate, cool, add 20 MLS distilled water, 5 MLS Conc. Hydrochloric Acid and boil salts into solution.
6. Cool in water bath, when cold transfer to 100 MLS Volumetric flask, add 1 MLS Superfloc solution and dilute to 100 MLS with distilled water.
7. Mix thoroughly and then transfer to original beaker.
8. When all samples ready, transfer to A.A. room for reading.
9. If Mo is required, 10.00 MLS of this solution is transferred to a test tube and 1.00 MLS of  $ALC_3$  solution added.

Statement of Costs

Labour

1 Geologist - 7 days @ \$90.00/day	\$630.00
1 Technician - 17 man days @ \$60.00/day	1,020.00

Food and Accommodation

Food - \$10.00/day/man x 8 days x 3 men	240.00
Accommodation - \$20.00/day/man x 8 days x 3 men	480.00

Transportation

Truck rental - two 4 x 4's @ \$16.60/day/truck x 8 days	531.20
Fuel & maintenance - \$10.00/day/vehicle x 8 days	160.00

Field Supplies

Location tags - 134 @ \$0.04/tag	5.36
Flagging - 13 rolls @ \$0.99/roll	12.87
Topo thread - 6 spools @ \$6.96/spool	41.76
Soil sample bags - 134 @ \$0.06/bag	8.04

Assaying

134 soil samples @ \$7.00/sample	938.00
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Report Preparation

Drafting - 3 days @ \$90.00/day	270.00
Report - 2 days @ \$90.00/day	180.00
Typing - 1 day @ \$60.00/day	<u>60.00</u>

Total            \$4,577.25

Cost Breakdown

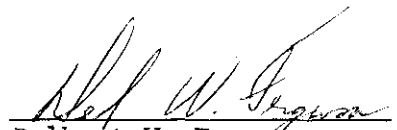
MacCall #1 Claim	- \$1,200.00	- 2 yrs.
F & B 1	- 400.00	- 3 yrs.
F & B 2	- 400.00	- 3 yrs.
F & B 3	- 300.00	- 3 yrs.
F & B 4	- 300.00	- 3 yrs.
F & B 7	- 300.00	- 3 yrs.
F & B 8	- 300.00	- 3 yrs.
F & B 9	- 300.00	- 3 yrs.
F & B 10	- 300.00	- 3 yrs.
F & B 11	- 300.00	- 3 yrs.
F & B 12	- <u>300.00</u>	- 3 yrs.

\$4,400.00

STATEMENT OF QUALIFICATIONS

I, Delbert W. Ferguson of Peachland, Province of British Columbia, do certify that:

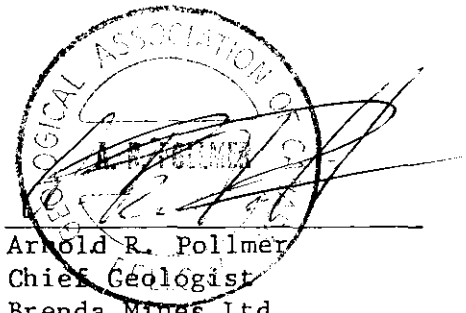
- 1) I am presently employed as an exploration geologist by Brenda Mines Ltd.
- 2) I am a graduate of the University of Western Ontario with an Honours Bachelor of Science Degree in geology (1979).

  
Delbert W. Ferguson  
Exploration Geologist  
Brenda Mines Ltd.

STATEMENT of QUALIFICATIONS

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

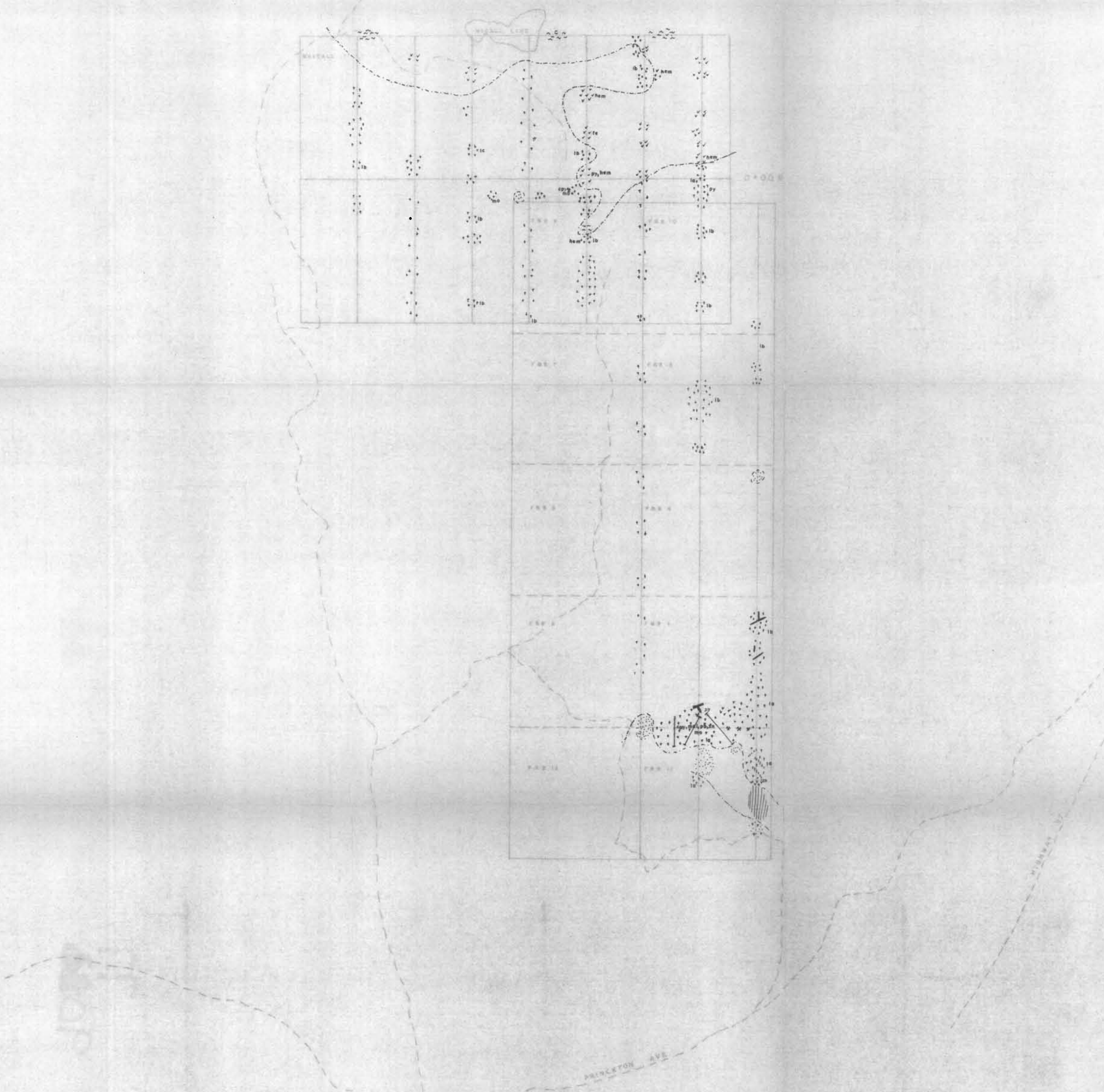
- 1) I have been employed as a geologist by Noranda Mines Limited from December 1973 to June 1977; I am presently employed as the chief geologist by Brenda Mines Ltd.
- 2) I am a graduate of the University of Wisconsin with a Bachelor of Science Degree in Geology (1972).
- 3) I am a member of the Canadian Institute of Mining and Metallurgy.
- 4) I am a fellow of the Geological Association of Canada.



Arnold R. Pollmer  
Chief Geologist  
Brenda Mines Ltd.



0+000 1+000 2+000 3+000 4+000 5+000 6+000 7+000 8+000

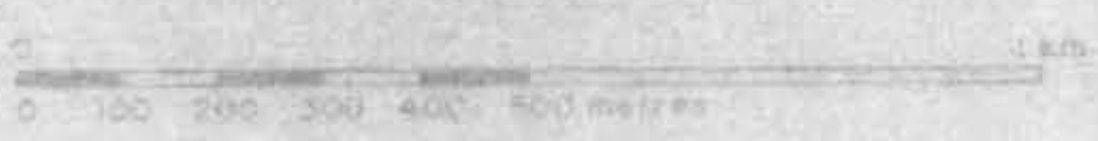


LEGEND

- Rock Types
- Volcanics (andesite-minor rhyolite)
  - Metasediments
  - Granodiorite (some Diorite)
  - Amphibolite and Gabbro Dykes
  - Quartz Monzonite
  - Syenite

- Alteration
- Propylitic - la strong lb moderate lc weak

- Symbols
- py pyrite
  - fe iron staining
  - hem hematite
  - spy chalcopyrite
  - mal malachite
  - mo molybdenite
  - pb lead (galena)
  - zn zinc (sphalerite)
  - - - assumed contact
  - o old workings
  - trench



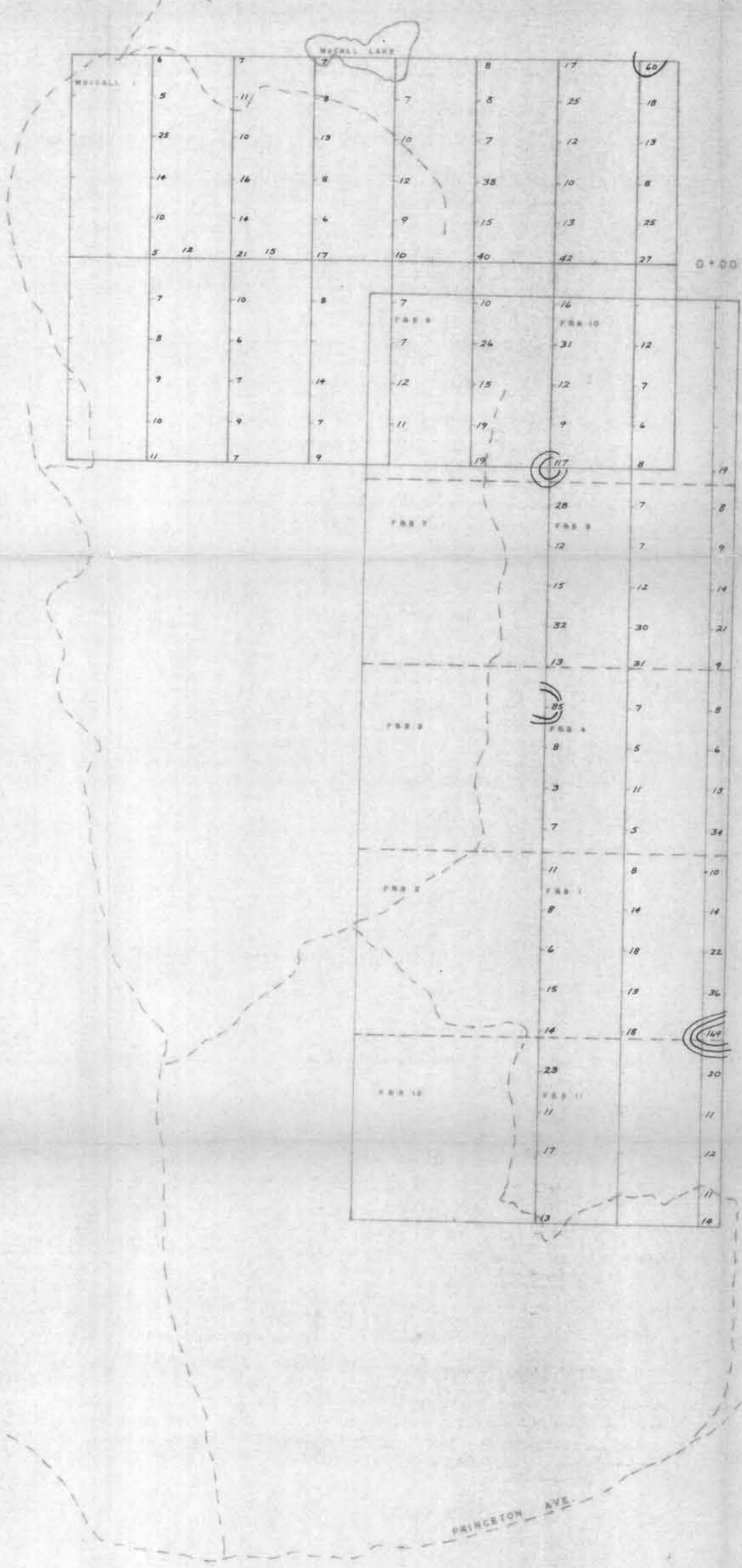
MINERAL REVENUE PLAN  
ASSESSMENT UNIT  
9022  
NO.

BRENDA MINES LTD  
EXPLORATION GROUP  
MCCALL PROPERTY  
GEOLOGY





0+00E 2+00E 4+00E 6+00E 8+00E 10+00E 12+00E 14+00E 16+00E

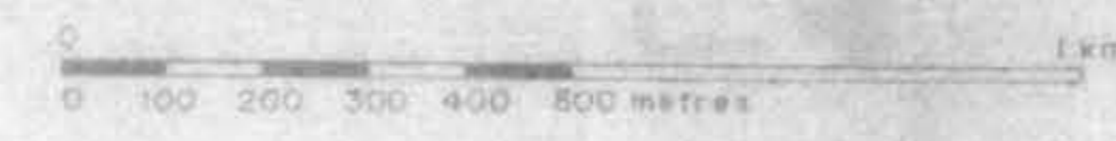


LEGEND

low anomalous (> 46 ppm)

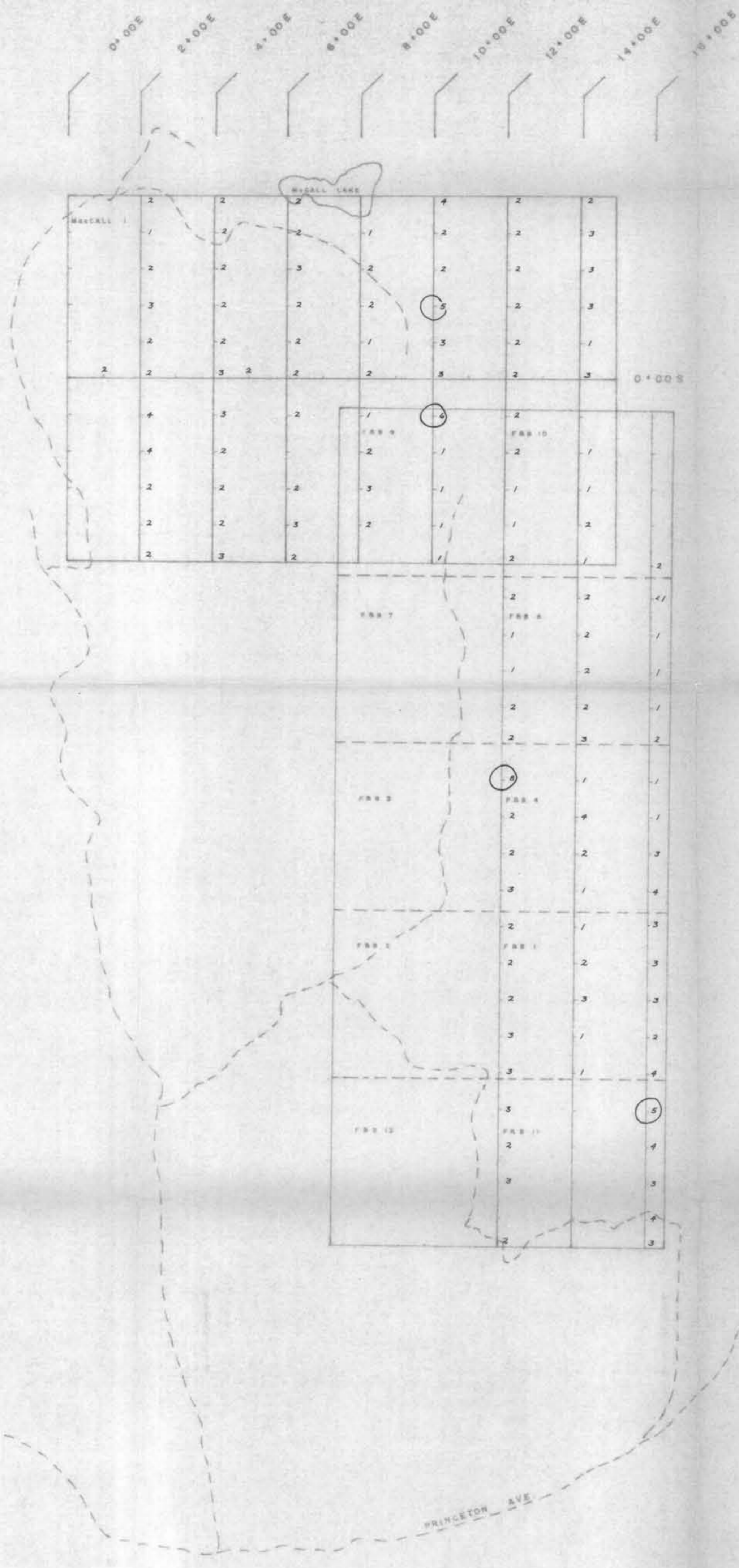
anomalous (> 74 ppm)

high anomalous (> 130 ppm)

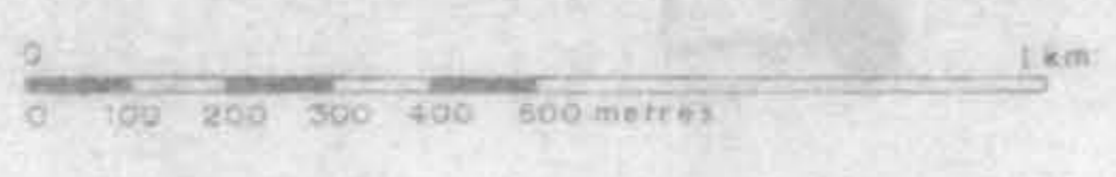


MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9077**  
NO

BRENDA MINES LTD  
EXPLORATION GROUP  
MCGILL PROPERTY  
GEOCHEM  
CU  
117600



LEGEND  
 low anomalous (< 5)  
 anomalous (> 12)

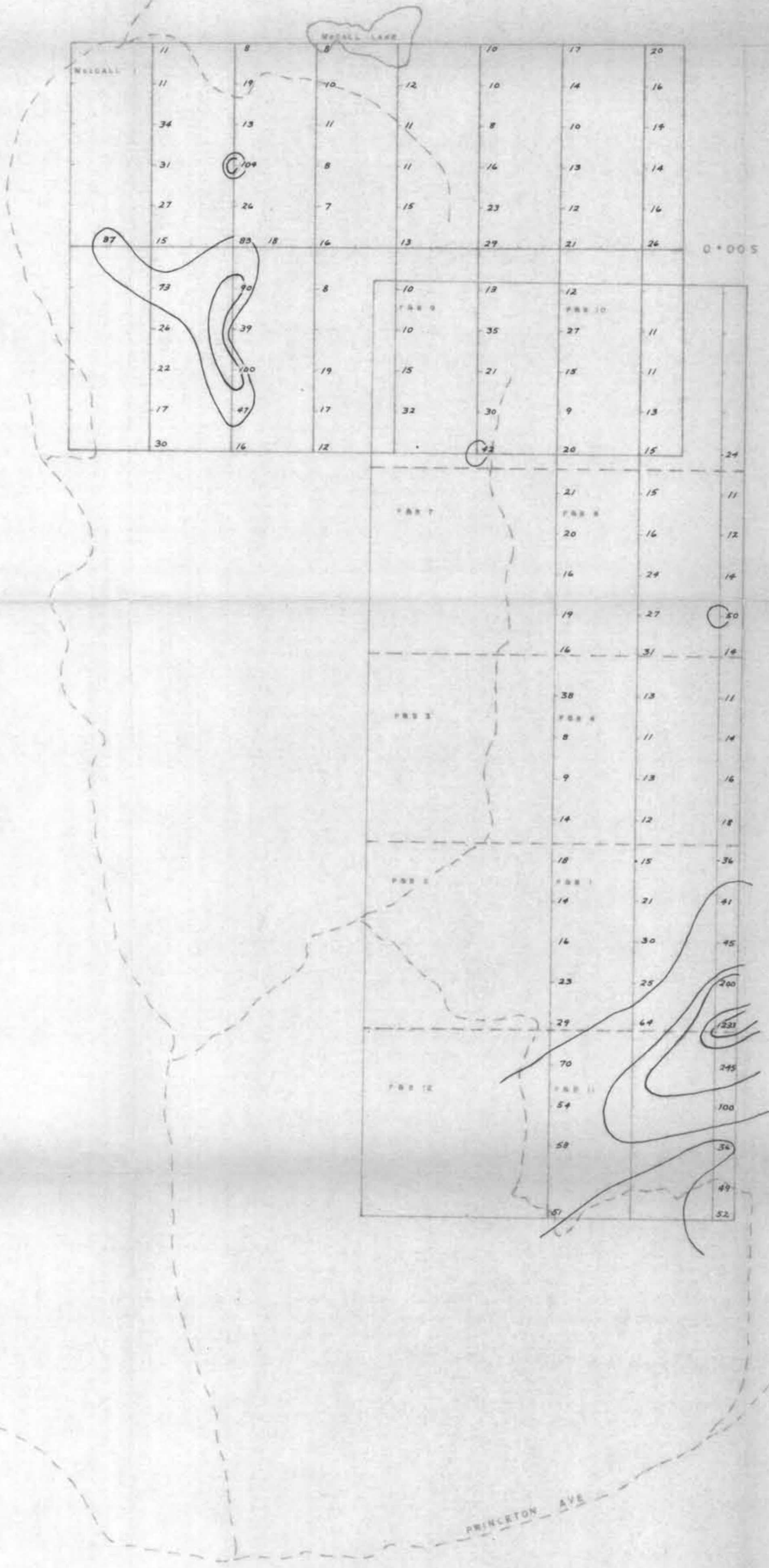


MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**9077**  
 NO.

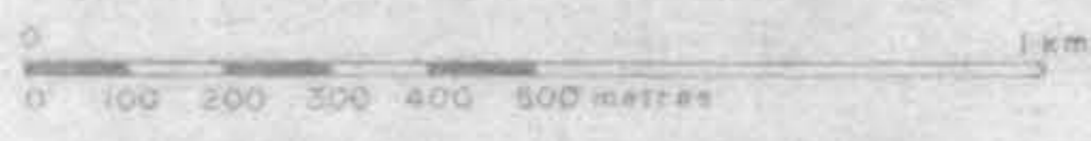
BRENDAMINES LTD.  
 EXPLORATION GROUP  
 MCCALL PROPERTY  
 GEOCHEM No  
 WA 17800



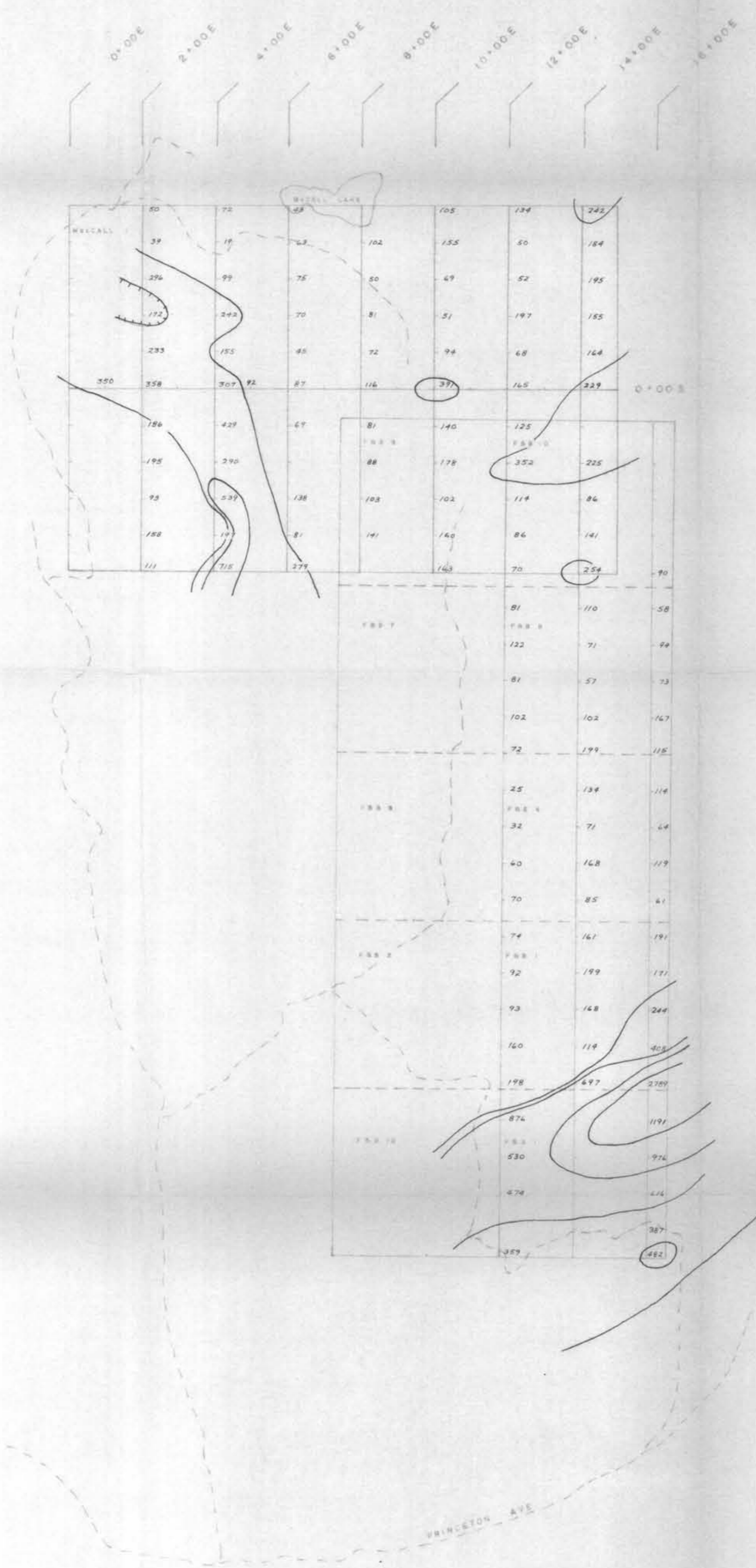
0+00E 2+00E 4+00E 6+00E 8+00E 10+00E 12+00E 14+00E 16+00E



LEGEND  
low anomalous (> 40 ppm)  
anomalous (> 89 ppm)  
high anomalous (> 187 ppm)



BRENDA MINES LTD.  
EXPLORATION GROUP  
MCCALL PROPERTY  
GEOCHEM Pb  
SCALE 1:7500  
MINERAL RECORD NO. 9083  
ASSESSMENT DATE 11/11/04



LEGEND

low anomalous (>225 ppm)

anomalous (>452 ppm)

high anomalous (>906 ppm)



BRENDAMINES LTD  
 EXPLORATION GROUP  
 MICAL PROPERTY  
 GEOCHEM ZP  
 17895