

823715

REPORT

on the

OPAL 1 and 2 MINERAL CLAIMS

Record Numbers 6629 & 6630

DIXON LAKE AREA

KAMLOOPS MINING DIVISION

NTS ~~8~~M/4W

Lat. 51°08' Long. 199°51'

for

MICHAEL RESOURCES LTD.

Owner and Operator

by

JAY D. MURPHY, P. ENG.

Consulting Geological Engineer

1988-03-27

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INTRODUCTION

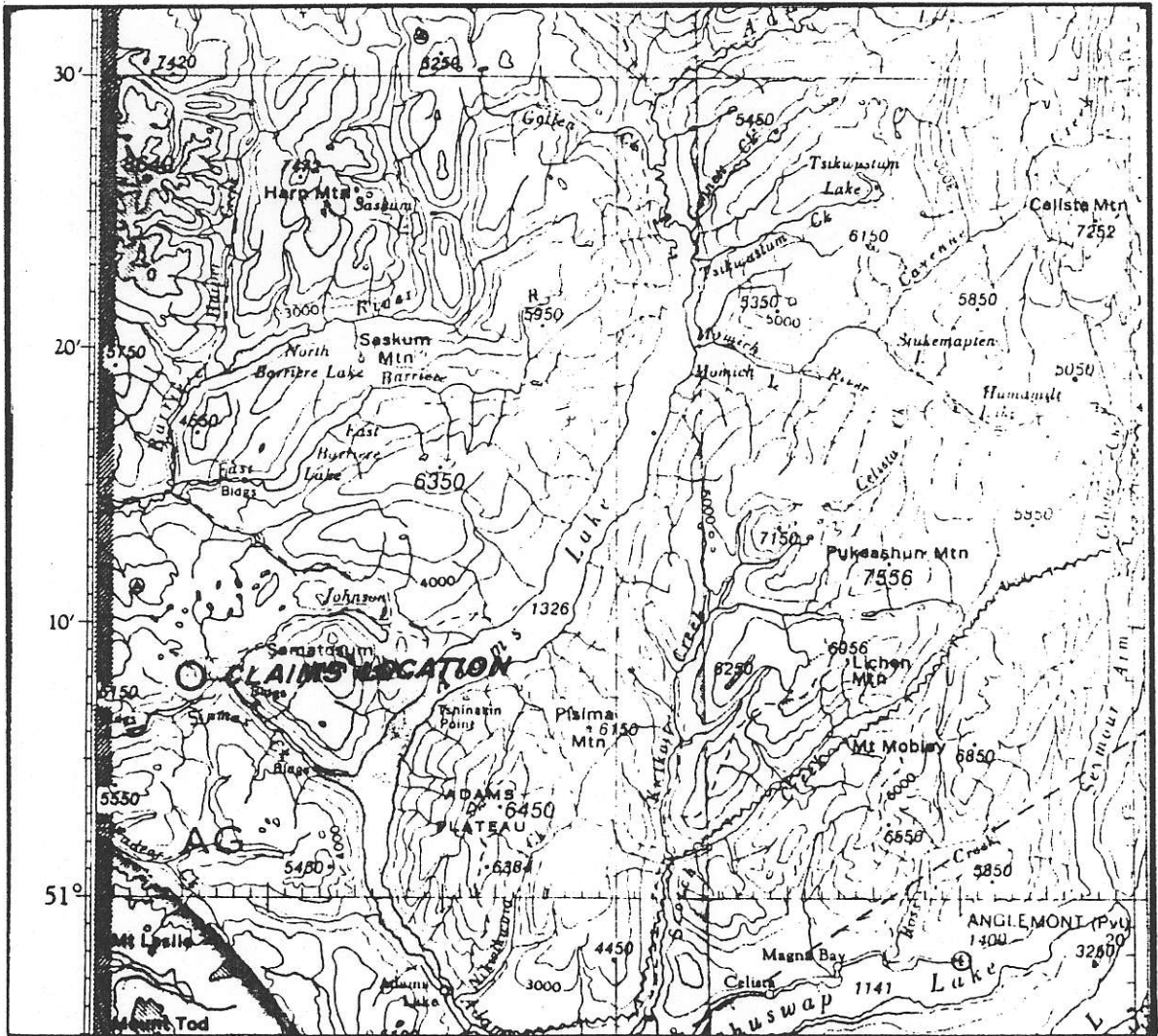
The Opal 1 and 2 Mineral Claims together form a rectangular block 2 km north-south by 4 km east-west. Claims are staked under the Modified Grid System and contain a total of 32 units, 20 in Opal 1 and 12 units in Opal 2 (Plate No. 2).

The claims are held by Larry McGregor (Opal 1) and Bob Cusson (Opal 2). Both claims expire on 1988-05-05.

The subject property is situated 55 km straight line distance northeast of Kamloops and 13 km west-northwest of Squam Bay on Adams Lake (Plate No. 1). The property is readily accessed by road from Kamloops via the Yellowhead Highway (No. 5) north to Louis Creek, then east on the paved Squam Bay road to the Dixon Creek road Junction. This secondary gravel road continues in a generally easterly direction about 10 km to the Opal claims. Total distance from Kamloops is approximately 80 km. Access within the claims is facilitated by old logging roads and new construction by Michael Resources Ltd.

The subject claims are situated on Dixon Ridge between elevations of 1190m and 1525m. Topography varies from gently sloping to moderately steep. The area is well forested with merchantable coniferous varieties and has been partially logged.

N ASTRONOMIC



SCALE 1: 800000



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OPAL 1 & 2 CLAIMS
KAMLOOPS M.D. 82M/4W

LOCATION MAP

J.D.M

88-03-29

PLATE NO. 1

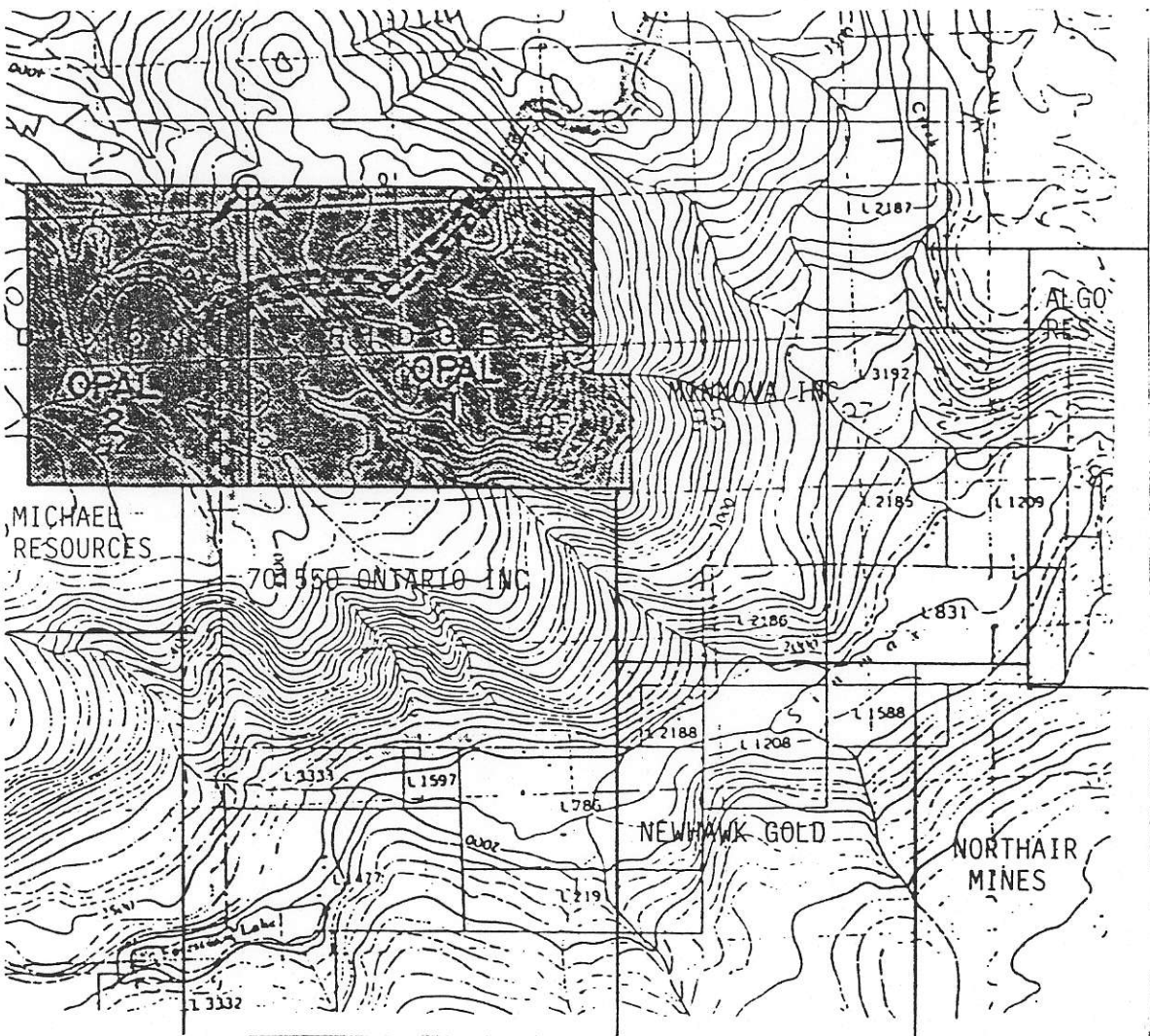
The claims area in general is well drained by several small unnamed streams flowing northerly to Dixon Creek, which in turn drains west and then north to the Barriere River. Some swampy areas do occur within the Opal claims.

Geologically, the subject claims are underlain by sedimentary and volcanic rocks of the Eagle Bay Formation, Devonian to Missippion in age. These rocks, and the contact between the principal units, strike northwest through the claims (Plate No.7).

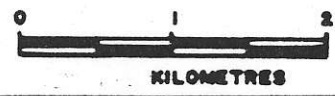
Clastic sediments, including sandstone, grit, quartzite and a variety of phyllites, lie on the southwest side of the contact, basaltic volcanics and greenstone with minor chert and quartzite to the northeast.

Structurally, the volcanic sequence occupies the core of an overturned isoclinal syncline having an intermediate dip to the northeast. The southwest limit of the folded volcanic unit is underlain structurally and stratigraphically by the clastic sedimentary sequence.

The purpose of this report is to (a) summarize exploration work to date on the Opal claims, (b) to reassess the economic potential of the property and (c) recommend additional work.



SCALE 1:80000



MICHAEL RESOURCES LTD.		
KAMLOOPS M.D. 82M/4W		
CLAIM MAP		
J.D.M	88-04-11	PLATE NO. 2

SUMMARY AND CONCLUSIONS

The volcanic sedimentary contact zone striking northwest through the Opal claims was the recommended focus for initial exploration. This work, primarily soil geochemistry, appears to enhance the potential importance of this zone and more closely define the most favourable horizon. Geochemical response in general appears to reflect geology rather than potentially economic mineralization. No significant anomalies in any metal were defined. However, scattered anomalous responses in lead, zinc and silver (Plates 3, 4 and 5) show a definite association with the contact between the southwest side of the meta tuff band and clastic metasediments. This zone should be given priority in future exploration work.

Geophysics is a suggested alternative to geochemistry as an exploration tool that may be more specific in delineating areas of sulphide mineralization. Recommended methods are VLF-EM and magnetics.

Some areas of anomalous zinc values in the northeast corner of the grid should be closed off by extending geochemical coverage to the east.

RECOMMENDATIONS

1. Extend the existing grid as shown on Plate No. 7 to accommodate subsequent geophysics and geochemistry.
2. Take geochemical soil samples to fill in unsampled gaps in the old grid lines plus the extended grid lines to provide complete coverage of the favourable zone outlined on Plate No. 7.
3. Conduct a VLF survey covering all lines within the designated zone using a Ronka 16 or equivalent instrument.
4. Conduct a ground magnetometer survey covering the designated area. A Geometrics nuclear precession reconnaissance instrument or equivalent is recommended.
5. Check any defined VLF anomalies by detailed soil geochemistry to provide confirmation and assign priorities.
6. Investigate defined targets in a systematic manner by bulldozer trenching and/or diamond drilling.

COST ESTIMATES

PHASE 1

1. Linecutting

5.7 km @ \$200/km \$ 1140.00

2. Geochemical Soil Sampling

190 sample collections @ \$5.00/sample \$ 950.00

190 sample preparations and analyses

(Zn, Pb, As) @ \$4.85/sample 945.75

Plot and interpret data 500.00

Total Geochemical Soil Sampling \$2395.75 \$ 2395.75

3. VLF-EM Survey

25.2 km @ \$150/km \$3780.00

Plotting and Interpretation 1500.00

Total VLF-EM Survey \$5280.00 \$ 5280.00

4. Magnetometer Survey

25.2 km @ \$125/km \$3150.00

Plotting and interpreting 1000.00

Total Magnetometer Survey \$4150.00 \$ 4150.00

5. Geochemical Follow Up

200 sample collections @ \$5.00/sample \$1000.00

200 sample preparation and analyses

(Au,Ag,Zn) @ \$9.60/sample 1920.00

Plotting and interpreting 1000.00

Total Geochemical Follow Up \$3920.00 \$ 3920.00

Total \$16385.75

15% Contingencies 2457.86

Total Phase 1 Costs \$18816.61

Say \$20,000

PHASE 2.

6. 200m BQ diamond drilling a \$100/m including engineering,
assaying and reporting @ \$100/m

\$20,000

TOTAL RECOMMENDATIONS

\$40,000

PROPERTY GEOLOGY

The sedimentary-volcanic contact previously discussed trends through the Opal 1 and 2 claims in a northwest direction for approximately three kilometres (Plates 3 to 7). A band of phyllite (meta tuff) 100 to 200 m wide occurs within the sediments and parallels the main contact zone at a distance of 200 to 500 metres. Blanchflower (1) reports repetitive occurrences of tuff and chert banding between the units, considered

favourable loci for the deposition of volcanogenic massive sulphides. All recommended work on the Opal claims was predicated on this concept since no economic mineralization has been found on the claims.

FIELD PROCEDURES

Exploration work completed on the Opal claims includes 5.4 km of baselines and tie lines, and 39.5 km of east-west picket lines. A total of 470 soil samples were collected covering 25 km of picket line spaced 100m apart with 50m station interval. All samples were analyzed for lead, zinc and silver. A total of 51 selected samples from a specific area of erratic high zinc values were also analyzed for arsenic and antimony.

Additional work included prospecting, rock sampling, road construction, clearing and bulldozer trenching.

DISCUSSION OF RESULTS

Approximately 65% of the total grid was soil sampled. Geochemical assay results are recorded on Plates 3 to 6 for zinc, lead, silver and arsenic respectively.

Geochemistry has yielded no well defined anomalies in any element. Zinc values (Plate No. 3) are most encouraging. Some small isolated clusters of high background to anomalous values occur, mostly in the northeast portion of the grid underlain by mafic metavolcanics. In no case do anomalous values extend for more than two contiguous grid lines.

Some scattered single point anomalies also occur along the southwest contact of meta tuff with sediments.

Approximately 70% of anomalous zinc values occur in mafic metavolcanics which represents only 35% of the total area sampled. Anomalous patterns are interpreted to have a weak trend paralleling geological strike.

Lead geochemistry (Plate No. 4) returned only 8 anomalous values, half of which are associated with the same meta tuff-sedimentary contact showing scattered anomalous zinc. Three of the four high lead values along this contact are coincident with anomalous zinc.

Only one anomalous lead value is associated with mafic volcanics.

Most soil samples showed no detectable quantities of silver. No statistical calculations were made, but based on a visual assessment, values exceeding .1 ppm were considered anomalous. Results are plotted on Plate No. 5. Approximately 75% of anomalous values are equally distributed between sediments and metavolcanics, with the remaining 25% associated with the narrow band of meta tuff. Two high silver values along the southwest contact of this unit are coincident with anomalous lead and zinc values.

Arsenic geochemistry returned only two anomalous values from 51 samples.(Plate No. 6). Both occur in the area of weakly anomalous zinc underlain by metavolcanics. One high arsenic value is coincident with a single point zinc anomaly.

Antimony analysis from the same 51 samples showed practically no contrast, with values varying from 4 to 11 ppm. Results were not plotted.

Prospecting has located numerous small outcrops but no significant mineralization. Rock samples returned no economic grade values.

STATEMENT OF COSTS

The following costs were incurred on the Opal 1 and Opal 2 claims during the period 1987-04-27 to 1988-02-29. All field-work was by contractors and consultants engaged by Michael Resources Ltd.

GRID PREPARATION

39.5 km picket lines

5.4 km baselines and tie lines

Total Grid Preparation

\$17612.14

GEOCHEMICAL SAMPLING AND ANALYSIS

25 km soil sampling at 50m intervals (470 samples) \$2945.00

470 geochemical assays for Pb,Zn & Ag 1318.10

Total Geochemical Sampling & Analysis

\$4263.10

4263.10

PHYSICAL WORK

Road construction, clearing and bulldozer

trenching

8453.87

LABOUR

Prospecting \$2620.00

Field assistant 1750.00

Total Labour

\$4370.00

4370.00

MANAGEMENT AND SUPERVISION

Administration and property management \$3500.00

Engineering 1400.00

Report preparation 615.12

Total Management and Supervision

\$5515.12

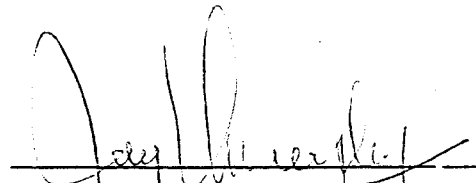
5515.12

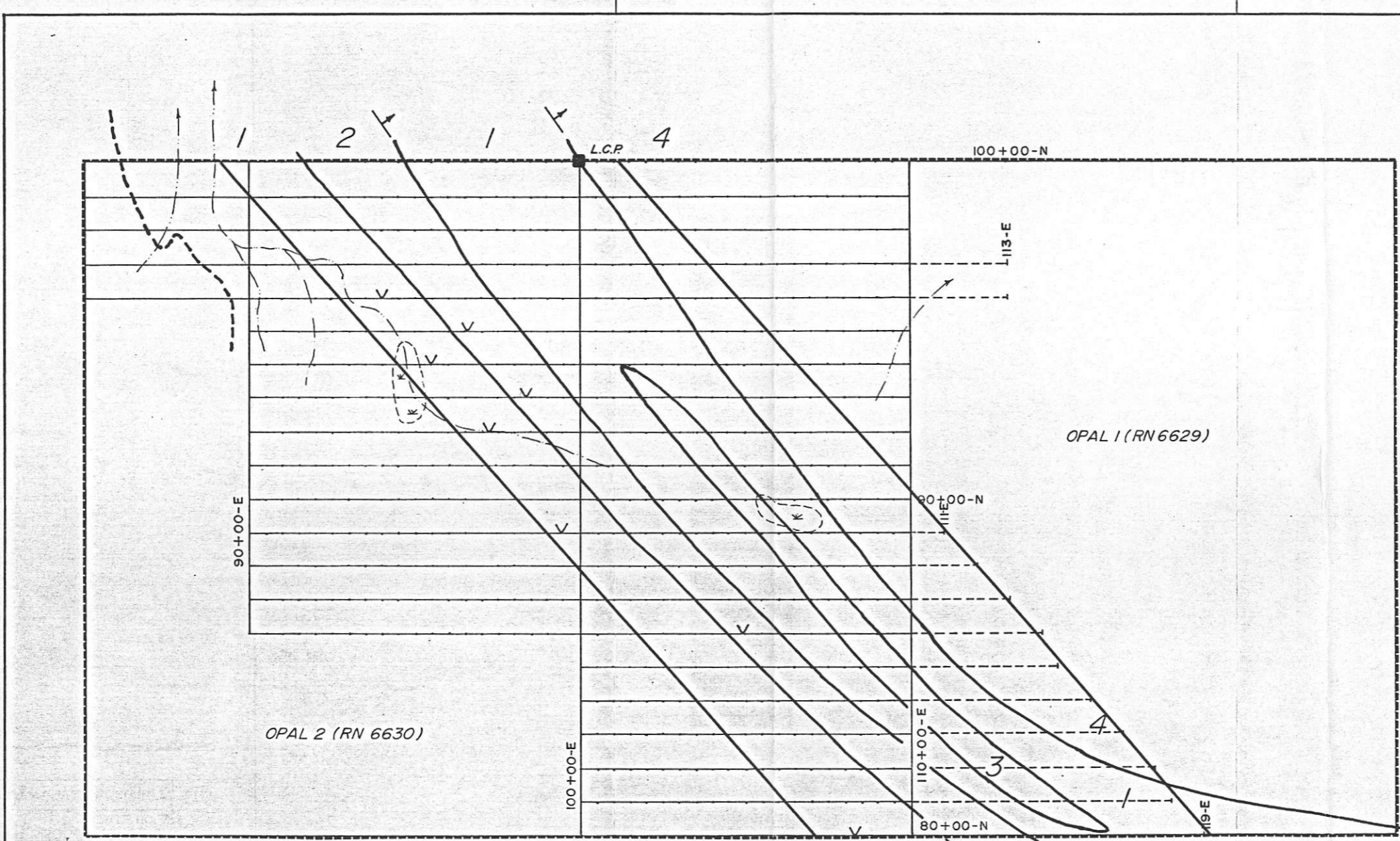
<u>TRANSPORTATION</u>	<u>\$ 496.80</u>	<u>\$ 496.80</u>
<u>SUPPORT SERVICES</u>	<u>\$ 28.50</u>	<u>\$ 28.50</u>
TOTAL COSTS		<u><u>\$40739.53</u></u>

STATEMENT OF QUALIFICATIONS

I, Jay D. Murphy, hereby certify:

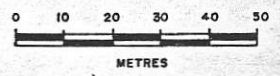
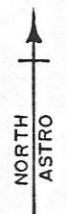
1. That I am a Consulting Geological Engineer, resident at 1335 Todd Road, Kamloops, B.C.
2. That I am a graduate from the University of Manitoba, (1954) with a B.Sc. in Geological Engineering.
3. That I have practiced my profession continuously since graduation.
4. That I am a member of the Association of Professional Engineers of British Columbia and Ontario.
5. That the information contained in this report is based, partly, on a personal examination of the subject property.
6. That I have no financial interest in the subject property.


Jay D. Murphy, P. Eng.



LEGEND

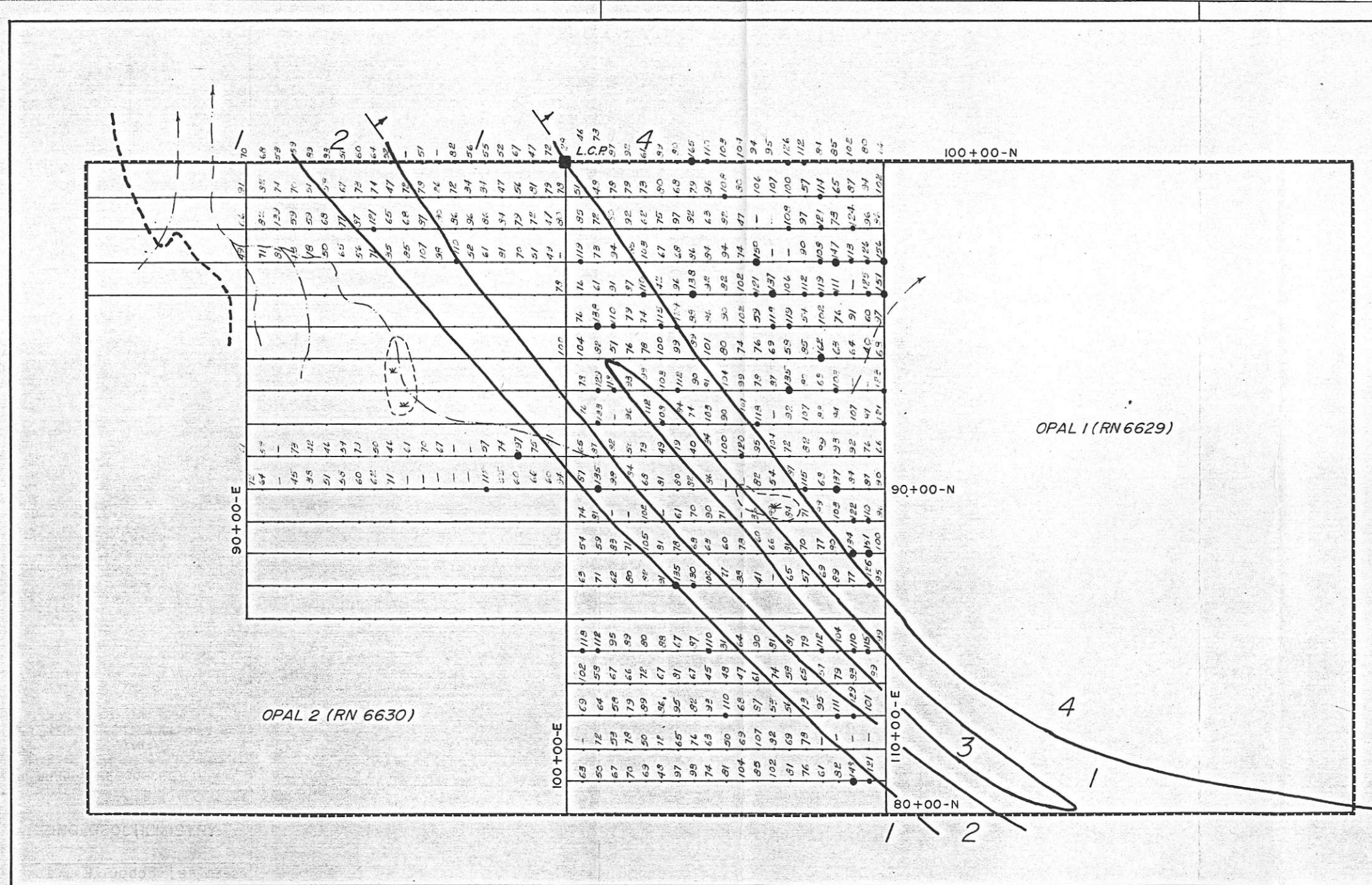
- 4 Mafic Metavolcanics
- 3 Limestone
- 2 Meta Tuff
- 1 Clastic Sediments
- Proposed grid extension
- v- Fill in soil sample line
- Limit of geophysical coverage



Geology from B.C. Ministry of Energy
 Preliminary Map No. 56 (Scharizza & Preto)



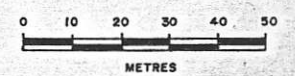
MICHAEL RESOURCES LTD		
PLATE NO. 7		
PROPOSED GRID EXTENSION AND GEOPHYSICAL COVERAGE		
J.D.M.	1:1000	88-03-29



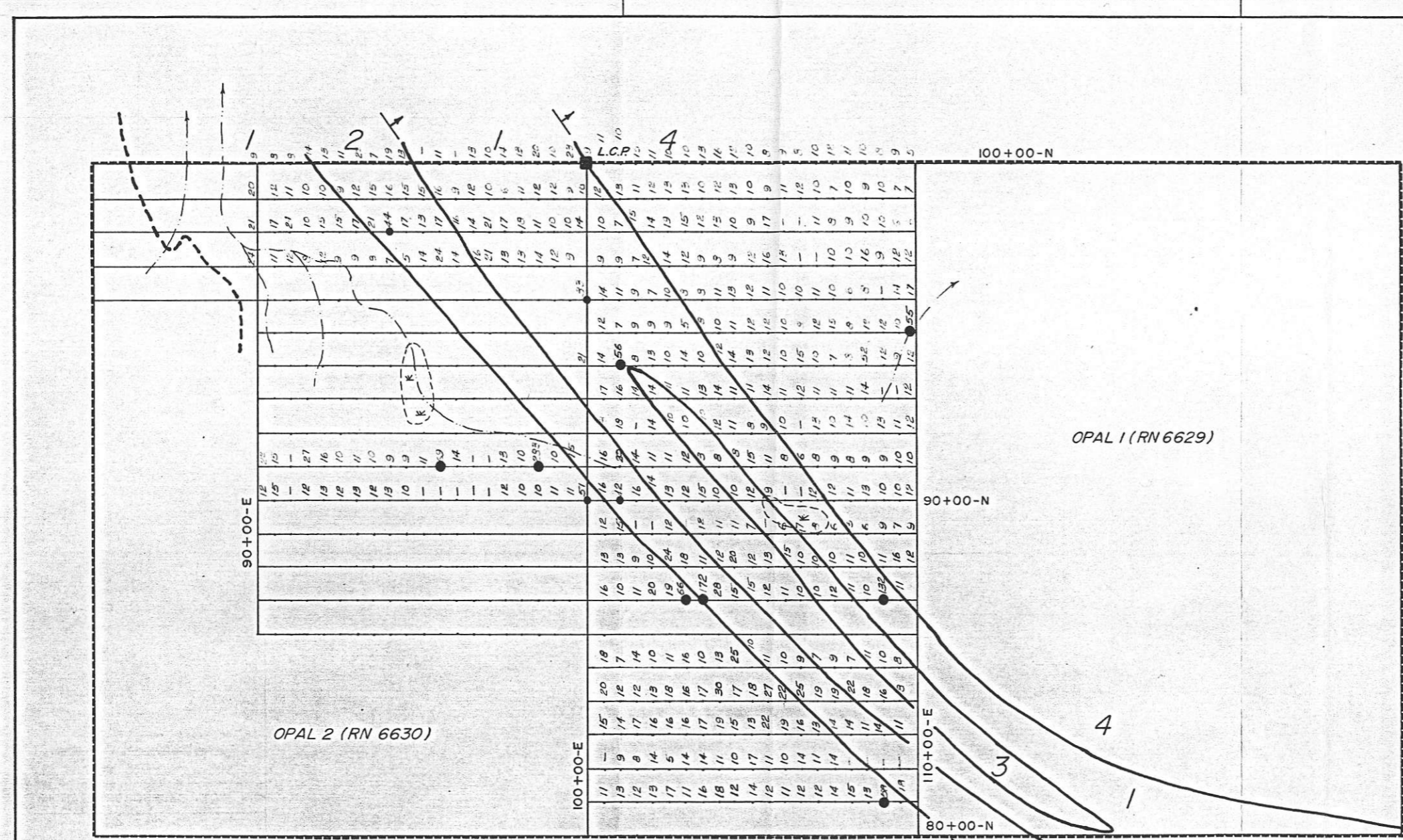
LEGEND

- 4 Mafic Metavolcanics
- 3 Limestone
- 2 Meta Tuff
- 1 Clastic Sediments

ZINC	ppm
Mean	83
Standard deviation	25
Threshold	133
High background	102 - 133 ●
Anomalous	134 & over ●



MICHAEL RESOURCES LTD
 PLATE NO. 3
 ZINC GEOCHEMISTRY
 J.D.M. 1:1000 88-03-29

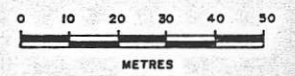


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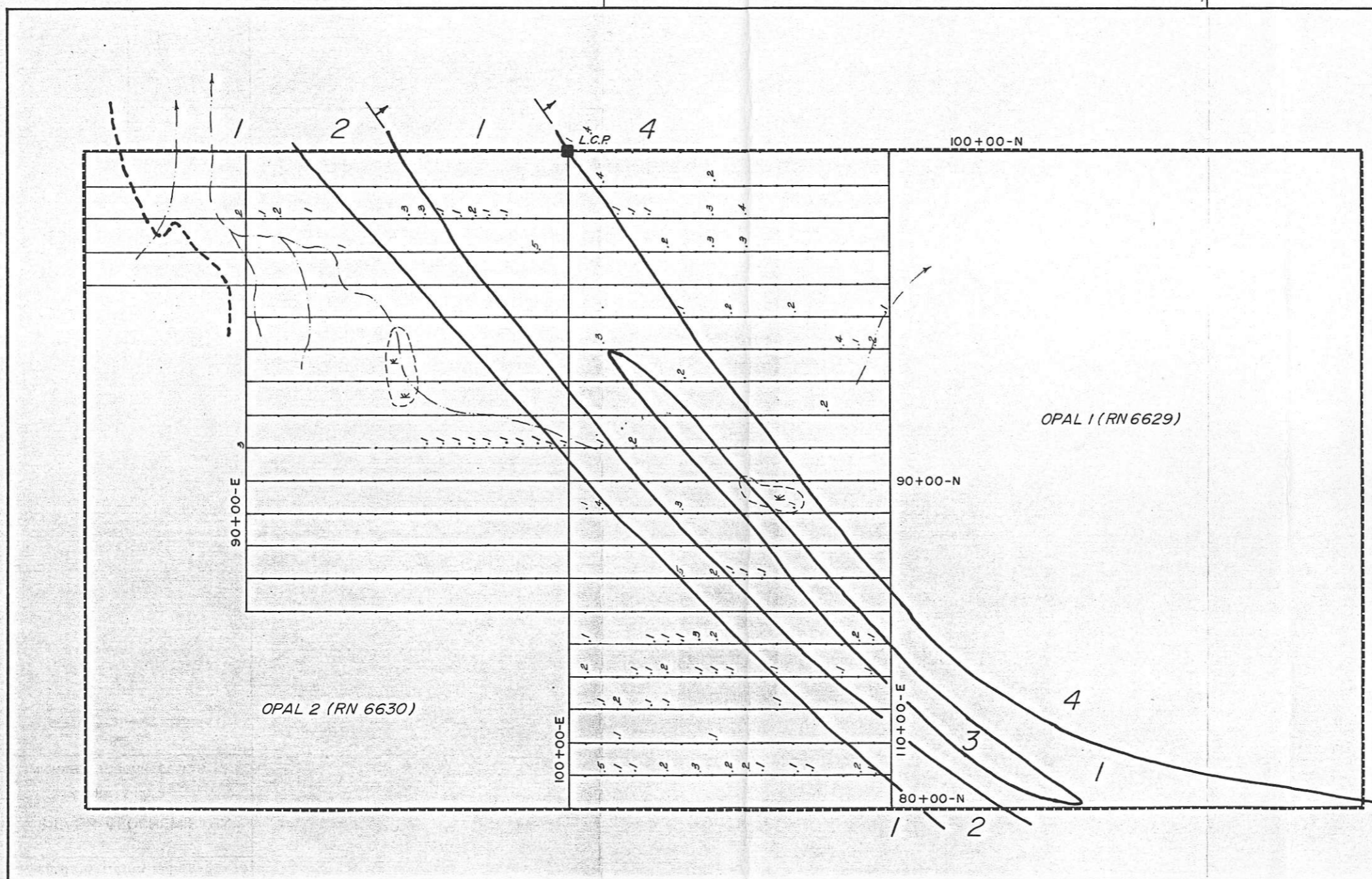
- 4 Mafic Metavolcanics
- 3 Limestone
- 2 Meta Tuff
- 1 Clastic Sediments

LEAD

	ppm
Mean	15
Standard deviation	18
Threshold	51
High background	33 - 51 ●
anomalous	>52 & over ●



MICHAEL RESOURCES LTD
 PLATE NO. 4
 LEAD GEOCHEMISTRY
 J.D.M. 1:1000 88-03-29

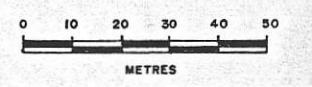


LEGEND

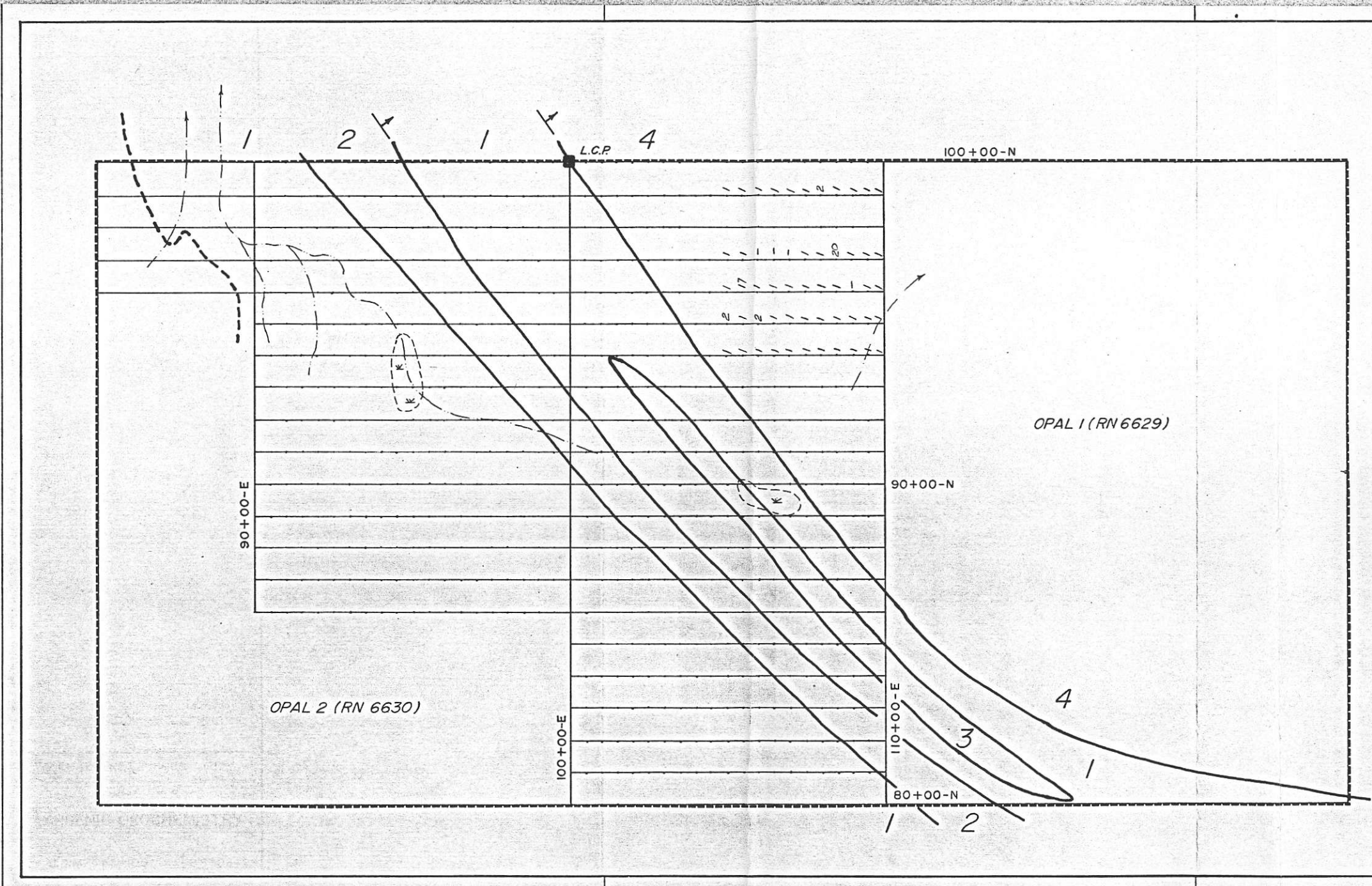
- 4 Mafic Metavolcanics
- 3 Limestone
- 2 Meta Tuff
- 1 Clastic Sediments

SILVER

Anomalous over 1ppm



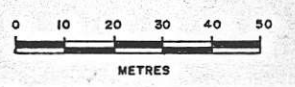
MICHAEL RESOURCES LTD		
PLATE NO. 5		
SILVER GEOCHEMISTRY		
J.D.M.	1:1000	88-03-29



LEGEND

- 4 Mafic Metavolcanics
- 3 Limestone
- 2 Meta Tuff
- 1 Clastic Sediments

ARSENIC
 Anomalous over 10ppm



MICHAEL RESOURCES LTD		
PLATE NO. 6		
ARSENIC GEOCHEMISTRY		
J.D.M.	1:1000	88-03-29