

GEOLOGICAL REPORT

on the

OKUM PROPERTY
GREENWOOD MINING DIVISION
118°37'W Longitude; 49°03'N Latitude
N.T.S. 82E/2E

on behalf of

OWNER: GEORGE O'BRIEN
OPERATOR: GEORGE O'BRIEN

by

JAMES W. McLEOD, GEOLOGIST

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| MINERAL RESOURCES BRANCH ASSESSMENT REPORT 7296 NO. _____ |
|--|

June 7, 1979

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APPENDICES

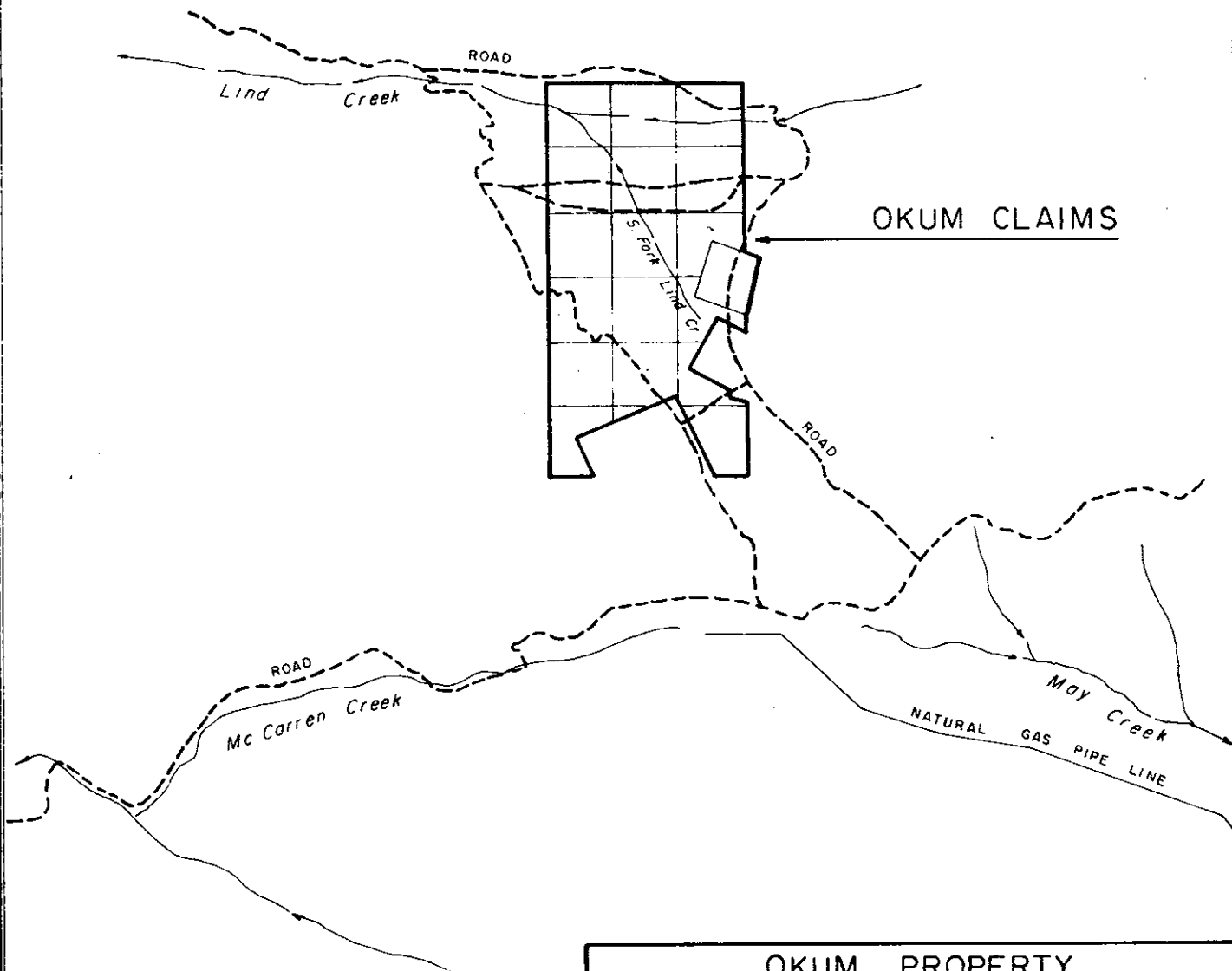
- A. V.L.F. - EM DATA
- B. MAGNETOMETER DATA

ILLUSTRATIONS

| | | |
|----------|-----------------------|----------|
| Figure 1 | Index Map | in front |
| Figure 2 | Claim Sketch | in front |
| Figure 3 | Geology and Grid Plan | in back |



FIGURE 1
OKUM PROPERTY
INDEX MAP



J.M.

| | |
|------------------------------------|----------|
| OKUM PROPERTY | |
| CLAIM SKETCH | |
| METERS 1000 500 0 1000 2000 METRES | |
| OCTOBER, 1978 | FIGURE 2 |

INTRODUCTION

During the period May 2 - 8, inclusive, 1979, the writer supervised an exploration programme on a portion of the Okum property.

This report is being prepared at the request of Mr. George O'Brien, of Greenwood, British Columbia.

LOCATION AND ACCESS

The property is located four kilometers southeast of the town of Greenwood, British Columbia. Access to the property is provided by travelling four kilometers southeast of Greenwood, British Columbia, on Lind Creek Road or by travelling 13 kilometers on the McCarron Creek road.

PROPERTY AND OWNERSHIP

The property consists of 18 full sized or partial-sized, located mineral claims (Okum 1-18) and one reverted Crown grant (Rattler) listed as follows:

Okum 1-18: Anniversary date: 26-6-79

Rattler reverted Crown Grant: Anniversary date: 30-6-79

The claims are owned by Mr. George O'Brien, of Greenwood, B.C.

TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT

The property lies on moderately steep, rounded terrain at an elevation of 1200-1600 meters m.s.l.

The area is conifer covered and receives light precipitation of approximately 65 cm. per year.

HISTORY

The area in which the Okum property is situated has received attention from time to time mainly because of its close proximity to the Phoenix copper deposit, three kilometers to the northeast. Activity in the general area began about 1891 and continues to the present. Copper has held most of the interest in the area, but a number of gold showings are known to occur on the general area.

GEOLOGY AND MINERALIZATION

The general geology of the property has been described by Little, G.S.C. Map 6 - 1957, Kettle River, East Half, as being underlain by greenstone, greywacke, limestone and para-gneiss which he assigns to the Permian? Anarchist Group.

Locally the writer observed three essentially different rock units which are listed as follows: A metamorphosed sediment - volcanic unit; a medium grained granodiorite/' and a basalt, (see Figure 3).

Mineralization observed on the property is pyrite, pyrrhotite, magnetite, arsenopyrite?, galena, sphalerite and chalcopyrite. The mineralization is accompanied by quartz as narrow veins in the metamorphosed sediment - volcanic unit.

WORK PROGRAMME

The work programme supervised by the writer from May 2-8 inclusive, 1979 included 13 kilometers of line installation (see Figure 3), geological mapping, 2.7 kilometers of V.L.F.

electromagnetic surveying, and 13 kilometres of magnetometer surveys, both of which were conducted at approximately 100 metre line spacing with maximum intervals every 50 metres.

The V.L.F. electromagnetometer used was a Geotronics, Model G28, serial no. V-102 detecting a signal originating near Seattle, Washington.

The magnetometer used was a Geotronics, Model G-100, serial no. G-1

The data from both surveys is presented in tabular form (see Appendices A & B) since the V.L.F. - E.M. data exhibited no dip-angle cross overs and the magnetometer data does not appear contourable. These results appear consistent with the bedrock data collected and will be discussed in the following section.

CONCLUSIONS AND RECOMMENDATIONS

A considerable amount of quartz veining accompanied by some pyrite mineralization is encountered within the north-central area of the Okum Group. Reconnaissance mapping of the claim indicated a concentration of alteration and mineralization in this area. The writer decided to test an area of known mineralization with the V.L.F. - E.M. to determine if an anomalous response would be obtained. It appears that no positive response to the V.L.F. - E.M. is obtained for the following reasons:

1. The quartz veins are very narrow and shallow dipping, often concordant with the foliation of the meta-sediments.
2. The mineralization observed was sparse and irregular and thus not affording a conductive response.

3. The areas of observed quartz veining appeared tight and well drained thus not affording conductivity by ground water filling.

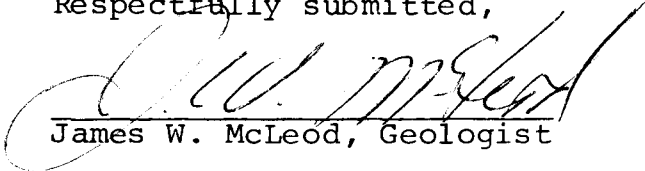
The noncontourability of the magnetometer data is not inconsistent with the indications that essentially one rock unit underlies most of the survey area.

The writer recommends that the 100 metre grid be completed over the remainder of the claim group and that a geochemical soil survey be undertaken at 100 X 50 metre spacing. The geological mapping of the group should be completed and mineralized and/or anomalous areas should be trenched, mapped and sampled.

COST OF WORK PROGRAMME

| | |
|--|------------|
| Geological mapping and supervision 7 days @ \$150/day | \$ 1,050 |
| Grid installation, 4 man/days @ \$75/day | 300 |
| Geophysical surveys, i.e. V.L.F.-E.M. and magnetometer, 3 man days @ \$75/day | 225 |
| Transportation: truck rental, gas, oil and mileage | 350 |
| Room and board | 280 |
| Equipment and supplies | 50 |
| Reports and maps | <u>125</u> |
| TOTAL | \$ 2,380 |

Respectfully submitted,


James W. McLeod, Geologist

CERTIFICATE

I, JAMES W. McLEOD, of the City of Vancouver, Province of British Columbia, hereby certify as follows:

1. I am a geologist and an Associate Member of the Geological Association of Canada.
2. I reside at 4086 West 17th Avenue, Vancouver, B.C.
3. I graduated in 1969 from the University of British Columbia, B.Sc. (Major - Geology)
4. I have practised my profession since 1969.
5. I have not, directly or indirectly, received or expect to receive any interest, direct or indirect in the property of the Company, or any affiliate, nor do I beneficially own, directly or indirectly, any securities of the Company or any affiliate.
6. The above report is based upon field work performed during May, 1978.


James W. McLeod, B.Sc.

Dated at Vancouver British Columbia, this 8th day of June, 1979.

APPENDIX 'A'

| <u>Station</u> | <u>Line 1 Dip Angle</u> | <u>Line 2 Dip Angle</u> |
|----------------|-----------------------------|-----------------------------|
| 0+00 | +11 | +10 |
| 0+50W | +11 | +9 |
| 1+00 | +11 | +8 |
| 1+50 | +10 | +9 |
| 2+00 | +11 | +12 |
| 2+50 | +9 | +12 |
| 3+00 | +11 | +10 |
| 3+50 | +13 | +10 |
| 4+00 | +10 | +9 |
| 4+50 | +10 | +9 |
| 5+00 | +10 | +12 |
| 5+50 | +9 | +12 |
| 6+00 | +9 | +13 |
| 6+50 | +6 | +14 |
| 7+00 | +7 | +15 |
| 7+50 | +9 | +11 |
| 8+00 | +8 | +9 |
| 8+50 | +9 | +8 |
| 9+00 | +11 | +8 |
| 9+50 | +10 | +9 |
| 10+00 | +8 | +12 |
| 10+50 | +8 | +18 |
| 11+00 | +12 | +16 |
| 11+50 | +13 | +17 |
| 12+00 | +13 | +12 |
| 12+50 | +13 | +11 |
| 13+00 | +12 | +11 |

APPENDIX 'B'

| <u>Line 1</u> | | <u>Line 2</u> | | <u>Line 3</u> | |
|---------------|-------|---------------|-------|---------------|-------|
| 0+00 | 53560 | 0+00 | 54080 | 0+00 | 53040 |
| 0+50 | 53900 | 0+50 | 54560 | 0+50 | 53040 |
| 1+00 | 53320 | 1+00 | 54520 | 1+00 | 53700 |
| 1+50 | 54020 | 1+50 | 53240 | 1+50 | 53720 |
| 2+00 | 54580 | 2+00 | 53360 | 2+00 | 54560 |
| 2+50 | 54340 | 2+50 | 53560 | 2+50 | 54920 |
| 3+00 | 54560 | 3+00 | 53640 | 3+00 | 54260 |
| 3+50 | 53840 | 3+50 | 54420 | 3+50 | 55760 |
| 4+00 | 54460 | 4+00 | 54700 | 4+00 | 54860 |
| 4+50 | 54620 | 4+50 | 54860 | 4+50 | 53660 |
| 5+00 | 54780 | 5+00 | 54880 | 5+00 | 54560 |
| 5+50 | 55100 | 5+50 | 54220 | 5+50 | 53900 |
| 6+00 | 55460 | 6+00 | 53540 | 6+00 | 54800 |
| 6+50 | 53640 | 6+50 | 54360 | 6+50 | 54020 |
| 7+00 | 55640 | 7+00 | 53640 | 7+00 | 53360 |
| 7+50 | 54520 | 7+50 | 53540 | 7+50 | 54220 |
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| 8+50 | 54440 | 8+50 | 54360 | 8+50 | 54620 |
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| 10+00 | 54380 | 10+00 | 53300 | 10+00 | 55040 |
| 10+50 | 55700 | 10+50 | 54025 | 10+50 | 53920 |
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| 11+50 | 55080 | 11+50 | 54120 | 11+50 | 54880 |
| 12+00 | 54920 | 12+00 | 53840 | 12+00 | 53940 |
| 12+50 | 55140 | 12+50 | 53520 | 12+50 | 53780 |
| 13+00 | 54820 | 13+00 | 53200 | 13+00 | 53660 |
| 13+50 | 53840 | 13+50 | 53420 | 13+50 | 53480 |
| | | | | 14+00 | 53520 |
| | | | | 14+50 | 53620 |
| | | 0+00 Line 1 | | 15+00 | 53540 |
| | | check 53600 | | 15+50 | 53620 |

APPENDIX 'B'

| <u>Line 4</u> | | <u>Line 5</u> | | <u>Line 6</u> | |
|---------------|-------|---------------|-------|---------------|-------|
| 0+00 | 53080 | 0+00 | 55040 | 0+00-1 | 54700 |
| 0+50 | 54340 | 0+50 | 53320 | 0+00-2 | 54760 |
| 1+00 | 53080 | 1+00 | 53080 | 0+00 | 54700 |
| 1+50 | 53920 | 1+50 | 54640 | 1+00 | 55100 |
| 2+00 | 53200 | 2+00 | 55580 | 1+50 | 55640 |
| 2+50 | 54060 | 2+50 | 54280 | 2+00 | 54840 |
| 3+00 | 54680 | 3+00 | 55180 | 2+50 | 55320 |
| 3+50 | 54140 | 3+50 | 54280 | 3+00 | 52660 |
| 4+00 | 53980 | 4+00 | 53500 | 3+50 | 55300 |
| 4+50 | 54720 | 4+50 | 54600 | 4+00 | 54800 |
| 5+00 | 53540 | 5+00 | 54420 | 4+50 | 53740 |
| 5+50 | 54120 | 5+50 | 55040 | 5+00 | 54460 |
| 6+00 | 54040 | 6+00 | 53900 | 5+50 | 53900 |
| 6+50 | 53980 | 6+50 | 54140 | 6+00 | 53940 |
| 7+00 | 55100 | 7+00 | 54400 | 6+50 | 53660 |
| 7+50 | 54020 | 7+50 | 54420 | 7+00 | 54200 |
| 8+00 | 53740 | 8+00 | 55800 | 7+50 | 53640 |
| 8+50 | 53880 | 8+50 | 54440 | 8+00 | 56000 |
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| 9+50 | 54380 | 9+50 | 52120 | 9+00 | 55220 |
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| 10+50 | 53000 | 10+50 | 56440 | 10+00 | 52000 |
| 11+00 | 55000 | 11+00 | 57200 | 10+50 | 53440 |
| 11+50 | 54340 | 11+50 | 54220 | 11+00 | 54300 |
| 12+00 | 54240 | 12+00 | 54000 | 11+50 | 53740 |
| 12+50 | 54080 | 12+50 | 54040 | 12+00 | 54660 |
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| 14+00 | 54300 | 14+00 | 54000 | | |
| 14+50 | 54260 | 14+50 | 54100 | 0+00 Line 5 | |
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0+00 Line 3
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APPENDIX 'B'

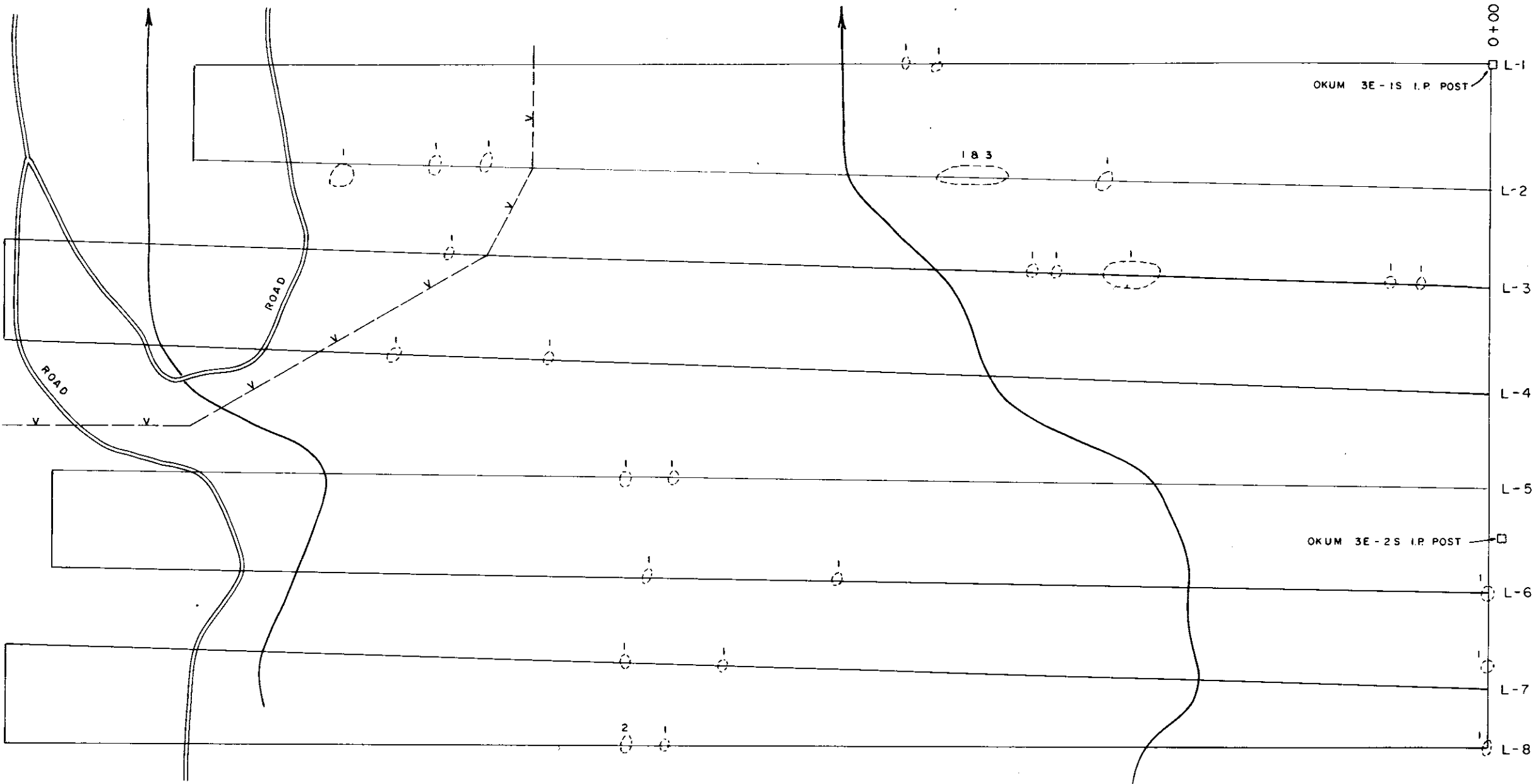
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14+50 54400
15+00 54840
15+50 54640

Line 8

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0+50 54460
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1+50 54300
2+00 54300
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13+50 54000
14+00 54600
14+50 55160
15+00 54240
15+50 55160
0+00 Line 7

Check 54080



LEGEND

- (1) Sediment, volcanics and their metamorphic equivalents
- (2) Granodiorite
- (3) Basalt
- x-x- Fence
- L-8 Grid Lines

J.M.



7296

| | |
|---------------------------------|----------|
| OKUM PROPERTY | |
| GEOLOGY & GRID PLAN | |
| GREENWOOD MINING DIVISION, B.C. | |
| <p>SCALE IN METERS</p> | |
| MAY, 1979 | FIGURE 3 |