5353

104I/6E & 11E

GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

ON THE

EAGLE CLAIMS 145-148, 154, 156

LAT. 58°30' LONG. 129°10'

104 I (6E/11E)

LIARD MINING DIVISION

BRITISH COLUMBIA

FOR

IMPERIAL OIL LIMITED

#314 - 1281 WEST GEORGIA

VANCOUVER, B.C.

J.M. MARR

JANUARY 22, 1975

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LIST OF MAPS

Introduction

This report is submitted to obtain assessment credits on the Eagle claims 145-148, 154 and 156, located in the Liard Mining Division, northern B.C. The claim block is located two miles to the southeast of Eaglehead Lake (see Map 2 - coloured section), and some thirty miles to the east of Dease Lake (see location map, next page). The six claims are contiguous with valid Company claims to the southeast and are flanked by four claims on the southwest which will be allowed to expire on February 6th, 1975 (153, 155,162, 164).

The six claims in question were recorded on February 6th, 1973 and cash was paid in lieu of assessment work on February 6th, 1974. Sixteen assessment-years ($3,200) are now being applied for on these claims as follows: (see following itemized list).

Claims	Record Nos.	No. of Years	New Expiry Date
154	69313	2	February 6, 1976
156	69315	2	February 6, 1976
145-148	69304-69307	3 each	February 6, 1977

These claims are jointly owned by Imperial Oil Limited (60%) and Nuspar Resources Limited (40%). The work in question was entirely paid for by Imperial Oil Limited. Imperial Oil personnel carried out a geological and geochemical evaluation of the area covered by the claims between July 26th and August 7th, 1974.

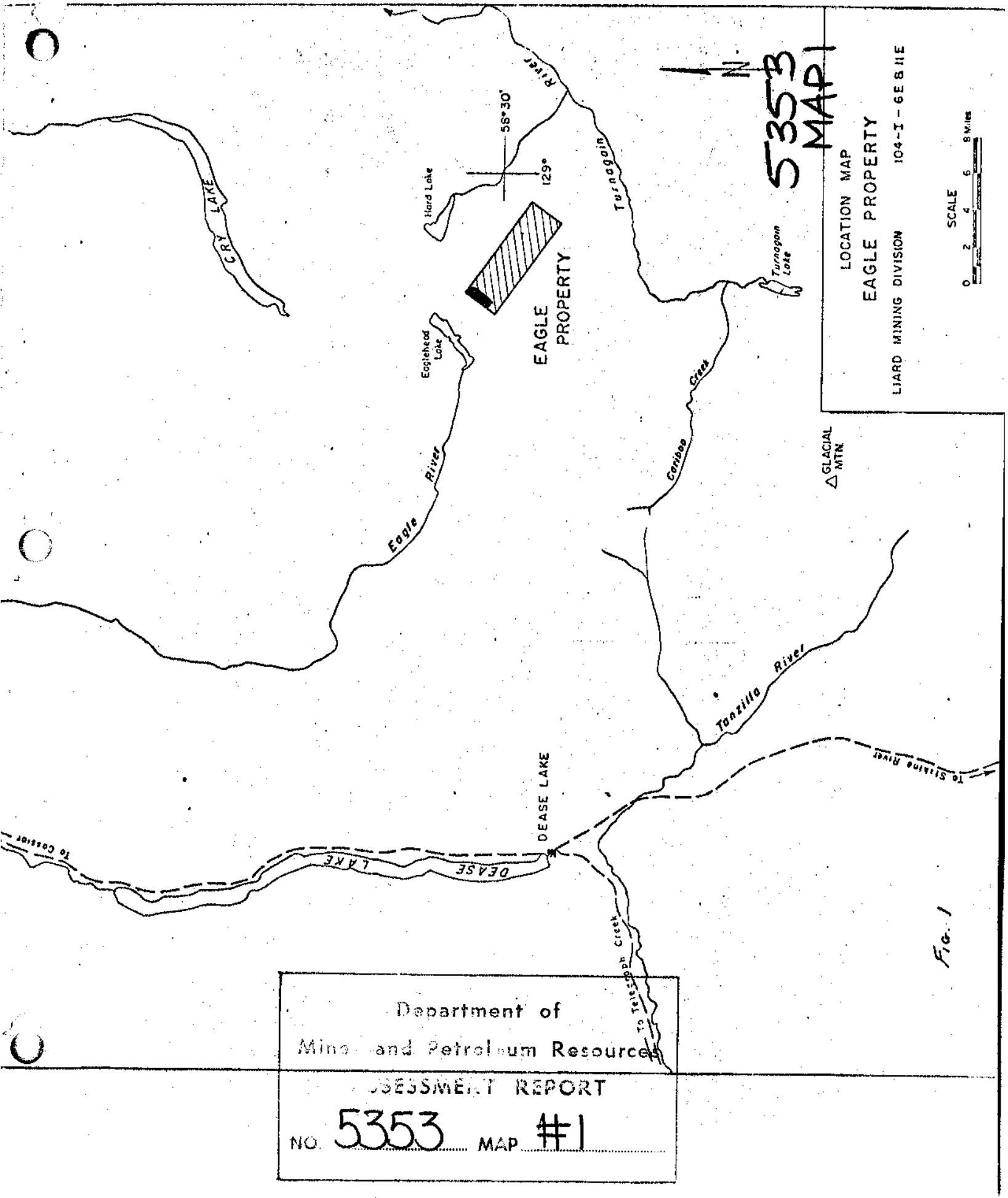


Fig. 1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5353 MAP #1

Normal access to the area is by fixed wing aircraft to Eaglehead Lake and by helicopter from there to the property. In this case, the camp was mobilized and supplied from a company base camp on Rainbow Lake.

Supporting Work

The N 45° W baseline (3000') and 1200' of the 00W crossline, (see Maps 3 and 4), were cut and cleaned out to survey standard by Sam Quock and Ray Nehass, of Dease Lake, between July 28th and 30th, 1974. The remaining part of the grid was blazed, flagged and chained at 100 foot intervals by K. Lum and R. Thornhill prior to the survey. Total grid established amounted to 24,600 feet, differentiated according to quality on Maps 3 and 4.

Geology

Mapping along the grid lines and with the assistance of air photographs revealed only one outcrop within the six claim block. The area is almost entirely masked by glaciofluvial deposits. In order, therefore, to complete the geological picture adequately, mapping was continued in surrounding areas until a 2 square mile area had been covered. Map 2 shows the results of this work. The mapping was done by J. Marr between July 26th and 28th, 1974 with help from K. Lum and R. Thornhill.

The mapping suggests that the claims are underlain by a NW-SE trending contact of unknown type between an intrusive body to the northeast and a sedimentary sequence to the southwest. The intrusive is a fresh, homogeneous biotite granodiorite in which no mineralization was observed. No minor intrusive phases were identified. The unit appears to be part of the Cassiar Batholith.

The sedimentary sequence is composed of an interbedded sequence of conglomerate, greywacke and argillite. The unit is reported to be of Lower Jurassic age (G.S.C. Map 29 - 1962). The outcrops mapped (Map 2) indicate a general decrease in grain size southwestwards from the contact. The conglomerate, which forms a prominent ridge, is a polymictic, massive unit with mainly volcanic clasts in a brown, rough weathering epiclastic matrix. This is followed by a massive, light weathering quartzo-feldspathic arkose sequence which is apparently succeeded to the southwest by poorly outcropping, thinly laminated black argillite and massive black greywacke beds. Although the entire sequence is thought to become younger in this direction, there is no hard evidence to support this. The sequence appears to be derived mainly from intermediate volcanic rocks (which are not exposed in this area).

The beds have a consistently steep dip, vertical in the conglomerate, steeply north in the argillite. No sign of folding was observed. No mineralization was encountered anywhere within this sequence.

Geochemistry

The soil sampling program was carried out by K. Lum and R. Thornhill between August 3rd and 7th, 1974. Both men were third year geology students. Both had received company instruction in sampling procedures and both had done the work previously.

115 'B' horizon soil samples were collected at 200 foot intervals on the grid. This horizon was sampled with a stainless steel garden trowel after an initial hole had been opened with a grubhoe. The samples, which came from an average depth of four inches, were generally reddish brown in colour and silty in texture. The brown forest type soil profile was thin but quite well developed in most localities, especially so on the gently-sloping, buckbrush-covered ground on either side of the creek. In these areas, the organic accumulation was generally found to be thin (< 1"), overlying a thin (2 - 3") B horizon which graded downwards into a yellowish, stony, C horizon. Much of the bedrock surface on the slopes appeared to have a covering of boulder till which locally "outcropped" as boulder fields. Samples collected in the broad valley bottom were more variable, ranging from very poorly developed horizons on glacial outwash or mounds to greatly thickened organic horizons in dried up drainage hollows.

Values in Cu and Mo in parts per million for the -80 mesh fraction are plotted on Maps 3 and 4 respectively. Details of the analytical method employed in the Company laboratory are described separately in the Appendix.

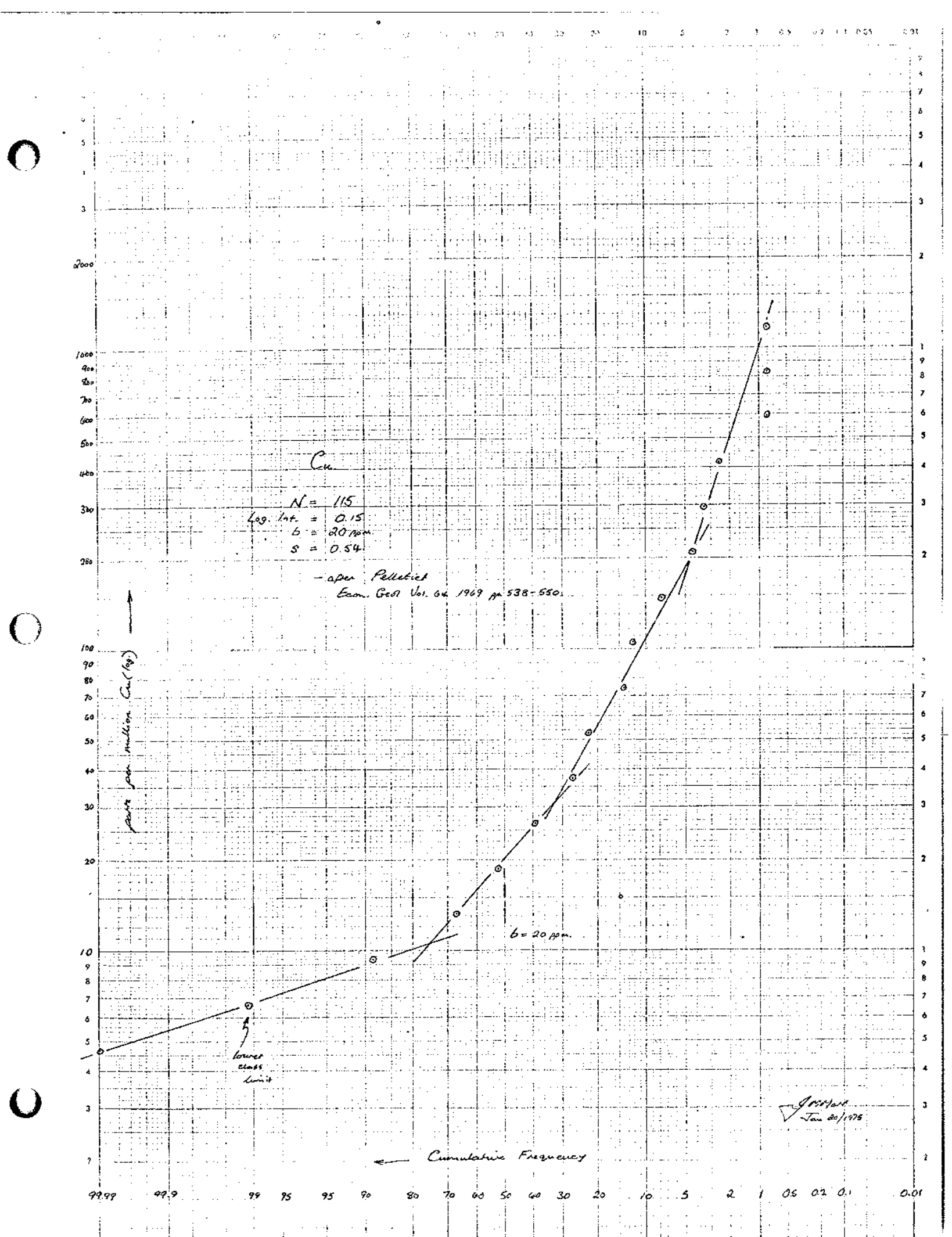
Interpretation

Nothing was observed during the geological work which would indicate economic potential in the area. However, the soil copper values (see Map 3) indicate a broadly anomalous zone trending approximately through claims 146 and 148. This is weakly supported by the Mo values. The cumulative frequency plot for the Cu data (next page) indicates an excess of higher values beyond a breaking point at 10 ppm (75% cum.freq.) Various statistical parameters from the data are shown there. This type of plot was not attempted for Mo since the range in values is too limited to make it meaningful.

The fact that this area is gently sloping (to the southwest) and is probably thinly overburden-covered suggests that the anomaly is in place and is reflecting an increased copper content in bedrock. The data do not provide any means of estimating the volume or tenor of this mineralization since none was actually observed.

J.M. Marr

JMM:lw


Cu
N = 115
Log. Int. = 0.15
b = 20 ppm
s = 0.54
- after Pelletier
Econ. Geol Vol. 64 1969 pp 538-550
parts per million Cu (log)
b = 20 ppm.
lower class limit
Cumulative Frequency
99.99
99.9
99
95
90
80
70
60
50
40
30
20
10
5
2
1
0.5
0.2
0.1
0.01
Jan 20/1975

COST STATEMENT

1. WAGES

J. Marr - Geology & Report Compilation			
- July 26-28, 1974	3 d.x $50/d.	$150	
- Jan.20-22, 1975	3 d.x $50/d.	150	
K. Lum - Linecutting & Geochemistry			
- July 26-28, 1974	3 d.x $26/d.	78	
- Aug. 3-7, 1974	5 d.x $26/d.	130	
R. Thornhill - Linecutting & Geochemistry			
- July 26-28, 1974	3 d.x $28/d.	84	
- Aug, 3-7, 1974	5 d.x $28/d.	140	
R. Nehass - Linecutting			
- July 28-30, 1974	3 d.x $40/d.	120	
S. Quock - Linecutting			
- July 28-30, 1974	3 d.x $40/d.	120	
Stenographic -	1 d.x $50/d.	50	
			$1,022

2. CAMP EXPENSES

25 man days @ $20/day $ 500

3. SERVICES (Freight, etc.) $ 12

4. TRANSPORTATION

(a) Scheduled Transport

J. Marr (Vancouver - Watson Lake)		180
K. Lum (Vancouver - Watson Lake)	25%	45
R. Thornhill (Vancouver-Watson Lake)	25%	45
		$ 270

Declared before me at the City of Vancouver, in the Province of British Columbia, this 27 day of January 1975, A.D.

A Commissioner for Taking Affidavits for British Columbia
A Notary Public in and for the Province of British Columbia

4. TRANSPORTATION

(b) Helicopter

July 26	1.50 hr. - mobilization	
July 28	.67 hr.	
July 30	.83 hr.	
Aug. 3	.67 hr.	
Aug. 7	1.33 hr. - demobilization	
	5.00 hrs. @ $260/hr.	$1,300

5. LABORATORY

118 samples @ $1.50/samples (2 determinations)	$ 177
TOTAL:	$3,281

Declared before me at the City of Vancouver, in the Province of British Columbia, this 27 day of January 1975, A.D.

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder

STATEMENT OF QUALIFICATIONS

I, John M. Marr, of North Vancouver, B.C. hereby certify the following qualifications:

(a) I obtained a B.Sc.(Hons.) degree in Geology (1968) from St. Andrews University, Fife, Scotland.

(b) I obtained an M.Sc. degree in Geology (1970) from the University of Manitoba, Winnipeg, Manitoba.

(c) I have been practising my profession as a geologist in Canada since that time.

John M. Marr

Procedure for Analysis of Soil and Silt Samples

C.J. Collyer
November 1/72

1. Hang the bagged sample in the drying oven at 50°C overnight or longer if necessary.
2. Sieve the sample to -80 mesh and retain this sieved portion in a plastic vial bearing the sample number.
3. Prepare a cross reference sheet to identify the samples during analysis.
4. Weigh 0.50 ± 0.01 gm. of the sieved sample and transfer to a Coors crucible, cover and place in its designated location on a stainless steel tray.
5. Place tray of samples in the muffle oven and ash at 500°C for 45 minutes (approximately 1½ hours is required to reach 500°C).
6. Remove samples from the muffle oven after it is cooled down and transfer to test tubes for digestion.
7. A. All Elements Except Molybdenum:
   - I. Add 5.0 ml. of HNO_3 and stir.
   - II. Transfer to heating blocks and digest for 1½ hours at 100°C.
   - III. Transfer to plastic racks; cool and dilute with 10 ml. of deionized water.

   B. Molybdenum Plus Other Elements Requested at Same Time:
   - I. Add 1.5 ml. HNO_3 and stir.
   - II. Transfer to heating blocks and digest for ½ hour at 100°C.
   - III. Add 0.5 ml. HCl and leave in heating blocks for an additional 2 hours.
   - IV. Transfer to plastic racks, cool and dilute with 7.8 ml. of 1,500 ppm Na_2SO_4 in deionized water.
8. Leave samples sit overnight, stir and analyze on the atomic absorption spectrophotometer for the elements requested after they are settled and the liquid clear.
9. Set scale expansion on the instrument at 1 ppm standard equal 34 on 7 A digestion and 1 ppm equal 20 on the 7 B digestion.

PRODUCT[illegible]N RESEARCH AND TECHNICAL SERV[illegible] LABORATORY
CALGARY, ALBERTA

GEOCHEMICAL LABORATORY REPORT

Laboratory Report No. L-52674 Analysis Requested by Jack Marr

Type of Extraction 3:1 HNO_3:HCl Method of Analysis "AA"

Analyst J. Collyer Date Sept 4/74

Remarks:

15/08 13:13 CROSS REFERENCE
AREA 9300 YEAR 74 RUN NO 1 CALIB FREQ 20

FIELD NO. 9300-	LAB NO.	P.P.M. METAL							
		Cu	Mo						
BLANK	1215.0	—	—						
STAND	1215.1	—	—						
1	1215.2	11	3						
2	1215.3	10	2						
3	1215.4	10	3						
4	1215.5	10	4						
5	1215.6	10	5						
6	1215.7	8	6						
7	1215.8	10	4						
8	1215.9	10	6						
9	1216.0	11	5						
10	1216.1	33	3						
11	1216.2	11	5						
12	1216.3	1200	5						
13	1216.4	117	5						
14	1216.5	540	5						
15	1216.6	580	3						
16	1216.7	62	2						
17	1216.8	60	1						
18	1216.9	16	3						
BLANK	1217.0	—	—						
STAND	1217.1	—	—						
19	1217.2	34	1						
20	1217.3	19	3						
21	1217.4	67	1						
22	1217.5	200	4						
23	1217.6	Sample Missing							
24	1217.7	13	4						
25	1217.8	10	4						
26	1217.9	11	5						
27	1218.0	17	3						
[illegible]	1218.1	14	3						
[illegible]	1218.2	13	4						
[illegible]	1218.3	10	5						
[illegible]	1218.4	13	4						
32	1218.5	21	4						
33	1218.6	58	1						
[illegible]	1218.7	10	2						
[illegible]	1218.8	17	3						
36	1218.9	11	3						

FIELD NO. 8300-	LAB NO.	P.P.M. METAL Cu	Mo						
BLANK	1219.0	—	—						
STAND	1219.1	—	—						
37	1219.2	6	1						
38	1219.3	10	5						
39	1219.4	24	2						
40	1219.5	13	5						
41	1219.6	10	3						
42	1219.7	9	2						
43	1219.8	9	2						
44	1219.9	26	1						
45	1220.0	24	3						
46	1220.1	133	3						
47	1220.2	196	2						
48	1220.3	160	2						
49	1220.4	65	1						
50	1220.5	36	1						
51	1220.6	39	1						
52	1220.7	240	2						
53	1220.8	60	1						
54	1220.9	330	2						
BLANK	1221.0	—	—						
STAND	1221.1	—	—						
55	1221.2	85	1						
56	1221.3	43	1						
57	1221.4	143	1						
58	1221.5	21	2						
59	1221.6	11	1						
60	1221.7	18	1						
61	1221.8	108	1						
62	1221.9	167	2						
63	1222.0	Insufficient Sample							
64	1222.1	54	1						
65	1222.2	14	1						
66	1222.3	34	0						
67	1222.4	20	2						
68	1222.5	23	0						
69	1222.6	15	2						
70	1222.7	14	1						
71	1222.8	7	1						
72	1222.9	22	0						
BLANK	1223.0								
STAND	1223.1								
73	1223.2	43	1						
74	1223.3	67	2						
75	1223.4	50	2						
76	1223.5	22	2						
77	1223.6	16	2						
78	1223.7	14	2						
79	1223.8	53	2						
80	1223.9	19	2						
81	1224.0	28	2						
82	1224.1	17	1						
83	1224.2	31	1						
84	1224.3	18	1						
85	1224.4	33	1						

FIELD NO. 9300 -	LAB NO.	P.P.M. METAL Cu	Mo						
86	1224.5	10	3						
87	1224.6	18	2						
88	1224.7	21	1						
89	1224.8	17	2						
90	1224.9	19	2						
BLANK	1225.0	—	—						
STAND	1225.1	—	—						
91	1225.2	15	1						
92	1225.3	8	1						
93	1225.4	8	1						
94	1225.5	7	2						
95	1225.6	37	1						
96	1225.7	12	1						
97	1225.8	32	1						
98	1225.9	27	1						
99	1226.0	36	0						
100	1226.1	62	1						
101	1226.2	99	1						
102	1226.3	35	1						
103	1226.4	10	3						
104	1226.5	13	2						
105	1226.6	14	1						
106	1226.7	31	1						
107	1226.8	43	1						
108	1226.9	131	0						
BLANK	1227.0	—	—						
STAND	1227.1	—	—						
109	1227.2	Sample Missing							
110	1227.3	17	0						
111	1227.4	7	1						
112	1227.5	9	2						
113	1227.6	30	2						
114	1227.7	8	2						
115	1227.8	9	2						
116	1227.9	20	1						
117	1228.0	9	1						
118	1228.1	22	1						

EAGLEHEAD LAKE

Feb '75

This group previously allowed to lapse

all validated at least till 1978

Northern limit of 1973 Eagle work See 1973 Report

N

LEGEND

- 5 Intrusive Biotite Granodiorite
- 4 Greywacke
- 3 Argillite
- 2 Arkose
- 1 Conglomerate

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5353 MAP #2

J.M. Marr 22/1/75

Contours — 2500 —
Stream or creek (Perennial, intermittent)
Marsh
Lake
Road
Jeep Road
Trail
Trees

5353 MAP 2

IMPERIAL OIL LIMITED — MINERALS

GEOLOGY

NW. EAGLE

Project No. 9300
Mining Division LIARD
Latitude 58° 30'
Longitude 129° 00'
NTS 104 I/6
To Accompany a Report By: J.M. MARR
Dated Jan 1975
Map No. 2.

SCALE : 1" - ½ mile

0.5 0.25 0 0.5 1.0
miles.

To EAGLEHEAD LAKE

N 45° W

Outcrop of Bi Granodiorite

CREEK

SCALE 1" = 400'

400 200 0 400 800

GRID

blazed, flagged and chained at 100' intervals

cut and cleared out to survey standard.

SYMBOLS

Drift-covered area

Rock outcrop, area of outcrop, float

Geological boundary (defined, approximate interpreted)

Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)

Bedding, tops unknown (inclined, vertical, dip unknown)

Schistosity, gneissosity, cleavage, foliation (horizontal inclined, vertical, dip unknown)

Lineation, axes of minor folds (horizontal, inclined, vertical)

Drag-fold (arrow indicates plunge)

Fault (defined, approximate, interpreted)

Fault (inclined, vertical)

Fault (solid circle indicated downthrow side, arrows indicate relative movement)

Thrust fault (approximate, interpreted)

Shearing and dip

Joint (horizontal, inclined, vertical, dip unknown)

Syncline (defined, approximate)

Anticline (defined, approximate)

Anticline and syncline (overturned)

Intensity (weak, moderate, strong)

Trench

Adit or tunnel

Rock dump or tailings

Quarry or mine

Shaft, raise, winze

Diamond-drill hole

Contours 2500 C.I.

Stream or creek (Perennial, intermittent)

Marsh

Lake LK.

Road

Jeep Road

Trail

Trees

5353
MAP 3

J.M. Marr 22/11/75

IMPERIAL OIL LIMITED – MINERALS

SOIL GEOCHEMISTRY – Cu ppm.
N.W. EAGLE.

Project No. 9300 Mining Division LIARD

Latitude 58° 30' N Longitude 129° 00' W

NTS 104 I/6

To Accompany A Report By: J. M. MARR

Dated: Jan. 1975

Map No. 3

TO EAGLEHEAD LAKE

MOSTAK

Outcrop of Bi Granodiorite

SCALE 1" = 400'

400 200 0 400 800

GRID

blazed, flagged and chained at 100' intervals

Cut and cleaned out to survey standard.

SYMBOLS

Drift-covered area

Rock outcrop, area of outcrop, float X

Geological boundary (defined, approximate interpreted)

Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)

Bedding, tops unknown (inclined, vertical, dip unknown)

Schistosity, gneissosity, cleavage, foliation (horizontal inclined, vertical, dip unknown)

Lineation, axes of minor folds (horizontal, inclined, vertical)

Drag-fold (arrow indicates plunge)

Fault (defined, approximate, interpreted)

Fault (inclined, vertical)

Fault (solid circle indicated downthrow side, arrows indicate relative movement)

Thrust fault (approximate, interpreted)

Shearing and dip

Joint (horizontal, inclined, vertical, dip unknown)

Syncline (defined, approximate)

Anticline (defined, approximate)

Anticline and syncline (overturned)

Intensity (weak, moderate, strong)

Trench

Adit or tunnel

Rock dump or tailings

Quarry or mine

Shaft, raise, winze

Diamond-drill hole

Contours 2500 C.I.

Stream or creek (Perennial, intermittent)

Marsh

Lake LK

Road

Jeep Road

Trail

Trees

J.M. Marr 22/1/75

IMPERIAL OIL LIMITED — MINERALS

SOIL GEOCHEMISTRY — Mo. ppm.

N.W. EAGLE

Project No. 9300 Mining Division LARD

Latitude 58°30'N Longitude 129°00'W

NTS 104 I/6

5353 M4

To Accompany A Report By: J.M. MARR

Dated: Jan. 1975

Map No. 4