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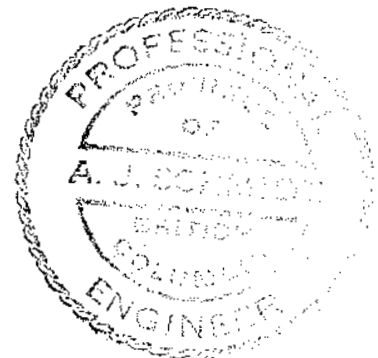
GEOPHYSICAL REPORT
ON THE MSJ CLAIMS
NEAR SMITHERS, B. C.
IN THE OMINECA MINING DIVISION

by L. A. Homeniuk, M.Sc.

HUDSON'S BAY OIL AND GAS COMPANY LIMITED

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. **5208** MAP.....



CLAIMS: MSJ 1-46

LOCATION: Omineca Mining Division
Smithers, British Columbia
Latitude 54°25'N, Longitude 121°22'W

DATE: October 24, 1974

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INTRODUCTION

A geophysical survey of the time-domain induced polarization (IP) type was conducted over a group of 46 claims held by Hudson's Bay Oil and Gas Company Limited. The survey was performed within the period August 8 to 13, 1974, and on September 19, 1974. The purpose of the survey was to determine the extent of the mineralization known to exist within the claim group.

LOCATION AND ACCESS

The claim group is located approximately 25 miles from the town of Smithers, British Columbia. Access to the property is by helicopter only. As only a short time was required to complete the survey, it was considered to be more economical to fly to the claim group daily from the town of Smithers, rather than to establish a field camp at the site. A location map is provided as Figure 1.

Air photographs, No. BC2774:37-9 and BC2774:61 & 62, at a scale of 1 inch = 1/4 mile, provide stereographic coverage of the area. The air photograph centers are indicated on Figure 3.

A claim location map is presented as Figure 2.

OWNERSHIP

The following information is pertinent to the mineral claims investigated.

<u>Claim Name & No.</u>	<u>Record No.</u>	<u>Recording Date</u>	<u>Recorded Owner</u>
MSJ 1-46	129400-129445	October 24, 1973	Hudson's Bay Oil & Gas Company Limited

GENERAL

The area of interest is on the east slope of an unnamed mountain of the Telkwa Range. A substantial cover of talus and glacial derived material overlies the area of interest. Three outcrops mineralized with pyrite are known to exist within the survey area. Their location is indicated on Figure 3. The rocks within these outcrops are altered to varying degrees and are interpreted to be associated with possible "porphyry type" mineralization.

The ground surface is steeply dipping to the east. The approximate location of the survey lines is indicated on Figure 3. The grid lines and stations have been established by topofil chain and compass.

GEOPHYSICS

A. SURVEY PROCEDURE

1. Induced Polarization Survey

The IP data was collected using a parallel pole-dipole type array configuration. The survey was conducted using 1,000 foot line spacings and 800 foot station spacings for the most part. On one set of lines (line numbers 49E, 45E, and 41E), a line spacing and station spacing of 400 feet was used.

The array configuration and the survey parameters as well as the data values obtained are presented in Figure 3. A total of approximately 20 line miles of IP information was collected within the survey area.

2. Apparent Resistivity Survey

The resolution of the apparent resistivity data determined in this manner is low as the array geometry is only known within the accuracy of the pace and compass traverses.

The apparent resistivities of the survey area were calculated from the following basic formula:

$$\rho_a = K \frac{V_p}{I}$$

where K = array geometry factor (form factor)
 V_p = field voltages at potential electrodes (volts)
 I = current (amperes)
 ρ_a = apparent resistivity (ohm-meters)

The calculated values and a contoured presentation of the apparent resistivity of the area surveyed are presented in Figure 4.

3. Equipment

The following is a list of the geophysical equipment used in performing the survey.

1	Huntec Series M-2, 7.5 KW IP Transmitter	
3	Crone Newmont-Designed, Pulse type N-IV IP Receivers	
1	Geotronics Model FT-15A Transmitter	stand-by
2	Geotronics Model R401 Geomite Frequency Domain Receivers	units

Instrument specifications may be obtained from the manufacturer.

B. INTERPRETATION

1. Induced Polarization Survey

The survey procedure and parameters have been described in Part A. A contoured representation of the data collected is presented as Figure 3, along with the chargeability values.

Background chargeability values within the claim group are typically 8 mv/v or less. The chargeability values within most of the area surveyed are above this threshold value and are considered to be anomalous.

The chargeability high is a north-south trending feature. Its dimensions are approximately 10,000 feet long by 5,000 feet wide. The chargeability high is flanked by a low to the east. The lower chargeability values (10 mv/v or less) grade into higher values as the southeastern direction is traversed.

The change in chargeability values from high to low to relatively high again may represent changes in the amount of sulphide mineralization or reflect changes in bedrock topography. Considering these two possibilities, the former is the most likely to be true in that the slope of the mountainside is relatively uniform and the array parameters are designed to minimize the effect of abrupt changes in the bedrock-overburden interface.

Lines 49E, 45E and 41E, which are diagonal to the other lines in the survey area and at a line and station spacing of 400 feet, confirm the general chargeability distribution. The chargeability values from these three lines have been given equal weight in the contour presentation, even though they are not synonymous with the other chargeability values in that they are representative of an average of a smaller rock-volume. They should be given qualitative consideration only in that they support the general distribution of chargeability values obtained from the reconnaissance IP survey.

The negative values probably represent a combination of inductive coupling and of the effect produced when the fixed geometry of the moving array is in a particular location with respect to the boundary of the mineralized body. This phenomenon is also known as edge effect.

2. Apparent Resistivity Survey

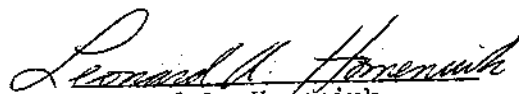
The apparent resistivity information is presented in Figure 4. In general there is a large variation in the apparent resistivity values within the survey area. The apparent resistivity values in the eastern portion of the claim group are generally quite low and indicate the presence of low resistivity material. There is no evident correlation between the chargeability and the apparent resistivity data.

CONCLUSIONS AND RECOMMENDATIONS

Within the MSJ claim group there is a chargeability anomaly with approximate dimensions of 10,000 feet by 5,000 feet. The amplitude of the anomaly is approximately five times the background value. The trend of this feature is north-south. The type of mineralization related to this anomalous condition is not known.

A program of drilling is required to establish the nature of the mineralization, as well as to provide geological information. The implementation of a more detailed geophysical program would be dependent upon the outcome of the initial drill test.

October 10, 1974


Leonard A. Homeniuk
Geophysicist

Qualifications of Supervisory Personnel

Jaroslav Panenka, M.Sc., Senior Geophysicist

B.Sc. (Geology), 1956, Charles University, Prague, Czechoslovakia

M.Sc. (Geophysics), 1958, Charles University, Prague, Czechoslovakia

Leonard A. Homeniuk, M.Sc., Geophysicist

B.Sc. (Geological Engineering), 1970, University of Manitoba

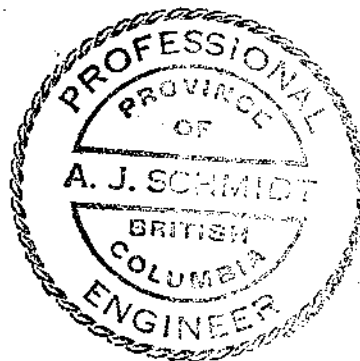
M.Sc. (Geophysics), 1972 University of Manitoba

Daniel P. Olson, B.Sc., Geophysicist

B.Sc. (Geological Engineering), 1973, University of British Columbia

Robert B. Boonstra, B.Sc., Geophysicist

B.Sc. (Geophysics Major), 1973, University of British Columbia



The geophysical survey described in this report was conducted under my general direction

A. J. Schmidt, P. Eng.
Andrew J. Schmidt (B.C.)

RELATED COSTS

<u>Name</u>	<u>Days Worked</u>			<u>Total</u>	<u>Salary</u>	<u>TOTAL</u>
	<u>August</u>	<u>September</u>	<u>October</u>			
Boonstra, R.	8-13	19		7	39.02	273.14
Busby, L.	8-13			6	27.25	163.50
Homeniuk, L.	8-10	23-27	1	9	75.00	675.00
Klutz, R.		19		1	36.42	36.42
Law, J.	8-13			6	27.47	164.82
McKee, C.		19		1	34.68	34.68
Niznik, A.	8-13			6	26.16	156.96
Olson, D.	8-13	19		7	50.00	350.00
Panenka, J.	9	25		2	100.00	200.00
Peebles, C.		19		1	29.72	29.72
Schmidt	8, 13			2	100.00	200.00
					Fee	
Oncul, N. (Drafting)			2-4	3	\$80/day	240.00
TOTAL				51		2,524.24

Total Wages 2,524.24

Room and Board: 39 man-days @ \$25/day/man 975.00

Transportation: GMC truck rental
Rentway Canada Ltd.
4412 Blackfoot Tr. S. E.
Calgary, Alberta
8 days @ \$550/month 146.66

Helicopter
Okanagan Helicopters Ltd.
439 Agar Drive
Vancouver, B. C.
\$285/hr.; \$.72/gal. (fuel)

<u>Date</u>	<u>Invoice No.</u>	<u>Hours</u>	<u>Fuel (Gal.)</u>	<u>Amount</u>	
August 9, 1974	56706	2.5	58	753.95	
" 10, 1974	56709	0.9	21	271.50	
" 11, 1974	56712	1.2	28	362.00	
" 12, 1974	56715	1.0	23	301.45	
" 13, 1974	56722	1.5	35	452.50	
Sept. 19, 1974	59780	<u>1.0</u>	<u>22</u>	<u>303.00</u>	
	Total	8.1	187	2,444.40	2,444.40

Instrument Rental:

1	Huntec Series M-2, 7.5 KW IP Transmitter 6 days @ \$1,500/month	300.00
3	Crone Newmont Designed Pulse Type N-IV IP Receivers 6 days @ \$357.50/month ea.	214.50
1	Geotronics Model FT-1519 Transmitter 6 days @ \$1,990/month	398.00
2	Geotronics Model R401 Geomite Frequency Domain Receivers 6 days @ \$832.95/month ea.	333.18

Other Equipment

4	Motorola HT-220 Series Walkie-Talkies 6 days @ \$50/month	40.00
	Wire (15 miles @ \$20/mile)	300.00
3	Topofil chains (6 days @ \$50/month)	40.00
	Equipment Insurance @ \$5/\$1,000/month	42.00
	on \$42,000 value for 6 days	38.53
	Tecktonic oscilloscope (6 days @ \$192.65/month)	24.00
	Instrument Accessories (6 days @ \$120/month)	

TOTAL EXPENDITURE

7,820.51

Hudson's Bay Oil and Gas Company Limited

Telephone (403) 267-2110 - 320 Seventh Avenue S.W. - Calgary, Alberta, Canada T2P 0X5

171 Pemberton Avenue, North Vancouver, B.C. V7P 2R4

October 18, 1974.

Mr. A.W. Milton, Mining Recorder
Omineca Mining Division
P.O. Box 340
Smithers, B.C.
VOJ 2N0

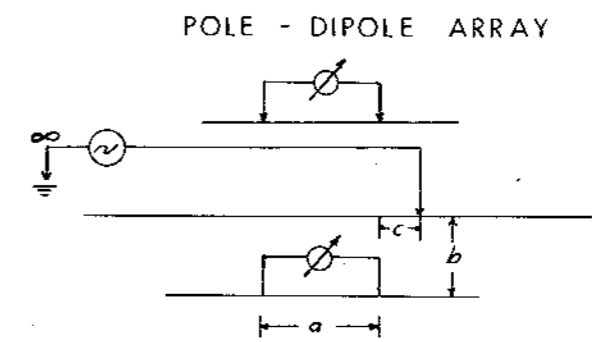
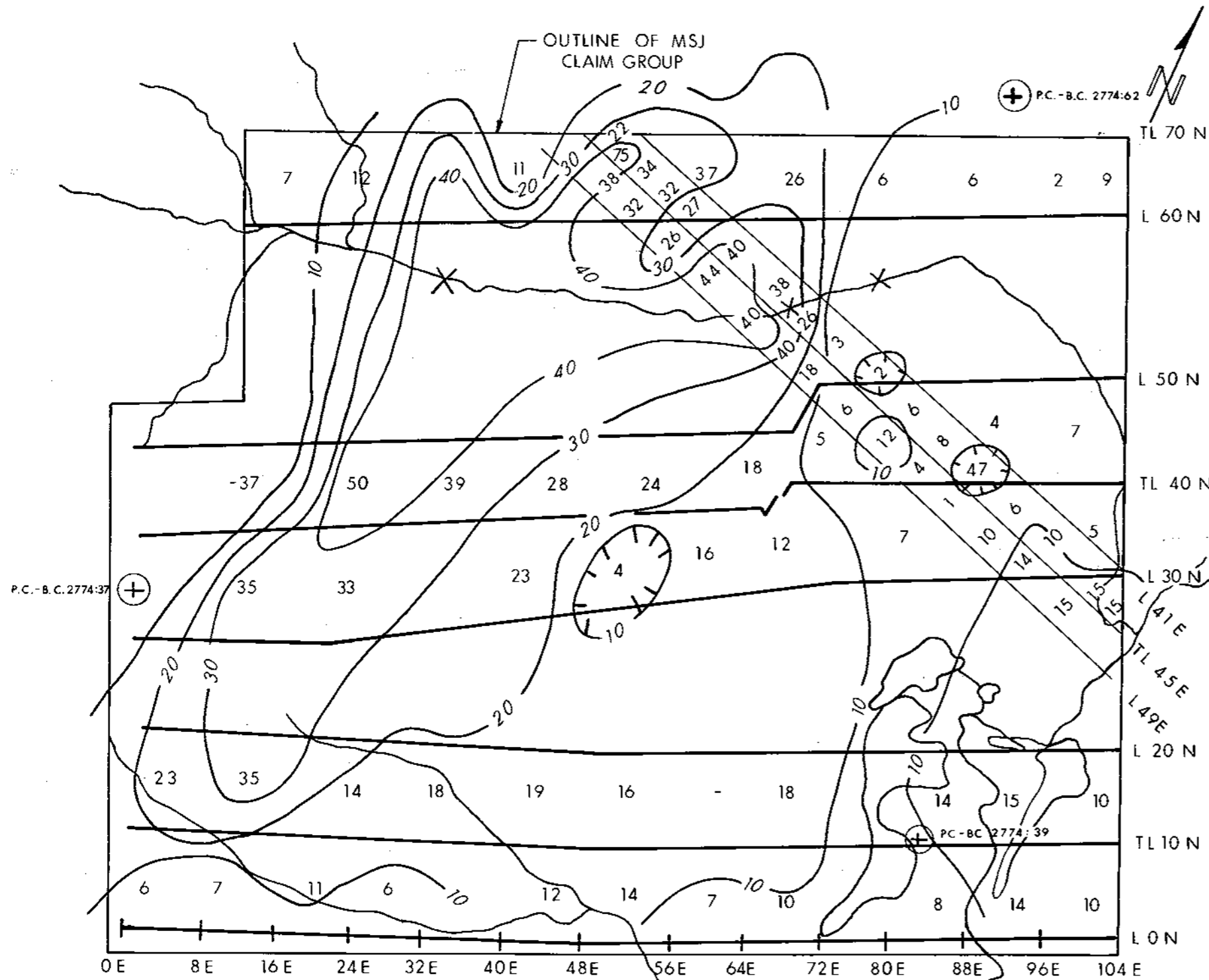
The foregoing statement of costs is accurate. The substantiating invoices are on file in our North Vancouver office or in our head office in Calgary.

The charge of \$2,444.40 for use of a helicopter is, in our opinion, valid because the cost of establishing, operating and removing an on-site tent camp for such a short period would have exceeded the cost of the daily helicopter charters.



Kenneth C. Rose, P.Eng.
Manager - Western Division
Minerals Exploration Dept.

KCR:Kd1



LEGEND

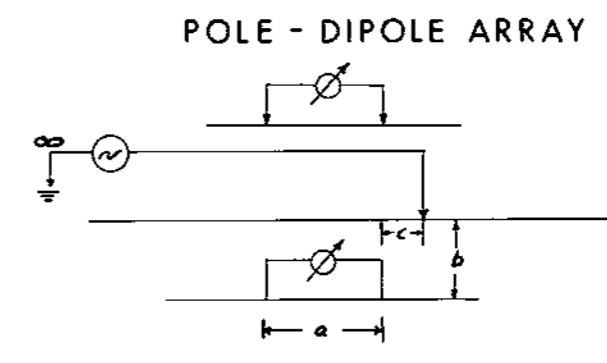
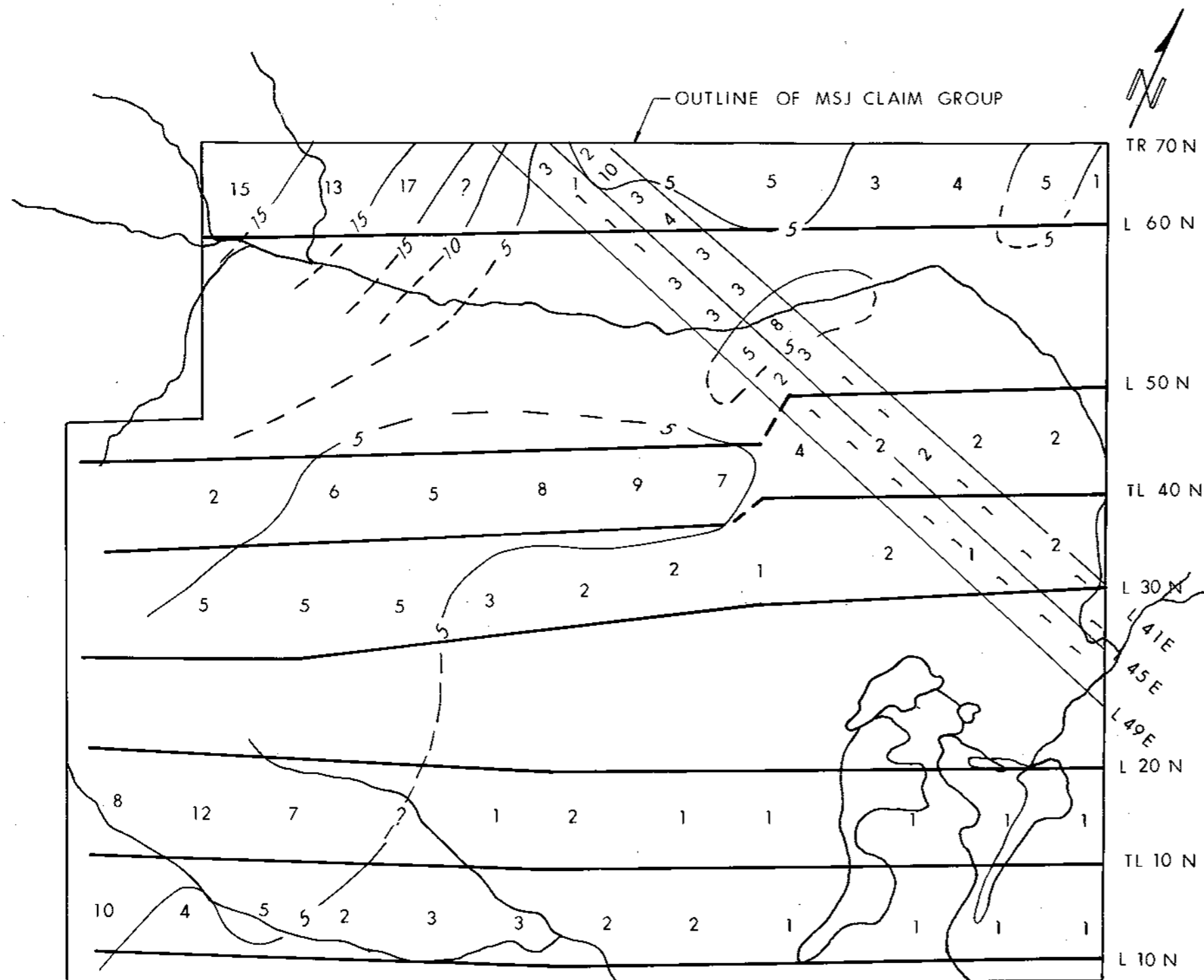
- PACE & COMPASS TRAVERSE
- L 50 N LINE NUMBER
- TL 40 N TRANSMITTER LINE
- X MINERALIZED OUTCROP
- ⊕ P.C.-B.C. 2774:62 AIRPHOTOGRAPH CENTER

5208 M3
 OCT 09 1974
 L.A. HOMENIUK

TO ACCOMPANY
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 OCTOBER 24, 1974

Department of
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Hudson's Bay Oil and Gas Company Limited MINERALS EXPLORATION CALGARY ALBERTA		
MSJ CLAIM GROUP OMINECA MINING DIVISION B.C. FIGURE 3 INDUCED POLARIZATION SURVEY CHARGEABILITY CONTOUR MAP CONTOUR INTERVAL: 5mv/v 		
SCALE:	AUTHOR: L. HOMENIUK	DATE: OCT. 1974
FILE #:		



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NO. **5208** MAP **#4**

L.A. Homenuk OCT 09 1974

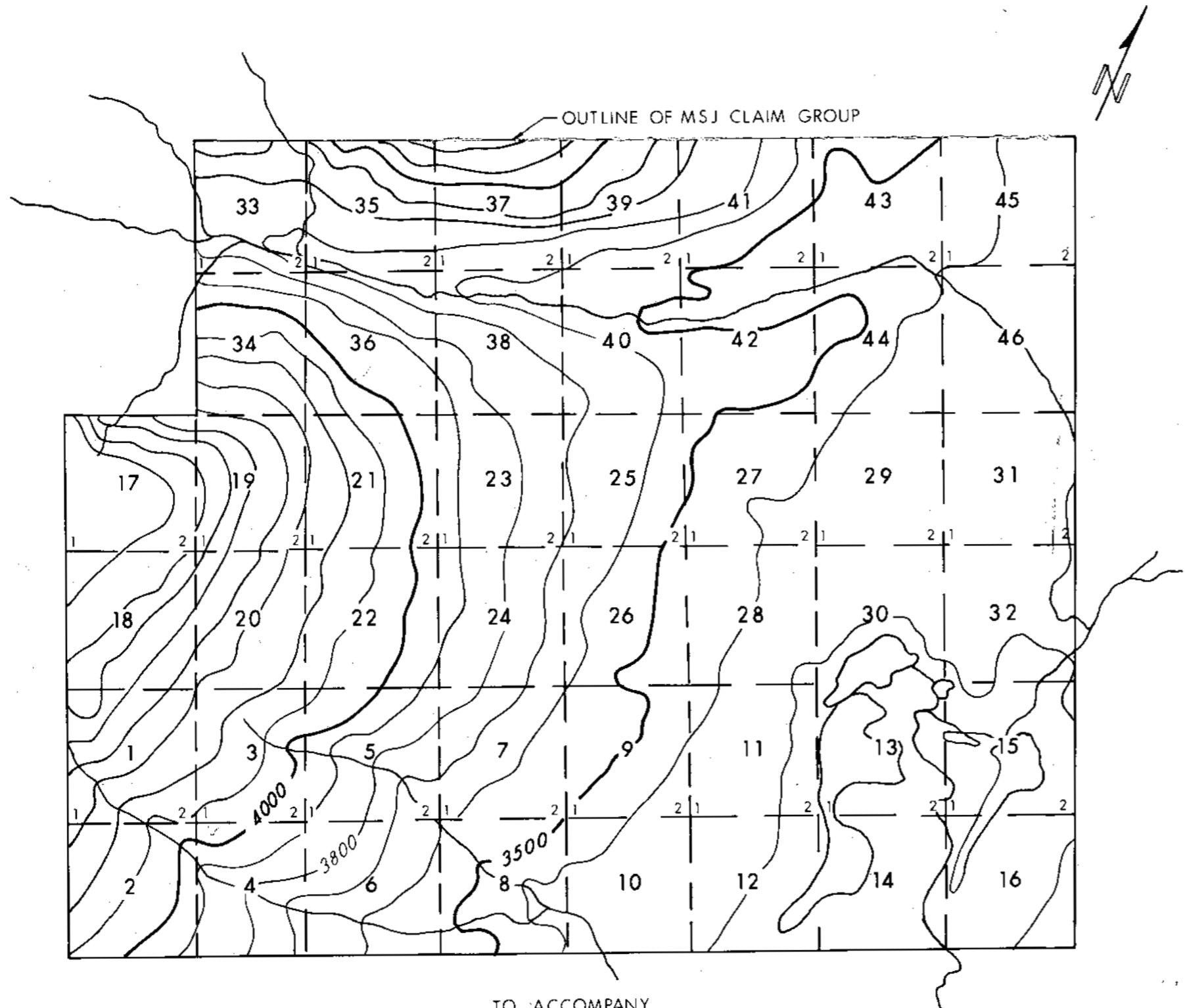
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Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION
CALGARY ALBERTA

MSJ CLAIM GROUP
OMINECA MINING DIVISION B.C.
FIGURE 4
INDUCED POLARIZATION SURVEY
APPARENT RESISTIVITY CONTOUR MAP
CONTOUR INTERVAL: 500 OHM-METERS
VALUES X 100 OHM-METERS

SCALE: AUTHOR: L. HOMENIUK DATE: OCT. 1974
FILE No.:











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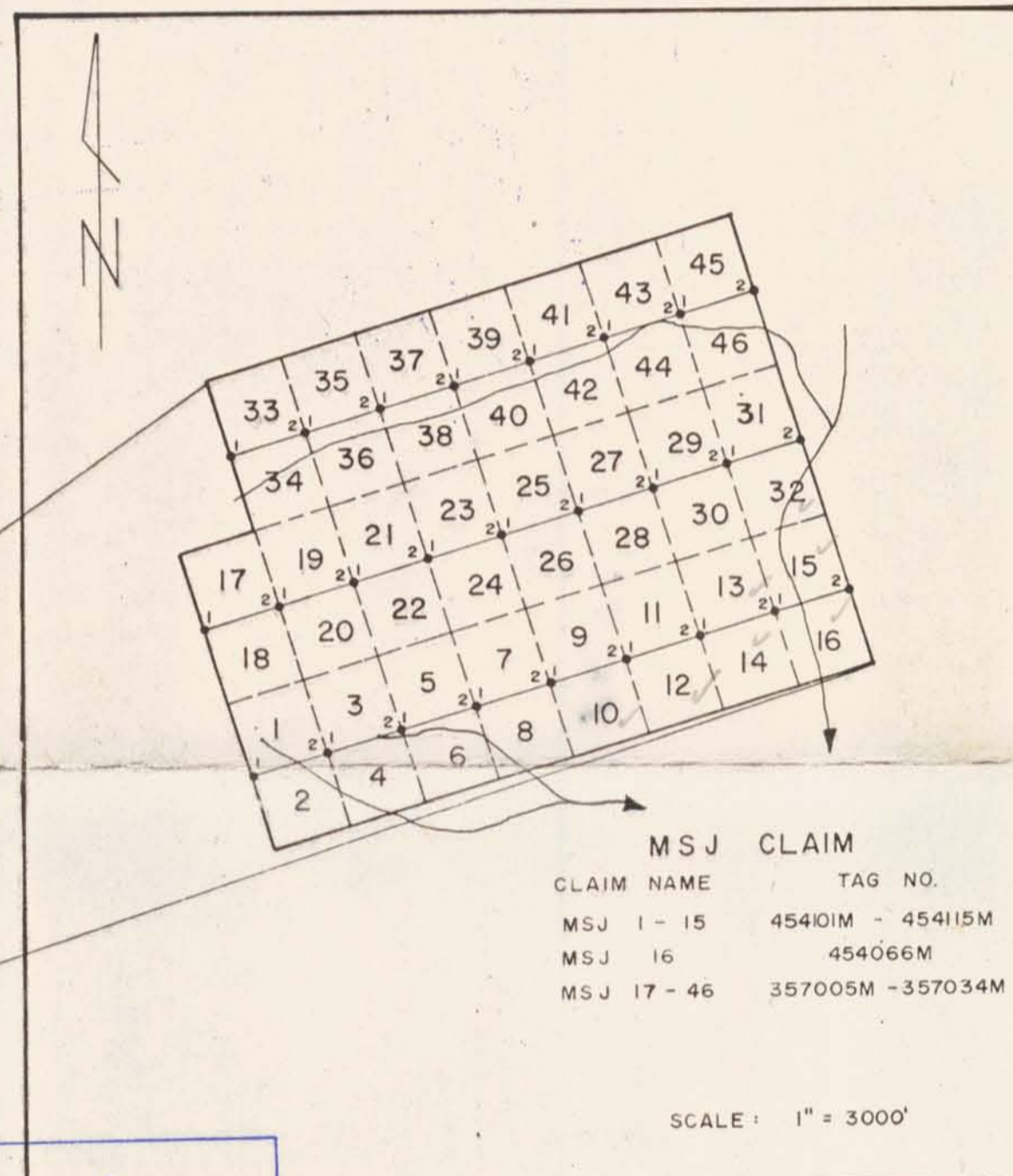
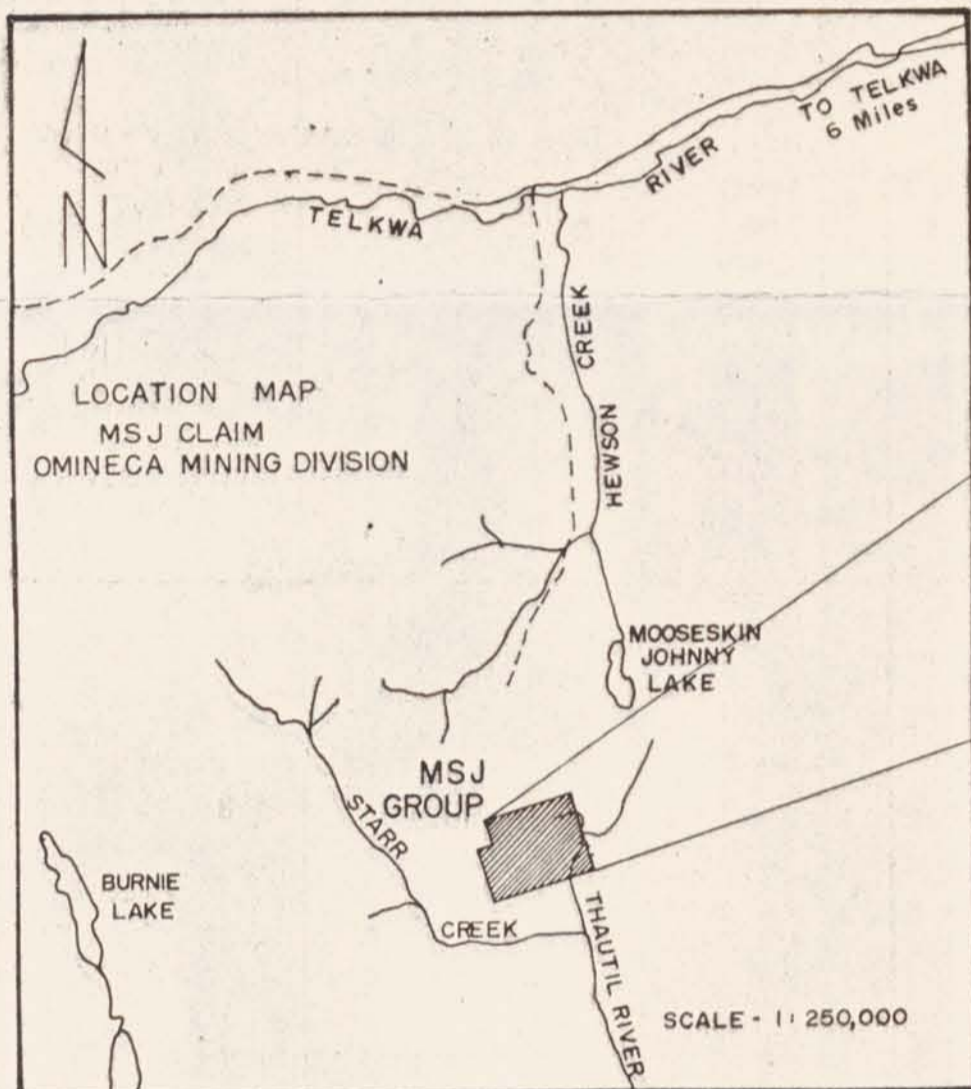
Department of
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L.A. Homeniuk
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M2

Hudson's Bay Oil and Gas Company Limited		
MINERALS EXPLORATION		
CALGARY		ALBERTA
MSJ CLAIM GROUP		
OMINECA MINING DIVISION B.C.		
FIGURE 2 - CLAIM MAP		
CLAIM NAME	TAG NUMBER	
MSJ 1-15	454101m - 454115m	
MSJ 16	454066m	
MSJ 17-46	357005m - 357034m	
-1320' -660' 0 1320'		
SCALE:	AUTHOR: L. HOMENIUK	DATE: OCT. 1974
FILE No.:		

LEGEND

-  CLAIM BLOCK BOUNDARY
-  CLAIM LOCATION LINE (CLAIM POSTS)
-  1 - INITIAL POST
-  2 - FINAL POST
-  W.P. - WITNESS POST
-  INTERNAL CLAIM BOUNDARY
-  ALL WEATHER GRAVEL ROAD
-  JEEP ROAD OR TRAIL



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FIGURE 1
LOCATION MAP

5208
M1

PREPARED FOR
HUDSON'S BAY OIL AND GAS Co. LTD.

CLAIM MAP

MSJ CLAIM GROUP *L.A. Homeniuk*
TELKWA RANGE AREA
OMINECA MINING DIVISION
BRITISH COLUMBIA

OCT 28 1974

STAKING BY KERR, DAWSON & ASSOCIATES LTD.	SCALE AS INDICATED
DRAWN BY	DATE OCTOBER, 1973
APPROVED BY J.M. DAWSON, P.Eng.	DWG. NO. 91-1

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