

5260

93A/6E & 6W

REPORT ON MAGNETOMETER SURVEY

OF THE FLY CLAIMS

NEAR HORSEFLY, B. C.

IN THE CARIBOO MINING DIVISION

by D. P. Olson, B.A.Sc.

HUDSON'S BAY OIL AND GAS COMPANY LIMITED

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5260 MAP

CLAIMS: Fly 1-40

LOCATION: Cariboo Mining Division
Horsefly, B. C.
Latitude 52°20'N, Longitude 121°16'W

DATE: November 1, 1974

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INTRODUCTION

A ground magnetometer survey was conducted over a group of 40 claims held by Hudson's Bay Oil and Gas Company Limited. The survey was performed with the proton precession type portable magnetometer and took place within the period May 10 to 15, 1974.

The purpose of the survey was to determine the exact location and extent of an airborne magnetic anomaly known to exist on the claim block, and also to correlate magnetics with geology.

LOCATION AND ACCESS

The claim group is located approximately 6 miles east northeast of the village of Horsefly, British Columbia, and approximately one and one-half miles south of the west end of Horsefly Lake. The claims are in the Cariboo Mining Division and are located as shown in Figure 1.

The property is bounded to the east by Black Mountain and to the southwest by Sucker Lake. Access is via five miles of secondary gravel road from Horsefly village to Gibbons Creek, then by three miles of four-wheel drive road to the test area. The property can be traversed easily by foot. A detailed claim map showing the location of cut and picketed lines is given as Figure 2.

OWNERSHIP

The Fly No. 1 group is comprised of the Fly No.'s 1-40 mineral claims. The claims are owned by C. V. Critchlow, SS #2, Dow & Thompson, Prince George, British Columbia, and are operated by Hudson's Bay Oil and Gas Company Limited on an option to lease agreement. The following information is pertinent to the Fly claim group.

<u>Claim Name & No.</u>	<u>Record No.</u>	<u>Recording Date</u>
Fly 1-8	54315-54322	November 3, 1969
Fly 9-22	54744-54757	November 17, 1969
Fly 23-40	54758-54775	November 18, 1969

GENERAL

The claims are situated in moderately rolling terrain on the west flank of Black Mountain. Altitudes range from 2,800' to 3,500' above sea level. The area exhibits erosional and depositional features of continental glaciation which moved in a general northwesterly direction. Outcrop is scarce and is limited to ridge crests and deeply-incised creek valleys. Overburden depths range up to 20 feet.

Vegetation is light to moderate and consists of open stands of spruce, fir, pine, birch and poplar. Undergrowth is thick in areas of poor drainage.

A grid system of cut and blazed lines had been previously established for survey control. The line and station locations are given in Figure 2. Lines run outside the cut grid were by pace and compass and were tied to the established grid.

GEOPHYSICS

A. SURVEY PROCEDURE AND RESULTS

The magnetometer data was collected using two proton precession magnetometers, which measure the total magnetic field strength in gammas. The survey was run on lines spaced 400 feet apart and readings were taken every 50 feet. The station spacing was selected in consideration of the known geology, with vertical faults and intrusive rocks being the target for the survey.

A base station was established at point 32W, 38S, and readings were taken here at the start and finish of each day's work. Base readings were also taken during the day whenever possible. It was found convenient to establish more base stations to the east, and on the last day of surveying, the base stations were tied together.

Each line of data was then corrected for diurnal variation if the closure error was greater than 50 gammas, and a constant was added or subtracted from each reading to correct for base station closure. The corrected data was then plotted in profile form with a horizontal scale of 1 inch to 400 feet, and a vertical scale of 1 inch to 1,000 gammas. The stacked profiles, shown as Figure 3, have a base of 59,000 gammas. Profiles were selected in favour of a contour map, since the character of the data would have made it difficult to interpolate the contours between adjacent lines.

A total of approximately 23 line miles of magnetometer data was collected within the Fly claim group.

B. EQUIPMENT

The instruments used for the survey were Geometrics Model G816 Portable Proton Precession Magnetometers. The sensing pot was supported on an 8 foot beam to reduce noise, which was dominant if the pot was held in the shoulder harness. Instrument specifications can be obtained from the manufacturer.

C. INTERPRETATION


The stacked profiles, as presented in Figure 3, show a general background magnetic field strength of 59,000 gammas, which is the value used as the base for each profile. It can be seen from the profiles

that a significant amount of low frequency noise (periods from 1 to 2 minutes with amplitudes ranging up to 700 gammas) was encountered throughout the survey period. This random noise cannot be removed from the data except by filtering, which would simultaneously remove useful information.

There are four significant features which stand out above the noise and these are as follows:

1. The very strong east-west trough running just south of Lemon Lake. This feature corresponds well with a major fault proposed by the detailed geologic survey of the claims. It is characterized by its linearity, low magnetic field strength and high magnetic gradients forming the trough walls.
2. The region of high magnetic relief (up to 4,000) covering Fly No.'s 11-16, 26 and 28. This anomalous area lies over a syendiorite intrusive, which is believed to be the source of the airborne anomaly. Drilling on Fly No. 26 showed disseminated magnetite to 1%, and minor hematite.
3. The weak, narrow trough striking due east from the east shore of Lemon Lake. This feature is most likely a fault as in No. 1, since it corresponds in strike and character to the larger "fault" further south.
4. The area of low magnetic relief north and west of Lemon Lake defines the low magnetic volcanics bordering the intrusive which lies to the south and east.

October 30, 1974


Daniel P. Olson
Geophysicist

QUALIFICATIONS OF SUPERVISORY PERSONNEL

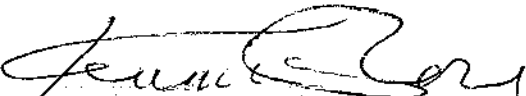
Daniel P. Olson, B.A.Sc., Geophysicist

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

Leonard A. Homeniuk, M.Sc., Geophysicist

B.Sc. (Geological Engineering), 1970, University of Manitoba
M.Sc. (Geophysics), 1972, University of Manitoba

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



Kenneth C. Rose, P.Eng.

RELATED COSTS

Name	Days Worked		Total	Salary	TOTAL
	May	October			
Busby, L.	10-15, 26, 27		8	\$ 27.25	\$218.00
Chromy, S.	12-14		4	27.47	109.88
Homeniuk, L.	15, 26		2	75.00	150.00
Niznik, A.	27		1	26.16	26.16
Olson, D.	10&11, 26, 27	22	5	50.00	250.00
Oncul, N.		29	1	(Fee) \$80/day	80.00
TOTAL			21 man/days		\$834.04

Room and Board: 21 man-days @ \$16/man-day
 North Country Lodge
 Box 125
 Horsefly, B. C. \$336.00

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

Instrument Rental:
 2 Geometric Model G816 Magnetometers 256.00
 8 days @ \$330/month ea.

TOTAL EXPENDITURE \$ 1,572.70

Declared before me at **VANCOUVER, B. C.**
 of **NOV 7 1974** in the
 Province of British Columbia, this *[Signature]*
 day of **Sub - Mining Recorder**

[Handwritten Signature]



Department of
 Mines and Petroleum Resources
 Assessment Services
 NO 5260 MAP #1

5260 *turnout Box*
 MAP 1

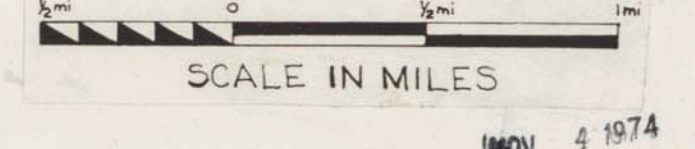
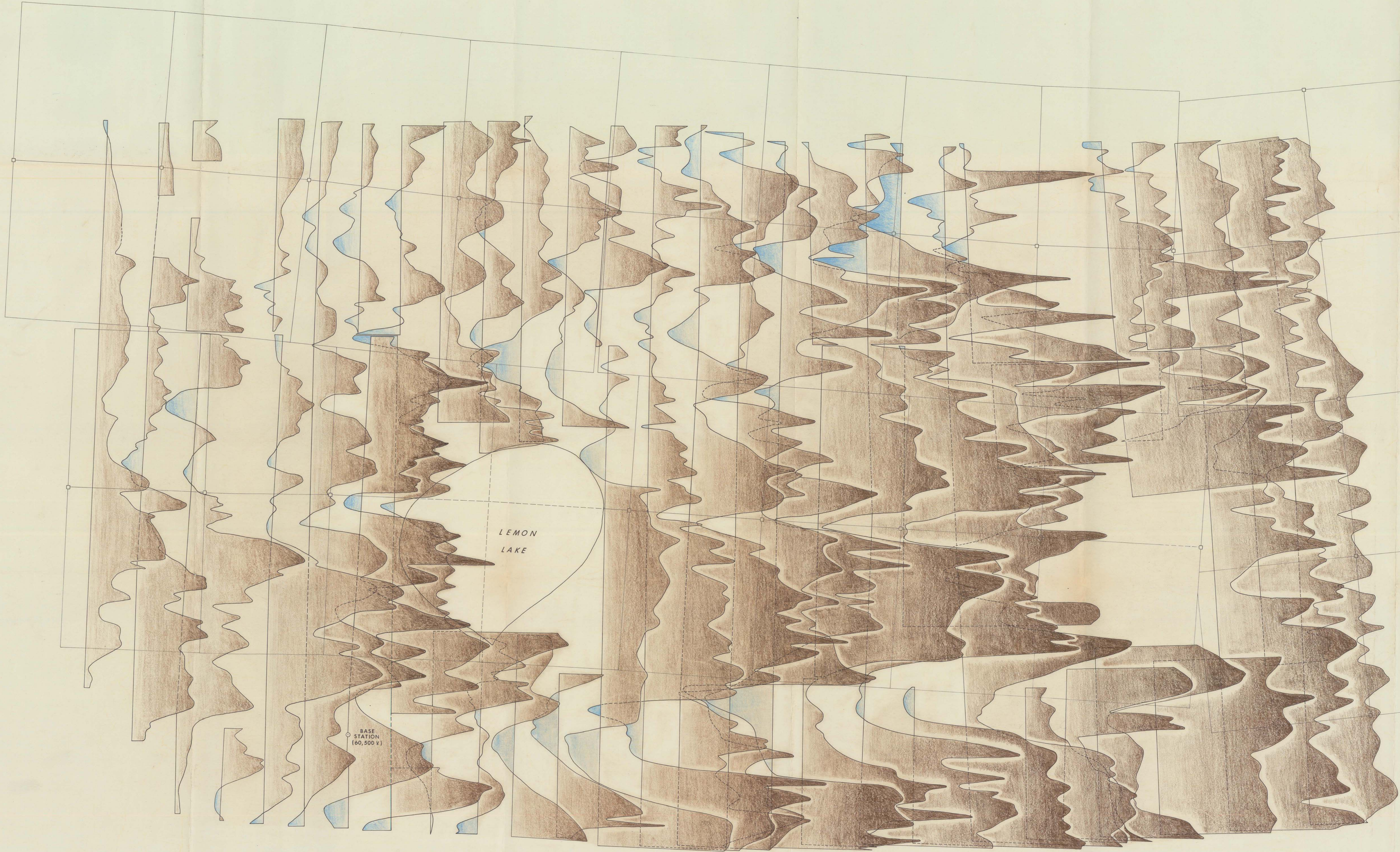


FIG. 1
 Hudson's Bay Oil and Gas Company Limited
 MINERALS EXPLORATION
 VANCOUVER BRITISH COLUMBIA
 QUESNEL TROUGH PROJECT
 CLAIM LOCATION MAP
 HORSEFLY LAKE AREA
 CARIBOO MINING DIVISION
 BRITISH COLUMBIA
 MAP DATE BY SCALE N.T.A.
 OCT. 1974 D.P. OLSON 1" = 1/2 mile 93 A

20 N
18 N
16 N
14 N
12 N
10 N
8 N
6 N
4 N
2 N
0
2 S
4 S
6 S
8 S
10 S
12 S
14 S
16 S
18 S
20 S
22 S
24 S
26 S
28 S
30 S
32 S
34 S
36 S
38 S
40 S
42 S
44 S
46 S



56 W — 52 W — 48 W — 44 W — 40 W — 36 W — 32 W — 28 W — 24 W — 20 W — 16 W — 12 W — 8 W — 4 W — 0 BASE LINE — 4 E — 8 E — 12 E — 16 E — 20 E — 24 E — 28 E — 32 E — 36 E — 40 E — 44 E — 48 E — 52 E — 56 E

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5260
MAP 3

SCALE IN FEET

SCALE IN GAMMA

Kenneth Olson

NOV 4 1974
Ken Olson

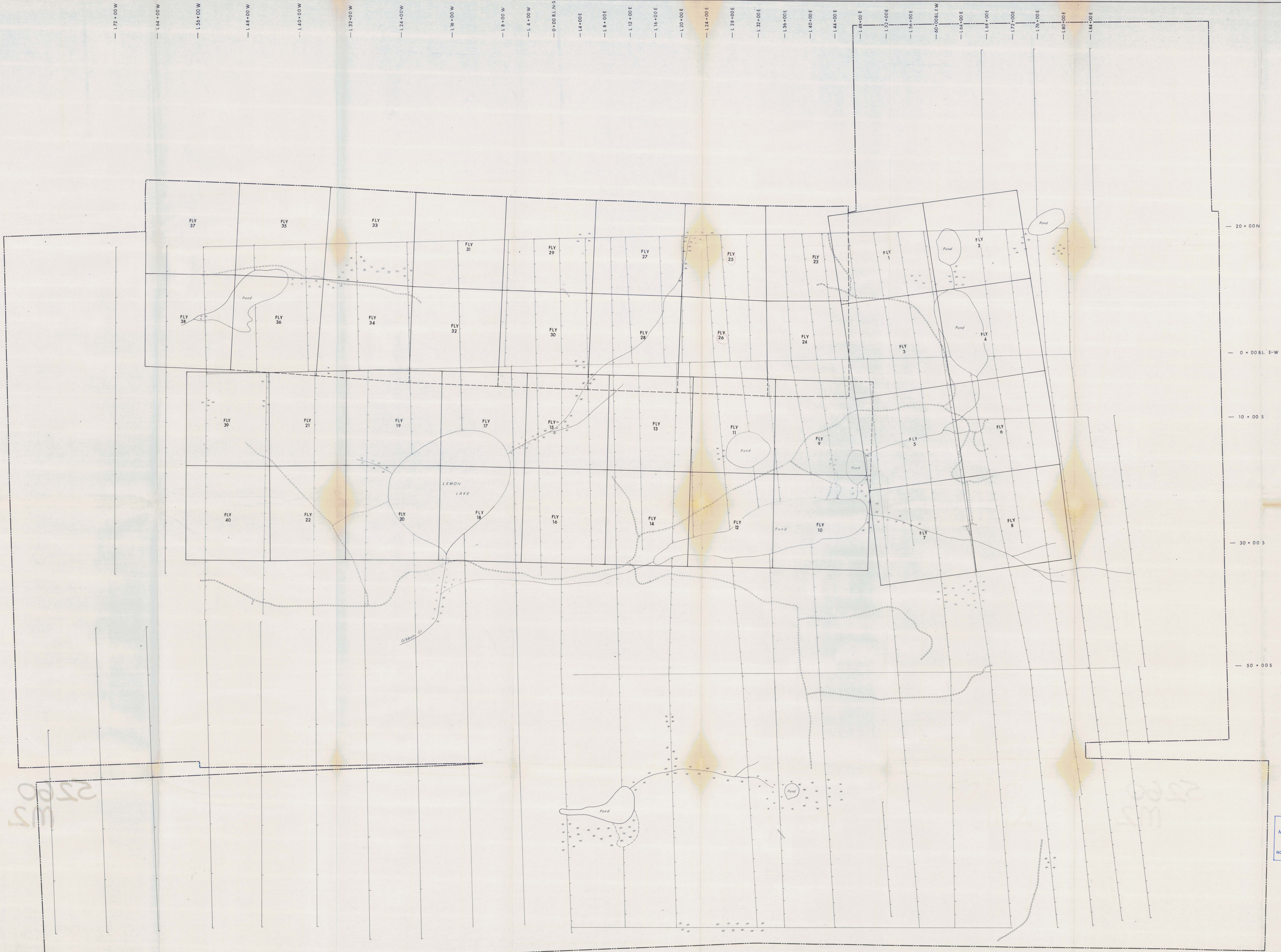
FIG. 3

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

QUESNEL TROUGH PROJECT
LEMON LAKE

MAGNETOMETER SURVEY
PROFILE BASE : 59,000 GAMMAS

MAP	DATE	BY	SCALE	N.T.S.
	OCT. 1974	D. P. OLSON	HOR. 1"=400' VER. 1"=1000' Gamma	



2500
US

2500
US

5260
M2

Department of
Mines and Petroleum Resources
ALBERTA
ASSESSMENT REPORT
NO. 5260 MAP #2

Renald Wilson

SCALE IN FEET
1" = 400'

FIG. 2

Hudson's Bay Oil and Gas Company Limited
MINERALS EXPLORATION ALBERTA
CALGARY ALBERTA
QUESNEL TROUGH PROJECT
CARBOO MINING DIVISION
FLY CLAIM MAP

NO.	REV.	BY	DATE	SCALE