

ENDAKO MINES LTD. (N. P. L.)

700 BURRARD BUILDING

VANCOUVER 5, B.C. CANADA

STATEMENT OF QUALIFICATIONS

568

The following report covers the geochemical investigation and magnetometer survey of the Pat Nos. 1 - 128 mineral claims. This work was carried out under my direction by R. E. Cribbs and D. C. Rotherham, Sr. Geochemist and Sr. Geologist respectively on the staff of Canadian Exploration Limited.

Mr. Cribbs holds a degree in geochemical engineering from the University of Minnesota and is a specialist in the field of geochemistry, having practiced this branch of geology since 1954. Mr. Rotherham has been engaged in mining exploration in B. C. and the Yukon for many years and has run many magnetometer surveys.

It is my opinion, therefore, that the field work has been carried out on a standard acceptable to the Association of Professional Engineers and, therefore, meets the requirements for credit as assessment work.

L. Adie

L. ADIE, P. Eng.
Projects Engineer

LA:msl

July 22, 1964

93K / 2W 1/2 3E

ENDAKO MINES LTD. (N. P. L.)

700 BURRARD BUILDING

VANCOUVER 5, B.C. CANADA

GEOCHEMICAL AND MAGNETOMETER REPORT

PAT NOS. 1-128 MINERAL CLAIMS.

ENDAKO AREA

OMINECA MINING DIVISION

BRITISH COLUMBIA

R. E. Cribbs
D. C. Rotherham

June 26, 1964

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 568 M.P.

Summary and Conclusions

The Pat group of mineral claims is underlain by the same batholith of Topley granite and related intrusives as the Endako molybdenite deposit. The soil over part of the Pat claim area is weakly anomalous in molybdenum, but no strong anomaly that might indicate the presence of an underlying molybdenum orebody was found. The possibility always exists, however, that deep glacial deposits may have obscured small areas of mineralization.

Very little difference in magnetic intensity was shown by the magnetometer survey thus making any interpretation questionable.

Property

The Pat group of mineral claims is located adjacent to the village of Endako in the Omineca Mining Division. Endako is 100 miles west of Prince George on Highway 16.

The claims are as follows:

Claim Numbers

Pat Nos. 1-128

Record Numbers

14756-15507

Topography

Most of this claim group is in an area of well-rounded hillsides. The north edge of the group is in the valley of the Endako River at an elevation of 2,200 feet. As one proceeds southward, the surface rises to a flat plateau 3,100 feet high. The southern border of the group is on the edge of this plateau.

General Geology

The regional geology of this area is described by Dr. J. E. Armstrong in G.S.C. Memoir #252, Fort St. James Map Area. This map shows

The Pat group to be underlain by Topley granite. Detailed mapping by Mr. C. W. Ball, for Canex Aerial Exploration, has shown the area to be much more complex with intrusives varying in composition from alaskite to diorite plus volcanic rock of uncertain age. These volcanics may be bounded on the west by a prominent north-west trending fault. Other faults trending north-east and east-west are projected through the area.

Survey Control

The main north baseline of Endako Mines is along the south boundary of the Pat group. Cross lines were cut for geochemical sampling every 1000 feet along the baseline and were used for control for both the geochemical sampling and the magnetometer work. Where geochemical lines were missing, magnetometer readings were taken every 100 feet along N.S. compass lines.

Geochemical Prospecting

Introduction

A reconnaissance geochemical soil survey was carried out over about one-half the area of the Pat claims. No sampling was done along the northern part of the area in the Endako River valley.

The presence of scattered outcrops, and the results of the diamond drilling indicate that the depth of glacial overburden over most of the sampled area is not in excess of 50 feet. Soil sampling, therefore, should probably locate any underlying mineralization.

Sampling

Soil samples were taken at 100 foot intervals on due north lines 1000 feet apart. Holes were dug at each location to a depth of at least

six inches below the humus. A sample of approximately two ounces of soil was taken from several places in the bottom of each hole.

Sampling on the Pat claims was done intermittently from June 20, 1963 to August 21, 1963.

Analysis

A total of 864 samples were taken and analyzed for molybdenum.

Of these samples 463 were run at the Ganex laboratory near Endako. The minus 60 mesh fraction of the soil was analyzed colorimetrically for molybdenum using the thiocyanate-stannous chloride method.

The remaining 401 samples were run at the University of British Columbia using a similar method of molybdenum analysis, but without first screening the samples.

Results

Soils over unmineralized granite in the Endako area have been found to average less than 1 ppm molybdenum. Most of the soil samples taken on the Pat claims contained less than 4 ppm and were obviously derived from barren granite.

Samples containing from 4 to 60 ppm are concentrated in three areas centered on the Pat 58, 60 and 69 claims; on the Pat 1, 3, 5, 21, 22 and 23 claims; and on the Pat 105, 106, and 116 claims. The source of much of this molybdenum is probably low grade mineralization in nearby bedrock. However, part of the molybdenum may have been transported by glacial action from the orebody several miles southwest. These anomalous areas on the Pat claims are very much weaker than soil anomalies over known molybdenum ore in the area.

Magnetometer Survey

Instrumentation and Method

Two magnetometers were used during this survey. A Watts magnetometer measuring vertical intensity was set up on a station in the camp area, and readings taken every two hours to measure the diurnal variation. This magnetometer is a Schmidt type vertical component magnetometer with a sensitivity of 30 gammas per scale division.

The field readings were taken with a Jalander flux gate magnetometer which on its most sensitive scale has a sensitivity of 10 gammas per scale division. This is a light, accurate magnetometer that does not require a tripod and thus enables the operator to take a reading quickly and move on to the next station.

Interpretation

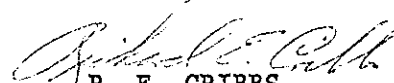
Little interpretation is possible as the survey shows slight variation in the magnetite content of the rocks in this area. An exception to this is small areas of diorite in the eastern section that give readings in excess of 1000 gammas and small inclusions of plugs of volcanic material that give higher readings.

Readings taken over outcrop areas show variations of several hundred gammas over similar appearing rock. This suggests an uneven distribution of magnetite. This uneven distribution coupled with the low variations makes it impossible to draw contours with any assurance of accuracy. Because of this, a simple color code has been used in place of contours.

Two areas stand out as being slightly different. The east-central portion contains some diorite and is in general a magnetic high. A magnetic

lower area occurs centering on Pat No. 6 mineral claim. This is an area of slight outcrop and it is uncertain if the lower readings are caused by less magnetite in the rock or an area of heavier overburden.

Respectfully submitted,


R. E. CRIBBS


D. C. ROTHERHAM

/ja

Statement of Expenses

Geochemical Survey

Name	Dates Employed	
David Young	June 21, 25, July 6, 27, Aug. 2, 3, 14-17, 19	
Richard Bowen	July 5, 6, Aug. 3, 14-17, 19 and 21	
Donald Idiens	June 20, 25, July 6, 26, 27, Aug. 2, 3, 14-16, 19 and 21	
Barry Scott	June 25, July 5, 6, Aug. 2, 16, 17, 19	
Siedo Tzgoeff	July 6, 26, 27, Aug. 3, June 20, 25	
Gary Scoretz	June 21, 25, July 6, 26, 27, Aug. 3, 14, 15, 17 and 19	
David Hawkins	June 21, 25, July 6, 27	
James Irwin	June 20, July 6, 26, 27, Aug. 2, 3	
TOTAL - 65 man days @ \$14.65 aver./day		\$ 953.00

R. E. Cribbs, geochemist supervisor - 7 days	315.00
Vehicle Rental - 7 days @ \$15	105.00
Camp Operation - 72 man days @ \$5	360.00
Geochemical assays - 722 determinations @ \$1	<u>722.00</u>

TOTAL Expenses - Geochemical \$ 2,455.00

Magnetometer Survey

Survey Crew Position	Dates Worked	Days	
D. Rotherham - Supervisor	May 4-8, 24-27	9	\$ 243.00
E. Rychkun - Instrument Operator	May 4 - June 6	34	375.00
B. Radcliffe - Lineman	May 6 - June 6	32	325.00
P. O'Hara - Instrument Reader (base camp 1/2 wages)	May 4 - June 6	34	<u>187.00</u>

\$ 1,130.00

H. O. Supervision and overhead @ 50% (included in \$750.00 below)	
Vehicle Rental - 34 days @ \$15	510.00
Magnetometer Rental - 1 Jalander and 1 Watts 34 days @ \$10 each	680.00
Camp Operation - 109 man days @ \$5	<u>545.00</u>

TOTAL Expenses - Magnetometer \$ 2,865.00

Head Office Supervision and Overhead 750.00 \$ 750.00

TOTAL \$ 6,070.00

DOMINION OF CANADA:)
)
 PROVINCE OF BRITISH COLUMBIA.)
)
 TO WIT:)

IN THE MATTER OF THE MINERAL ACT AND
 PAT 29, 32, 33, and 97 GROUPS OF
 MINERAL CLAIMS.

I, Lawrence Adie

of 700 Burrard Building, 1030 West Georgia St., Vancouver

in the Province of British Columbia, do solemnly declare that the following expenditures have been incurred by Endako Mines Limited in carrying out assessment work on the Pat 29 Group of 20 mineral claims, the Pat 32 Group of 18 mineral claims, and the Pat 33 Group of 17 mineral claims, and the Pat 97 Group of 14 mineral claims.

<u>1. Geochemical Survey</u>	<u>Dates Worked</u>	<u>Time</u>	
Survey crew as shown on attached sheet.	Between June 20-Aug. 21	65 man days	\$ 953
R.E. Cribbs - geochemist-supervisor		7 days	315
Vehicle Rental-7 days @ \$15			105
Camp Operation-72 man days @ \$5			360
Geochemical assays-722 determinations @ \$1			<u>722</u>
Total Geochemical			\$ 3,430
<u>2. Magnetometer Survey</u>	<u>Dates Worked</u>	<u>Time</u>	
Survey crew position			
D. Rotherham - Supervisor	May 4-8, May 24-27	9 days	\$ 243
E. Rychkun - Instrument Operator	May 4 - June 6	34 days	375
B. Radcliffe - Lineman	May 6 - June 6	32 days	325
P. O'Hara - Instrument Reader (base camp - ½ wages)	May 4 - June 6	34 days	187
Vehicle Rental - 34 days @ \$15			510
Magnetometer Rental - 1 Jalander and 1 Watts			
34 days @ \$10 each			680
Camp Operation - 109 man days @ \$5			<u>545</u>
Total Magnetometer			\$ 2,865
3. Head Office Supervision and Overhead			<u>\$ 750</u>
TOTAL			<u>\$ 6,070</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City)
 of Vancouver in the)
 Province of British Columbia, this 7)
 day of October, A. D.)
1964.

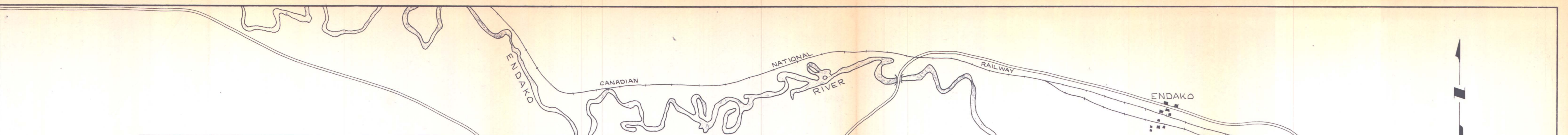
Lawrence Adie

J. M. McEwen

A Commissioner for taking Affidavits in British Columbia.

ATTACHMENT TO GEOCHEMICAL SURVEY INFORMATIONSurvey Crew

<u>Names</u>	<u>Dates Employed</u>
David Young	June 21, 25 July 6, 27, Aug. 2, 3, 14-17, 19,
Richard Bowen	July 5, 6, Aug. 3, 14-17, 19 & 21
Donald Idiens	June 25, July 6, 26, 27, Aug. 2, 3, 14-16, 19, 21 also June 20
Barry Scott	June 25, July 5, 6, Aug. 3, 16, 17, 19
Gary Scoretz	June 21, 25, July 6, 26, 27, Aug. 3, 14, 15, 17 and 19
Siedo Tzgoeff	July 6, 26, 27, Aug. 3, June 20, 25.
David Hawkins	June 21, 25, July 6, 27
James Irwin	June 20, July 6, 26, 27, Aug. 2, 3.



PAT 62	PAT 61	PAT 50	PAT 49	PAT 12	PAT 11	PAT 13	PAT 14	PAT 25	PAT 26	PAT 37	PAT 38	PAT 83	PAT 84	PAT 85	PAT 86	PAT 117	PAT 118
PAT 64	PAT 63	PAT 52	PAT 51	PAT 10	PAT 9	PAT 15	PAT 16	PAT 27	PAT 28	PAT 39	PAT 40	PAT 73	PAT 74	PAT 87	PAT 88	PAT 119	PAT 120
PAT 66	PAT 65	PAT 54	PAT 53	PAT 8	PAT 7	PAT 17	PAT 18	PAT 29	PAT 30	PAT 41	PAT 42	PAT 75	PAT 76	PAT 89	PAT 90	PAT 121	PAT 122
PAT 68	PAT 67	PAT 56	PAT 55	PAT 6	PAT 5	PAT 19	PAT 20	PAT 31	PAT 32	PAT 43	PAT 44	PAT 77	PAT 78	PAT 91	PAT 92	PAT 123	PAT 124
PAT 70	PAT 69	PAT 58	PAT 57	PAT 4	PAT 3	PAT 21	PAT 22	PAT 33	PAT 34	PAT 45	PAT 46	PAT 79	PAT 80	PAT 93	PAT 94	PAT 125	PAT 126
PAT 72	PAT 71	PAT 60	PAT 59	PAT 2	PAT 1	PAT 23	PAT 24	PAT 35	PAT 36	PAT 47	PAT 48	PAT 81	PAT 82	PAT 95	PAT 96	PAT 127	PAT 128

BASE LINE N 85° 20' E

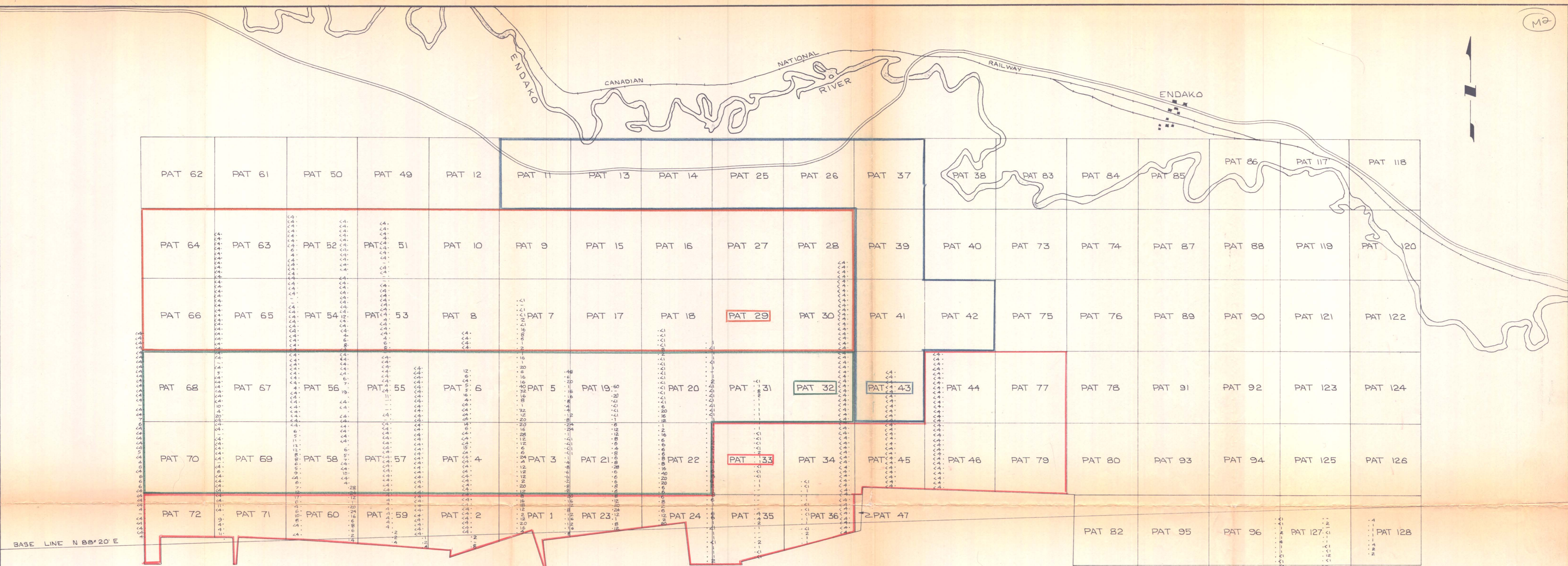
NOTE: Base station readings were taken every 2 hours with a Wabits magnetometer and the field readings corrected for the diurnal variation. Field readings were measured with a Jolander magnetometer. All readings are in gammas.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 568 MAP 1

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To accompany Geochanical and Magnetometer Report on PAT Nos 1-128 Mineral Claims, Endako area, Omineca Mining Division, by D.C. Rotherham and R.E. Cribbs, June 26, 1964.

DRAWN R.G.B.	SCALE 1" = 1000'	CANEX AERIAL EXPLORATION	MAGNETIC VARIATION
TRACED	DATE JUNE / 64	PAT CLAIMS	FILE NO.
APPROVED			



LEGEND
 <1 PPM Mg - U.B.C. ASSAYS
 <4 PPM Mg - CANEX ASSAYS

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **568** MAP **2**

To accompany Geochemical and Magnetometer Report on PAT Nos 1-128 Mineral Claims, Endako area, Omineca Mining Division, by D.C. Rotherham and R.E. Cribbs, June 26, 1964

DRAWN R.G.B.	SCALE 1" = 1000'	CANEX AERIAL EXPLORATION	GEOCHEMICAL SURVEY
TRACED	DATE JUNE / 64	PAT CLAIMS	FILE NO.
APPROVED	<i>[Signature]</i>		

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