

3786

A GEOPHYSICAL REPORT

ON

LEM CLAIM GROUP
HIGHLAND VALLEY, B. C.
KAMLOOPS MINING DIVISION

Latitude 50°25'N

Longitude 120°58'W

92 I / 7W

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 3786 MAP

BY

D. G. LEIGHTON, Geophysicist
and
R. B. STOKES, P.Eng.

STOKES EXPLORATION MANAGEMENT CO. LTD.

July 31, 1972

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PROPERTY

The LEM mineral claims occupy a pie-shaped piece of ground located immediately north of Roscoe Lake. The apex of the pie is near the edge of Roscoe Lake; the wedge widens to 2000 feet -- 6500 feet to the NNE. A total of 10 claims are included in the group listed below:

<u>Claim</u>	<u>Record No.</u>	<u>Record Date</u>
Lem 11 Fr	83459	September 4, 1969
Lem 12 Fr	84020	September 24, 1969
Lem 73 - 80	82473 - 82480	July 29, 1969.

ACCESS

The property is accessible from the Spences Bridge-Merritt Highway via the old Stellako Mining Camp road which leaves the highway 14 miles from Spences Bridge or by way of the Chataway Lakes Lodge road. The claims are approximately two miles off the main road and about one mile north of Stellako's showings.

GEOLOGY

The LEM claims are underlain, for the most part, by Bethlehem-Bethsaida transitional contact zone rocks as mapped by Northcote (1969). South of the small lake located near the central part of the property a Post-Bethsaida porphyry dike was uncovered during bulldozer trenching.

The main copper minerals are chalcopyrite with lesser bornite and minor azurite. These occur as disseminated replacements (associated with mafic minerals) and as fracture fillings in a

HIGHLAND VALLEY ROAD

Pyrites in

LEM CLAIMS

Department of
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ANNEAL

SPRING
(1899)
SEWING
NICOLA RIVER
HENRITT
(1899)

SCALE (MILES)
0 1 2 4

LOCATION MAP
Showing Position of
LEM Claims, N.V.
Humboldt M.D.
MAY 1976 C.M.L.

Geology (Cont'd)

relatively fresh quartz-diorite. This copper occurs in a zone which has been traced through trenches 9, 10 and 13 with an average width of 15 feet. Alteration minerals in this zone are limonite, chlorite and biotite. There are also vein-like zones of potassium alteration in the form of potassium-feldspar (albite) and also fairly common sericite replacing plagioclase and combined with limonite in gouge seams. ?

MAGNETOMETER SURVEY

The magnetic data for this report were compiled from information recorded along grid lines as shown in an accompanying plan (see pocket.) A McPhar M500 fluxgate magnetometer (see Appendix I for the instrument specifications) was used to measure the vertical component of the earth's magnetic field. Diurnal variations were corrected for in the usual way, that is, by looping traverses to a series of baseline stations. Readings were recorded at 50 foot intervals along grid lines.


The results of the magnetic survey are presented on an accompanying plan (see pocket). The plan shows the individual reading. All readings are relative and not comparable to the earth's true (absolute) magnetic field.

CONCLUSIONS

The magnetic survey serves to extend and project three parallel north-south trending zones of alteration and copper mineralization as uncovered by bulldozer trenching. Further I.P. anomalies known for previous work coincide with magnetic lows.

Respectfully submitted:

D.G. Leighton (Geophysicist)


R.B. Stokes, P. Eng.
STOKES EXPLORATION
MANAGEMENT CO. LTD.

July 31, 1972.

REFERENCES

Stokes, R. B. (1970)

A Geological Report with Proposed Program
on the Lem Group, Highland Valley, B. C.

Baird, Jon G. (1970)

Report on Induced Polarization Survey on
some Lem Claims in the Highland Valley
Area, British Columbia.

Northcote, K. E. (1969)

Geology and Geochronology of the Gulchon
Creek Batholith, B.C. Dept. of Mines and
Petroleum Resources, Bull. No. 56.

CERTIFICATION

1. RONALD B. STOKES, do hereby certify that:

1. I am a practicing Professional Mining Engineer with offices at Suite 713 - 744 West Hastings Street, Vancouver 1, British Columbia and resident of Vancouver.
2. I am a graduate of the Camborne School of Mines, Cornwall, England, 1952 in Mining Engineering.
3. I have practised Mining Engineering and Mining Exploration for nineteen years, seventeen of which were based in British Columbia.
4. I am a Member, in good standing, of the Association of Professional Engineers of the Province of British Columbia.
5. I am a Member of the Canadian Institute of Mining Metallurgy, the Institution of Mining & Metallurgy, England and the Australasian Institute of Mining & Metallurgy.
6. I am president of Stokes Exploration Management Co. Ltd. which carried out the program of exploration.

This report is based on study and interpretation of data assembled by SEMCO and the work was carried out directly by D.G. Leighton, Geologist/Geophysicist.



R. B. STOKES, P.ENG.

SPECIFICATIONS



TEMPERATURE STABILITY — The temperature drift of the instrument, including the battery supply, is contained to within 300 gammas over a temperature range of -30°F. to $+130^{\circ}\text{F.}$ See chart.

MAXIMUM SENSITIVITY — 20 gammas per scale division on 1000 gamma range.

MAXIMUM MEASUREMENT—Zero to $\pm 300,000$ gammas in six ranges.

RANGE SWITCH POSITION	FULL SCALE IN GAMMAS	GAMMAS PER SCALE DIVISION
1K	1,000	20
3K	3,000	50
10K	10,000	200
30K	30,000	500
100K	100,000	2,000
300K	300,000	5,000

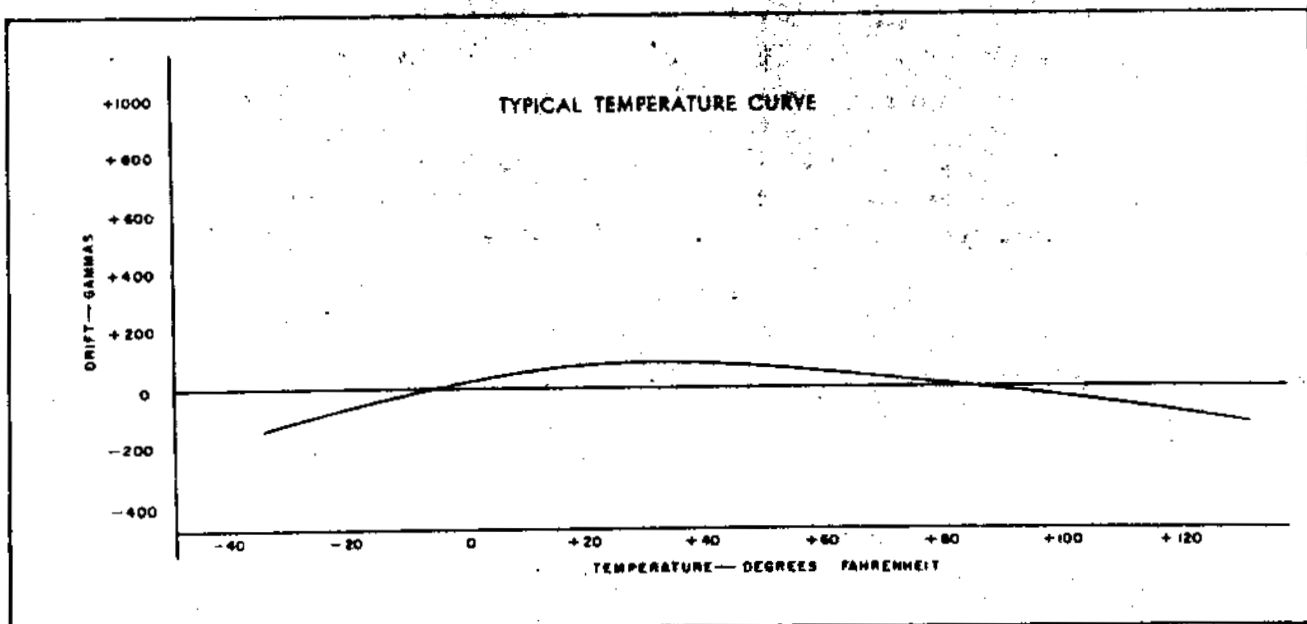
MEASUREMENT POLARITY — The above ranges can be reversed in polarity as a simple function of the on-off switch.

LATITUDE ADJUSTMENT — A fine and course latitude adjustment permit cancelling the earth's field up to 100,000 gammas.

SELF-LEVELLING SENSING HEAD — The unique self-levelling Sensing Head of this magnetometer is inserted into the instrument as a plug-in unit. It is easily detached for replacement (all McPhar Sensing Heads are interchangeable) or for other reasons. McPhar Sensing Heads are not sensitive to orientation.

WEIGHT — 6 pounds, including batteries and leather Carrying Case.

CASE DIMENSIONS — $4 \times 7 \times 11\frac{1}{2}$ inches.



APPENDIX II

ASSESSMENT CREDIT DATA

CREW

D.G. Leighton	July 21-26, 1972	6 days @ \$90/D	\$540.00
G.G. Leighton	July 21-24, 1972	4 days @ \$25/D	100.00
R.B. Stokes, P. Eng	July 24-25, 1972	1 day @ \$125/D	<u>125.00</u>
			<u>\$765.00</u>

EXPENSES

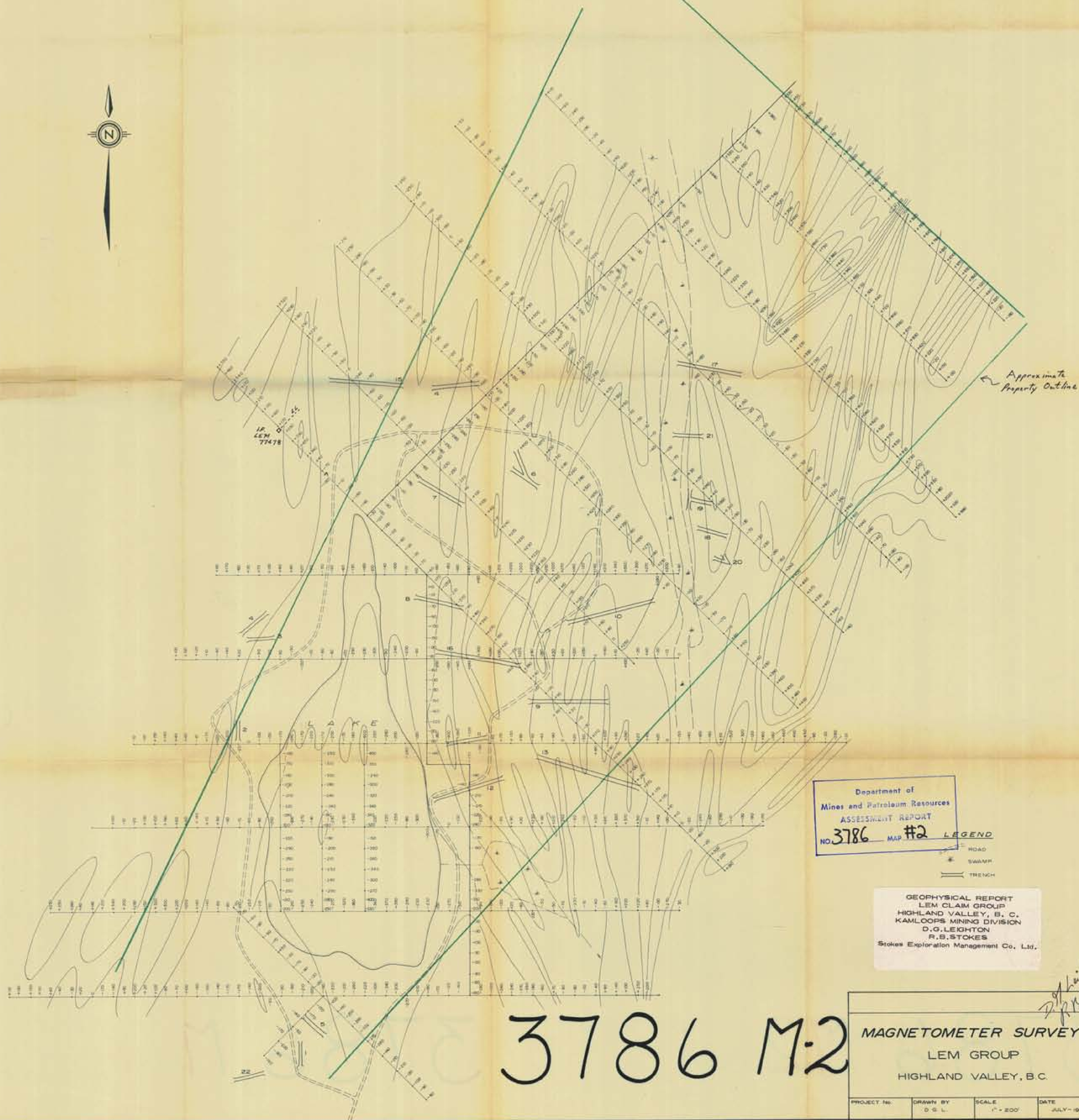
Transportation	\$240.00	
Meals and accommodations	95.00	
Magnetometer rental	100.00	
Drafting and report reproduction	<u>150.00</u>	
		<u>585.00</u>
		<u>\$1,350.00</u>

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 10
day of August 1972, A.D.

D.G. Leighton

Julie Jones
A Commissioner for taking Affidavits within British Columbia
A Notary Public in and for the Province of British Columbia

SUB-MINING RECORDER



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3786 MAP #2

LEGEND
ROAD
SWAMP
TRENCH

GEOPHYSICAL REPORT
LEM CLAM GROUP
HIGHLAND VALLEY, B. C.
KAMLOOPS MINING DIVISION
D.G. LEIGHTON
R.B. STOKES
Stokes Exploration Management Co., Ltd.

3786 M-2

MAGNETOMETER SURVEY
LEM GROUP
HIGHLAND VALLEY, B.C.

PROJECT No. DRAWN BY SCALE DATE
D.G.L. 1" = 200' JULY-1972