

2369

GEOPHYSICAL & GEOCHEMICAL

REPORT

ON

THE 82 M/5 EBL GROUP

AT

BARRIERE, B.C.

50° 119° S.W.

By

N.B. Vollo, P. Eng.

December 1, 1969.

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MAPS IN POCKET

#1 Geochemical Plan - Copper	1" = 400'
#2 Geochemical Plan - Zinc	1" = 400'
#3 Geochemical Plan - Molybdenum & Silver	1" = 400'
#4 Magnetic Survey	1" = 400'
#5 <i>Index Map</i>	1" = 4 miles

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. **2369** MAP

SUMMARY

Magnetic and geochemical surveys were completed over roughly 30 miles of grid, covering an area of Paleozoic volcanics and sediments immediately adjacent to the Barriere Stock. A prominent copper anomaly was outlined and subsequently tested by 2200' of diamond drilling. Two zones of low grade copper mineralization in highly chloritized rock were partly delineated.

LOCATION & ACCESS

The EBL Group is located between East and North Barriere Lakes, approximately 25 miles north-east of Barriere on the North Thompson River. Access is by good forestry road to East Barriere Lake, then by six miles of old logging road, suitable for four-wheel drive vehicles only, to the property.

TOPOGRAPHY & CLIMATE

Most of the group is on an upland surface of low relief, sloping southerly from an elevation of 4,000' along line 104+00 N, to 3,000' at line 0+00,

and dropping abruptly along both the north and south margins to North and East Barriere Lakes at 2,000' above sea level.

The area is marginal to the interior rain-forest and has moderately high precipitation. A heavy growth of alpine fir, cedar, hemlock, spruce and douglas fir, partly logged, is present. The central part of the group was burned over about 25 years ago and is covered by an extremely dense, almost impenetrable, second growth.

CLAIMS

The group consists of 118 claims, as follows: -

REM 1 - 12, Optioned from James Gourlay

REM 13, 14, Optioned from George Moore

REM 15 - 18, Optioned from Tom Moore

BRAD 1 - 6, Optioned from Tom Moore

EBL 1 - 55, Owned by Royal Canadian Ventures Ltd.

EBL 55A, 56A, 57 and 59, Owned by Royal Canadian Ventures Ltd.

EBL 61 - 92, Owned by Royal Canadian Ventures Ltd.

All are in the Kamloops Mining Division.

HISTORY & PREVIOUS WORK

The area around the Barriere stock has a long history of prospecting dating back to the turn of the century, but had had only minor production. James Gourlay and Tom and George Moore became interested in the present EBL group as a result of tracing float north from East Barriere Lake. The property was optioned by them through Barriere Lake Mines to Scurry Rainbow Oils of Calgary. This company in 1966, cut about 50 miles of grid, only part of which was covered by magnetic and electro-magnetic surveys. The claims were allowed to lapse, and were restaked by Gourlay and the Moore Brothers in 1968. They subsequently drilled five short holes and optioned the group to Royal Canadian Ventures Ltd.

The area was mapped in 1962, 1963, by R.B. Campbell, for the Geological Survey of Canada and a map, 48 - 1963, Adams Lake, on the scale of 1" = 4 miles, published.

REGIONAL GEOLOGY

The group is located within Paleozoic volcanics and sediments immediately south-west of the Barriere

Stock, (Campbell, 1963), and about 15 miles west of the Shuswap metamorphic complex.

FIELD WORK

Approximately 1500 soil samples were collected in July and August, 1969. A magnetic survey was completed and approximately 6 miles of new grid cut. Diamond Drilling was started in September and 2200' drilled in 5 holes.

MAGNETIC SURVEY

Readings were taken at 100' or closer intervals along lines spaced 400 feet apart, using a Sharpe MF-1 Fluxgate Magnetometer. A base station was established at 72+00 N, 0+00, where the instrument was set at 520 gammas. Substations were established along the base line from this. Traverses were looped and correction made for diurnal variation.

A magnetic survey by Scurry Rainbow Oils, covering the area east of 16+00 W and south of 40+00 N, was reduced to the present base, and incorporated in a map contoured at 200' intervals. (In pocket).

The magnetics delineate a consistent north-north-westerly trend. The high relief in the southern part of the surveyed area is at least in part due to pyrrhotite - magnetite - chalcopyrite zones in skarny amphibolite. This zone may continue to the north-west to a similar area of high magnetic relief on the EBL - 27 Claim. The origin of the very sharp lows to the north-east is not known but this is close to the projected contact of the Barriere stock. The broad area of the low magnetic relief in the central part of the group may be due to an aureole of chlorite alteration.

GEOCHEMICAL SURVEY

Soil samples were taken at 100' intervals along the lines 400' apart, using soil augers. Samples were placed in kraft paper envelopes and sent to TSL Laboratories in Vancouver. Analysis were made for hot acid extractable Cu, Zn, Ag, and Mo. Determination whereby atomic absorption for copper, zinc and silver, the Zn - dithiol method for molybdenum.

The area has a well developed podzol type soil profile. Samples were taken from the B horizon,

which in most cases was readily recognizable.

A pronounced copper anomaly is present between line 72+00 N and 84+00 N, with readings up to 2,000 ppm, and covering an area approximately 1200' x 1800'. Copper content drops off very sharply to the north east, to a background of less than 10 ppm. To the south west values drop off more gradually, with large areas above 200 ppm extending almost a mile south, where background drops to about 30 ppm, with numerous erratic highs. The general pattern suggests a zone or zones striking north-westerly, and sub-outcropping along a line crossing the 0+00 base line at about 80+00 N. Glacial movement, slightly west of south, has smeared the anomaly to the south-west. This is probably accentuated by the southerly slope and drainage. Scattered highs to the south of the main anomaly may be float anomalies but should be investigated.

Zinc content has a fairly uniform background of 50 - 60 ppm over most of the group. An anomalous area, with analysis up to 900 ppm, is located immediately south of the large copper anomaly and is located roughly in a copper low. The zinc anomaly is also

apparently smeared to the south - southwest by glacial action and drainage. The origin, at about line 60+00 N, should be investigated for possible mineralization. The origin of a small, sharp zinc high at about 26+00 W on line 24+00 N is also unknown and should be investigated.

Silver content has a fairly uniform background of about 1 part per million and correlates closely with copper content. A large silver anomaly, with readings to 15 ppm, corresponds very closely with the copper anomaly. Again, glacial smearing to the south-west is evident. The origin of several small, sharp silver highs, in the south part of the group is unknown.

Mo content is generally less than 0.5 ppm, with scattered values to 4 ppm.

Geochemical results are shown graphically on three maps (in pocket) on the scale of 1" = 400'. Molybdenum is not shown contoured.

GEOLOGY

Outcrop is extremely sparse. Several trenches and drill holes in the south east part of the group expose pyrrhotite - chalcopyrite - magnetite zones in amphibolite garnet skarns. In an area along the 0+00 base line, from line 40+00 N to 72+00 N, several outcrops of feldspar porphyry, often pyritized, are present. No systematic mapping has been done due to the lack of outcrop and the geology of the anomalous area is derived entirely from diamond drilling.

CONCLUSIONS AND RECOMMENDATIONS

A large zone of copper mineralization has been discovered. The possibility of locating deposits of ore grade within it are good. The following points must be considered in planning further work.

1. The geochemical highs do not necessarily define the sub-outcrop of the best mineralization as they are a function of overburden depth as well.
2. The broad area of low magnetic relief, roughly coincident with the geochemical high may crudely outline an aureole of alteration of the type encountered in the drilling, and should be the prime target for further work.

3. The favourable alteration zone has been fairly well defined by magnetics, geochemistry and geology, as a broad north - north-westerly trending zone about 2,000' wide, crossing the 0+00 base line between approximately 32+00 N at 88+00 N.

The following work is recommended.

1. Extend the grid to the east and west of the anomalous area.

(a) Extend lines to 45+00 W from line 44+00 N to 96+00 N; approximately 5 miles of this will require bulldozing as line cutting is impractical in the burnt area.

(b) Extend lines to 30+00 E from 16+00 N, to 80+00 N.

2. Complete soil sampling and a magnetic survey over the extended grid.

3. Have an I.P. survey done over the area between lines 20+00 N and 104+00 N, covering the projected mineralized area, using either 800' or 400' line separation. An I.P. configuration should be chosen which will penetrate to at least 600'.

4. Drilling. The known mineralized zones should be tested on extension by a series of vertical holes spaced at 800' centres. A minimum of 5,000 feet of drilling in 10 holes is suggested.

ESTIMATED COST

Grid

Bulldozing - 4.5 miles @ \$150. per mile	\$ 670.00
Chain & Compass line - 8.0 miles @ \$100.00 per mile	800.00
Tie line - 1.3 miles @ \$150. per mile	<u>200.00</u>
	\$ 1,670.00

Soil Sampling

650 samples @ \$2.00	1,300.00
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Magnetic Survey

13 miles @ \$50. per mile	650.00
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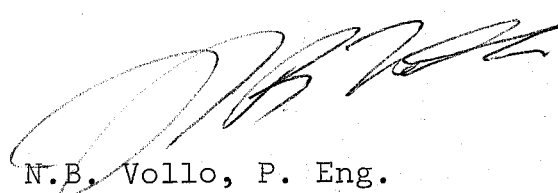
I.P. Survey

Approximately 10 miles @ \$500. per mile	5,000.00
Contingent Detail Work	<u>3,000.00</u>
	8,000.00
Sub-Total Preliminary Work	\$ <u>11,620.00</u>

Bulldozing & Access Roads	3,000.00
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Diamond Drilling - 5,000' @ \$10.	50,000.00
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Total	\$ <u>64,620.00</u>
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N.B. Vollo, P. Eng.

December 1st, 1969.

ASSESSMENT DATA AND AFFIDAVIT ON EXPENDITURES


Personnel

N.B. Vollo, P.Eng. supervisinn, June, July, Aug./69 Interpretation and report, 6 days @ \$75. -----	\$ 450.00
L. Loranger, Field Man, July, 1969 Soil sampling, chaining, 17 days @ \$45.00 -----	765.00
Larry Loranger, assistant, July, 1969, soil sampling 6 days @ \$20. -----	120.00
M. Fennell, assistant, July 1969, soil sampling 10 days @ \$30. -----	300.00
D. Barlow, assistant, August, 1969, soil sampling 3 days @ \$30. -----	90.00
C. Mohn, Instrument Operator, August, 1969, magnet- ometer survey, 10 days @ \$35. -----	350.00
Camp Expenses, East Barriere Lake Resort -----	457.00
Company Vehicles, 1809 miles @ 12¢ -----	217.08
Geochemical Analysis, TSL Laboratories, Vancouver ----	3495.30
Prints, Air Photos, flagging, etc. -----	<u>64.42</u>
	\$ 6308.80

I, Nels B. Vollo, of the City of Kamloops in the Province of British Columbia, make the above declaration, concientiously believing it to be true and knowing 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 Kamloops, in the Province of British Columbia, this 8th day of Aug 1969, A.D.


A commissioner for taking affidavits for British Columbia.

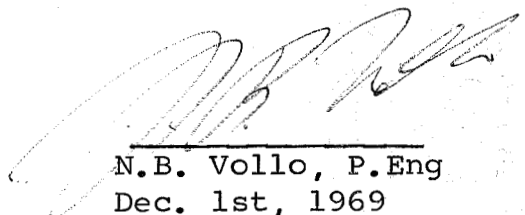

A Commissioner for taking affidavits
in the Province of British Columbia.

QUALIFICATIONS OF INSTRUMENT OPERATOR

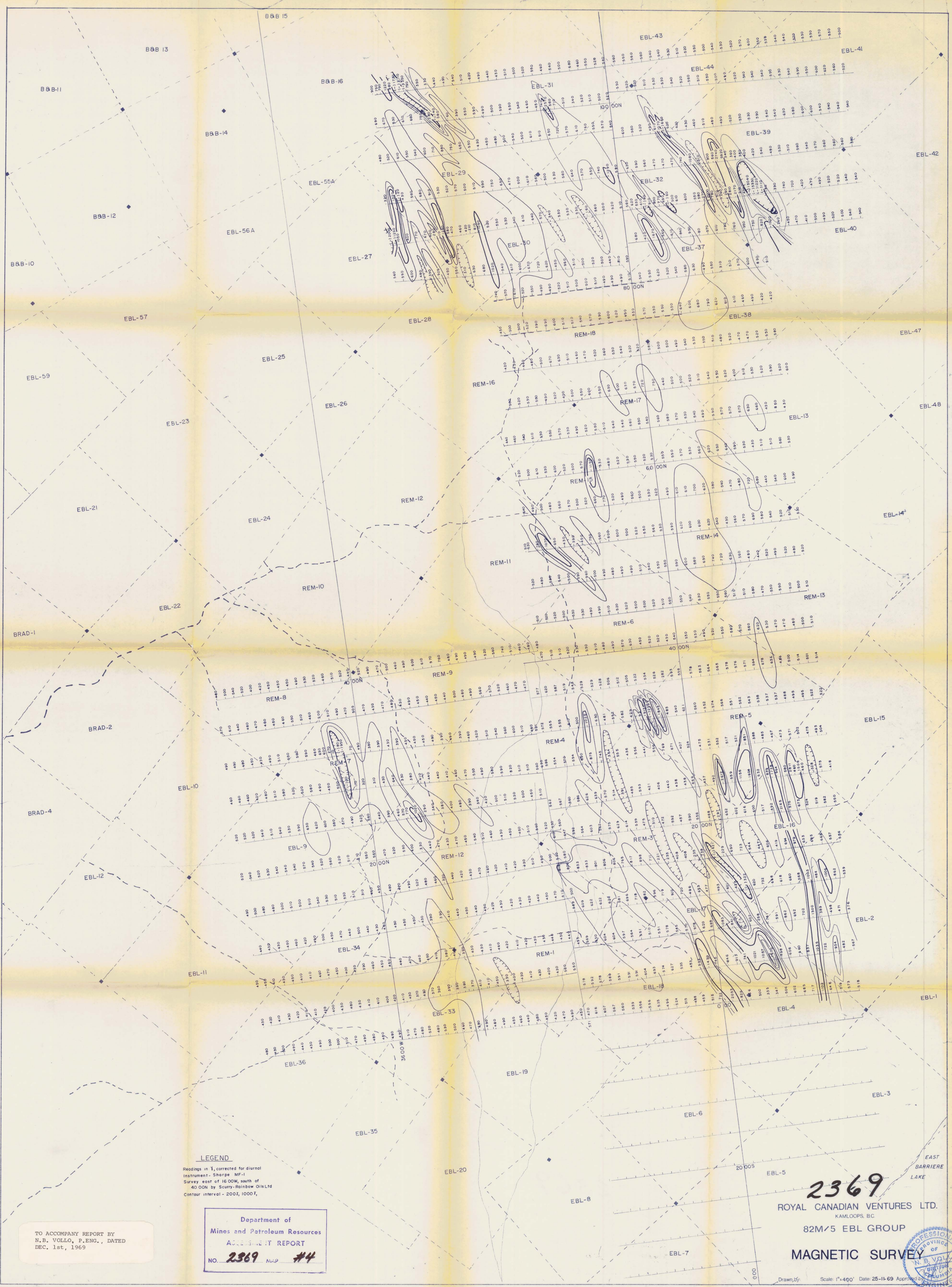
Chris Mohn is 22 years of age and completed Grade XII in Alberta. He has completed two years in Electrical Engineering at the University of Alberta at Calgary.

He has been employed for two summers by Royal Canadian Ventures as a geophysical assistant and instrument operator.

He has been carefully instructed in the operation of the Sharpe MF-1 fluxgate magnetometer by the undersigned, who knows his work to be carefully and reliably done



N.B. Vollo, P.Eng
Dec. 1st, 1969

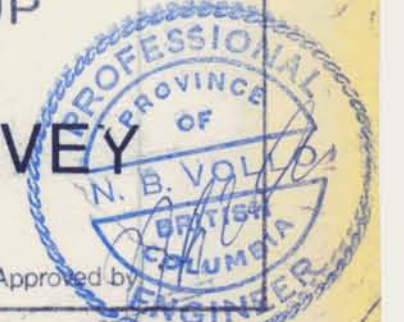


LEGEND
 Readings in γ , corrected for diurnal
 instrument - Shorpe MF-1
 Survey east of 16 00W, south of
 40 00N by Scurry-Rainbow Oils Ltd
 Contour interval - 200 γ , 1000 γ .

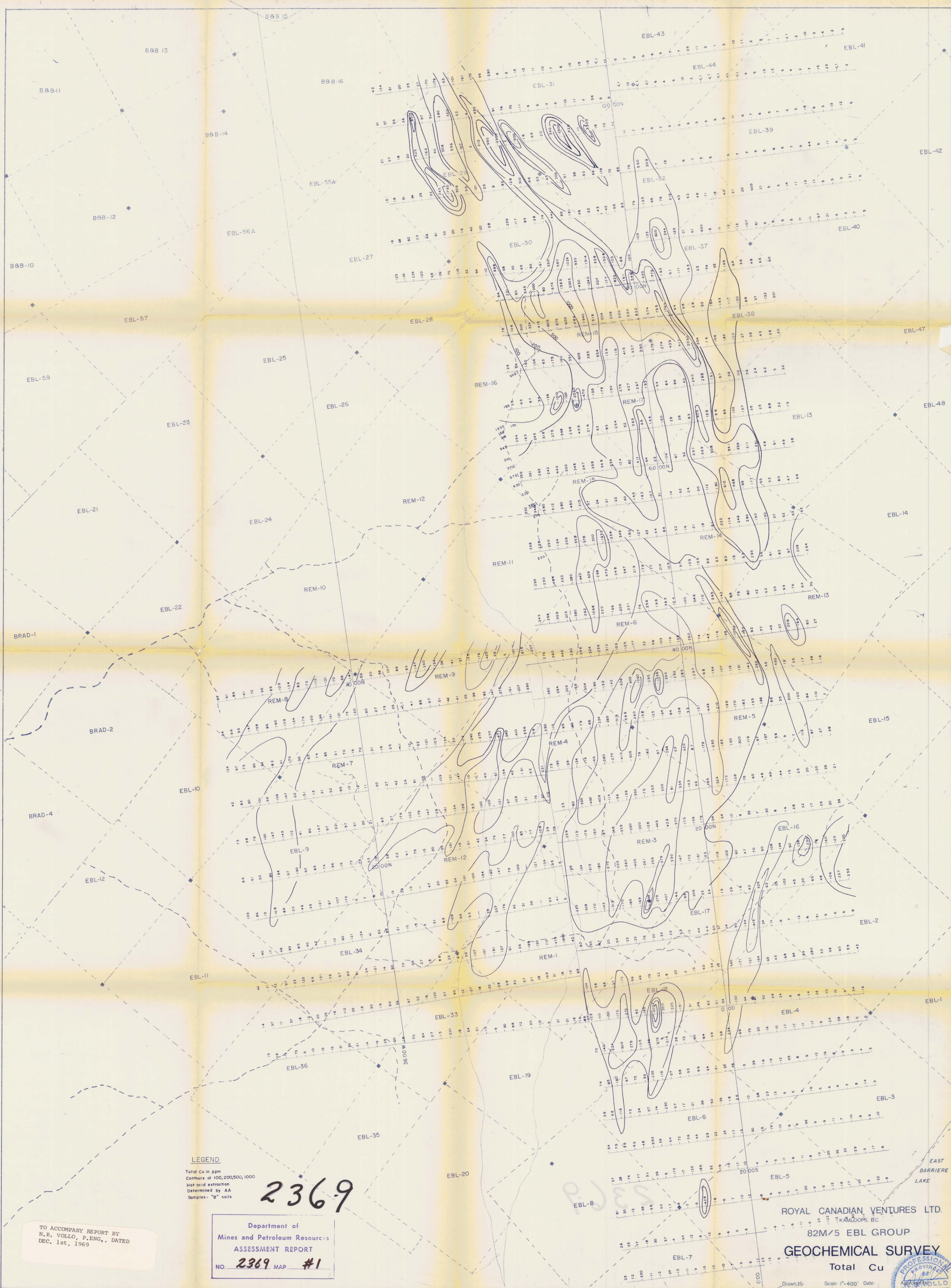
TO ACCOMPANY REPORT BY
 N.B. VOLLO, P.ENG., DATED
 DEC. 1st, 1969

Department of
 Mines and Petroleum Resources
 ACQUISITION REPORT
 No. **2369** MAP #4

2369
 ROYAL CANADIAN VENTURES LTD.
 KAMLOOPS, BC
 82M/5 EBL GROUP
MAGNETIC SURVEY



Scale: 1"=400' Date: 25-11-69 Approved: [Signature]



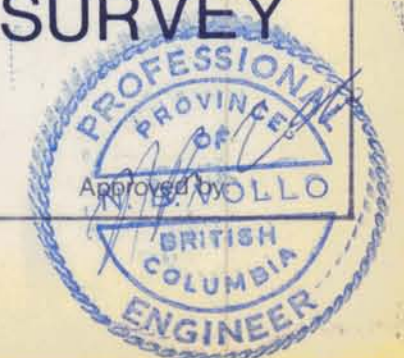
LEGEND
 Total Cu in ppm
 Contours of 100, 200, 500, 1000
 Hot acid extraction
 Determined by A.A.
 Samples - "B" soils

2369

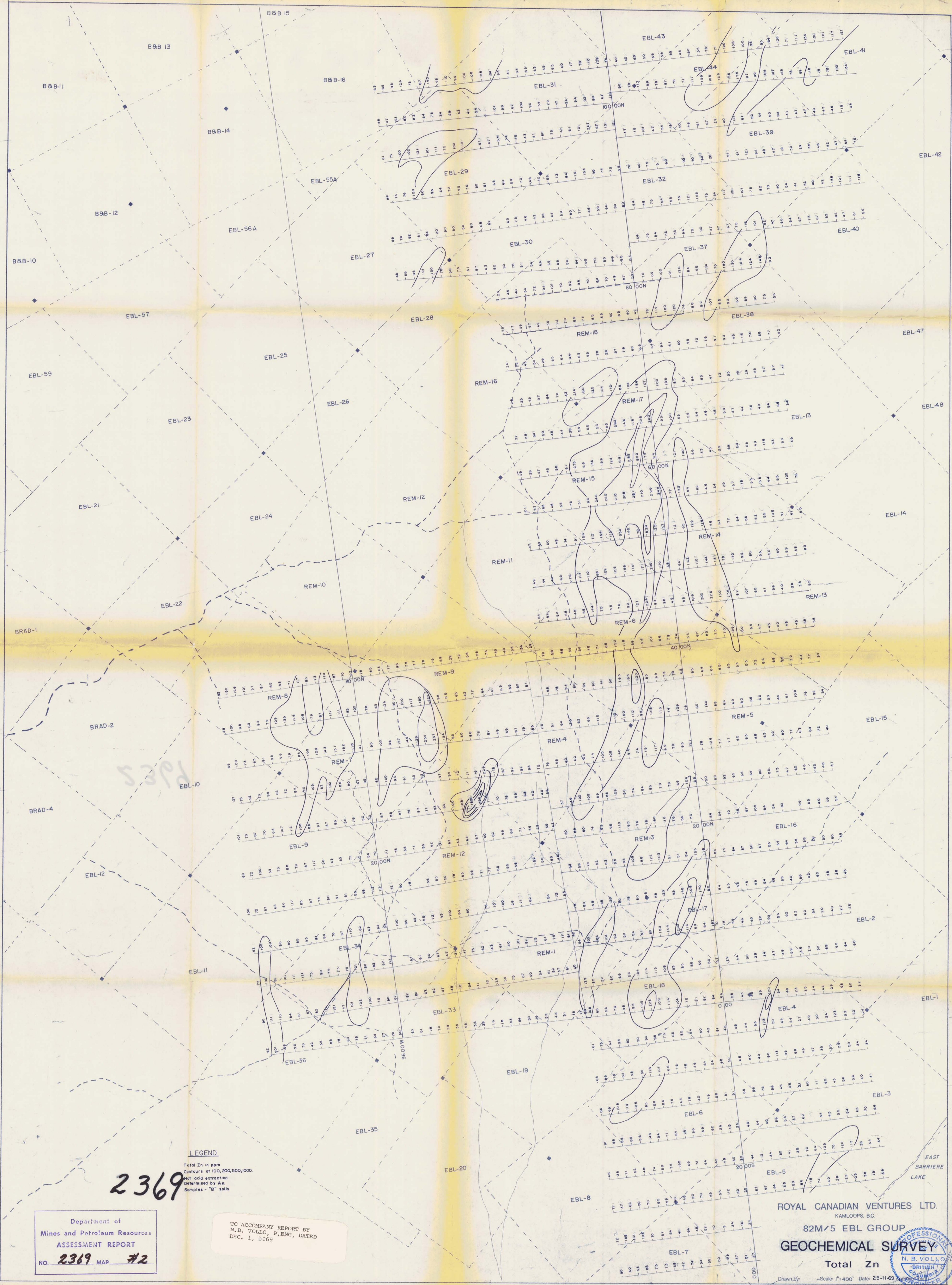
TO ACCOMPANY REPORT BY
 N.B. VOLLO, P. ENG., DATED
 DEC. 1st, 1969

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **2369** MAP #1

ROYAL CANADIAN VENTURES LTD.
 82M/5 EBL GROUP
GEOCHEMICAL SURVEY
 Total Cu



Drawn by: Scale 1"=400' Date:



2369

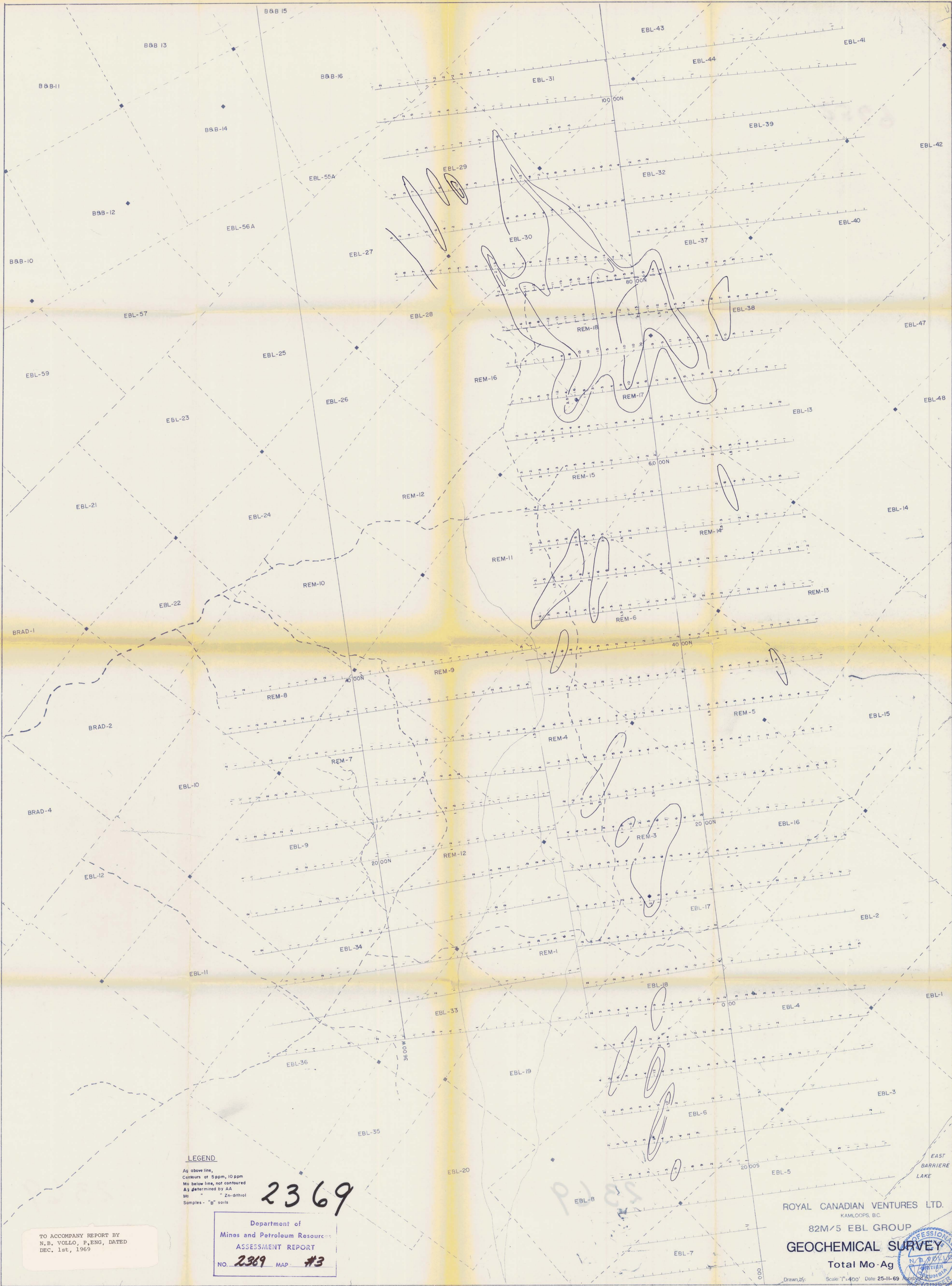
LEGEND
 Total Zn in ppm
 Contours of 100, 200, 500, 1000.
 Hot acid extraction
 Determined by AA
 Samples - "B" soils

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 2369 MAP #2

TO ACCOMPANY REPORT BY
 N.B. VOLLO, P.ENG, DATED
 DEC. 1, 1969

ROYAL CANADIAN VENTURES LTD.
 KAMLOOPS, BC
 82M/5 EBL GROUP
GEOCHEMICAL SURVEY
 Total Zn
 Drawn by: [Signature] Scale: 1"=400' Date: 25-11-69





LEGEND
 Ag above line,
 Contours at 5 ppm, 10 ppm
 Mo below line, not contoured
 Ag determined by AA
 Mo " " " Zn-dithiol
 Samples - "g" soils

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TO ACCOMPANY REPORT BY
 N.B. VOLLO, P.ENG, DATED
 DEC. 1st, 1969

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **2369** MAP **#3**

ROYAL CANADIAN VENTURES LTD.
 KAMLOOPS, B.C.
 82M/5 EBL GROUP
GEOCHEMICAL SURVEY
 Total Mo-Ag



Scale: 1"=400' Date: 25-11-69