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GEOPHYSICAL AND GEOCHEMICAL  
REPORT ON THE 920/10 ML#5 Grp.  
ROYAL CANADIAN VENTURES LTD.  
Big Creek, B.C. 51°122° NW  
N.B. Vollo, P. Eng.  
January 20<sup>th</sup>, 1970. *Extra Copy*

*Assessment Report - extra copy*  
980040-07  
PROPERTY FILE

2174

Extra copy  
No Map 1

GEOPHYSICAL AND GEOCHEMICAL

REPORT

ON THE

920/10 ML #5 GROUP

OF

ROYAL CANADIAN VENTURES LTD.

AT

BIG CREEK, B.C.

51°122° NW

By

NB. Vollo, P. Eng.

January 20th, 1970.

TABLE OF CONTENTS

	<u>Page</u>
Summary	1
Location & Access	1
Topography & Climate	1
Claims	2
History & Previous Work	2
Field Work	3
Geochemical Survey	3
Magnetic Survey	4
VLF-EM Survey	5
Conclusions and Recommendations	5

MAPS IN POCKET

#1 Geochemical Survey	1" = 400'
#2 Magnetic Survey	1" = 400'
#3 EM-16 Survey	1" = 400'

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 2174 MAP.....

## SUMMARY

Approximately 15 miles of Geochemical, magnetic, and VLF-EM Surveys were done in November on the ML #5 Group to detail a soil copper anomaly previously located.

## LOCATION & ACCESS

The ML #5 Group is located thirteen miles south east of Big Creek Post Office. Logging roads reach to within six miles of the group, but the most convenient access is by helicopter from Williams Lake.

## TOPOGRAPHY & CLIMATE

The group is located on an upland surface, 5,000 to 5,600 feet above sea level. Local relief is very low. Rainfall and snow fall are moderate and the area is covered with an open growth of mature lodgepole pine. Several swampy meadows provide convenient landing places for helicopters.

A series of sharp gullies, cut into rock, are present along the height of the land, perpendicular to the ridge trend. These

are of post glacial age and are difficult to explain. They may have been outlets for a pro-glacial lake impounded between a glacier to the west and the height of land.

### CLAIMS

The group consists of 40 claims as follows: -

ML 117 to 126	Record No.'s 17660 to 17669
ML 137 to 151	Record No.'s 17680 to 17694
ML 153, 155, 157	Record No.'s 17696, 17698, 17700
ML 159 to 169	Record No.'s 17702 to 17712
ML 174	Record No. 17717

All are held by Royal Canadian Ventures Ltd., and are in the Clinton Mining Division.

### HISTORY AND PREVIOUS WORK

A reconnaissance soil geochemical survey, magnetic and VLF-EM surveys, and geological mapping were completed during the summer to check an stream anomaly located in 1968. This work outlined a moderate soil copper anomaly, and a report was filed on it dated December 16th, 1969. To the writer's knowledge no mineral claims had previously been held in the immediate area.

## FIELD WORK

Approximately 15 miles of grid were chained and blazed, with lines at 400' intervals and perpendicular to the previous grid. Magnetic, VLF-EM and soil geochemical surveys were completed between November 3rd, and November 18th, 1969.

## GEOCHEMICAL SURVEY

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

The area has a moderately well developed podzol type profile, but the "B" horizon is not easily distinguished from the underlying "C" zone. The "A<sub>1</sub>" humus horizon varies from a few inches to two feet in thickness. Samples were taken below the "A<sub>2</sub>" zone, usually about one foot deep. Some of the samples may have been taken from the "C" zone.

Soil copper content has a background value of about 15 ppm. A sharply defined anomaly, about 2400' long and up to 600' wide, correlates fairly closely with that obtained previously. Readings rise very sharply from background to several hundred ppm, to a maximum of 4,000 ppm. Several smaller and weaker anomalies trend eastward from the main zone. (See accompanying map in pocket.)

Mo content is mostly below 0.5 ppm with scattered readings to a maximum of 6 ppm. Ag content is uniformly below 0.5 ppm, with only a few readings to 1 ppm. Molybdenum and silver were not plotted.

#### MAGNETIC SURVEY

Readings were taken at 100' intervals along lines 400 feet apart using a Sharpe MF - 1 Fluxgate Magnetometer. A base station was established at 96+00 S, 52+00 E, and substations established along lines 96+00 <sup>S</sup> W and 104+00 <sup>S</sup> W from this. Traverses were looped and corrected for diurnal variation.

Magnetic relief is very low except for the area on Claims ML-143 and 144. A line roughly coincident with the north boundary of these claims probably marks the contact between two facies of the intrusive.

## VLF-EM SURVEY

Readings were taken at 100' intervals on lines 400' apart using a Ronka EM-16 unit. Primary source was NAA, Cutler, Maine, whose field at this point is north-south. All readings were taken facing easterly. Since topographic relief is very low, no vertical control was necessary. In-phase and quadrature readings are plotted as profiles, using a vertical scale of 1" = 50%, and are shown on the accompanying map. (In pocket.)

Except for the area on Claims ML 143 and 144, where overburden is thin, profiles are very smooth, and overburden is probably substantial.

## CONCLUSIONS AND RECOMMENDATIONS

A reconnaissance copper anomaly was substantiated by the present survey and more closely defined. Magnetic and VLF-EM data indicate that the anomaly is on or close to a probable contact.

The anomaly is located in a possible glacial outwash area, and overburden can therefore be expected to thicken rapidly eastward.

The anomaly should be mapped in detail and checked by about six miles of IP survey. Anomalies resulting from this work should be checked by test pits or holes.



ASSESSMENT DATA AND AFFIDAVIT ON EXPENDITURES

Personnel

N.B. Vollo, P.Eng.  
Supervision and report, 2 days @ \$75 -\$ 150.00

L. Loranger, Inst. Operator  
Field work, Nov. 3 - 18, 16 days/\$40 - 640.00  
Plotting, 2½ days @ \$40 ----- 90.00

M. Fennell, assistant  
Field work, Nov. 3-18, 16 days @ 27.50 440.00

M. Hjelt  
Draughting, Jan. 5-7, 3 days @ \$40 --- 120.00

Analysis

TSL Laboratories Ltd., 943 samples ----- 1767.25

Transportation

Company vehicles, 699 miles @ 12¢ ----- 83.88  
Okanagan Helicopters Ltd., 4½ hrs @ \$150 --- 675.00

Camp expenses ----- 106.24

Misc.

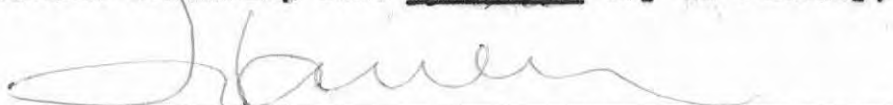
Printing, flagging, etc. ----- 18.60

Total \$4090.97

I, Nels B. Vollo, of the city of Kamloops in the province of British Columbia, make the above declaration, conscientiously 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 23 day of January, 1969, A.D.




A commissioner for taking affidavits for British Columbia

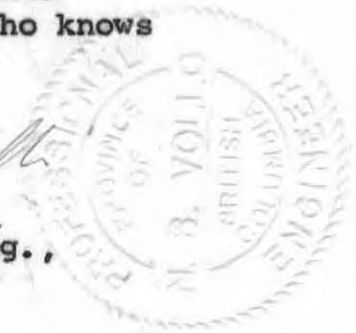
QUALIFICATIONS OF INSTRUMENT OPERATOR

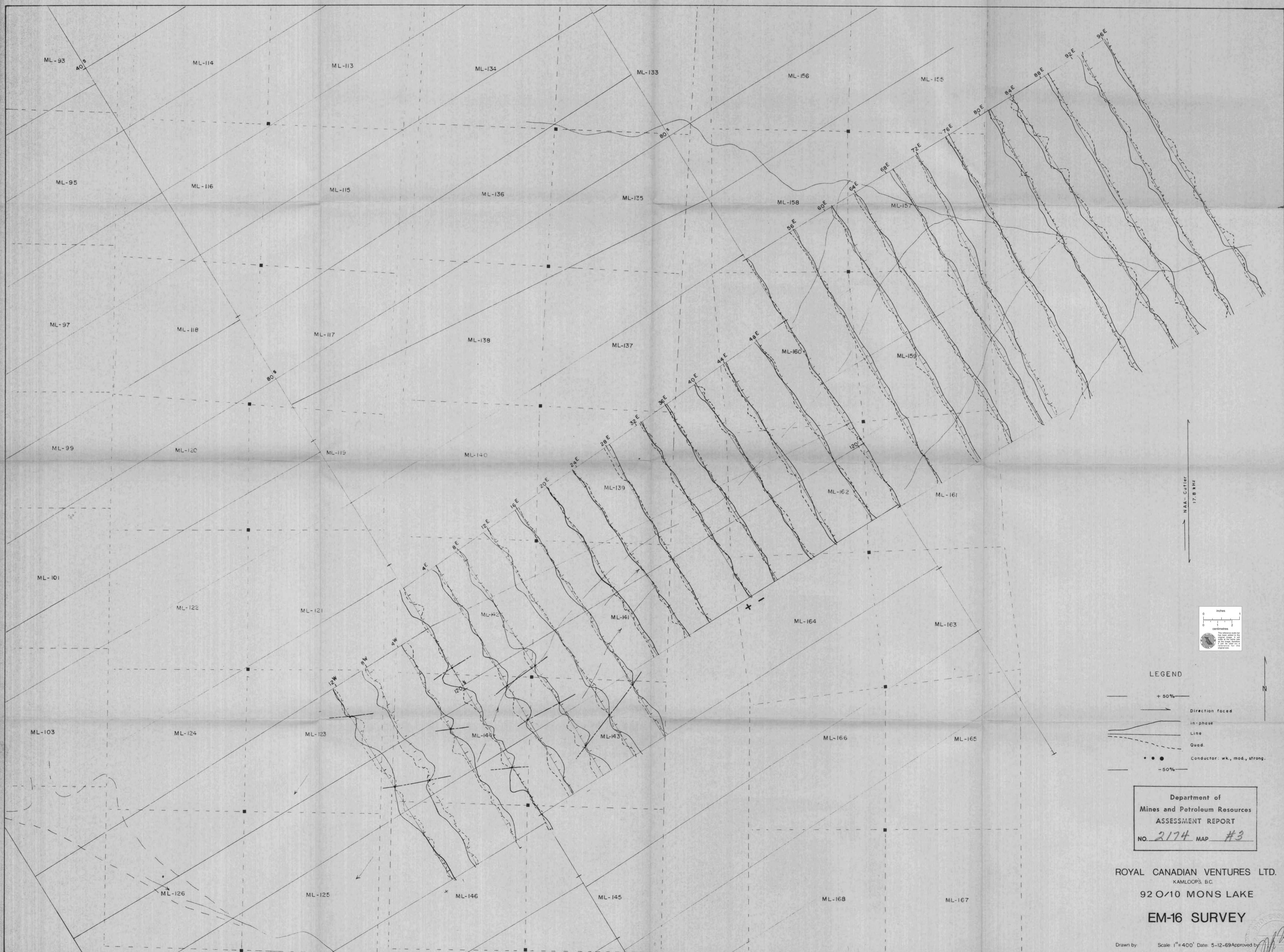
Leo Loranger is 41 years of age and completed grade IX at Englehart, Ontario.

He was employed for four years, from 1962 to 1966, by the Noranda Exploration Co., at Matagami, Que, as a geophysical assistant and instrument operator. He was employed for two years, from 1966 to 1968, by Scurry Rainbow Oils, Calgary, Alta., as a geophysical assistant and instrument operator. He has been employed for two years by Royal Canadian Ventures as a field man and Instrument Operator.

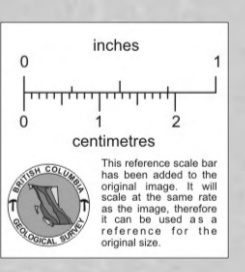
He has been carefully instructed in the operation of the Sharpe MF-1 Fluxgate Magnetometer and the Ronka EM-16 electromagnetic unit by the undersigned, who knows his work to be carefully and reliably done.

  
\_\_\_\_\_  
N.B. Vollo, P.Eng.,  
Jan. 20th, 1970





NAA - CUTLER 17.8 kHz



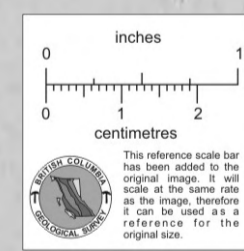
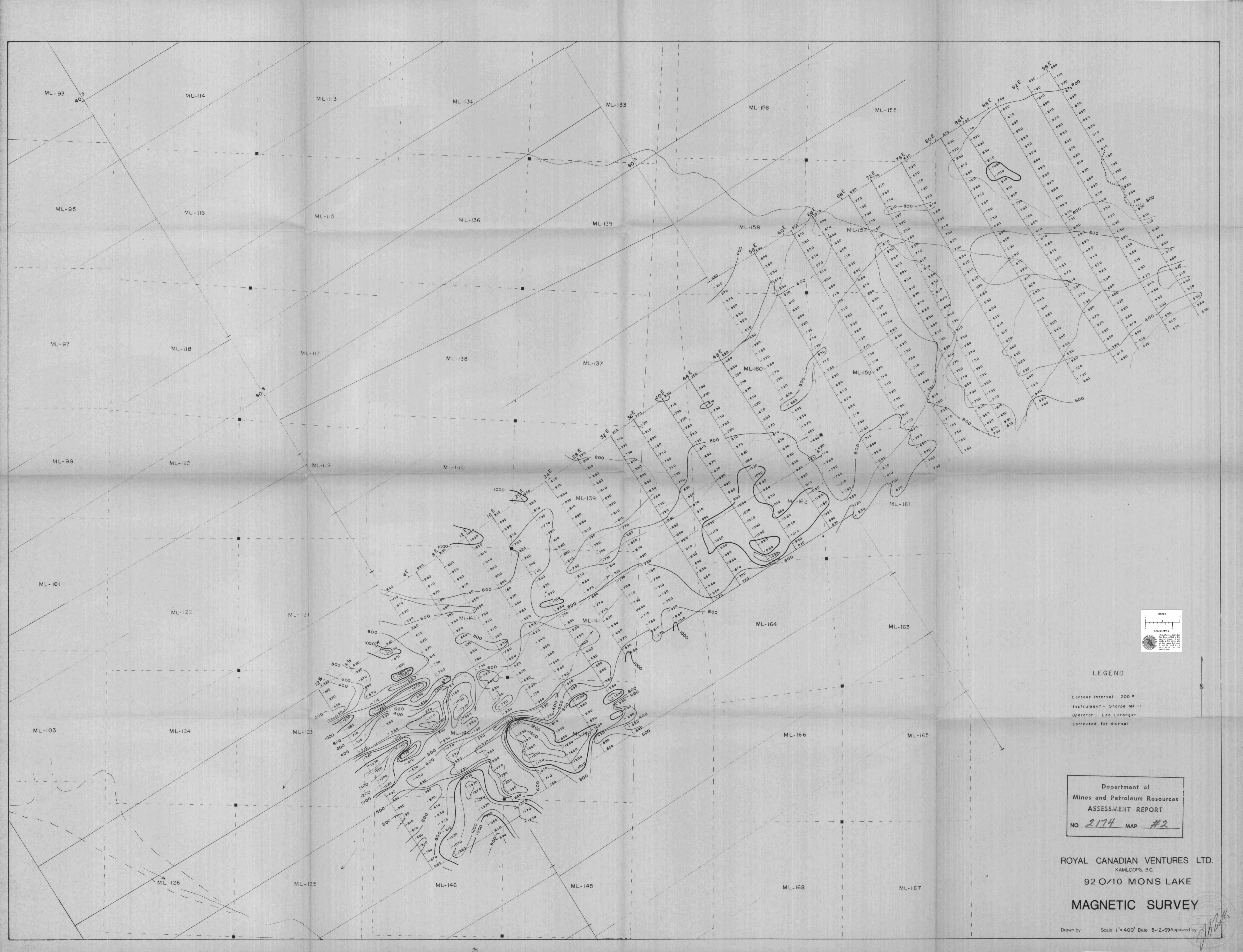
**LEGEND**

- +50% —
- Direction faced
- in-phase —
- Line —
- Quad. ---
- • • Conductor: wk., mod., strong.
- -50% —

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 2174 MAP #3

**ROYAL CANADIAN VENTURES LTD.**  
KAMLOOPS, BC.  
**92 O/10 MONS LAKE**  
**EM-16 SURVEY**

Drawn by: \_\_\_\_\_ Scale: 1" = 400' Date: 5-12-69 Approved by: \_\_\_\_\_



**LEGEND**

Contour interval 200'  
 Instrument - Sharpe MF-1  
 Operator - Leo Loranger  
 Corrected for diurnal

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 2174 MAP #2

ROYAL CANADIAN VENTURES LTD.  
 KAMLOOPS, B.C.  
 920/10 MONS LAKE  
**MAGNETIC SURVEY**

Drawn by \_\_\_\_\_ Scale: 1"=400' Date: 5-12-69 Approved by \_\_\_\_\_