

2627

GEOCHEMICAL AND GEOPHYSICAL REPORT

ON

82M/5 NB GROUP

of

ROYAL CANADIAN VENTURES LTD.

at

BARRIERE, B.C.

51° 119° S.W.

by

N.B. VOLLO, P. ENG.

September 23rd, 1970.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2627 MAP.....

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Maps in Pocket (*Over*)

| | |
|---|-----------|
| <i>#1</i> Geochemical Plan, Total Cu - Mo | 1" = 400' |
| <i>#2</i> EM-16 Survey | 1" = 400' |
| <i>#3</i> Magnetic Survey | 1" = 400' |

SUMMARY

Geochemical, VLF Electromagnetic and magnetic surveys were completed over roughly 15 miles of grid. Northing of economic interest was uncovered, but the group should be retained pending developments on adjoining properties.

LOCATION & ACCESS

The group is located on the north shore of North Barriere Lake, approximately 25 miles north east of Barriere. A good forest access road from Barriere is located through the centre of the property.

TOPOGRAPHY & CLIMATE

The group is located on a south slope, rising from 2100' at lake level to about 4,000 feet at the north boundary. Rainfall and snowfall are moderately high, and a fairly dense stand of fir and alpine fir is present, with some lodgepole pine near the lake.

CLAIMS

The group consists of 50 claims as follows: -

| | |
|---------------|----------------------------|
| NB - 1 - 46, | Record Nos. 84457 - 84502 |
| NB - 47 - 50, | Record Nos. not available. |

All are held by Royal Canadian Ventures Ltd.

HISTORY & PREVIOUS WORK

The property has been intermitently staked over a long period but to the writer's knowledge no systematic work has been done. Widespread, though as yet uneconomic, copper mineralization is present on adjoining properties to the south and west.

The area was mapped by R.B. Campbell and a preliminary map, 48-1963, on a scale of 1" = 4 miles published by the Geological Survey of Canada. The area was covered by a Federal-Provincial aeromagnetic survey (Map 53216, Barriere Lakes, 1968).

REGIONAL GEOLOGY

The group straddles the south contact of the Barriere intrusion with sedimentary and volcanic rocks of paleozoic age (Campbell, 1963).

FIELD WORK

Four men were employed for approximately 3 weeks in April, 1970. Cross lines 2,000 feet apart were picketed upslope from a cut base line along the road. Compass lines were then chained and blazed 800' apart between the cross picket lines. Approximately 400 soil samples were collected along 15 miles of grid. VLF-EM and magnetic surveys were done along the cross tie lines only.

GEOCHEMICAL SURVEY

Samples were collected at 200' intervals along lines 800' apart, and also from the cross tie lines. Soil augers were used, the samples placed in kraft paper envelopes and sent to TSL Laboratories in Vancouver. Analysis were made for total Cu, Mo and Ag, using hot aqua regia extraction, by the atomic absorption method.

A podzol type soil profile is fairly well developed and samples were taken from the "B" horizon, which can be recognized fairly consistently. Because of the steep slope, considerable soil creep has probably occurred.

Soil copper content is very low, characteristic of the Barriere intrusion and its immediate contact zone. Background is about 5 ppm with the exception of the south west corner of the survey area where it rises to about 15 ppm. This threshold probably marks the transition from contact gneiss to greenstone of relatively low metamorphic grade.

The molybdenum background is about 5 ppm again characteristic of the Barriere intrusion and contact gneiss zone. Several areas above 10 ppm are present but cannot be considered anomalous.

With the exception of one analysis of 25 ppm probably erratic, silver content is uniformly below 0.5 ppm.

Cu and Mo are plotted on the accompanying map (in pocket) with only those Mo analysis above 10 ppm shown.

MAGNETIC SURVEY

Massive pyrrhotite bodies are common on the Barriere Lake Mines property to the west, and a magnetic survey was therefore considered useful. Readings were taken at 100' intervals along the base line and cross tie lines using a Sharpe MF-1 Fluxgate Magnetometer. A base station was established at 60+00 E on the 0+00 base line, where the instrument was set at 550 gammas and substations established at the tie line intersections from this. Traverses were made up each tie line, doubled back to their point of origin on the base line, and corrected for diurnal variation where necessary.

A widely spaced survey lines (2000') permit only rough contouring. Magnetic relief is very low, with a fairly consistent rise of 200 gammas from the lake shore to the north boundary.

VL-EM SURVEY

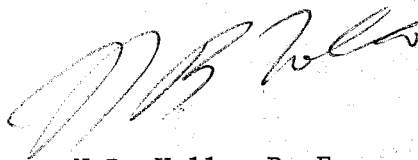
Readings were taken at 100' intervals along tie lines 2000 feet apart using a Ronka EM-16 unit. Primary source was NAA, Cutler, Maine, whose field at this point averages about north 10 degrees

west, very nearly parallel to the tie lines. All readings were taken facing northerly. The in-phase readings were reduced to contourable data using the method devised by Fraser. (Fraser D.C., Geophysics, v.34, p. 958-967, 1969), and plotted on the accompanying map (in pocket). This method eliminates topographic effects.

While contouring is probably not justified at this wide line spacing, a fairly consistent series of weak anomalies trends across the central part of the surveyed area. They occur approximately along the contact of the Barriere intrusion and lack of associated geochemical or magnetic anomalies suggests that they are probably due to weak pyrite mineralization.

CONCLUSIONS AND RECOMMENDATIONS

Nothing of obvious economic interest has been defined, but the group should be retained pending results from adjoining properties.



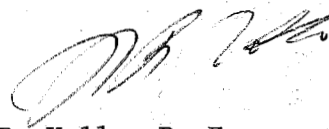
N.B. Vollo, P. Eng.

September 23rd, 1970.

QUALIFICATIONS OF OPERATORS

Mauri Hjelt, is 29 years of age and completed grade 12 at Pemberton, B.C. He graduated from the University of British Columbia in physical education in 1965. He was employed for four summers by Mining Corporation Ltd. as a prospector and has been employed for three and one half years by Royal Canadian Ventures as a prospector and instrument operator. He has been carefully instructed in the operation of the Ronka EM-16 Unit by the undersigned who knows his work to be carefully and reliably done.

David Barlow is 21 years of age and completed Grade 12 at Weyburn, Saskatchewan. He has completed 3 years in geology at the University of Saskatchewan. He has been employed by Royal Canadian Ventures Ltd. for two summers as a field assistant and instrument operator. He has been carefully instructed in the operation of the Sharpe MF-1 Magnetometer by the undersigned, who knows his work to be carefully and reliably done.



N.B. Vollo, P. Eng.

September 23rd, 1970.

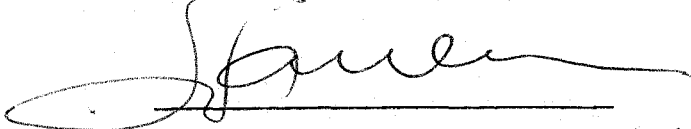
AFFIDAVIT ON EXPENDITURES

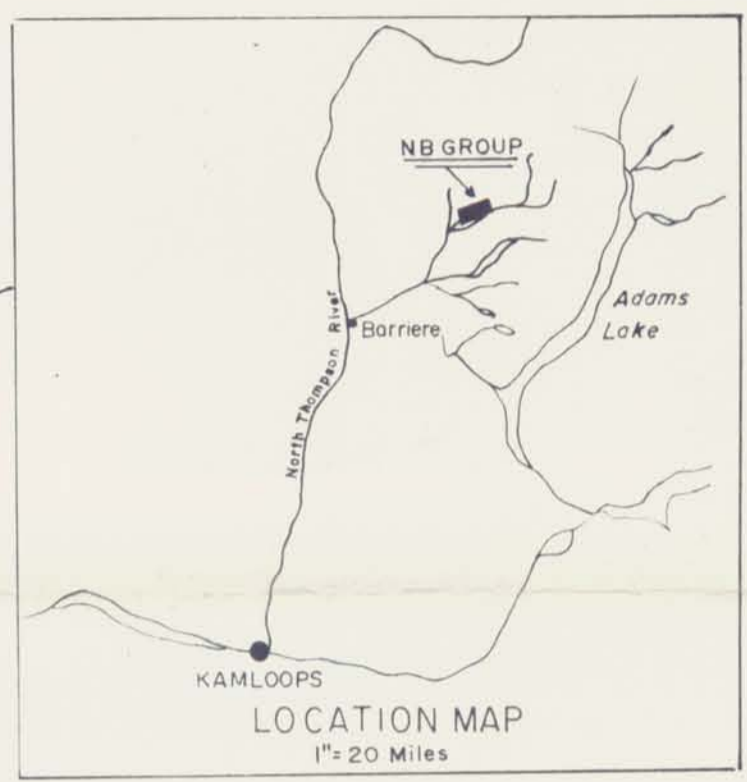
PERSONNEL

| | | |
|--|---|---------------------------|
| N.B. Vollo, P. Eng. | - Supervision, interpretation and report, 4 days @ \$75. | \$ 300.00 |
| M. Hjelt - | EM-16 Operator, April 17th to 24th, 1970 4 days @ \$45. | 180.00 |
| | Drafting, June, 1/2 day @ \$45. | 22.50 |
| L. Loranger - | Geochemical Survey - April 17th to 30th, 1970 17 days @ \$45. | 765.00 |
| | Plotting - 1 day @ \$45. | 45.00 |
| M. Fennell - | Geochemical Survey - April 7th to 30th, 1970 17 days @ \$30. | 510.00 |
| | Drafting - 3 days @ \$30. | 90.00 |
| D. Barlow - | Magnetometer Survey - April 20th to 24th, 1970 4 days @ \$30. | <u>120.00</u> |
| | | \$ 1,942.50 |
| Vehicle Expense - 830 miles @ .12¢ | | 99.60 |
| Airphotos, printing, flagging, etc. | | 102.32 |
| Camp expense | | 174.68 |
| Analysis - TSL Laboratories, 325 Howe St., Vancouver, B.C. | | <u>796.50</u> |
| TOTAL | | <u><u>\$ 3,115.60</u></u> |

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 15th day of October 1970, A.D.


A Commissioner for taking affidavits for British Columbia.

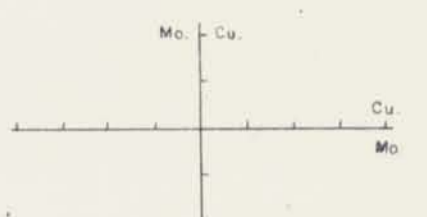


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2627 MAP #1

LEGEND

to accompany report by N.B. Vollo,
P.Eng., dated Sept. 23rd, 1970

Hot aqua regia extraction
Analysis by atomic absorption

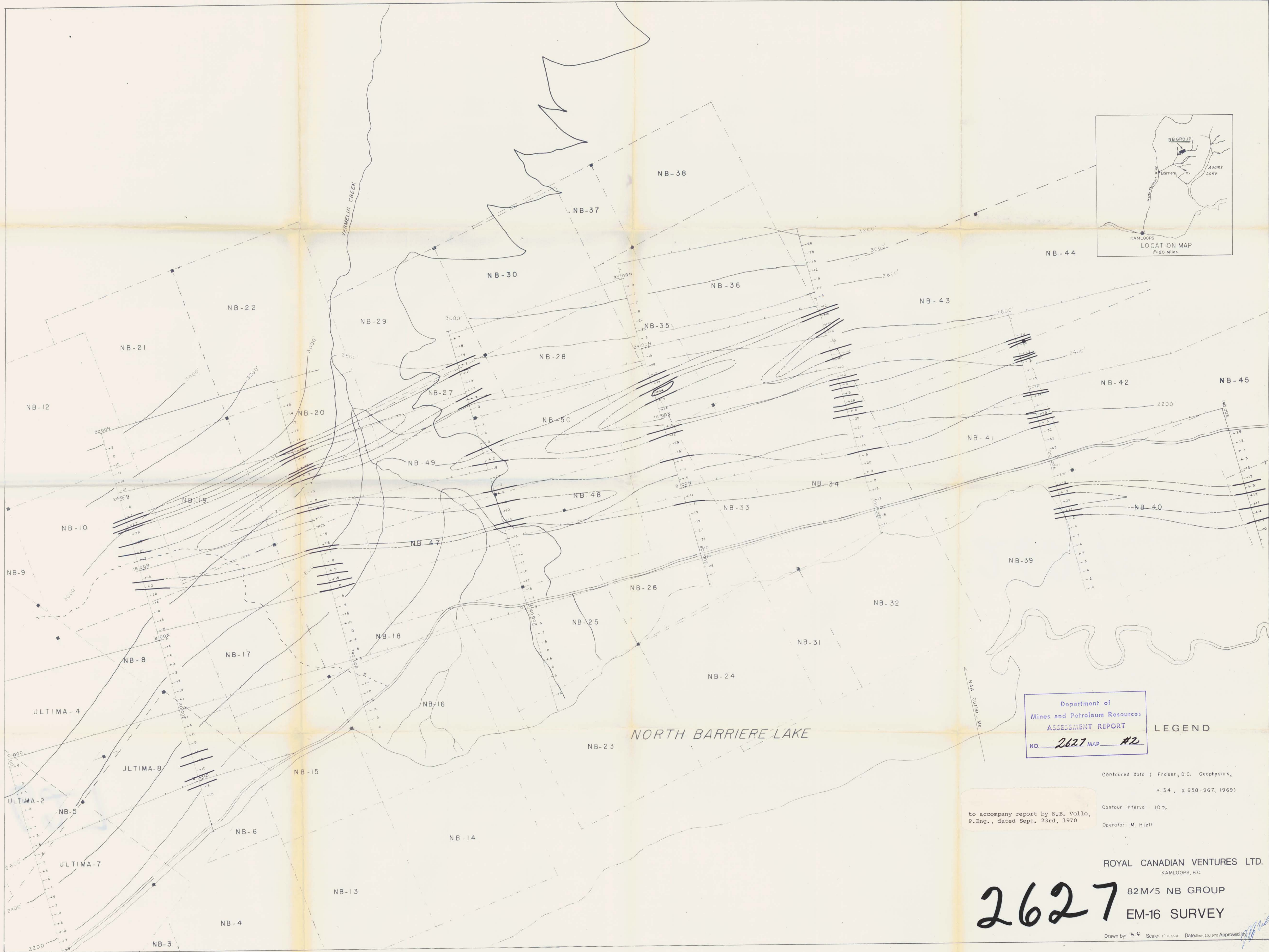


ROYAL CANADIAN VENTURES LTD.
KAMLOOPS, B.C.

2627

82M/5 NB GROUP
GEOCHEMICAL SURVEY
TOTAL Cu., Mo.

Drawn by: *mf* Scale: 1" = 400' Date: Sept 20, 1970



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2627 MAP # 2

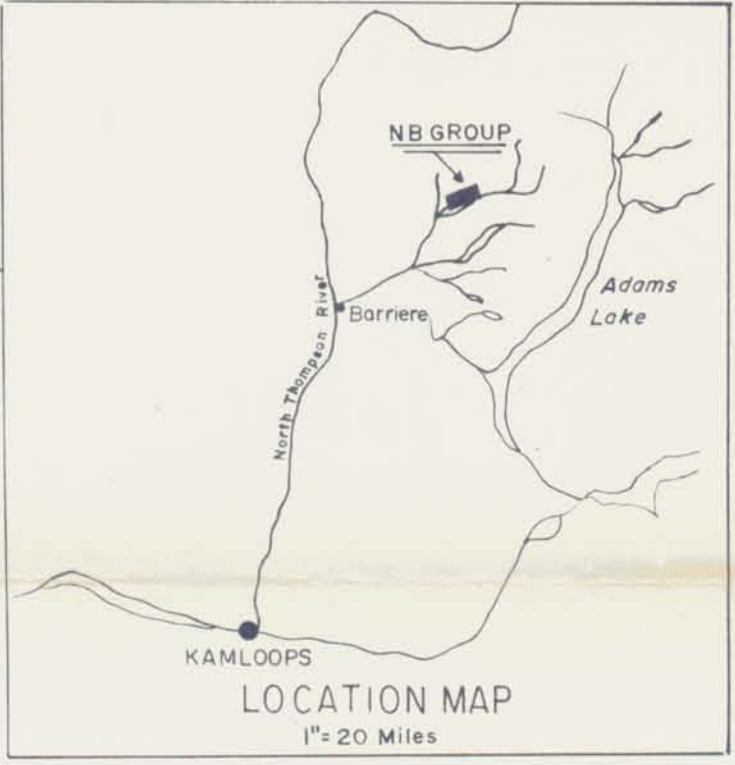
LEGEND

Contoured data (Fraser, D.C. Geophysics, V. 34, p. 958-967, 1969)
Contour interval - 10%
Operator: M. Hjelt
to accompany report by N.B. Vollo, P.Eng., dated Sept. 23rd, 1970

ROYAL CANADIAN VENTURES LTD.
KAMLOOPS, B.C.

2627 82M/5 NB GROUP
EM-16 SURVEY

Drawn by: *M.H.* Scale: 1" = 400' Date: 10/20/70 Approved: *M.H.*



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NO. **2627** MAP **A3**

Readings in γ
Corrected for diurnal
Instrument: Sharpe MF-1
Operator: D. Barlow

to accompany report by N.B. Vollo,
P.Eng., dated Sept. 23rd, 1970

ROYAL CANADIAN VENTURES LTD.
KAMLOOPS, B.C.

2627
82M/5 NB GROUP
MAGNETIC SURVEY

Drawn by: P.C.H. Scale: 1" = 400' Date: Sept 20, 1970 Approved by: [Signature]