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Geochemical Report on
the Royal Group of
ROYAL CANADIAN VENTURES LTD.
at Calling Lake, 50° 121° SE
by N.B. Vollo, Aug. 26 - Nov. 21, '66

Geochemical Report

on

The Royal Group

of

ROYAL CANADIAN VENTURES LTD.

at Calling Lake, Highland Valley, 50⁰ 121⁰ SE

by

N.B. Vollo, P.Eng.

November 21st, 1966

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GEOCHEMICAL REPORT ON THE 92 I/6 ROYAL GROUP

Location and access

The Royal group is located at Calling Lake in the Highland Valley area of B.C., N.T.S. designation 92 I/6. The property can be reached by either of two jeep roads which leave the Highland Valley road at Quiltsanton Lake.

Topography

The group lies between 5100 and 5700 feet above sea level, has rather gentle relief and is covered with an open mature forest of lodgepole pine. A broad drift filled valley trends southeasterly across the group with a narrow swamp along its bottom. Upland areas have abundant rock outcrop.

Geology

The group is underlain almost completely by granodiorite, with small areas of quartz porphyry near the west boundary. The overburden is boulder till, probably averaging less than ten feet in the upland areas, thickening to an unknown depth in the central valley. A very high proportion of the boulders are identical to rock in adjacent outcrop and the till is probably fairly closely representative of the underlying bedrock.

Soil profiles generally poorly developed in the till and no attempt was made to sample a particular soil horizon. Excellent preglacial soil profiles have been developed on the underlying granodiorite, as exposed in trenches, but this horizon was reached with certainty in only three test holes.

Sampling method

Samples were collected at 200 foot intervals along chained picket lines spaced 400 feet apart. 100 foot spacings were used around the trench on Cana 9 M.C. Holes were drilled into the overburden with a one inch hand auger five feet long. Due to the high proportion of boulders in the till considerable difficulty was encountered in drilling some of the holes. Average depth of penetration was about three feet.

Analysis

Samples were collected in paper envelopes and sent to TSL laboratories in Vancouver for analysis. Hot HCl extraction was used; copper was determined by atomic absorption, molybdenum by the dithizone method.

Interpretation

Molybdenum content was found to be very low, less than 0.5 ppm, and of no significance.

The median background value for copper is about 30 ppm (fig. 1). A few values over 100 ppm are scattered more or less at random but three areas show consistent values above a threshold of about 60 ppm (see map).

Anomaly "A" on the Cana 9 claim is in an area of thin overburden and probably reflects above normal copper in the underlying rock. Sparse malachite, chalcopryrite and bornite were observed in the trench adjacent to the anomaly.

A broad zone of copper values consistently above 50 ppm extends along both sides of the narrow swamp occupying the bottom of the central valley. Two areas on the east side of the swamp, labelled "B" and "C" on the map, have copper contents rising to about five times threshold. The overburden here is probably quite thick and may in part have been transported downslope from the northeast. The anomalies, however, could be hydrostatic anomalies above bedrock copper concentrations.

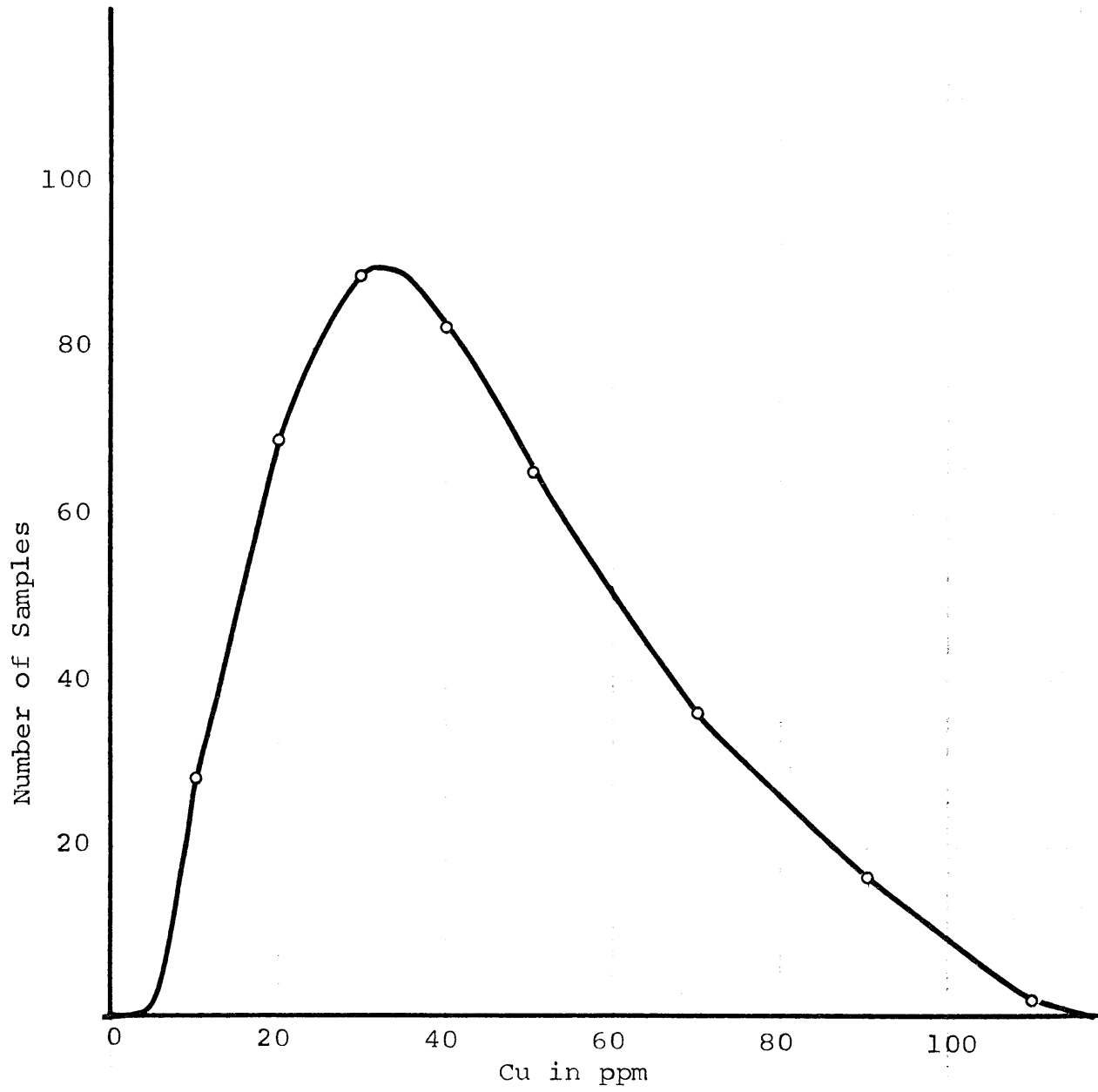
Recommendations

Anomaly "A" is probably adequately explained

by minor copper observed in the adjacent trench. The "B" and "C" anomalies were considered sufficiently interesting to warrant further investigation. An induced polarization survey was recommended over most of the area covered by the geochemical survey, and field work for this has been completed.

N.B. Vollo, P.Eng.

Kamloops, B.C.
Nov. 21st, 1966



DISTRIBUTION OF COPPER VALUES

Fig. 1

ASSESSMENT DATA

Personnel

N.B. Vollo, P.Eng., supervision - Aug. 16, 1966
Report preparation -- Nov. 21, 1966
R. Zimmerman, sample collection - Aug. 18,19,"
Aug.25-28, "
Sept. 1-4, "
Draughting ----- Nov. 16,17,21

Transportation

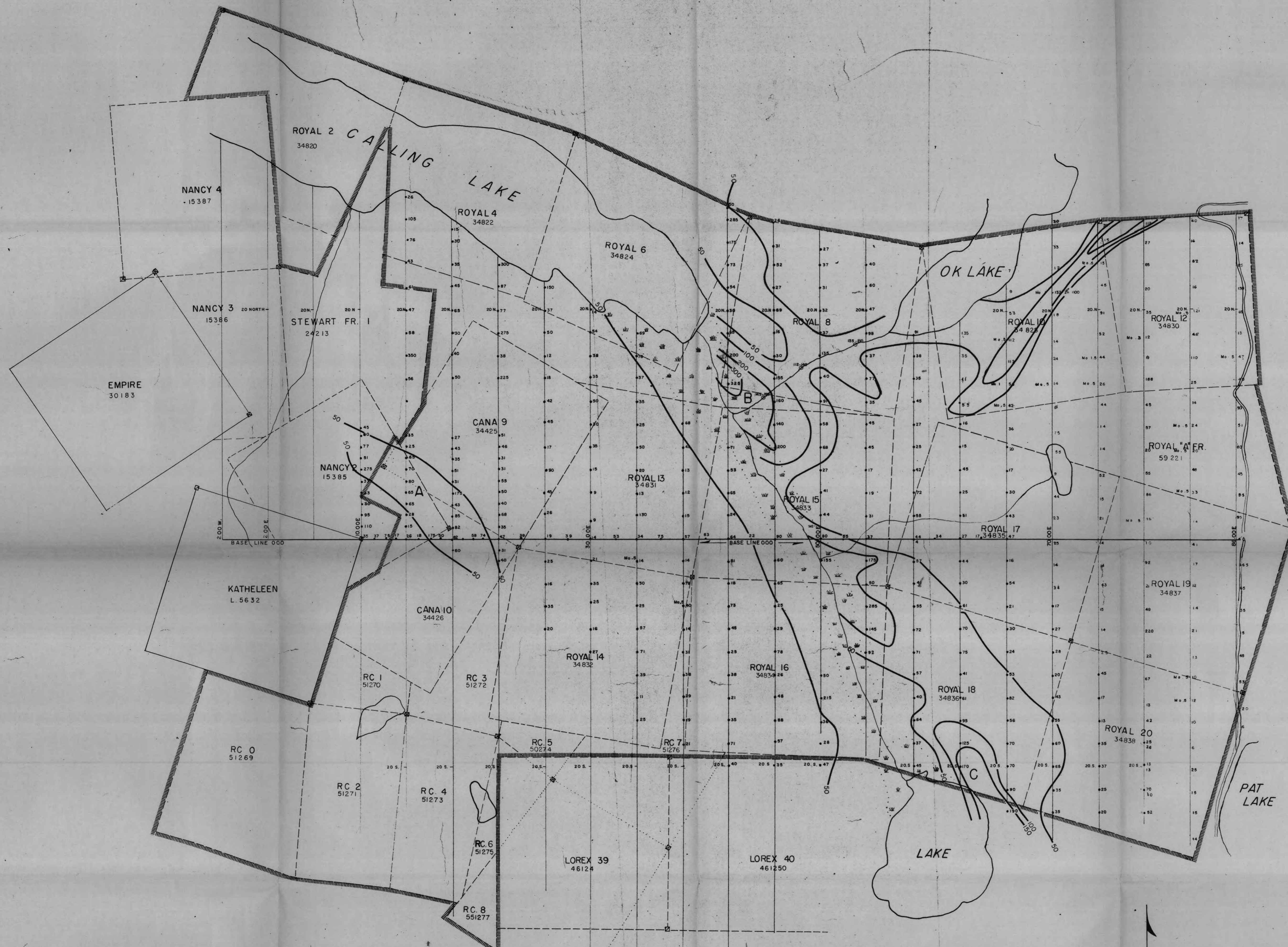
Company owned truck and rented car.

Accomodation

Camp on Calling Lake

Analyst

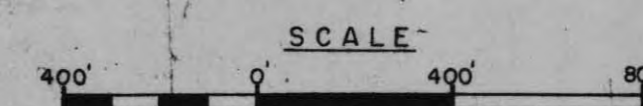
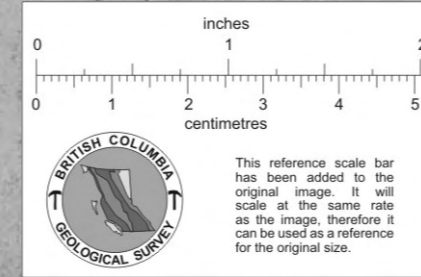
TSL Laboratories,
325 Howe St.
Vancouver, B.C.



LEGEND

- 180 PARTS Cu per million
- 5 PARTS Mo per million
- 24 Cu
- Property boundary
- Stream sediment

NOTE:
 Method - Hot HCl extraction.
 Cu determined by A-A
 Mo determined by Dithionite Method



ROYAL CANADIAN VENTURES LTD.
92 1/6 ROYAL, CANA, RC
GEOCHEMICAL PLAN

DRAWN BY _____ DATE _____ APPROVED BY _____