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### GEOCHEMICAL SOIL SURVEY

G.B. MINERAL CLAIMS

50° 120° NW

B. O. BRYNELSEN

J. D. KNAUER

NORANDA EXPLORATION COMPANY, LIMITED

KAMLOOPS MINING DIVISION JULY 26, 1967 to AUGUST 16, 1967

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## Noranda Exploration Company, Limited Geochemical Soil Survey of the G.B. Mineral Claims

#### INTRODUCTION:

The following report covers a geochemical soil survey on 7 G.B. mineral claims in the Durand Creek area. The claims are located approximately twenty-five miles south of Savona, B.C. It is bounded by Durand Lake to the north, Dominic Lake to the south and Durand Creek on the west. During October of 1965, 28 claims were staked as a result of prospecting in the area. In 1966 a limited amount of trenching and geological mapping were done on the northern G.B. Group. Further investigation indicated a favourable area to the south and due to limited outcrop a soil grid was established and systematic sampling was done in the summer of 1967. A control base line, extending north-south, was established by chain and compass. This base line was flagged, blazed and stations marked at 100 intervals. East-west lines were spaced at 400 foot intervals along the base line. These were also established by chain and compass, and marked by flagging and blazing. Samples were taken at 200 foot intervals east and west. Claim lines and tie lines were used in plotting the exact location of the grid. Work was done under the direction of B.O. Brynelsen, P. Eng., with field supervision by J.D. Knauer and a crew of four men. Results of the soil survey are plotted on a 1 inch to 400 feet base map. The soil survey was conducted from July 26, 1967 through August 16, 1967.

#### SUMMARY-CONCLUSIONS-RECOMMENDATIONS:

G.B. claims (G.B. 55 through 59, 75 and G.B. FR. and 80) were covered by the soil survey. Each sample was analyzed for p.p.m. Cu. The results show anomalous copper values which trend northwestward. The range of the copper values is from 75 to 660 p.p.m. The few outcrops indicate that the area is underlain by Nicola Volcanics. Minor amounts of chalcopyrite and magnetite were observed in a few of the outcrops. Further work recommended on the property is as follows:

- 1. Further trenching in the areas of interest,
- 2. Geophysical work in certain areas,
- 3. Possible blasting and a few x-ray drill holes if the geophysics and trenching show this is warranted.

#### GENERAL GEOLOGY:

Reconnaissance geology in the grid area indicates that Nicola Volcanics are the dominant underlying rocks. The volcanics have been highly altered. Minor amounts of pyrite, magnetite, and chalcopyrite were observed in a few of the outcrops.

#### **GEOCHEMISTRY:**

All analyses for copper were made in the Noranda Exploration Company, Limited laboratory located at 1050 Davie Street, Vancouver, B.C.

#### Sampling Method:

The samples were obtained by digging holes with a mattock and shovel, to a depth at which the brownish B Horizon was encountered and a sample was taken from this Horizon. In certain cases, as noted on the accompanying soil map, more than one sample was taken at different depths for testing purposes. The sampled material was then placed in "Hi Wet Strength Kraft, 3 1/2" by 6 1/8" Open End" envelopes and the grid station locations were marked on the envelopes with indelible felt pens.

#### Laboratory Determination Method:

The samples are first hung in a dry cabinet for 24 hours to 48 hours. Then they are mechanically screened and sifted to obtain a -80 mesh fraction.

The determination procedure for total copper is as follows: 0.125 grams of -80 mesh material is fused with potassium bisulfate. This is dissolved in 5 ml of 0.5N hydrochloric acid. A 2 ml aliquot is shaken with 10 ml acetate buffer and 1 ml biquinolin solution. The samples are then compared with colorimetric standards.

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**RESULTS:** 

Values for copper ranged from 75 to 660 p.p.m. on the sampled grid. The anomalies appear to have a northwestward trend. Due to the high copper background and limited outcrop other methods will be used to determine the significance of the anomalous values.

Respectfully submitted,

/James D. Knauer Geochemical Co-ordinator

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B.O. Brynelsen P. Eng. November 3, 1967

