

1051

GEOCHEMICAL SOIL SURVEY

KIRA MINERAL CLAIMS, DUM LAKE

51° 120° SE

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NORANDA EXPLORATION COMPANY, LIMITED

KAMLOOPS MINING DIVISION

JUNE 23, 1967 to JULY 23, 1967

TABLE OF CONTENTS

	Page
INTRODUCTION:	1
SUMMARY-CONCLUSION-RECOMMENDATIONS:	1
GENERAL GEOLOGY:	2
GEOCHEMISTRY:	
Sampling Method	3
Laboratory Determination Method	3
RESULTS:	4
MAP (in pocket) # /	
Geochemical Survey (Copper, Nickel, Molybdenum)	

Noranda Exploration Company, Limited
Geochemical Soil Survey
of the
Kira Mineral Claims

INTRODUCTION:

This report covers a geochemical soil survey and reconnaissance geology on 74 Kira mineral claims, located approximately 4 miles west of Little Fort, B. C. Dum Lake is near the center of the area of interest. During August of 1966 120 claims were staked to cover an area of reconnaissance silts high in copper values. A grid was established and a soil survey conducted in an attempt to locate the source of copper found in the stream sediments. A control base line extending north-south was cut and picketed at 100 foot intervals. Lines running east and west from the base line were established by chain and compass, and marked by flagging and blazing. The east-west lines were spaced at 800 foot intervals north and south along the base line. 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 seven men. Results of the soil survey are plotted on a 1 inch to 400 feet base map. The soil survey was carried out from June 23, 1967 thru July 23, 1967.

SUMMARY-CONCLUSION-RECOMMENDATIONS:

Kira claims (Kira 1 thru 18, 27 thru 39, 43 thru 60, 65 thru 74, 76, 78, 80, 82 and 91 thru 101), were covered by the soil survey to include the main areas of interest which were determined from the results of the reconnaissance silting. Determinations were run on all samples for copper and nickel, and a portion were run for molybdenum. From the results of the soil survey two general

areas of interest have been outlined. One area contains copper and one contains nickel. The copper area lies mainly in the eastern portion of the grid. Copper values range from a mean of 53 ppm to intensities ranging from 100-400 ppm. Anomalous nickel values are in the southwest corner. Nickel values ranging from a background of 40-50 ppm to a maximum intensity of 2000 ppm. The general reconnaissance geology indicates a transitional contact between the rocks as classified by Campbell and Tipper G.S.C. Map 3 - 1966 belonging to the Upper Triassic or Lower Jurassic Thuya Lake Batholith and the Upper Triassic metasediments of the Nicola Group. Minor mineralization was found in the outcrop. No conclusive explanation has yet been found to explain the higher than background values both copper and nickel.

Further work recommended on the property is as follows:

1. Soil sample intermediate 400 foot grid lines at 200 foot intervals in the main areas of interest shown by the original samples.
2. Detailed geologic investigation in the main anomalous areas.
3. If either of the above give any identification as to the source of the copper and nickel values, or more specific anomalies, then surface trenching and/or blasting would be feasible.

GENERAL GEOLOGY:

Reconnaissance geology shows that the area covered by the soil survey is comprised of Upper Triassic, or Lower Jurassic Thuya Lake Batholith and metasediments of the Nicola Group (Campbell and Tipper 1966). Granite crops out to a limited extent in a few areas. The contact between the igneous and metasediments is not distinct in the area of the soil survey. The regional structure of the area strikes N20°W. Fracturing in general parallels the regional structure. Pyrite is the most common mineral observed, with minor amounts of chalcopyrite.

GEOCHEMISTRY:

All analyses for molybdenum, copper, and nickel 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 grey C Horizon was encountered. Two samples were taken; one from the overlying brownish B Horizon, and one from the C Horizon. In some cases it was possible to obtain only one representative sample. 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 a period of 24 hours to 48 hours. They are then mechanically screened and sifted to obtain a -80 mesh fraction.

The determination procedure for total molybdenum is as follows: 0.1 gram sample of the -80 mesh material is fused with a sodium carbonate mixture. It is then dissolved in water (demineralized) and diluted to 10 ml. A 2 ml aliquot is shaken with 2 ml hydroxylamine hydrochloride solution and 0.5 ml dithiol solution. The samples are then compared with colorimetric standards.

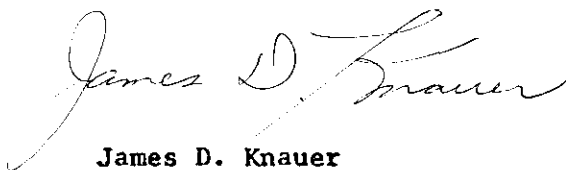
The determination procedure for total copper is as follows: 0.125 grams of -80 mesh material is fused with potassium bisulfate. This is dissolved in 5 ml of 0.5N hydrochloric acid. A 2 ml aliquot is shaken with 10 ml acetate buffer and 1 ml biquinolin solution. The samples are then compared with colorimetric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

The determination procedure for total nickel is as follows: 0.1 gram of -80 mesh material is fused with potassium bisulfate. This is dissolved in 10 ml of 0.5N hydrochloric acid. A 2 ml aliquot is shaken with 5 ml nickel buffer and 1 ml alpha furil dioxime solution. The samples are then compared with colorimetric standards.

RESULTS:

Values for copper showed a background of up to 70 to 80 ppm and anomalous values above 120 ppm. The main anomalous copper area lies mainly in the eastern portion of the grid. There are, in addition to the main area, scattered high copper values on other portions of the grid. Line 32N in the southwest corner shows very high nickel values compared to the rest of the grid and will need more work to determine its significance. Some samples were run for molybdenum but the results were such that this was discontinued for the remainder of the grid.

Respectfully submitted,



James D. Knauer

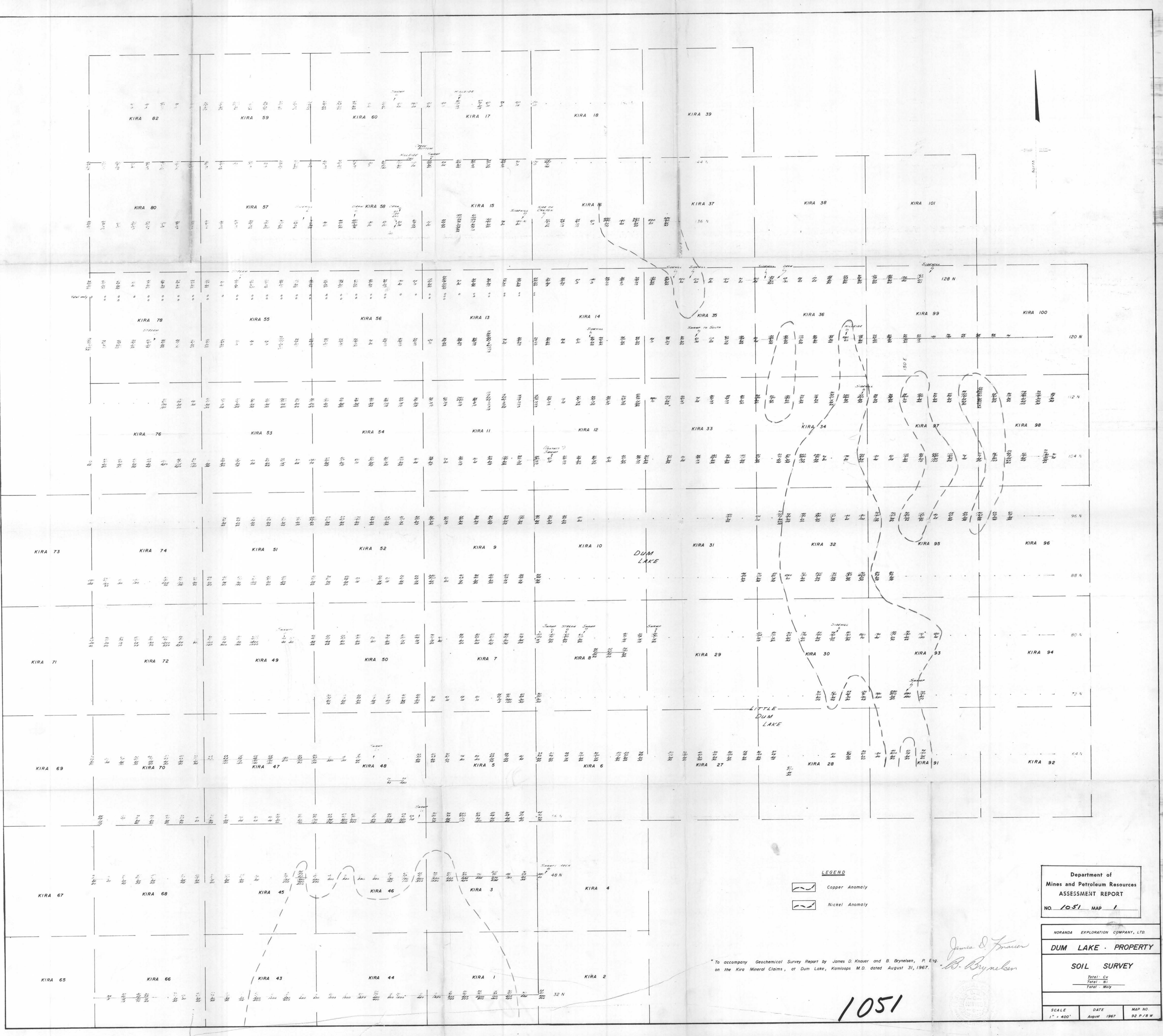
Geochemical Co-ordinator



B. O. Brynelsen

September 6, 1967

Reference: Campbell and Tipper - Bonoparte River Map 3-1966, 92p.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1051 MAP 1

NORANDA EXPLORATION COMPANY, LTD.
DUM LAKE - PROPERTY
SOIL SURVEY
Total - Cu
Total - Ni
Total - Mo
SCALE 1" = 400'
DATE August 1967
MAP NO. 92 P. 8 W.

LEGEND
Copper Anomaly
Nickel Anomaly

To accompany Geochemical Survey Report by James D. Knauer and B. Brynelsen, P. Eng. on the Kira Mineral Claims, at Dum Lake, Kamloops M.D. dated August 31, 1967.

1051

James D. Knauer
B. Brynelsen