202

NORANDA EXPLORATION COMPANY LIMITED

Electromagnetic Survey

of the

Road No. 2 and Brown Groups

of Mineral Claims

Gordon Creek Property

7 miles Northwest
of
Lower Nicola, B.C.

50° 120° SE

M.M. Menzies, P. Eng.
May 1958

TABLE OF CONTENTS

NORANDA EXPLORATION COMPANY LIMITED

Cost of Geophysical Survey

of the

Road No. 2 and Brown Groups

Merritt, B.C. - 1958

Professional Engineering:

Supervisory, field.

15 days @ $35.00/day - $ 525.00

Technical:

Surveyor, Assistant Geophysical Operator, Draftsman

20 man days @ $15.00/day - $ 300.00

Labor:

Line Cutting, Chaining

20 man days @ $15.00/day - $ 300.00

Total cost $1125.00

Cost Proportions:

Road No. 2 Group	- (W.P. No's 85,87,89,91)	$ 400.00
Brown Group	- (W.P. No's 86,88,90,92)	$ 400.00
		$ 800.00

W.M. MacKenzie

NORANDA EXPLORATION COMPANY LIMITED

Electromagnetic Survey

of the

Read No. 2 and Brown Groups

Gordon Creek Property

Kamloops Mining Division

Introduction:

The Read No. 2 and Brown groups of mineral claims are part of the Highland Valley Copper Corporation's holdings, now called the Gordon Creek property, in the southern portion of the Guichon batholith about 7 miles northwest of Lower Nicola, B.C. Approximately half of this property, forty seven claims in all, were optioned by Noranda Exploration Company Limited in late April, 1958 as part of a very extensive exploration programme for copper in and along the contacts of the Guichon batholith. A programme of camp building, line cutting, claim surveying and trenching was begun at once and a systematic electromagnetic survey started by mid-May. Conductors found by the electromagnetic survey and not eliminated by further surface investigations will be drilled.

Description:

The Gordon Creek property lies 7 miles northwest of Lower Nicola, B.C. in the high plateau country overlooking the Nicola River Valley. Elevations range from about 3500 to 4500 feet with Promontory Hills immediately to the east reaching a height of 5888 feet. The area is drained by several creeks and intermittent streams but the terrain is not precipitous. Extremely rugged topography however, lies to the west and south beyond the property's

present boundaries. A few small swampy areas lie in flat country adjacent to the streams.

Scattered stands of fir and pine cover the Gordon Creek property. Underbrush is sparse giving the terrain a pleasant park-like appearance. Precipitation is light.

Access to the property is provided by a good 10 mile logging road from Dot, B.C. on the Merritt-Spences Bridge highway. Alternative routes are by forestry road to Promontory Peak or by road and cat-trail from the Aberdeen highway to Tyner and Farr lakes and thence southerly to a junction with the Dot logging road.

Geology:

The geology of the Guichon batholith is described in the following reports:

1. Memoir 249; Geology and Mineral Deposits of Nicola Map-Area, British Columbia

   by

   W.E. Cockfield.

2. Memoir 262; Ashcroft Map-Area, British Columbia

   by

   S. Duffell and K.C. McTaggart.

3. The Geology and Mineral Deposits of Highland Valley, B.C.

   by

   Wm. H. White, E.M. Thompson, and K.C. McTaggart.

The Guichon batholith is roughly bounded by the Guichon creek to the east, the Nicola river to the southwest, and the Thompson river to the west and north.

It consists of granite, granodiorite, quartz-diorite and diorite of Lower Triassic age and intrudes the Upper Triassic Nicola formation near Lower Nicola and along the Thompson river to the west and north. The Lower Cretaceous Spences Bridge and Kingsvale groups of volcanic rocks form a thick mantle over the contact of the Guichon batholith with older rocks along a belt paralleling the Nicola river and thus obscures many miles of structure favorable to the deposition of copper deposits.

Several large mining companies have begun an intensive search for commercial copper deposits in and along the contacts of the Guichon batholith. This interest is largely due to the encouraging developments in the Highland Valley and Craigmont areas. Two entirely different types of deposits are involved and this has greatly increased the scope of exploration programmes and given a wider choice of methods in the search for ore. The Bethlehem Copper's Highland Valley deposit is the low grade porphyry-copper type while the Craigmont ore deposit near Lower Nicola is the contact metamorphic type. The latter occurs along the contact of the Guichon batholith and the Nicola formation and is characterized by a halo of skarn minerals.

Previous Work:

The Highland Valley Copper Corporation did extensive road building, stripping and some geophysical work on the Gordon Creek property during the 1956 and 1957 field seasons.

Reasons for Present Survey:

Noranda Exploration Company Limited has acquired a large number of claims in the southern portion of the Guichon batholith for the express purpose of

searching for copper deposits similar in character to Craigmont. The Gordon Creek property was optioned because geological conditions similar to that of the Craigmont area were expected and because surface mapping and geophysics could be facilitated by suitable terrain and ease of access. The electromagnetic type of survey was chosen following a careful study of the geology and characteristics of the Craigmont ore body. Supplementary work to be done will include an aeromagnetic survey, geological mapping and surface trenching.

Electromagnetic Equipment:

The electromagnetic instrument model used in this survey is called the Junior E.M. It was developed and tested over a period of years by Crone Geophysics, Toronto, Ontario, a division of Noranda Mines, Ltd. While the basic principles are the same as those for standard E.M. instruments a number of radical new developments, now being patented, have been incorporated which give the Junior E.M. many advantages over the familiar equipment commonly used in this type of survey. It is very light in weight and designed for rapid coverage of rough terrain.

Method of Survey:

In preparing the ground for the electromagnetic survey all claim location lines were surveyed by brunton compass and chained at 100 foot intervals. This was augmented by a grid system of true north-south, east-west lines spaced 2000 feet apart and chained at 100 foot intervals.

Three men comprised the Junior E.M. crew. The chief and helper, maintaining a distance of 200 feet between transmitter and receiver, traversed north-south

lines taking readings at 100 foot intervals and noting dips in degrees. Where significant angles were obtained readings were taken every 50 feet. The north-south lines were spaced at 400 foot intervals.

The third crew man started each line at a known point on the grid system. From there he ran a 2000 foot compass line true north or south, blazing and chaining off each hundred feet, and tying in to the appropriate point at the end of the traverse. This method was found to be both fast and accurate.

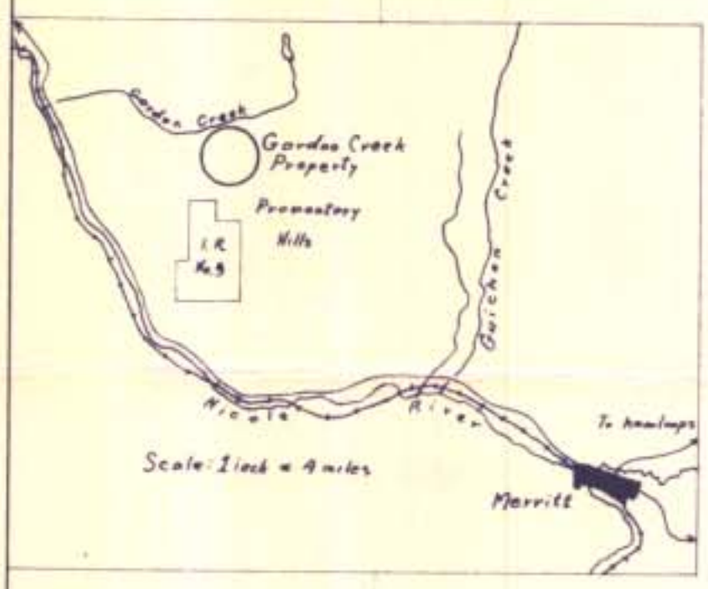
Observations:

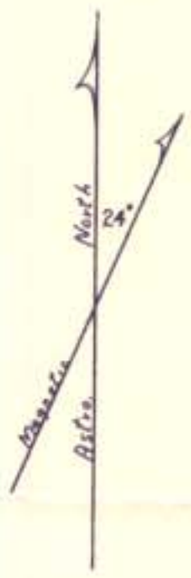
1. Much outcrop was encountered east of zero base line and overburden in general is believed light.
2. No outcrop was found west of the zero base line but overburden is thought to be shallow enough to permit use of the Junior E.M. equipment.
3. One definite conductor was found on mineral claim W.P. 91 of the Road No. 2 group.
4. This conductor did fall along the southeast side of a shallow swamp but the E.M. profiles are characteristic of a sulphide zone.
5. If the W.P. 91 conductor cannot be eliminated by geophysics or surface work, it will be drilled later this season.

Respectfully submitted,

M.M. Menzies.

Morris M. Menzies, P.Eng.





Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 202 MAP #1

Readings in Degrees
Conductors -

202

Report 202

Noranda Exploration Company Limited
Crone Electromagnetic Survey
Gordon Creek Property
Kamloops Mining Division
Scale: 1 inch = 400 feet
May 1958 M.M. Menzies