258

NORANDA EXPLORATION COMPANY LIMITED

GEOPHYSICAL SURVEY

of the

TINER LAKE PROPERTY

NINE MILES NORTH

of

LOWER NICOLA, B.C.

50° 120° East Southeast

M.M. Menzies, P.Eng.

May - August, 1958

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NORANDA EXPLORATION COMPANY LIMITED

COST OF GEOPHYSICAL SURVEY

of the

TYNER LAKE PROPERTY

NINE MINES NORTH

of

LOWER NICOLA, B.C.

MAY - AUGUST, 1958

PROFESSIONAL:

| | | |
|---|---|---|
| SUPERVISORY - | 15 days @ $35.00/day | $ 525.00 |
| SURVEY - | 40 days @ $35.00/day | $1400.00 |

TECHNICAL:

| | | |
|---|---|---|
| DRAUGHTING - | 25 days @ $20.00/day | $ 500.00 |

LABOR:

| | | |
|---|---|---|
| LINE CUTTING - | 150 man days @ $15.00/day | $2250.00 |
| ASSISTANTS - | 160 man days @ $15.00/day | $2400.00 |
| | TOTAL | $7075.00 |

COST DISTRIBUTION:

| CLAIM | NO. OF CLAIMS | DISTRIBUTION/CLAIM | TOTAL |
|---|---|---|---|
| Matt No's 1-8 inclusive | 8 | $100.00 | $ 800.00 |
| Dip No's 1-13 inclusive | 13 | $100.00 | $1300.00 |
| Pat No's 1-16 inclusive | 16 | $100.00 | $1600.00 |
| Rip No's 1-4 inclusive | 4 | $100.00 | $ 400.00 |
| Rip No's 9 & 10 | 2 | $100.00 | $ 200.00 |
| Rip No's 13-18 inclusive | 6 | $100.00 | $ 600.00 |
| Cat No's 1, 2 & 4 | 3 | $100.00 | $ 300.00 |
| Cat No's 6-12 inclusive | 7 | $100.00 | $ 700.00 |
| Cat No's 15-22 inclusive | 8 | $100.00 | $ 800.00 |
| | 67 claims | TOTAL | $6700.00 |

# NORANDA EXPLORATION COMPANY LIMITED

## GEOPHYSICAL SURVEY

## of the

## TYNER LAKE PROPERTY

### INTRODUCTION:

Noranda Exploration Company Limited optioned 114 claims in the Tyner Lake Area from William Marchant Rand, 736 Granville Street, Vancouver B.C. in April, 1958. A programme of extensive road building, camp construction, surveying, line cutting, geological mapping and geophysical work was started on the 14th of May and completed by the 9th of August.

### DESCRIPTION:

The Tyner Lake property is located around Tyner Lake 9 miles north of Lower Nicola, B.C. A rough but serviceable road branches off the Aberdeen road about 8 miles north of Lower Nicola and continues westerly to Tyner and Farr lakes and thence southerly to the Gordon Creek property where junction is made with a system of old logging roads leading to Dot on the Merritt-Spences Bridge highway. Five miles of new construction was completed by Noranda Exploration Company Limited and extensive repairs made to poorer sections of earlier road work. In relation to local mines, Tyner Lake property is 6 miles north of Craigmont and 12 miles south of Highland Valley.

Tyner Lake is 5 miles west of Guichon Creek where property elevations range from 4200 to 4900 feet. The southern claims are in an area of low rock ridges and many swamps and these features show pronounced northerly and northwesterly strikes. The northern terrain is more level with less outcrop. Lakes and swamps cover about 15% of the property. Ridges are covered by lodgepole pine, and spruce and poplar grow abundantly near swamps. The area is drained in the north by Skuhun Creek flowing westerly to the

Nicola river and in the south by Tyner creek flowing easterly to Guichon creek. Climate is characteristic of the Interior dry belt with light rainfall in the summer and moderate snowfall in the winter.

BIBLIOGRAPHY:

Cockfield, W.E. (1948): Geology and Mineral Deposits of Nicola Map-Area, British Columbia; Geol. Surv., Canada Memoir 249

Duffell, S. and McTaggart, K.C. (1951): Ashcroft Map-Area British Columbia; Geol. Surv., Canada Memoir 262

Rice, H.M.A. (1947): Geology and Mineral Deposits of the Princeton Map-Area, British Columbia Geol. Surv. , Canada Memoir 243

White, W.H., Thompson, R.M., McTaggart, K.C. (1958): The Geology and Mineral Deposits of Highland Valley, B.C. C.I.M. Transactions Vol. LX. 1957, PP 273-289

GENERAL GEOLOGY:

The Tyner Lake property is near the eastern edge of the Guichon Creek batholith and 6 miles north of Craigmont mine which marks the southern extremity of the batholith. The Guichon Creek batholith is bounded on the east by the Guichon Creek valley, on the southwest by the Nicola river, and on the north and west by Thompson river. It is 40 miles in length and has a maximum width of 17 miles.

The predominant rock types are granodiorite and quartz diorite with some gabbro found along Guichon creek. Extensive areas of the batholith, mainly to the north of Highland Valley, are overlain by late Tertiary volcanics of the Kamloops group.

Copper mineralization occurs in the Guichon creek batholith and along its contacts with Nicola Group rocks. The largest deposits found so far are on the Bethlehem Copper property where copper minerals occur in

fractured quartz diorite which intrudes the rocks of the batholith, and in a breccia probably derived in part from the Guichon Creek batholith. At other properties in Highland Valley copper minerals are found in altered and jointed quartz diorite, and in faults cutting quartz diorite. At the O.K. mine, 14 miles northwest of Tyner Lake, 10,000 tons of copper ore were mined and about 1,400 tons of concentrate shipped. At the Aberdeen mine, 3 miles east of Tyner Lake, 1,809 tons of ore averaging 10.82 percent copper were mined. This deposit is associated with an inclusion of greenstone in rocks of the Guichon Creek batholith. The Craigmont copper deposit occurs in Nicola Group rocks near the contact with the batholith.

REASONS FOR INVESTIGATION:

The Tyner Lake property lies 3 miles west of the Aberdeen mine where copper mineralization occurs in a Nicola greenstone inclusion in batholithic rocks. Vague reports of similar inclusions and strong magnetic anomalies appeared worthy of investigation.

The only geological data available on the Tyner Lake area is contained in the G.S.C. Memoir 249 and the accompanying 4-mile scale map. Because a large proportion of the area is covered by glacial till, river gravel, swamp, and lake it was thought remotely possible that a major Nicola-Batholith contact, with favorable conditions similar to those at the Craigmont mine, might exist on the Tyner Lake property.

Aerial photographs disclosed northerly and northwesterly lineaments which suggested major faults or shear zones. These structures are frequently mineralized in the Guichon Creek quartz diorite and warrant investigation.

The Tyner Lake property was suited to the efficient and economical geological and geophysical survey methods used by Noranda Exploration Company Limited.

SURVEY CONTROL:

Old north-south, east-west lines of the Railway Belt survey were recut and chained at 100 foot intervals and the corner markers located. Where necessary, additional lines were laid out thus forming a grid system over the Tyner Lake property with each square measuring approximately one half mile on the side. Geology was mapped on a scale of 1 inch to 400 feet by running east-west pace and compass traverses between two known points. The same method was employed to control the electromagnetic survey. Claim posts were tied in by a chain and compass survey.

ELECTROMAGNETIC EQUIPMENT:

The electromagnetic instrument 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 Limited. 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:

Three men comprised the Junior E.M. crew. The chief and helper, maintaining a distance of 200 feet between transmitter and receiver, traversed east-west lines taking readings at 100 foot intervals and noting dips in degrees. The east-west lines were spaced at 400 foot intervals over most of the southern half of the Tyner Lake property.

The third man of the crew started each line at a known point on a base line. From there he ran a compass line east or west to the next base line or to the property boundary, blazing frequently and chaining at 100 foot

intervals. If the east or west line ended on a base line it was tied in to a known point. This method was found to be both fast and accurate.

OBSERVATIONS:

1. The Junior E.M. instrument has an effective range of penetration in excess of 100 feet. Much swamp exists in the area covered and some of this may be too deep for the type of instrument used. However, extensive areas of outcrop have been thoroughly tested for electrical conductors.

2. A few anomalous readings were obtained but these are isolated and are believed to be of no importance.

CONCLUSIONS:

It is readily acknowledged that the Junior E.M. instrument would probably fail to detect large areas of very low grade disseminated sulphide, short lenses or pods of relatively high grade material, and deep-seated ore deposits. However, it can be stated with reasonable certainity that in areas of moderate overburden no sulphide zones approaching ore grade were encountered.

Respectfully submitted,

M. M. Menzies

M. M. Menzies, P.Eng.

MMM/ai

Dip 15 | Pat 4 | Pat 1 | Rip 20 | Cat 12 | Cat 11 | Cat 6 | Cat 5

Rip 8

LAKE

Pat 2 | Pat 3 | Pat 6 | Pat 5 | Rip 7 | Cat 10 | Cat 9 | Cat 4 | Cat 3

Dip 1

Rip 2 | Cat 8 | Cat 2 | Cat 1

Tyner Lake | LAKE | Pat 8 | Pat 7

Dip 2 | Dip 3 | Rip 4

Rip 1 | Rip 3 | Matt 4 | Matt 1

Pat 10 | Pat 9

Dip 4 | Dip 5

Marsby Lake | Rip 13 | Rip 14

Rip 15 | Rip 16 | Cat 17 | Cat 18 | Matt 3 | Matt 2

Pat 11 | Pat 12

Dip 6 | Dip 7

Rip 18

Pat 13 | Pat 14 | Rip 17 | Matt 7 | Matt 5

Dip 10 | Dip 9 | Cat 19 | Cat 20

Pat 16 | Pat 15 | Matt 8 | Matt 6

Dip 12 | Dip 11 | POTHOLE LAKE | Cat 21

Dip 13 | Dip | Dip

NOTE: Maps 2 and 3 are claim & grid maps as here and as in Rpt. 257. They have been omitted from filming. Ed.

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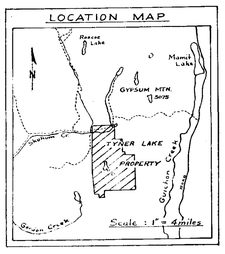
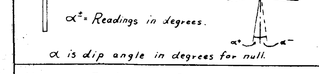
Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 258 MAP #1

LOCATION MAP




LEGEND




Noranda Exploration Company Limited
Tyner Lake Property
Merritt BC
E-M Survey Map
Scale 1 inch = 400 feet
South Sheet August 13, 1958

Pat 30
Pat 29
Pat 28
Pat 27
Pat 26
Pat 25
Pat 24
Pat 23
Pat 22
Pat 21
Pat 20
Pat 19
Pat 18
Pat 17
Rat 32
Rat 31
Rat 30
Rat 29
Rat 28
Rat 27
Rat 26
Rat 25
Rat 24
Rat 23
Rat 20
Rat 18
Rat 19
Rat 17
Rip 29
Rip 27
Rip 26
Rip 25
Rip 24
Rip 23
Rip 22
Rip 20
Rip 19
Cat 14
Cat 13
Cat 12
Cat 11
Cat 6
Cat 5
Dip 15
Pat 4
Pat 1
5300N
2650N
0-00N
No. 1 Blk.
No. 2 Blk.
No. 3 Blk.

LOCATION MAP
Scale 1 in 4 Miles
Tyner Lake Property

Noranda Exploration Company Limited
Tyner Lake Property
Merritt B.C.
Claim and Grid Map
Scale: 1 inch = 400 feet
North Sheet August 13, 1958

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 258 MAP #2

Dip 15 | Pat 4 | Pat 1 | Rip 20 | Cat 12 | Cat 11 | Cat 6 | Cat 5

Rip 8 | Cat 4 | Cat 3

Dip 1 | Pat 3 | Pat 2 | Pat 6 | Pat 5 | Rip 7 | Cat 10 | Cat 9

Rip 2 | Cat 8 | Cat 7 | Cat 2 | Cat 1

Dip 3 | Dip 2 | Tyner Lake | Pat 8 | Pat 7 | Rip 4

Rip 1 | Rip 3 | Cat 15 | Cat 16 | Matt 4 | Matt 1

Dip 5 | Dip 4 | Pat 10 | Pat 9 | 5300S

Marshy Lake | Rip 13 | Rip 14

Matt 3 | Matt 2

Dip 7 | Dip 6 | Pat 12 | Pat 11 | Rip 15 | Rip 16 | Cat 17 | Cat 18

Rip 18

Dip 9 | Dip 10 | Pat 14 | Pat 13 | Rip 17 | Cat 19 | Cat 20 | Matt 7 | Matt 5

No. 1 B/L | No. 2 B/L | No. 3 B/L | No. 4 B/L | No. 5 B/L | No. 6 B/L

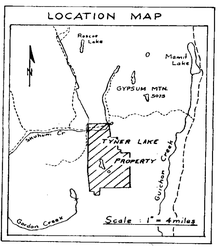
Dip 11 | Dip 12 | Pat 16 | Pat 15 | Cat 21 | Cat 22 | Matt 8 | Matt 6

10700S

Dip 13 | Dip

Dip

LOCATION MAP




Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 258 MAP #3

Noranda Exploration Company Limited
Tyner Lake Property
Merritt B.C.
Claim and Grid Map
Scale: 1 inch = 400 feet
South Sheet August 13, 1958