# COMBINED GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

on

TOOT 1, TOOT 2 and LAKE 8-11 Mineral Claims

Liard Mining Division

104-0-16 (W½)

$59^{o}59'$ N - $130^{o}26'$ W

Noranda Exploration Company Limited (NPL)



G. Macdonald

30 January 1979

# TABLE OF CONTENTS

# COMBINED GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

## TOOT 1, TOOT 2 and LAKE 8-11 Mineral Claims

## INTRODUCTION

The claims referred to in this report are registered in the name of Noranda Exploration Company Limited (No Personal Liability) and include LAKE 8-11 (14575-14578), TOOT 1 (542) and TOOT 2 (543) Mineral Claims. The LAKE 8-11 mineral claims are optioned by Noranda Exploration Company Limited (N.P.L.) from prospectors A. Riba, S. Papp and A. Fekete; TOOT 1 and TOOT 2 were staked by Noranda Exploration Company Limited (N.P.L.)

The property lies 2 kilometers south of the BC/Yukon border, 38 kilometers east of Swift River (Yukon Territory) and 13 kilometers south of Milepost 710 on the Alaska Highway (see Figure 1, Location Map).

Access to the property in 1978 was by helicopter from Swift River, Yukon Territory (machine ferried from Ross River, Yukon Territory).

The claims cover an occurrence of molybdenite, galena and scheelite mineralization in quartz veins, altered quartz monzonite and garnet-diopside skarn zones.

Work in 1978 comprised geological and geochemical soil surveys. To provide survey control, 57.5 kilometers of grid were established, covering the entire property, and 1417 soil samples were taken by Stirling Expediting Ltd. of Ross River, Yukon Territory, as contractor. Samples were analyzed for molybdenum, copper, lead, zinc and silver content. Geological mapping was conducted at a scale of 1:5000 over the property by G. Macdonald, Geologist, under the supervision of G. Dirom, Professional Engineer. Both of these personnel are employees of Noranda Exploration Company Limited (No Personal Liability).

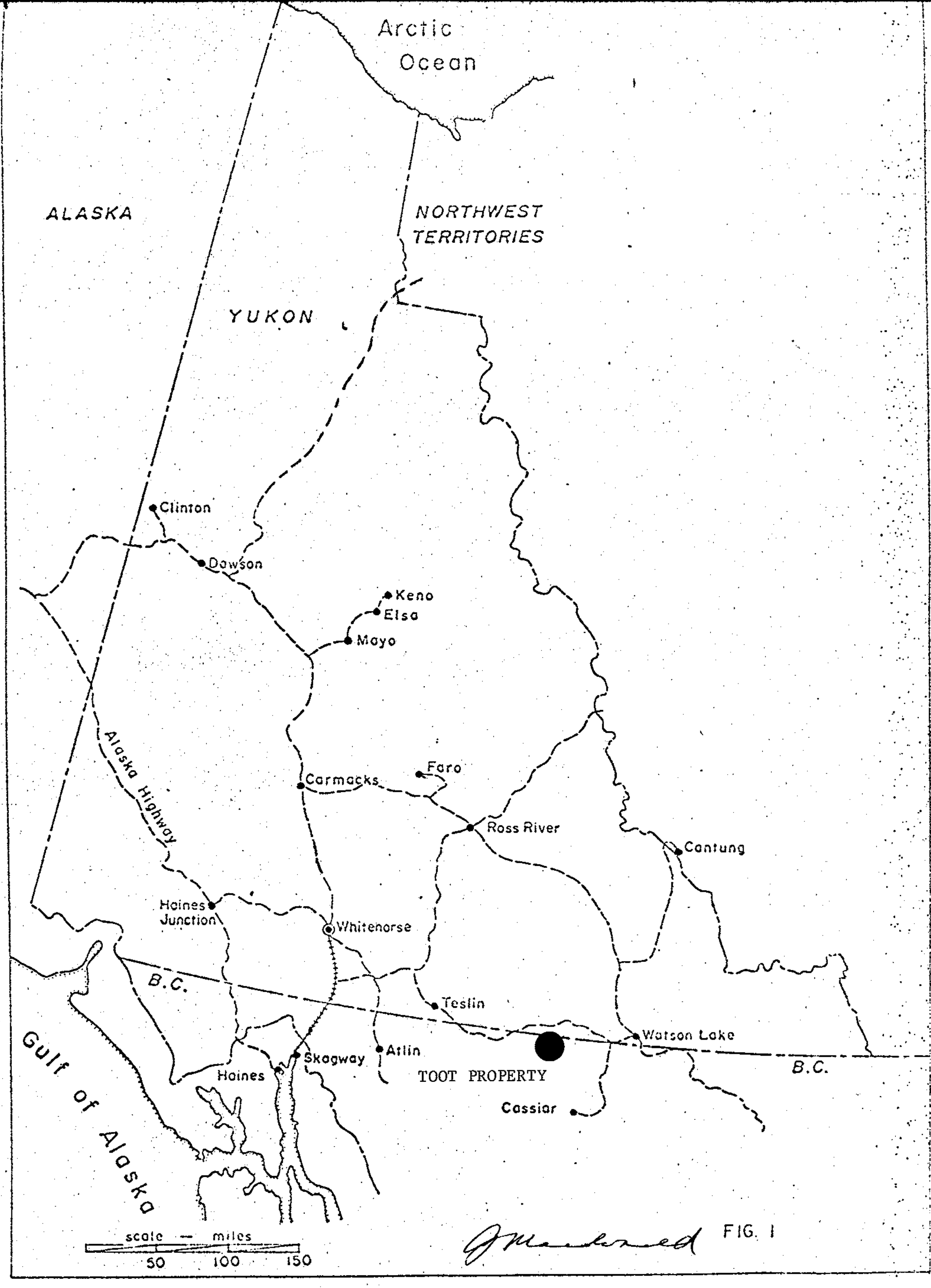
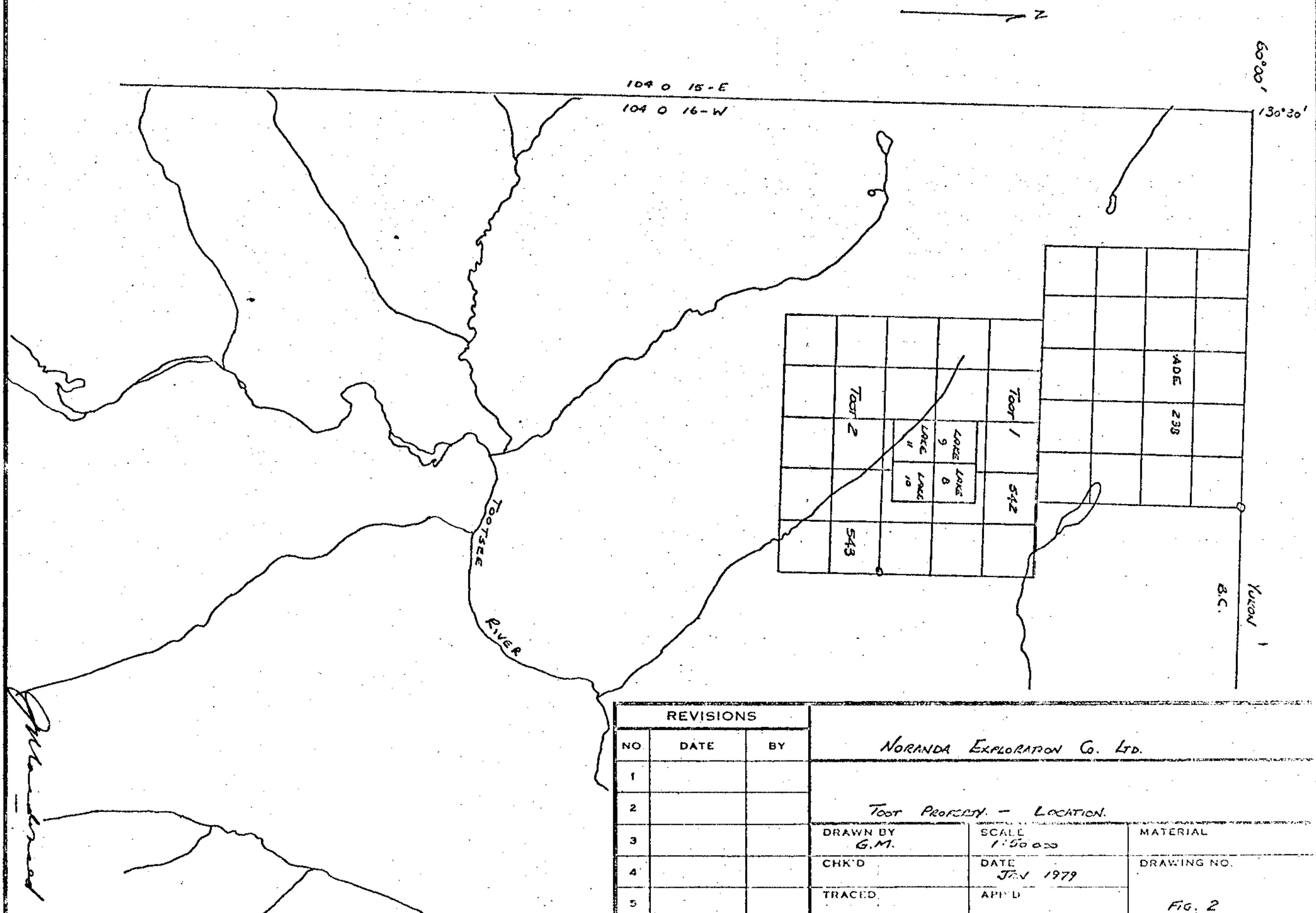

Arctic Ocean
ALASKA
NORTHWEST TERRITORIES
YUKON
Clinton
Dawson
Keno
Elsa
Mayo
Alaska Highway
Faro
Carmacks
Ross River
Cantung
Haines Junction
Whitehorse
B.C.
Teslin
Watson Lake
Atlin
Skagway
Haines
TOOT PROPERTY
Cassiar
Gulf of Alaska
scale — miles
50
100
150

FIG. 1




| REVISIONS | | |
|---|---|---|
| NO. | DATE | BY |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

NORANDA EXPLORATION CO. LTD.

TOOT PROPERTY. – LOCATION.

| | | |
|---|---|---|
| DRAWN BY G.M. | SCALE 1:50 000 | MATERIAL |
| CHK'D | DATE JAN 1979 | DRAWING NO. |
| TRACED | APP'D | FIG. 2 |

GEOCHEMICAL SOIL SURVEY

All soils were analyzed for copper, lead, zinc, molybdenum and silver in the Noranda Exploration Company Limited laboratory located at 1050 Davie Street, Vancouver, British Columbia; analyst was Evert Van Leeuwen.

The soil samples were collected by Stirling Expediting Ltd. of Ross River, Yukon Territory, under contract during the period September 2nd to September 12th, 1978. Five personnel were engaged under the contract.

## Sampling Method

Samples were obtained by digging holes with a maddock to a depth, when feasible, where the visible B horizon or sub-outcrop was encountered. The B horizon was sampled whenever possible. The samples were placed in "Hi-Wet-Strength Kraft $3\frac{1}{2}$ x $6\frac{1}{8}$" Open-End" envelopes and the grid station was marked on the envelopes with indelible felt pen. Samples were tied together according to lines and sent to the laboratory in Vancouver for analysis.

## Laboratory Determination Method

The samples are first placed in a drying cabinet for a period of 24 to 48 hours; the sample material is then screened and siften to obtain a -80 mesh fraction.

The determination procedure for total copper, lead, zinc, molybdenum and silver is as follows:

> 0.200 gram of the -80 mesh material is digested in 2 ml of $HClO_4$ and 0.5 ml of $HNO_3$ for approximately 4 hours. Following digestion, each sample is diluted to 5 ml with demineralized $H_2O$. A varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the parts per million copper, lead, zinc, molybdenum and silver content in each sample.

The Theory of Atomic Absorption Spectrophotometer is fully described in the literature and will not be elaborated upon in this report.

## Presentation of Geochemical Results

Results of the soil survey are presented in Drawings 1 to 5 of this report (plan maps, scale 1 cm = 50 m, showing individually Mo, Cu, Pb, Zn and Ag results in parts per million).

## Discussion of Geochemical Results

(See Table 1 for a summary of anomalous soil sample values.)

### (i) Cu-Mo

Copper and molybdenum present coincident anomalies from 106 N to 110 N. The anomaly is linear and about 200 meters wide; it trends southwest from 110 N - 90 W. Molybdenum shows as a more concentrated anomaly, while copper is less definitive. The copper anomaly extends farther southwest (to 100 N) than molybdenum. This anomaly reflects molybdenite and minor chalcopyrite mineralization along the sediment-intrusive contact.

### (ii) Pb-Ag

A distinct lead-silver anomaly occurs partially coincident with the copper-molybdenum anomaly. This anomaly is best defined from 107 N to 110 N from 90 W to 94 W. Peripheral to the main copper-molybdenum anomaly, lead and silver are commonly weakly to moderately anomalous. The lead and silver values reflect galena-tetrahedrite(?) mineralization in small quartz veins in both intrusive and sedimentary rocks. Other occasional anomalous lead-silver areas represent minor galena mineralization in rusty shear zones in the intrusives; these anomalies tend to be quite erratic but show a general linear trend on the west half of the grid.

### (iii) Zn

Most of the anomalous zinc samples are peripheral to or partially coincident with the main copper-molybdenum anomaly. These samples reflect minor sphalerite in quartz veinlets or skarn. Other anomalous zinc samples are quite erratic but may reflect weakly mineralized shear zones in the intrusive.

Table 1

Anomalous Values of Soil Samples

| | | |
|---|---|---|
| Mo | Threshold | 10 - 24 ppm |
| | Anomalous | > 24 ppm |
| | Highly Anomalous | > 60 ppm |
| Cu | Threshold | 22 - 36 ppm |
| | Anomalous | > 36 ppm |
| Pb | Threshold | 30 - 60 ppm |
| | Anomalous | > 60 ppm |
| | Highly Anomalous | > 250 ppm |
| Zn | Threshold | 250 - 350 ppm |
| | Anomalous | > 350 ppm |
| Ag | Threshold | 1.4 - 2.2 ppm |
| | Anomalous | > 2.2 ppm |

## GEOLOGY

The property is underlain by Cambro-Ordovician shales and carbonates and Silurian-Devonian carbonates intruded by Cretaceous quartz monzonites and granodiorites. Near intrusive contacts, pelitic sediments are altered to hornfels and calcareous sediments altered to skarn. Border phases of the intrusive complex are moderately to intensely altered.

A summary of geology is presented in Table 2.

Table 2

Table of Formations

| | | | |
|---|---|---|---|
| CRETACEOUS | Kqm<br>Kg | Quartz Monzonite<br>Granodiorite | Medium to coarse grained biotite granodiorite and hornblende-biotite quartz monzonite |
| SILURIAN-DEVONIAN | SD | Domomite and Limestone | Light grey-buff weathering silty limestones and dolomites; commonly altered near intrusive contacts to wollastonite (tremolite?) skarn |
| CAMBRO-ORDOVICIAN | $€O_2$ | Shale | Thin bedded black shale; altered to hornfels |
| | $€O_1$ | Limestone | Thin bedded, fine grained grey limestone; altered to garnet-diopside skarn |

## (i) Cambrian and Ordovician (Kechika Group)

The Cambrian-Ordovician Kechika Group is represented on the TOOT claims by a thin (< 50 m thick) package of thin bedded, fine grained grey limestone (€$O_1$(?)) and thin bedded black pyritiferous shale (€$O_2$). These rocks occur on the eastern portion of the property and are present as banded garnet-diopside-calcite skarn (€$O_1$) and laminated hornfels (€$O_2$). Fine grained disseminated pyrite and pyrrhotite are present to 25% in hornfels. The hornfels and skarn of this unit are poorly exposed and have been highly faulted and deformed where observed in outcrop.

## (ii) Silurian and Devonian

A thick sequence of buff-grey weathering, sandy dolomite overlies the Kechika Group on the eastern margin of the TOOT claims. The dolomite is commonly silicified or altered to wollastonite-tremolite(?) skarn and forms prominent topographic features (e.g. cliffs). Fine grained pyrite is present (< 1%) in the skarn. Occasionally, differentiated skarnification of the dolomite, caused by alternating sand-rich and lime-rich bands up to 5 cm in thickness, produces a characteristic anastomosing network weathering pattern.

## (iii) Granitic Rocks

Granitic rocks intruding the older stratified rocks underlie most of the TOOT property. These intrusives represent the eastern margin of Cassiar Batholith which is primarily composed of large areas of homogeneous medium to coarse grained grey biotite quartz monzonite (Gebrielse, 1969). Peripheral phases of the TOOT property consist of biotite-hornblende granodiorite, biotite quartz monzonite and coarse grained pink granite (pegmatite?)

## (iv) Biotite Quartz Monzonite

Coarse grained greyish biotite quartz monzonite makes up most of the granitic rock at the TOOT property. Commonly, the rock is weakly hydrothermally altered to the propylitic stage, characterized here by some chloritic replacement of mafic minerals and weak clouding of feldspars. Accessory minerals include magnetite (to 5% locally), apatite, illmenite and zircon. The quartz monzonite is intruded by swarms of aplite and occasional muscovite-pegmatite dykes. Aplite dykes range in size from a few millimeters to one meter in width.

(v) Biotite-Hornblende Granodiorite

A medium-grained biotite-hornblende granodiorite phase of the intrusive occurs on the northwest boundary of the property. The granodiorite is gradational(?) with quartz monzonite in some instances, but contacts are generally observed. The rock is fresh and unaltered.

(vi) Granite

Coarse grained pink granite occurs near the centre of the property. Probably, the pegmatitic dykes and granite porphyry represent a common phase of the intrusive complex. Chill margins are generally absent or very narrow in both aplite and granite dykes. Occasional fragments of diorite to 5 cm in diameter occur in the granite porphyry.

## Alteration

Most of the intrusive rocks on the TOOT property show some degree of alteration. Sedimentary rocks have been pervasively altered for as much as 500 meters from their contact with the intrusive mass.

Alteration on the property has been divided into four classes as a result of field classification. Surface leaching of rocks is not a significant feature at the TOOT property.

(i) Fresh

Rocks with no visible alteration of the primary minerals were considered to be fresh.

(ii) Propylitic-Argillic

The propylitic alteration zone was characterized by chloritic alteration of biotite and slight clouding of feldspars.

(iii) Phyllic-Strong Argillic

A phyllic alteration zone consisting of sericite, kaolin and secondary quartz is present in one small area (150 x 200 m) with a slightly larger halo of (probably) strong argillic alteration. Within this zone, original textures of the rock (monzonite) are totally obscured, and kaolin and sericite form a matrix in which quartz phenocrysts are embedded.

(iv) Sedimentary Alteration

Sedimentary rocks are highly altered near their contact with the intrusive complex. Carbonate rocks are altered to calc-silicate skarn (garnet-diopside-calcite or wollastonite-(tremolite?)-quartz skarns), while argillaceous rocks have been altered to a dense pyritiferous hornfels.

## Distribution of Alteration Zones

Biotite-hornblende granodiorite on the northwest corner of the property is fresh and virtually unaltered. Biotite quartz monzonite is commonly altered to the phyllic stage. Around the region 96 W - 107 N, the monzonite has been intensely altered to the phyllic stage in an area approximately 150 x 200 meters. Around this zone, the rock is commonly altered to an advanced (strong) argillic stage characterized by almost total replacement of original minerals but no development of sericite or secondary quartz. The monzonite in this area exhibits miarolitic cavities and is cut by coxcomb-textured quartz veinlets. Manganese staining is widespread.

Sedimentary alteration is pervasive up to 500 meters from the intrusive-sediment contact. The highest degree of alteration is exhibited by a thin Cambrian-Ordovician limestone unit which, where exposed, is totally altered to garnet-diopside-calcite (± actinolite) skarn. This unit and the Cambrian-Ordovician argillaceous unit (intensely altered to pyritiferous hornfels) are (poorly) exposed near 106 - 108 N at 95 - 96 W and along the contact near the south margin of the property. Silurian-Devonian dolomites have been differentially altered to wollastonite-(tremolite?)-quartz skarn bands alternating with less altered sandy dolomite layers. The resulting rock weathers differentially and develops a banded appearance.

## Alteration Near Quartz Veins

Intense alteration "envelopes" surround a series of quartz veins near 107 N - 97 W and locally in other areas within biotite quartz monzonite. This quartz-vein developed alteration extends up to half a meter from the vein.

## Intrusive and Structural Relationships

The intrusive complex underlying most of the TOOT property consists of quartz monzonite and granodiorite intruding older dolomite, shale and limestone. The intrusives probably represent different phases of the same intrusive event. Fragments of diorite occurring in dykes may reflect an underlying phase of the intrusive complex.

The Silurian-Devonian dolomite on the eastern margin of the property overlies unconformably (or by thrust fault contact?) the Kechika (Cambrian-Ordovician) unit. The Kechika Group has been extensively sheared and faulted near its contact with the intrusive. This stress may express a part of a major fault structure crossing (from north to southwest) the property near the margin of the intrusive complex. A series of northwest-southeast shear zones cut both quartz monzonite and granodiorite phases of the intrusive complex.

## Economic Geology

Economic minerals at the TOOT property include molybdenite, scheelite, galena, tetrahedrite(?), sphalerite and chalcopyrite. Mineralization occurs in three environments: as disseminations in biotic quartz monzonite, in quartz veins cutting biotite quartz monzonite and sediments, and in skarn zones peripheral to the intrusive complex.

### (i) Mineralization Disseminated in Intrusive

Molybdenite and minor chalcopyrite disseminated in altered biotite quartz monzonite were observed in a small outcrop near 108 N at 98 W and in float near 101 N - 98 W. The quartz monzonite in these instances contains little biotite and has small, rusty miarolitic cavities (to ½ cm diameter). Molybdenite is disseminated as small (10 - 20 mm) flakes randomly oriented to as much as 5% (commonly less than 1%) of the rock. Chalcopyrite accompanying molybdenite occurs as very occasional grains less than 5 mm long in small shears.

(ii) Mineralization in Quartz Veins

Numerous quartz veins in the intensely altered area of biotite quartz monzonite carry molybdenite. Larger veins (to 1.5 meters wide) which pinch and swell may be traced for more than 100 meters. Several such veins are present and generally average 0.5 to 1.2% molybdenum, which occurs in disseminated rossettes and small zones of massive molybdenite. Two sets of shears accompanying these veins carry fine grained blebs of massive molybdenite several centimeters long and up to 1 cm wide. In some areas, as many as 6 shears per meter are present. These shear zones lie approximately $55^{\circ}$ and $85^{\circ}$ to the main quartz veins. Other "dry" fractures or joints also occur sporadically in the intensely altered area and carry minor amounts of fine molybdenite "paint".

Peripheral to the molybdenite veins, small (1 - 2 cm wide) quartz veins carry galena, sphalerite and possibly tetrahedrite. These veins commonly exhibit a coxcomb texture.

A well developed garnet-diopside-calcite skarn zone (1 - 3 meters wide), exposed 107 - 108 N / 93 - 94 W, carries molybdenite as very fine ($\leq$ 1 mm) disseminated flakes, occasionally 1 cm in width. Minor amounts of scheelite (0.15% $WO_3$) are also present in the skarn here and near the south margin of the property near 107 W as float.

Minor amounts of chalcopyrite also occur in quartz veins along the south end of the property and in pyrite-rich bands of hornfels along the contact near 93 N - 106 W.

## SUMMARY AND RECOMMENDATIONS

The TOOT claims cover an occurrence of molybdenite-chalcopyrite-scheelite-(galena-sphalerite) mineralization near the margin of the Cassiar Batholith.

A geochemical survey has indicated a target area of interest.

Further work should include delineating the geochemically anomalous region to the northeast, detailed prospecting and mapping in the geochemical anomaly, and diamond drilling.

Glen Macdonald - Geologist.

# A P P E N D I C E S

Appendix I

List of Claims

| Claim Name | Record Number | Record Date |
|---|---|---|
| LAKE 8 | 14575 | June 24 |
| LAKE 9 | 14576 | June 24 |
| LAKE 10 | 14577 | June 24 |
| LAKE 11 | 14578 | June 24 |
| TOOT 1 (15) | 542 | May 30 |
| TOOT 2 (10) | 543 | May 30 |

Appendix II

## References


| | |
|---|---|
| Gabrielse, H. | Geology of Jennings River Map Area, British Columbia (104-O); Paper 68-55, G.S.C. |
| Poole, W. H., Roddick, J. A. and Green, L. H. | 1960 - Wolf Lake Map Area, Yukon Territory; G.S.C. Map 10-1960. |

Appendix III

Statement of Costs

## NORANDA EXPLORATION COMPANY, LIMITED

## STATEMENT OF COST

PROJECT Tootsee Property DATE Feb. 1979

TYPE OF REPORT Geology Geochem, and Line Preparation

a) Wages:

No. of Days 20

Rate per Day $ 67.125

Dates: from August 22 to October 30, 1978

Total Wages 20 x $ 67.125 1,342.50

b) Food and Accomodation:

No of days 20

Rate per day $ 17.681

Dates: from August 22 to October 30. 1978

Total Cost 20 x $ 17.681 353.63

c) Transportation:

No of days 20

Rate per day $ 46.1745

Dates: from August 22 to October 30, 1978

Total Cost 20 X $ 46.1745 923.49

d) Instrument Rental:

Type of Instrument

No of days

Rate per day $

Dates: from to

Total Cost X $

Type of Instrument

No of days

Rate per day $

Dates: from to

Total Cost X $

| | | | |
|---|---|---|---|
| f) | Analysis<br>(See attached schedule) | | 5,073.10 |
| g) | Cost of preparation of Report | | |
| | Author 4 @ 67.125 | 268.50 | |
| | Drafting 4 @ 172.265 | 690.26 | |
| | Typing 2 @ 100.00 | 200.00 | 1,158.76 |
| h) | Other: | | |
| | Sterling Expeditors. Contractors | 10,095.00 | |
| | Terr Air (to transport Contractor) | 4,829.25 | |
| | Tent frames and camp supplies for contractors | 528.93 | |
| | Supervisors R.C.Heim, PhD.,P.Eng. and G.E. Dirom P.Eng. 4 days @ 180 | 720.00 | |
| | | | 16,173.18 |

Total Cost 25,024.66

e) Unit costs for Geological Survey

No of days 17

No of units 17 M.D.

Unit costs 180.088823 / M.D.

Dates from: Aug. 22 to Oct. 30/78

Total Cost 17 x 180.088823 — 3,061.51

Unit Cost for Geochem Survey

No of Units 1410 Samples

Unit Cost $8.325503/sam

Total geochem Cost 1410 x $8.325503 — 11,738.96

Unit Cost for Line Preparation

No of Units 55 Km

Unit Cost $185.89436/Km

Total Line Cost 55 x $185.89436 — 10,224.19

25,024.66

NORANDA EXPLORATION COMPANY, LIMITED

(WESTERN DIVISION)

## DETAILS OF ANALYSES COSTS

PROJECT: Tootsee Property February 1979

| ELEMENT | NO. OF DETERMINATIONS | COST PER DETERMINATION | TOTAL |
|---|---|---|---|
| Cu | 11 | 4.50 | 49.50 |
| Mo | 11 | 6.00 | 66.00 |
| Pb | 1 | 6.00 | 6.00 |
| $WO_3$ | 1 | 9.00 | 9.00 |
| W | 42 | 2 | 84.00 |
| Cu | 1429 | 1 | 1,429.00 |
| Zn | 1429 | 0.60 | 857.40 |
| Pb | 1429 | 0.60 | 857.40 |
| Mo | 1429 | 0.60 | 857.40 |
| Ag | 1429 | 0.60 | 857.40 |
| | | | 5,073.10 |

## Appendix IV

## Statement of Qualifications

I, GLEN MACDONALD, of the City of Whitehorse in the Yukon Territory, Geologist, DO HEREBY CERTIFY THAT:

1. I have been employed as a Geologist by Noranda Exploration Company Limited (No Personal Liability) since May, 1976;

2. I am a graduate (1973) of the University of British Columbia, with a Bachelor of Science degree in Geology;

3. I am a member of the Canadian Institute of Mining and Metallurgy.

G. Macdonald, Geologist,
Noranda Exploration Company Limited
(N.P.L.)


7257

200 100 0 100 200 300 400 500
METERS

TO ACCOMPANY GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2 AND LAKE 8,9,10, 11 MINERAL CLAIMS, LIARD M.D., B.C.
BY G. MACDONALD.

NOTE
ALL MOLY ABOVE < 2 ARE PLOTTED

| REVISED | FEKETE OPTION - TOOTSEE PROPERTY | |
|---|---|---|
| NOV 6, 78 | GEOCHEMICAL SOIL SURVEY<br>Mo IN P.P.M. | |
| PROJ. No. 24 | SURVEY BY: G.M. | DATE: OCT. 1978 |
| N.T.S. 104 O / 16 | DRAWN BY: J.V.V. | SCALE: 1:5,000 |
| DWG. No. 1 | NORANDA EXPLORATION<br>OFFICE: VANCOUVER | |

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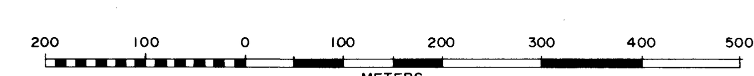


TO ACCOMPANY COMBINED GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2 AND LAKE 8,9,10,11 M.C., LIARD M.D. B.C., BY G. MACDONALD.

| | |
|---|---|
| REVISED | FEKETE OPTION - TOOTSEE PROPERTY |
| NOV 6, 78 | GEOCHEMICAL SOIL SURVEY<br>Cu IN P.P.M. |
| PROJ. No. 24 | SURVEY BY: G.M. DATE: OCT. 1978 |
| N.T.S. 104 O / 16 | DRAWN BY: J.V.V. SCALE: 1:5,000 |
| DWG. No. 2 | **NORANDA EXPLORATION**<br>OFFICE: VANCOUVER |

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7257

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METERS

TO ACCOMPANY GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2 AND LAKE 8,9,10,11 M.C. LIARD M.D., B.C. BY G. MACDONALD

| REVISED | FEKETE OPTION - TOOTSEE PROPERTY |
|---|---|
| NOV 6, 78 | GEOCHEMICAL SOIL SURVEY<br>Pb IN P.P.M. |
| PROJ. No. 24 | SURVEY BY: G.M. DATE: OCT. 1978 |
| N.T.S. 104 O/16 | DRAWN BY: J.V.V. SCALE: 1:5,000 |
| DWG. No. 3 | NORANDA EXPLORATION<br>OFFICE: VANCOUVER |

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200 100 0 100 200 300 400 500
METERS

TO ACCOMPANY GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2 AND LAKE 8,9,10,11 M.C. LIARD M.D., B.C. BY G. MACDONALD.

| REVISED | FEKETE OPTION - TOOTSEE PROPERTY | |
|---|---|---|
| NOV 6, 78 | GEOCHEMICAL SOIL SURVEY<br>Zn IN P.P.M. | |
| PROJ. No. 24 | SURVEY BY: G. M. | DATE: OCT. 1978 |
| N.T.S. 104 O / 16 | DRAWN BY: J. V. V. | SCALE: 1:5,000 |
| DWG. No. 4 | NORANDA EXPLORATION<br>OFFICE: VANCOUVER | |

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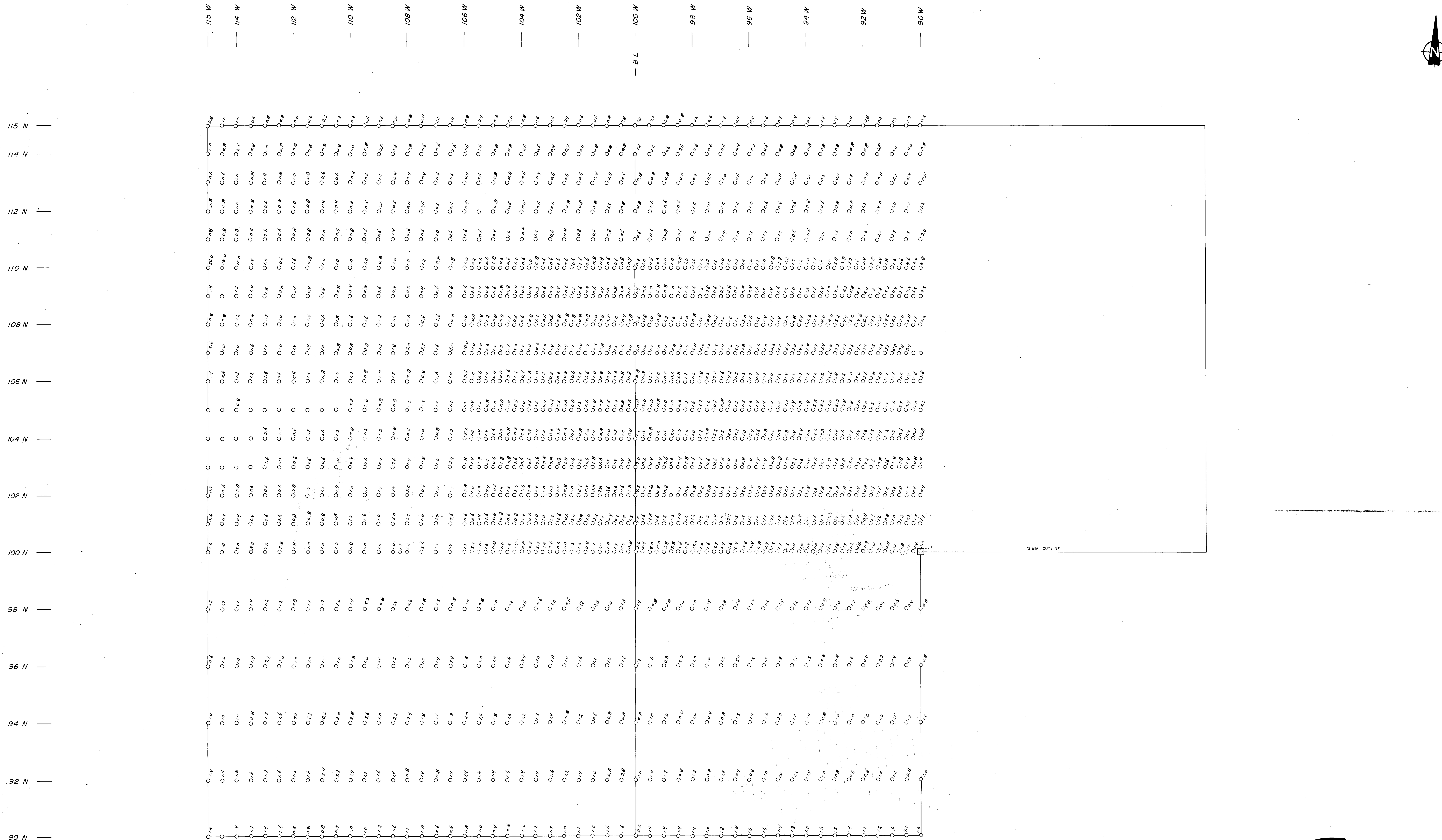


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METERS

TO ACCOMPANY COMBINED GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2, AND LAKE 8,9,10,11 MINERAL CLAIMS, LIARD M.D. B.C., BY G. MACDONALD

| REVISED | FEKETE OPTION - TOOTSEE PROPERTY |
|---|---|
| NOV 6,78 | GEOCHEMICAL SOIL SURVEY<br>Ag IN P.P.M. |
| PROJ. No. 24 | SURVEY BY: G.M. DATE: OCT 1978 |
| N.T.S. 104 O/16 | DRAWN BY: J.V.V. SCALE: 1:5,000 |
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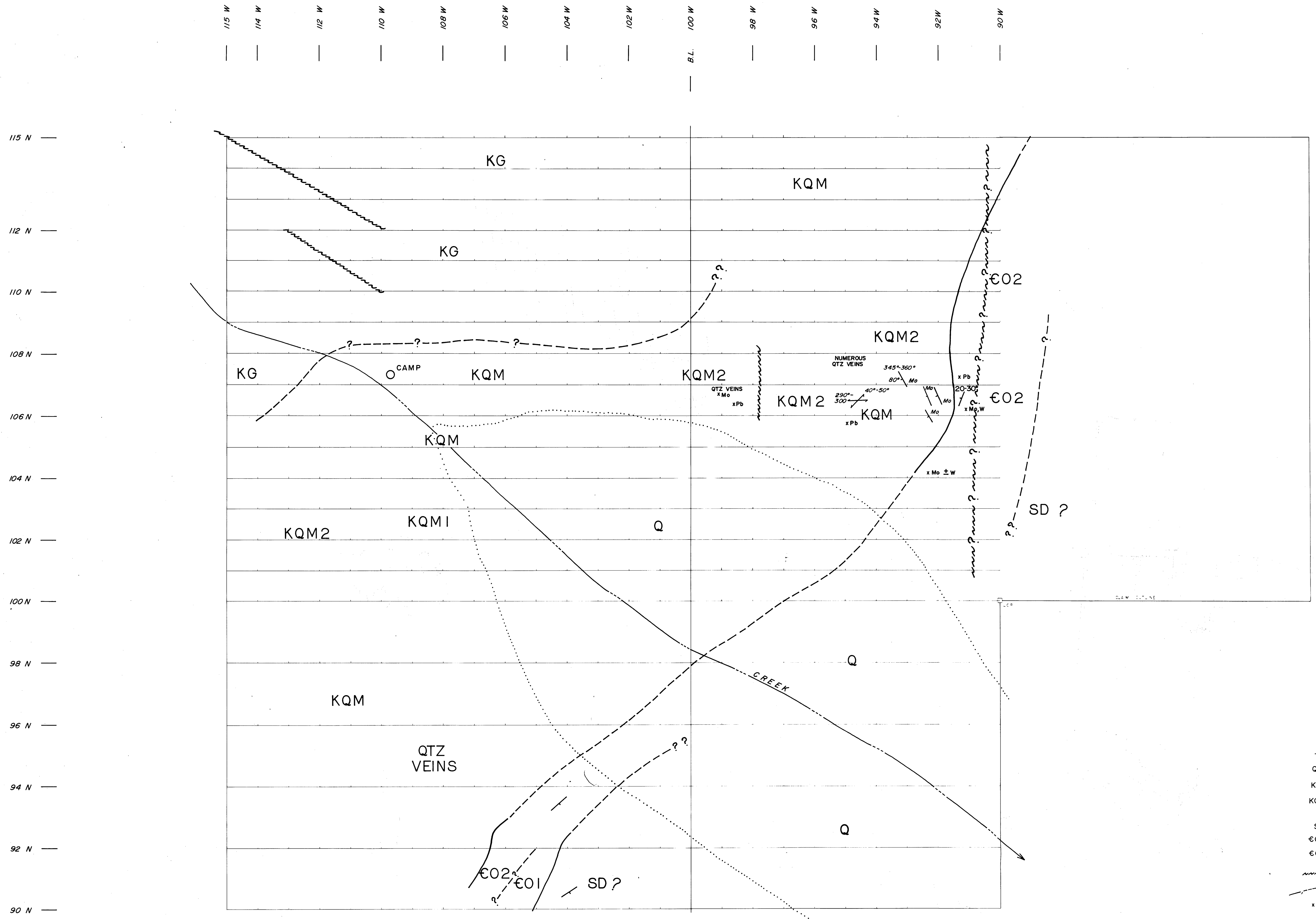


## LEGEND

| | |
|---|---|
| Q | ALLUVIUM |
| KG | GRANODIORITE |
| KQM | BIOTITE QUARTZ MONZONITE ; ① WEAKLY ALTERED, MAGNETITE<br>② INTENSLY ALTERED |
| SD | LIMESTONE ( SKARN NEAR CONTACT ) |
| €O 2 | HORNFELSED SHALES SILTSTONES |
| €O 1 | SKARNIFIED LIMESTONE ; LIMESTONE |
| | FAULT |
| | CONTACT : DEFINED, ASSUMED, APPROXIMATE |
| x | MINERAL OCCURRANCE<br>Pb - GALENA<br>Mo MOLYBDENITE<br>W SCHEELITE |
| | PROMINENT FRACTURE |
| | STRIKE, DIP ; QTZ VEINS IN INTRUSIVE |

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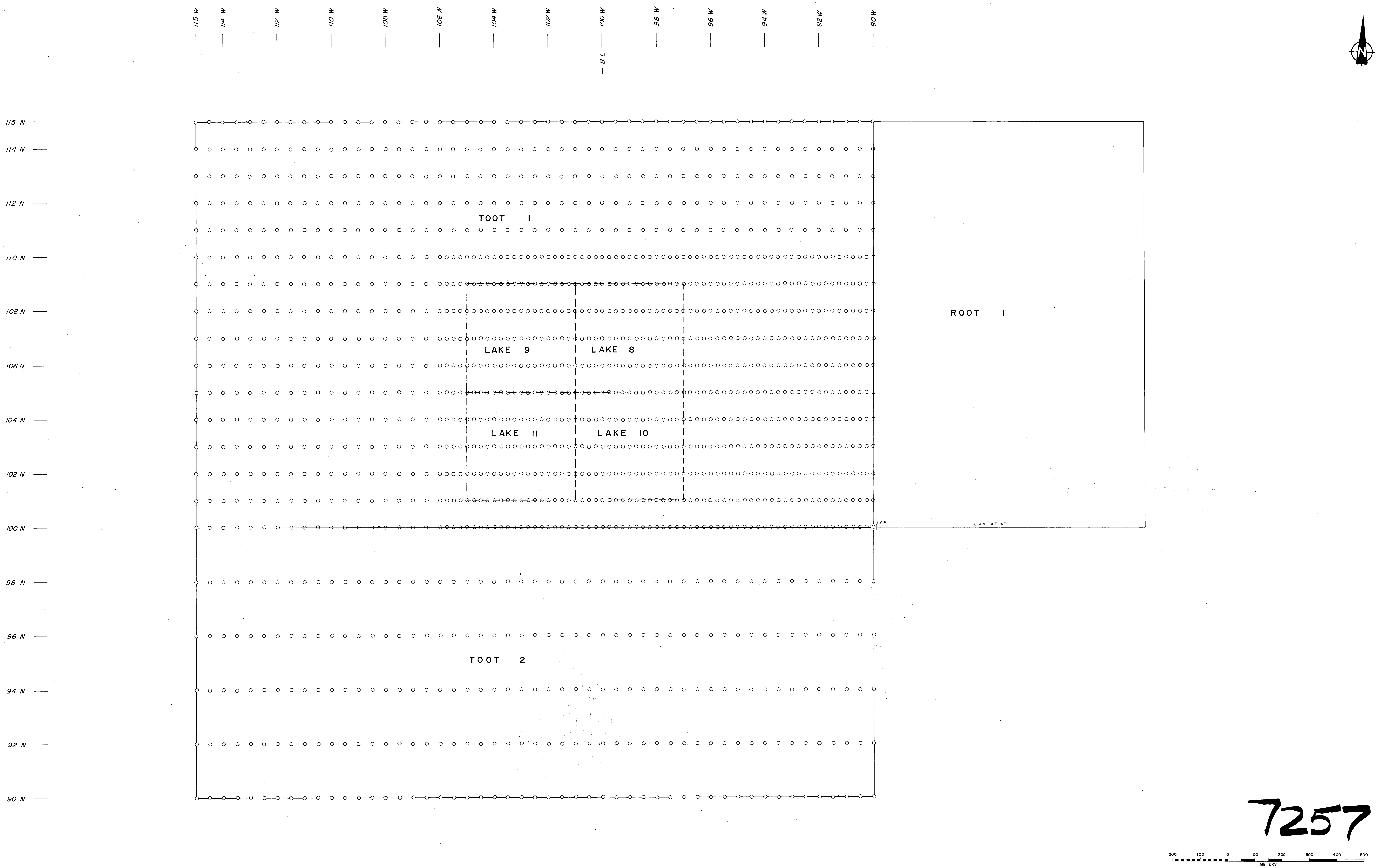
200 100 0 100 200 300 400 500
METERS

TO ACCOMPANY COMBINED GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1,2 AND LAKE 8,9,10,11 MINERAL CLAIMS, LIARD M.D., B.C. BY G. MACDONALD.

| REVISED | |
|---|---|
| NOVEMBER 1978 | FEKETE OPTION - TOOTSEE PROPERTY |
| JAN. 1979 | PRELIMINARY GEOLOGY |
| PROJ. No. 24 | SURVEY BY: G.M. DATE: OCT. 1978 |
| N.T.S. 104 O / 16 | DRAWN BY: J.V.V. SCALE: 1:5,000 |
| DWG. No. 6 | NORANDA EXPLORATION<br>OFFICE: VANCOUVER |

VanCal




TO ACCOMPANY COMBINED GEOLOGICAL AND GEOCHEMICAL REPORT ON THE TOOT 1, 2 AND LAKE 8,9,10,11 MINERAL CLAIMS, LIARD M.D., B.C.
BY G. MACDONALD.

| REVISED | FEKETE OPTION - TOOTSEE PROPERTY |
|---|---|
| | CLAIM MAP |
| PROJ. No. 24 | SURVEY BY: G.M. DATE: OCT. 1978 |
| N.T.S. 104 O / 16 | DRAWN BY: J.V.V. SCALE: 1:5,000 |
| DWG. No. 7 | NORANDA EXPLORATION |
| | OFFICE: VANCOUVER |

VANCAL