

4341

Combined Geochemical

and

Geophysical Report

on the

Lorry 1-9, 11, 13, 15, 17-32;
SP 1-20 and SP 1-7 Fractional
Mineral Claims

49° 42' N 120° 25' W

92 H / 9W

R.C. Heim, P. Eng.

J.D. Khauer

J.T. Walker

Noranda Exploration Company, Limited

Vancouver Mining Division

July 10, 1972 to July 23, 1972

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4341	MAP

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R.C. Heim, P. Eng.	
J.D. Knauer	
J.T. Walker	
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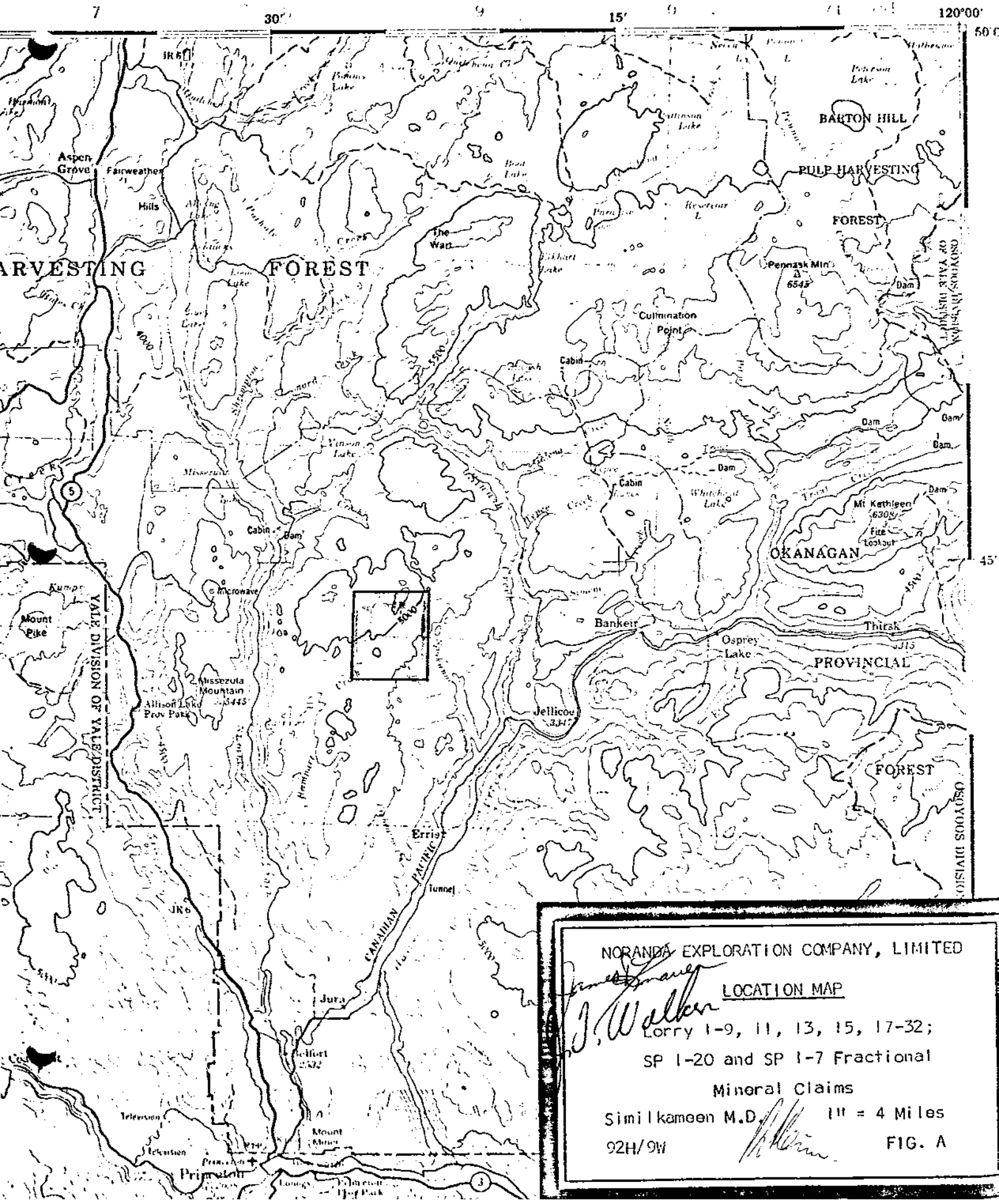
INTRODUCTION:

The claims referred to in this report consist of:

<u>Claim Name</u>	<u>Record Numbers</u>
Lorry 1-9 inclusive	35204-35212 inclusive
Lorry 11	35214
Lorry 13	35216
Lorry 15	35218
Lorry 17-32 inclusive	35220-35235 inclusive
SP 1-20 inclusive	36812-36831 inclusive
SP Fractions 1-7 inclusive	36832-36838 inclusive

The surveys described in the following report were conducted within the boundaries of the above listed mineral claims. Their boundaries are shown on Drawing No. 1.

The claims are located approximately 18 miles N15°E of Princeton, B.C. at the headwaters of Spukunne Creek, a tributary of Hayes Creek. Access to the property is by means of helicopter from Princeton. A landing pad was constructed at the north end of the swamp in the southern portion of the property. Elevation ranges from 4300 feet to 5740 feet. The claim group lies on a gentle to moderate southeast facing slope. Lodge pole pine covers most of the area with willow swamps to the southeast.



NORANDA EXPLORATION COMPANY, LIMITED

J. Walker
J. Walker

LOCATION MAP
 Lorry 1-9, 11, 13, 15, 17-32;
 SP 1-20 and SP 1-7 Fractional
 Mineral Claims
 Similkameen M.D. 1" = 4 Miles
 92H/9W *Walker* FIG. A

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Between July 10 and July 23, 1972, geochemical and geophysical surveys were conducted after the necessary line preparation. All work was carried out by a Noranda Exploration Company, Limited crew of 4 men under the direction of R.C. Heim, P. Eng. with field supervision of J.D. Knauer (Geochemical) and J.T. Walker (Geophysical).

GENERAL GEOLOGY:

The general geology in the area covered by the Lorry and SP mineral claims indicates the northwest to be underlain by bedded tuffs and thin porphyritic flows of the Nicola Group. The remainder by a medium grained, porphyritic granodiorite. The area has been glaciated from north to south. (Unpublished Noranda Exploration Company, Limited report by J. Fraser, July 5, 1972).

GRID PREPARATION:

In order to carry out the geochemical and geophysical surveys, five control lines at 1400 foot intervals were used varying in length from 6,000 feet to 15,500 feet. Stations were chained and flagged every 200 feet along the control lines. A total of 12.2 miles of grid was developed.

GEOCHEMICAL SOIL SURVEY:

All soils were analyzed for copper, zinc and molybdenum in the Noranda Exploration Company, Limited laboratory located at 1050 Davie Street, Vancouver 5, B.C., analyst was Evert Van Leeuwen.

Sampling Method:

Samples were obtained by digging holes with a shovel, to a depth if feasible, where the visible C horizon or sub-outcrop was encountered.

The C horizon was sampled and the B horizon, where visible, was also sampled. The samples were placed in "Hi Wet Strength Kraft 3½" x 6 1/8" Open End" envelopes and the grid station was marked on the envelopes with indelible felt pens. Soil samples were taken at 400 foot intervals along the control lines.

Laboratory Determination Method:

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

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

0.200 grams of the -80 mesh material is digested in 2 ml. of HClO₄ and 0.5 ml. of HNO₃ for approximately four hours. Following digestion, each sample is diluted to 5 ml. with demineralized H₂O. A Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer was used to determine the parts per million copper, zinc and molybdenum content in each sample.

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

Presentation of Results:

Results of this survey are presented in Drawings No. 1 and No. 2 of this report; plan maps (scale 1 inch equals 1,000 feet) showing copper, zinc and molybdenum in parts per million. Copper values greater than or equal to 130 p.p.m. are indicated by a circle and zinc values greater than or equal to 110 p.p.m. are also circled.

No values for molybdenum were considered to be anomalous as all values were either 2 p.p.m. or less.

DISCUSSION OF RESULTS:

Copper determination values show a background of less than 80 p.p.m. and anomalous values ranging from 130 to 620 p.p.m. Zinc values range from a background of less than 70 p.p.m. to anomalous values greater than 110 p.p.m. Molybdenum values ran 2 p.p.m. or less; no obvious anomalies were detected.

The initial 1400 foot line spacing was used on a somewhat reconnaissance basis to determine if soil geochemistry along with a magnetometer survey and geology would be a useful tool in the evaluation of this property.

The results of the soil survey are as follows:

1. The major area of interest appears to be north of the 100 N base line.
2. Coincident anomalous copper and zinc values occur mainly on line 114 W north of the 100 N base line.
3. Anomalous copper values extend to the west of line 114 W on line 128 W with no anomalous zinc values.
4. Anomalous zinc values tend to increase to the east particularly on line 86 W with fewer coincident copper values.
5. The B and C horizons were sampled, where possible, at each sample location. The majority of the anomalous copper values are in the C horizon. The majority of the anomalous zinc values occur in the B horizon.
6. Overburden on the property is of glacial origin transported from north to south.
7. Additional soil sampling on closer spacing would be required for a more detailed interpretation of the area north of the 100 N base line.

MAGNETOMETER SURVEY:

The magnetometer survey was carried out utilizing a Fluxgate magnetometer (model MF-2, serial No. 002193). The instrument was manufactured by Scintrex Limited, 222 Snidercroft Road, Concord, Ontario. The instrument is designed to read the vertical component of the earth's magnetic field.

Five lines of reconnaissance survey, totalling 64,000 feet were conducted using a line spacing of 1,400 feet with readings at 100 foot intervals along the lines.

Method:

Normal field procedures were followed throughout the survey, recording the magnetometer reading, line, and station location. Prior to surveying, the latitude controls of the instrument were adjusted to produce a zero reading on the most sensitive scale. No adjustment was made for diurnal change.

Presentation of Results:

Upon completion of the survey, the arbitrary datum was reduced by 2000 gammas to eliminate all negative readings, as recorded in the field.

The adjusted readings are plotted on Drawing No. 3 of this report; a plan map of a scale of 1 inch equals 1000 feet. The magnetic values are shown in profile form with a vertical scale of 1 inch equals 2000 gammas.

A generalized contour map of the magnetic intensity is presented on Drawing No. 4 at a scale of 1 inch equals 1000 feet. In an attempt to reduce aliasing caused by uneven sampling and to enhance regional features, the data has been manipulated using a 3 point average and plotting values at 300 foot intervals. The contour interval is 200 gammas.

Discussion of Results:

A magnetic variation in excess of 3000 gammas is indicated on the profiled results, while on the generalized contour map, magnetic intensity varies from 1000 gammas to 3100 gammas with a background ranging between 2000 to 2200 gammas on the south half of the grid with slightly lower background value in the north half of the grid.

High frequency magnetic variations are most evident on the northwest portion of the grid, reputed to be underlain by bedded tuffs and the porphyritic flows.

RECOMMENDATIONS AND CONCLUSIONS:

Results of the surveys discussed in this report have indicated the area of interest to lie north of the 100 N - baseline.

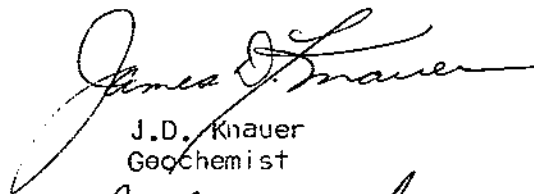
Further work in this area should include the following:

1. Detailed geological mapping and prospecting.
2. Where indicated by favorable geology, detail surveys, consisting of soil geochemistry and induced polarization, should be conducted.

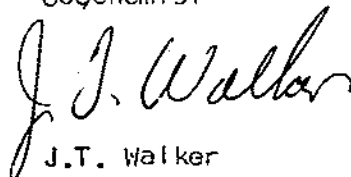
Respectfully submitted,



R.C. Heim, P. Eng.



J.D. Knauer
Geochemist



J.T. Walker
Geophysicist

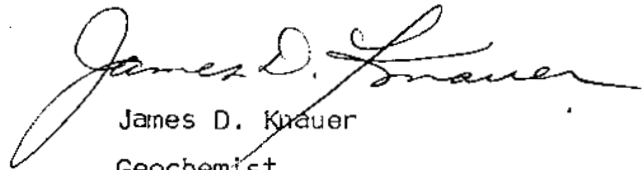
March 27, 1973

Statement of Qualifications

I, James D. Krauer of the City of Vancouver, Province of British Columbia do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since August 1964.
2. I am a graduate of the University of New Mexico with a Bachelor of Science Degree in Geology.
3. I am a member of the Geochemical Society.
4. I have held the position of Geochemist for Noranda Exploration Company, Limited, British Columbia, since June 1965.
5. I am a member of the Canadian Institute of Mining and Metallurgy.

Dated at Vancouver
this 27th day of March 1973



James D. Krauer

Geochemist

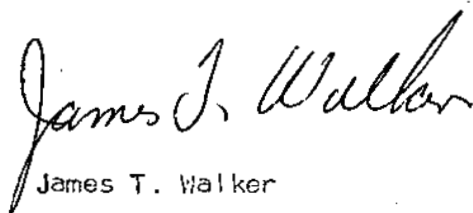
Noranda Exploration Company, Limited
(No Personal Liability)

Statement of Qualifications

I, James T. Walker of the City of Vancouver, Province of British Columbia do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since May 1958.
2. I have held the position of Geophysicist for Noranda Exploration Company, Limited, British Columbia since June 1965.
3. I am a member of the Canadian Institute of Mining and Metallurgy.

Dated at Vancouver
this 27th day of
March 1973.

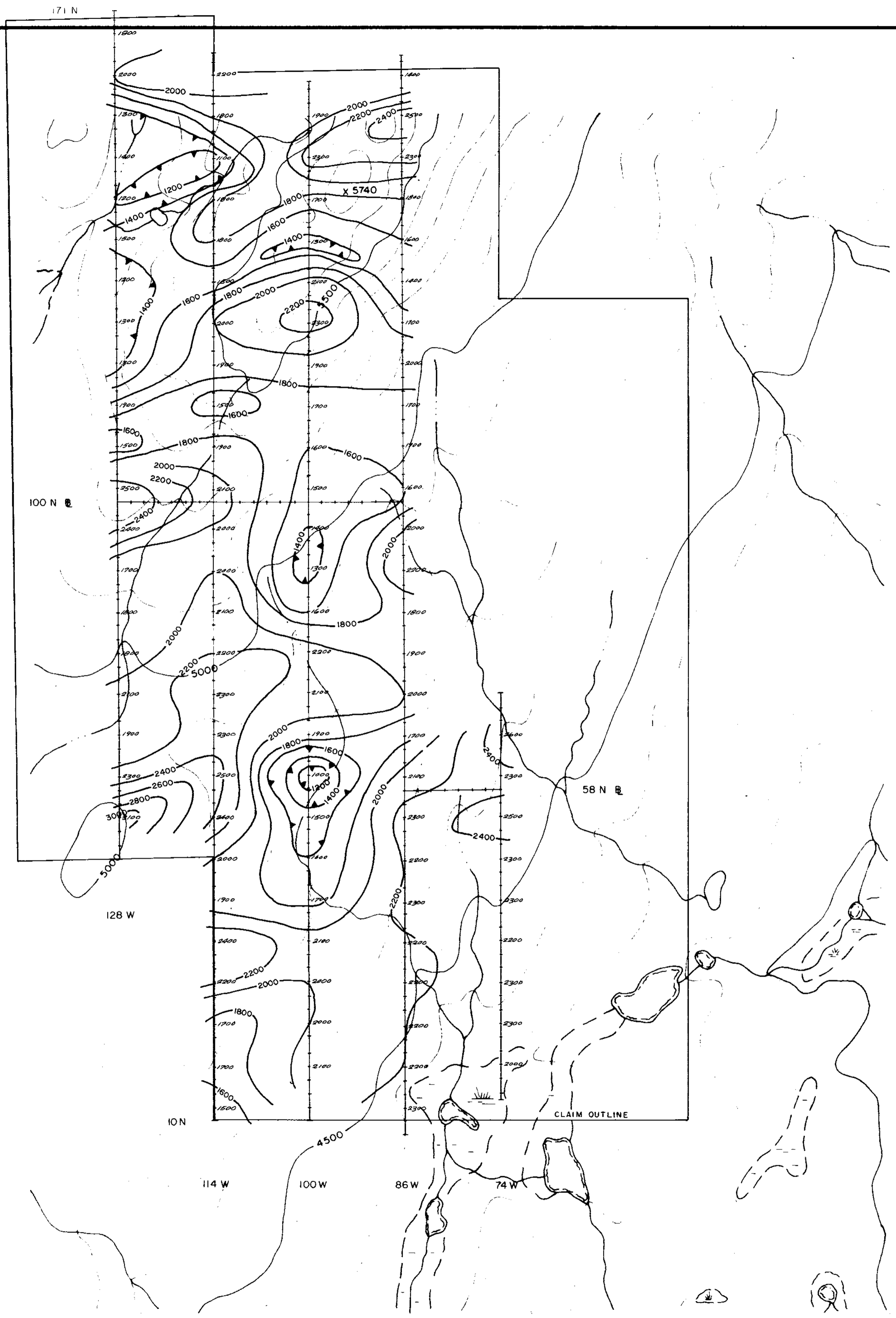
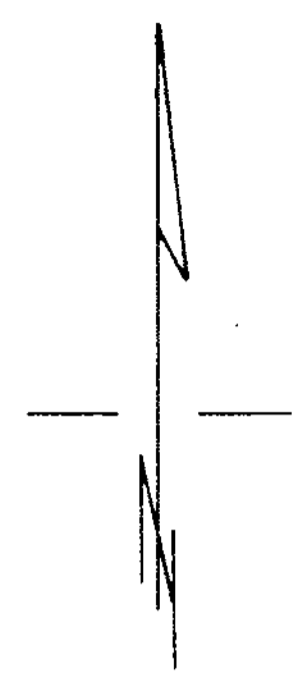


James T. Walker

Geophysicist

Noranda Exploration Company, Limited

(No Personal Liability)



To accompany Geophysical Report by R.C. Heim, P.Eng. and J.T. Walker, Geophysicist, on the Lorry 1-9, 11, 13, 15, 17-32, SP1-20 and SP1-7 Fractional M.C.'s.

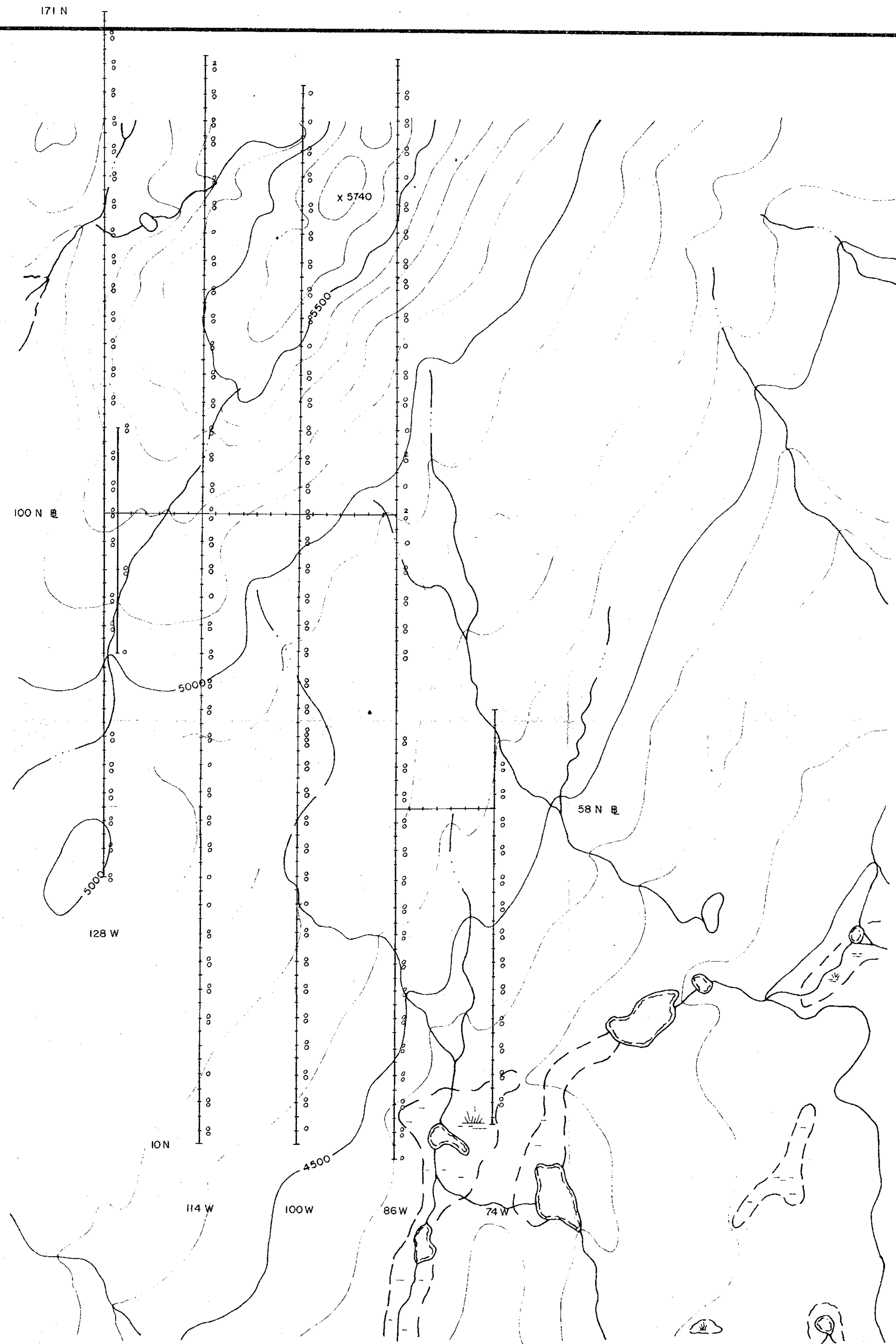
Similkameen Mining Division March 1, 1973.

J.J. Walker

R. Heim

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REVISED	SPUKUNNE	
	MAGNETOMETER SURVEY	
	CONTOUR INTERVAL - 200 gammas INSTRUMENT - Scintrex MF-2 Boxcar Filter using 3 point average	
PROJECT:		
PROJ. NO.	SURVEYED BY:	DATE:
N.T.S. 92 H/9 W	DRAWN BY: <i>mg</i>	SCALE: 1" = 1000'
DWG. NO.	NORANDA EXPLORATION CO. LTD.	
4	OFFICE: VANCOUVER	



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To accompany Geochemical Report by R.C. Heim, P.Eng.
 and J.D. Knauer, Geochemist, on the Lorry 1-9, 11, 13, 15,
 17-32, SPI-20 and SPI-7 Fractional M.C.'s.

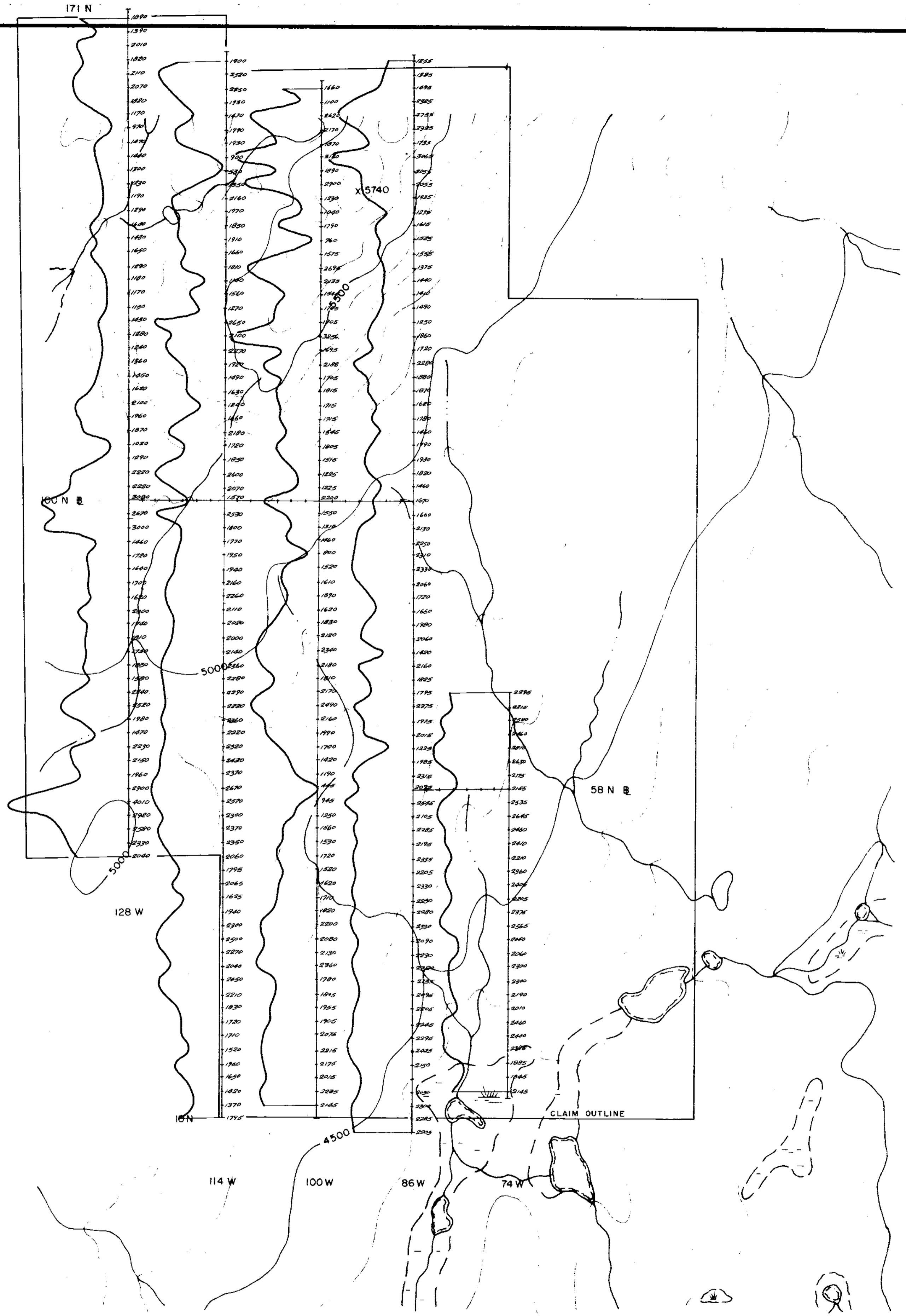
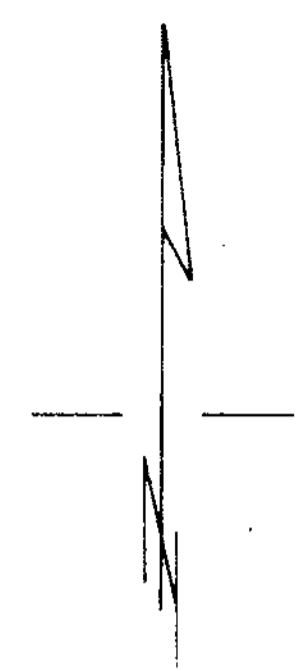
Similkameen Mining Division March 1, 1973.

James D. Knauer *R.C. Heim*

SOIL HORIZONS

Two samples per station "B" Horizon
 "C" Horizon
 One sample per station "C" Horizon

REVISED	SPUKUNNE	
	SOIL SURVEY	
	Ppm. Total Mo.	
	PROJECT:	
PROJ. NO. N.T.S. 92 H/9 W	SURVEYED BY:	DATE:
DWG. NO. 2	DRAWN BY: <i>R.C.</i>	SCALE: 1" = 1000'
	NORANDA EXPLORATION CO. LTD.	
	OFFICE: VANCOUVER	



To accompany Geophysical Report by R.C. Heim, P.Eng. and J.T. Walker, Geophysicist, on the Lorry 1-9, 11, 13, 15, 17-32, SPI-20 and SPI-7 Fractional M.C.'s.

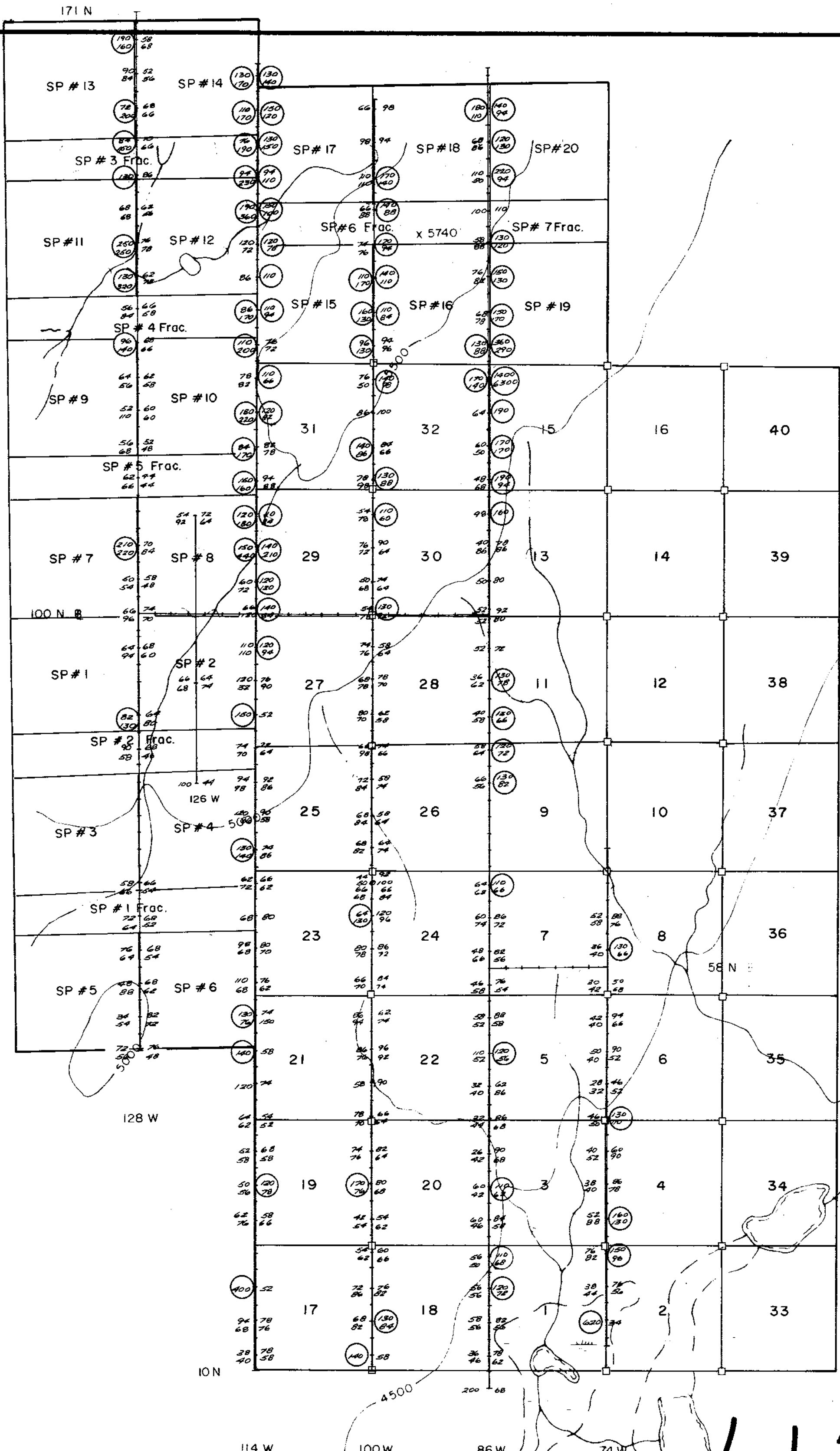
Similkameen Mining Division March 1, 1973.

J. J. Walker

R.C. Heim

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REVISED	SPUKUNNE	
	MAGNETOMETER SURVEY PROFILES Instrument - Scintrex MF-2 Vertical Scale - 1" = 2000 gammas	
PROJ. NO.	SURVEYED BY:	DATE:
N.T.S. 92 H/9 W	DRAWN BY: <i>J.J.W.</i>	SCALE: 1" = 1000'
DWG. NO.	NORANDA EXPLORATION CO. LTD.	
3	OFFICE: VANCOUVER	



LEGEND

130
150 65 Station with anomalous Cu - 130ppm⁺
96
100 120 Station with anomalous Zn - 110 ppm⁺

To accompany Geochemical Report by R.C. Heim, P.Eng. and J.D. Knauer, Geochemist, on the Lorry 1-9, 11, 13, 15, 17-32, SP1-20 and SP1-7 Fractional M.C.'s.

Simitkameen Mining Division March 1, 1973.

James D. Knauer

[Signature]

SOIL HORIZONS

Department of Mines and Petroleum Resources

Assessment Report

NO. 4341 MAP #1

REVISED	SPUKUNNE	
	SOIL SURVEY	
	Ppm. Total Cu Ppm. Total Zn	
	PROJECT:	
PROJ. NO.	SURVEYED BY:	DATE:
NTS 92H/9W	DRAWN BY:	SCALE: 1:1000
DWG. NO.	NORANDA EXPLORATION CO. LTD.	
1	OFFICE:	

4341 M-1