84-#274 — 12127

4

REPORT OF WORK
GEOPHYSICAL SURVEYS
ON THE
ROSS MORRISON OPTION
N.T.S. 82F/4W

TRAIL CREEK MINING DIVISION
49 03'N, 117 54'W

Submitted by : L. Bradish
Division Geophysicist
Western Division
Vancouver, B.C.
May, 1984

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REPORT OF WORK
GEOPHYSICAL SURVEYS
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ROSS MORRISON OPTION

1.0 INTRODUCTION :

Geophysical surveys consisting of Total Field magnetometer and Frequency Domain Induced Polarization (I.P.) were carried out on the Ross-Morrison Option during the month of March, 1984. Line cutting was completed a few days prior to the geophysical surveying.

The purpose of the surveys was to assist in the geological mapping of the property. The magnetometer survey defined an interesting structure while the limited I.P. survey demonstrated the difficulty with the I.P. method in a geological setting that is partially comprised of serpentenized ultrabasic rocks.

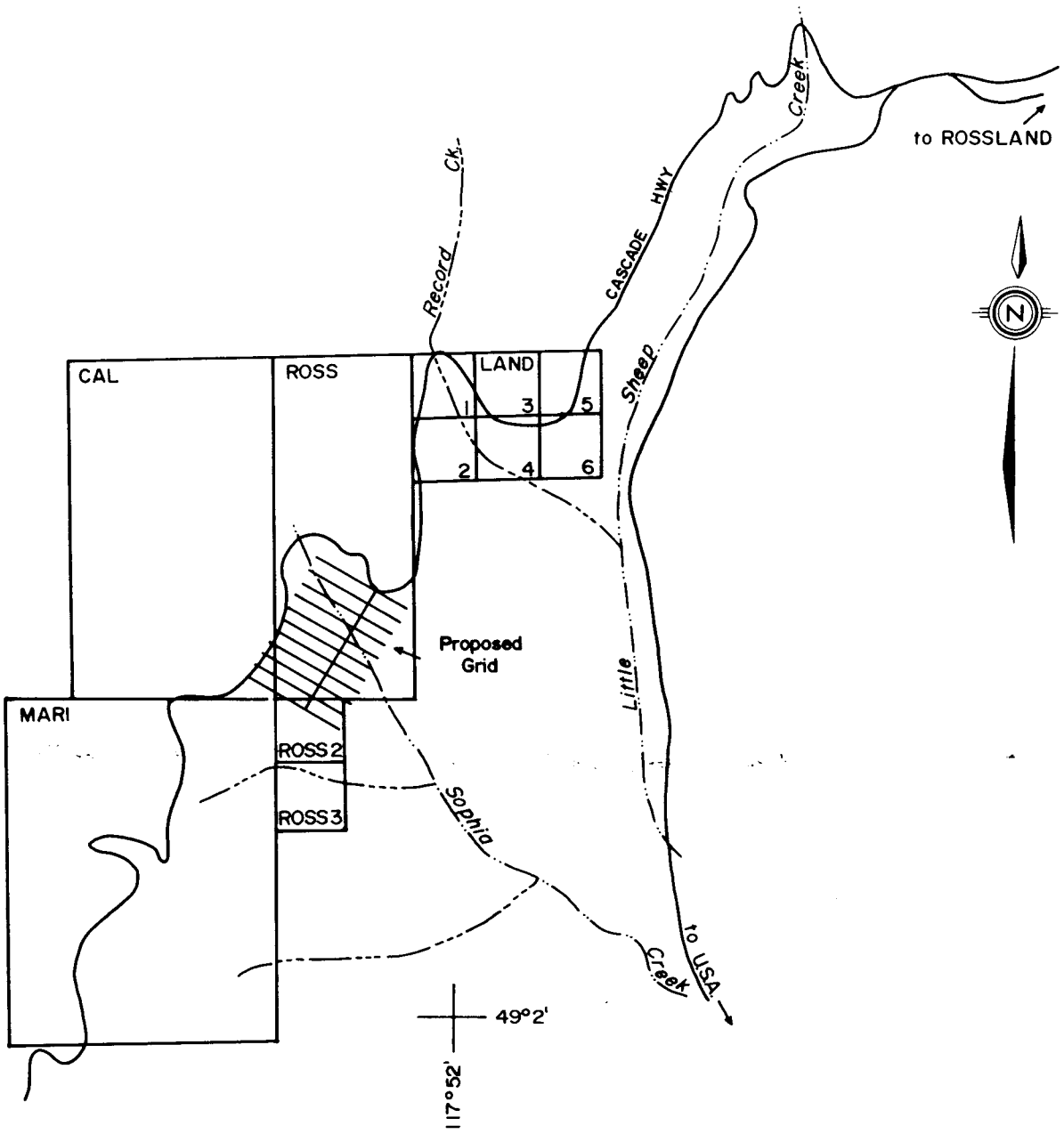
2.0 LOCATION, ACCESS AND GRID :

The property is located six Kilometers southwest of Rossland, B.C. (see fig 1). Access to the claims and grid are excellent and are via the old Cascade Highway which provides year round access. The grid was established by contract crew and consists of a 15.400 Km. baseline (Az 30 deg) from which 17 wing lines, (100 meter spacing) each 0.800 Km long were established. The lines were flagged and stations marked at 25 meter intervals.

The claims pertinent to this report of work are as follows:

CAL	rec #244
LAND 1, LAND 2, LAND 3	rec #250,251,252
LAND 4, LAND 5, LAND 6	rec #253,254,255
MAR 1	rec #243
ROSS 3	rec #743

and are recorded in the Trail Creek Mining Division.



SCALE

1000 500 0 1000 2000 metres

REVISED	ROSS - MORRISON
	LOCATION MAP
PROJ. No. 26	SURVEY BY: _____ DATE: 84-04-19
N.T.S. 82 F 4	DRAWN BY: sks Lillie SCALE: 1:50 000
DWG. No.	NORANDA EXPLORATION
	OFFICE: Vancouver

VANCAL 11927

3.0 PERSONNEL :

The geophysical survey crew consisted of K. Lillie, Geophysical Supervisor, W. Kerby and A. Lippert both Field assistants, and L. Bradish, Division Geophysicist, all employees of Noranda Exploration Co. Ltd. The Linecutting contract crew was manned by P. Bland and R. Bankner.

Crew accomodation was at a local motel in Rossland.

4.0 INSTRUMENTATION

4.1 MAGNETOMETER SURVEY :

"UNIMAG" G.836 Proton Precession magnetometers manufactured by Exploranium Geometrics of Ontario were utilized for this survey. The Total Field measurement is read with a resolution of 10 gammas and all recorded values were corrected for diurnal and day to day variations. The correction values were determined from readings taken by a base station magnetometer at two minute intervals. Grid readings were recorded at 25 meter intervals and plotted in plan at a datum of 56,000 gammas.

4.2 INDUCED POLARIZATION SURVEY :

The I.P. survey employed Frequency Domain equipment manufactured by Phoenix Geophysics of Toronto, Ont. The electrode configuration was a dipole-dipole array (50 meter dipoles) with readings recorded to the third separation with a few additional fourth separation readings taken on one of the lines. Both Percent Frequency Effect and Resistivity (ohm-meters) were recorded on Lines 11+00N and 11300N.

The frequencies employed were standard frequecies at 4.0 Hz and 0.25 Hz. A fixed transmitter set-up was used for each of the two survey lines.

5.0 GEOLOGY :

The property is underlain by Jurassic Rossland formation and serpentinized ultrabasic rocks. The gold mineralization is believed to have been sourced from the ultrabasic rocks which contain trace gold and are mobilized to the fringes of the ultrabasic intrusions.

6.0 DISCUSSION OF RESULTS :

The magnetometer survey recorded values between -1050 nT and 4360 nT on a datum of 56,000 nT. The data is presented in plan at a scale of 1:5,000 (map 1) and is contoured at an interval of 500 nT.

The contour presentation shows an interesting arcuate pattern comprised of high amplitude and short wavelength variations. The 'nose' or axis of this feature is approximately parallel to the line direction and lies adjacent to lines 10800N and 10900N. This uniform pattern begins to distort at the east ends of lines 10000N to 10200N and in the vicinity of lines 11500N to 11300N.

The I.P. survey did not prove to be of significant value even though it was of very limited coverage. The backgroung values of the P.F.E. were quite high probably due to the ultrabasic / serpentinized rock. The resisitivities also showed the effects of the geology as the resisitivity values were exceptionally low.

7.0 CONCLUSIONS :

The Magnetometer survey has defined a major arcuate structure and is an invaluable aid in mapping the geology of the property. The I.P. survey is of limited use and is not considered to be a cost effective tool in this environment at this time.

Additional Magnetometer surveys should be carried out to aid the geologist in mapping the property. Once the favourable stratigraphy has been defined and located then it may prove worthwhile to carry out detailed I.P. coverage over this high potential area.

L. Bradish
Division Geophysicist
May, 1984

APPENDIX 1

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

DATE APRIL 1984

PROJECT - ROSS MORRISON
TYPE OF REPORT Geophysics and Linecutting

a) **Wages:**

No. of Days -	17 Mandays	
Rate per Day -	$149.41	
Dates From -	March 1984	
Total Wages	17 X $149.41	$2,550.00

b) **Food and Accommodation:**

No. of Days -	17	
Rate per Day -	$25.00	
Dates From -	March 1984	
Total Cost -	17 X $25.00	$ 425.00

c) **Transportation:**

No. of Days -	8	
Rate per Day -	$45.00	
Dates From -	March 1984	
Total cost	8 X $45.00	$ 360.00

d) Analysis

e) Cost of Preparation of Report

Author
Drafting
Typing

f) Other:	Contractor	$3,000.00
	Camp & Field supplies	$1,000.00
Total Cost		$7,335.00

UNIT COSTS

Unit Costs for Geophysics

No. of Days -		
No. of Units -	14.4 Km	
Unit Costs -	257.39/Km	
Total cost	14.4 X 257.39	$3,706.38

Unit Costs for Linecutting

No. of Days -		
No. of Units -	15.4 Km	
Unit Costs -	235.62/Km	
Total Cost -	15.4 X 235.62	$3,628.62
Total Cost		$7,335.00

APPENDIX 2

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Lyndon Bradish of Vancouver, Province of British Columbia, do hereby certify that:

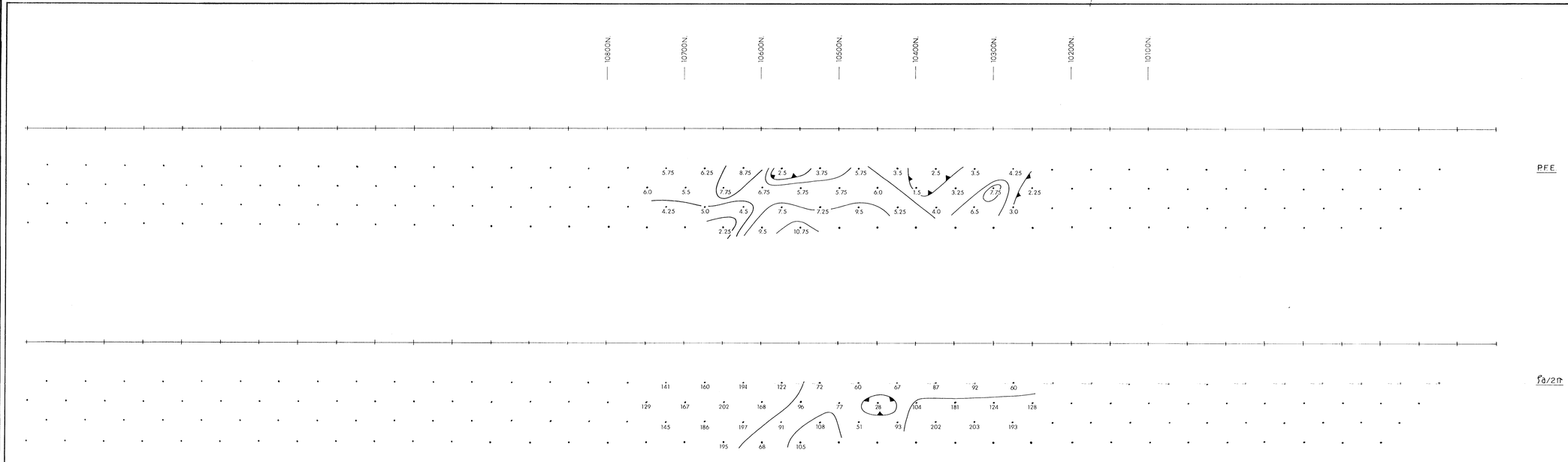
1. I am a Geophysicist residing at 1826 Trutch St. Vancouver, B.C.

2. I am a graduate of the University of British Columbia with a B.Sc. (geophysics).

3. I am a member in good standing of the Society of Exploration Geophysicists, Canadian Institute of mining and the Prospector's and Developer's Association.

4. I presently hold the position of Division Geophysicist with Noranda Exploration Co. Ltd. and have been in their employ since 1973.

L. Bradish.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,127

LEGEND

Array: Dipole - dipole

Frequency: 4.0 / 0.25 Hz

a: 50 m

PFE: 3.0, 5.0, 7.5, 10

Contour Interval

fa: 100, 300, 500, 1000, 1500

SURVEY DATE: March/84

REVISED

DWG NO. 2

PROJ NO. 26

NTS 82F/4

SCALE 1:2500

I.P. SURVEY
Line 110N.

PROJECT ROSS MORRISON

Drawn by (traced) LM Date April/84

noranda
NORANDA EXPLORATION CO. LTD. Vancouver

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,127

LEGEND

Array : Dipole - dipole

Frequency : 4.0 / 0.25 Hz

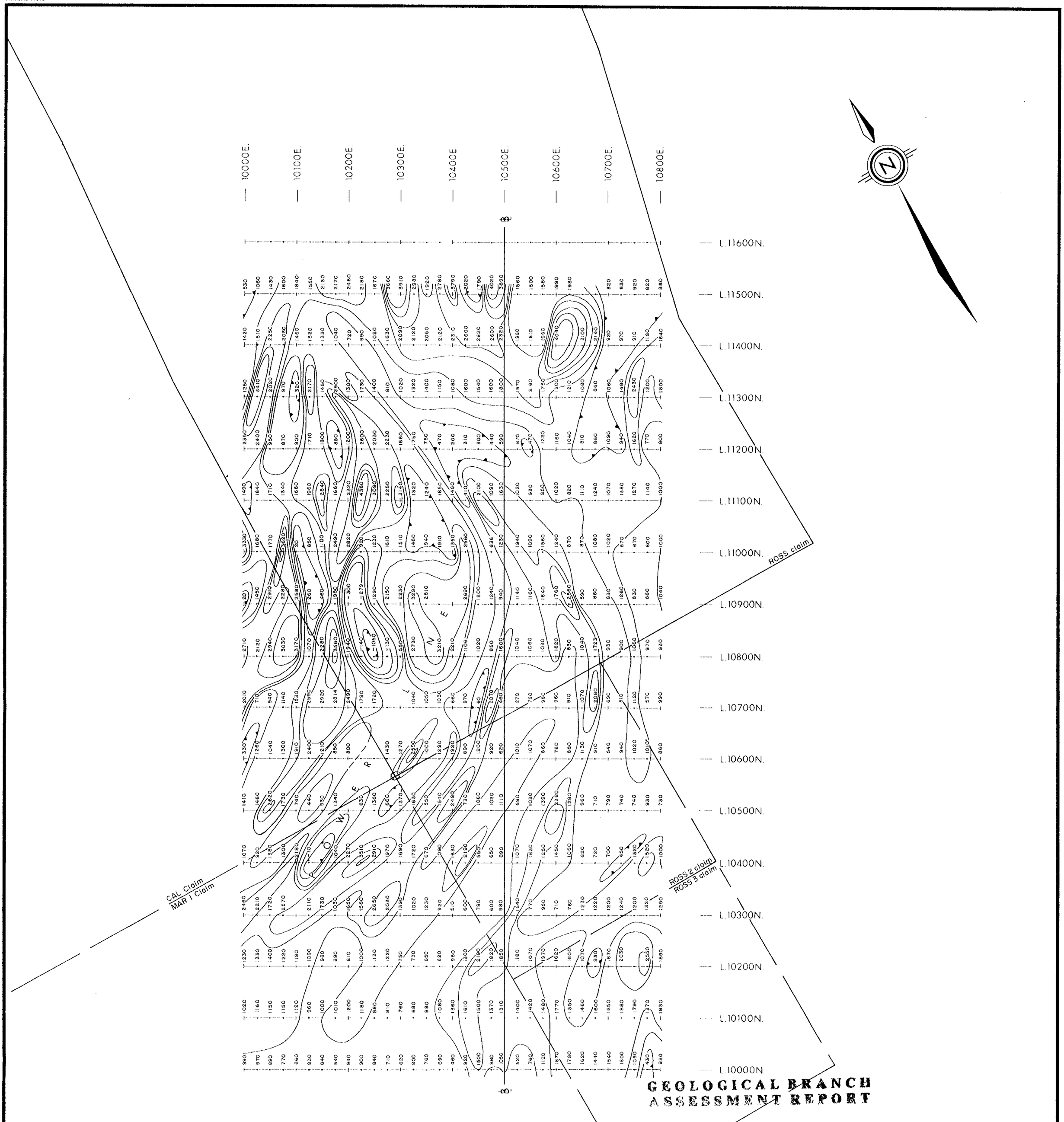
a 50 m.

Contour Interval
P.F.E. 0, 3.0, 5.0, 7.5, 10.0, 12.0, 14.5, 17.0
ρa 100, 300, 500, 1000, 1500

SURVEY DATE : March/84

REVISED	I.P. SURVEY Line 113N.
DWG Nº 3	
PROJ Nº 26	PROJECT ROSS MORRISON
NTS 82F/4	Drawn by (traced) Date April/84
SCALE 1:2500	noranda NORANDA EXPLORATION CO LTD Vancouver

VANCAL 11918



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,127

SCALE

100 50 0 100 200 300 400 metres

LEGEND

INSTRUMENT	: G.836
DATUM	: 56 000
CONTOURS	: 500 nT
SURVEY DATE	: March '84
OPERATOR	: K.L., W.K.
CLAIM LINE and LCP (approximate)	: —⊟— / — — —

REVISED	
PROJ No	26
NTS	82F/4
DWG No	1

ROSS MORRISON

MAGNETOMETER SURVEY

DATUM: 56000γ

SURVEY BY K.L. & B.K. DATE March/84
DRAWN BY SCALE 1:5000

NORANDA EXPLORATION

OFFICE Vancouver