

85-872-
14138

9/86

GEOCHEMICAL AND GEOLOGICAL SURVEY
ON THE REX FRACTION
SLOCAN MINING DIVISION
N.T.S. 82F/14
LATITUDE $49^{\circ}53.75'$ LONGITUDE $117^{\circ}20.2'$

Owner : Andaurex Resources Inc.

Operator : Noranda Exploration Company, Limited

Author(s): W.S. Ferreira, Project Geologist
D. Bent, District Geologist

Date : November, 1985

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14.138

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1.0 INTRODUCTION

1.1 Introduction

On August 31, 1985 geological and geochemical surveys were conducted on the Rex Fraction, 7 km south of Silverton, B.C. in the Slocan Mining Division. The project is part of a joint venture agreement between Andaurex Resources Incorporated and Noranda Exploration Company, Limited.

1.2 Location and Access

The Rex fraction is located 7 km south of Silverton, B.C. near Finland Creek in the Selkirk Mountains (Fig. 1).

From Silverton the fraction may be reached by driving 1 km south of Silverton on Highway 6, 4 km southeast along Red Mountain Road, and 3 km along a four wheel drive road to the site of the abandoned LH tunnels and campsite, and continuing by foot approximately 0.5 km.

The Rex fraction is located in the Slocan Ranges of the Selkirk Mountains along a ridge flanking Mt. Aylwin. Elevation rises from 1500 m (4900 feet) to 1575 m (5200 feet) above sea level.

The topography of the fraction is steep, approximately one-third covered by a near vertical cliff, one-third by talus, and one-third by overburden.

1.3 Previous Work

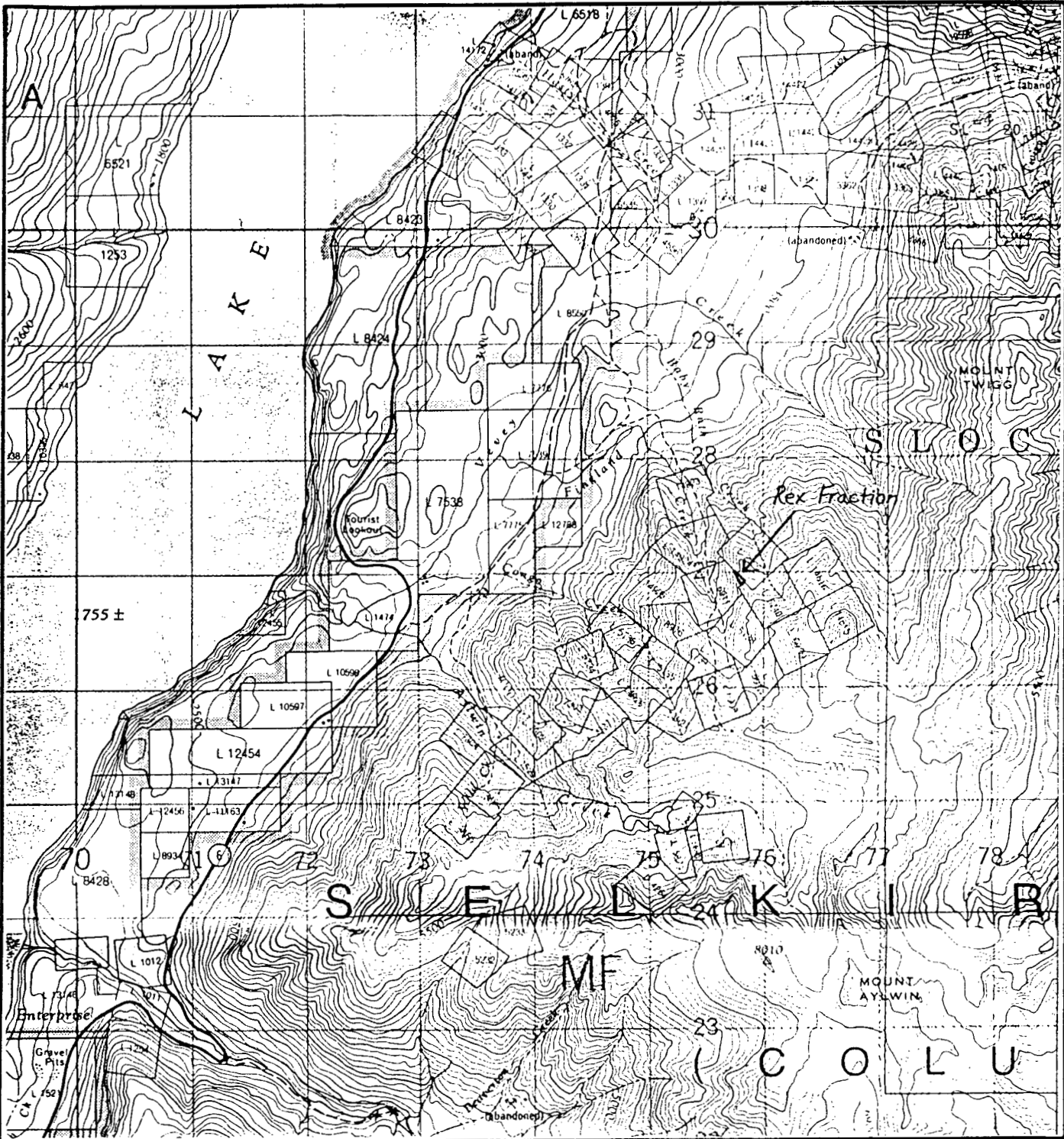
The adjoining LH crown granted claims have experienced intermittent exploration since the discovery of gold at the LH tunnels site in 1895. However, no known attention has been focussed on the Rex fraction claim.

The Rex fraction was staked on September 18, 1981 by Hudson's Bay Oil & Gas Company Limited, as part of an exploration venture with Andaurex Resources Inc., owners of the LH property. The Rex Fraction was sold to Andaurex Resources Inc. on March 1, 1985.

The present work is being done under a joint venture agreement between Andaurex Resources Inc. and Noranda Exploration Company, Limited.

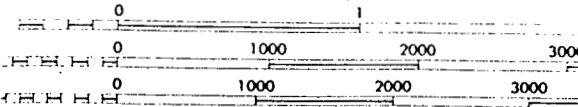
1.4 Ownership of Fraction Claim

The Rex fraction claim (Record Number 2706) is owned by Andaurex Resources Incorporated, #4800, P.O. Box 173, First Canadian Place, Toronto, Ontario M5X 1C7. The current operator is Noranda Exploration Company, Limited, P.O. Box 2380, Vancouver, B.C. V6B 3T5.



SLOCAN
 KOOTENAY LAND DISTRICT
 BRITISH COLUMBIA

Scale 1:50,000 Échelle



REVISED	REX FRACTION	
	Figure 1	
	LOCATION MAP	
PROJ.No. 435	SURVEY BY: WSF	DATE: 9-85
N.T.S. 82F14	DRAWN BY:	SCALE: 1:50000
DWG. No.	NORANDA EXPLORATION	
	OFFICE: Vancouver, B.C.	

1.5 Exploration Potential

Alteration consisting of silicification, the introduction of about 3% pyrite, and partial textural destruction has affected rocks within the Rex fraction. However, results of soil and rock geochemical surveys do not appear promising. The position of the fraction within a larger series of crown-granted claims necessitates keeping the fraction in good standing.

2.0 SUMMARY OF WORK DONE

2.1 Line Cutting

A grid initially established over the adjoining LH claims was extended to cover the Rex fraction. Two crosslines at azimuth 115° 50 m apart were located along the extension of the baseline (at 025°) by hip chain, compass and clinometer. 25 m stations were flagged along the crosslines. A total of 250 m of grid was placed.

2.2 Geological Examination

Geological mapping at a scale of 1:2500 was completed on the fraction claim, covering an approximate area of 0.0146 km².

2.3 Geochemical Survey

A geochemical survey consisting of the collection of 10 rock and 10 soil samples was performed. Rock and soil samples were both analyzed for Au, Ag, As, Cu, and Mo.

2.4 Claims Worked

The above mentioned surveys were conducted on the Rex fraction claim.

Owing to the small size of the Rex fraction and absence of survey markers, it is possible that the work partially extends onto the adjoining LH group of claims, also owned by Andaurex Resources Inc.

2.5 Personnel

Geological mapping and rock sampling was done by W.S. Ferreira. Linecutting and soil sampling was done by I. Francis under the supervision of W.S. Ferreira.

3.0 DETAILED TECHNICAL DATA AND INTERPRETATION

3.1.1 Purpose

Geological mapping at a scale of 1:2500 was done in order to define the types of rocks and their association, to identify any visible mineralization, and to determine the setting of any mineralization found.

3.1.2 Regional Geology

The Rex fraction is part of a Triassic roof pendant within the post-Triassic Nelson Batholith (Fig.2). The roof pendant consists of volcanic and sedimentary rocks, and their altered and metamorphosed equivalent. Small felsic plutons have intruded the volcanic-sedimentary pile (Cairnes, 1934; Cairnes, 1935; Little, 1960).

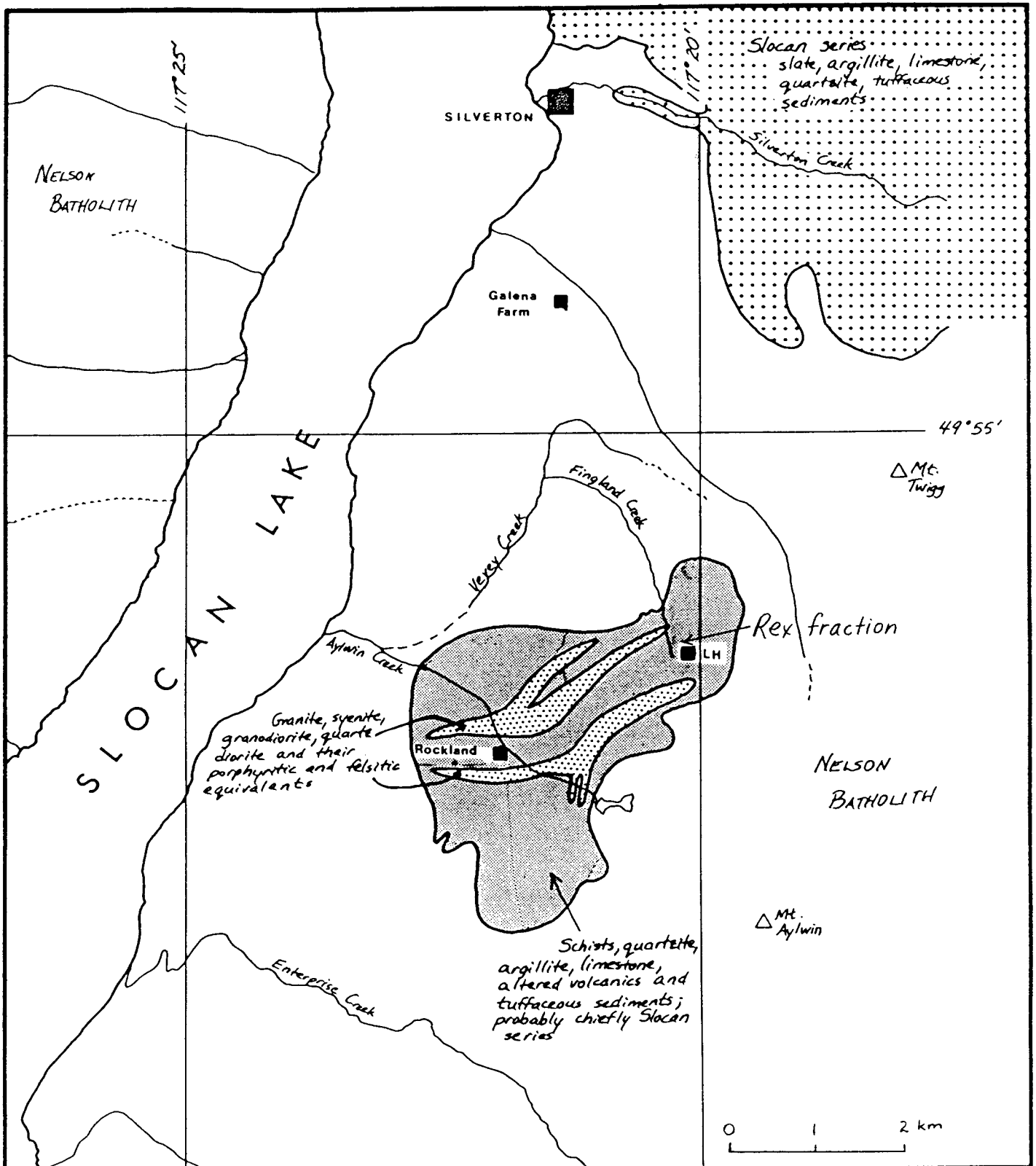
3.1.3 Local Geology

The Rex fraction contains Slocan Group sandstone interbedded with crystal tuff and greywacke beds (Fig.3 and Table 1). The unit has been mapped on the adjoining LH property as having a stratigraphic thickness of at least 540 m. The sandstone is medium grained with poorly defined medium bedding. The sandstone is immature, consisting of quartz, feldspar, and mica in angular to rounded grains. The greywacke is fine to medium grained, lacks lithic clasts, and is principally composed of biotite and feldspar. The interbedded crystal tuff contains up to 50% matrix, 30-70% free feldspar crystals (some broken) and minor biotite. Silicification and sulphide mineralization with accompanying partial textural destruction is pervasive throughout the Rex fraction.

Metamorphic grade of rocks on the LH property is sub-greenschist facies. Effects of metamorphism are minimal. Where textural destruction and compositional change have affected the rocks, it is the result of alteration, not metamorphism.

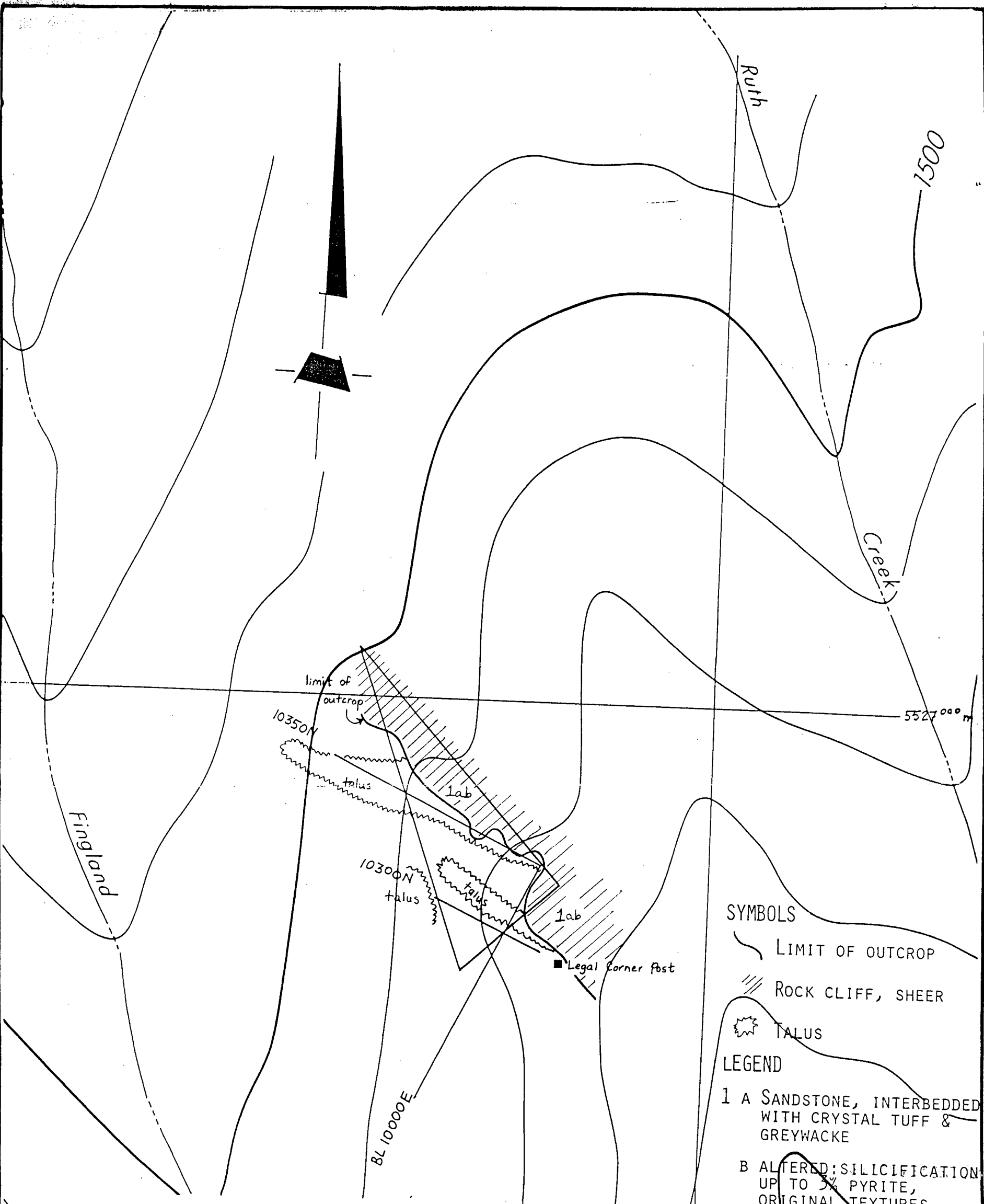
While rocks of the Rex fraction are part of a larger sequence of rocks which have undergone structural deformation, especially by faulting and disruption by intrusive bodies, within the fraction the structure is not significant. Bedding was locally observed, however, reliable measurements could not be made from available outcrops.

Up to 3% silvery pyrite, probably including minor arsenopyrite based on rock geochemistry results, occurs disseminated ubiquitously throughout the rocks.



REVISED	LH PROPERTY	
	FIGURE 2	
	SUMMARY of	
	REGIONAL GEOLOGY	
PROJ. No. 135	SURVEY BY: after Cairnes, 1934	DATE: 10-85
N.T.S. 82F14	DRAWN BY: KJF	SCALE: 1 63360
DWG. No.	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	

VANCAL 11927



SYMBOLS

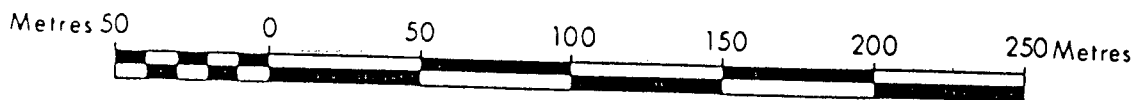
- LIMIT OF OUTCROP
- ROCK CLIFF, SHEER
- TALUS

LEGEND

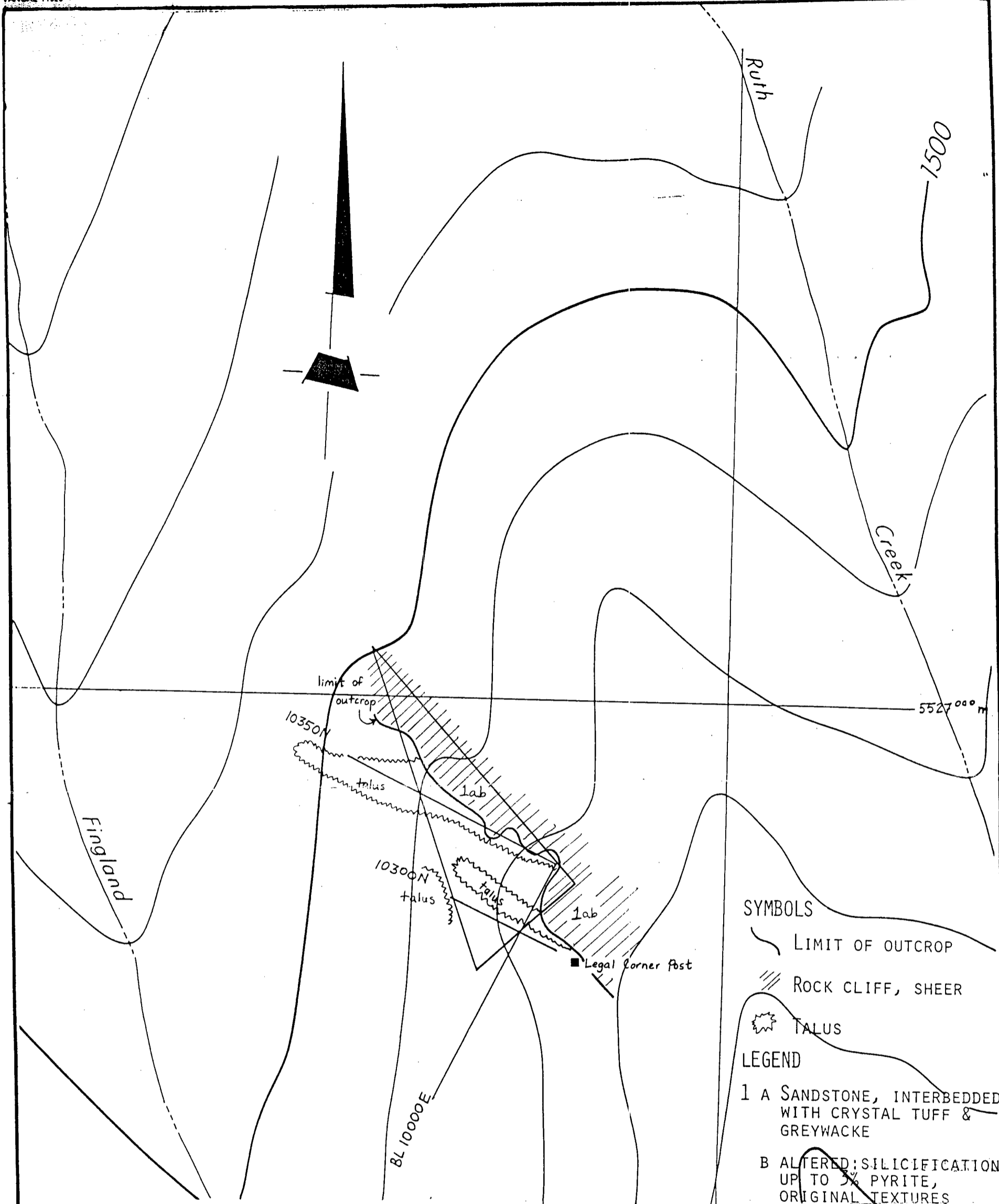
- 1 A SANDSTONE, INTERBEDDED WITH CRYSTAL TUFF & GREYWACKE
- B ALTERED: SILICIFICATION UP TO 3% PYRITE, ORIGINAL TEXTURES POORLY PRESERVED

PROPERTY BOUNDARIES LOCATED BY HIP CHAIN AND COMPASS

SCALE
1:2500



REVISED	REX FRACTION	
	FIGURE 3:	
	GEOLOGY OF THE	
	REX FRACTION	
PROJ. No. 435	SURVEY BY: WSE	DATE: 11-85
N.T.S. 82F14	DRAWN BY: KIF	SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION	
	OFFICE: VANCOUVER, B.C.	



SYMBOLS

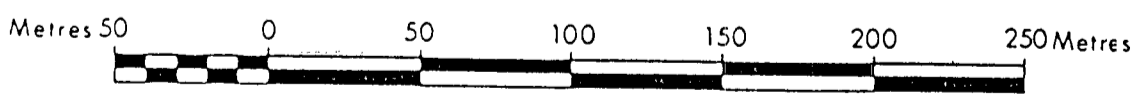
- LIMIT OF OUTCROP
- ROCK CLIFF, SHEER
- TALUS

LEGEND

- 1 A SANDSTONE, INTERBEDDED WITH CRYSTAL TUFF & GREYWACKE
- B ALTERED; SILICIFICATION UP TO 5% PYRITE, ORIGINAL TEXTURES POORLY PRESERVED

PROPERTY BOUNDARIES LOCATED BY HIP CHAIN AND COMPASS

SCALE
1:2500



REVISED	REX FRACTION	
	FIGURE 3: GEOLOGY OF THE REX FRACTION	
PROJ. No. 435	SURVEY BY: WSE	DATE: 11-85
N.T.S. 82F14	DRAWN BY: KIF	SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION OFFICE: VANCOUVER, B.C.	

TABLE 1: DESCRIPTION OF LITHOLOGY

SLOCAN GROUP

MEDIUM GRAINED SANDSTONE INTERBEDDED WITH GREYWACKE

Colour: Fresh, light grey to buff; weathered buff-grey

Bedding: Generally thin (1-10 cm) to medium (10-30 cm) bedded.

Structures: Locally graded bedding, locally beds pinch out on outcrop scale suggesting channel deposits, locally soft sediment deformation.

Grain Size: Medium grained.

Composition: 40-90% sandstone, 10-60% greywacke; proportion of sandstone increases toward Rosslund Group.

1-30% quartz, 0.5 - 2.0 mm
15-70% feldspar, 0.5 - 1.5 mm
1-25% visible mafic minerals (esp. biotite), 0.5 mm
0-60% aphanitic, siliceous
Lithics are absent

The composition of the greywacke grades into the sandstone however; adjacent beds show abrupt compositional changes.

3.2 Geochemical Survey

3.2.1 Purpose

Soil and rock geochemistry samples were collected to check for anomalous zones of Au, Ag, As, Cu, Mo which might be traced to bedrock sources of mineralization.

3.2.2 Techniques

10 soil samples were collected from B horizon at a depth of 5-25 cm using a hand trowel. The samples, generally containing 150 g of material, were collected in Kraft paper bags.

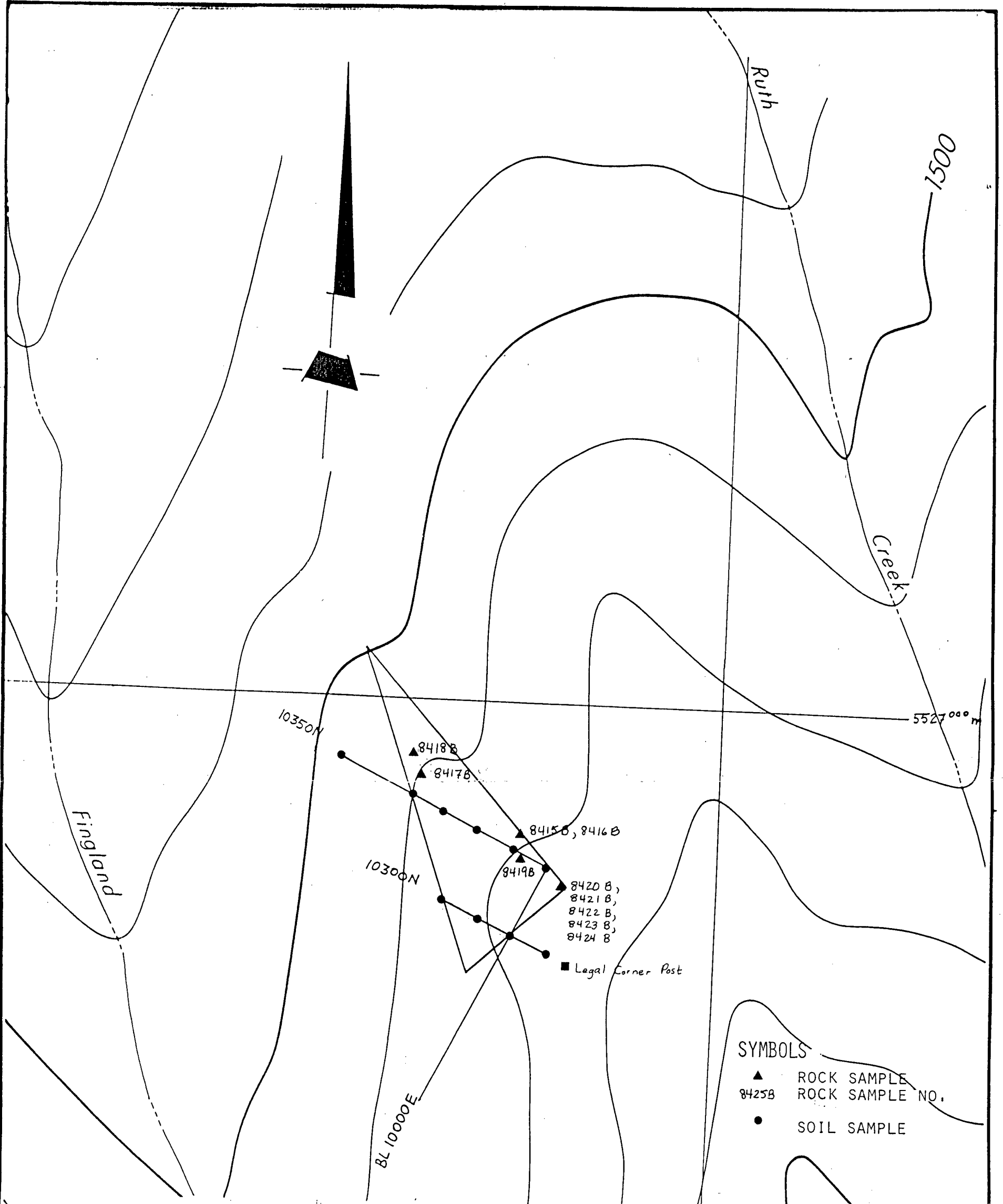
10 rock samples were collected as selected grab samples or chipped samples across measured widths. Sample results are given in Appendix 1; sample descriptions are given in Appendix 2. Locations of both rock and soil samples are shown on Figure 4.

Soil analyses were performed by Noranda Geochemical Laboratory, 1050 Davie Street, Vancouver, B.C. using techniques described in Appendix 3. Rock analyses were performed by Rossbacher Laboratory Ltd., 2225 South Springer Avenue, Burnaby, B.C. using the same techniques as Noranda Geochemical Laboratory.

3.2.3 Results

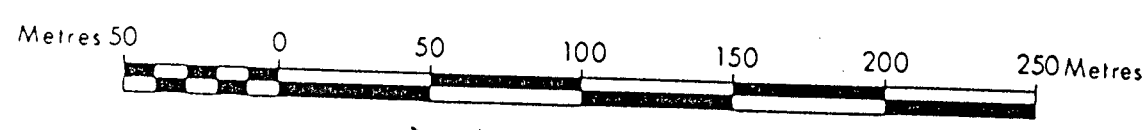
Soil and rock samples were analyzed for Au, As, Ag, Cu, and Mo (Figs. 5-9). Three soil samples analyzed >100 ppb Au, with a maximum of 230 ppb Au. Arsenic values in soil samples were elevated, however, Cu, Ag and Mo analyses provided disappointing results.

Rock samples returned disappointing geochemical results, with a maximum value of 840 ppb Au for one sample, although some As values were slightly higher than background.

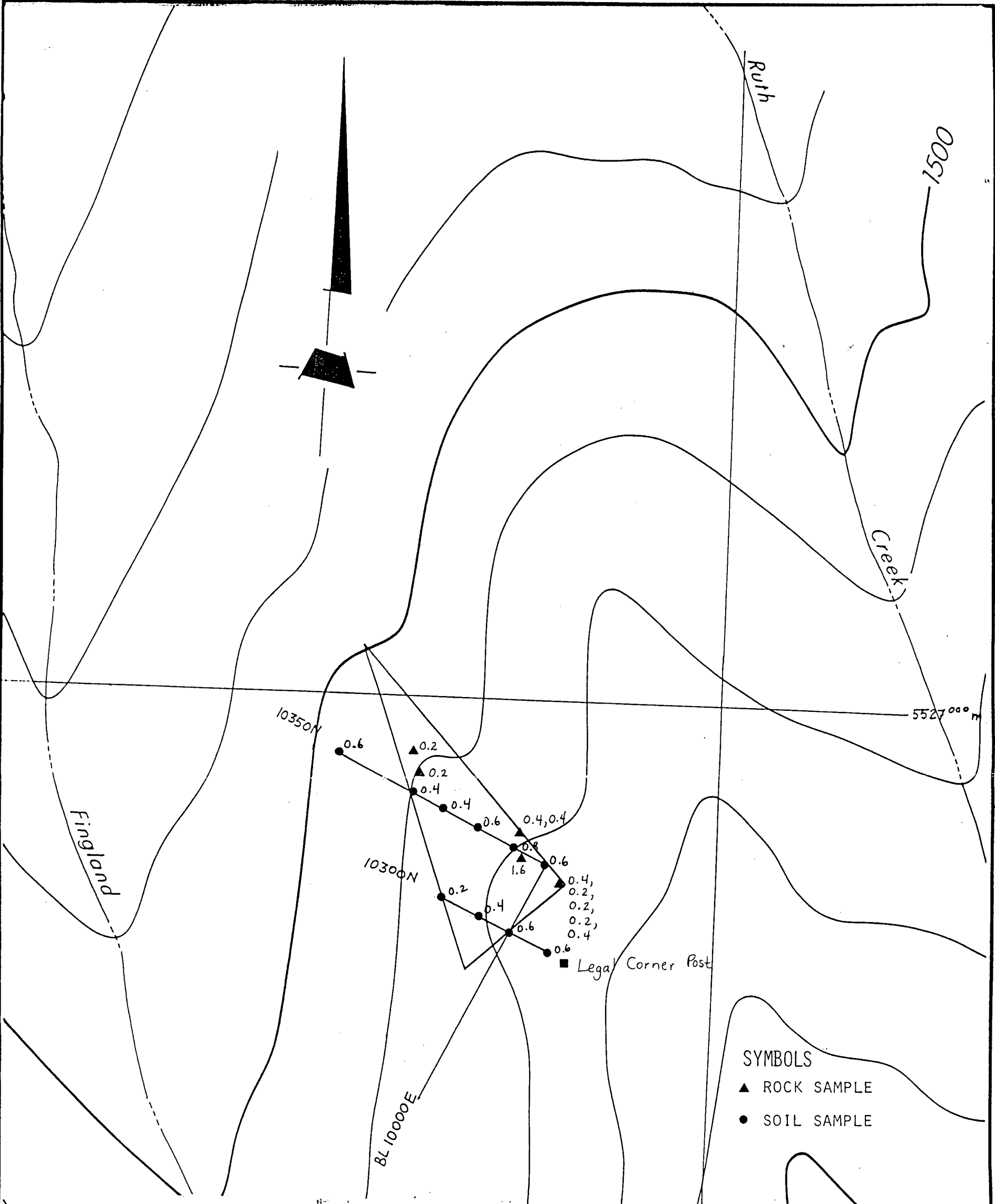


SYMBOLS
 ▲ ROCK SAMPLE
 8425B ROCK SAMPLE NO.
 ● SOIL SAMPLE

SCALE
 1:2500

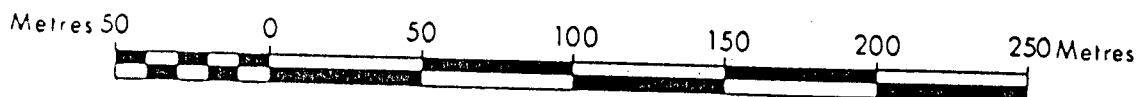


REVISED	REX FRACTION	
	FIGURE 4:	
	SAMPLE LOCATIONS	
PROJ. No. 435	SURVEY BY: WSF	DATE: 11-85
N.T.S. 82FI4	DRAWN BY: KIF	SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION	
	OFFICE: Vancouver, B.C.	

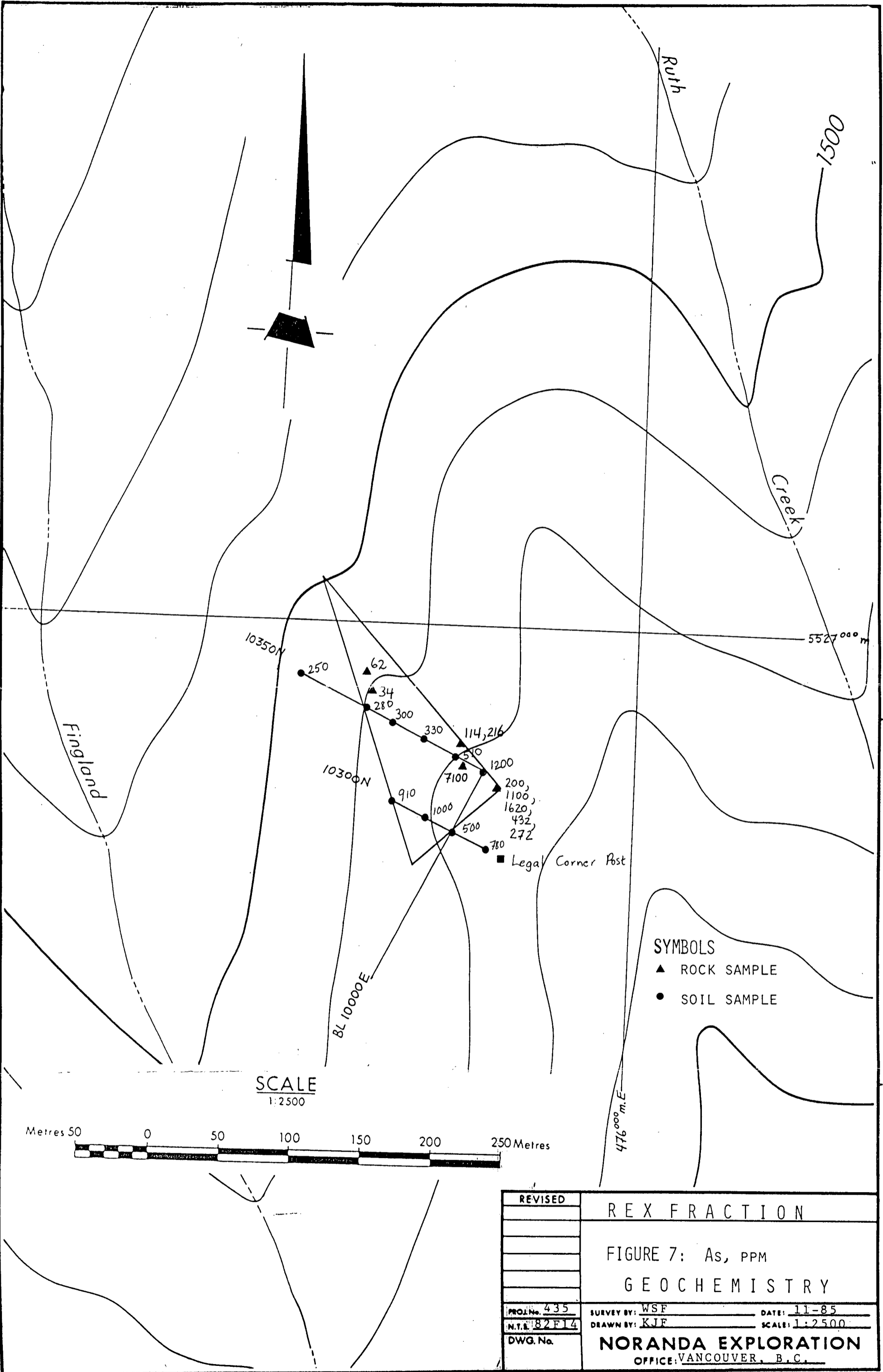


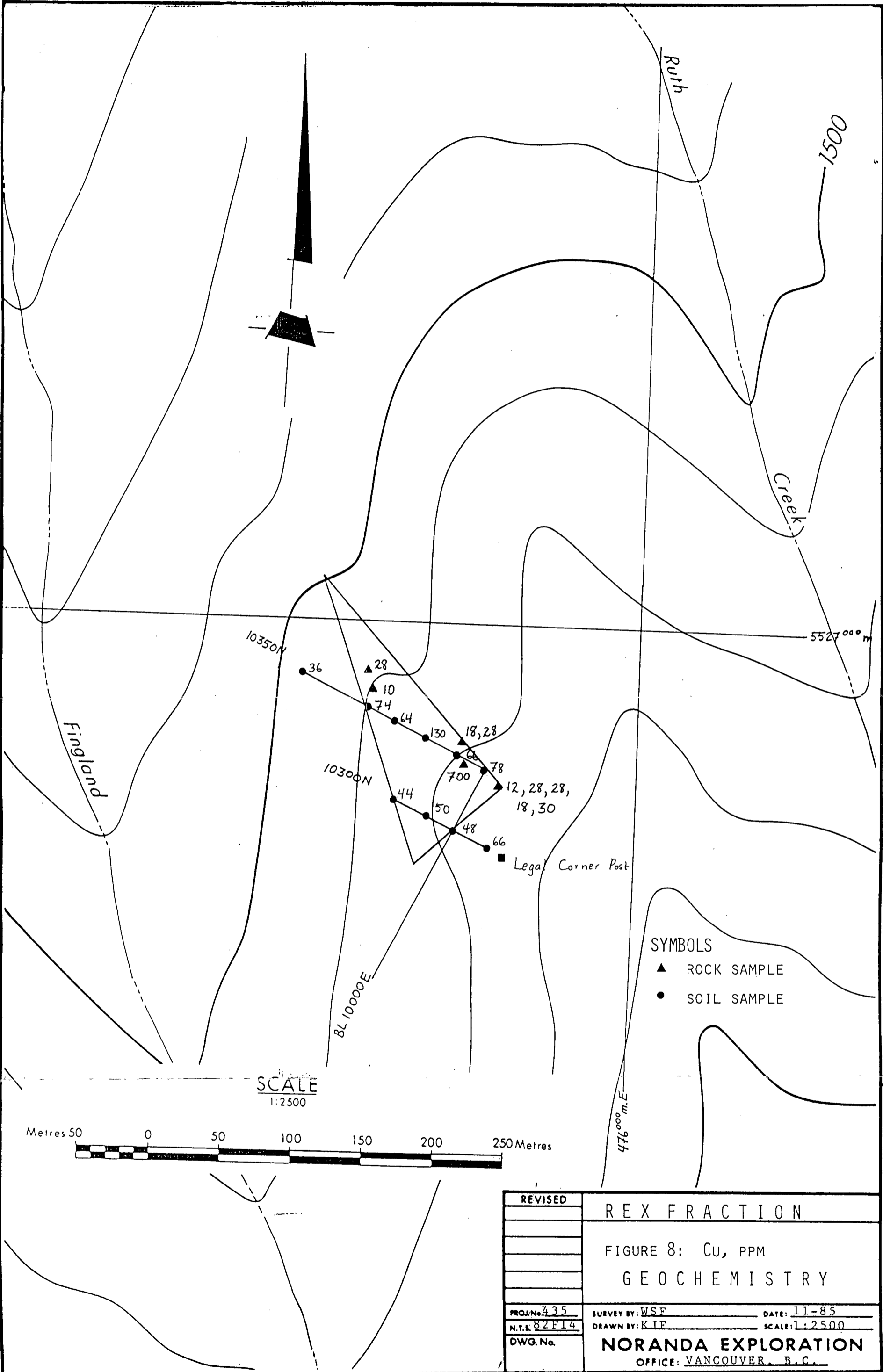
SYMBOLS
 ▲ ROCK SAMPLE
 ● SOIL SAMPLE

SCALE
 1:2500



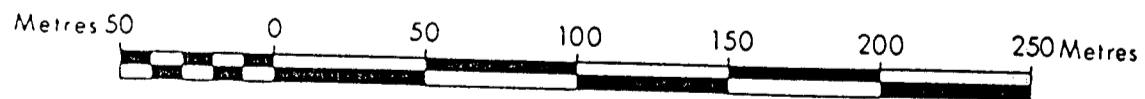
REVISED	R E X F R A C T I O N	
	F I G U R E 6 : A g , P P M	
	G E O C H E M I S T R Y	
PROJ. No. 435	SURVEY BY: W S F	DATE: 11-85
N.T.S. 82F14	DRAWN BY: K I F	SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION	
	OFFICE: VANCOUVER, B.C.	





SYMBOLS
 ▲ ROCK SAMPLE
 ● SOIL SAMPLE

SCALE
 1:2500



REVISED	REX FRACTION	
	FIGURE 8: CU, PPM	
	GEOCHEMISTRY	
PROJ. No. 435	SURVEY BY: WSF	DATE: 11-85
N.T.S. 82 F14	DRAWN BY: K.I.F.	SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION	
	OFFICE: VANCOUVER, B.C.	

4.0 SUMMARY AND CONCLUSIONS

No results from the geochemical or geological surveys were considered significant. The geology of the rocks in the Rex fraction are silicified sandstone interbedded with crystal tuff and greywacke. The rocks appear to correlate with Slocan Group sedimentary rocks.

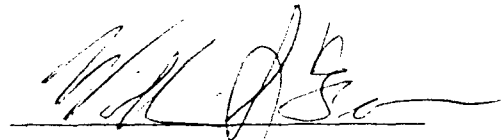
REFERENCES CITED

- Cairnes, C.E., 1934 Slocan Mining Camp, British Columbia. Geological Survey of Canada Memoir 173, 137 pp.
- Cairnes, C.E., 1935 Descriptions of Properties, Slocan Mining Camp, British Columbia. Geological Survey of Canada, Memoir 184, pp. 66-67.
- Little, H.W., 1960 Nelson Map-area, West Half, British Columbia (82F W 1/2). Geological Survey of Canada Memoir 308, 205 pp.

STATEMENT OF QUALIFICATIONS

I, William S. Ferreira of 286 Houde Drive, City of Winnipeg, Province of Manitoba, do hereby certify that:

1. I have been employed by Noranda Exploration Company, Limited since July, 1985.
2. I graduated from the University of Minnesota - Duluth in 1978 with a B.Sc. degree in geology, and from the University of Manitoba in 1984 with an M.Sc. in geology.
3. I have worked in mineral exploration since 1974 and have practiced my profession as a geologist since 1984.
4. I am a member of the Canadian Institute of Mining and Metallurgy - Winnipeg section .



William S. Ferreira
Geologist

STATEMENT OF QUALIFICATIONS

I David P. Bent of 7631 Cheviot Place, Richmond, Province of British Columbia, do hereby certify that:

1. I have been employed by Noranda Exploration Company, Limited as District Geologist for the Southern Cordillera since November, 1982.
2. I graduated from Acadia University in 1968 with a Bachelor of Science degree in Geology.
3. I have worked in mineral exploration since 1965 and have been a practising geologist since 1968.
4. I am a member of the Canadian Institute of Mining and Metallurgy.



D.P. Bent

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT Rex Claim - LH
TYPE OF REPORT Geology & Geochem

DATE November 14, 1985

a) Wages:

No. of Days 3
Rate per Day \$ 94.07
Dates From: Aug. 31/85
Total Wages 3 x \$ 94.07 282.21

b) Food and Accomodation:

No of days 3
Rate per day \$ 45.00
Dates From: Aug. 31/85
Total Cost 3 x \$ 45.00 135.00

c) Transportation:

No of days 3
Rate per day \$ 50.00
Dates From: Aug. 31/85
Total Cost 3 X \$ 50.00 150.00

d) Instrument Rental:

Type of Instrument
No of days
Rate per day \$
Dates From:
Total Cost X \$

Type of Instrument
No of days
Rate per day \$
Dates From:
Total Cost X \$

f) Analysis 156.00
(See attached schedule)

g) Cost of preparation of Report
Author 50.00
Drafting 50.00
Typing 50.00

h) Other:
Contractor

Total Cost \$873.21

e) Unit costs for Geology
No of days 1.5
No of units
Unit costs 239.07 / day
Total Cost 1.5 x 239.07 358.61

f) Unit costs for Geochem
No of units 20 samples
Unit costs 25.73 / sample
Total Cost 20 x 25.73 514.60

\$873.21

NORANDA EXPLORATION COMPANY, LIMITED
(WESTERN DIVISION)

DETAILS OF ANALYSES COSTS

PROJECT: Rex Claim

<u>ELEMENT</u>	<u>NO. OF DETERMINATIONS</u>	<u>COST PER DETERMINATION</u>	<u>TOTAL</u>
Cu	20	1.60	32.00
Mo	20	.60	12.00
Ag	20	.60	12.00
Au	20	3.50	70.00
As	20	1.50	30.00
Total			<u>\$156.00</u>

APPENDIX I
GEOCHEMICAL RESULTS

8509-037

ROSSBACHER LABORATORY LTD.

2225 S. SPRINGER AVENUE
BURNABY, B.C. V5B 3W1
TEL : (604) 299 - 8910

CERTIFICATE OF ANALYSIS

TO : NORANDA EXPLORATION CO. LTD.
1050 DAVIE STREET
VANCOUVER B.C.

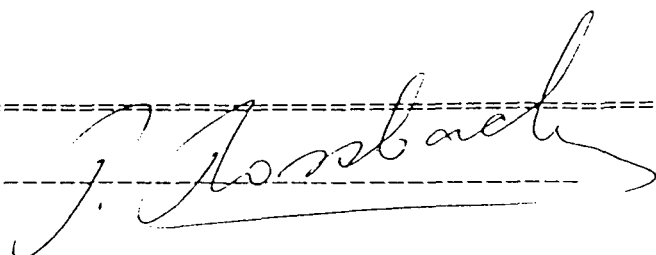
CERTIFICATE#: 85340
INVOICE#: 5530
DATE ENTERED: SEPT. 11, 1985
FILE NAME: NOR85340
PAGE # : 1

PROJECT: 453 8509-037 LH (WF)
TYPE OF ANALYSIS: GEOCHEMICAL

PRE FIX	SAMPLE NAME	PPM Mo	PPM Cu	PPM Ag	PPB Au	PPM As
A	8415 B	3	18	0.4	10	114
A	8416 B	2	28	0.4	10	216
A	8417 B	1	10	0.2	10	34
A	8418 B	6	28	0.2	10	62
A	8419 B	30	700	1.6	840	7100
A	8420 B	2	12	0.4	10	200
A	8421 B	4	28	0.2	270	1100
A	8422 B	4	28	0.2	40	1620
A	8423 B	1	18	0.2	90	432
A	8424 B	1	30	0.4	200	272

4/9/85 WF DB WM DP

CERTIFIED BY :



NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION:LH

CODE :8509-037

Project No. :135
 Material :Soil
 Remarks :

Sheet:1
 Geol.:W.F.

Date rec'd:Sep. 04
 Date compl:Sep. 20

Values in PPM, except where noted.

T. T. No.	SAMPLE No.	PPB						NTS	GCI
		Cu	Ag	Mo	As	Au			
49	10350N-10000E	78	0.6	2	1200	160	82F/14	51760	
50	9975	66	0.8	2	510	10			
51	9950	130	0.6	1	330	10			
52	9925	64	0.4	2	300	30			
53	9900	74	0.4	1	280	10			
54	10350N-9850E	36	0.6	4	250	20			
55	10300N-9950E	44	0.2	2	910	230			
56	9975	50	0.4	2	1000	150			
57	10000	48	0.6	2	500	10			
58	10300N-10025E	66	0.6	2	780	20			

APPENDIX II
DESCRIPTION OF ROCK SAMPLES

APPENDIX III
DESCRIPTION OF ANALYTICAL METHOD

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method:

Antimony - Sb: 0.2 g sample is attacked with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to *measure* arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the

range of atomic absorption. The AA-475 with the use of a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

* N.B. If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

EJvL/ie
March 14, 1984