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This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$ 2,000.00

J a Main
A/ Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

B. R. BAXTER
Supervising Mining Recorder

for Commissioner of Yukon Territory

INTRODUCTION

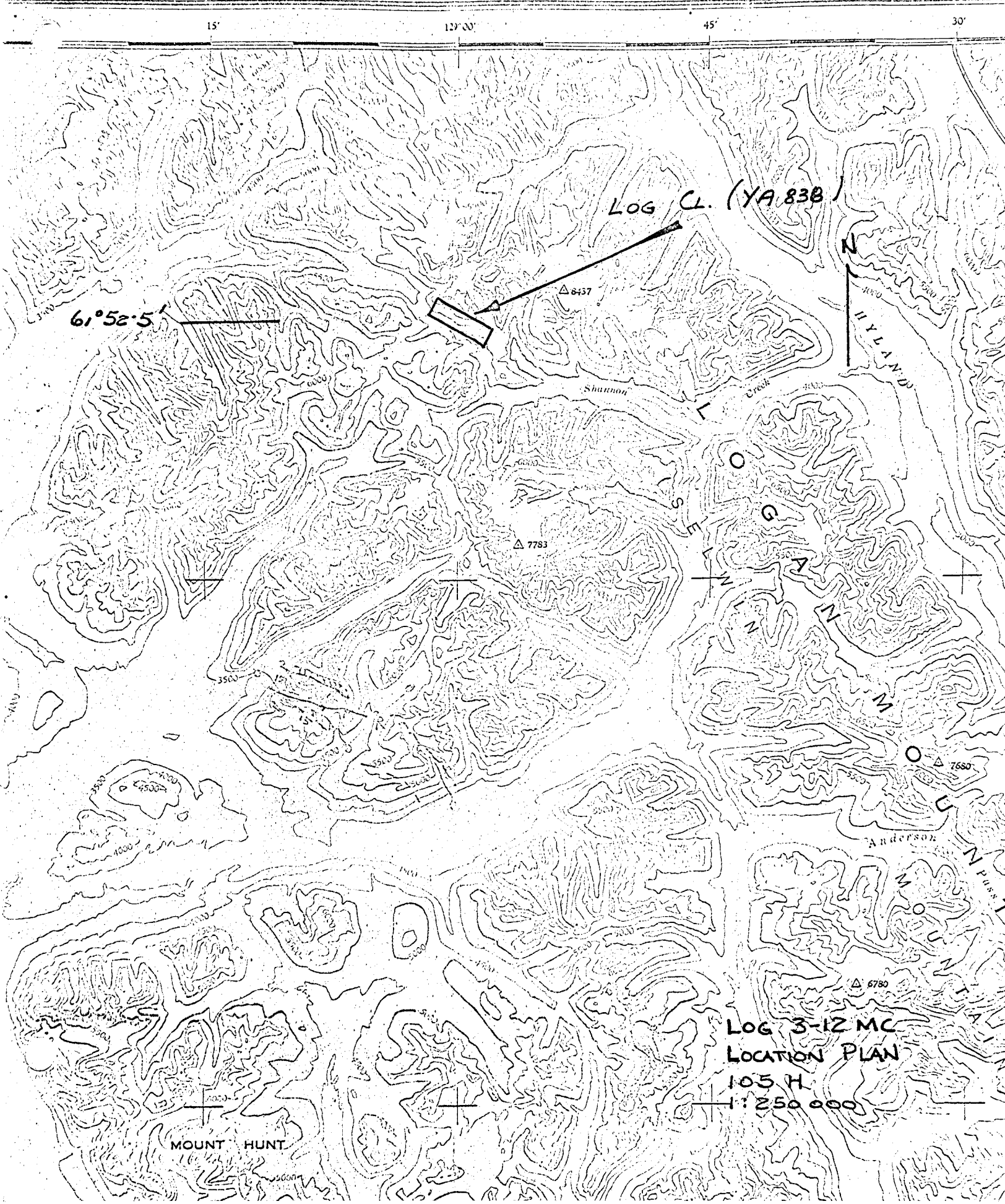
The LOG claims referred to herein are registered in the name of NORANDA EXPLORATION COMPANY, LIMITED (No Personal Liability).

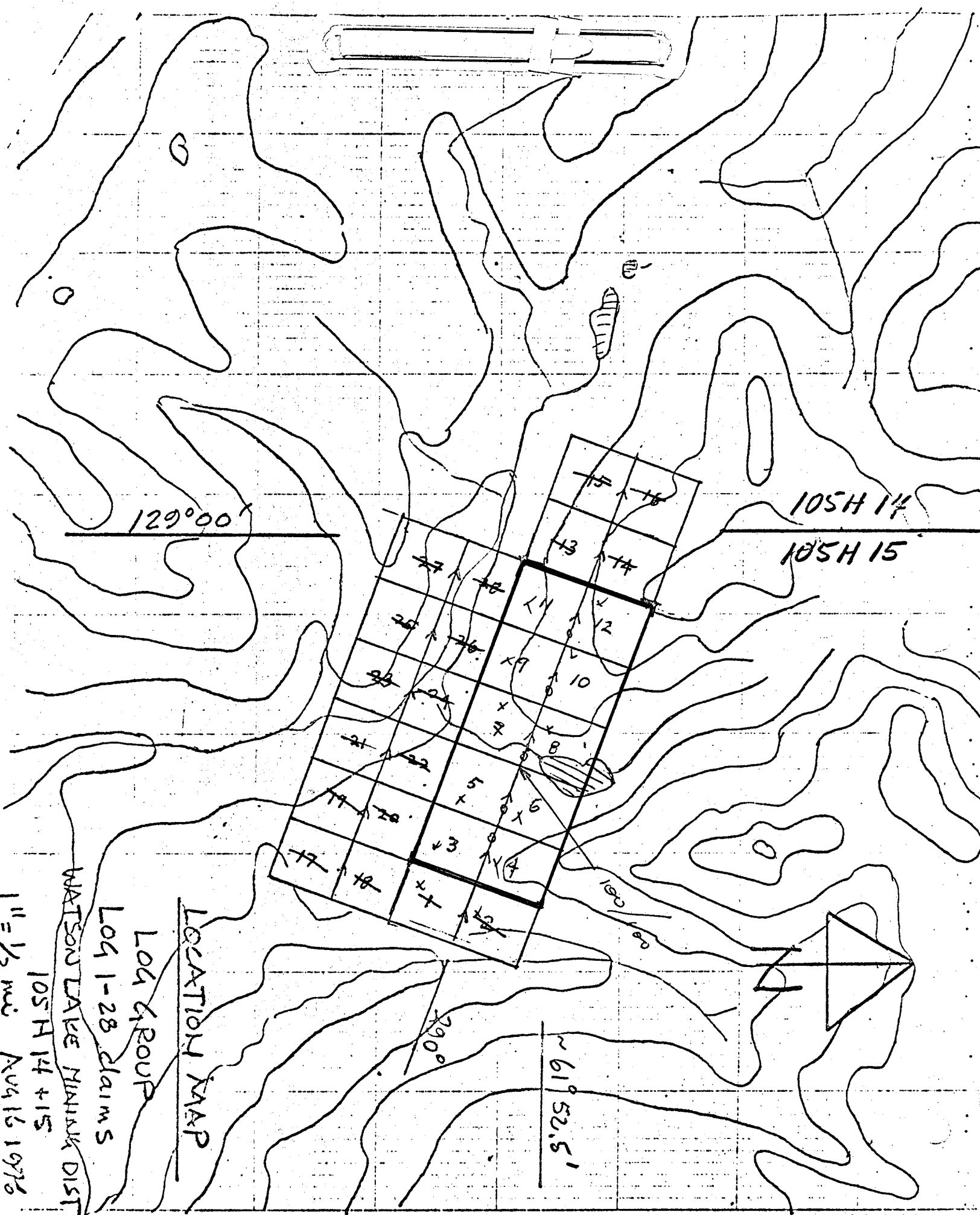
The claim group consists of 10 claims, as follows:

Claim Name	Grant Number
Log 3	YA 839
Log 4	YA 840
Log 5	YA 841
Log 6	YA 842
Log 7	YA 843
Log 8	YA 844
Log 9	YA 845
Log 10	YA 846
Log 11	YA 847
Log 12	YA 848

The LOG claims are located approximately 30 miles west of Tungsten, N.W.T., on claim sheet 105-H-15. Access is by helicopter.

Geophysical survey and geological reconnaissance work was conducted during the period August 28 - September 1, 1977 by Noranda Exploration Company, Limited. Mapping and survey control was based on an established grid of lines 400 feet apart with picket stations at 200-foot intervals on the lines. Results are presented on grid maps with a scale of 1 inch = 400 feet. (Maps G-1 to G-4.)


15'
129°00'
45'
30'
LOG CL. (YA 838)
61°52·5'
△8437
N
HYLAND
Shannon
Creek
△7783
STONE MOUNTAIN
△7680
Anderson
Pass
△6780
MOUNT HUNT
LOG 3-12 MC
LOCATION PLAN
105 H
1:250 000


129°00'
105H 14
105H 15
LOCATION MAP
LOG GROUP
LOG 1-28 claims
WATSON LAKE MINING DIST
105H 14 + 15
1" = 1/2 mi
AUG 12 1976
61° 52.5'
2900
1900
ALTERNATE GUIDE LINE
NON-REPRODUCIBLE
10 5641
10 X 10 TO THE INCH

GEOLOGICAL SURVEY

Geological mapping was conducted by G. Macdonald, Geologist for Noranda Exploration Company, Limited.

Stratigraphy

The LOG 3-12 mineral claims are underlain by an Hadrynian meta-sedimentary complex comprised of shaley, cherty, quartzitic and dolomitic horizons. The originally lime-rich members are often skarnified and the argillaceous members are in part hornfelsed. Hornfels zones contain up to 5% pyrite and/or pyrrhotite (see Table I for a lithological summary).

The Hadrynian unit is steeply northward dipping and has a thickness of at least 3,000 feet. Individual lithologies within the complex are very distinctly bounded and exhibit a strong northwesterly linear trend.

Skarn Zones

Originally lime-rich horizons have altered to one of two types of skarn:

(a) Garnet-diopside-epidote (± wollastonite) containing some, all or none of galena, sphalerite, chalcopyrite, scheelite;

(b) Cherty grey-green (wollastonite?) skarn with occasional diopside crystals and 1-5% finely disseminated pyrite.

The mineralized skarns vary in width from 2 inches to 5 feet and are traceable intermittently for 2,000 feet. Sulphides and scheelite are very erratically distributed and make up from 0 - 20% of the garnet-diopside type skarn. At least 10 distinct mineralized skarn zones occur on the property.

Individual skarn zones are very distinctly bounded on upper and lower surfaces by changes in the rock lithology, with skarnification restricted to originally lime-rich portions of the complex.

Post-skarnification faulting is prevalent. Faults generally strike northeasterly, have a near-vertical attitude and exhibit a left-lateral movement of some tens of feet.

TABLE I
TABLE OF LITHOLOGIES

Cretaceous		Granodiorite
Hadrynian	Hq	White, fine-grained quartzites and cherts
	Hd	Buff-weathering, fine-grained Dolomite and limestone; usually skarnified. Occurs as definite bands 3 inches to 4 feet wide
	Hsp	Black, fine-grained shales and phyllites

Sampling

Rock samples were taken at several locations to test mineralization indicated by a 1976 soil sampling project. Samples consisted of rock chips taken every 2 - 3 inches across (or along) the zone being tested for the indicated distance (e.g. across 4 feet). Significant anomalies tested are shown diagramatically in Maps G-2 and G-3 (rock sample locations are indicated). Rock samples were sent to Vancouver where they were analysed to determine the content of Cu, Pb, Zn, W ± Ag.

NORANDA EXPLORATION COMPANY, LIMITED

TABLE II

N.T.S. 115-H-15

PROPERTY LOG Assay Results (to accompany Plans G-2 and G-3)

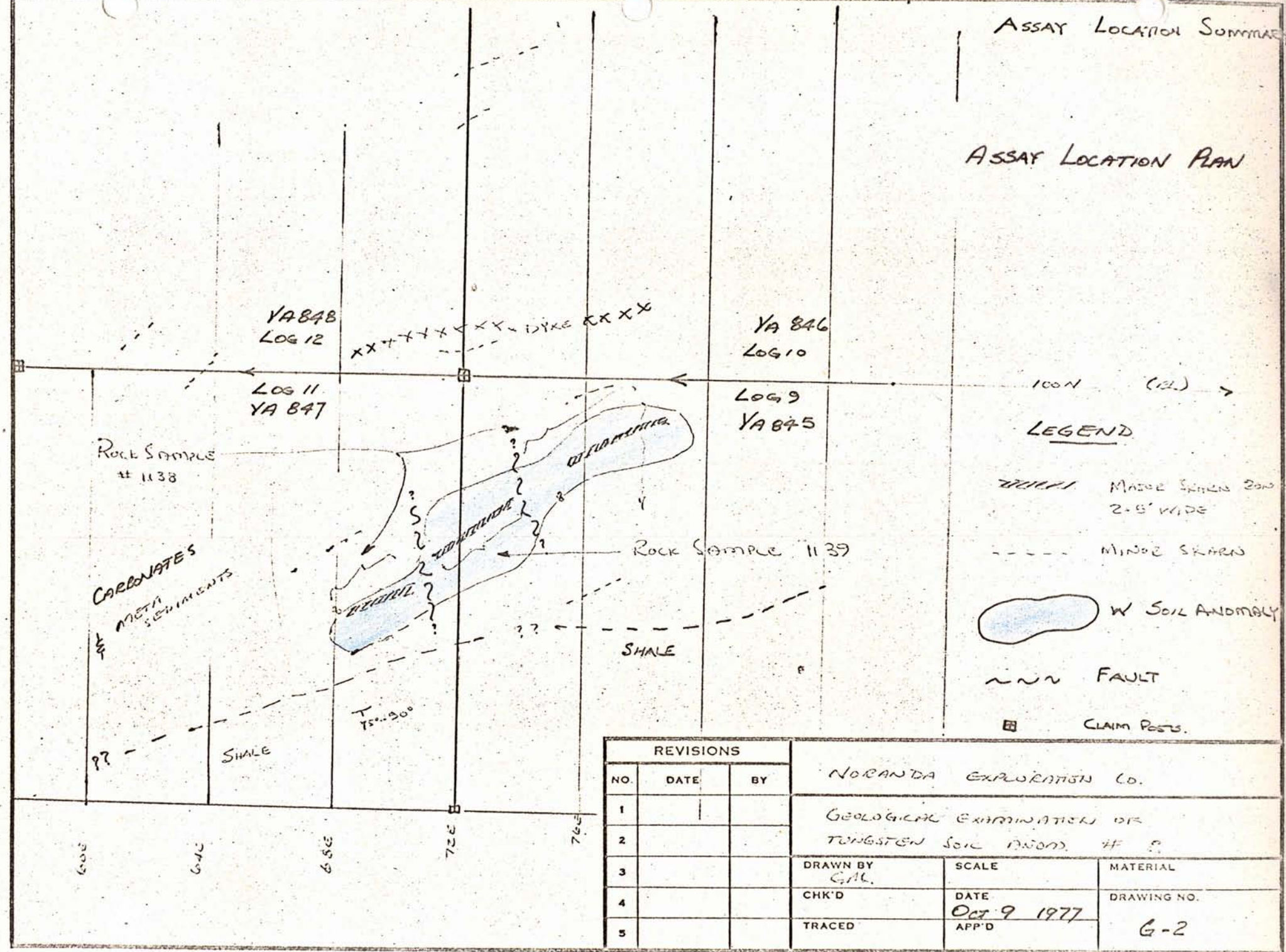
DATE October 9, 1977.

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION (see Maps G-2 and G-3)	TYPE	WIDTH LENGTH (L)	ASSAYS Cu %	Pb %	Zn %		W %	Ag oz/ton		SAMPLED BY
1138	68E, 90N-70E, 91N + 75E, 96N - 78E, 98N (Rock Geochem)	Chip	400' (L)	0.08	0.18	0.34		0.02	0.36		
1139	71E, 93N - 73E, 95N (Rock Geochem)	Chip	200' (L)	0.21	1.91	1.26		0.04	1.68		
P 5976	87E, 93 + 50N (Assay)	Grab	--	0.01	1.38	1.70		0.03	0.12		
P 5977	88E, 94 + 25N (Assay)	Grab	--	0.02	1.62	1.66		0.02	0.20		
P 5978	100E, 94N (Assay)	Grab	--	0.01	1.70	1.58		0.01	0.16		
P 6701	87 + 50E, 91 + 50N - 88 + 75E, 91 + 50N (Rock Geochem)	Chip	150' (L)	Tr.	Tr.	0.02		Tr.	Tr.		
P 6702	89E, 94 + 50N - 90E, 94 + 50N (Rock Geochem)	Chip	100' (L)	Tr.	0.03	0.06		Tr.	Tr.		
P 6703	89 + 25E, 96N (Rock Geochem)	Chip	10'	Tr.	0.09	0.16		Tr.	0.60		
P 6704	86 + 50E, 95N - 87 + 50E, 95N (Rock Geochem)	Chip	100' (L)	0.01	0.15	0.18		0	Tr.		

ASSAY LOCATION SUMMARY

ASSAY LOCATION PLAN



REVISIONS		
NO.	DATE	BY
1		
2		
3		
4		
5		

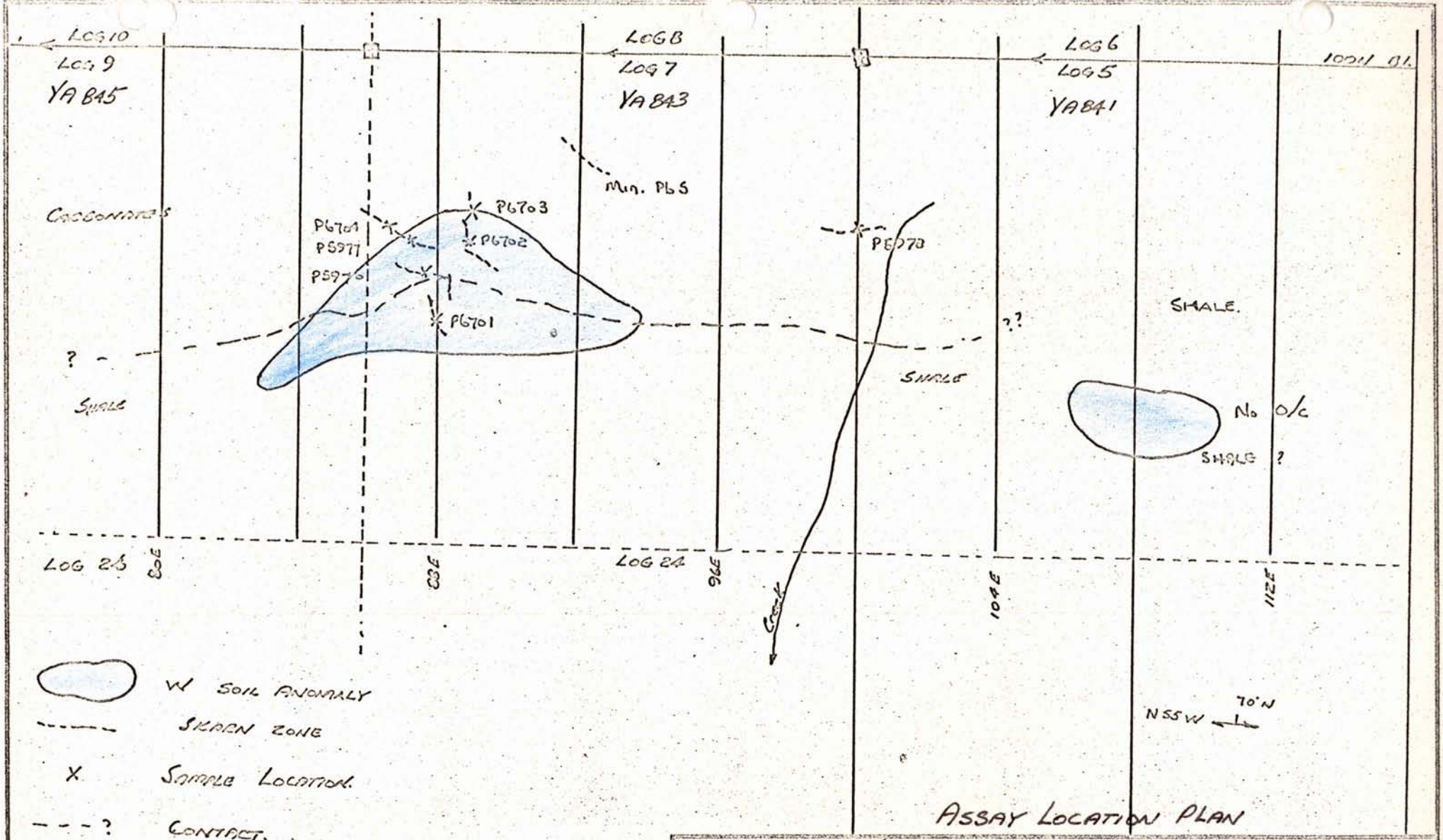
NORANDA EXPLORATION CO.

GEOLOGICAL EXAMINATION OF TUNGSTEN SOIL ANOM. # 8

DRAWN BY	SCALE	MATERIAL
G.M.		
CHK'D	DATE	DRAWING NO.
	Oct 9 1977	G-2
TRACED	APP'D	

Alan C. Hedenquist Aug 27 1977

ASSAY LOCATION SUMMARY



ASSAY LOCATION PLAN

REVISIONS		
NO.	DATE	BY
1	AUG 21	
2		
3		
4		
5		

NORANDA EXPLORATION CO.

SAMPLING & GEOLOGY OF 1976 W- ANOMALY

DRAWN BY GM/BDF	SCALE 1" = 400'	MATERIAL
CHK'D	DATE Oct 9 1977	DRAWING NO. G-3
TRACED	APP'D	

Alan C Mandsfield

Laboratory Testing Method

Rock samples P1138, P1139 and P6701-6704 were analysed by the process of rock geochemistry. Here, the samples are crushed and analysed by the Atomic Absorption Spectrophotometer methods used for soil sample geochemical analysis. Samples P5976-5978 were tested by standard assay procedures.

Samples tested by assay methods are more definitive than those evaluated by Atomic Absorption.

Presentation of Results

Geological results are plotted on a grid plan map (Map G-4) with a scale of 1 inch = 400 feet.

Discussion of Results

Chip samples from three of the best mineralized zones on the property were low in economic values. In particular, tungsten values show only a very minor occurrence of scheelite on the property, with the best assay being 0.04% W.

CONCLUSIONS AND RECOMMENDATIONS

Sulphide mineralization at the LOG property is erratic and of non-economic value. No additional work is presently justified on the occurrence.

J Macdonald

MAGNETOMETER SURVEY

Introduction

The magnetometer survey was carried out by M. Vetterli on August 21, 28 and 30, 1977, under the supervision of J.T. Walker, both employees of Noranda Exploration Company, Limited.

The magnetometer (McPhar model M700) was manufactured by McPhar Geophysics of Don Mills, Ontario.

The relative, vertical component of the magnetic field (in gammas) was recorded at 50 foot intervals in the central area and at 100 foot intervals near the edge of the grid for a total of 9.28 line miles.

Field Procedure

The magnetometer was adjusted on the property such that the most readings or "back ground" values would fall within the lowest positive range in order to attain the highest accuracy. This adjustment, once made is not changed for the duration of the survey.

Diurnal corrections were applied to the raw data. A series of magnetic base stations were initially established along the base line. Readings at these stations were recorded throughout the day and differences plotted against time to obtain the diurnal variation. The raw data can then easily be adjusted to remove the diurnal.

Presentation of Results

The results are plotted and contoured on a grid plan map (drawing G1) at a scale of 1 inch equals 400 feet.

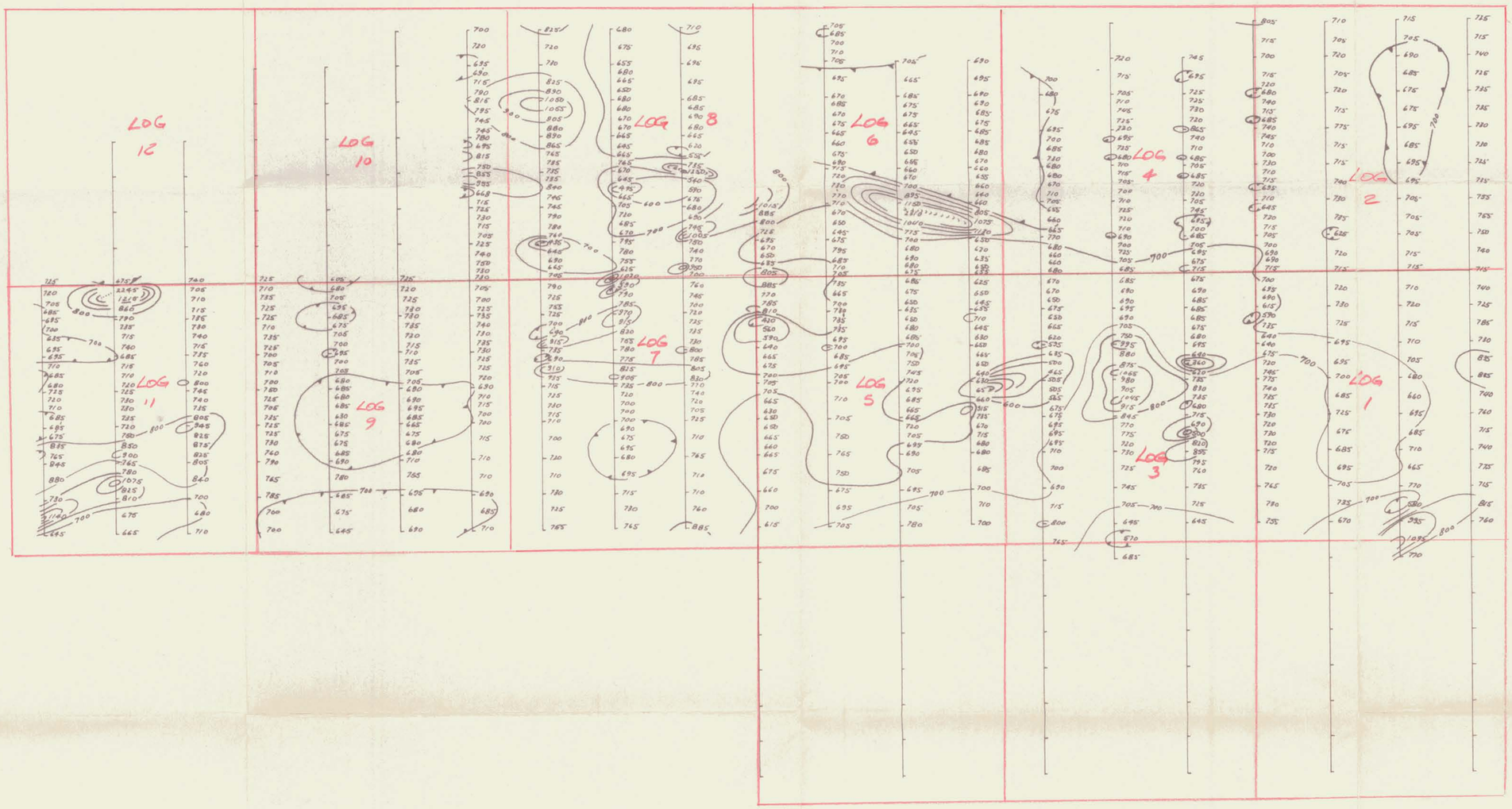
Discussion of Results

The magnetic readings ranged from a low of 65 gammas to a high of 2310 gammas. The "background" is between 700 and 800 gammas.

The overall survey indicates a broad low region centered about the eastern half of the grid. A linear high, attaining 2310 gammas, striking east-west through station 108E - 103.5N, forms the northern edge of this feature. Several localized high gradient areas are evident near the margins of this broad low.

The western half of the grid has an isolated high reading of 2245 gammas at station 64E - 99.5N.

Gary R. Fenton



TO ACCOMPANY COMBINED GEOLOGICAL SAMPLING PROGRAM AND GEOPHYSICAL ASSESSMENT REPORT BY G. McDONALD AND G. FENTON ON THE LOG MINERAL CLAIMS.

DATED: OCT. , 1977

Gary L. Fenton

REVISED
Oct 2/77

SHANNON CREEK

MAGNETOMETER SURVEY
RELATIVE VERTICAL FIELD

CONTOUR INTERVAL = 100 γ

PROJ. No. 915
N.T.S. 105H/15
DWG. No. G1

SURVEY BY: MV DATE: AUG. 1977
DRAWN BY: G.F. SCALE: 1" = 400'

NORANDA EXPLORATION
OFFICE VANCOUVER

60E 64E 68E 72E 76E 80E 84E 88E 92E 96E 100E 104E 108E 112E 116E 120E 124E 128E 132E 136E 140E

112 N
108N
104N
100N BASE LINE
96 N
92 N
88N
84N
80N
76N
72N

LAKE

LOG 12 LOG 10 LOG 8 LOG 6 LOG 4 LOG 2
LOG 11 LOG 9 LOG 7 LOG 5 LOG 3 LOG 1

2dg 30'
2dgc 20'
TS-100' Edgc, 2dm
P 1978 Pb 0.48% Zn 0.44% Ag 0.48 oz/t WO3 <0.02%
P 1977 Pb 0.40% Zn 0.76% Ag 0.44oz/T WO3 <0.02%
B 4513 Pb 1.1% Zn 0.8%
B 4514 Pb 2.1% Zn 1.8% Cu 0.7%
B 4515 Pb 2.2% Zn 1.6% Ag 80.0oz/T
B 4516 Pb 0.75% Zn 0.7%
P 1976 Pb 1.2% Zn 0.8% Ag 0.48 oz/t WO3 0.04%

1qd 1q 1qd 1s 1qd 1ps 1qd 1ps 1qd 1ps 1qp

SHALE

CREEK

N

LEGEND

~~~ Fault
—— ---- Contact (Observed, Assumed)
?... Limit of Outcrop
—o—•— Skarn Talus Trace
———— == Skarn (5'-10'), Intermittent
x P1976 Assay Location; Grades. (See Table)
—xx— Dyke

1 Sediment Complex with:
d dolomite
l limestone
p phyllite
q quartzite
s shale

2 Skarn, with:
d diopside
g garnet
e epidote
c cherty grey skarn
m magnetite

3 Granodiorite

Dates Worked:
Aug. 31, 1977
Sept. 28,
Sept. 30,

J. MacDonald

REVISED	SHANNON CREEK PROPERTY
Oct 16 1977	GEOLOGY
PROJ. No. 915	SURVEY BY: DATE: NOV 1976
N.T.S. 105 H 15	DRAWN BY: G.M. SCALE: 1"=400'
DWG. No. G-4	NORANDA EXPLORATION
	OFFICE WHITEHORSE

VANCAL
~~~

60E 64E 68E 72E 76E 80E 84E 88E 92E 96E 100E 104E 108E 112E 116E 120E 124E 128E 132E 136E 140E

LAKE

112 N
108N
104N
100N BASE LINE
96 N
92 N
88N
84N
80 N
76 N
72 N

REVISED

SHANNON CREEK PROPERTY

LOG CLAIMS

PROJ. No. 915
N.T.S. 105 H 15
DWG. No. G-5

SURVEY BY: DATE: NOV 1978
DRAWN BY: SCALE: 1" = 400'

NORANDA EXPLORATION
OFFICE: WHITEHORSE