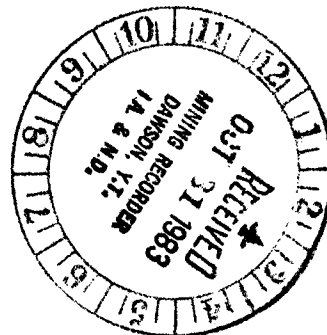


REPORT OF WORK
MAGNETOMETER SURVEYS
ON THE
CASSIAR CREEK PROPERTY
N.T.S. 116C/8

091523



Submitted by : L. Bradish
Division Geophysicist
Western Division
Vancouver, B.C.
October, 1983

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 6,680⁰⁰.

K. Grapes

for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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REPORT OF WORK
MAGNETOMETER SURVEYS
ON THE
CASSIAR CREEK PROPERTY
N.T.S. 116C/8

1.0 INTRODUCTION

An extensive Magnetometer survey (approximately 182 line Kilometers) was completed during the period June 26 - July 11, 1983 on three areas within the Cassiar Creek project claim holdings. The purpose of the work was to assist in the target location and definition for tungsten skarn mineralization. This work was a continuation of a similiar program carried out during 1982 which succesfully targeted tungsten mineralization.

2.0 CLAIMS, ACCESS AND LOCATION

The claim group is located approximately 56 Kilometers northwest of Dawson City, Yukon Territory (64 23'N, 140 10'W, 116C/8, see fig 1). Access to the property is best via helicopter available for charter from Trans North Turbo Air based at Dawson City.

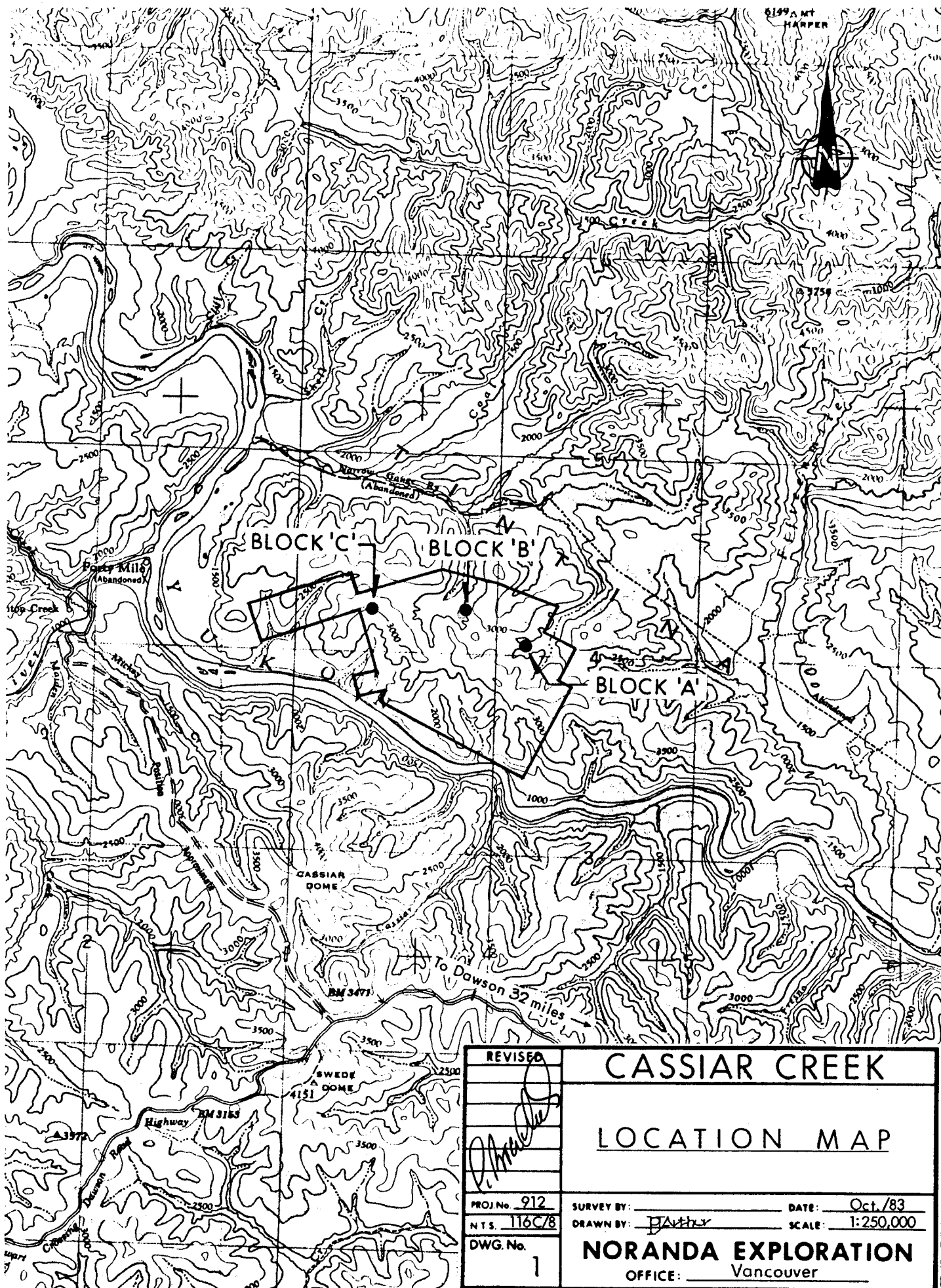
To date the property is comprised of 103 claims. The work described in this report only covers a portion of these claims and are as listed in appendix I.

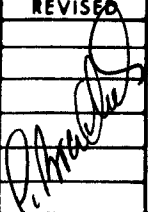
The grids (A, B & C) were established by a contract crew, Morley Barker of Whitehorse, YT. The lines were simple chain and compassed lines flagged at 25 meter intervals. The lines are controlled by Baselines and all lines are as shown on maps 2, 3 and 4.

3.0 PERSONNEL

The field work was completed by J. Moore and M. Seywerd, both temporary employees of Noranda Exploration Co. Ltd. The geophysical program was under the supervision of the writer.

6199 A MT HARPER



REVISED	CASSIAR CREEK	
	LOCATION MAP	
PROJ. No. 912	SURVEY BY: <u> </u>	DATE: <u>Oct./83</u>
N.T.S. 116C/8	DRAWN BY: <u>D. Atter</u>	SCALE: <u>1:250,000</u>
DWG. No. 1	NORANDA EXPLORATION	
	OFFICE: <u>Vancouver</u>	

4.0 INSTRUMENTATION - 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 a recording (EDA) base station with a reading interval of 10 minutes. Readings were recorded at 25 meter intervals (10 meter intervals on block A) and plotted in plan at a datum of 57,000 gammas.

5.0 GEOLOGY

The target mineralization sought after is tungsten - skarn mineralization occurring within chloritic and graphitic quartz schists, quartzite and limestone in close proximity to a Cretaceous quartz monzonitic batholith.

The reader is referred to the report titled 'Cassiar Creek Program, 1982 Summary Report, Project 912' by R. Rogers.

6.0 DISCUSSION OF RESULTS

The surveys were carried out over three areas - namely Blocks/Grids B and C with some minor amount on Block A and whose relative locations are as shown on Location Map #1.

BLOCK 'A'

This block is a composite of two separate surveys run in 1982. Unfortunately proper diurnal corrections were not applied to this data at those times. During the 1983 program the baseline was rerun and the data west of Line 110+00N was corrected. East of this line the data could not be corrected and thus is left in its raw uncorrected state. It is for this reason that the background levels may not quite match, as inferred by the lack of a 900 nT contour on the west block and the lack of an 800 nT contour on the east block. These contours were dropped in order to visually present a map that was not conflicting and suppress attention to the diurnal drift.

This survey identified several small, high amplitude anomalies of which one (L.107+00N / 98+70E) was drilled and intersected tungsten mineralization.

Note that this map is at a scale of 1:2000 whereas the other mag maps are at a scale of 1:5000.

BLOCK 'B'

The magnetometer values recorded on this grid lie between a low of 690 nT and a high of 1160 nT on a datum level of 57,000 nT. There are several interesting features evident :

- 1) A monotonous background level is observed to occur within a 125 nT envelope (750 nT - 875 nT) over the grid.
- 2) A subtle E - W bias is noted on the smaller magnetic features. This preferred direction could be further enhanced if the contouring was forced to that bias. These small anomalies represent localized, near surface concentrations of magnetic mineralization.
- 3) A large 900m X 400m anomaly of 135 nT in amplitude is recorded in the vicinity of Lines 119+00N to 128+00N at station 91+50E. This anomaly hints at being the result of two sources of susceptibility centered at L.121+50N/91+00E and 126+00N/91+75E. A depth to source calculation yielded a value of 70 meters for the higher susceptibility anomaly.

BLOCK 'C'

The results for this grid differ somewhat from those on grid B. The range of values lie between 590 nT and 3330 nT on the same datum level of 57,000 nT. The background level varies more than on grid B and also shows a uniform horizontal gradient of 10 nT/m in a northwesterly direction (possibly due to change in overburden thickness ??).

The area grid-south of Line 188+00N has a relatively uniform background (600 - 800 nT) with no features of interest. Grid-north of this line has a markedly different signature as seen by the higher spatial frequencies and amplitudes. For the most part the sources of the small anomalies are due to near surface targets. No particular directional trend can be gleaned from this data due to the wide spacing of the lines.

A large anomalous feature is evident on the grid-northwest corner and appears to be due to a change in rock composition with some small localized concentrations of magnetic minerals.

7.0 CONCLUSIONS

To date the magnetometer surveys have detected numerous small, but high amplitude anomalies of interest and are probably sourced by limy skarn horizons. Some of those on Grid 'A' have been drilled and have returned encouraging tungsten assays but the dimensions of the mag anomalies hint that the mineralization would probably be restricted to a small area within and probably along strike of these linear magnetic anomalies.

On Grid 'B' the large anomaly as discussed in section 6.0 above may have some potential but caution must be exercised as this anomaly could also be modelled by a subtle change in the rock type and not be related to (w) mineralization. Similarly the zone on Grid 'C' may be sourced by an array of possibilities, but the small, high amplitude features within this large anomaly would be of particular interest.

To reduce the ambiguity of the magnetic sources, particularly those due to the large magnetic anomalies on B and C, samples of the bedrock within the bounds of these anomalies could have their susceptibility measured. With that information one can determine if the recorded magnetic response is due to a slight change in the magnetite concentration in the bedrock or due to a smaller hidden source of higher susceptibility.

Respectfully submitted



L. Bradish
Division Geophysicist.

APPENDIX I
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CLAIM LIST

CLAIM LIST

The following list of claims are those which have had work completed on them and additional claims which have been grouped.

|      |         |
|------|---------|
| RAIL | 1 - 32  |
| RAIL | 41 - 44 |
| RAIL | 46      |
| RAIL | 48      |
| RAIL | 50      |
| RAIL | 52      |
| RAIL | 54      |
| RAIL | 56 - 60 |
| RAIL | 145     |
| RAIL | 147     |
| RAIL | 149     |
| RAIL | 151     |
| RAIL | 153     |
| RAIL | 155     |
| RAIL | 157-164 |

|     |         |
|-----|---------|
| TIE | 5 - 16  |
| TIE | 21 - 40 |

TOTAL : 92 CLAIMS

APPENDIX II

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STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT - Cassiar Creek
TYPE OF REPORT - Geophysics and Linecutting

DATE: October 18, 1983

a) Wages:

No. of Days - 39
Rate per Day - 168.75
Dates From - June 1 - July 31, 1983
Total Wages - 39 X \$168.75 \$6,581.42

b) Food and Accommodation:

No. of Days - 39
Rate per Day - 107.98
Dates From - June 1 - July 31, 1983
Total Cost - 39 X \$107.98 \$4,211.22

c) Transportation:

No. of Days - 39
Rate per Day - 204.45
Dates From - June 1 - July 31, 1983
Total cost 39 X \$204.45 \$7,973.54

d) Cost of Preparation of Report:

Author \$ 337.50
Drafting \$ 337.50
Typing \$ 337.50

e) Other:

Contractor	\$3,900.00
Camp and Field Supplies	\$1,552.29

Total Cost	<u>\$25,230.97</u>
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The Exploration cost of \$25,230.97
is certified correct by

J.E. Oscroft
Br. Accountant

APPENDIX III
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STATEMENT OF QUALIFICATIONS

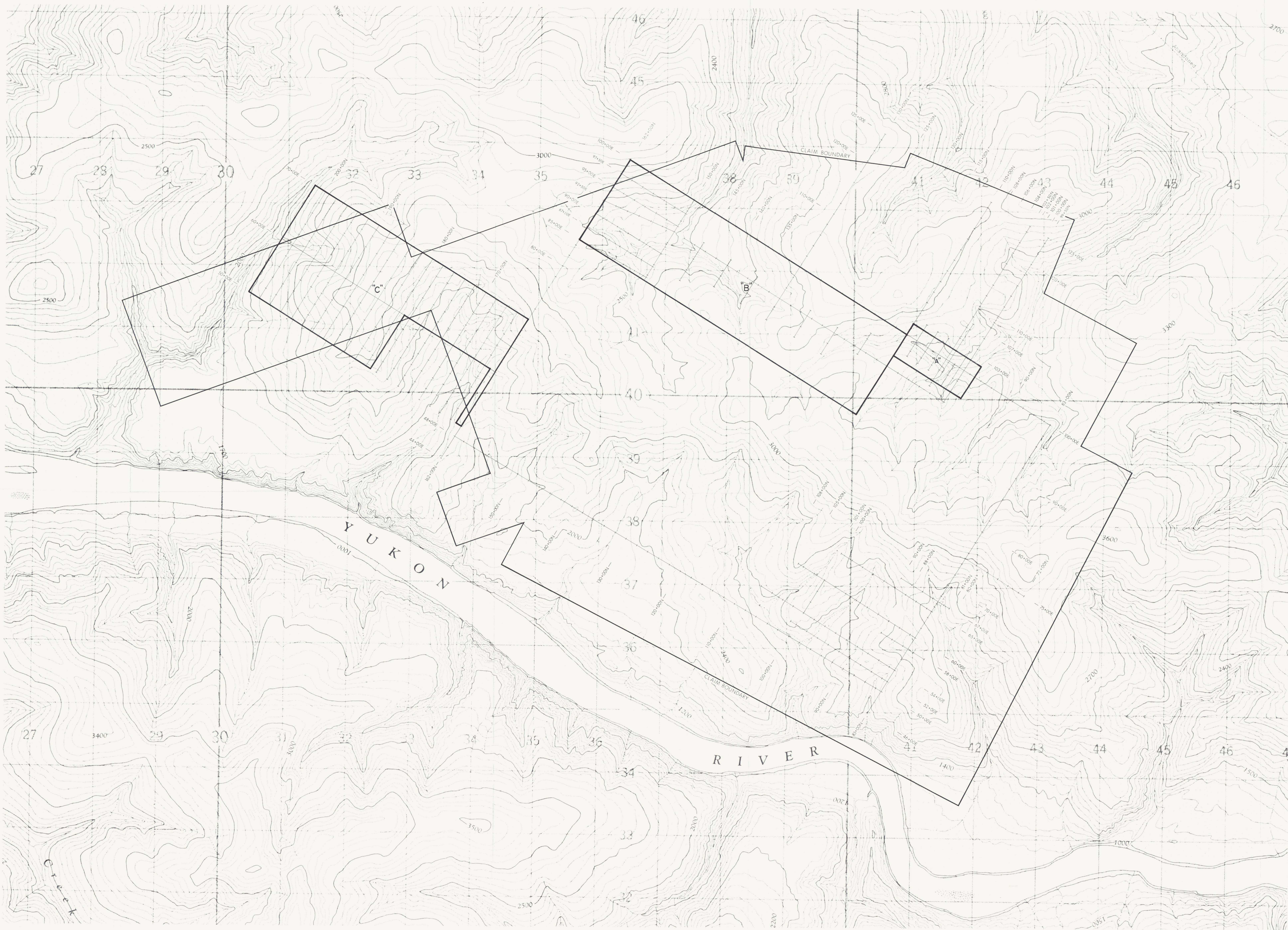
STATEMENT OF QUALIFICATIONS  
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I, Lyndon Bradish of Vancouver, Province of British Columbia, do hereby certify that:

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.



REVISED May 7/83 <i>[Signature]</i>	CASSIAR CREEK DAWSON MINING DISTRICT YUKON TERRITORY CLAIM BOUNDARY & GRID RAIL I-212, ROAD I-4, TRACK I-28, TIE I-40, SPIKE I-156
PROJ. No. 912 N.T.S. 116C/8 DWG. No. 1	SURVEY BY: R. Rogers DRAWN BY: <i>[Signature]</i> DATE: Feb. 7/83 SCALE: 1:20,000
	NORANDA EXPLORATION OFFICE: Whitehorse



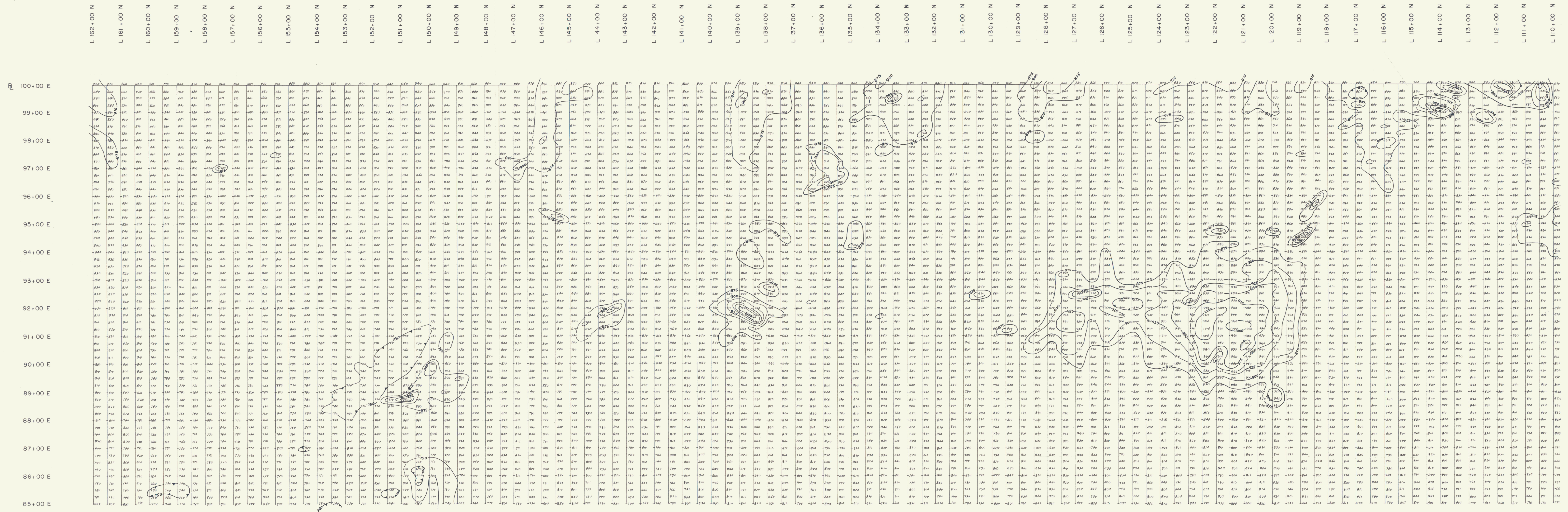
CORRECTED RAW DATA (1982 Survey) ← UNCORRECTED RAW DATA (1982 Survey)

CONTOURS
 1982 DATA Every 100' except 900'
 1982 Raw Data Every 100' except 800'

LEGEND

- INSTRUMENT : Unimag
- FIELD MEASUREMENT : Total
- DATUM : 57,000
- OPERATORS : R.K., J.M., M.S.
- DATES OF SURVEY : Aug/Sept - 1982,
- : Drill Holes

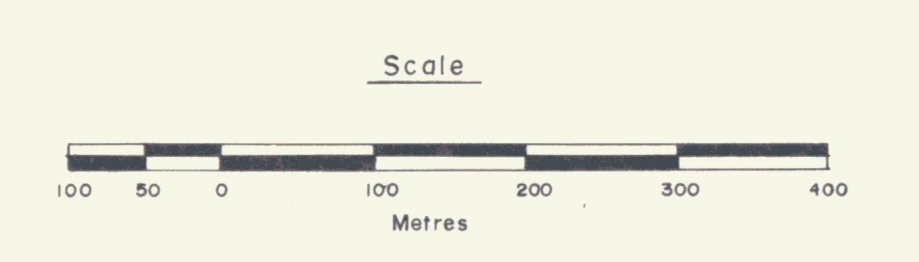
REVISION No. 2 Date: 10/1/82 By: R.K.		CASSIAR CREEK MAGNETOMETER SURVEY, 1982 "A" GRID	
PROJ. No. 512 N.T.S. 100' C/S DWG. No. 2	SURVEY BY: R.K. DRAWN BY: S.N.P., P.A.R.T.H.U.R. NORANDA EXPLORATION OFFICE: VANCOUVER, B.C.	DATE:	SCALE: 1:2,000



100+00 E
99+00 E
98+00 E
97+00 E
96+00 E
95+00 E
94+00 E
93+00 E
92+00 E
91+00 E
90+00 E
89+00 E
88+00 E
87+00 E
86+00 E
85+00 E

LEGEND

INSTRUMENT	Unimag
FIELD MEASUREMENT	Total
DATUM	57,000'
CONTOURS	100, 1050, 1000, 975, 950, 925, 900, 875, 750, 700
OPERATORS	J.M., M.S.
DATE OF SURVEY	June 28 - July 10, 1983

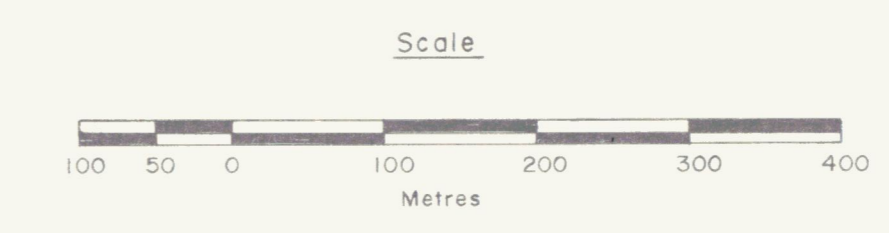


REVISED	CASSIAR CREEK	
	MAGNETOMETER SURVEY	
	B⁺ GRID	
PROJ. No. 912	SURVEY BY: J.M., M.S.	DATE: August - 1983
N.T.S. 1:6 C-B	DRAWN BY: (traced) W.M.R.	SCALE: 1:5000
DWG. No. 3	NORANDA EXPLORATION	
	OFFICE Vancouver	



LEGEND

- INSTRUMENT : Unimag
- FIELD MEASUREMENT : Total
- DATUM : 57000'
- CONTOURS : 100' intervals except for 800',
700' to 1000', 1200', 1400', 1600',
1800', 2000', 2500', 3000'
- OPERATORS : J.M., M.S.
- DATE OF SURVEY : July 1, 2 - 1983



REVISED	CASSIAR CREEK	
	MAGNETOMETER SURVEY	
	C GRID	
PROJ. No. 912	SURVEY BY: J.M., M.S.	DATE: Sept-1983
N.T.S. 1:16 C-B	DRAWN BY: W.M.R. (traced)	SCALE: 1:5000
DWG No. 4	NORANDA EXPLORATION	
	OFFICE: VANCOUVER	