

MAP NO.	ASSESSMENT REPORT	X	DOCUMENT NO.:	092655
	PROSPECTUS		MINING DISTRICT:	WATSON LAKE
	CONFIDENTIAL	X	TYPE OF WORK:	GEOPHYSICAL
105 F 16	OPEN FILE			

REPORT FILED UNDER: Noranda Exploration Company, Limited

DATE PERFORMED:	September, 1988	DATE FILED:	December 5, 1988
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LOCATION:	LAT.:	61°48'N	AREA:	Bruce Lake
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	LONG.:	132°03'W	VALUE \$:	6,000.00
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CLAIM NAME & NO.: LS 1-60 YB01352-411; LUKESHANE 3-13, 38-40, 42-48 YA71081-91, YA71116-18, 20-26

WORK DONE BY: H. Copland

WORK DONE FOR: Noranda Exploration Company, Limited and A. Carlos (owner)

DATE TO GOOD STANDING	REMARKS:
	#43 BRUCE LAKE Ground magnetometer surveys (1:5000 scale) in the northeastern and southwestern claims delineated
	1) two small buried ultramafic bodies (?) and a small shallow magnetic source; and 2) an east-southeast trending structure and an area of folded ultramafics (?), respectively.

GEOPHYSICAL REPORT

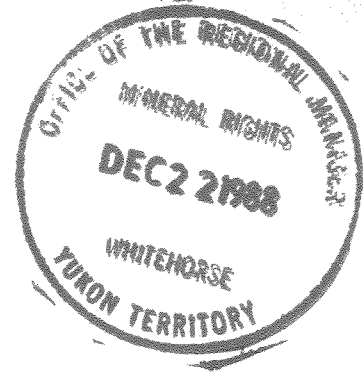
on the

LUKESHANE PROPERTY

LS 1 - 60 CLAIMS

Watson Lake Mining Division

N.T.S.: 105 F/16
Latitude: 61 48'N
Longitude: 132 03'W



092655

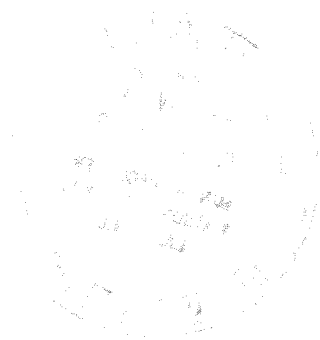


Owned by: A. Carlos
275 Alsek Rd.
Whitehorse, Yukon

H. Copland
November, 1988

Operated by: Noranda Exploration Company, Limited
201 - 107 Main St.
Whitehorse, Yukon

092655



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 \$ 6000.00

D. Demond
Regional Manager, Exploration and
Development, Yukon Department of
Geological Survey, Yukon Territory.

SUMMARY

The Lukeshane property consists of 80 claims located approximately 30km southeast of Ross River on the Robert Campbell Highway. The claims lie along the northeastern boundary of the Tintina Trench in sedimentary and ultramafic units of the Anvil Allochthon. In 1988 a ground magnetometer survey was conducted in order to delineate possible structure and lithologies lying beneath a thick glacial overburden cover. Several structures were detected and some possible ultramafic units were delineated. An expanded program of geophysical surveys (mag, HLEM) is recommended over more of the property.

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CHAPTER ONE: INTRODUCTION

1-1: Introductory Statement

The Lukeshane Property consists of 80 claims located between Bruce Lake and Horton Creek, 30km southeast of Ross River. This report covers geophysics (magnetometer) conducted over a portion of the LS 1-60 claims in September 1988.

1-2: Location & Access (see figs. 1,2,3)

The property is located near the Pelly River at Bruce and Nickel Lakes 30km southeast of Ross River (NTS 105 F/16, Lat.; 61 48'N, Long.; 132 03'W). The Robert Campbell Highway passes through the northwestern boundary of the claim block. Access into Nickel Lake and the centre of the property is via a 4WD road and cat trail off the highway.

1-3: Topography & Vegetation

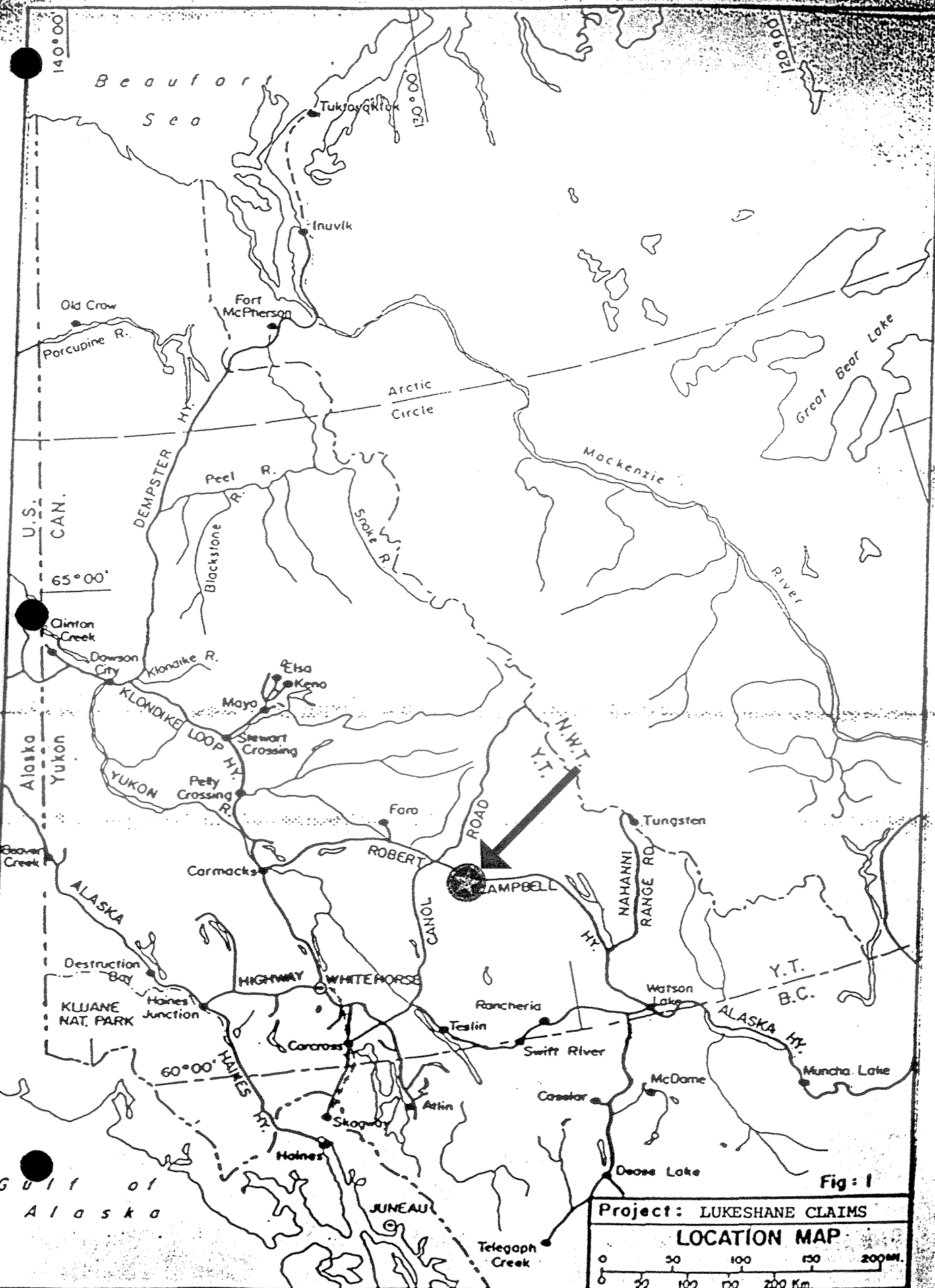
The claims lie just northeast of the St. CYR Range of the Pelly Mountains, in the Pelly River Valley. Topography is gentle with a maximum variation in elevation from 915 metres in the southwest to 820 metres at Bruce Lake.

Vegetation is predominately spruce with minor stands of aspen and birch. Evidence of old fires can be seen throughout the property.

1-4: Claim Definition (see fig. 4)

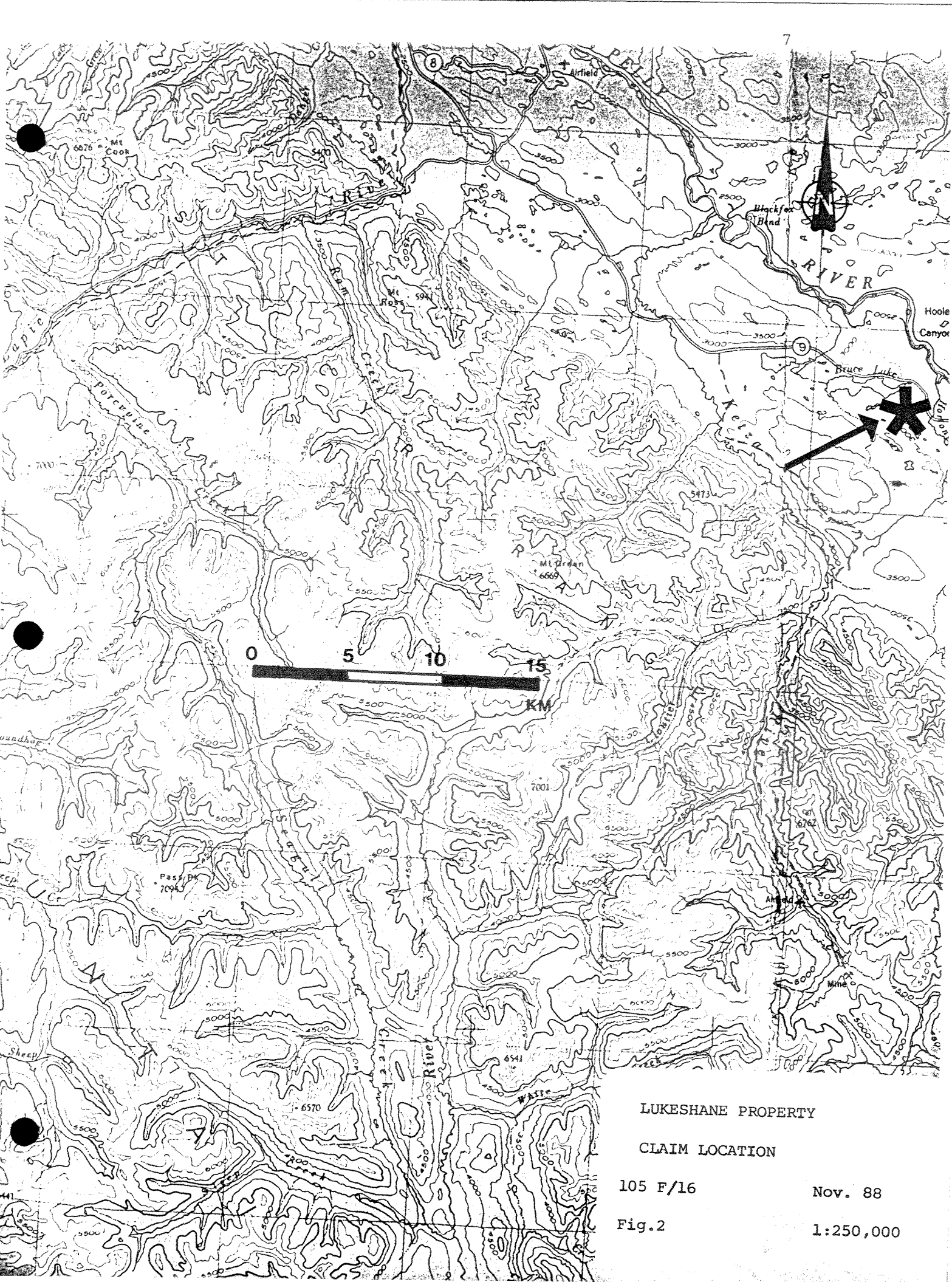
The Lukeshane property consists of the following claims:

<u>CLAIM NAME</u>	<u>GRANT NO.</u>	<u>RECORDED</u>	<u>ANNIVERSARY</u>
Lukeshane 3 - 13	YA71081 - 71091	June 84	Dec. 14/90
" 38 - 40	YA71116 - 71118	"	"
" 42 - 48	YA71120 - 71126	"	"
LS 1 - 60	YB01352 - 01411	Sept. 17/87	Sept. 17/89



Project: LUKESHANE CLAIMS
LOCATION MAP
 0 50 100 150 200 MI.
 0 50 100 150 200 Km

Fig: 1



LUKESHANE PROPERTY

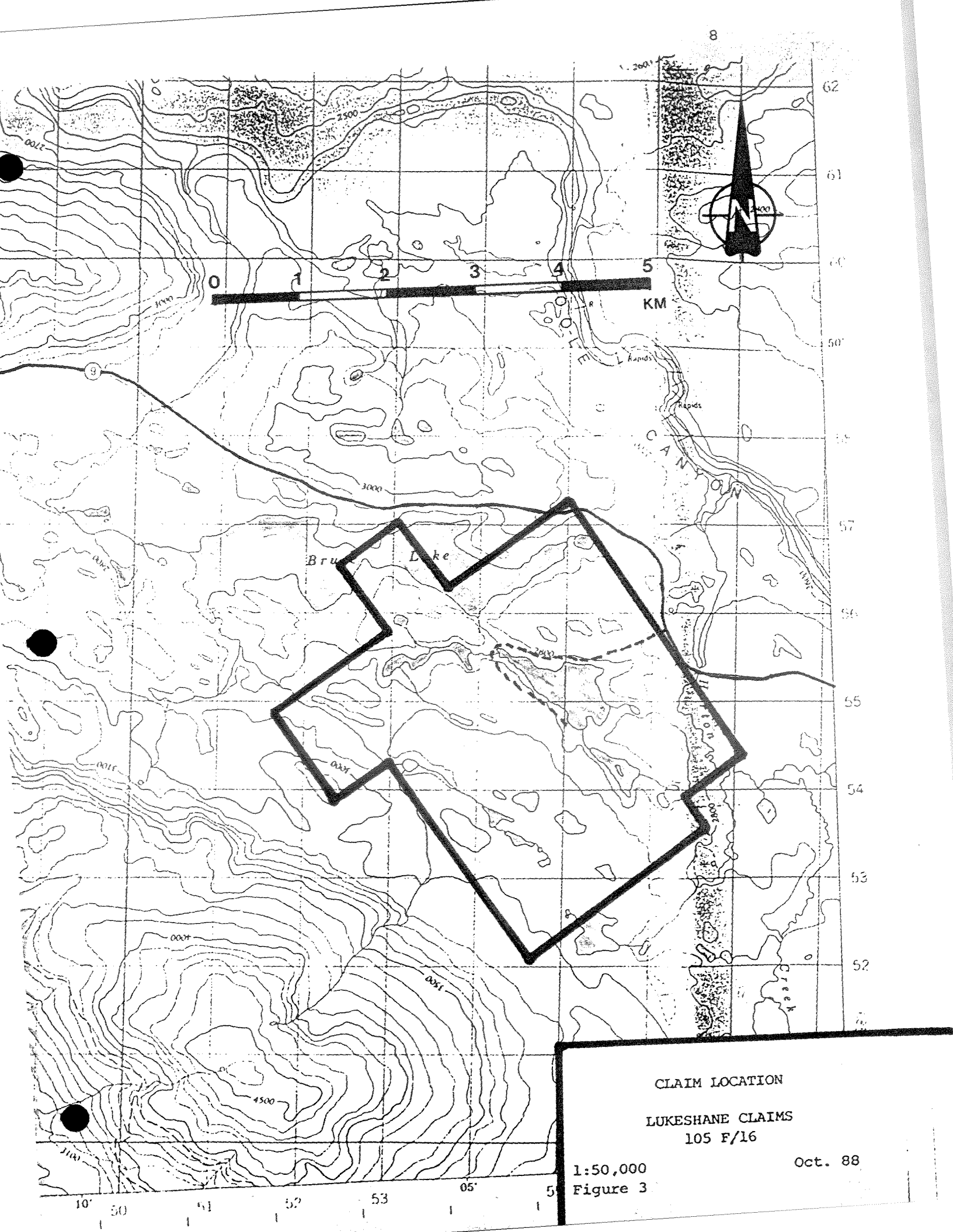
CLAIM LOCATION

105 F/16

Nov. 88

Fig.2

1:250,000

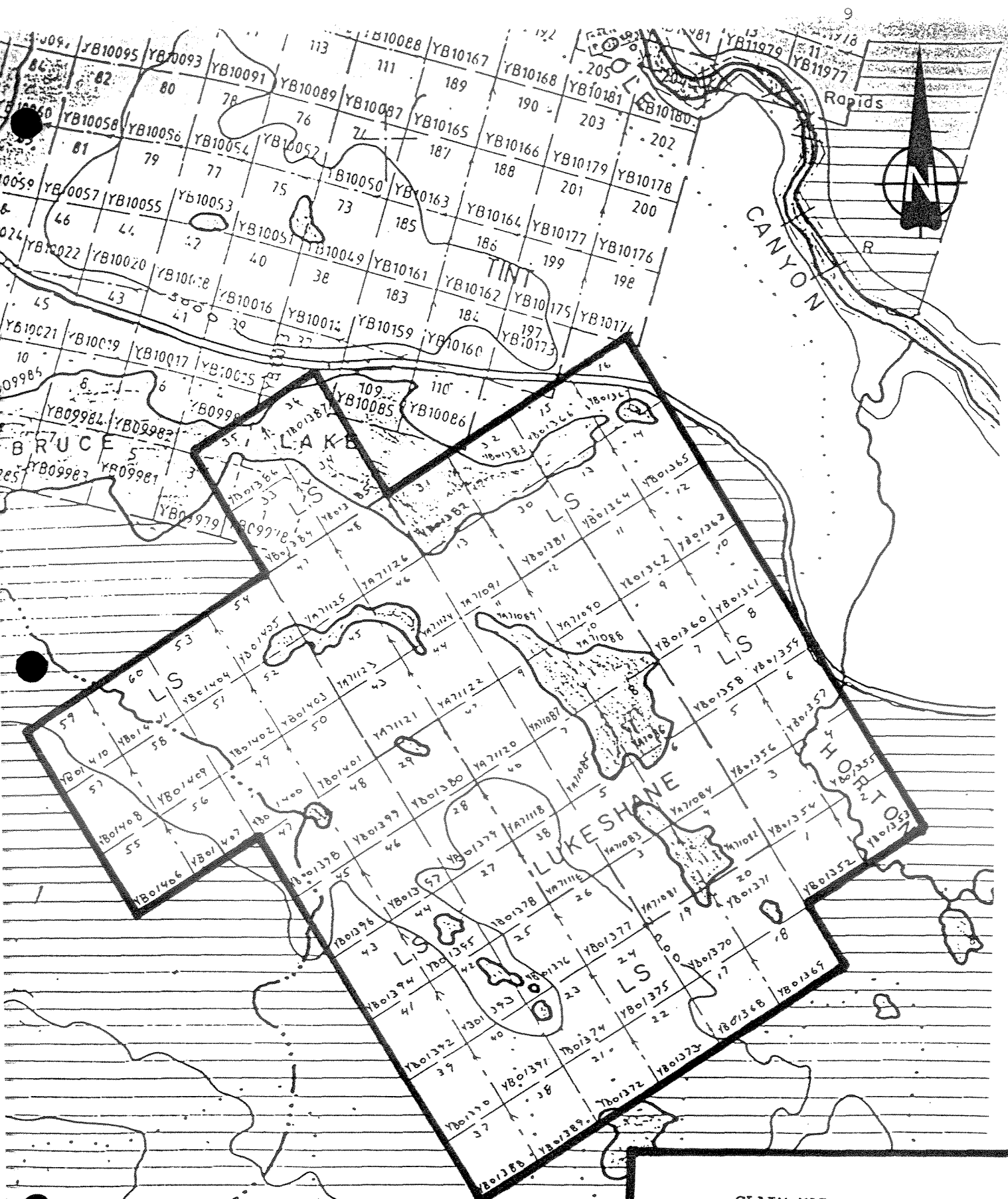


CLAIM LOCATION

LUKESHANE CLAIMS
105 F/16

1:50,000
Figure 3

Oct. 88



CLAIM MAP

LUKESHANE CLAIMS

1:30,000
Figure 4

Oct. 88

This report covers only the LS 1 - 60 claims and the above anniversary is contingent on the acceptance of this report.

1-5: History

The property was staked as MAG claim (86401) in April 1963 by Newmont following the release of GSC aeromag maps. Newmont conducted further airborne mag and EM surveys and prospected the adjacent area in 1963. Old pits and claim posts were found on Horton Creek, about 200 feet north of the highway.

The property was restaked in June 1965 as SAS claim (89119) by Frobex L (British Met Can L, Conwest and McIntyre Porcupine ML), which drilled three holes (827 feet) in 1966, formed a new company to develop the claims (Bruce Lake ML) and drilled four holes (1429 feet) in 1968 in a joint venture with Augustus EL. The drilling was conducted over EM and mag anomalies on the north side of Nickel Lake. They intersected disseminated sulphides in siliceous sediments intruded by a serpentinized peridotite sill. Best intersection reported was 0.39% Cu and 0.52% Ni over less than 1 metre.

Prospecting by A. Carlos of Whitehorse turned up chalcidonic and brecciated quartz float on the shores of Nickel Lake in the spring of 1984 and staked the Lukeshane claims. VLF and magnetometer surveys were subsequently conducted along with some bulldozer trenching in 1987. The LS claims were added in 1987 to protect adjacent ground.

1-6: 1988 Work Program

During the period September 11 - 16/88 approximately 41km of grid were established on the LS claims and a ground magnetometer survey carried out.

The following personnel were involved:

Gordon MacKay	Field Geologist	Whitehorse
Bruce Bark	Field Geologist	Peterborough

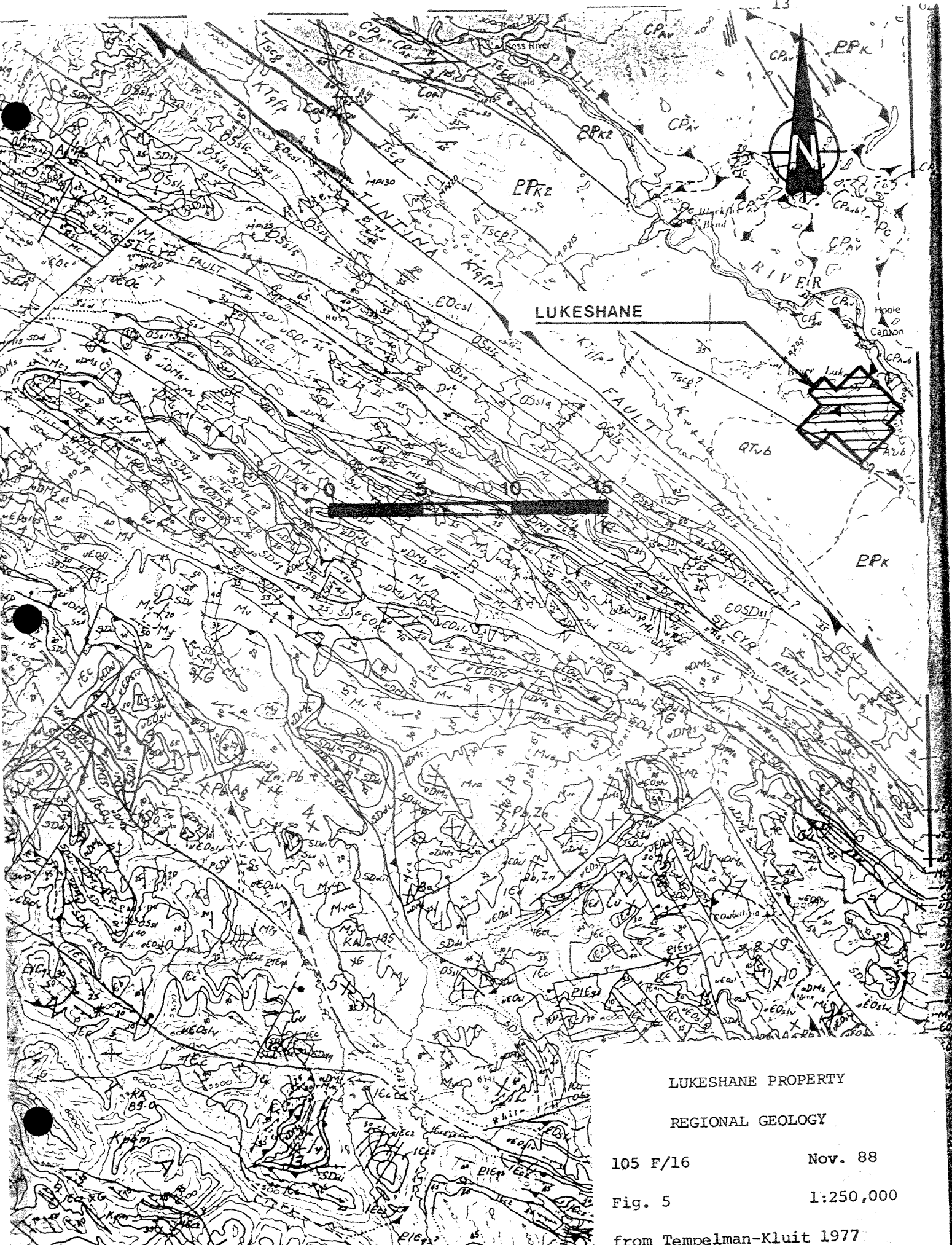
Jung Hofer	Field Assisstant	Whitenorse
Kim Rogers	" "	
Steve Keizer	Geophysical Technician	Vancouver
John Weir	" "	" "

CHAPTER TWO: GEOLOGY

2-1: Regional Geology (see fig. 5)

The claims lie along the northeast boundary of the Tintina Trench, a large transcurrent Tertiary-Cretaceous fault system. The trench in this area separates two tectonic terranes, the Pelly-Cassiar to the southwest, and the Anvil Allochthon to the northeast. The Pelly-Cassiar terrane consists largely of phyllite, argillite, and chert of the Kechika Group whereas the Anvil terrane comprises mafic flows and tuffs. The Anvil units are thought to be allocthonous (Templeman-Kluit, 1977). Also present in the claim area are allocthonous units of Klondike Schist (quartz-chlorite phyllites) in a structurally complex sequence with the other units, northeast of the trench.

Within the Tintina Trench itself post and/or syn-tectonic units predominate namely sandstone, conglomerate and shale with minor coal beds and a clay altered quartz feldspar porphyry rhyolite. Fresh looking basalts appear to be the youngest units in the area (Tertiary-Quaternary).



LUKESHANE PROPERTY
 REGIONAL GEOLOGY
 105 F/16 Nov. 88
 Fig. 5 1:250,000
 from Tempelman-Kluit 1977

TABLE OF FORMATIONS

(adapted from Templeman - Kluit 1977)

TERTIARY

QTub: basalt

Tscg: sandstone, conglomerate, shale

Tgfp: quartz-feldspar porphyritic rhyolite

CARBONIFEROUS & PERMIANCPav: ANVIL ALLOCHTHON - amphibolite, greenstone, basalt, gabbro

CPas: serpentinite

CAMBRIAN & ORDOVICIANUEOs1: KECHIKA GROUP - phylliteAGE UNKNOWNPPK: KLONDIKE SCHIST

2-2: Property Geology

The majority of the property owing to its low topography is covered by thick glacial overburden. Little or no outcrop has been located to date. Previous drilling has revealed sediments probably belonging to the Anvil Allochthon which have been silicified and intruded by ultramafics of unknown age. Ultramafic float has also been observed on surface on various parts of the property.

Chalcedonic quartz, quartz breccia and brecciated siliceous sediments have been observed in float on the lakeshore. These are assumed to be coming from a large structure (Danger Creek Fault) running beneath the lake. Silicification and brecciation is assumed to be associated with movement along the Tintina Fault.

CHAPTER THREE: GEOPHYSICS

3-1: Procedure

Two grids were established on the LS claims (see fig. 6) for a total of approximately 41 line-km. Line spacing on the grids was 100 metres. Two EDA Total Field proton magnetometers and a base station were utilized. Readings were taken every 12.5 metres on the lines.

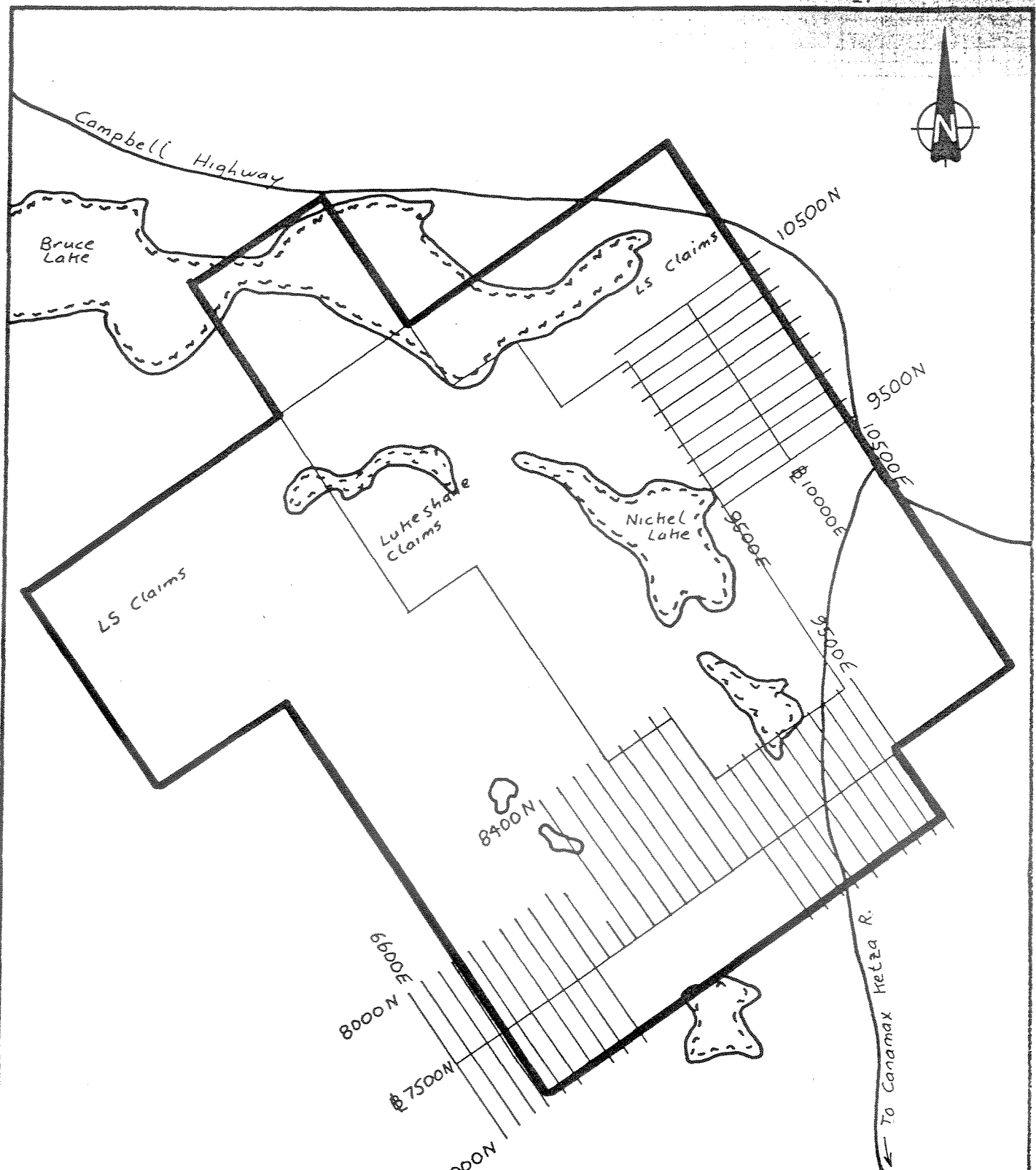
3-2: Results (from Bradish, 1988) (see figs 7,8,9)LUKESHANE 1 GRID:

The data on this grid has mapped two small buried 'plugs' centered at approximately 9850N/10425E and at 10150N/9650E with the latter plug being elongated in an east-west direction. A small magnetic source at (near) surface is also mapped at L.9600N/9675E. These three features are the most prominent magnetic signatures and produce the overall magnetic overprint which is seen as the uniform magnetic gradient. For the most part the magnetic response of the survey area is exceptionally low and uniform (seds?).

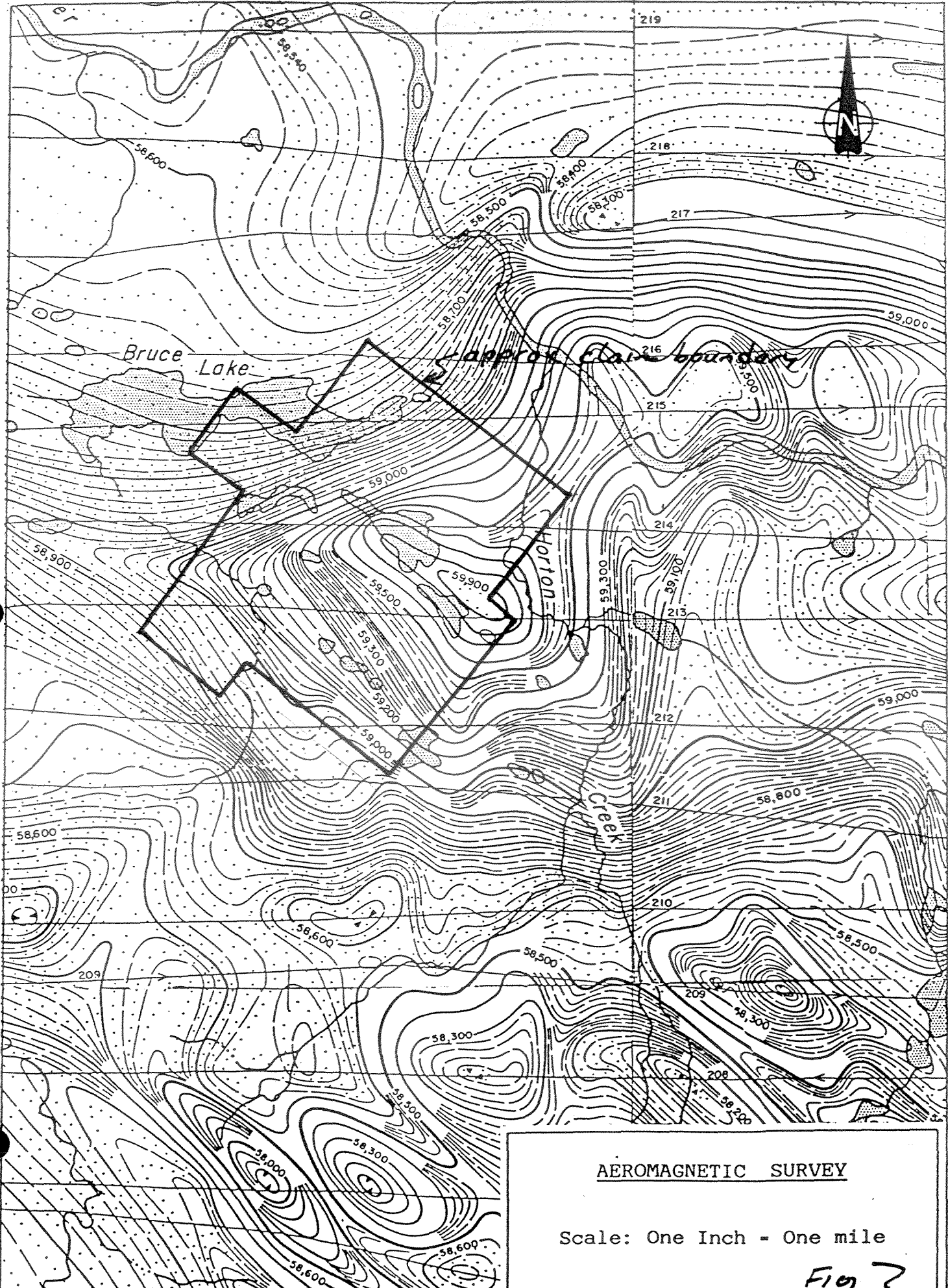
LUKESHANE 2 GRID

This grid covers a larger area than above and it is clear that the underlying geology is somewhat different from that inferred from the Lukeshane 1 grid.

Several signatures are evident within this data set however for the most part it appears from the 'smooth' nature of the contours that the sources occur well below the ground surface. One exception to this is the oval shaped zone of high frequency mag centred at 6900E/7600N which suggests that it may be a bedrock (or topo) high of different magnetic



REVISED	LUKESHANE	
	GRID LOCATION	
PROJ. No. <u>312</u>	SURVEY BY: <u>GM, AB, KR, JH</u>	DATE: <u>Sept. 88</u>
N.T.S. <u>1:50,000</u>	DRAWN BY: <u>HE</u>	SCALE: <u>1:30,000</u>
DWG. No.	NORANDA EXPLORATION	
6	OFFICE: <u>Whitehorse</u>	



AEROMAGNETIC SURVEY

Scale: One Inch - One mile

Fig 7

susceptibility.

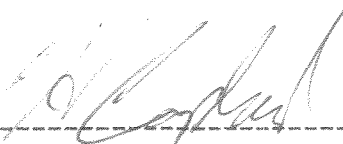
The magnetics also describe a somewhat sinuous nature to the underlying geology and which are of high magnetic susceptibility. A possible source that would 'fit' the data would be narrow, folded ultramafics. In particular the sinuous nature is observed over the grid east section of the grid.

A possible (fault) structure may be interpreted approximately between L.8500E/8200N and L.7200E/7625N, striking with an azimuth of about 110 degrees.

CHAPTER FOUR: CONCLUSIONS & RECOMMENDATIONS

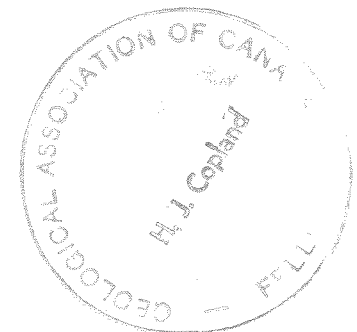
Geophysics remain as the best initial exploration tool in this area due to the lack of outcrop and thick glacial blanket which hinders geochemistry. In addition the major structure of interest lies beneath Nickel Lake. The short 1988 mag survey indicated that the mapping of significant structure and to some extent geology is possible with this method. It is recommended that an expanded mag and HLEM survey be conducted during the winter to cover the entire claim block.

Respectfully submitted by;



Hugh Copland

Project Geologist



ASSESSMENT COST STATEMENT

1) LABOUR		
a) Field - grid establishment	16md X \$150/day	\$2,400.
- mag survey	6md X \$150/day	900.
b) Office - report writing	1md X \$150/day	150.
- geophysical data entry	1md X \$150/day	150.
- secretarial	1 d X \$150/day	<u>150.</u>
	SUBTOTAL	\$3,750.
2) FOOD & ACCOMODATION (field)		
	16md X \$50/day	\$ 800.
3) VEHICLES		
a) Rental	5 days X \$50/day	250.
b) Gas & Oil		<u>200.</u>
	SUBTOTAL	\$ 450.
4) MISCELLANEOUS		
a) Computer Plotting Time		\$ 400.
b) Mag rentals	6 days X \$100/day	<u>600.</u>
	SUBTOTAL	\$1,000.
	TOTAL	\$6,000.

SELECTED REFERENCES

Bradish, L.

1988: Lukeshane Magnetometer Survey, Noranda Exploration Company Limited, internal memo.

Carlos, A.

1985: Property Report on the Lukeshane Mineral Claims; unpublished

MacKay, G.C.

1988: Property Examination Report on the Lukeshane Claims, Noranda Exploration Company Limited, internal memo.

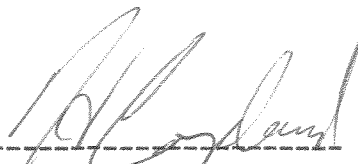
Templeman-Kluit, D.J.

1977: Geology of The Quiet Lake (105 F) and Finlayson Lake (105 G) Map Sheets, GSC of 486.

STATEMENT OF QUALIFICATIONS

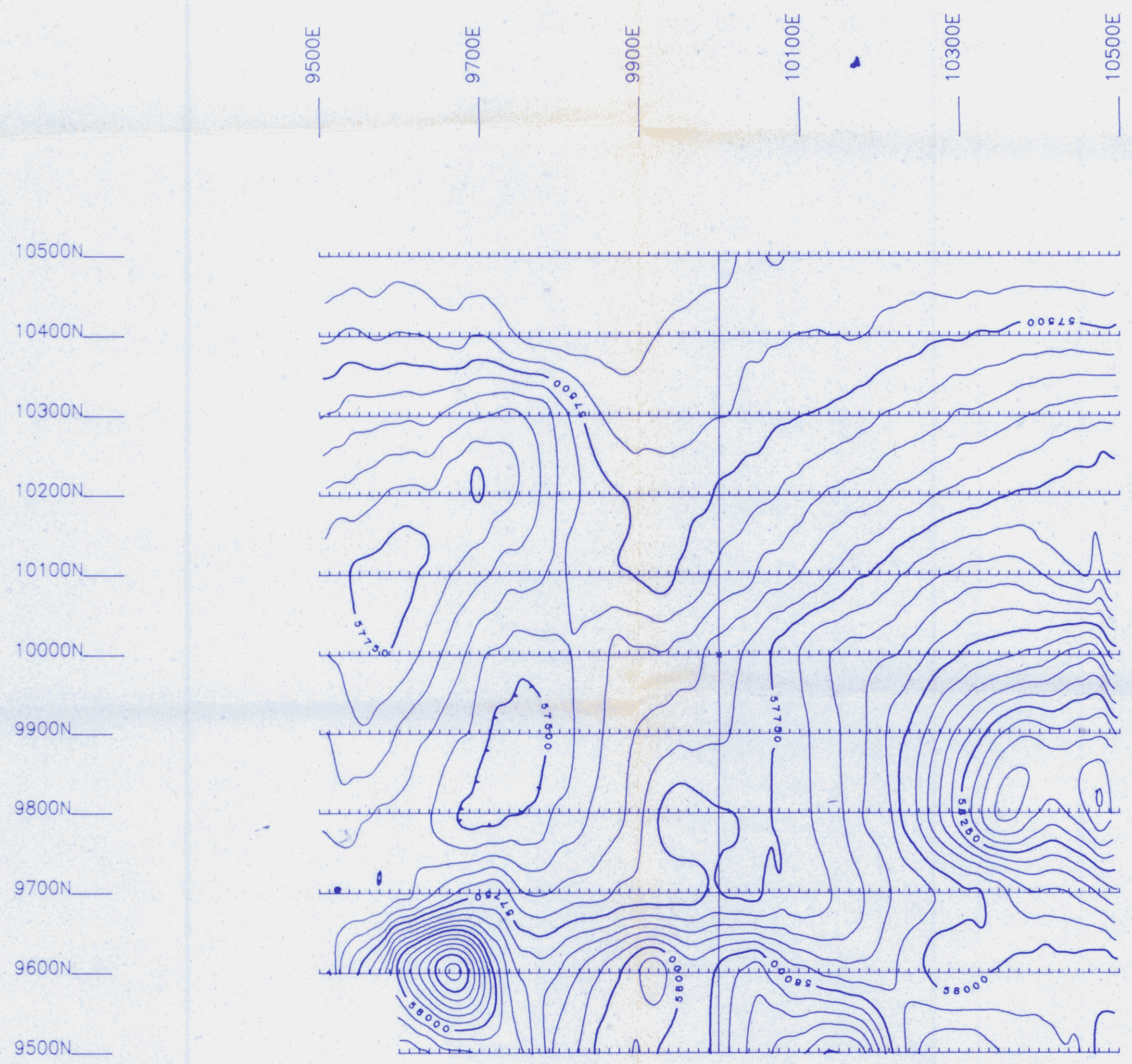
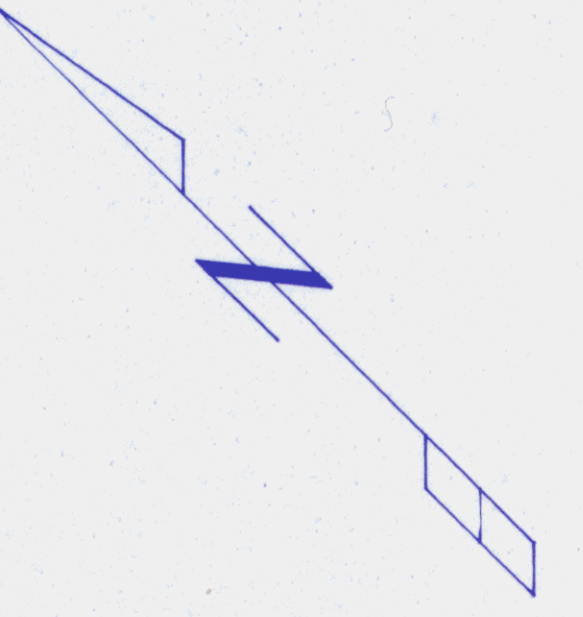
I, Hugh Copland of the City of Whitehorse, Yukon, do hereby certify that:

1. I have been an employee of Noranda Exploration Company Limited (NPL) in Whitehorse since May, 1985.
2. I am a graduate of the University of British Columbia with a B.Sc. in Geology and of McMaster University, Hamilton, Ontario with a B.Eng..
3. I am a member of the Yukon Professional Geoscientist Society, and a fellow of the Geological Association of Canada.
4. I supervised work on the claims during 1988.



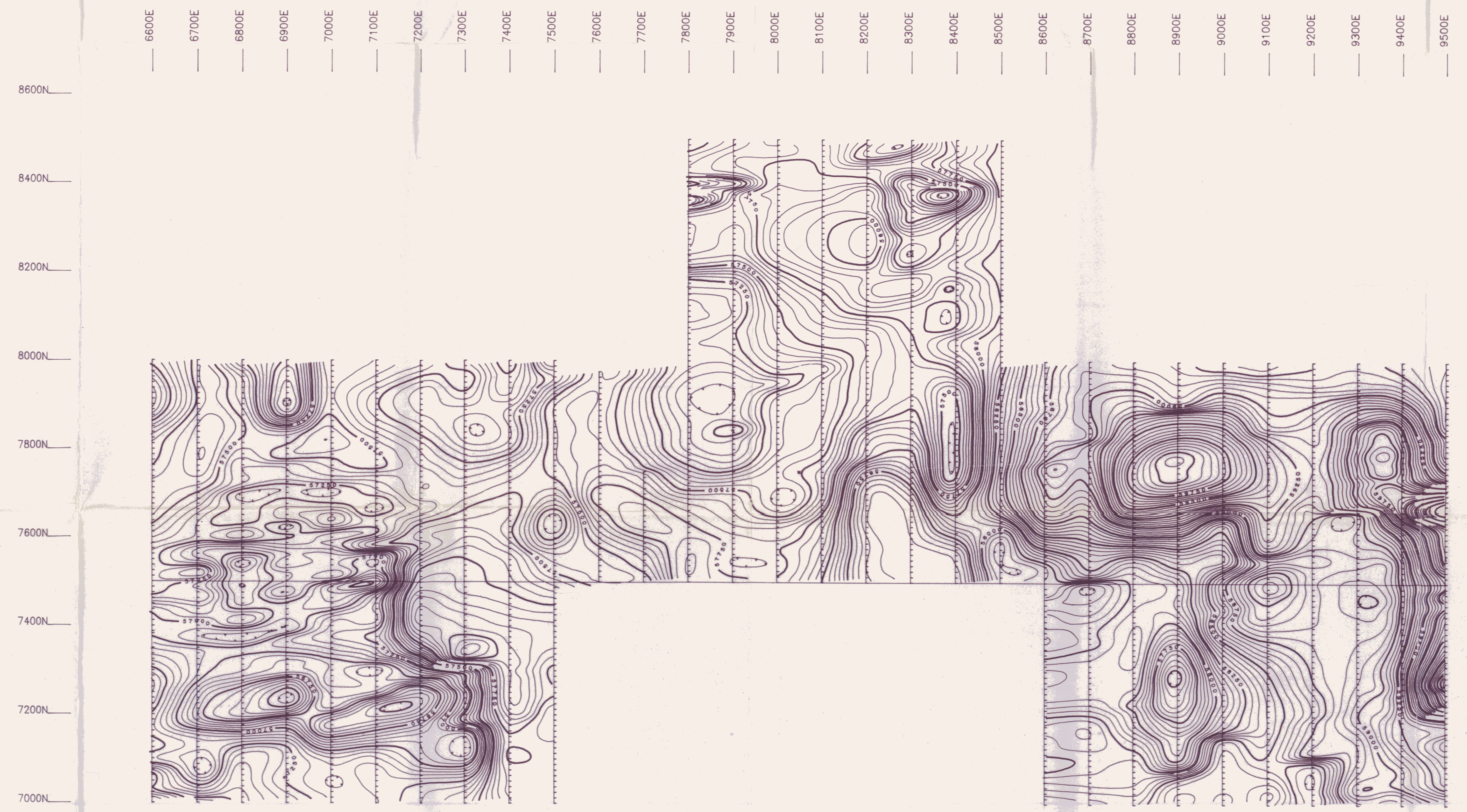
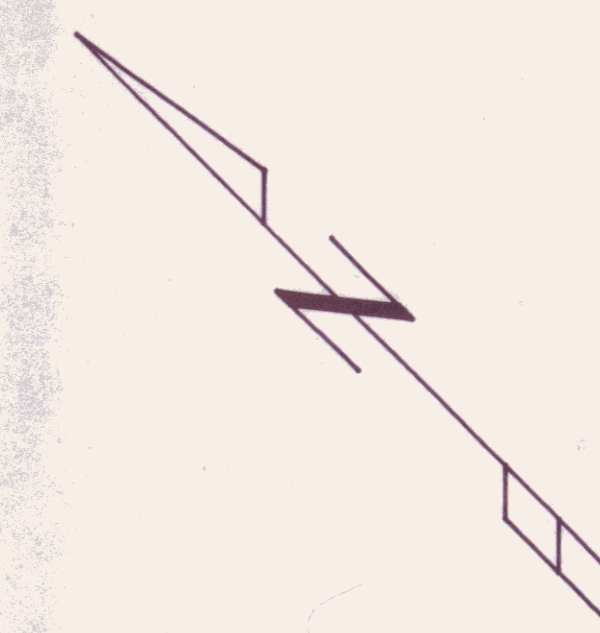
Hugh Copland
Project Geologist





Instrument	: EDA MAG
Field	: TOTAL
Datum	: 0.0 nT
Contour Interval	: 50 nT
Conductor Axis	:

LUKESHANE 1
MAGNETOMETER SURVEY
PROJECT: LUKESHANE1 PROJECT # : 312
BASELINE AZIMUTH : 135 Deg.
SCALE = 1 : 5000 DATE : 9/15/88
SURVEY BY : J.D.W. NTS :
FILE: M312GRI **092655**
NORANDA EXPLORATION



BASELINE 135°

Instrument	: EDA MAG
Field	: TOTAL
Datum	: 0.0 nT
Contour Interval	: 50 nT
Conductor Axis	:

100m 50m 0m 50m 100m

LUKESHANE2

MAGNETOMETER SURVEY

092655

PROJECT: LUKESHANE2 PROJECT # : 312
 BASELINE AZIMUTH : 135 Deg.

SCALE = 1 : 5000 DATE : 9/15/88
 SURVEY BY : S.K.\J.D.W. NTS :
 FILE: M312LUK
NORANDA EXPLORATION

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