

MAP NO.: ASSESSMENT REPORT X  
115 F 15 PROSPECTUS X  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 092525  
MINING DISTRICT: Whitehorse  
TYPE OF WORK: GEOCHEMICAL

REPORT FILED UNDER: Lodestar Exploration Inc.

DATE PERFORMED: June 18 - October 16, 1987 DATE FILED: September 21, 1988

LOCATION: LAT.: 61<sup>0</sup>57'N AREA: White River  
LONG.: 140<sup>0</sup>32'W VALUE \$: 9,200.00

CLAIM NAME & NO.: CT 1-17 (YA97527-543); (CI 18 YB08539)  
WR 1-16 (YA97560-YA97575); (WR 17-26 YB08517-YB08526)

WORK DONE BY: G.S. Davidson

WORK DONE FOR: Lodestar Exploration Inc.

DATE TO GOOD STANDING:

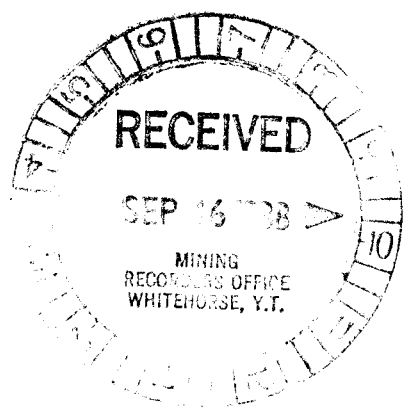
REMARKS: Adjacent to #33 CANALASK  
In 1988, magnetometer and VLF-EM surveys were carried out. Four strong VLF-EM conductors coincident with magnetic lows trend 120 across the WR claims.

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EXPLORATION REPORT  
on the  
**CT and WR CLAIMS**  
White River Area  
Whitehorse Mining District



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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 \$ 9200.00.

*J. J. Greener*

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

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EXPLORATION REPORT  
on the  
**CT and WR CLAIMS**  
Lat. 61° Long 140° 32'  
N.T.S. 115 F-15  
Whitehorse Mining District

For:  
**LODESTAR EXPLORATIONS INC.**  
Suite 19 - 4078 Fourth Avenue  
Whitehorse, Yukon

By:  
**G.S. DAVIDSON**  
Consulting Geologist  
17-4078 Fourth Avenue  
Whitehorse, Yukon  
Y1A 4K8

August, 1988

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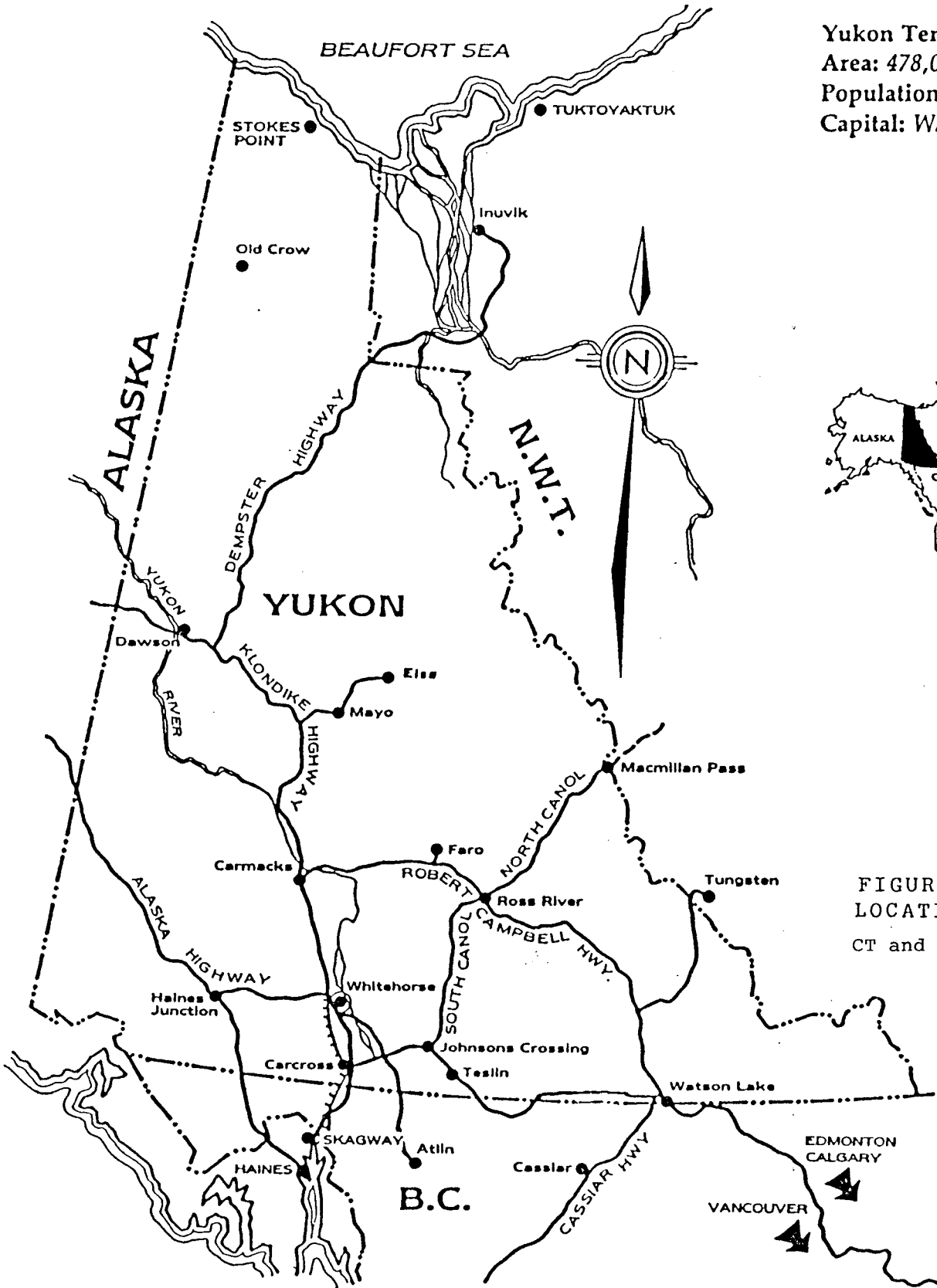
0 3 2 5 2 5

**SUMMARY**

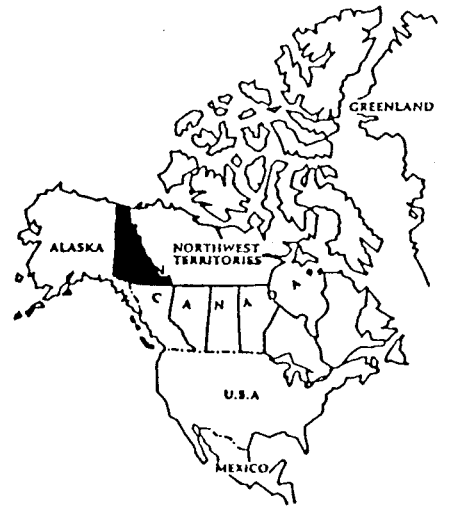
The CT and WR mineral claims (44 claims) are held by Lodestar Explorations Inc. in the White River district of the western Yukon. This report prepared at the request of B. Lueck, President of Lodestar describes line cutting and geophysical surveys performed on the property from March to May, 1988.

The CT and WR claims adjoin the Canalask nickel deposit (Micro claims) which has reserves of 550,000 tons assaying 1.68% nickel. The deposit consists of disseminated and fracture filling pyrrhotite and pentlandite occurring in shattered silicified tuffs in close proximity to a peridotite sill. The tuffs belong to the Permian Skolai Group which also underlies the CT and WR claims.

The magnetometer and VLF-EM surveys on the CT and WR claims described in this report have outlined northwest-southeast trending anomalies. The cause of these anomalies is unclear due to excessive overburden. A program of trenching and geochemistry is recommended to evaluate the geophysical results.



**Yukon Territory**  
 Area: 478,034 sq. km.  
 Population: 25,000  
 Capital: Whitehorse



**FIGURE 1**  
**LOCATION MAP**  
 CT and WR CLAIMS

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## INTRODUCTION

The CT 1-18 and WR 1-26 claims are held by Lodestar Explorations Inc. in the White River area of the Yukon. The claims adjoin the Micro property which contains the Canalask nickel deposit. This deposit discovered in 1952 is presently being reevaluated for its platinum group metal content. Permian volcanic and sedimentary rocks which host this deposit, also underlie the CT and WR claims.

Lodestar Explorations Inc. secured the writer to undertake grid development and geophysical surveys on the property. The work was completed between March 14 and May 30, 1988 and this report describes the results of the exploration program.

## LOCATION AND ACCESS

The claims are located on the east bank of the White River, south of Mile 1168 on the Alaska Highway and 40 km south of the town of Beaver Creek on NIS Map Sheet 115 F-15. Geographical coordinates are 61° 57' north and 140° 22' west. Figure 1 shows the property location.

The property is accessible by a gravel road which connects the Micro property to the Alaska Highway. The road cuts through the CT claims and ends near the Canalask portal. Several cat roads extend from the Micro property onto the WR claims. The total road distance from Whitehorse to the property is 405 km.

## PHYSIOGRAPHY, CLIMATE AND VEGETATION

The claims are situated in the Kluane Range of the St. Elias Mountains close to the Shakwak Valley. The Shakwak Valley is a major structural depression and part of the Denali Fault system. The claims cover low hills and level swampy areas between 730 and 1000 meters elevation. The White River flows along the western margin of the claims, through wide gravel flats. Outcrop is limited to the steep river banks and to slightly higher ground at the southeastern end of the WR claims.

The White River area features a northern interior climate with long cold winters and low annual precipitation. Exploration is possible on a year round basis at the elevations encountered on the WR and CT claims.

Hillsides are covered in fairly thick poplar, birch and spruce trees while level areas are often open and feature grassy hummocks, moss and spotty spruce trees.

## PROPERTY

The WR 1-26 and CT 1-16 mineral claims are registered with the district mining recorder in Whitehorse, Yukon. The claims are held by Lodestar Explorations Inc. under the terms of an option agreement with Harjay Exploration Co. Figure 2 shows the claim plan and claim data is listed in Table 1.

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LODESTAR EXPLORATIONS INC.		
CT-WR CLAIMS CLAIM PLAN		
WHITE RIVER, YUKON TERRITORY		
NTS: 115 F/15-16	TECH: G.D.	DATE: MAR., 1988
SCALE: 1 : 50,000	DRAFTING: J. G. GARDNER JR.	FIGURE: 2

TABLE I

## CLAIM DATA

Claim Name	Grant Numbers	Recording Date	Expiry Date*
CT 1-17	YA97527-YA97543	June 18, 1987	June 18, 1990
CT 18	YB08539	October 16, 1987	June 18, 1990
WR 1-16	YA97560-YA97575	June 18, 1987	June 18, 1990
WR 17-26	YB08517-YB08526	October 16, 1987	October 16, 1990

\*applied for

## REGIONAL GEOLOGY

The White River area south of the Shakwak Valley is underlain by Permian and Triassic sedimentary and volcanic units intruded by granitic and mafic bodies of Upper Triassic and Cretaceous age. The general geology of the district was released in Open File #829 by the G.S.C. The Regional Geology is shown in Figure 3.

The property lies 2 km south of the Denali Fault, the structural division between the Kluane Ranges and metamorphic to plutonic rocks in the Ruby Ranges of the Coast Mountains. In the Kluane Range the Carboniferous to Permian Skolai Group is the most common group. It consists of green cherty tuffs and volcanic breccia of the Station Creek formation and argillite, siltstone greywacke, conglomerate and limestones of the Hansen Creek formation. The Skolai Group is foliated parallel to the Denali Fault and contains, chlorite, pyrite and other base metal sulphide minerals.

Triassic Nikolai greenstone also occurs extensively in the Kluane Ranges. It consists of fine to medium grained mafic flows which weather to a dark green or purple colour.

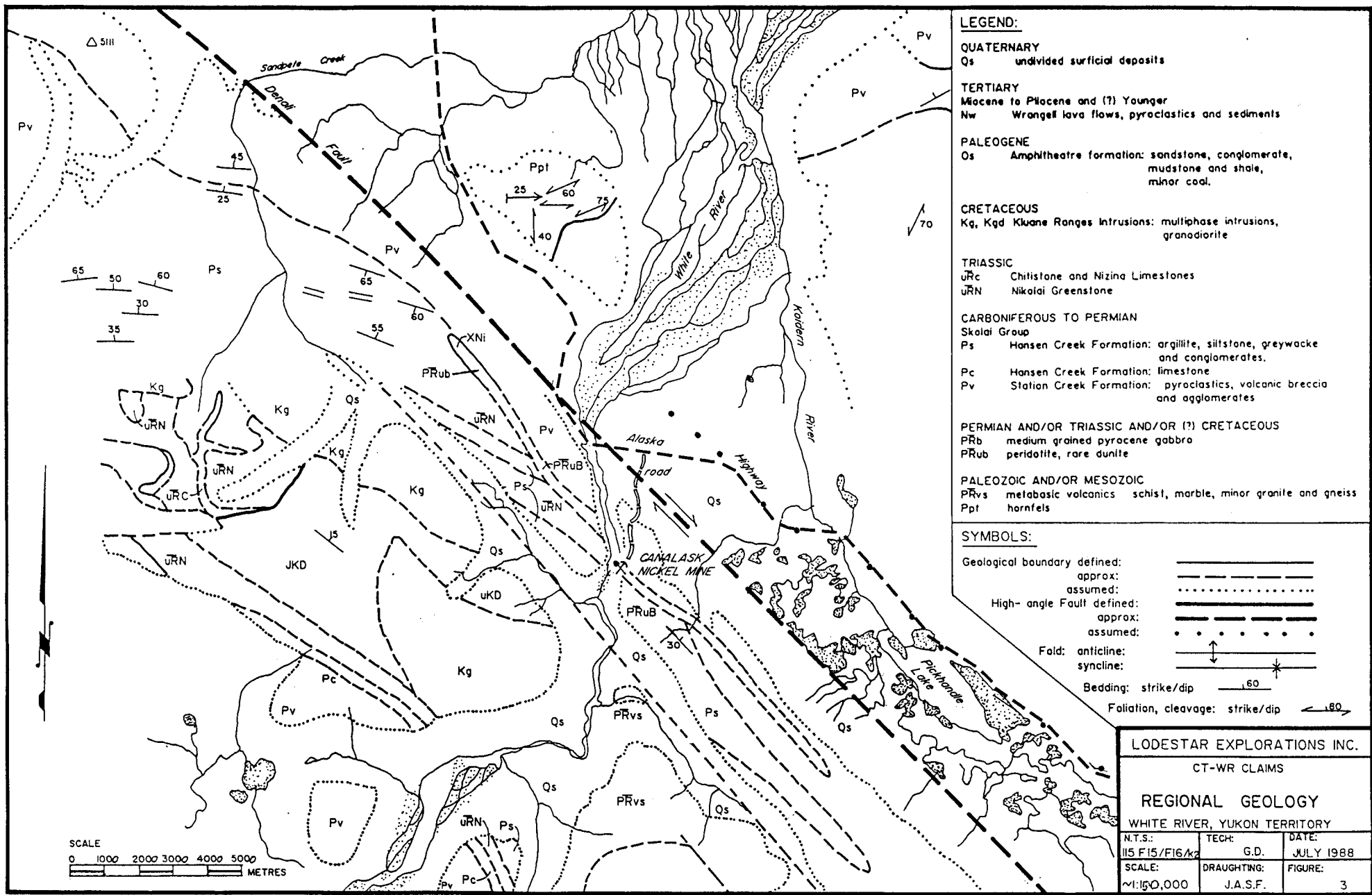
Sills and elongated bodies of peridotite and gabbro occur in the tuffaceous rocks of the Skolai Group. The gabbros, serpentized peridotites and enclosing rocks host nickel and copper mineralization which contain low grades of platinum group metals.

## EXPLORATION HISTORY

The region was first explored in the early 1900's by prospectors looking for the sources of placer copper on the upper White River. One native copper deposit (Canyon City) was discovered in 1905. Limited development work uncovered several large tabular masses of native copper.

In the 1930's, placer miners were active on Sanpete, Pan, Miles and Gold Creeks. Old cabins and sluice boxes mark the areas that were mined.

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In the 1950's, the Kluane Ranges were intensely explored for copper-nickel mineralization. Two deposits, Wellgreen and Canalask, were discovered and developed. Hudson Bay Mining and Smelting Company mined the higher grade Wellgreen deposit from 1959 - 1960. It contained a reported tonnage of 728,000 tons grading 2.05% nickel, 1.42% copper, 0.073% cobalt, 0.038 oz/ton platinum, 0.027 oz/ton palladium and 0.005 oz/ton gold. At the Canalask property, an ore body with reserves of 550,000 tons assaying 1.68% nickel, and 0.04% copper was outlined by surface diamond drilling and underground exploration, however no mining took place.

The CT and WR claim area was originally staked along with the Canalask showing as the General Enterprises group which was acquired by Canalask Nickel Mines Ltd. in 1954. Magnetometer and self potential surveys were undertaken on a cut grid reported to cover most of the 79 claims. In the late 1950's most of the claims were allowed to lapse.

A second surge of exploration activity was underway by the mid 1960s and the Canalask area was restaked as the Micro claims by P. Versluce and Associates. Surface work was undertaken on the Canalask ore body but no significant exploration took place on the surrounding claims.

The recent rise in the price of platinum group minerals has prompted another surge of exploration throughout the Kluane Ranges. Resource companies active in the district include All-North Resources Ltd., Chevron Minerals Ltd., Pak-Man Resources Inc. and Silverquest Resources. Harjay Exploration Ltd. staked the initial CT and WR claims in June 1987.

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## 1988 EXPLORATION PROGRAM

### Introduction

In March, 1988, the writer and a two man linecutting crew initiated work on the CT and WR claims. Preliminary mapping located claim boundaries, roads and existing grids. Cut baselines were established on both claim groups and 25.5 km of slashed cross lines were run at 100 or 120 meter centres. Figures 4 and 5 show the grid plans.

In April, 1988, L. Lebedoff and R. Smith completed a magnetometer survey and in May, 1988 the writer performed a VLF-EM survey on the grids.

### Property Geology

A general lack of outcrop on the claims prevents an accurate interpretation of the geology. The CT claims appear to be underlain primarily by chloritic tuffs, andesites and chert of the Station Creek formation. The tuffs are exposed along the banks of the White River and weather a light grey to green colour. Silicification and pyritization of the tuffs is of varying intensities.

The WR claims are underlain by cherty argillite and greywacke of the Hansen Creek formation and lesser andesite of the Station Creek formation.

### Geophysical Surveys

#### Survey Methods

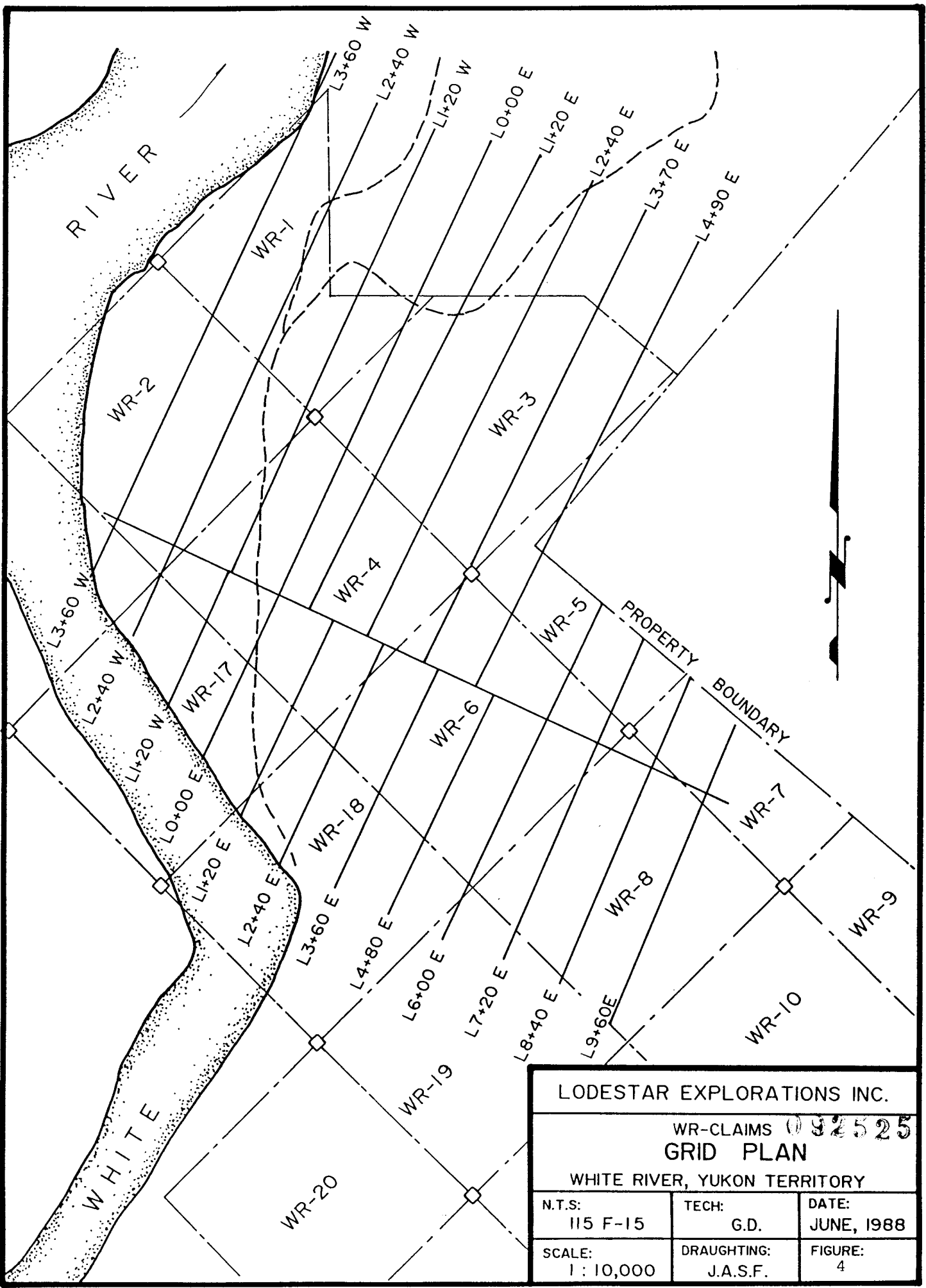
Magnetometer and VLF-EM surveys were performed on the CT and WR grids. A Scintrex FM-3 magnetometer was utilized to measure fluctuations in the total magnetic field. The survey was conducted using the standard method of establishing a magnetic baseline and then proceeding along crosslines, starting and returning to the baseline in a loop pattern. The crossline readings are then corrected relative to the diurnal magnetic variation.

The VLF-EM survey was performed using an EDA Omni Plus instrument set to measure VLF frequencies transmitted from Jim Creek, Washington State (24.8 KHz) and from Lualei, Hawaii (23.4 KHz). The orientation of the signal from the Jim Creek station was best suited for the survey area. The VLF data was Frazer filtered to produce a contour plan.

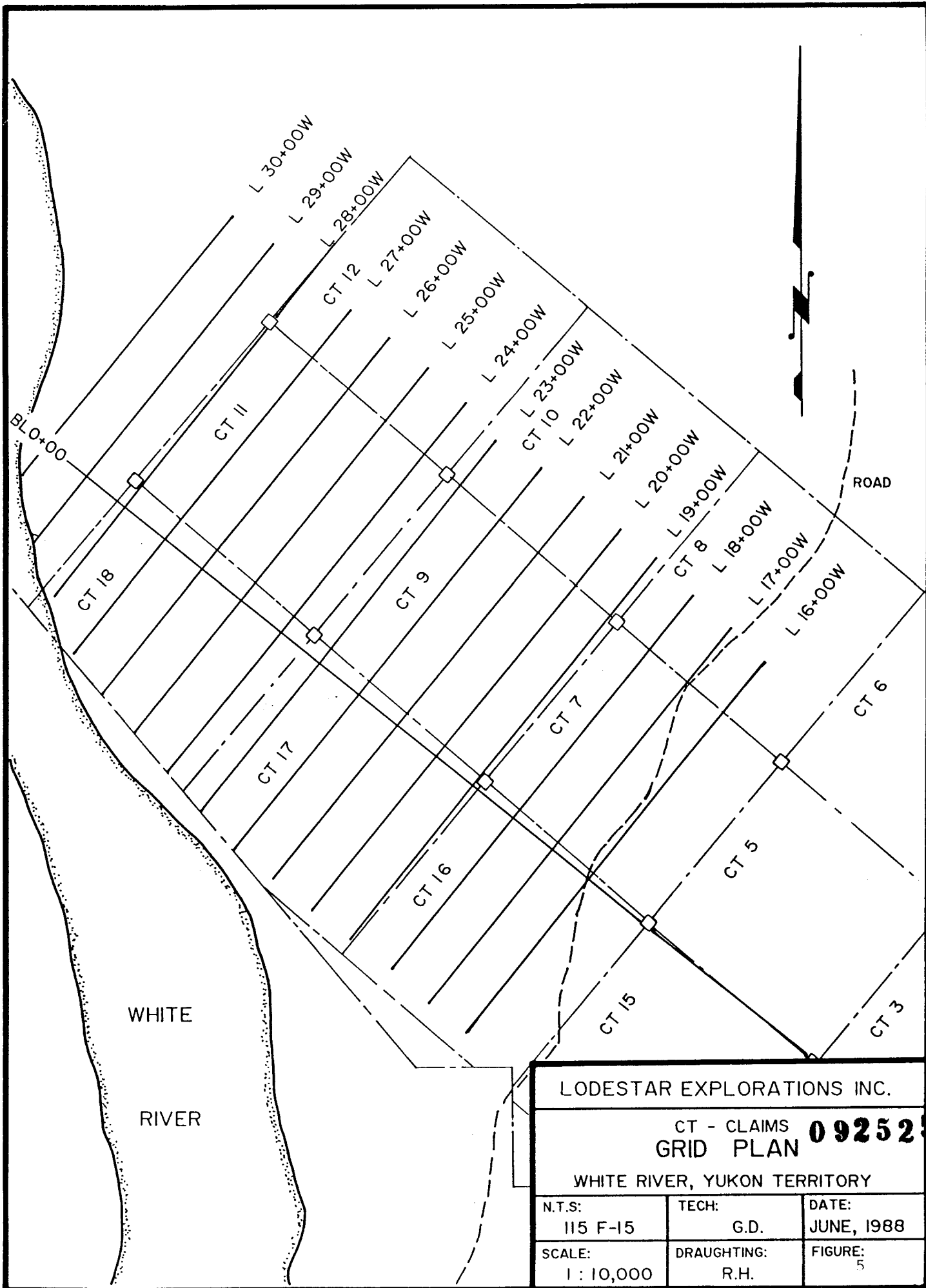
#### Magnetometer Survey Results

Contour magnetometer plans of the CT and WR claims are presented in Figures 6 and 7. The total magnetic field in the area ranges from 57,000 to over 60,000 gammas. The 400 gamma contour corresponds to a total field reading of 57,400 gammas.

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LODESTAR EXPLORATIONS INC.		
WR-CLAIMS 092525		
GRID PLAN		
WHITE RIVER, YUKON TERRITORY		
N.T.S: 115 F-15	TECH: G.D.	DATE: JUNE, 1988
SCALE: 1 : 10,000	DRAUGHTING: J.A.S.F.	FIGURE: 4



On the WR grid, a strong magnetic high located just north of the property boundary delineates a sill of serpentized peridotite. This northwesterly trending sill is reported to be 200 m wide and is covered by the Micro claims (the old Canalask Mines property). Several moderate to weak magnetic highs within the WR claims correlate with changes in the Permian volcanic and sedimentary strata. There is a moderate correlation between a series of magnetic lows and VLF anomalies in the western half of the WR grid.

On the CT claims the magnetic environment is relatively flat. One weak northerly trending magnetic high extends over 700 m and several spot highs are overlain by overburden.

### VLF Survey Results

On the WR claims four strong conductors trending 120°, cross the grid. The nature of these anomalies is unclear as the area is covered by overburden. The locations of the anomalies are listed below.

- 1) Lines 3+60W to 4+90E at 11+00S
- 2) Lines 0+00E to 6+00E at 17+50S
- 3) Lines 2+40W to 4+90E between 13+00S and 13+50S
- 4) Lines 6+00E to 9+60E at approx 15+50S

On the CT claims two conductors of moderate strength are located across Lines 21+00W to 24+00W at 7+25N and 9+25N. (See figure 9) The cause of these anomalies is also unknown.

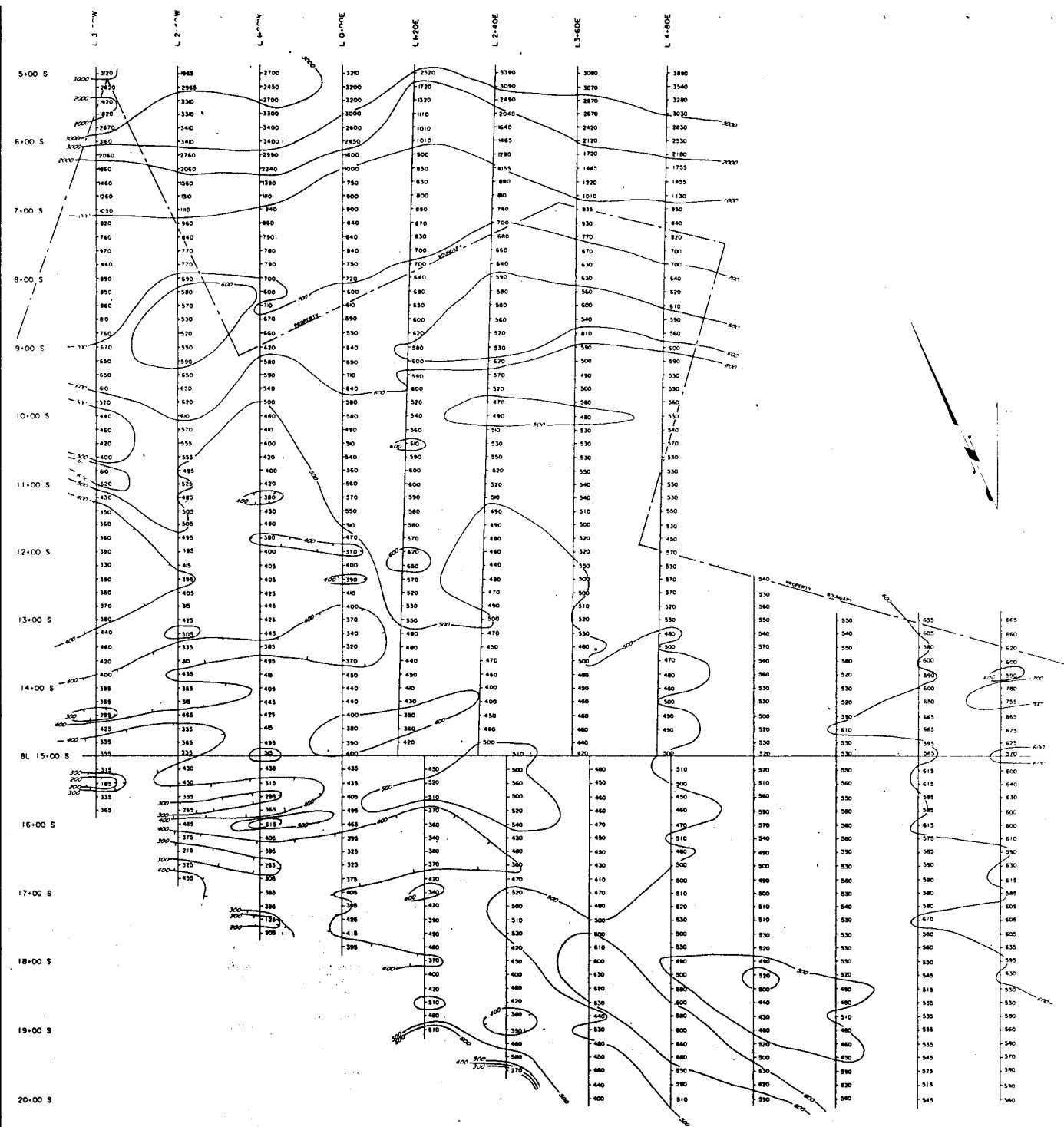
### CONCLUSIONS AND RECOMMENDATIONS

The VLF and magnetometer anomalies located on the CT and WR claims are difficult to interpret due to a paucity of outcrop in the claim area.

The anomalous areas are very accessible and should be soil sampled on the existing grid lines at 25 m intervals. Also if a bulldozer or backhoe is available in the local area several trenches should be excavated across the stronger anomalies.

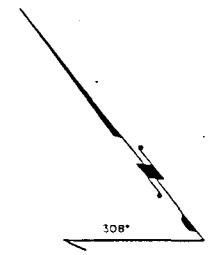
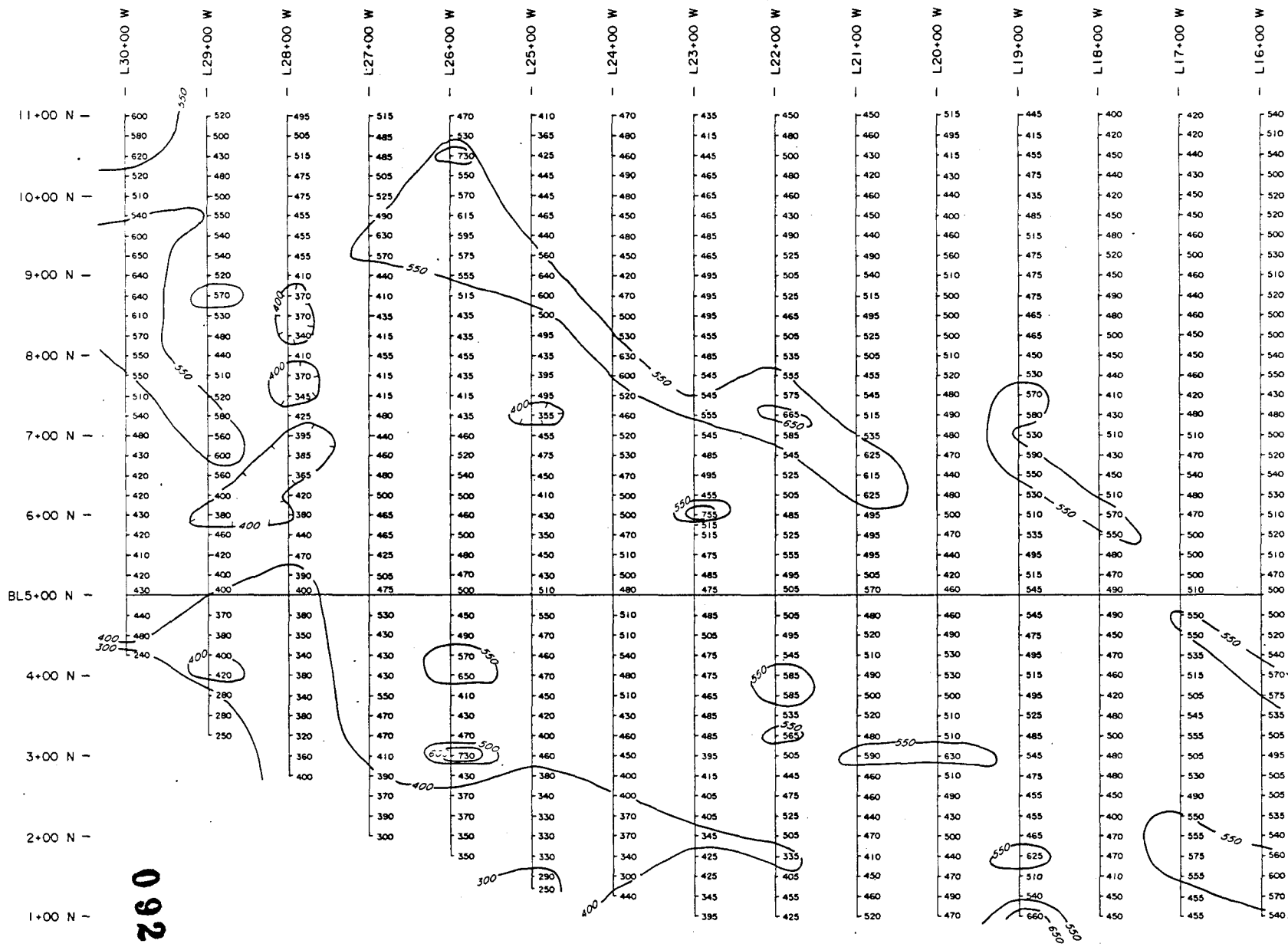
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LEGEND  
 UNITS OF MEASUREMENT  
 1 GAUSS = 100 MILLI GAUSS  
 1000 MILLI GAUSS = 1 GAUSS  
 1000 GAUSS = 1000 MILLI GAUSS

LODESTAR EXPLORATIONS INC		
NW 1-26 CLAIMS		
MAGNETOMETER SURVEY		
WHITE RIVER, KUNMUN TERRITORY		
DATE	BY	SCALE
1958 FEB 10	J. D. CLARK	1:2500
NO. 1	2000	6

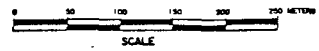


**LEGEND :**

EQUIPMENT : SCINTREX FM-3  
MAGNETOMETER

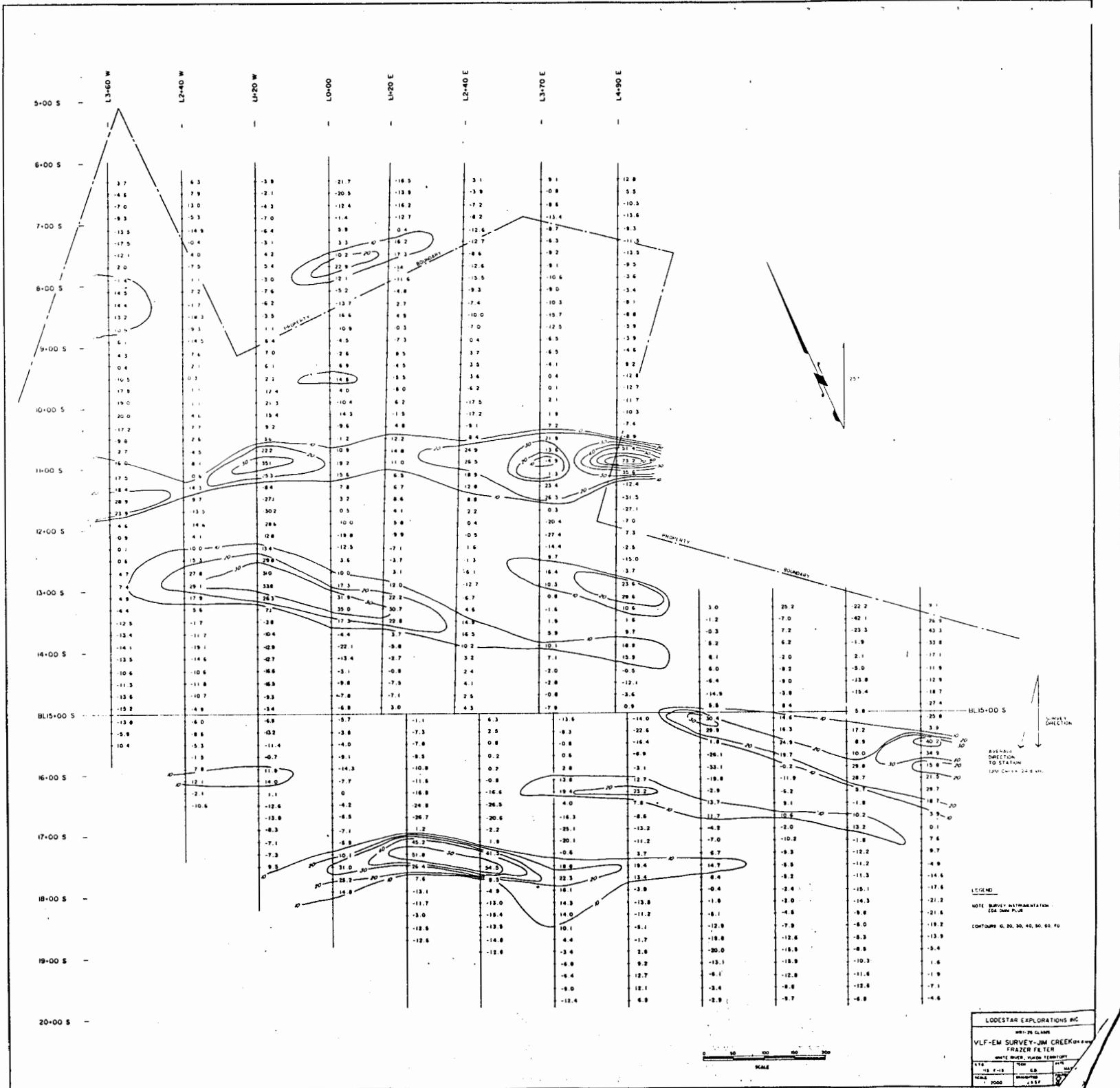
CONTOURS : 300, 400, 550 & 650

MAGNETIC LOWS

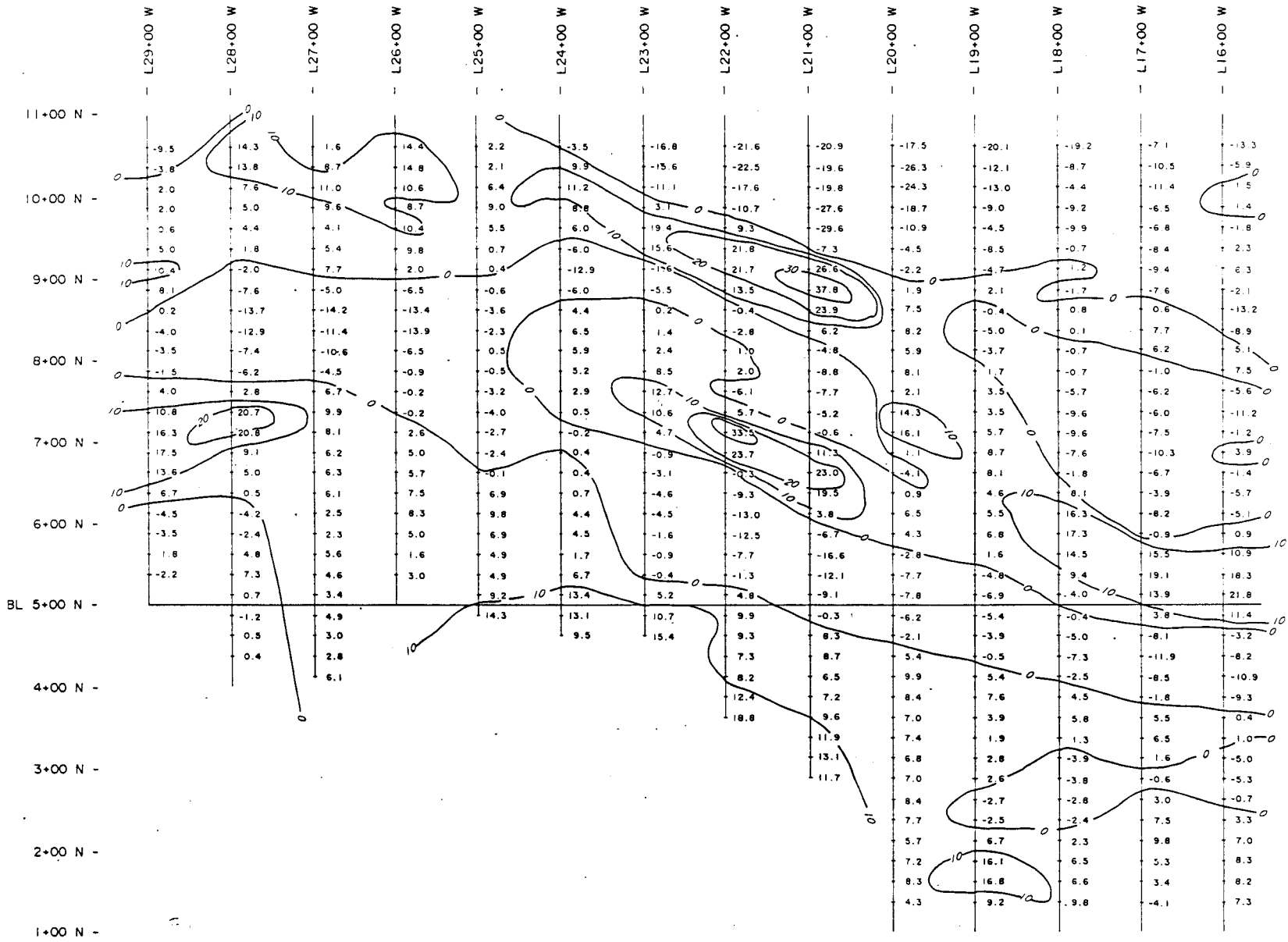


LODESTAR EXPLORATIONS INC.		
CT 1-18 CLAIMS		
MAGNETOMETER SURVEY		
WHITE RIVER, YUKON TERRITORY		
DATE:	TECH:	DATE:
15 F/75	C.D./L./R.S.	MAY, 1988
SCALE:	DRAWN BY:	FILE NO.:
1 : 2,500	R.H.	7

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LODESTAR EXPLORATIONS INC  
 381-26 CLARK  
 VLF-EM SURVEY - JM CREEK  
 FRAZER FALTER  
 WHITE MOUNTAIN TERRITORY  
 1:15 1:15 1:15  
 1:15 1:15 1:15  
 1:15 1:15 1:15  
 1:15 1:15 1:15

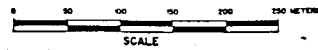


LEGEND  
 INSTRUMENTATION: EDA OMNI PLUS VLF  
 CONTOURS: 0, 10, 20, 30

DIRECTION TO STATION  
 (JIM CREEK)  
 24.8 KHZ

SURVEY DIRECTION

25000



LODESTAR EXPLORATIONS INC.		
CT HIB CLAIMS		
VLF-EM SURVEY-JIM CREEK 24.8 KHZ.		
FRAZER FILTER		
WHITE RIVER, YUKON TERRITORY		
MTA.	TECH.	DATE.
115 F/75	C.D.	MAY, 1988
SCALE	DRAWING	FIGURE
1:2500	04	9

**CERTIFICATE**

I, GRAHAM DAVIDSON, of the City of Whitehorse, in the Yukon Territory, HEREBY CERTIFY:

1. That I am a consulting geologist and that I supervised and participated in the work program described in this report.
2. That I am a graduate of the University of Western Ontario (H.B.Sc., Geology, 1981).
3. That i am registered as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (#42308).
4. That I have been engaged in mineral exploration on a full and part time basis for seven years, of which five have been spent in the Yukon, Northwest Territories and British Columbia.

SIGNED at Whitehorse, Yukon this 31st day of August, 1988.



---

G. S. Davidson, P. Geol.

8:52 E

## STATEMENT OF COSTS

WORK PERIOD: March 14 - May 30, 1988

## CT Claims

Line cutting (13.5 km)	\$4,000.00
Magnetometer survey	1,400.00
VLF survey	1,500.00
	<hr/>
	\$6,900.00

## WR Claims

Line cutting (15.0 km)	4,000.00
Magnetometer survey	1,400.00
VLF survey	1,500.00
	<hr/>
	\$6,900.00

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**REFERENCES**

**Antoniuk, T., 1967:** Report on the Micro Nickel Project

**Campbell, S.W., 1976:** Open File 1976-10; Nickel-Copper Sulphide Deposits in the Kluane Ranges, Y.T.

**Open File #829, 1984:** G.S.C., Geology of 115 F Map Sheet

**Templeman-Kluit, 1973:** Map-16-1973, Geology of the Snag Map Sheet

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