WATSON LAKE M.D.

ASSESSMENT REPORTS

MAP No. 105 F 16 **TYPE OF WORK:** GEOPHYSICAL

REPORT FILED UNDER	Allen Carlos
DATE PERFORMED	March 15 - April 13, 1985 **DATE FILED:** May 2, 1985
LOCATION — LAT.	61°48'N
LONG.	132°03'W
CLAIM Nos.	LUKESHANE 1-48 YA71079-YA71126
WORK DONE BY	A. Carlos
WORK DONE FOR	A. Carlos
REMARKS	According to 1:250,000 geologic mapping by Tempelman-Kluit (1977), the area is covered by Carboniferous and Permian dunite, peridotite and pyroxenite with serpentinized equivalents.

091627

4 x 85 p. '45

In March and April, 1985, two grids were set up for geophysical surveys. Totals of 38.8 km and 6.4 km of VLF-EM respectively were performed on each grid and a small portion of the former was also used for a magnetometer survey.

Two large structures were established with the VLF-EM survey and together with airphoto interpretation indicate the presence of faults trending NNW and NNE respectively. Disseminated graphite in samples of hydrothermal breccia may be the source of the anomalies in these faults.

GEOPHYSICAL REPORT

ON

LUKESHANE 1-48 MINERAL CLAIMS

Watson Lake Mining District
N.T.S. 105-F-16
Latitude 61°48'
Longitude 132°03'

By

ALLEN CARLOS

March 15 - April 13, 1985

091627

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 $ _____.

Regional Manager, Exploration and Geology, for Commissioner of Yukon Territory.

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 $ 7200.00.

D.D. Emond

for Regional Manager, Exploration and Geology, for Commissioner of Yukon Territory.

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LIST OF ILLUSTRATIONS

MAPS

1.	V.L.F. Fraser Filter Station Seattle	In pocket
2.	V.L.F. Fraser Filter (Overlay) Station Hawaii	In pocket
3.	Magnetometer Contour	In pocket

INTRODUCTION

The LUKESHANE 1-48 mineral claim group was staked in the spring of 1984 following a regional geochem and prospecting programme conducted along the general trend of the Tintina Fault system.

Float material located along the shore of the larger lake consisted of highly brecciated siliceous sediments with features indicating the presence of a once active epithermal system. Selected specimens were found to be anomalous in gold and attendant indicator elements.

A grid with a 8400' baseline and crosslines at 400' intervals was established over which a total of 24.13 miles of V.L.F. survey (using Seattle Station at 24.8 Khz) was conducted. A select portion of this grid was later subject to a magnetometer survey.

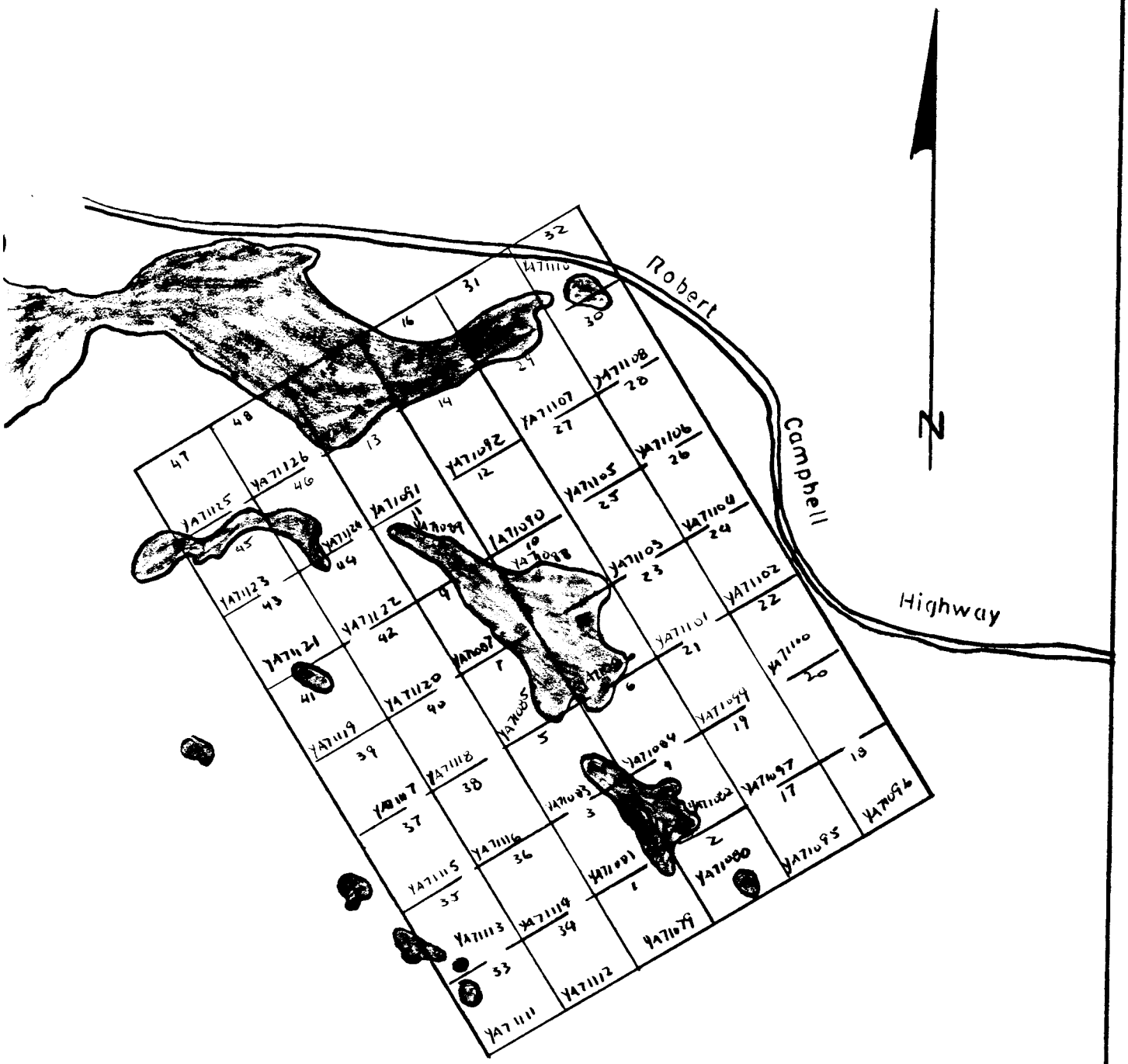
A second 2800' baseline (B.L.^{A}) and crosslines were subject to four miles of V.L.F. survey using Hawaii Station at 23.4 Khz. Distance for the three separate surveys total 31.5 miles and were conducted by A. Carlos.

PROPERTY

The LUKESHANE GROUP consists of 24 contiguous mineral claims as follows:

LUKESHANE 1-48 ..... YA71079 - YA71126

The holder of the above claims is ALLEN CARLOS of 13 Aspen Drive, Whitehorse, Y.T.



LUKESHANE GP.

1 INCH = 1/2 MILE

LOCATION AND ACCESS

Access is by means of wheeled vehicles or skidoo along a tote trail leaving the Robert Campbell Highway a distance of 24 miles southeast of Ross River.

GEOPHYSICAL SURVEY

(a) General

Understanding the model of epithermal ore deposition is basic to an efficient selection of exploration methods. Because of limited sulphides and only minor magnetic variations, geophysical methods are not a direct tool in the search for ore.

However, the systems (epithermal) are structurally controlled so that select methods to ascertain structure can be used. My own experience, together with past research[1], show that V.L.F. surveys are an effective method in the determination of geological structures.

(b) General Geology

A pervasive cover of drift prevents any surface geological determination within the LUKESHANE claim group. However, in their diamond drilling programme of 1966, "Bruce Lake Mines Ltd." logged the following rock types:

(1) Gabbro (gabbro-diorite) basic intrusives that are brecciated and altered;
(2) Siliceous sediments (some brecciated);
(3) Altered pyroxenite (some brecciated).

Work compiled in 1977 by D. J. Tempelman-Kluit indicates the following units underlying the LUKESHANE group:

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(1) V.L.F. Mapping of Geological Structure - W. F. King - under direction of Dr. A. Becker - Geological Survey of Canada.

Allochthonous - Carboniferous and Permian

Resistant, dun brown weathering, dunite, peridotite and pyroxenite with serpentinized equivalents.

(c) Methods, Equipment and Presentation

E.M.

Crosslines at 400' intervals were surveyed at 50' spacings using a Geonics EM-16 instrument. Additional fill-in lines were established where I felt warranted. The readings were treated to Four Point Difference calculations (Fraser Filter)[2] in the direction faced (west) and then contoured. This procedure gives positive numbers for anomaly centres, reduces noise, and can be used directly for contouring. Resultant data generally peak very close to the top of the conductor.

MAGNETOMETER

A portion of the Seattle Station V.L.F. grid was surveyed at 100' station readings using a Geotronics model G-110 fluxgate magnetometer having a sensitivity of 20 gammas per dial division. The acquired data was corrected for diurnal and contoured at 300 gamma intervals.

(d) In t erpretation

Section line A-B as plotted on the large map (V.L.F. Station Seattle) represents a lengthy E.M. expression interpreted to be a fault structure. C-D is a cross structure readily identified by use of a light table and overlay map (V.L.F. Station Hawaii).

These two E.M. established structures are supported by air photo lineaments. A third possible feature along line 48N is suggested from the magnetometer map.

Coincident V.L.F. and magnetometer anomalies along the westerly edge of

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(2) V.L.F. E.M.Data Processing - C.I.M. Transactions: Vol. LXXIV, pp. 11-13, 1971.

the large lake may be due to a structural feature invaded by a basic intrusive.

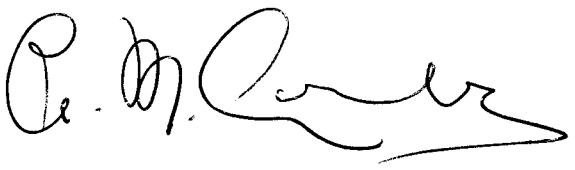
Geochemically anomalous specimens of hydrothermal breccia found as float contain a significant amount of disseminated graphite. As such, the strong V.L.F. conductor occurring at the junction of faults A-B and C-D is a prime exploration target.

(e) Conclusions and Recommendations

The V.L.F. survey in particular was very effective in establishing two important structural features. Further testing with Station Hawaii could be done across line 48N to more definitely determine whether a structure does exist along this position.

I believe little further work need be done before drill testing is commenced.

A. Carlos,
Prospector.



16N 20N 24N 28N 32N 36N 40N 44N 48N 52N 56N 60N 64N 68N 72N 76N 80N 84N

33N 38N

Seattle

0+00 4N 8N 12N

B.L.

A

B

B.L.

"LUKESHANE" GROUP

NTS 105 F-16

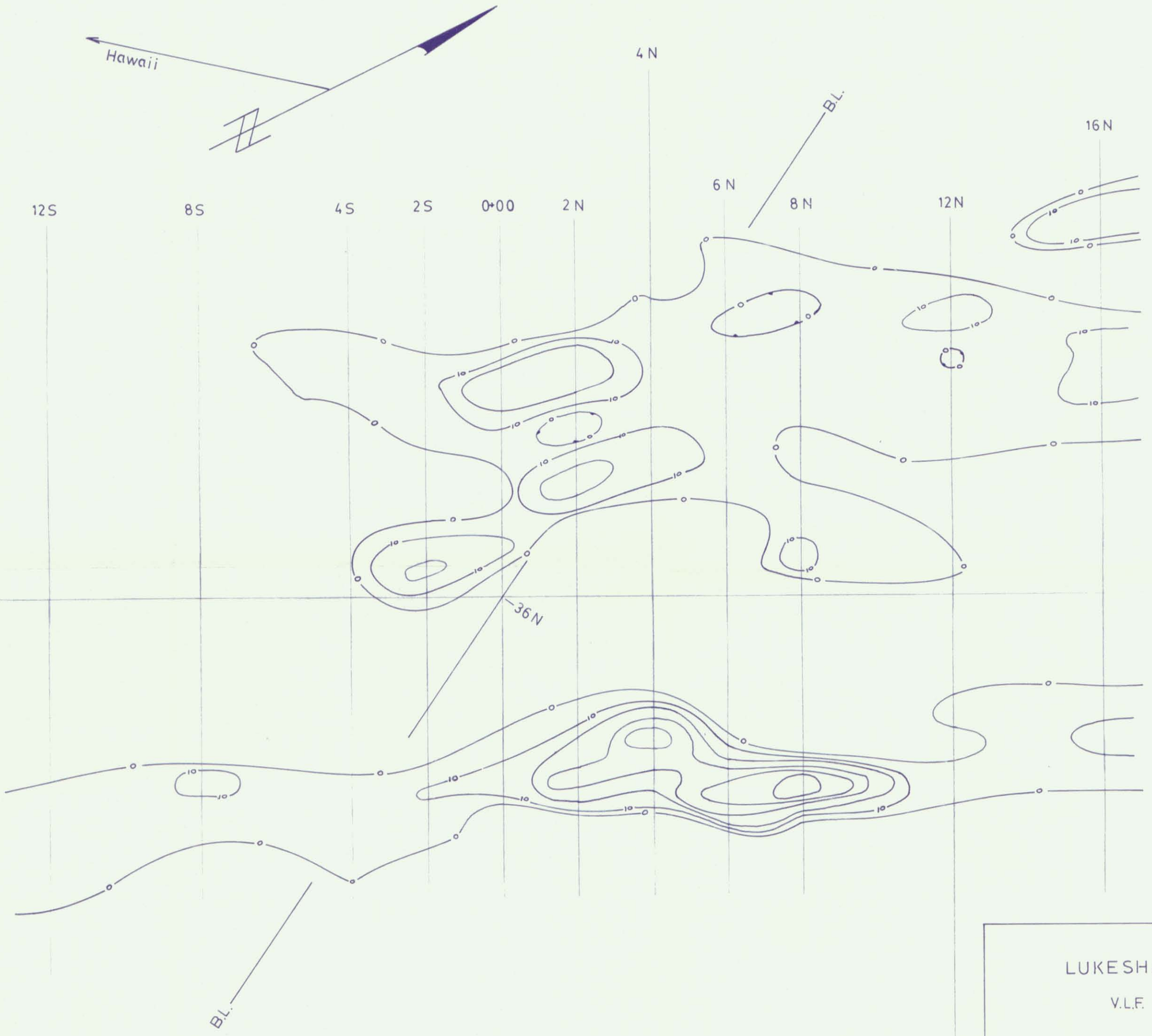
EM 16 FRASER FILTER

contour interval 10

SCALE: 1INCH = 250 FT.

APRIL 1985

DWN. by AMC



B.L. A

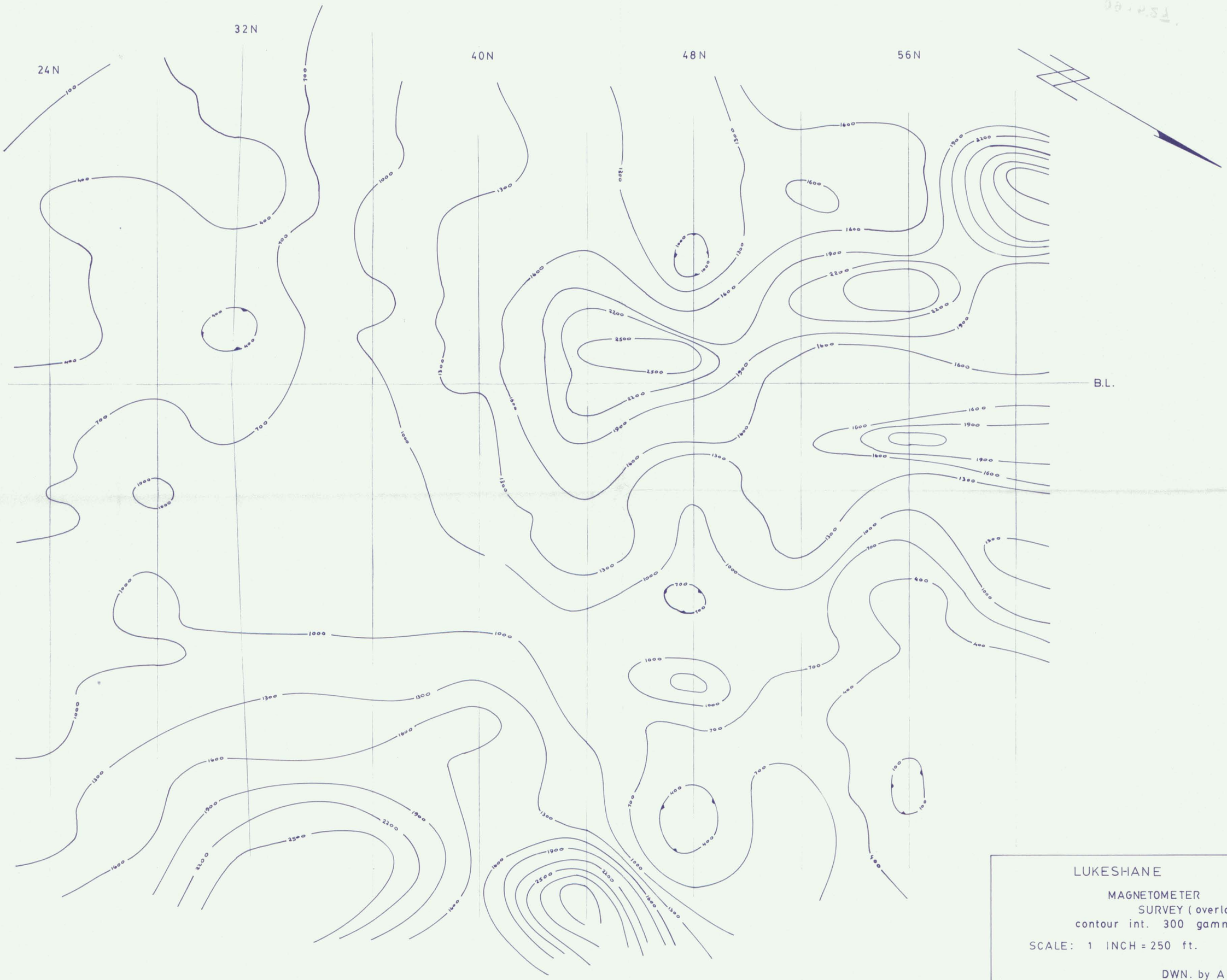
LUKESHANE

V.L.F. FRASER FILTER
(overlay)

SCALE: 1 INCH = 250 ft.

April 1985

DWN. by AMC



LUKESHANE

MAGNETOMETER
SURVEY (overlay)
contour int. 300 gammas

SCALE: 1 INCH = 250 ft.

DWN. by AMC

Q100431.42
091627

SCHEDULE "A"

Work Performed/Monies Spent

(a) Geophysical Surveying

20 days of field work for total of 31.5 miles together with use of own instruments and support vehicles:

$275.00 per day x 20 days	$5,500.00

(b) Drafting

Calculations, drafting and report: 10 days @ $100.00/day	1,000.00

(c) Incidental Expenses

- Gas and oil	$289.96	
- Groceries	241.90	
- Flagging, survey thread, E.M. cards	165.12	696.98

(d) Printing 29.71

(e) Secretary 25.00

TOTAL WORK PERFORMED ON LUKESHANE CLAIMS valued at: $7,251.69

I, A. CARLOS, hereby swear that the work performed and monies spent as per this Schedule "A" are correct and true.

A. Carlos

Date: April 29 1985