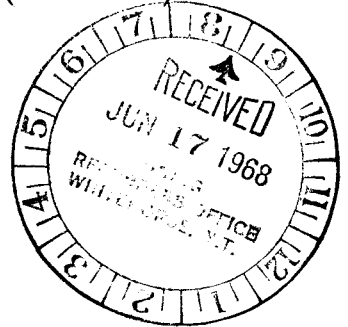


1035 WEST PENDER STREET, VANCOUVER 1, BRITISH COLUMBIA TEL. 688-2355

SPARTAN EXPLORATIONS LTD. (N.P.L.)

OPEN



MAGNETIC GEOPHYSICAL SURVEY

SPAR MINERAL CLAIM GROUP

GEOLOGICAL SURVEY
 APRIL 9 - APRIL 30th, 1968
 AUG 27 1968
 Resident Geologist
 Whitehorse, Y. T.

April 9 - April 30th, 1968

by

CLYDE L. SMITH, Ph.D.

SPARTAN EXPLORATIONS LTD. (N.P.L.)

This report has been examined by the Geological Evaluation Unit. Approved as to technical worth by:

D.C. Findley
RESIDENT GEOLOGIST

Approved as to cost in the amount of: \$1675.46

R.F. Hedden
RESIDENT MINING ENGINEER

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

James H. ...
COMMISSIONER OF YUKON

TAY RIVER AREA

WHITEHORSE MINING DIVISION

YUKON TERRITORY

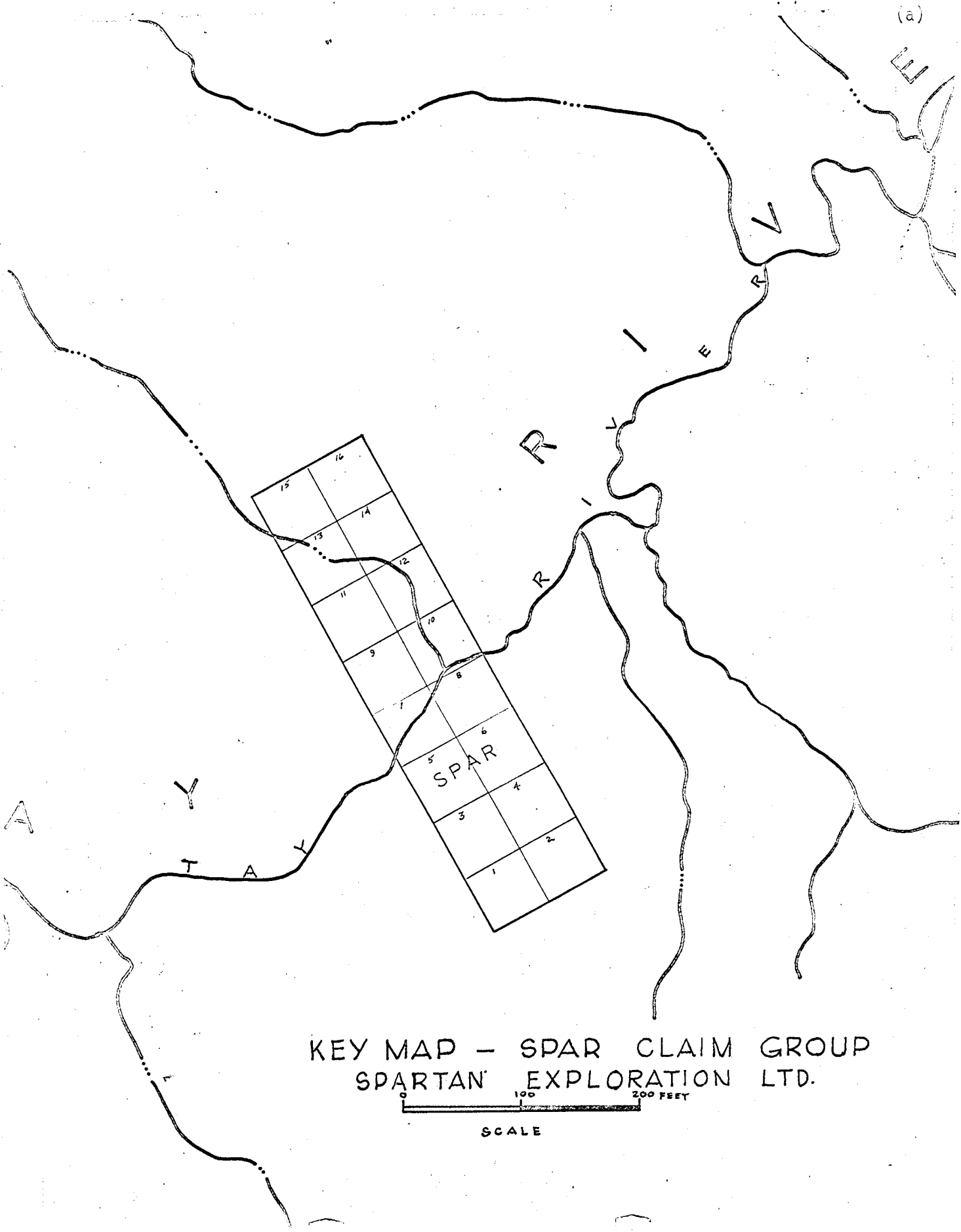
Longitude 134° 20' W.

Latitude 62° 35' N.

Map Sheet: 105-L-9

TABLE OF CONTENTS

	<u>Page No.</u>
KEY MAP	(a)
LIST OF CLAIMS	(b)
INTRODUCTION	1
LOCATION AND ACCESS	1
PREVIOUS WORK	1
METHOD OF SURVEY Instrument Used Magnetometer Survey	2
TREATMENT OF DATA Magnetic Results	2
GEOLOGY	3
GEOPHYSICAL RESULTS	3
CONCLUSIONS AND RECOMMENDATIONS	4
STATEMENT OF COSTS	5
AFFIDAVIT SUPPORTING STATEMENT OF COSTS	6
PERSONNEL	7
ACCOMPANYING MAPS	(Pocket)
Ground Magnetometer Survey Contour Map Scale: 1" = 500'	
Ground Magnetometer Survey Values Map Scale: 1" = 500'	
SUPPORTING VOUCHERS	(Pocket)
Copy Invoices	
Copy Time Sheets	



KEY MAP - SPAR CLAIM GROUP
SPARTAN EXPLORATION LTD.

0 100 200 FEET

SCALE

LIST OF CLAIMS

<u>Claim No.</u>	<u>Grant Numbers</u>	<u>Date Recorded</u>
SPAR 1-16	Y18299-Y18314	May 29th, 1967

INTRODUCTION

The Spar claims were staked to cover a 100-foot by 100-foot gossan, located along the Tay River, in a favourable geologic environment north-west of the Anvil lead-zinc deposit. The claims were recorded by Messrs. Alan Kulan and James S. Dodge on May 29th, 1967, and transferred to Spartan Explorations Ltd. on August 23rd, 1967, as part of an intensive exploration program conducted in the Ross River region during the summer of 1967.

On April 9th, 1968, a crew, consisting of a magnetic operator and assistant, were placed on the property to investigate the possibilities of anomalous magnetics associated with the gossan.

LOCATION AND ACCESS

The Spar mineral claims are located at latitude 62° 35'N., longitude 134° 20'W., along the west bank of the Tay River, 9 miles upstream from the confluence of the Tay River and the Pelly River.

Access to the property is by helicopter from a beaching site for aircraft or boats at the mouth of the Tay River, or from the end of the road near the Anvil mine.

PREVIOUS WORK

To the knowledge of Spartan Explorations, no work has been done on the Spar claims, or in the immediate area of the claims prior to investigation by Spartan in early 1967.

METHOD OF SURVEY

Instrument Used

For the magnetometer survey, a Sharpe MF-1 fluxgate, vertical component magnetometer was used. The instrument is hand held and measures the vertical magnetic component by use of an oil-dampened fluxgate which automatically levels itself in the direction of the vertical field. The magnetometer is of light weight and readings can be obtained quickly. A conversion factor is necessary before gamma values can be determined.

Magnetometer Survey

The survey area consists of a 116,000-foot base line, trending north-westerly, and twenty-eight 3,000-foot long cross lines crossing the base line at about 1,500 feet. Cross lines are spaced at an average of 500 feet apart.

Prior to the actual magnetometer survey, readings were taken along the central base line at cross line intersection points. These stations were looped and re-read every few hours as a means of controlling drift and diurnal variations. With base stations of an established value serving as a means of controlling drift and diurnal variations, a rapid and precise check was kept on magnetic variations and the entire survey was thus kept on a relative basis during day to day operation. The survey was done by one operator using the same instrument.

TREATMENT OF DATA

Magnetic Results

Magnetic results were corrected for diurnal and drift variations each night by the field operator. The final gamma values were then plotted on a grid plan using a scale of 500 feet to 1 inch. Gamma values were then

contoured at an interval of 100 gammas. Magnetic data is presented in this report on maps of 500 feet to the inch, showing values in gammas and contours at 100 gammas.

GEOLOGY

The Spar group lies on the northeast side of the Tintina Trench, in the Pelly River Valley, in an area of low relief and extensive overburden cover. Bedrock exposures are limited, however, outcrops indicate that the area is underlain by northwesterly-striking and gently-dipping metavolcanics similar in composition to those in the Middle Upper Cambrian of the Anvil district. In a portion of the claim group, exposures consist of rusted biotite gneiss in contact with coarse-grained porphyritic diorite. Alteration in the gneiss consists of silica, sericite and tourmaline with bleached biotite. Several quartz stringers cross cut the gossan and the gneiss in a northwesterly direction. The gossan appears to be a residual type and, probably, formed by alteration of a pyrite-rich area within the gneiss.

GEOPHYSICAL RESULTS

The range in gamma values over the survey area is from 700 to 2,000 gammas, with a background average of 800 gammas. The only significant anomalous area occurs on line 58 N. along the base line. This is the central point of the survey area and corresponds very closely with the location of the above mentioned gossan. It is believed that the peak value of 2,000 gammas obtained in this small, anomalous zone reflects either magnetite or pyrrhotite content within the gneiss at some shallow depth below the limonitic gossan.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the only significant anomaly developed within the magnetometer survey area reflects either pyrrhotite or magnetite content in a gneiss lying at some shallow depth below a limonite gossan located in the centre of the survey area.

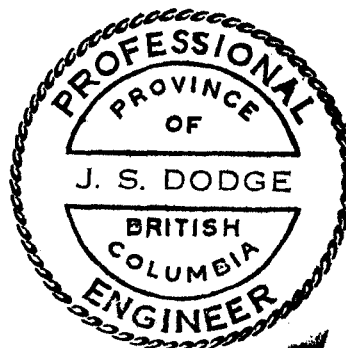
It is recommended that no further work be done on the Spar claims because of the limited extent of the magnetic anomaly developed, and the lack of geological potential known on the ground.

Respectfully submitted,

Clyde L. Smith, Ph.D.,
Exploration Manager and Chief Geologist.

James S. Dodge
James S. Dodge, P.Eng., B.C.
Vice-President Exploration

Vancouver, B.C.
May 29th, 1968.



Expiry Date: August 4, 1968

STATEMENT OF COSTSMAGNETIC GEOPHYSICAL SURVEY

(From April 9th - May 29th, 1968)

SPAR MINERAL CLAIM GROUP
 TAY RIVER AREA
WHITEHORSE MINING DISTRICT, Y.T.

CAMP SUPPORT	\$ 264.12	(invoices attached)
WAGES	502.68	" "
SUPER CUB SUPPORT	415.84	" "
ROSS RIVER BASE EXPENSES	213.58	**
	<hr/>	
	\$ 1,396.22	
HEAD OFFICE OVERHEAD		
20% Estimate of field expenditure inclusive of report typing, etc., etc.	279.24	
	<hr/>	
TOTAL	\$ 1,675.46	
	<hr/> <hr/>	

** Proportion of Ross River Base Expenditure
 attributable to Spar Project.

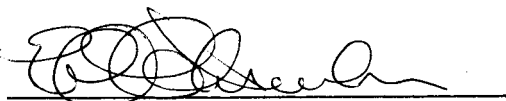
AFFIDAVIT

SUPPORTING STATEMENT OF COSTS

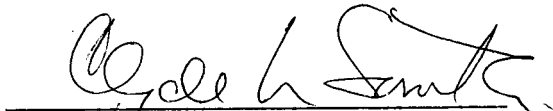
I, C.L. Smith, Exploration Manager, Spartan Explorations Ltd., of Vancouver, British Columbia, do hereby state that to the best of my knowledge and belief the STATEMENT OF COSTS, as presented on Page 5 of this report entitled "MAGNETIC GEOPHYSICAL SURVEY, SPAR MINERAL CLAIM GROUP", is both true and correct.

Dated at the City of Vancouver in the Province of British Columbia this 29th day of May, A.D. 1968.

SWORN BEFORE ME in the
City of Vancouver in the Province
of British Columbia this 29th day
of May, A.D. 1968



A Commissioner for taking
Affidavits in the Yukon
Territory.



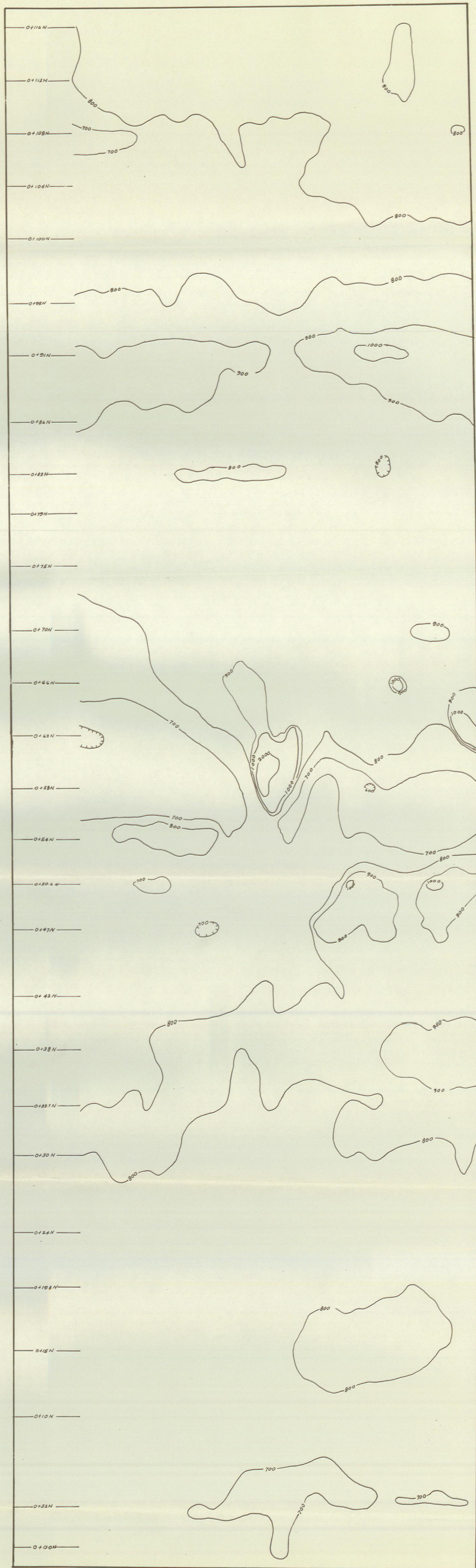
C.L. Smith.

PERSONNEL

The following were personnel engaged in the magnetometer survey on the Spar mineral claims between April 9th and May 29th, 1968:

Alan Carlos	Magnetometer Operator	Viscount, Sask.
Arthur John	Magnetometer Assistant	Ross River, Y.T.
Douglas Goodbrand	Geologist (Report Writing)	Vancouver, B.C.
C.L. Smith	Project Manager	Vancouver, B.C.
J.S. Dodge	Professional Engineer B.C.	Vancouver, B.C.

(Time Sheets Attached - Pocket)



SPARTAN EXPLORATIONS LTD.

ROSS RIVER, YUKON
SPAR MINERAL CLAIMS

GROUND MAGNETOMETER SURVEY
CONTOUR MAP

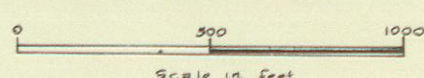
INTERVAL: 100 GAMMAS

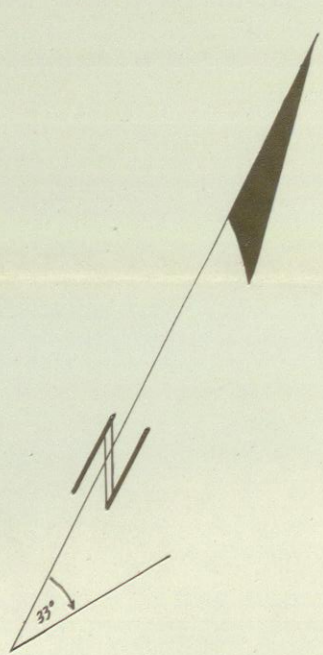
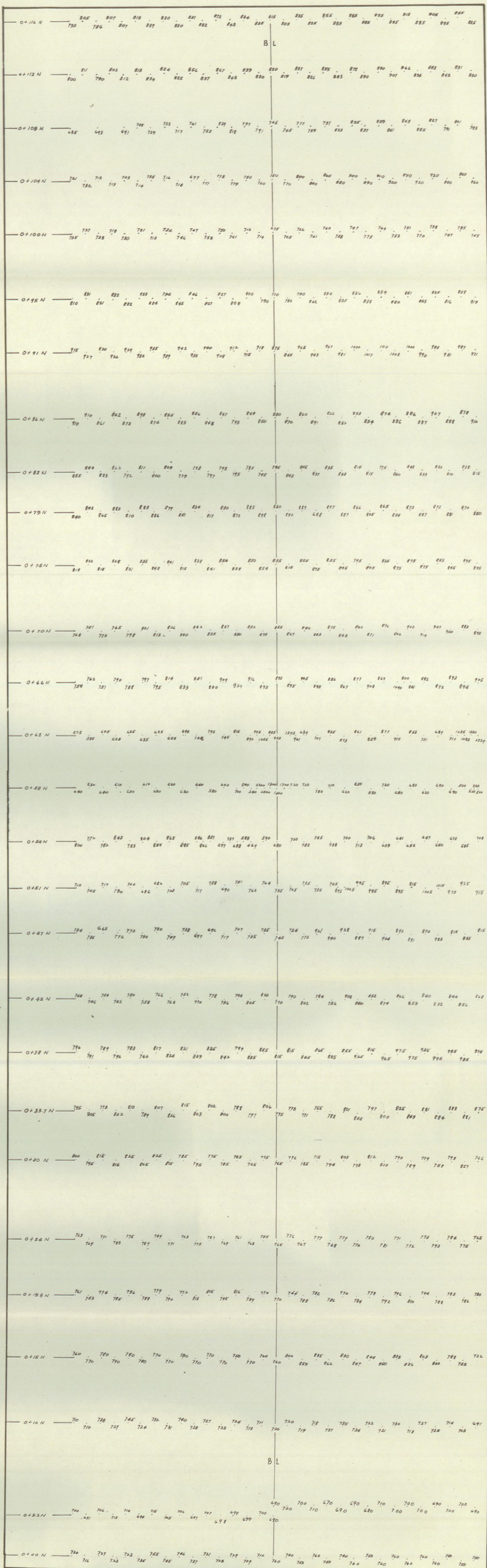
INSTRUMENT: MF-1

OPERATOR: A. CARLOS

DRAWN BY: B. DUNA

DATE: MAY 16, 1968





SPARTAN EXPLORATIONS LTD.
ROSS RIVER, YUKON

SPAR MINERAL CLAIMS
GROUND MAGNETOMETER SURVEY

VALUES MAP IN GAMMAS
INSTRUMENT: SHARPE MF-1

Operator: A. Carlos
Drawn by: B. G. Duna
Date: May 16, 1968

