



GEOCHEMICAL
GEOCHEMICAL REPORT



ON

JOY MINERAL CLAIMS

ITSI LAKE AREA

Watson Lake Mining Division
Yukon Territory



Latitude 62° 45'N.

Longitude 130° 15'W.

62°N. 130°W.

Map Sheet 105-J-9

By

Glen Woodsworth,
Geologist.

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

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

[Signature]
RESIDENT GEOLOGIST

Approved as to cost in the amount of: \$ 1570.00

[Signature]
RESIDENT MINING ENGINEER

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

[Signature]
COMMISSIONER OF YUKON

July 1st -- Spetember 1st, 1968.

TABLE OF CONTENTS

	<u>Page No.</u>
LIST OF CLAIMS	A
INTRODUCTION	1
LOCATION AND ACCESS	1
GEOLOGY	1
SURVEY TECHNIQUES	1
Line Cutting	1
Soil Sampling	2
Method of Analysis	2
Treatment of Data	2
GEOCHEMICAL ENVIRONMENT AND SOIL TYPES	3
DESCRIPTION OF ANOMALIES AND INTERPRETATIONS	3
CONCLUSIONS AND RECOMMENDATIONS	4
APPENDIX I -- Summary of Costs	5
APPENDIX II -- Affidavit	6
APPENDIX III -- Personnel	7

ILLUSTRATIONS

ITSI AREA INDEX MAP	Pocket
JOY GROUP CLAIM MAP	Pocket
GROUND MAGNETIC PROFILE MAP	Pocket
GROUND MAGNETIC CONTOUR MAP	Pocket

LIST OF CLAIMS

Claim Numbers

Grant Numbers

Dated Recorded

JOY 1-60

Y27976-Y28035

September 9, 1967.

INTRODUCTION

During the summer of 1968, Spartan Explorations conducted a reconnaissance program of geochemistry, geological mapping, and prospecting in the Itsi Lake area. The Joy group of 60 mineral claims was staked in early September, 1967, to cover a tungsten-copper occurrence in float discovered by the primary prospecting program. The mineralized float was found in a geologically favourable area of chert, limestone, conglomerate and dolomite. Geological, geophysical and geochemical work was done in an effort to locate the source of the mineralized boulders.

LOCATION AND ACCESS

The JOY group is centered at latitude 62° 45' N. and longitude 130° 15' W., about 5 miles south of the western end of Itsi Lake. The best access to the property is by helicopter, although the broad open creek valleys make access by foot relatively easy.

GEOLOGY

The claims are underlain by an east-west trending syncline. The core of the syncline is composed of slates of Devonian age, while the limbs consist of underlying Lower Cambrian (?) cherts and dolomite. Small east-west trending stocks and dykes of Cretaceous (?) quartz porphyry intrudes the syncline and the presence of an underlying stock is assumed.

A boulder of skarn containing significant amounts of sphalerite, chalcopyrite and scheelite was found on a JOY 19 claim near the contact between the favourable dolomite and the overlying slates. Tungsten grade in the boulder was visually estimated at 3% WO_3 . No other mineralization of economic importance was observed on the claims.

METHOD OF SURVEY

A Sharp MF-1 magnetometer was used. The instrument is hand-held and measures the vertical magnetic component by use of a fluxgate which auto-

Method of Survey (Continued)....

matically levels itself in the direction of vertical field. The range of this instrument is 200,000 gammas on a plus and minus scale and readability is plus or minus 5 gammas. The magnetometer is light in weight and readings can be quickly obtained. A conversion factor is necessary before gamma values can be determined.

A soil sampling survey was conducted on a grid consisting of a total of 140,000 feet of cut line. The grid is made up of two east-west trending base lines, each 15,000 feet in length. Cross lines are between and at right angles to the base lines, averaging 8,000 feet in length, and are spaced approximately 1,000 feet apart. The grid was laid out so that cross lines run roughly perpendicular to the favourable limestone-shale contacts.

Prior to the actual magnetometer survey, readings were taken along the south base line at cross line intersection points. These stations were looped and re-read every day to provide a control for detecting magnetic variations, and to keep the entire survey in a relative basis during day to day operations.

Readings were taken every 100 feet along the cross lines and the entire survey was conducted by one operator using the same instrument.

TREATMENT OF DATA

Results were corrected for daily magnetic variations and final gamma values were plotted on a 1,000 feet to 1 inch scale map. A magnetic profile map, and a magnetic contour map with a contour interval of 100 gammas, were constructed from the data.

RESULTS AND INTERPRETATION

The magnetic profile and contour maps indicate that little or no magnetic response was detected. The general trend of the magnetic contours is east-west. This may reflect the general east-west strike of the sediments underlying the area, and minor stratigraphically controlled variations in their magnetite content. It was assumed that due to the pyrrhotite content of the

Results and Interpretation (Continued),...

float boulder, any sub outcropping body of pyrrhotite-bearing skarn would be located magnetically. This was not the case, but it is entirely possible considering the usually small and erratic beature of such skarn that they could be of shorter length than the line spacing used in the magnetic survey and could, therefore have been missed being detected by the magnetic methods.

CONCLUSIONS AND RECOMMENDATIONS

Because the magnetometer survey was conducted on grid lines that were possibly too widely spaced to have detected any pyrrhotite-bearing skarn zones, it is recommended that a more detailed magnetometer survey with a grid line spacing of 400 feet be conducted over this area.

Respectfully submitted,

G. Woodsworth

Glen Woodsworth,
Geologist.



September 4, 1969.

APPENDIX I

SUMMARY OF COSTS1. Preliminary Studies:

Wages, Salaries, Bonuses	100.00	
Consultants Fees and Management	32.00	
Helicopter Support	45.00	
Fuel	4.00	
Ross River Base Camp	100.00	
Camp Support	<u>125.00</u>	406.00

2. Geophysical Surveys:

Wages, Salaries, Bonuses	375.00	
Helicopter Support	185.00	
Fuel	20.00	
Ross River Base Camp	270.00	
Camp Support	<u>375.00</u>	<u>1,225.00</u>

GRAND TOTAL		<u>\$1,631.00</u>
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APPENDIX II

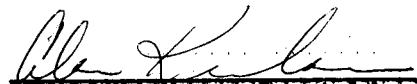
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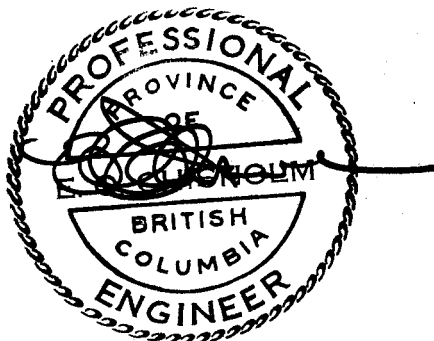
Supporting Summary of Costs

I, Glen Woodsworth, Geologist, Spartan Explorations Limited, of Vancouver, British Columbia, do hereby state that to the best of my knowledge and belief the summary of costs as presented in Appendix I of this report "Geophysical Report on the JOY Mineral Claims" is both true and correct.

DATED AT Vancouver, British Columbia, this eighth day of September, A.D., 1969.

SWORN BEFORE ME at
Vancouver, British
Columbia, this 8th
day of September,
A.D., 1969.


A Commissioner for taking
Affidavits in the Yukon
Territory.




Glen Woodsworth.

APPENDIX III

PERSONNEL

Name

Position

Address

G. James

Geologist

Hedley, B. C.

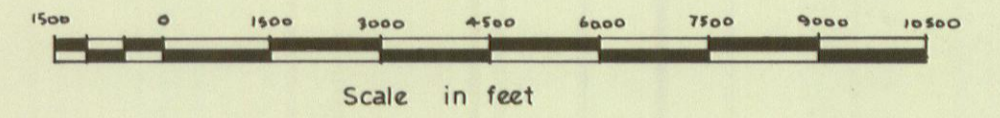
SPARTAN EXPLORATIONS LTD.

VANCOUVER B.C.

ITSI PROJECT

ITSI AREA INDEX MAP

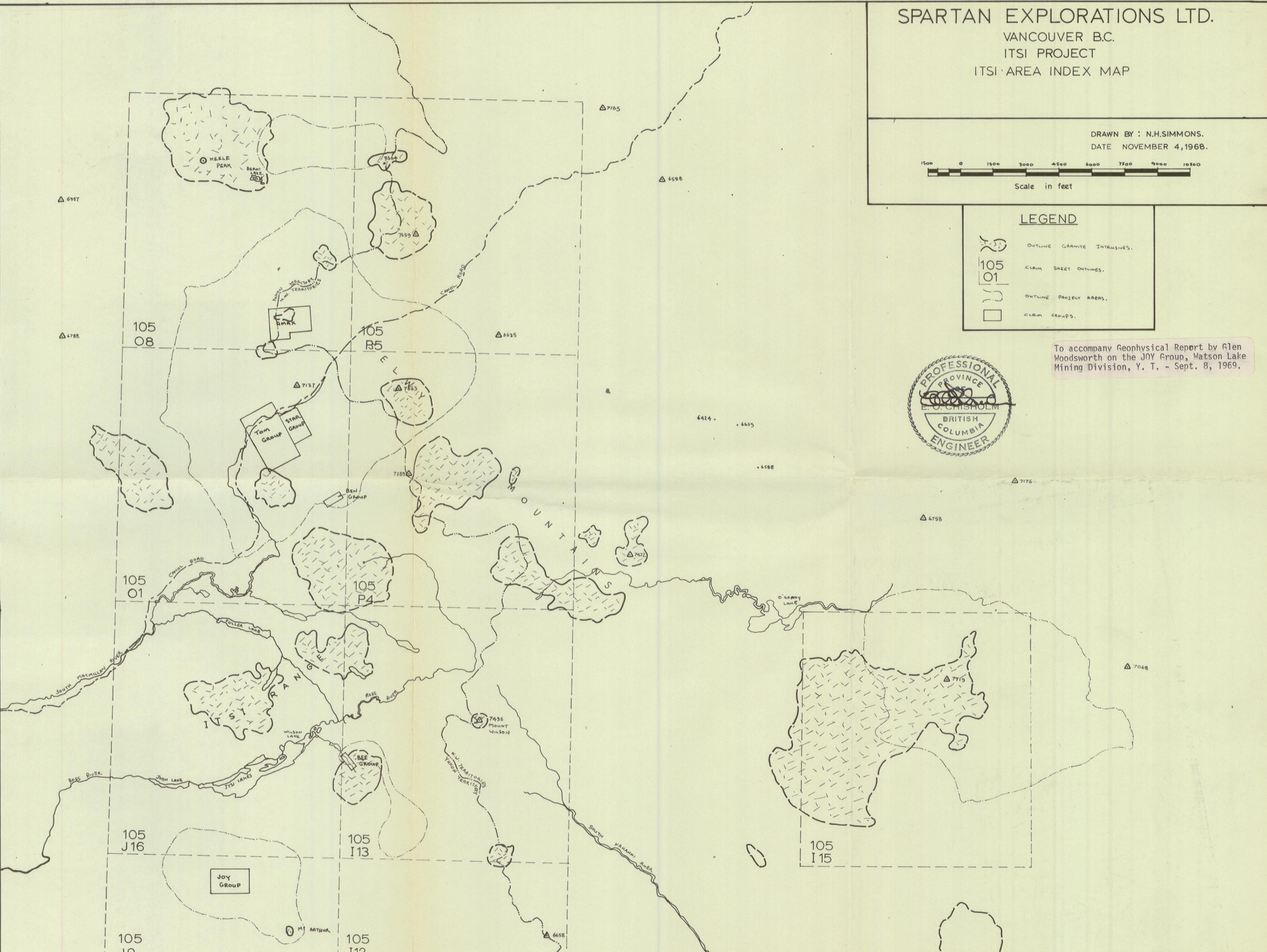
DRAWN BY : N.H.SIMMONS.
DATE NOVEMBER 4, 1968.

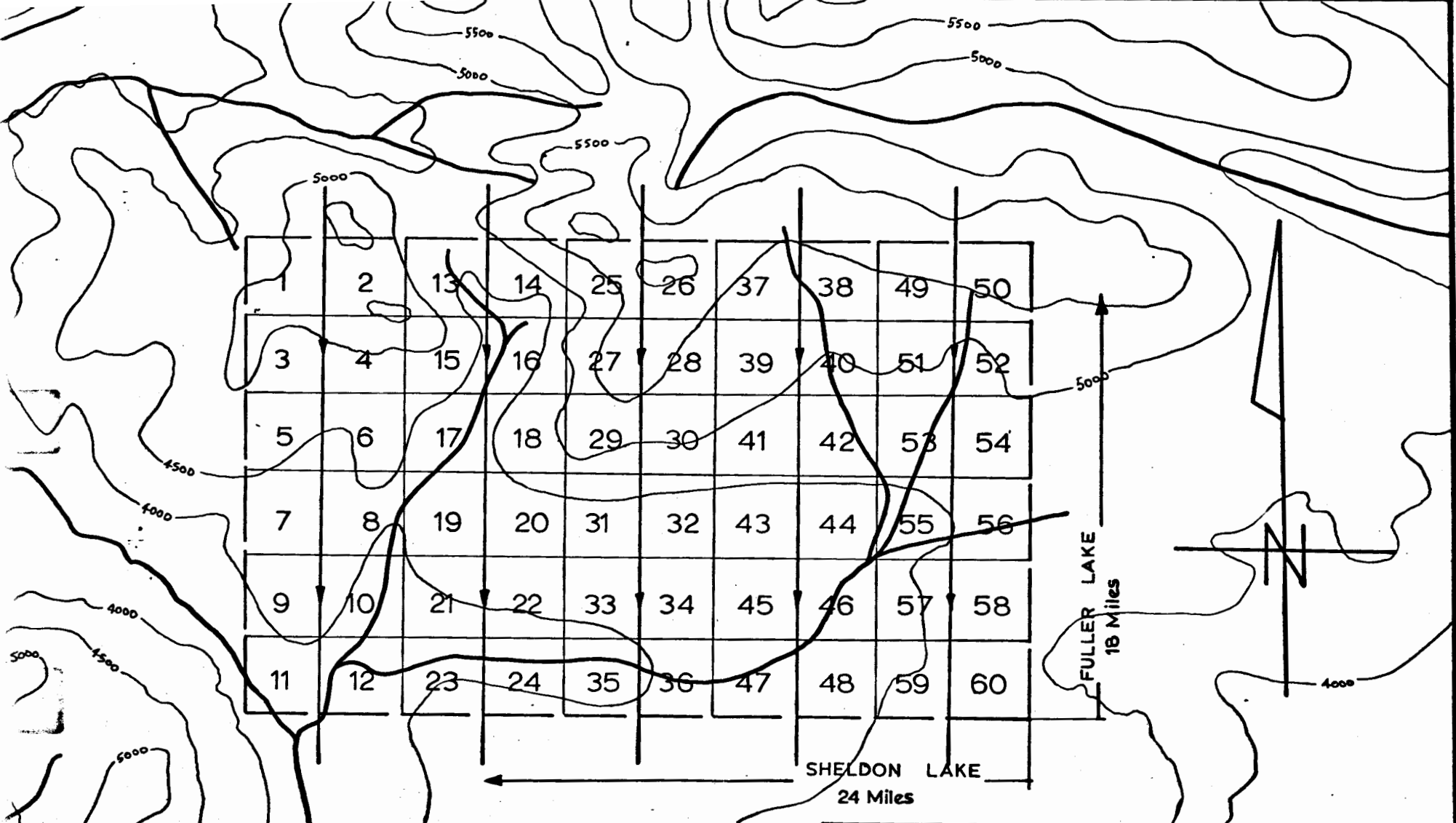


LEGEND

- OUTLINE GRANITE INTASIVES.
- CLAIM SHEET OUTLINES.
- OUTLINE PROJECT AREAS.
- CLAIM GROUPS.

To accompany Geophysical Report by Glen Woodworth on the JOY Group, Watson Lake Mining Division, Y. T. - Sept. 8, 1969.





CLAIMS STAKED BY:-

- 1-8 W. ROBERTS.
- 9-16 M. EARLY.
- 17-24 G. ETZEL.
- 25-32 N. SIMMONS.
- 33-40 C. SMITH.
- 41-48 M. WOLFHARD.
- 49-56 C. OLLIE.
- 57-60 A. MCLEOD.

SPARTAN EXPLORATIONS LTD.
 ROSS RIVER YUKON
 ITSI PROJECT
 JOY CLAIM GROUP
 STAKING MAP

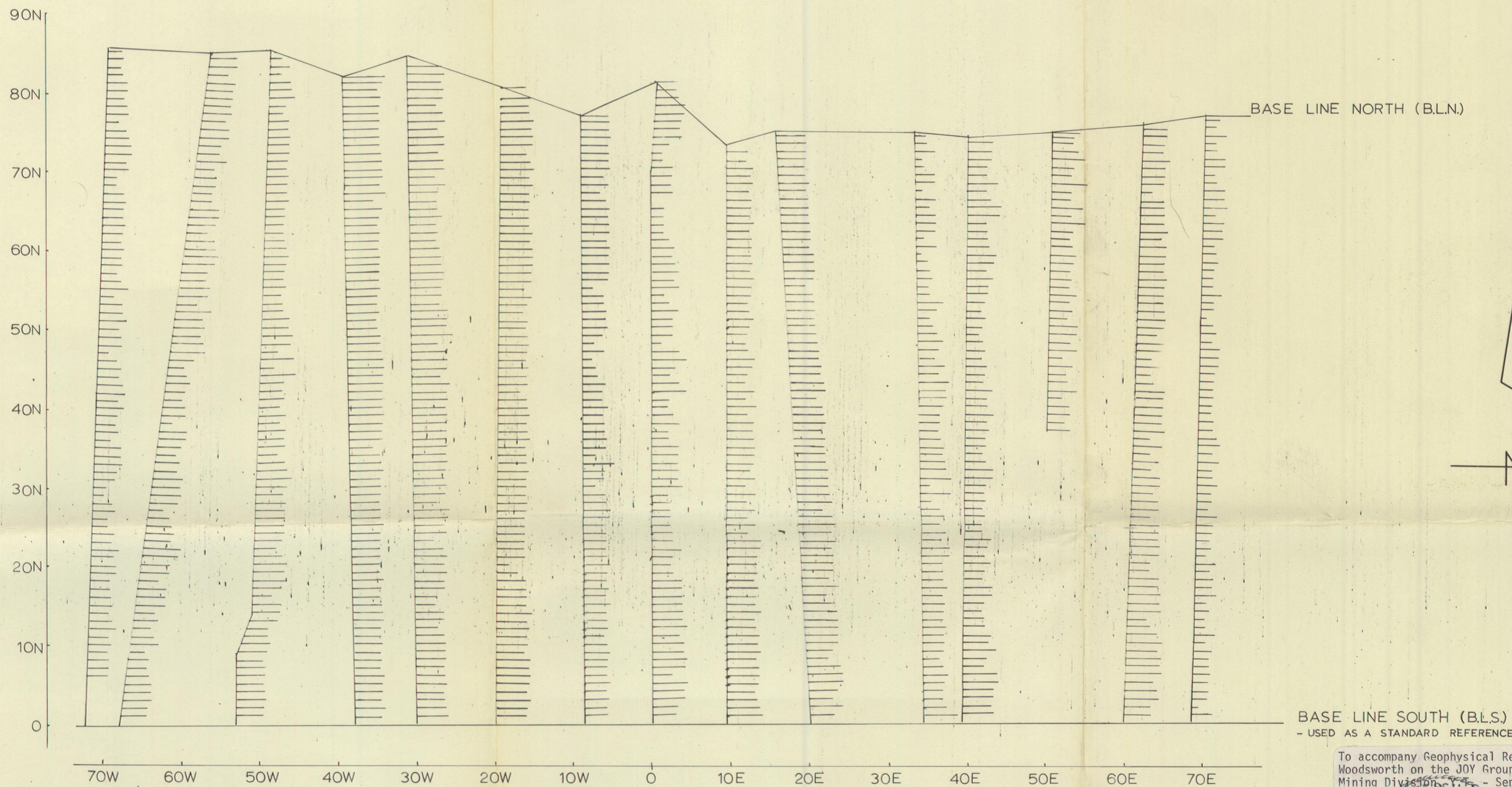
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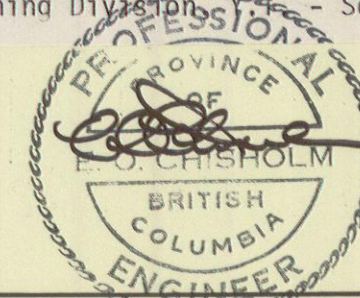
Scale in feet

To accompany Geophysical Report by Glen
 Woodsworth on the Ross River, Watson Lake
 Mining Division, Sep. 8, 1969.





To accompany Geophysical Report by Glen Woodworth on the JOY Group, Watson Lake Mining Division - Sept. 8, 1969.



SPARTAN EXPLORATIONS LTD.
ROSS RIVER YUKON.
ITSI PROJECT
JOY CLAIM GROUPS
GROUND MAGNETIC PROFILE MAP
1" = 100 Gammas

INSTRUMENT : SHARPE, MF1. DRAWN BY : G. JAMES.
OPERATOR : G. JAMES. DATE : SEPTEMBER, 1, 1968.

