



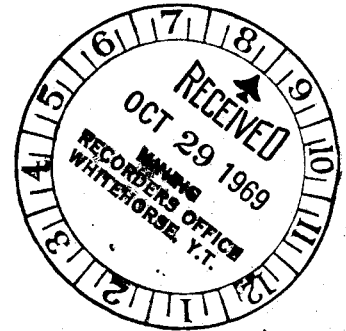
GEOLOGICAL REPORT

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.

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

D. H. Crave
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 868.00

R. S. Redden
RESIDENT MINING ENGINEER

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

[Signature]
COMMISSIONER OF YUKON

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

July 1st -- September 1st, 1968.

TABLE OF CONTENTS

	<u>Page No.</u>
LIST OF CLAIMS	A
INTRODUCTION	1
LOCATION AND ACCESS	1
GEOLOGY.	1
ECONOMIC GEOLOGY	2
CONCLUSIONS AND RECOMMENDATIONS	3
APPENDIX I - Summary of Costs	4
APPENDIX II - Affidavit	5
APPENDIX III - Personnel	6

ILLUSTRATIONS

ITSI AREA INDEX MAP	Pocket
JOY GROUP CLAIM MAP	Pocket
JOY GROUP GEOLOGY MAP	Pocket

LIST OF CLAIMS

Claim Numbers

Grant Numbers

Date 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 from Itsi and John Lakes relatively easy.

GEOLOGY

The claims are largely underlain by easterly striking sediments of Lower Cambrian and Devonian age which are intruded by dykes and small stocks of quartz porphyry. As mapped by the Geological Survey of Canada (Map 12 - 1961) these sediments have a fairly constant regional dip of about 50° to the north.

Outcrop is moderately good in a northern half of the claim group, but the southern half of the group is drift covered.

In the area of the JOY claims, four units were mapped. The following is a table of geologic formations:

Pleistocene	--	Glacial drift
Cretaceous (?)	--	5b Quartz porphyry
Devonian	--	4b Slates
Lower Cambrian (?)	--	3f George dolomite
Lower Cambrian (?)	--	3e Black chert

Geology (Continued)....

Unit 3e is a black carbonaceous, massively bedded chert that outcrops as a 300-foot wide band in the western portion of the claims. This band strikes northwest and dips about 30° to the south.

Unit 3f consists of thin bedded light grey dolomite and dolomitic limestone. These rocks outcrop mainly in the northeastern portion of the claim area but several smaller westerly to northwesterly striking areas of dolomite were also located. Although largely covered, the southern half of the claim group is believed to be underlain largely by this map unit.

Unit 4b consists of dark grey shale and shales and in the best exposed unit on the claims. Contacts between this unit and the George dolomite strike east-west.

Quartz porphyry of Cretaceous (?) age intrudes the Paleozoic rocks as dykes and small stock. These stocks are elongate in plan. The largest is 1,000 feet in length and about 400 feet wide. An east-west trending dyke-like body of quartz porphyry has been traced for over 5,000 feet.

The JOY group appears to be underlain structurally by an east-west trending syncline. This syncline has a core unit 4b in the north central portion of the claims and broad limbs of the underlying unit 3f. The quartz porphyry appears to have been intruded along the axis of the syncline, and presence of an underlying stock is assumed.

ECONOMIC GEOLOGY

One boulder containing significant amounts of scheelite, chalcopryrite, sphalerite and pyrrhotite was found on the JOY 19 claim. The boulder is situated near the inferred contact between the Lower Cambrian dolomite and the overlying Devonian slates. Scheelite grade in the boulder was visually estimated at about 3% WO₃.

Economic Geology (Continued)....

No skarn bodies or significant mineralization were found on the property, however, much of the area is drift covered, particularly in the southern half of the claim area, and potentially ore-bearing skarn bodies could be covered by overburden.

CONCLUSIONS AND RECOMMENDATIONS

A highly favourable contact area between dolomite and overlying shales is intruded by quartz porphyry; however, no mineralization of economic importance has been found in outcrop. As the area is largely drift covered, it is recommended that the claims be retained for at least one more year in order to thoroughly re-evaluate all data from the area.

Respectfully submitted,



Glen Woodsworth,
Geologist

September 3, 1969.

APPENDIX I

SUMMARY OF COSTS1. Preliminary Studies:

Wages, Salaries, Bonuses	150.00	
Consultants Fees and Management	32.00	
Helicopter Support	45.00	
Fuel	5.00	
Ross River Base Camp	110.00	
Camp Support	<u>175.00</u>	517.00

2. Geological Surveys and Mapping:

Wages	145.00	
Supplies and Miscellaneous Equipment	20.00	
Ross River Base Camp	40.00	
Camp Support	<u>60.00</u>	265.00

3. General Supervision:

Helicopter Support	80.00	
Fuel	<u>6.00</u>	<u>86.00</u>

GRANT TOTAL		<u><u>\$868.00</u></u>
-------------	--	------------------------

APPENDIX II


AFFIDAVIT

Supporting Summary of Costs

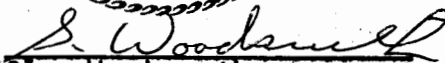
I, Glen Woodsworth, Geologist, Spartan Explorations Limited, of Vancouver, British Columbia, do hereby state that to the best of my knowledge and belief the summary of costs as presented in Appendix I of this report "Geological Report on the JOY Mineral Claims" is both true and correct.

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

PERSONNELNamesPositionAddress

G. James
W. Roberts
N. Simmons

Geologist
Geologist
Mapper

Hedley, B. C.
Vancouver, B. C.
Vancouver, B. C.

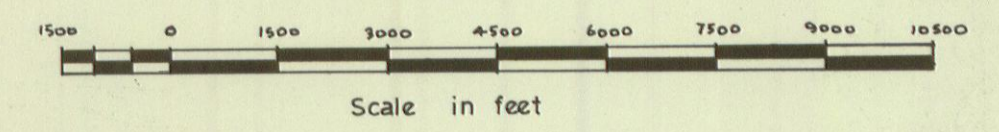
SPARTAN EXPLORATIONS LTD.

VANCOUVER B.C.

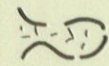
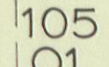
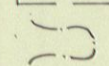
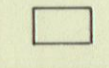
ITSI PROJECT

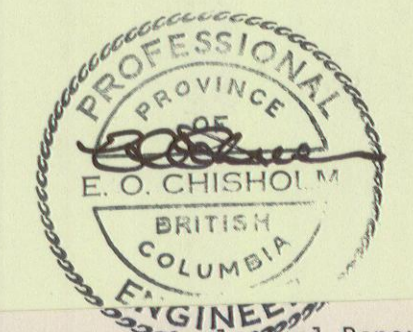
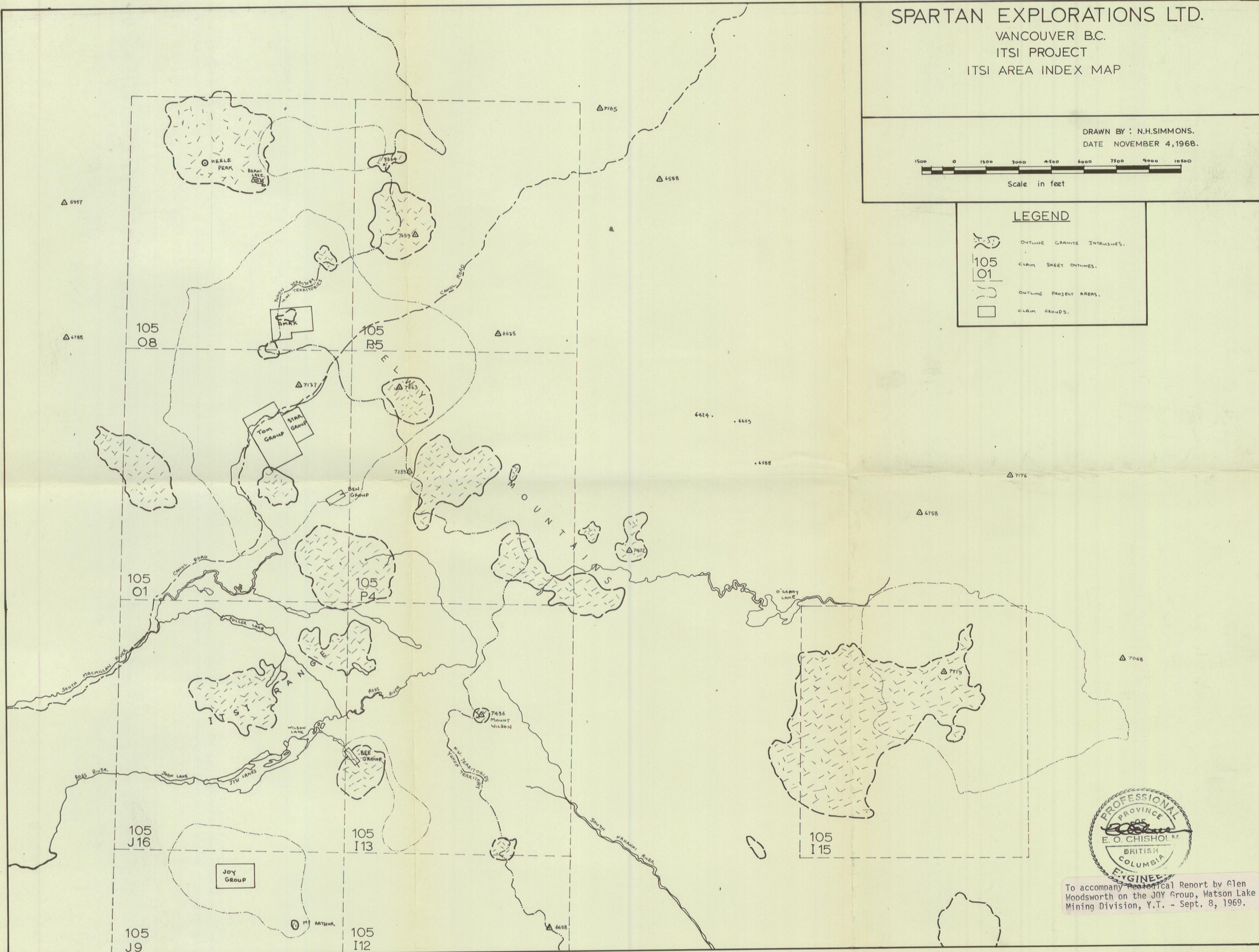
ITSI AREA INDEX MAP

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

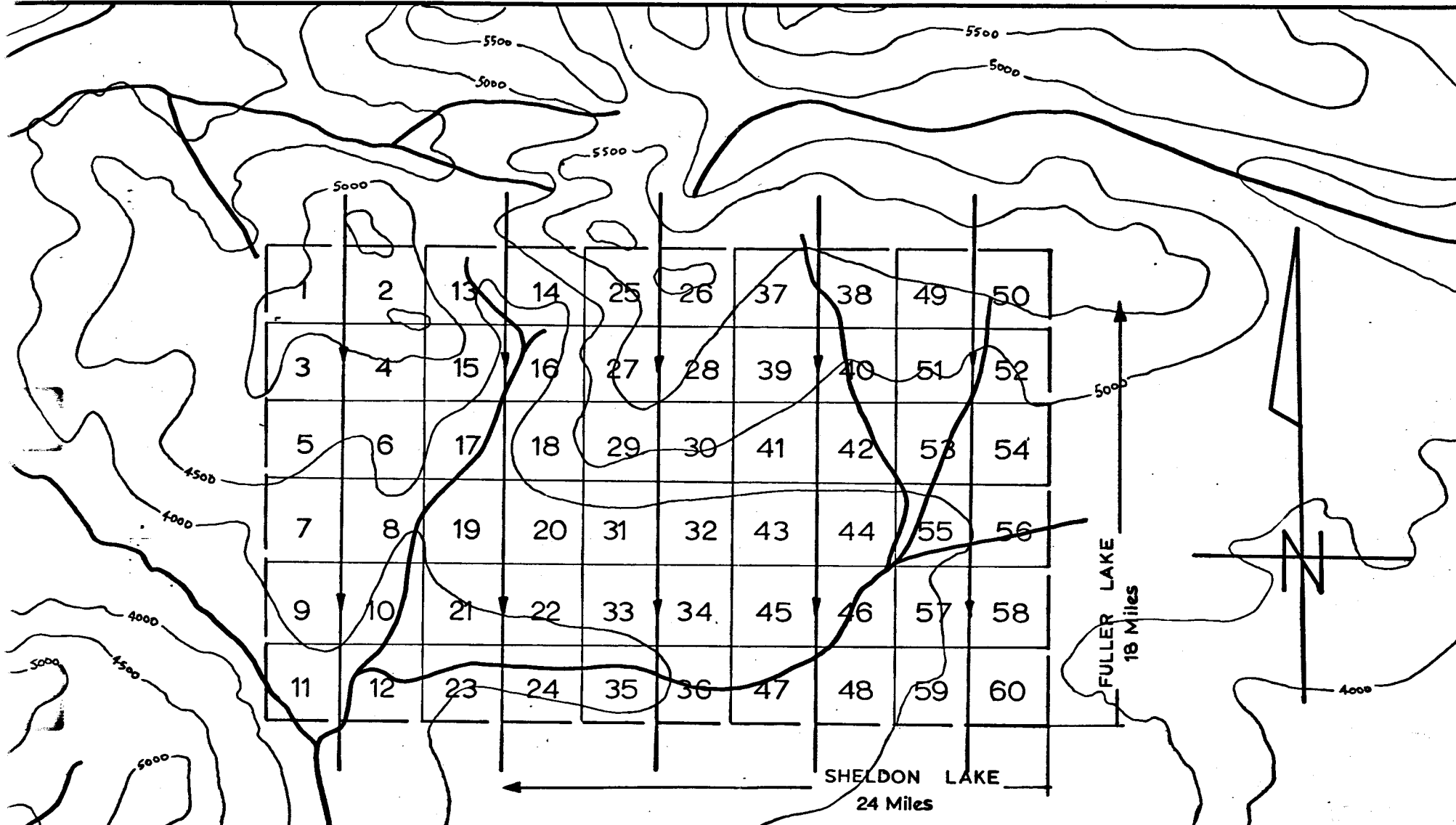


LEGEND

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



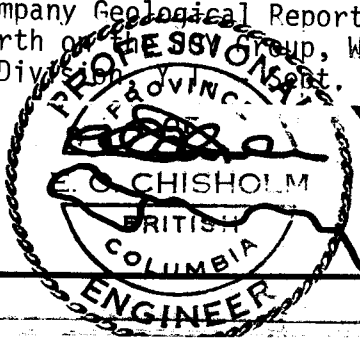
To accompany Geological Report by Glen Woodsworth on the JOY Group, Watson Lake Mining Division, Y.T. - Sept. 8, 1969.



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.

To accompany Geological Report by Glen
 Woodsworth on the Ross River Group, Watson Lake
 Mining Division, Sept. 8, 1969.

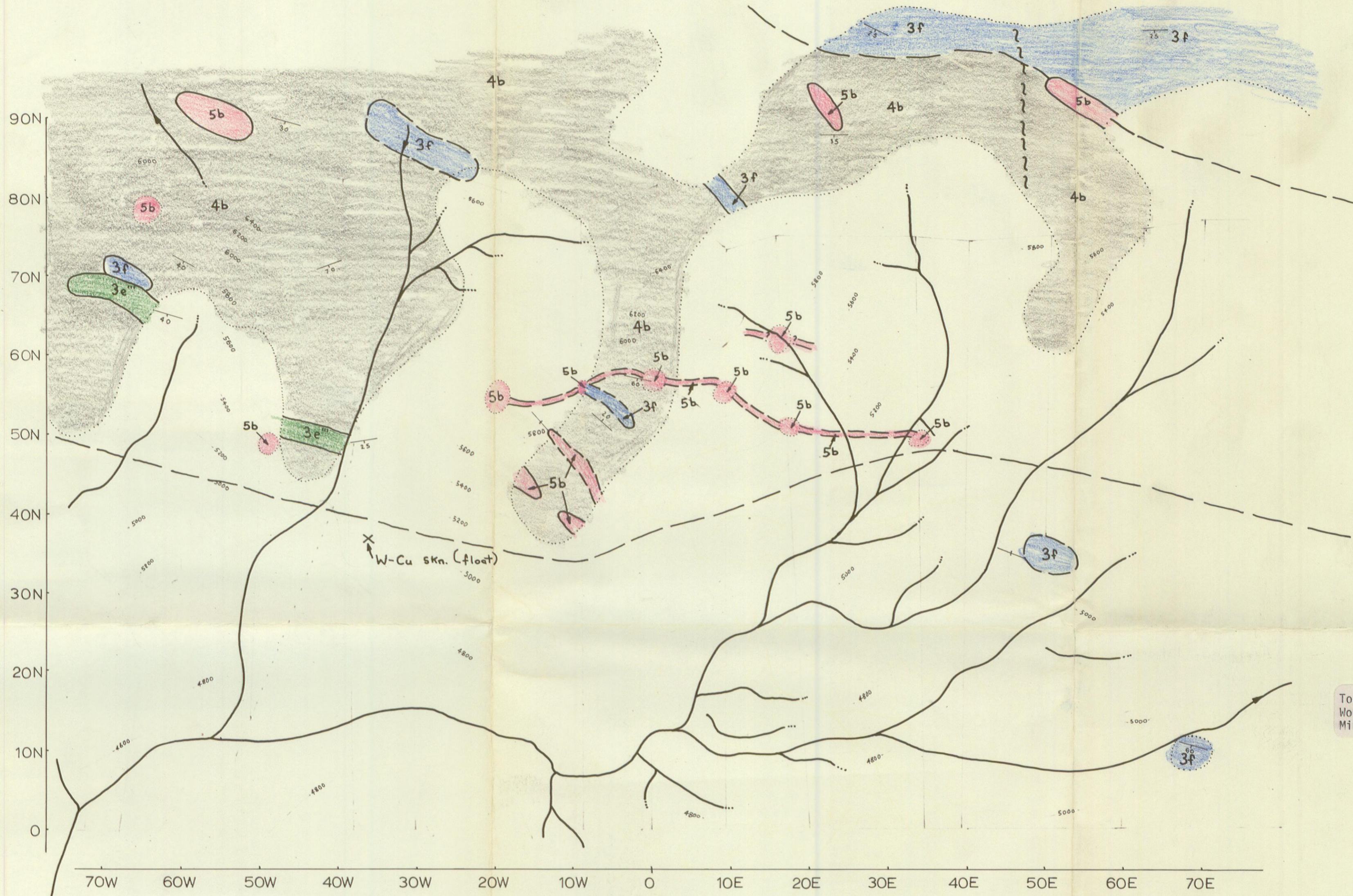


SPARTAN EXPLORATIONS LTD.
 ROSS RIVER YUKON
 ITSI PROJECT
 JOY CLAIM GROUP
 STAKING MAP

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



Scale in feet



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



- LEGEND**
- 5b QUARTZ PORPHYRY
 - 4b FERROUGINOUS SLATES
 - 3f GEORGE DOLOMITE
 - 3e BLACK CHERT.

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

GEOLOGY : G. JAMES, W. ROBERTS.

DRAWN BY : N.H. SIMMONS.
 DATE : SEPTEMBER 3, 1968.

