

SPARTAN EXPLORATIONS LTD. (N.P.L.),
303 - 1035 West Pender Street,
Vancouver 1, B.C.

APPLICATION

FOR

NORTHERN MINERAL EXPLORATION ASSISTANCE

ON THE

ITSI PROJECT

(STAR AND BEE CLAIM GROUPS)

YUKON TERRITORY

by

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Exploration Manager and Chief Geologist.

MARCH 19th, 1968.

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ITSI PROJECTPARTICULARS OF PROPOSED PROGRAM
OF EXPLORATORY WORK TO BE UNDERTAKEN
BY SPARTAN EXPLORATIONS LTD. (N.P.L.).I INTRODUCTION

In accordance with requirements of Application for Northern Mineral Exploration Assistance, as noted in Section 4, Subsections (a), (b), (c) and (d) of the Regulations, Spartan Explorations Ltd. (N.P.L.) is herein submitting information required for formal application. Particulars of this application are described below in the order raised in Section 4 of the Regulations.

II DESCRIPTION OF AREA OF PROPOSED EXPLORATORY WORK
AND HOLDINGS TO WHICH THEY RELATE (4a)1) Introduction

During the summer of 1967, Spartan Explorations Ltd. conducted a program of reconnaissance exploration in the Macmillan Pass region of the eastern Yukon. This program resulted in the location of several geochemical anomalies and an understanding of the regional geology, as well as the staking of the Star (1-32) Group and, at a later date, the Bee (1-16) Group.

The Star group of 32 claims lies contiguous with the eastern border of the Tom group of claims, now actively being drilled by the Hudson Bay Mining & Smelting Company. These groups are located in the eastern Yukon, about 1¹/₂ miles south of the Canol Road, near Macmillan Pass on the Northwest Territories' boundary.

The Bee group of 16 claims lies 3 miles southeast of Wilson Lake. These claims were staked on a number of copper showings,

located along a creek flowing northwest into Wilson Lake.

The proposed program for the Itsi project in the 1968 field season will be concentrated in a belt approximately 50 miles wide, running roughly parallel to the Northwest Territories-Yukon boundary, bounded on the north by latitude 63° 30' and bounded on the south by latitude 62° 15'.

The Itsi project region is underlain by northwesterly-striking sedimentary and metasedimentary rocks, ranging in age from Proterozoic to Devonian and locally intruded by granitic stocks of Cretaceous age. Much of the region consists of black slates and cherts of the Middle-Upper Devonian, but older rocks reach the surface in the northwest and southeast portions of the exploration region. The region appears to have potential for Pb-Zn deposits of the Tom group type, Cu-Mo-W deposits of the type located by Spartan Explorations in the Logan Mountains, and tungsten deposits of the Cantung type, located just southeast of the region.

2) List of Holdings

<u>Claims</u>	<u>Recording Date</u>	<u>Tag Numbers</u>	<u>Total</u>
<u>STAR GROUP - 32 claims - Watson Lake Mining District - Map Sheet 105-0-1</u>			
STAR 1-32 incl.	June 1st, 1967	Y17754-Y17785	32
<u>BEE GROUP - 16 claims - Watson Lake Mining District - Map Sheet 105-J-16</u>			
BEE 1-16 incl.	Feb. 7th, 1968	Y22636-Y22651	16
<u>GRAND TOTAL CLAIMS</u>			<u>48</u>

3) Star Group

Spartan Explorations Ltd. staked the Star group on the geologic reasoning that zinc mineralization could be structurally localized in

the area immediately east of the Tom group. A brief geological reconnaissance of the area revealed that:

- 1) Extensive transported gossans occur near the centre of the Star claims.
- 2) Prominent steeply-dipping fault zones extend eastward from the Tom group onto the Star claims.
- 3) Complex folding with variable axial plane orientations occur near the boundary between the Star and Tom groups.
- 4) A leucocratic quartz-feldspar porphyry stock outcrops near the southern end of the Star group. A similar intrusive outcrops on the Tom group, a few thousand feet south of the 'main' showings.
- 5) Graphitic phyllite float containing quartz stringer fissure filling was found on the group.

III DESCRIPTION OF PROPOSED PROGRAM AND ESTIMATES OF PROPOSED EXPENDITURES, BASIS OF ESTIMATES AND PURPOSE OF EXPENDITURES (4b)

1) Introduction

Spartan Explorations believes the Itsi region to be favourable for exploration, mainly for the following three reasons:

- 1) Presence of the Tom group type of Pb-Zn mineralization, which probably can be traced regionally. The set of geologic features recognized in the area of the Tom group include distinctive host rock of probable Silurian age, proximity to granitic intrusives (some porphyry), and proximity to major fault zones (possibly intersecting).

- 2) The existence of known tungsten mineralization within the northwest end of the belt, and the presence of the Cantung mine in the southeast end of the belt. Some occurrences of tungsten are known in the project area as well.
- 3) Known existence of copper showings which may have porphyry Cu possibilities. Also, Mo and tungsten are logical associates of Cu in this region.

The total crew required for the project will consist of nine men, as follows:

2 - Project managers	(1 experienced geologist, 1 experienced prospector).
2 - Prospectors	
2 - Geochemical samplers-prospectors' assistants.	
2 - Junior geologists	(3rd year level)
<u>1</u> - Cook	
9 men total	
<u> </u>	

It is proposed that two teams, each consisting of a prospector, a junior geologist and a geochemical sampler be formed. The first base camp will be established at Wilson Lake, and teams will operate out of fly camps set out by helicopter and fixed-wing aircraft. Their work will consist of prospecting, geochemical sampling and regional mapping.

The program will be under the direction of an experienced geologist, Mr. James S. Dodge, Vice-President Explorations, and an experienced Yukon prospector, Mr. A. Kulan, Vice-President Operations.

2) Proposed Program on the Star Group

The proposed program on the Star group is as follows:

- 1) Cut grid over showings area (400 ft. spaced lines).
- 2) Geologic mapping of showings (400 ft. = 1 inch).

- 3) Detailed geochemical survey on grid (100 ft. station spacing).
- 4) E.M. survey on grid.

3) Proposed Program on the Bee Group

The proposed program on the Bee group is as follows:

- 1) Preliminary prospecting.
- 2) Geologic mapping of showings (400 ft. = 1 inch).
- 3) Reconnaissance geochemical program.
- 4) Grid cut in area of potential (400 ft. line spacing).
- 5) Detailed geochemical survey (100 ft. station spacing).
- 6) Magnetometer and E.M. surveys, if warranted.

4) Estimates of Proposed Expenditures on Entire Itsi Project

Transportation

(a) Fixed-wing (Beaver, Otter, Cessna 180) Supply flights from Ross River to Wilson Lake, Summit Lake and other lakes in Itsi region - assume 1 1/2 flights/week @ \$260.00/flight	\$ 7,800.00
(b) Super-Cub Support for sample and personnel transportation, as well as geologic reconnaissance flights - assume 337.5 hours @ \$20.00/hour	6,750.00
(c) Helicopter (G3B1) 30 hours/month (average 1 hour/day) @ \$130.00/day	15,600.00
(d) Mobilization-Demobilization 9 men from Vancouver to Ross River Approx. @ \$270.00/man	2,500.00
(e) Fuel Transportation flights with Otter to Wilson and Summit lakes @ \$1.10/mile	4,000.00
(f) Fuel Purchase About 80 45-gallon drums @ \$25.00/drum	<u>2,000.00</u>
Sub-total	\$ 38,650.00

contd....

Excerpt from property report by R.E. Chaplin, P.Eng.,
dated October 11th, 1967, filed with British Columbia
Securities Commission.

STAR CLAIM GROUP
32 Claims
Watson Lake Mining District, Y.T.
Lat. 63° 10'N., Long. 130° 08'W.

The Star claims adjoin the northeast side of Hudson Bay Mining and Smelting's Tom group of claims, located in the Hess Mountains, Nidderly Lake Topography Sheet 105-0-1, approximately 10 miles southwest of the Northwest Territories-Yukon Territory boundary at McMillan Pass. The claims are located on an easterly tributary of the South MacMillan River. The abandoned Canal Road passes within two miles of the claims.

The claims are accessible by helicopter from Jeff Lake, 15 miles to the southwest. Jeff Lake may be serviced from the town of Ross River, 100 miles to the southwest. The topography is mountainous.

GEOLOGY

The area is within the frontal range of the Rocky Mountain-type cordilleran system. A series of Palaeozoic sediments comprise black chert-pebble conglomerate, black cherty to graphitic argillites and minor lime units. The bedded rocks are folded into broad structures, however zones of intense folding occur locally. Intrusive granodioritic rocks and leucocratic quartz feldspar porphyry intrude the sedimentary rocks.

On the adjoining Tom claims, replacement-type galena, sphalerite, pyrite and barite occur in fine bands replacing a light coloured banded unit (carbonate ?) and black chert. The mineralized zone persists continuously for approximately 3/4 mile and is reported to contain approximately 10 million tons averaging 5% zinc. The sulphide zone appears to be contained in a complex fold structure. Prominent fracture cleavage foliation may be confused with primary bedding foliation, hence

Star Claim Group - Geology (continued)....

Careful mapping is required to determine folded structures.

CONCLUSIONS

The Star Group of claims was staked to investigate north-easterly photo linears that traverse the Tom group of claims. The linears are steeply inclined foliation planes due to bedding. The rocks on the Star claims trend transverse to the northwest-southeast regional trend and probably reflect some irregular fold pattern.

Leucocratic quartz-feldspar porphyry outcrops along the south side of the claim group. Similar rocks outcrop on the adjoining Tom claims.

The locally intense folded rocks may have been deformed in part by intrusive activity.

No mineralized rocks were seen on the Star claims by the writer.

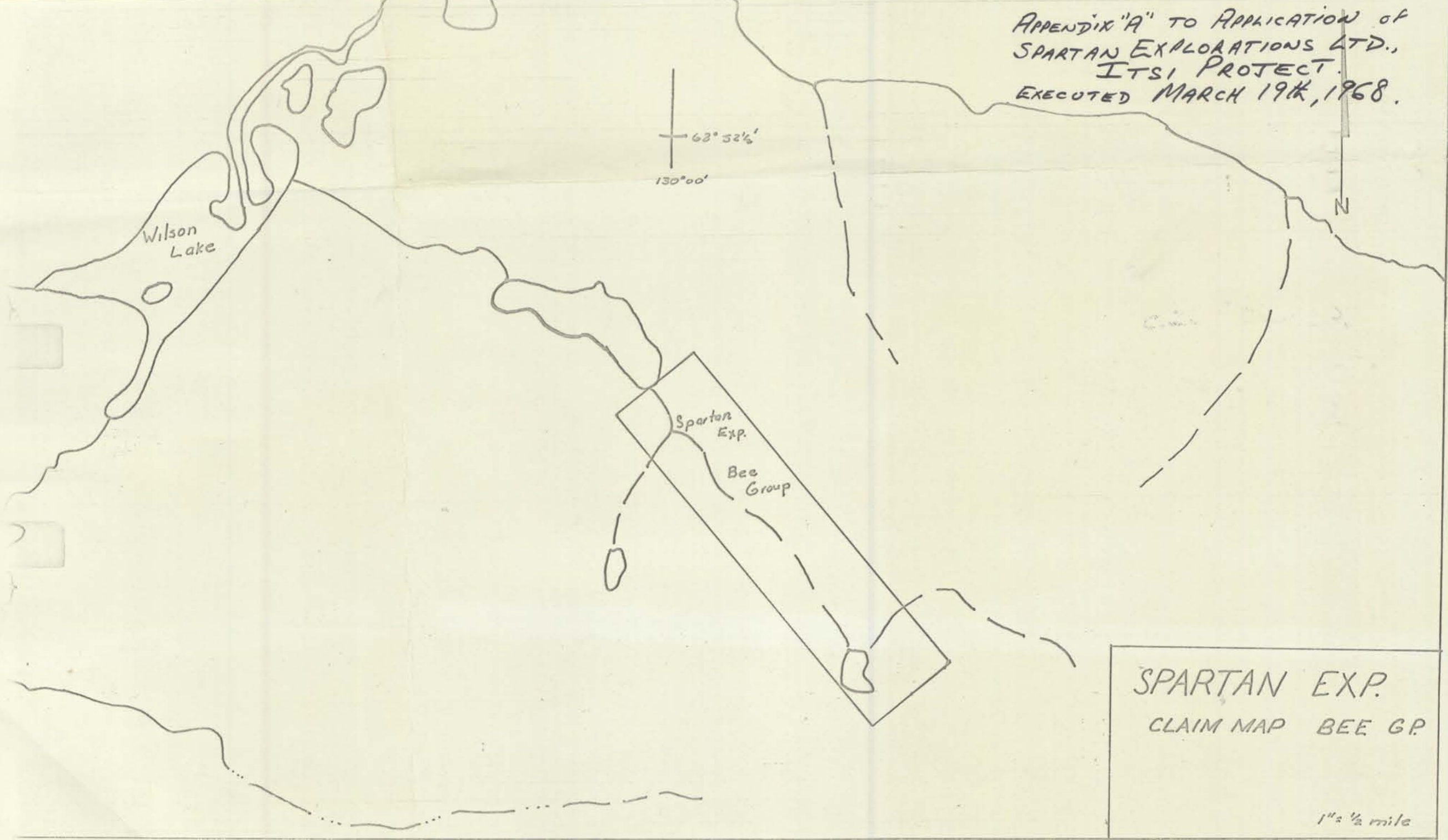
RECOMMENDATIONS

Detailed mapping of fold structures in the area may define a sulphide bearing zone with or without surface expression. Rock chip geochemistry may be helpful to further evaluate the claims.

FINANCIAL REQUIREMENTS FOR 1968 (STAR GROUP)

Geologist & 2 Assistants for 1 month	\$2,000.00
Rock Chip Geochemistry	500.00
Camp Support	1,000.00
Aircraft	4,500.00
Staking Reserve	1,000.00
Overhead & Administration	1,000.00
Contingencies	1,000.00
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TOTAL	\$ 11,000.00
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APPENDIX "A" TO APPLICATION OF
SPARTAN EXPLORATIONS LTD.,
ITSI PROJECT.
EXECUTED MARCH 1968.



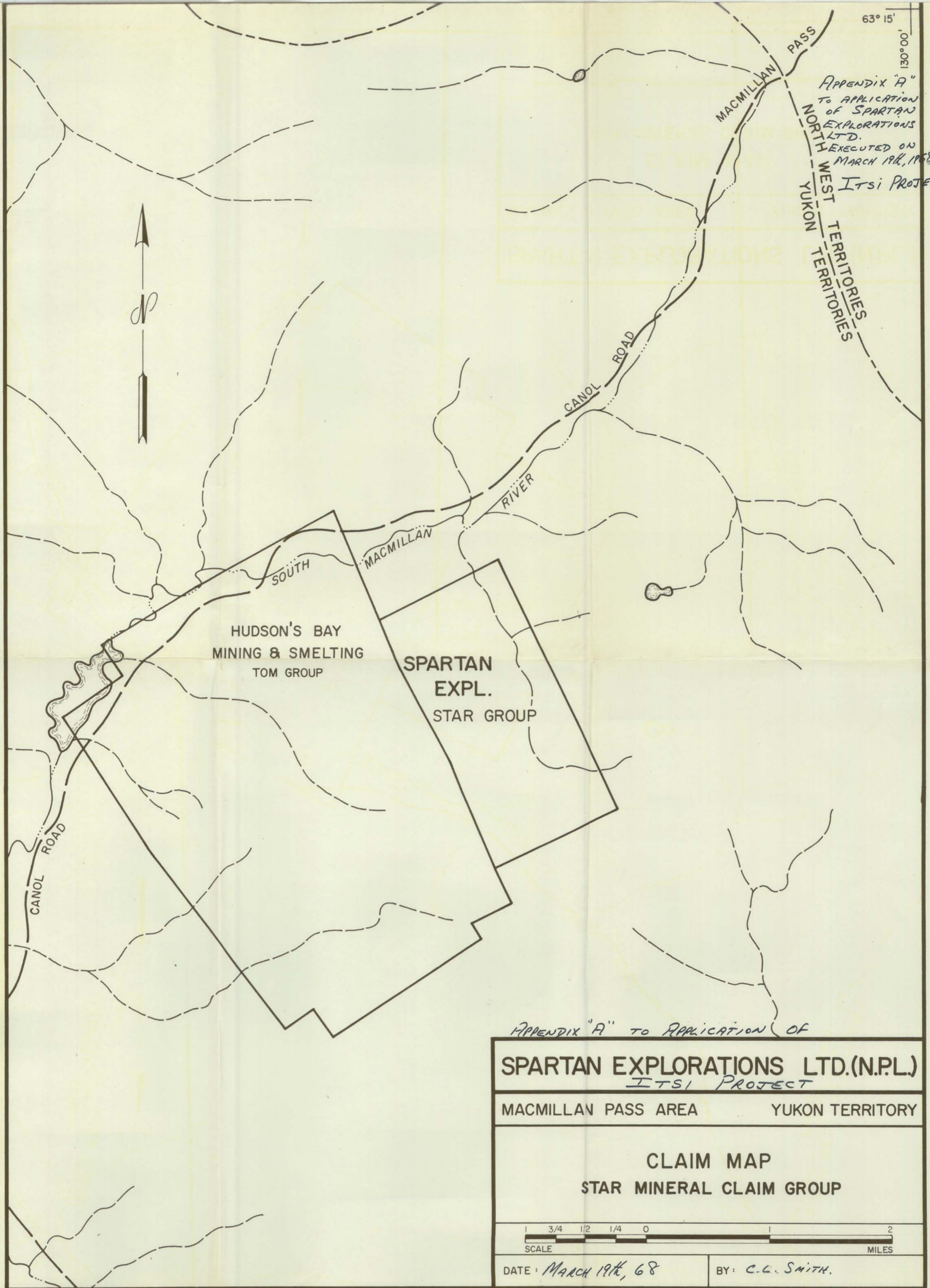
62° 32 1/2'
130° 00'

SPARTAN EXP.
CLAIM MAP BEE GP.
1" = 1/2 mile

63° 15'

130° 00'

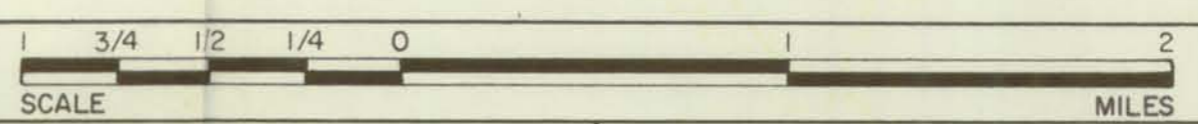
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MACMILLAN PASS AREA YUKON TERRITORY

CLAIM MAP
STAR MINERAL CLAIM GROUP



DATE: MARCH 19th, 68

BY: C.L. SMITH.