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Geophysical Note
on The
Magnetometer Survey
of
Portions of Freegold Mountain
Carmacks, Y.T.
on behalf of
PRISM RESOURCES

By:

D.R. Cochrane P. Eng.,
Oct. 12, 1973
Delta, B.C.

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INTRODUCTION:

During the period October 2 to 6, 1973, 4.4 line miles of grid was layed out and a vertical field fluxgate magnetometer survey was completed on mineral claims on Mt. Freegold in the Yukon Territory.

Mr. G. Elliott was the magnetometer operator, and also helped the author lay out the grid lines. The purpose of the work was to outline auriferous magnetite/specularite pods and veins, in order to determine the extent of the gold bearing zones on Freegold Mountain.

This note briefly discusses the procedures used and the results obtained.

FIELD AND DATA PROCESSING PROCEDURES:

The area surveyed on Freegold Mountain lies above the 4000 foot level in relatively gently rolling open alpine country. Several years ago, a ground control grid was established, and lath pickets were used to mark station positions. The base line runs northwest by westerly and cross lines are turned off at right angles at 400 foot intervals. A few of these pickets are still standing, however many were realigned and renumbered . Intermediate lines (i.e. those not lying on the previously established 400 foot cross lines) were turned off by a transit from the base line, and numbered flags were lined up on shrubs, or tied around loose rocks. The line station intervals were chained with a 200 foot long chain. The grid layout shown on the accompanying maps is believed to be a fair representation of the actual situation.

A central magnetometer base station was established at 26+00 West (26W) on the base line, and an MF2 fluxgate magnetometer was adjusted to zero (0) gammas at this position and in the afternoon of October 2. All magnetometer values are relative to this arbitrary zero at that point in time.

The base line was surveyed first, at a 50 foot station interval, in a "loop back" to the base station fashion in order that small diurnal changes could be eliminated on the base line. Cross lines were run in a "loop" method, and "check ins" along the

base line, and into the main base station were made at frequent intervals in order to eliminate geomagnetic fluxuations. Time-drift corrections were applied to all magnetic data, and the maximum error is believed to not exceed ±50 gammas at values within the +1000 to -1000 range. In areas of extreme magnetic relief, the along line station interval was reduced to 25 feet, and a fine grid was layed out over the "new" Discovery Zone.

RESULTS:

Drift corrected magnetometer results ranged from a low of -29,400 to a high of +21,500 gammas, and thus, the magnetic relief is extreme. Much of the survey area is characterized by gentle relief and small magnetic changes, and magnetic anomalies are prominent and obvious. (see isomagnetic plan).

Two zones are worthy of note and these are:

(a) Anomaly "A" centered some 300 feet south of the Discovery Zone in an area covered with overburden. The "plus" 2000 gamma area is approximately 100 feet long and 50 feet wide and anomalous response is believed to be caused by near surface high susceptibility minerals such as magnetite and specularite. The Discovery Zone (anomaly C), first uncovered by Fred Guder in 1930, contains free gold in a skarn type pod consisting of magnetite, quartz, specular hematite, garnet, epidote and small amounts of chalcopyrite.

(b) Anomaly "B"

This anomaly extends for a considerable strike length, and lies subparallel to the base line and some 500 feet to the north. The anomaly is indicative of a narrow, steeply dipping tabular body which may contain magnetite and specularite. Except for one small hand trench on line 36W, the zone is covered by overburden and remains untested by trenching or drilling.

Anomaly "B" is a few hundred feet north of the Margaret vein from which Dr. P. Sevensma obtained the following assay results:

Location	Width	Au(oz./ton)	Ag(oz./ton)
Trench 150'E of shaft	12"	4.5	19.4

Trench 180'E of shaft	18"	2.6	10.6

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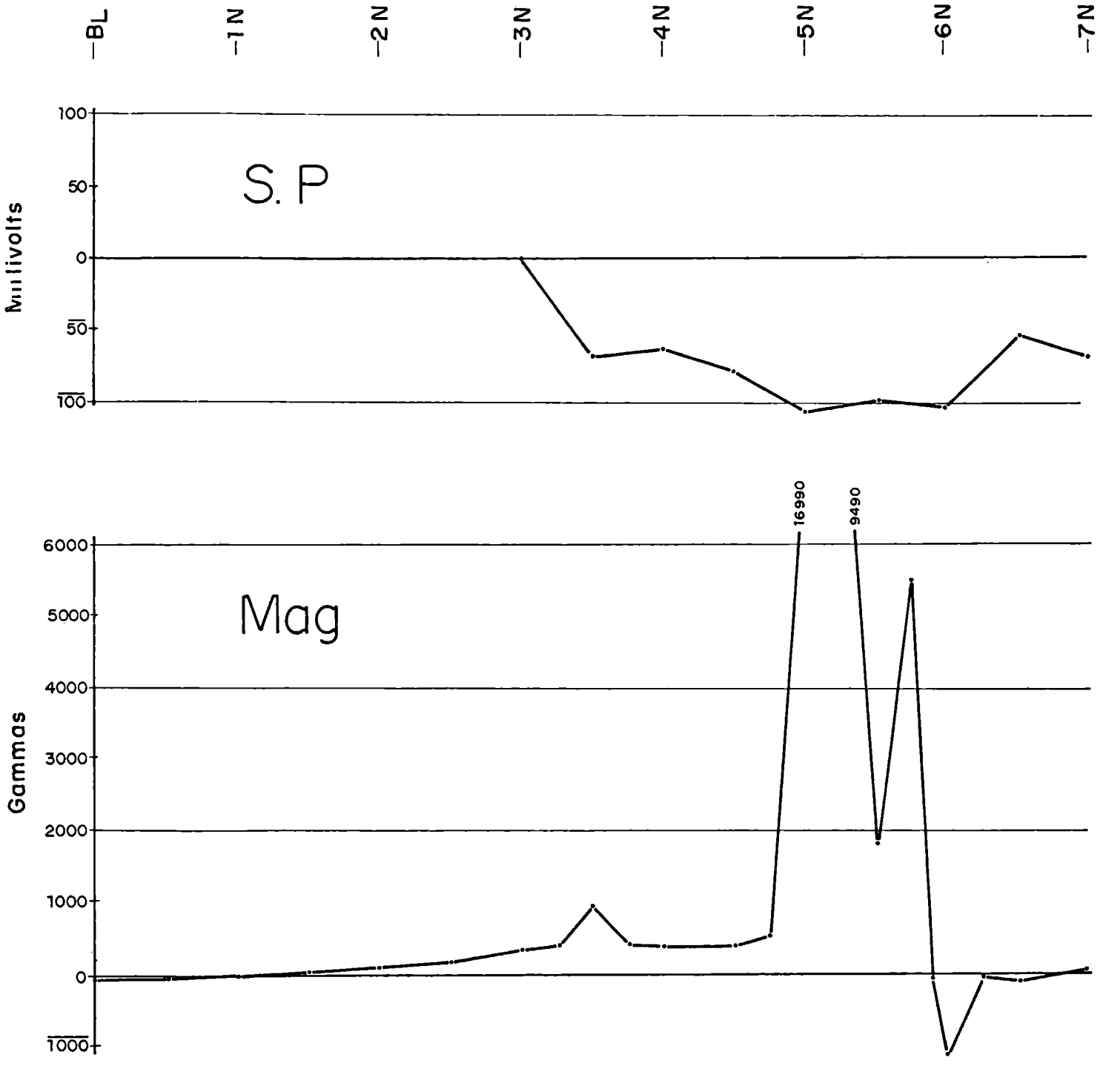

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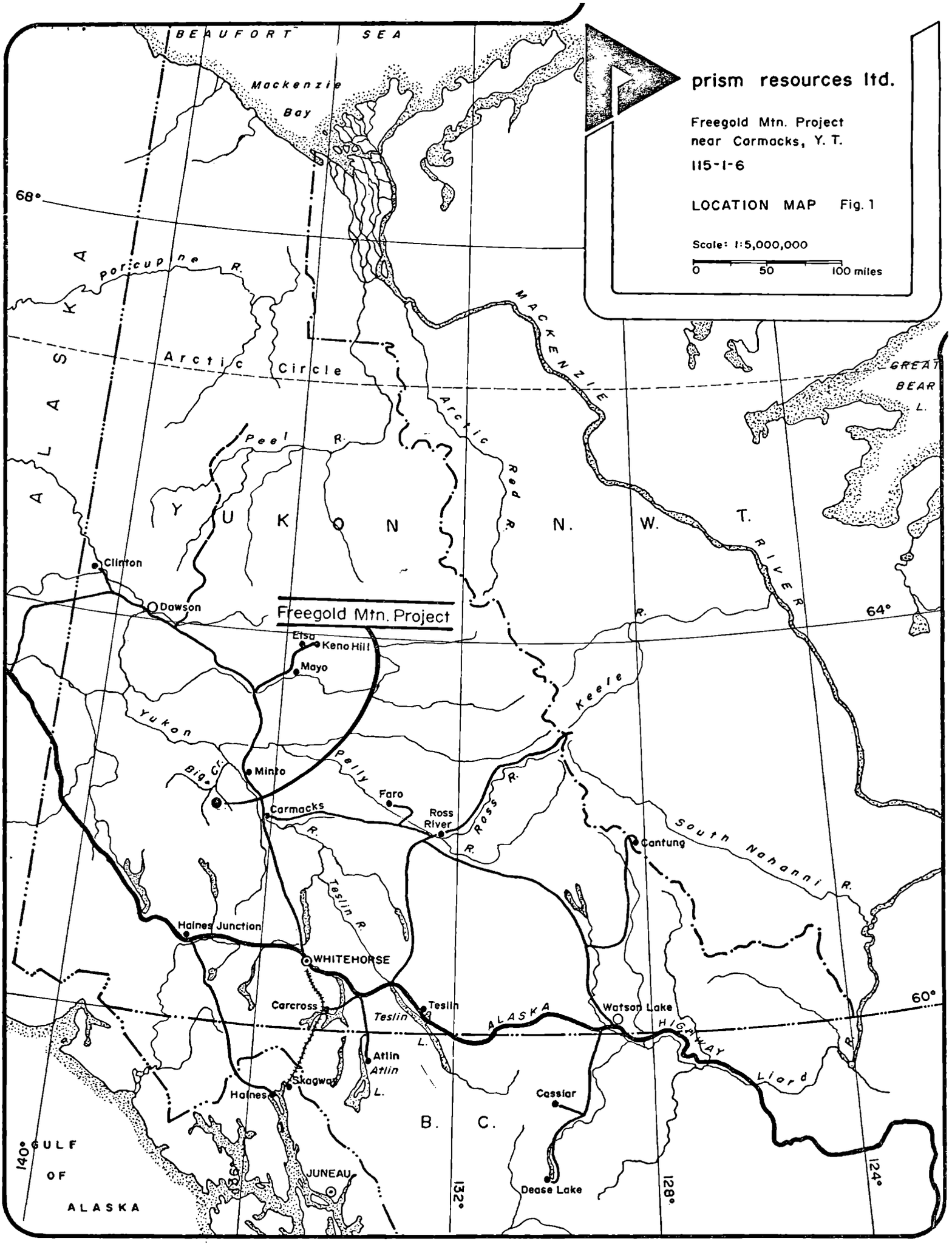
115-1-6

SELF POTENTIAL and
MAGNETOMETER
PROFILES – Line 48 W

Horizontal Scale: 1" = 100'
Vertical Scale as indicated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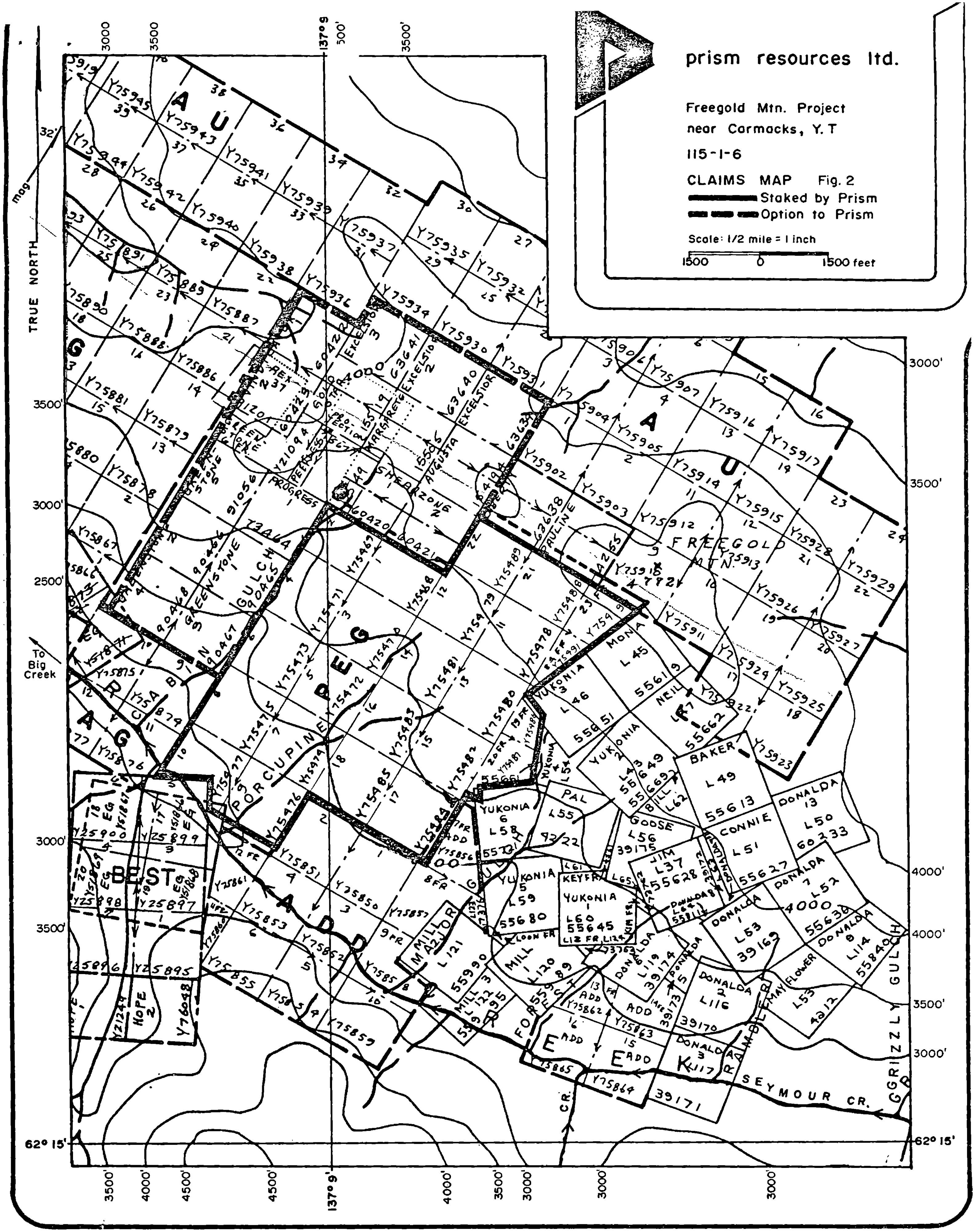
LOCATION MAP Fig. 1
Scale: 1:5,000,000
0 50 100 miles
BEAUFORT SEA
Mackenzie Bay
68°
ALASKA
Porcupine R.
Arctic Circle
MACKENZIE
GREAT BEAR L.
Peel R.
Arctic Red R.
YUKON
N.W.T.
RIVER
Clinton
Dawson
Freegold Mtn. Project
64°
Elsa
Keno Hill
Mayo
Yukon
Keele R.
Big Cr.
Minto
Pelly
Faro
Carmacks
Ross River
Ross R.
South Nahanni R.
Cantung
Teslin R.
Haines Junction
WHITEHORSE
Carcross
Teslin
Teslin L.
ALASKA HIGHWAY
Watson Lake
60°
Liard R.
Atlin
Atlin L.
Skagway
Haines
Cassiar
B. C.
140°
GULF OF ALASKA
JUNEAU
Dease Lake
132°
128°
124°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CLAIMS MAP Fig. 2
Staked by Prism
Option to Prism
Scale: 1/2 mile = 1 inch
1500 0 1500 feet
TRUE NORTH
mag
32'
137° 9'
62° 15'
To Big Creek
FREEGOLD MTN.
PORCUPINE
SEYMOUR CR.
GRIZZLY GULCH
BEST
YUKONIA
BAKER
DONALDA
CONNIE
GOOSE
MONA
PAL
JIM
NEIL
MILL
MAJOR
HOPE
MAYFLOWER
EXCELSIOR
AUGUSTA
SHEARZONE
PROGRESS
PEERLESS
MARGARET
GREENSTONE
GULCH
PAULINE
RAMBLER
KEY FR
3000'
3500'
4000'
4500'
2500'
500'