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A REPORT ON

THE FANNIN GROUP

MINERAL CLAIMS

WHITEHORSE M.D.

YUKON TERRITORY

(Lat.  $62^{\circ}20'$ , Long.  $133^{\circ}25'$ )

Submitted to:

GOLDEN GATE EXPLORATIONS LTD.  
 714 West Hastings Street  
 Vancouver 1, B. C.

By

Joseph Sullivan, P. Eng.  
 2766 West 30th Avenue  
 Vancouver 8, B. C.

This report was examined by  
 the Geological Survey of Canada Unit.  
 and found to be in accordance with the  
 requirements of the Act.

*D. C. Findlay*  
 Director

Amount paid for the amount  
 of \$1,043.50

*H. S. Pedersen*  
 Registrar

Registered as participation work  
 under Section 53(4) Yukon Quartz  
 Act.

*[Signature]*  
 COMMISSIONER OF YUKON

GEOLOGICAL SURVEY.

*[Signature]*  
 JAN 18 1967

Resident Geologist  
 Whitehorse, Y. T.

December 15, 1966

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A REPORT ON  
THE FANNIN GROUP  
MINERAL CLAIMS  
WHITEHORSE M.D.  
YUKON TERRITORY  
(Lat.  $62^{\circ}20'$ , Long.  $133^{\circ}25'$ )

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INTRODUCTION:

On November 4, 1966 the writer was instructed by Mr. Thomas Lytton of Golden Gate Explorations Ltd., Vancouver, B. C. to conduct a reconnaissance survey on the Fannin Group of mineral claims. The object of this survey was to establish, on the ground, a starting point for a ground magnetometer survey. This was to be the start of a surface exploration program subsequent to a recently conducted airborne magnetometer survey.

The personnel involved in this work are listed in the Appendix at the end of this report.

GENERAL CONDITIONS:

(1) Location: (Lat.  $62^{\circ}20'$ , Long.  $133^{\circ}25'$ )

The claim group is situated in the Whitehorse Mining Division of the Yukon Territory, (claim map 105 K-6). Survey marker VG-10 on the Faro Road is 4500 feet southwest from the center of the group. The marker itself lies 48.5 road miles from the cross roads at Ross River settlement.

A location sketch follows this page.

(2) Accessibility:

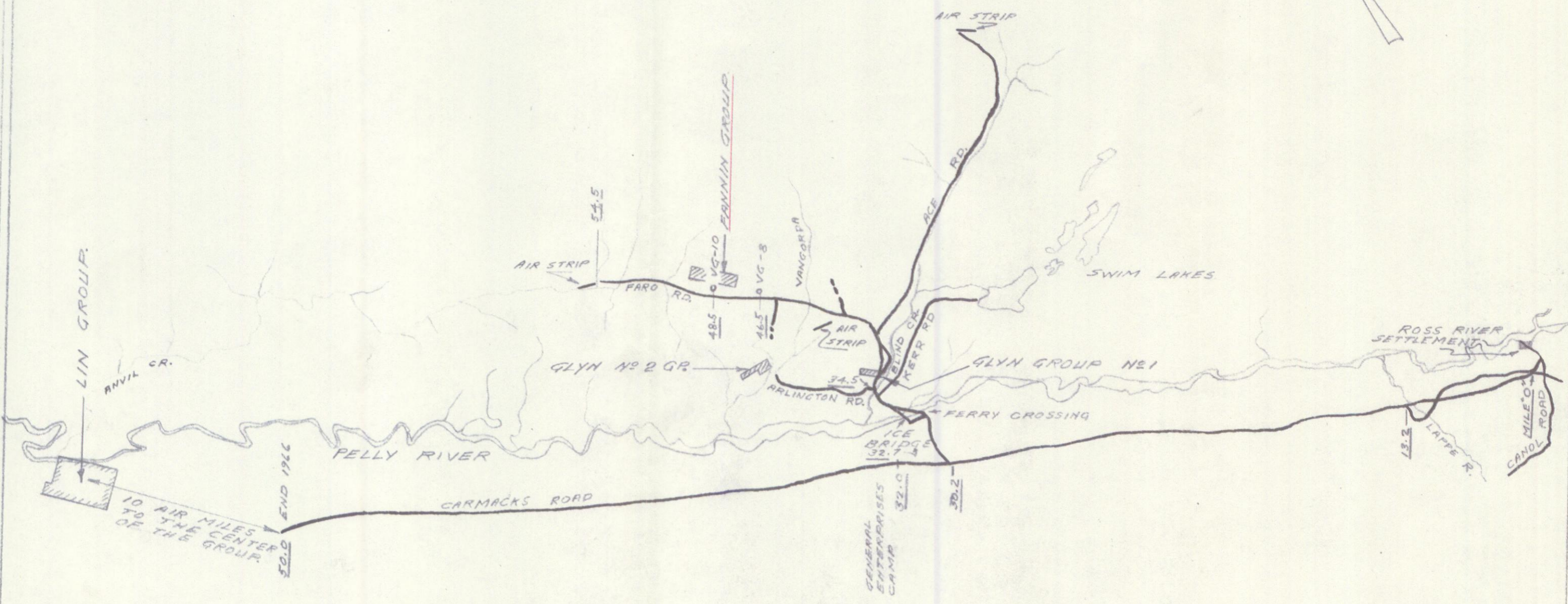
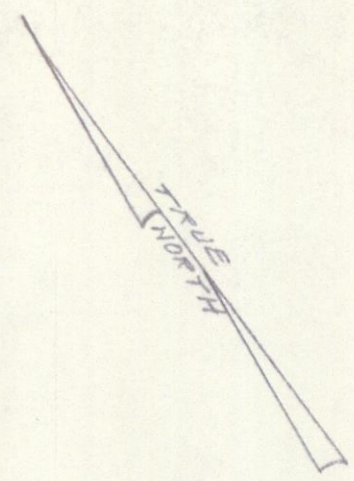
The terrain affords easy access to the claims. Four hundred feet east from the survey marker VG-10, there is a wide straight line cut through the brush leading up the slope toward the Fannin No. 5. At 3000 feet from the road the line ends on a crossline trending northwest southeast. This crossline is the southwest boundary of the Fannin Group.

In the Spring and Fall seasons the access road from Ross River closes for a few days until the Pelly River crossing converts from a ferry to an ice bridge, or vice versa.

(3) Surface Features:

Very little timber exists in the area. Most of the growth is low willow and alder brush, with an abundance

BASE MAP BY ARCHER CATHRO & ASSOCIATES.  
 REFERENCE POINTS AND MILEAGES BY W.G. STEVENSON  
 CROSS ROADS AT ROSS RIVER = MILE "0"



|                               |                     |                 |
|-------------------------------|---------------------|-----------------|
| GOLDEN GATE EXPLORATIONS LTD. |                     |                 |
| FANNIN GP.                    | PELLY RIVER VALLEY. | LOCATION SKETCH |
| 1" = 4 MI. (APP)              | Nov 10, 1966.       | J.S.            |

of grass and moss. The slopes are gentle and rounded. A higher, more rugged topography lies north and easterly just beyond the claim boundaries.

PROPERTY AND OWNERSHIP:

A double row of eight claims each are strung northwesterly across the hillside forming a contiguous grouping of sixteen claims. These are the Fannin Nos. 1 to 16. They are all locations that have been transferred to Golden Gate Explorations Ltd., 714 West Hastings Street, Vancouver 1, B. C.

At the back of this report there is a sketch of the group as an insert in the upper right hand corner of the "Surface Plan".

RECONNAISSANCE METHODS:

Primarily, the desired area was located with respect to its own claim posts and/or posts for adjoining properties. Then a chained line was run from the post, or posts, into the area, along a compass bearing. Pace and compass traverses were then originated from this measured "base" and looped back to some part of the line so that they could be adjusted. Existing claim lines and lines from older surveys were utilized whenever possible.

Most of the rock outcrops were hidden by the early snow. However, obvious exposures were recorded.

Magnetometer readings were taken on at least one traverse across the area being worked. In addition, an aneroid was used to follow contours around the ridges. About 80 percent of the work, after posts had been found, was tied together and plotted on a surface plan. The accuracy of the horizontal distances is expected to be within  $\pm$  25 feet.

#### DISCUSSION OF RECONNAISSANCE:

No difficulties were encountered in locating claim posts for this group. The lines are well blazed and marked with yellow flagging tape. Moving around the hillside was done with ease.

On the surface plan the writer has interchanged the locations for the Fannin Nos. 5 and 6. This comes from the descriptions read on the posts, which does not agree with the claim map.

A granodiorite contact was traced from the Fannin No. 7, through the south corner of Fannin No. 8, across the Fannin No. 5, and off the claim group. Generally, the contact is eastwest, but it was noted to swing northwest on occasion thus conforming somewhat with the magnetic ridges discovered in September, 1966 by an air-

borne magnetometer survey (1) of the area.

The highest magnetic readings recorded on the ground lie 500 feet south of the granodiorite contact well within a faint banded andesitic flow on tuff. In general the andesite trends northwest and dips moderately southwest, however, as the granodiorite is approached the banding swings to conform with the contact.

There appeared to be a wide strip of open ground immediately southwest of the Fannin's boundary so the reconnaissance party closed in the staking on behalf of Golden Gate Explorations with the Julian Nos. 1, 3 and 3 Fr. mineral claims.

GEOLOGICAL SUMMARY: (G.S.C. Map Sheet 13-1961)

The geological mapping by the Geological Survey of Canada indicates the presence of a thin layer of altered andesite (7 and/or 8), intruded by a quartz monzonite and granodiorite body (11). From the work being considered herein the writer feels that both these formations appear on the Fannin Group and that they come into contact across the Fannin No. 5 M.C. The actual contact was not seen but

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(1) Airborne Magnetometer Survey, Fannin Group  
for  
Golden Gate Explorations Ltd.  
by  
Husky Industries and Services Ltd.  
September 29, 1966

its presence has been inferred on the accompanying surface plan.

CONCLUSIONS:

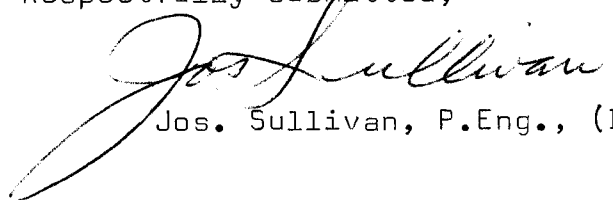
The most attractive area, magnetically, lies 500 feet south of the granodiorite contact. The trend of the magnetic "highs" is influenced more by the trend of the contact than it is by the trend of the banding in the andesite. Further, the andesite, if truly related to the G.S.C. formation (7), could be a thin layer giving way to more attractive sedimentary units a short distance below the surface. (The sediments are referred to as "more attractive" because they are the host rock for the known base metal deposits being explored by Anvil Mines on the Faro claims to the north.)

RECOMMENDATIONS:

The writer recommends the No. 1 claim posts of the Fannin Nos. 5 and 6 as the starting point for a ground magnetometer and geological mapping program. The ground control can extend both east and west from these posts with north-south crosslines spaced 400 feet apart.

Property boundaries and survey results will determine the size of the area to be explored.

Respectfully submitted,



Jos. Sullivan, P.Eng., (B.C.)

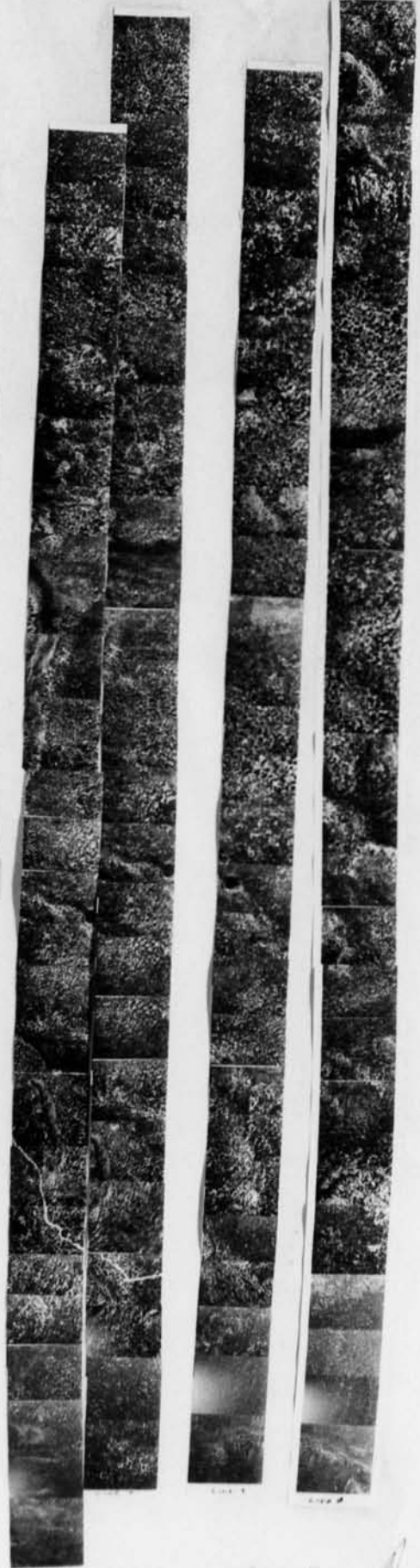


Fig. 1

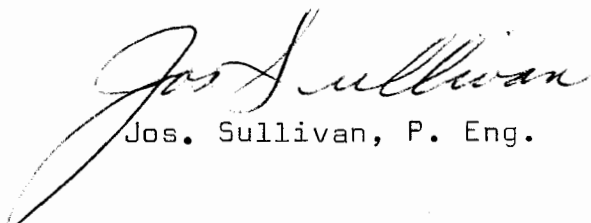
Fig. 2

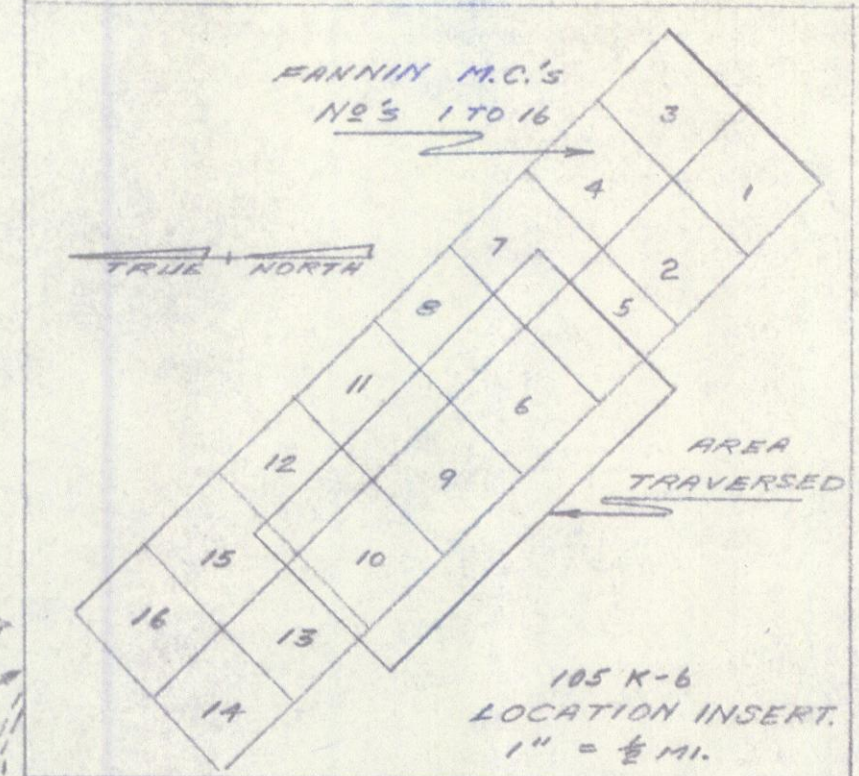
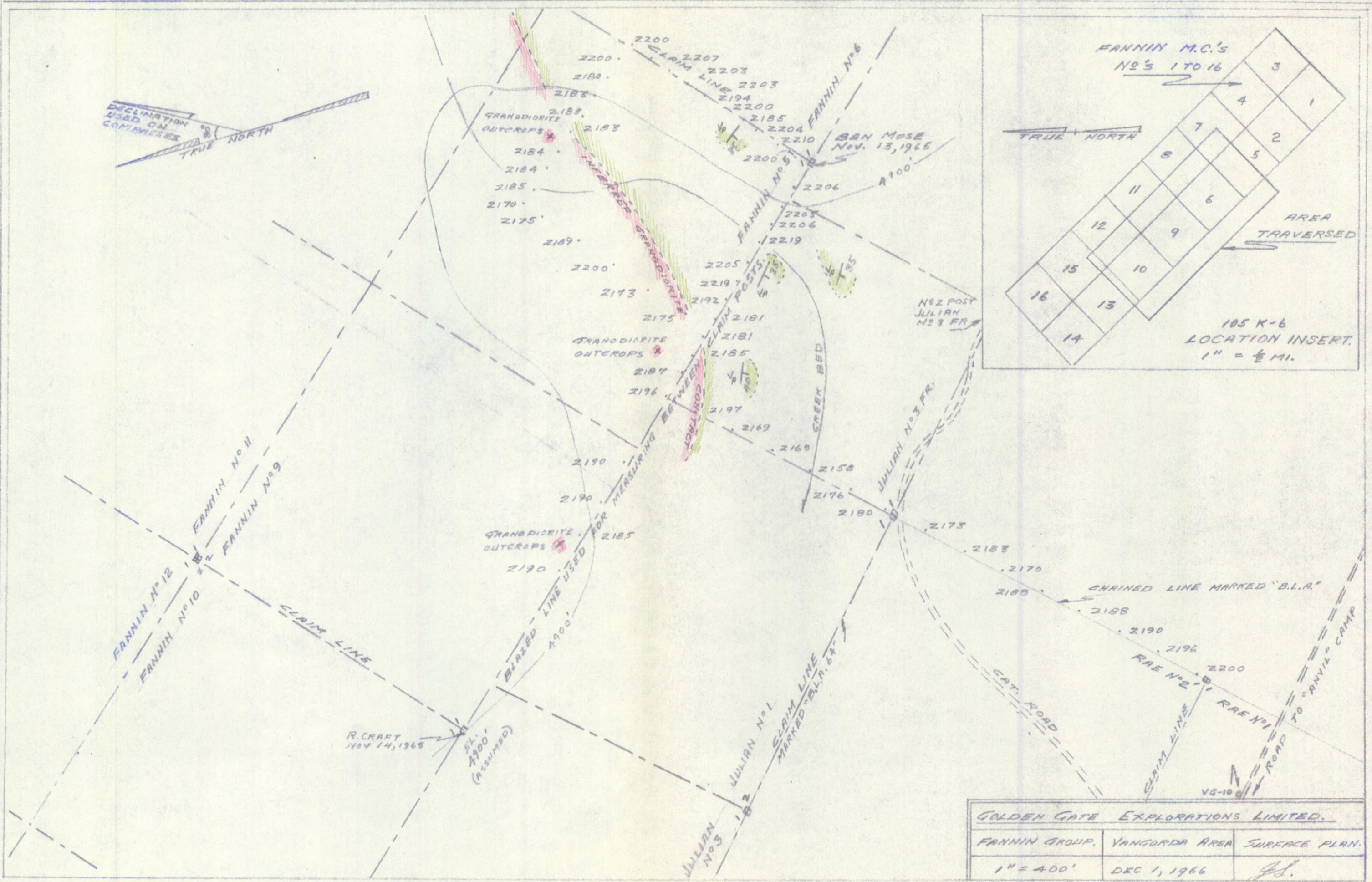
APPENDIX

FANNIN GROUP

SCHEDULE OF TIME AND REMUNERATIONS

| <u>Name and Address</u>   | <u>Occupation</u>            | <u>Period (1966)</u>             | <u>Total Days</u> | <u>Total Remuneration</u> |
|---|------------------------------|----------------------------------|-------------------|---------------------------|
| W. G. Stevenson<br>509 Stock Exchange Bldg.<br>Vancouver 1, B. C. | P. Eng.<br>Geology           | Nov. 16,<br>17, 18,              | 3                 | \$375.00                  |
| J. Sullivan<br>2766 West 30th Avenue<br>Vancouver 8, B. C.        | P. Eng.<br>Geology           | Nov. 19 to<br>Nov. 21<br>(Incl.) | 3                 | 375.00                    |
| J. Berkosha<br>Port Moody Inn<br>Port Moody, B. C.                | Geophysics<br>and<br>Survey  | Nov. 19 to<br>Nov. 21<br>(Incl.) | 3                 | 225.00                    |
| Bill Carson<br>Ross River, Y. T.                                  | Prospector<br>and<br>Vehicle | Nov. 16,<br>17,                  | 2                 | 58.50                     |
| Magnetometer  |                              |                                  | 2                 | 10.00                     |
|   |                              |                                  | TOTAL             | <u>\$1,043.50</u>         |

  
Jos. Sullivan, P. Eng.



**LEGEND**

- VA ANDESITIC FLOW OR TUFF
- VB BASALTIC FLOW OR TUFF
- SN SHALE
- SA ARGILLITE
- SP PHYLLITE
- SL LIMESTONE
- SQ QUARTZITE
- SHc CHLORITE SCHIST.
- SHs SERICITE SCHIST.
- GR GRANITE
- GRD GRANDIORITE
- DR. DIORITE
- ROCK CONTACT INFERRED
- ASD ATTITUDE OF BANDING
- X OUTCROP LOCATION.
- 2100 MAGNETOMETER READING WITH MICROMETER VALUE.
- - - APPROXIMATE CLAIM BOUNDARY.
- ## CLAIM POST AND NUMBERS
- == ROAD.

30°E MAGNETIC DECLINATION CARRIED ON COMPASSES

|                                   |               |               |
|-----------------------------------|---------------|---------------|
| GOLDEN GATE EXPLORATIONS LIMITED. |               |               |
| FANNIN GROUP.                     | VANGORDA AREA | SURFACE PLAN. |
| 1" = 400'                         | DEC 1, 1966   | J.S.          |

Report on an  
Airborne Magnetometer Survey  
of the  
Fannin, [REDACTED]  
of Mineral Claims  
near Ross River, Y.T.

GEOLOGICAL SURVEY  
*[Signature]*  
JAN 19 1967  
Resident Geologist  
Whitehorse, Y. T.

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 \$ 922.05  
*[Signature]*  
RESIDENT MINING INSPECTOR  
Approved as representation work  
Section 53(4) Yukon Quartz  
Mining Act  
*[Signature]*  
GEOLOGICAL SURVEY

Report on an  
Airborne Magnetometer Survey  
of the  
Fannin, ~~\_\_\_\_\_~~  
of Mineral Claims  
near Ross River, Y.T.

for  
Golden Gate Explorations Ltd. (N.P.L.)  
714 West Hastings Street,  
Vancouver, B.C.

Survey by  
Husky Industries and Services Ltd.  
97 - 845 Hornby Street,  
Vancouver, B.C.

Interpretation by  
Joseph Sullivan, P.Eng.  
201 - 525 Seymour Street  
Vancouver, B.C.

September 29, 1966

Introduction:

This report is on the airborne magnetometer surveys of five separate claim groups, all in the same general locality. Husky Industries and Services Ltd., 97 - 845 Hornby Street, Vancouver, B.C. conducted each survey on September 3, 1966. The client, and owner, for each group was the same, namely: Golden Gate Explorations Ltd., 714 W. Hastings Street, Vancouver, B.C.

Properties:

The five group total 60 located mineral claims:

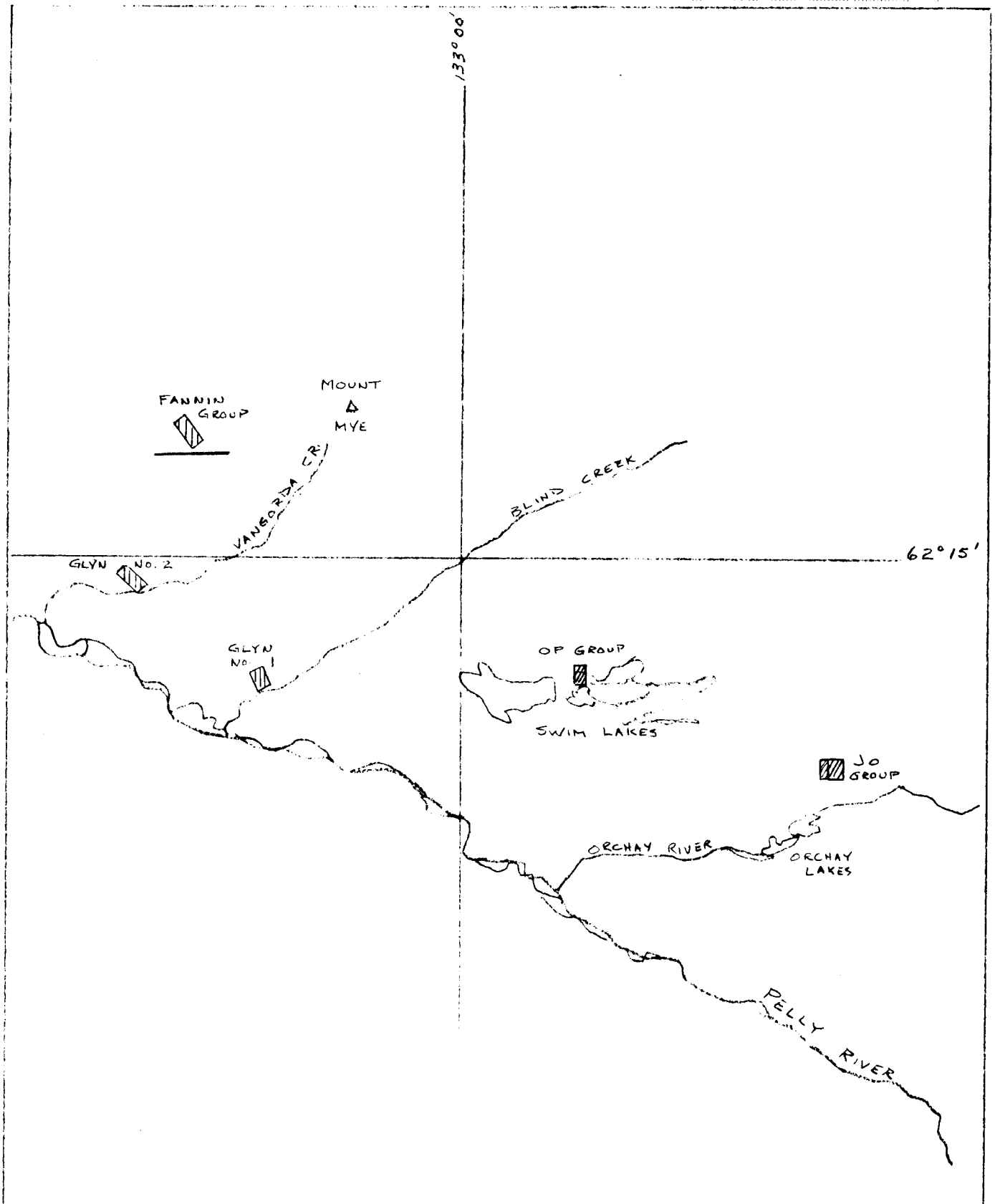
|                     |                                 |
|---------------------|---------------------------------|
| <u>Fannin Group</u> | <u>No's. 1 to 16 (16)</u>       |
| Glyn Group No. 1    | No's. 1 to 8 (8)                |
| Glyn Group No. 2    | No's. 65 to 80 (16)             |
| OP Group            | No's. 17 to 24 (8)              |
| JO Group            | No's. 19 to 24, + 43 to 48 (12) |

A claim sketch for each grouping has been included at the back of this report.

Location: (Lat.  $62^{\circ} 00' 20''$ , Long.  $132^{\circ} 00' 25''$  N.W.)

All the claims are in the Whitehorse Mining Division of the Yukon Territory. They lie on the north side of the Pelly River, west of the Ross River townsite, east of Rose Mountain, and south of Mount Mye.

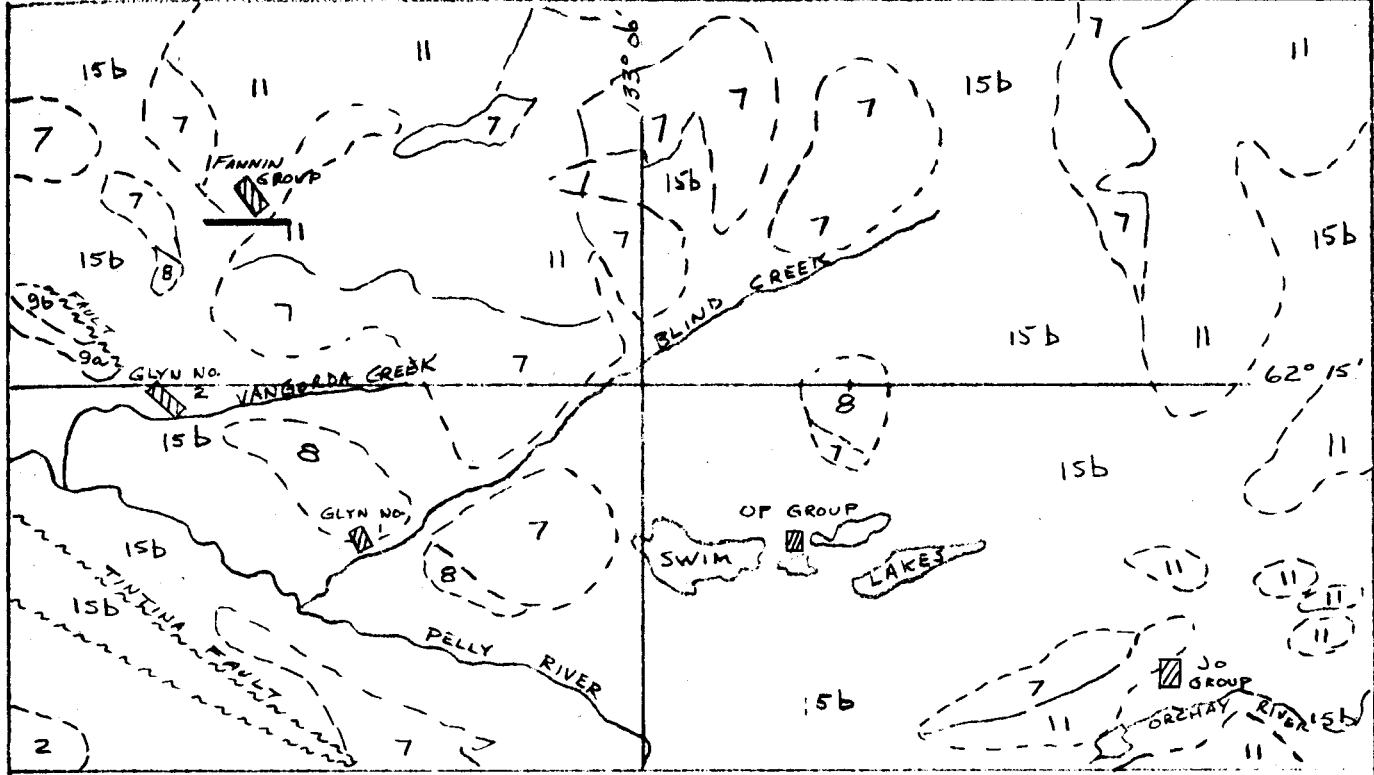
The following location sketch shows each group located with respect to its closest topographical feature.



LOCATION SKETCH

Geological Summary: (G.S.C. Map Sheet 13 - 1961)

As might be expected, with so widespread an array of claims, there is considerable variation in the general geology. On the northwest, the Fannin Group appears to be underlain by Cretaceous intrusives, classified in the accompanying legend as formation (11). For the area of both the Glyn groups there is a great variety of altered volcanics and sediments of Mississippian age, formations (7), (8), and (9). The OP group is on flatter ground, covered chiefly by glacial deposits. The most likely underlying formation is (7), an altered volcanic-sedimentary complex. The same Cretaceous intrusives associated here with the Fannin group, appear also in the locality of the JO claims and are the most likely underlying rocks, since no other formations are indicated here.



LEGEND

- 2 Buff-and grey-weathering, grey, green, and black shales, slates, and phyllites; silty limestone and siltstone.
- 7 Banded quartzose granulite, green and purplish banded skarn, quartz-sericite schist, hornfels and phyllite; chlorite schist and thin altered andesite (8) common in upper part; minor crystalline limestone.
- 8 Altered, dark green andesite and basalt flows and tuffs, commonly schistose, rarely porphyritic; minor phyllite, dark argillite, and light grey quartzite.
- 9 9a, greenish grey quartzite, commonly thin-bedded; micaceous and silvery graphitic schists; minor dark grey siliceous slate, silty limestone, and grey micaceous quartzite; 9b, conglomerate with pebbles of chert, andesite, quartzite, chlorite schist, and limestone.
- 11 Medium-to coarse-grained quartz monzonite and granodiorite, commonly porphyritic; minor diorite and gneiss.
- 15b Unconsolidated glacial and alluvial deposits.

GEOLOGY

### Method of Survey:

A magnetometer built to record the vertical component of the earth's magnetic field was mounted in a Hiller 12E helicopter. The readings were directed through an electric chart recorder, so that a continuous record of the gamma changes was inscribed on the paper charts.

These surveys covered a total of 36.2 line miles at approximately 1,000 foot spacings. Each group had a ground marker, visible from the air, on a claim corner, so that the automatic camera on the helicopter could relate each traverse or flight to a known point.

The operator's field records are included as Appendix 1 at the back of this report.

Interpretation: (See also accompanying recorder charts)

(1) Fannin

All the flights recorded considerable range in the gamma count, with many of the readings beyond the limits of the chart paper. The most pronounced trend noted was a parallel set of magnetic ridges lying eastwest across the southerly portion of the claims. If the claims are underlain entirely by intrusive rocks, as is suggested in the geological summary, then these magnetic ridges could indicate a relatively more basic intrusive phase with a greater magnetic content, or perhaps a zone of alteration controlled by a wide east-west shear.

(2) Glyn Group No. 1

The trend marked as No. 1 is a drop in the gamma count from a high range into a pronounced magnetic depression. This suggests a rock contact with a more basic unit on the west. The indicated trend No. 2 is a magnet on the northerly ends of lines 2 and 3. There may be no relation between the lines, but the presence of one or more magnetic bodies is indicated.

(3) Glyn Group No. 2

On flight-line 4 is an isolated magnetic high, the only signature on note on the charts. Perhaps the rope-like fashion in which the runs were made explains the unrelated appearance of one chart to the next.

(4) OP Group

An eastwest magnetic high zone predominates over a magnetic gradient, which increases from west to east. This high zone appears on lines 1 and 2, and because it is well pronounced, and does not continue through the survey, is one of the most attractive trends in all of the five projects.

(5) JO Group

Trend No. 1 crossing lines 3, 4, and 5 is a narrow break in the gradients, often caused by a fault or a rise in the topography. However, this trend is normal to the topographic trends, and has a dipole type signature, making it a truly anomalous condition worthy of further investigation.

Recommendations:

(1) Fannin Group:

Investigate the magnetic ridges on the ground by prospecting with a dip-needle.

(2) Glyn Group No. 1:

Prospect the area marked "Trend No. 2" by visual inspection and a dip-needle.

(3) Glyn Group No. 2

The magnetic peak may not extend into the claims. This can be determined by the use of a dip-needle.

(4) OP Group:

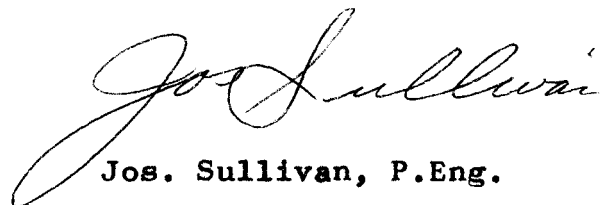
The magnetic zone marked "Trend No. 1" should be outlined on the ground by a magnetometer survey and geological mapping.

(5) JO Group:

The magnetic zone marked "Trend No. 1" should be outlined on the ground by a magnetometer survey and geological mapping.

The various trends discussed are plotted on the flight-line sketches located herein after the claim outlines. Because of the ground markings and camera control, each trend, as plotted, should be a reasonably good starting point for the recommended ground investigations.

Respectfully submitted,



Jos. Sullivan, P.Eng.

September 29, 1966.

Appendix 1

Airborne Magnetic Survey

For Golden Gate Exploration Ltd.

Fannin Group #1 - 16 (16)

| <u>Line No.</u> | <u>Direction Flown</u> | <u>No. Pictures</u> | <u>Tape Length</u> | <u>Mileage</u> |
|-----------------|------------------------|---------------------|--------------------|----------------|
| 1               | SE - NW                | 27                  | 12.5"              | 2.50           |
| 2               | SE - NW                | 25                  | 11.8"              | 2.36           |
| 3               | SE - NW                | 26                  | 12.6"              | 2.52           |
| 4               | SE - NW                | <u>26</u>           | 11.4"              | <u>2.28</u>    |
| Totals          |                        | 104                 |                    | 9.66           |

Date Flown - September 3, 1966

Line Bearings - N 45° W approximately

Altitude - 700'

Air Speed - 60 M.P.H.

Sensitivity - 1000 gammas full scale

Lines - 1000' apart

Operator - R. Robillard

BY D.M.F. DATE 27.9.66

SUBJECT HUSKY INDUSTRIES & SERVICES LTD

SHEET NO. OF

CHKD. BY DATE

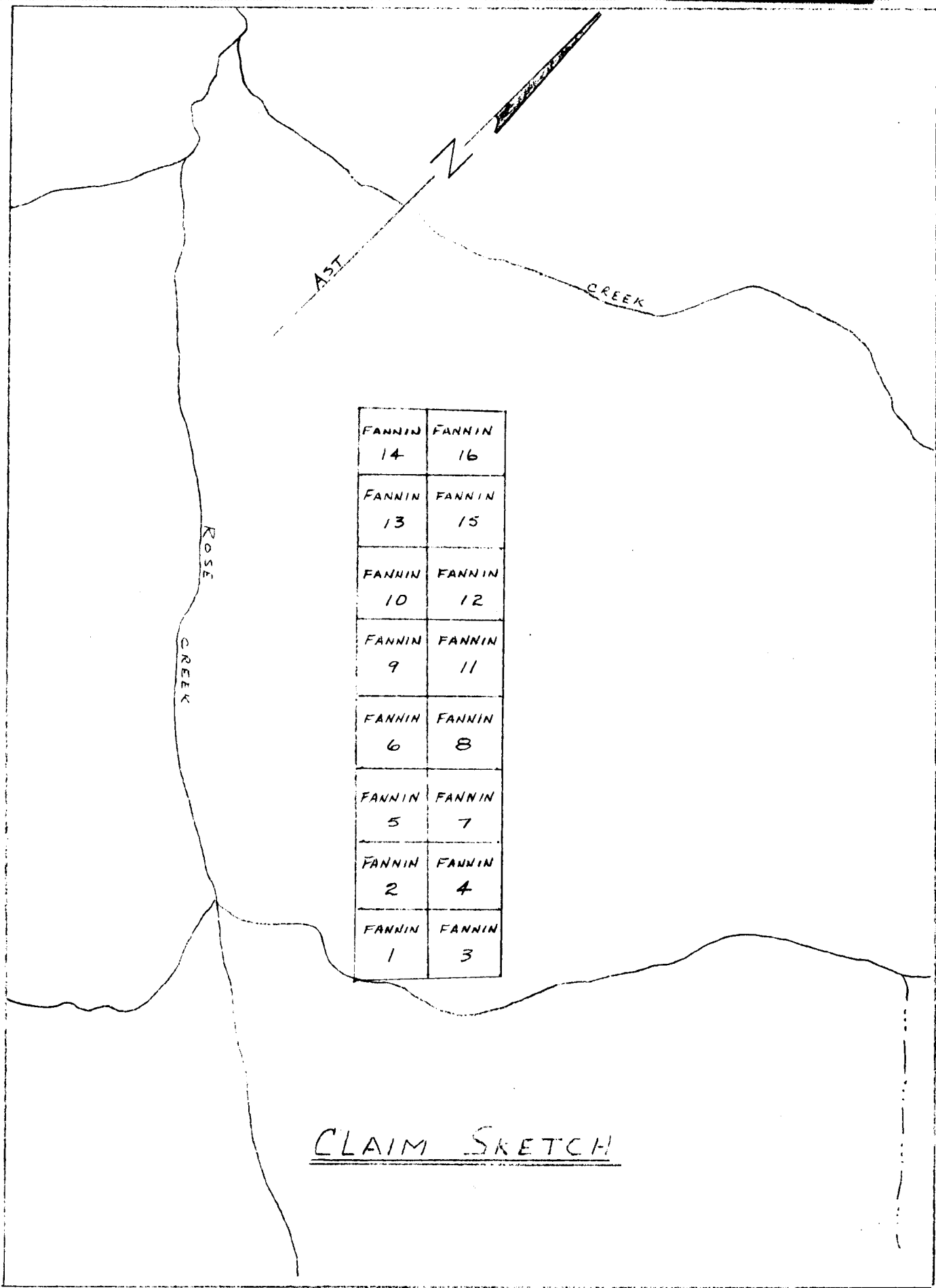
AIRBORNE MAGNETOMETER SURVEY FOR

JOB NO. 4-A

SCALE 1" = 1/4 MILE

GOLDEN GATE EXPLORATIONS LTD (N.P.L.)

FANNIN GROUP



|              |              |
|--------------|--------------|
| FANNIN<br>14 | FANNIN<br>16 |
| FANNIN<br>13 | FANNIN<br>15 |
| FANNIN<br>10 | FANNIN<br>12 |
| FANNIN<br>9  | FANNIN<br>11 |
| FANNIN<br>6  | FANNIN<br>8  |
| FANNIN<br>5  | FANNIN<br>7  |
| FANNIN<br>2  | FANNIN<br>4  |
| FANNIN<br>1  | FANNIN<br>3  |

CLAIM SKETCH

