

2565

Report on Assessment Work on

DOE CLAIM GROUP

GOOSLY LAKE AREA, OMENICA
MINING DIVISION

HOUSTON, B. C.

Lat 54 degrees 13' N
Long 126 degrees 29' W.

FOR

NORTH PACIFIC MINES LTD. (N. P. L.)
2502 1177 West Hastings St. Vancouver, B. C.

BY

D. W. Pringle & Associates Ltd.
R. R. #2 Oliver B. C.

August 1970

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2565 MAP

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ASSESSMENT REPORT ON DOE CLAIMS

INTRODUCTION

North Pacific Mines Ltd. acquired the 100 mineral claims known as the Doe Claim Group in late 1969.

A preliminary report was filed by D. W. Tully, P. Eng. on Oct. 6, 1969, which outlined a work program.

The writer, on a property visit in March 1970, set up the line cutting crews of Emery Mining Services Ltd. It was later arranged that R A F Engineering would run the ground magnetometer survey and help supervise the line cutting.

Details of the work program, access, claim locations, geology etc. is contained in the attached R A F Engineering Report by Wm. H. Pierre.

SUMMARY

As is normal the original claim staking job was not too accurate and, therefore, covering fractions were located. The group now consists of 100 claims and 5 fractions.

The new air photos and 1" -1000' topographical map produced by Lockwood assisted in the control of the survey.

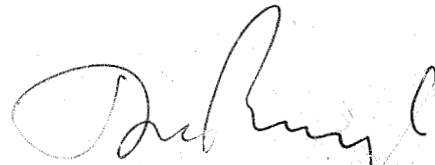
As indicated in the attached report some anomalous areas were indicated in the north, central and south sections of the claim group.

RECOMMENDATIONS

Results indicate that detailed geological mapping plus geochemical work should be completed as recommended by Don Tully, P. Eng., in Oct. 1969. This work could be confined to the interesting areas as indicated by the geomagnetic survey.

ENCLOSED ITEMS

- (1) Report by R A F Engineering.
- (2) Lockwood Survey Corporation - Topographical map and Claim Locations.
- (3) Magnetometer map.
- (4) Claim grouping map.



D. W. Pringle, P. Eng.
D. W. Pringle & Associates Ltd.

GEOPHYSICAL REPORT
MAGNETOMETER SURVEY

OF THE
DOE CLAIM GROUP

Southwest

Located Southeast of Goosly Lake, Omenica Mining
Division, Houston, British Columbia

Lat. 54 degrees 13' N.
Long. 126 degrees 29' W.

FOR

NORTH PACIFIC MINES LTD. (N. P. L.)
2502 - 1177 West Hastings Street,
Vancouver 2, B. C.

BY

William H. Pierre April, 1970

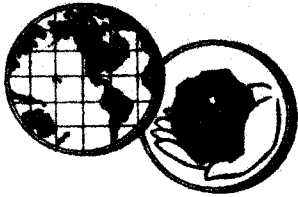
Vancouver, B. C.

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RAF ENGINEERING CORPORATION LTD.

Mineral Exploration Services

2502 - 1177 WEST HASTINGS STREET, VANCOUVER, B.C., TELEPHONE 604-684-7521

Árpád Füstös B.S.F. / For Eng., B.Sc.
Geologist

William Pierre B.Sc.
Mining Engineer

INTRODUCTION

This report summarizes the results of a magnetometer survey conducted on the Doe Claim Group held by North Pacific Mines Limited. The survey began on April 6, 1970 and was completed on April 28, 1970. Considerable delay was encountered throughout the survey because of poor organization on behalf of the line-cutting crew; inclement weather, particularly during the early portion of the survey; and by all personnel having to use snowshoes because of the heavy winter snowfall.

All data was treated statistically as it was decided that this method of interpretation would be much more advantageous than that of a magnetometer contour map.

LOCATION

The Doe Claim Group is located approximately thirty miles by dirt road southeast of Houston, B. C. The Claims are located approximately longitude 126 degrees 29' West and latitude 54 degrees 13' North.

Access from Houston is made via the Buckley Flats road 1.7 miles west of Houston. After travelling 18.7 miles in a southeasterly direction the Buckley Flats road intersects the Parrott Lake road. The Doe Claim location lines cross this road

in numerous locations approximately five miles south from this intersection.

The Buckley Flats road is very much improved due to it being the primary log haulage road between Goosly Lake, where extensive logging operations are being conducted, and Houston. Goosly Lake is located 8.7 miles east of the Parrott Lake road intersection. The Parrott Lake road is unimproved and for the most part requires four-wheel-drive vehicles. However, this road is presently being reconstructed for logging operations and should be suitable for normal vehicular traffic within the near future. All-year access is maintained on the Buckley Flats road. The same will probably be true for the Parrott Lake road when logging operations commence.

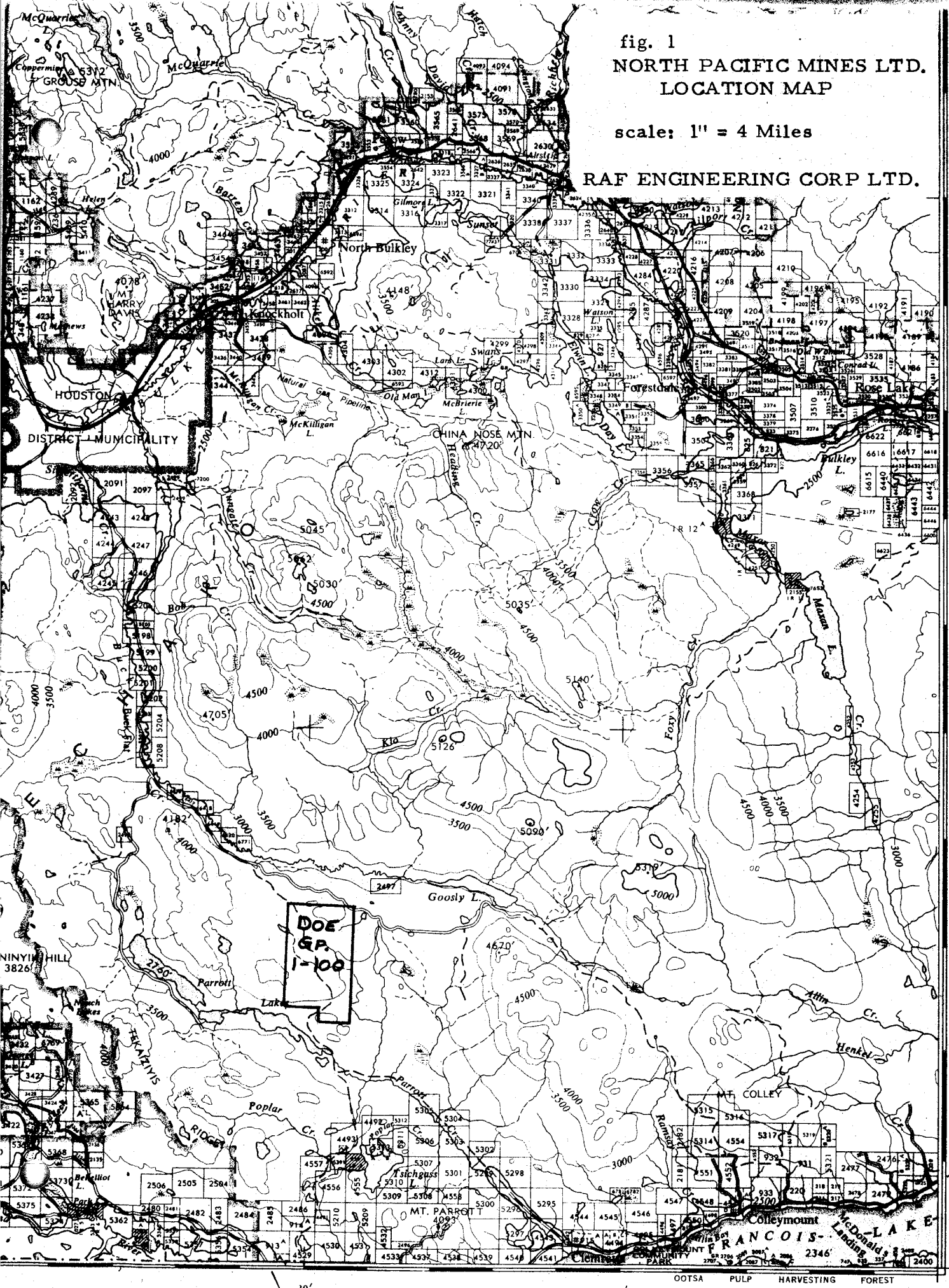
TOPOGRAPHY

The topography is rolling and rises to the north with less than 800 feet of local relief - the average elevation being 3,000 feet above sea level. Since the area has been extensively glaciated, swamps predominate the southern portion while eskers predominate the northern portion. With the exception of the swamp areas the claim group is densely covered with Jackpine, poplar, and spruce. Due to its gentle relief, drainage is light with most creeks being small and intermittent. The most predominant topographical feature is a drumlin located on the Doe 41 and 43 claims having a relief of approximately 200 feet.

fig. 1
NORTH PACIFIC MINES LTD.
LOCATION MAP

scale: 1" = 4 Miles

RAF ENGINEERING CORP LTD.



To Prince George 17 1/2 miles
To Burns Lake 16 miles

15'

To Francois Lake 14 Miles

54°00'

To Colleymount 18 Miles

15'

OOTSA PULP HARVESTING FOREST

126°00'

GEOLOGY

Much of the geology of the Doe Claim Group cannot be ascertained because of glaciofluvial material covering much of the bedrock. This is particularly true of the lower elevations and swamp areas. However, there are good outcrops on the extreme southwestern and northern portions of the claim group. The southern exposure of the aforementioned drumlin also has good outcroppings.

The outcrops on the southwestern portion (Doe 72, 83, and 84) comprise of rock types belonging to the Hazelton Group. These are Mesozoic in age and are, for the most part, andesitic with occasional argillites, limestone, and sandstone. Rhyolitic dykes were also observed however their size and lateral extent are minor in nature. The outcrops located on the southern exposure of the drumlin are quite similar to those of the Hazelton Group, however, no rhyolitic dykes were observed.

The outcrops on the northern portion (Doe 49 - 56) consisted primarily of Tertiary sediments. The predominant rock type is basalt with minor amounts of andesite, agglomerate, and tuff.

Mineralization in all outcrops is sparse with the exception for minor amounts of pyrite, epidote, and chlorite.

MAGNETOMETER SURVEY LINES

North Pacific Mines Limited made an agreement with an independent line-cutting contractor to provide a 750 foot North-South grid pattern blanketing the entire Doe Claim Group. It was decided to begin the magnetometer survey after fifty percent of the line-cutting had been completed to better co-ordinate both jobs. Immediately upon beginning the magnetometer survey it was obvious that the majority of base and grid lines were incorrectly done and would have to be redone. As a result, RAF Engineering Corporation Limited was given authority to supervise the balance of the line-cutting. In the best interest to both North Pacific Mines Limited and the line-cutting contractor, it was decided to redo as few lines as possible and to cut all future lines parallel to previously cut lines where possible.

It should be mentioned that a factor causing improper line-cutting was probably, in part, due to poor claim staking as indicated on the claim map. Several fractions had to be staked because of this. It should also be mentioned that the line-cutting crew was grossly mismanaged and was probably the major cause of the problem.

MAGNETOMETER

The magnetometer used to conduct the survey was a Model G-110 manufactured by Geotronics Instruments Limited. This is a portable neutralized fluxgate magnetometer with a sensitivity of twenty gammas per scale division, and a range of 100,000

gammas. This instrument measures the absolute vertical field component thereby eliminating the necessity to work with a diurnal factor.

SURVEY PROCEDURE

The survey was conducted by taking double readings on 200 foot stations along all base, grid, and tie lines. Where substantial fluctuations occurred between two or more consecutive stations readings were taken on 100 foot intervals.

All readings were plotted on a base map at 200 feet to the inch to observe the general distribution. Rather than produce a contoured magnetometer map it was felt that considerably more pertinent information would be gained by contouring only those values which were statistically anomalous as derived from the cumulative frequency-concentration graph. (fig. 2)

STATISTICAL TREATMENT OF DATA

The arithmetic mean, variance, mean deviation, and standard deviation were first determined for each base, grid, and tie line independently. This information was then compiled for the total population and a cumulative frequency-concentration graph produced using one-quarter of a standard deviation for the group interval.

From the cumulative frequency-concentration graph it was decided that values above 66, 500 gammas distinctly anomalous; values from 55, 500 to 66, 499 gammas possible-anomalous - this being an area where high background values and low anomalous values mix

to cause an overlap; and values below 55, 500 gammas distinctly non-anomalous and of background concentration only.

INTERPRETATION

It is somewhat difficult to state that there exists a definite trend pattern based on the anomalous zone distributions. However, the possible anomalous zones do indicate a northerly trending distribution. From this it can be reasonably deduced that the anomalous zones have an associated weak northerly trend.

All areas where anomalous zones exist are areas of extensive outcropping. Of particular interest however, is the fact that there does not exist a strong anomalous zone to the southwest. As previously noted this area has extensive outcroppings with rock types similar to those exposed on the drumlin. Since the drumlin does have a relatively strong anomalous zone the question of similar rock types being anomalous, based on surficial geology, does not appear to be the case. It does however, bring to question the possibility of the glaciofluvial deposits in the non-anomalous areas having a dampening effect on the magnetometer. The anomalous zone located on the drumlin accentuates this fact since it is surrounded on all sides, except for the east, by detrital material and swamps. However, again a definite conclusion cannot be made regarding this fact due to the substantial possible-anomalous zone located immediately to the west of the drumlin. Thus it is felt that if there does exist a dampening effect it is insignificant for all intents and purposes.

The anomalous zones to the north are the most significant since all are completely surrounded by a single possible-anomalous zone. It is however regretful that the line-cutting was not continued to the northern property boundary. This area is extensively outcropped and there exists a strong possibility of a substantially larger anomalous zone.

CONCLUSION

The Doe Claim Group is strategically located and has good possibilities for finding copper and silver mineralization. The writer was fortunate in being able to observe two major exploration projects in the immediate vicinity. Kennco Exploration-Western Limited, has been actively working on its Goosly Lake property located approximately ten miles to the north-east. To date they have developed a sizable copper-silver orebody. The predominant rock types belong to the Hazelton Group, however they have been overlain by Tertiary volcanics. Approximately ten miles to the southeast, Nadina Mines Limited has been engaged in a very extensive deep-drilling exploration program. Again the predominant rock types belong to the Hazelton Group however here they are associated with granitic and dioritic intrusives.

The property lends itself directly to geophysical and geochemical exploration methods due to the lack of previous claim staking and prospecting activity.

A local logging company, Buckley Valley Forest Industries Limited, intends to begin logging operations on a major portion of the

Doe Claim Group in the near future. This could greatly minimize exploration costs as well as provide excellent accessibility.

RECOMMENDATIONS

1. Completing the magnetometer survey to the northern and southern property boundaries.
2. Detailed geological mapping over the entire property.
3. Conducting a geochemical survey over the entire property.

The writer feels that the above recommendations fall in natural succession and would further verify the anomalies produced from the magnetometer survey. If these and future magnetic anomalies coincide with geochemical anomalies then a more sophisticated exploration program should be recommended.

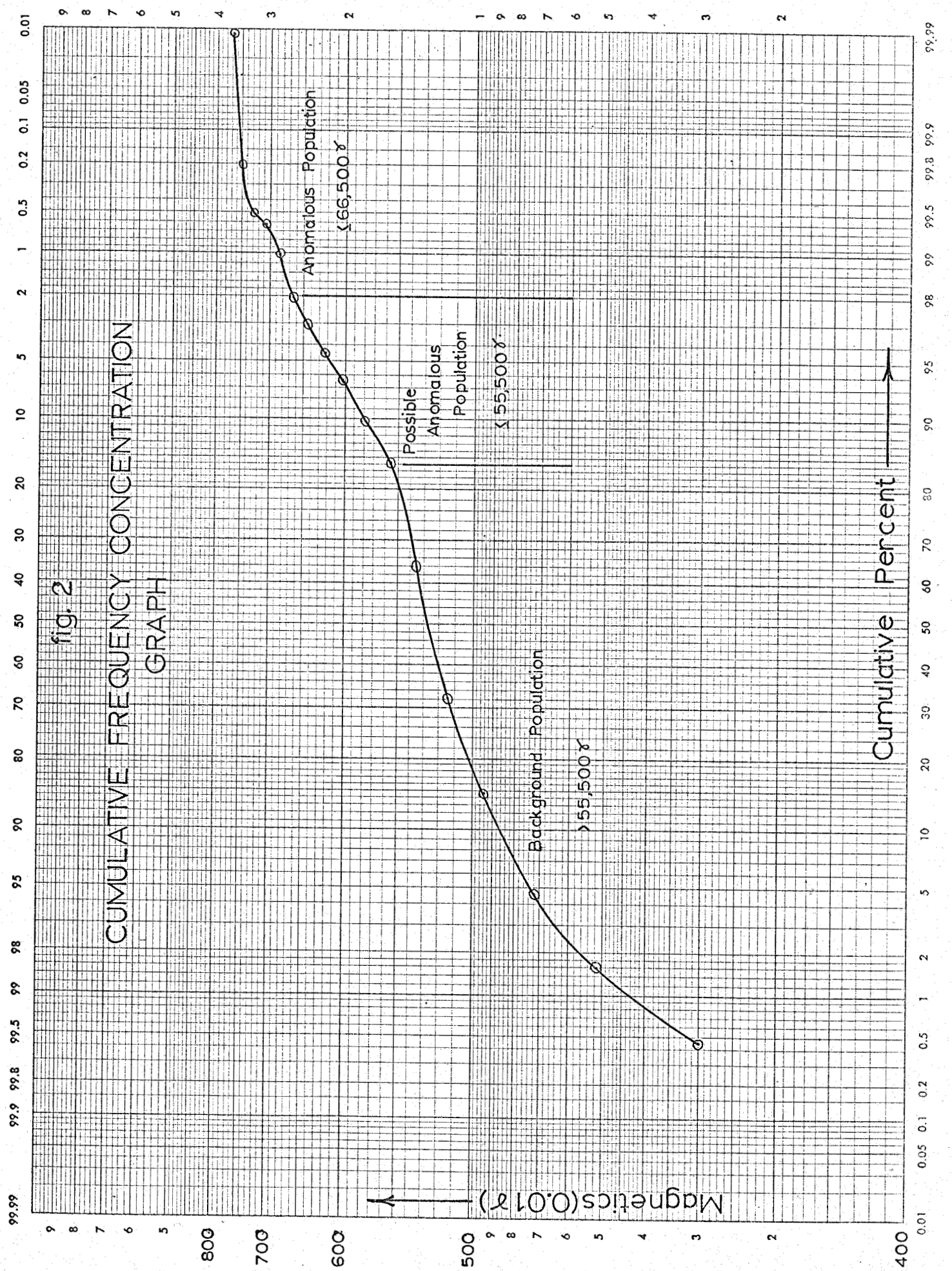
William H. Pierre

William H. Pierre
Mining Engineer



fig. 2

CUMULATIVE FREQUENCY CONCENTRATION GRAPH



Cumulative Percent

Magnetism(0.01r)

Anomalous Population
≤66,500 r

Possible
Anomalous
Population
≤55,500 r

Background Population
>55,500 r

R A F ENGINEERING LTD.
2502 - 1177 West Hastings St. ,
Vancouver 2, B. C.

April 28, 1970

TO: North Pacific Mines Ltd. (N. P. L.)
2502 - 1177 West Hastings Street
Vancouver 2, B. C.

Magnetometer Survey on DOE 1 - 100 Mineral claims in the
Goosly Lake area, Houston, B. C.

April 6th to 28th, 1970

42.6 Mi @ \$75.00/Mi \$ 3,195.00

Room & Board
28 May days @ \$7.00/day 196.00

Truck Usage 3500 miles at
0.15/Mi 525.00

Gasoline 150.00
\$ 4,066.00

Statistical Evaluation Report of the
Magnetometer Survey 500.00
\$4,566.00

CERTIFICATE

I. WILLIAM HENRY PIERRE, of Vancouver

British Columbia, do hereby certify that:

1. I am a graduate of the Montana School of Mines
(B. Sc. Mining Engineer 1968)
2. I am an Engineer-In-Training, State of Montana
Board of Registration for Professional Engineers
and Land Surveyors. (Certificate # 3054 EIT)
3. I personally conducted the magnetometer survey as
described in this report.
4. I have practiced my profession as a Mining Engineer
since 1965.
5. I have not received, nor do I expect to receive, any
interest directly or indirectly in North Pacific Mines
Ltd. (N, P. L.)

William H. Pierre

William H. Pierre
Mining Engineer

DATED this day: August 18, 1970

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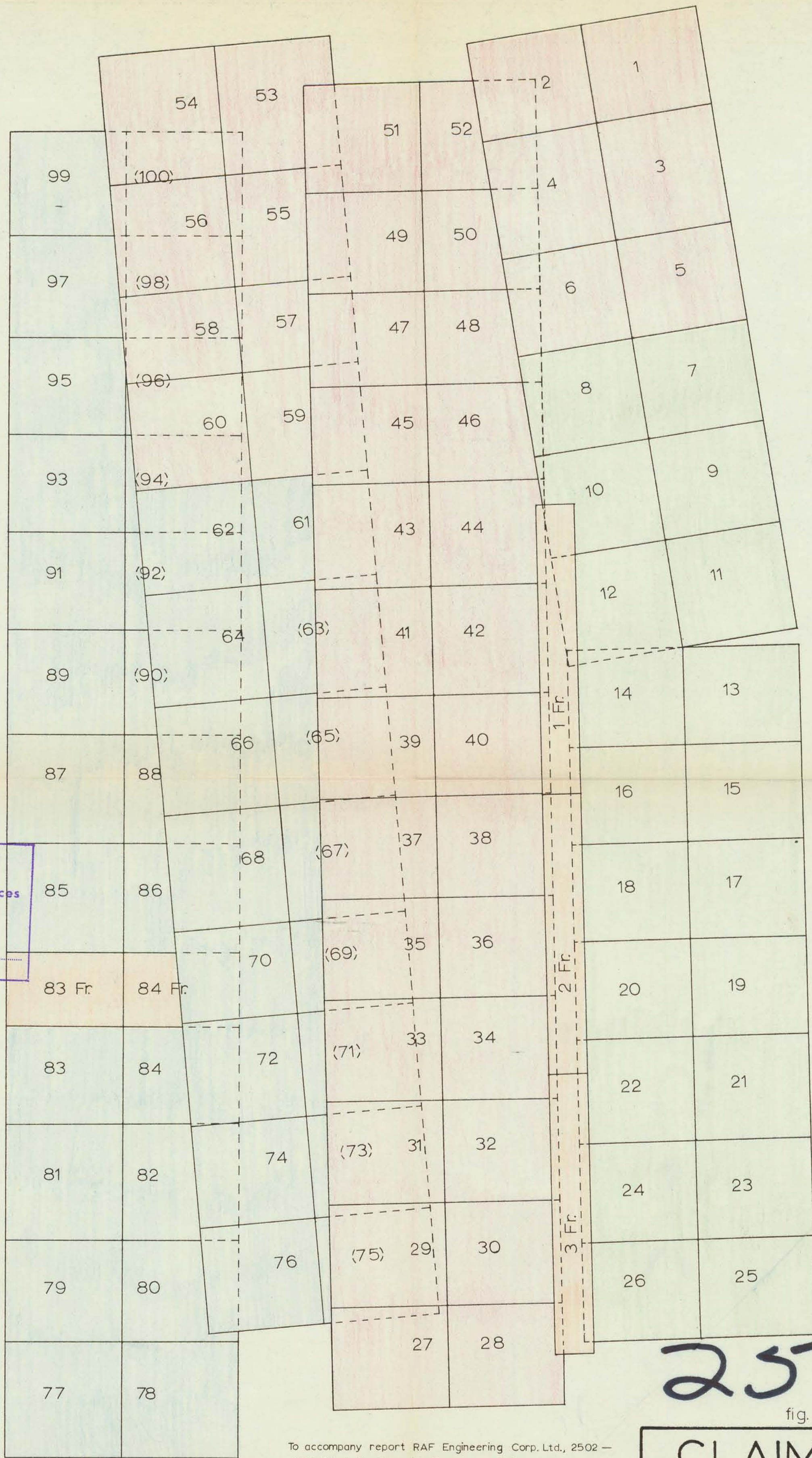
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Vancouver, B. C. October 6, 1969



LEGEND

- Alpha Group -
- Bravo Group -
- Charlie Group -

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 2565 MAP #2

2565

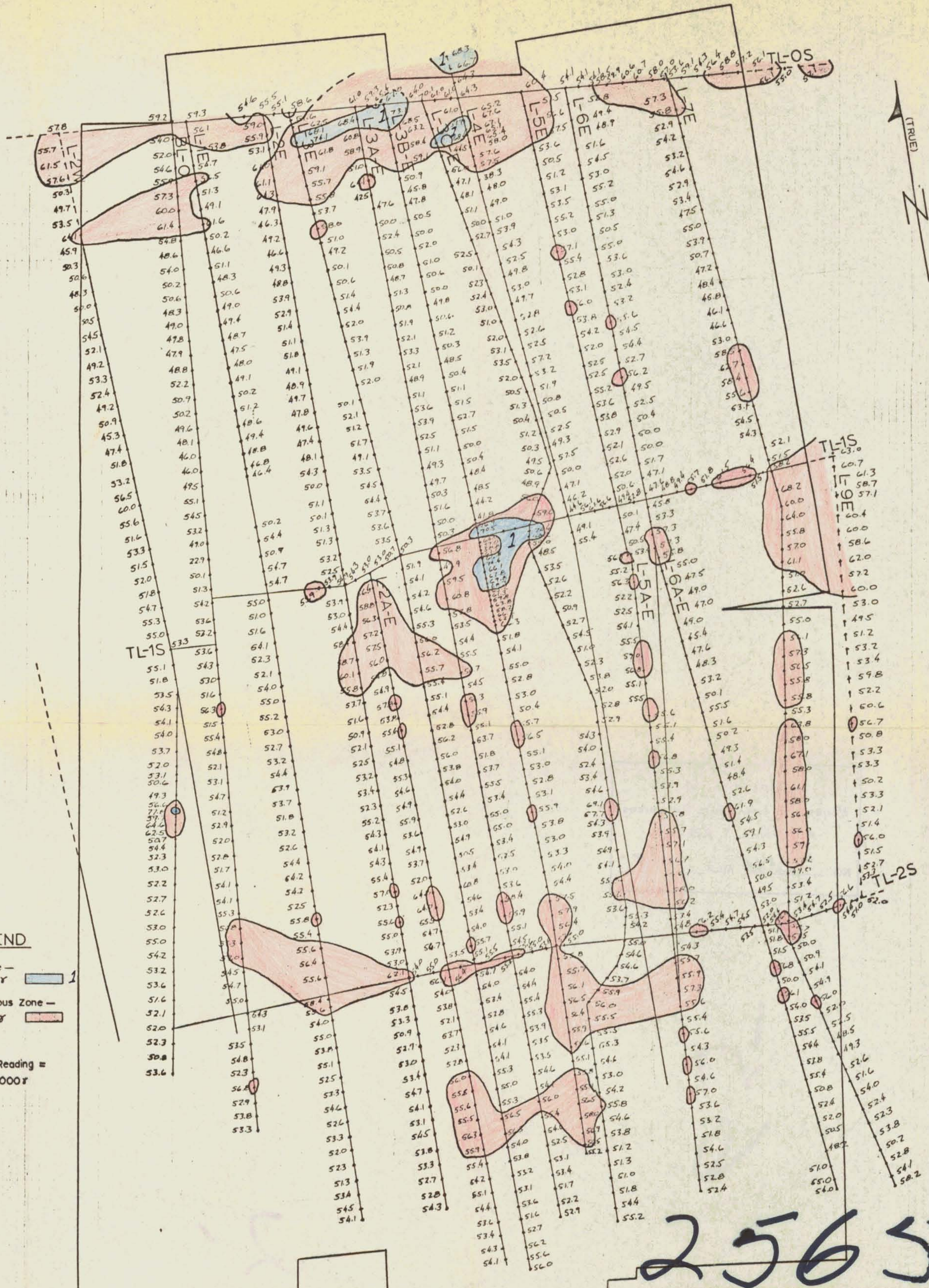
fig. 3

To accompany report RAF Engineering Corp. Ltd., 2502 -
 1177 West Hastings St., Vancouver, B.C. *William & Pierre*

CLAIM MAP

NORTH PACIFIC MINES
 DRAWN BY: W.H.P. DATE: 5-16-70 SCALE 1"=1,000'

DOE CLAIM GROUP
 GOOSLY LAKE HOUSTON, B.C.



LEGEND

Anomalous Zone — (66,500 γ) 1

Possible Anomalous Zone — (55,500 γ)

NOTE:
Actual Mag Reading =
No. X 1,000 γ

2565

fig. 4

COMPOSITE MAP

Magnetometer Contour & Control Line

To accompany report RAF Engineering Corp Ltd., 2502-1177 West Hastings St., Vancouver, B.C. William H. Perre

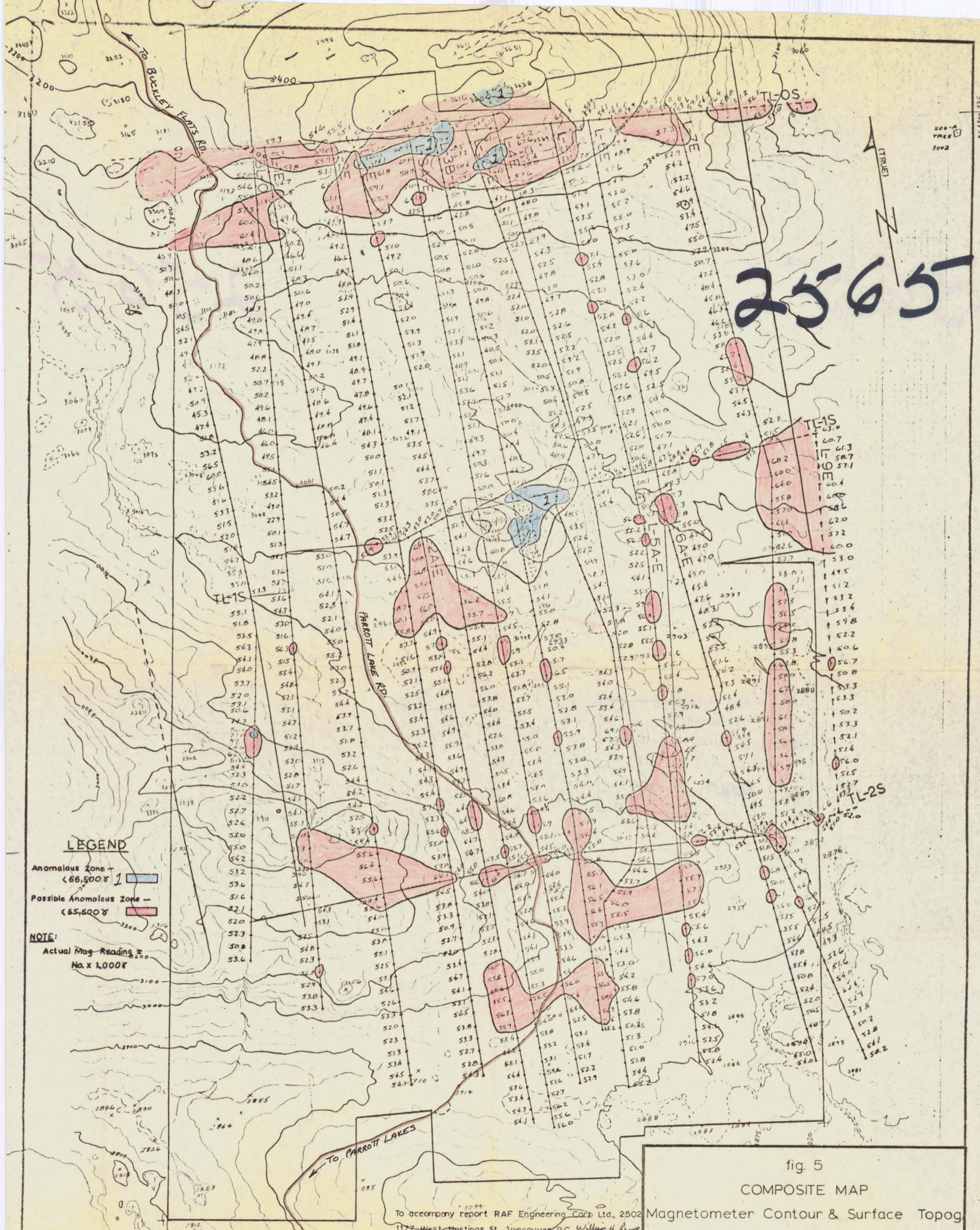
NORTH PACIFIC MINES

DOE CLAIM GROUP

DRAWN BY: W.H.P. DATE: 5-11-70 SCALE: 1"=1,000'

GOOSLY LAKE

HOUSTON, B.C.



LEGEND

Anomalous Zone - $< 66,500 \gamma$

Possible Anomalous Zone - $< 65,500 \gamma$

NOTE:
Actual Mag Reading \pm
No. x 1,000

2565

fig. 5

COMPOSITE MAP

To accompany report RAF Engineering Corp Ltd., 2502 Magnetometer Contour & Surface Topog
1177 West Hastings St., Vancouver, B.C. *William H. Rowe*

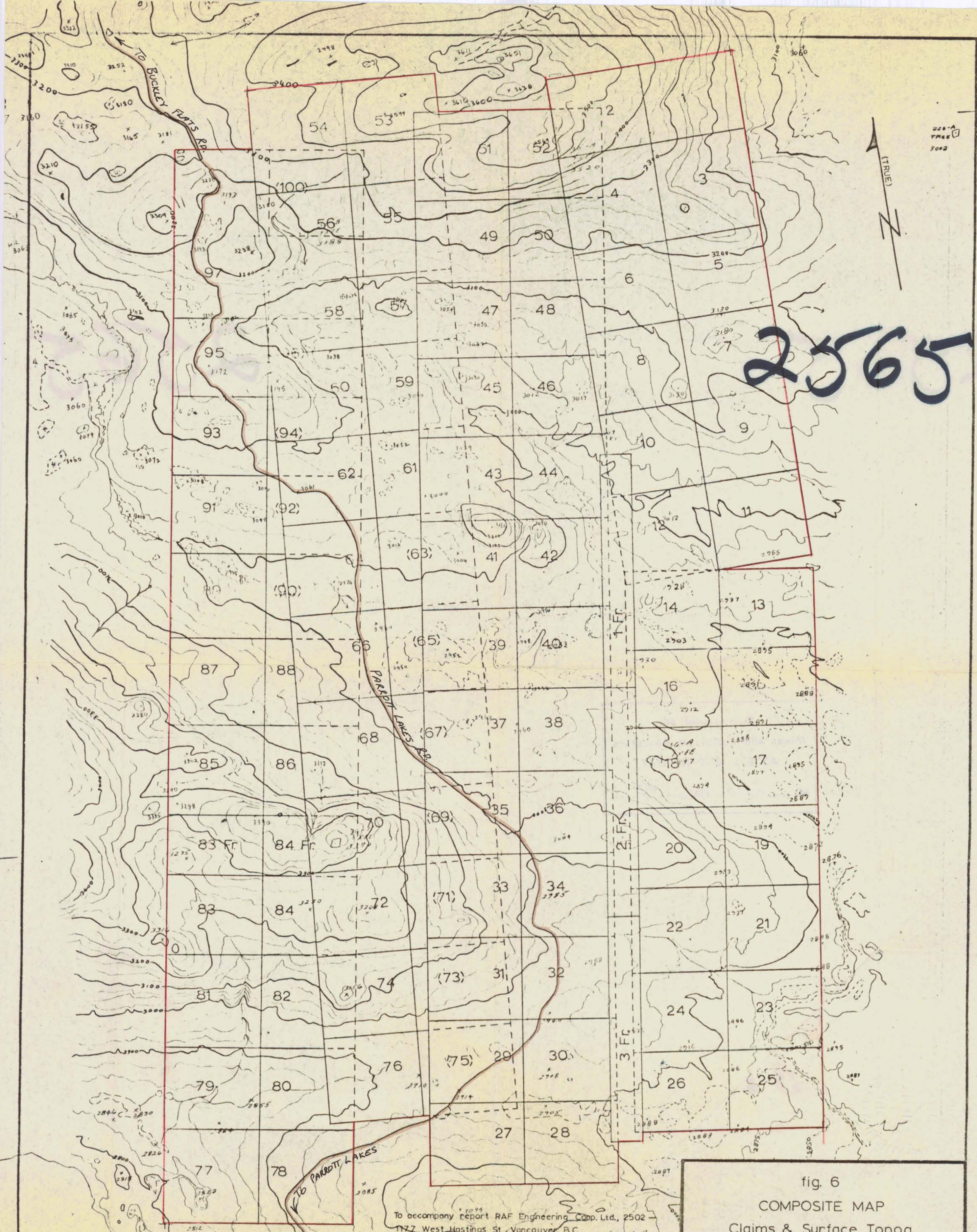
NORTH PACIFIC MINES

DOE CLAIM GROUP

DRAWN BY: W.H.P. DATE: 5-11-70 SCALE: 1"=1,000'

GOOSLY LAKE

HOUSTON, B.C.



2565

fig. 6
COMPOSITE MAP
Claims & Surface Topog.

To accompany Report RAF Engineering Corp. Ltd., 2502
177 West Hastings St, Vancouver, B.C.

NORTH PACIFIC MINES
DRAWN BY: WHP DATE: 5-16-70 SCALE 1"=1,000'

DOE CLAIM GROUP
GOOSLY LAKE HOUSTON, B.C.