

2454

MAGNETOMETER & GEOCHEMICAL REPORT
Catface Claims - PW, RW, JB, RH & W Claims
Alberni Mining Division, B. C.

92 F/5W - E.

Location: Catface Range
Approximately 10 miles north-northwest
of Tofino, Vancouver Island, B. C.

Co-ordinates: 49° , 125° SE

Claim Owner: Fort Reliance Minerals Ltd.

Date of work: April 22, 1970 to May 13, 1970

Reported by: R. D. Westervelt, P. Eng.
L. W. Saleken, Geologist (B.Sc.)

June 1970

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2454 MAP

SUMMARY

The Catface mineral claims are located 10 miles northwest of Tofino, B. C. in the Alberni Mining Division. The claims adjoin Falconbridge's Catface copper property on the north. Reconnaissance soil and stream sediment sampling of 1969 indicated a number of potential areas of interest which were followed up by a detailed soil geochemical survey and a fluxgate magnetometer survey in April/May, 1970.

The detail survey located and extended the areas of interest found last year. The magnetics of the property were found to have little correlation to the soil anomalies, thus, the possibility of skarn type mineralization was eliminated. The soil anomalies that occur on Claims PW 22, 24, 26, 34 and 35 are isolated and discontinuous and require no further work. The Cu-Zn and Cu anomalies that are located on Claims PW 15, 16, 17 and 18 indicate a potential mineralized source area that may be related to disseminated sulfide mineralization. During the survey, no obvious mineralization was encountered. A detailed prospecting program and a reconnaissance I.P. survey are recommended for this area.

INTRODUCTION

At the request of J. A. Harquail, President, Fort Reliance Minerals Ltd., Westervelt Engineering Ltd. was approached to conduct the follow-up work on several geochemical anomalies detected by a reconnaissance survey in 1969. The 1969 geological and geochemical survey was conducted by Western Geological Services under the supervision of P. E. Hirst, P.Eng.

The 1970 program consisted of line cutting, a detailed soil survey and a fluxgate magnetometer survey over several claims, mainly PW 15, PW 16, PW 17, PW 18, PW 22, PW 24, PW 26, PW 34 and PW 35. The field work was conducted under the overall

supervision of R. D. Westervelt, P. Eng.; L. W. Saleken, Geologist, supervised the work in the field. The field work was conducted between April 22, 1970 and May 13, 1970.

PROPERTY

The Catface property consists of 81 contiguous mineral claims that are owned by Fort Reliance Minerals Ltd. The property consists of the following claims:

<u>Claim Name</u>	<u>Recording Numbers</u>
PW 1 - 10 (incl.)	13504 - 13513
PW 15 - 26 (incl.)	13514 - 13525
PW 33 - 35 (incl.)	13532 - 13534
PW 39 - 42 (incl.)	15255 - 15258
PW 50 - 58 (incl.)	15259 - 15267
RW 39 - 44 (incl.)	15162 - 15167
RW 47 - 50 (incl.)	15170 - 15173
JB 1 - 3 (incl.)	13562 - 13564
JB 7 - 12 (incl.)	13568 - 13573
W 1 - 12 (incl.)	13538 - 13549
RH 1 - 12 (incl.)	13550 - 13561

The above claims have been grouped as follows:

a. Catface #1 Group (40 claims):

PW 1 - 10	PW 50 - 55
PW 15 - 26	PW 57 - 58
PW 33 - 35	RW 39 - 41
PW 39 - 42	

b. Catface #2 Group (40 claims):

JB 1 - 3	RH 1 - 12
JB 7 - 12	RW 42 - 44
W 1 - 12	RW 47 - 50

During May 1970, an additional three mineral claims, Crab 1, Crab 2 and Crab 3, were staked to bring the total claim group to 84 mineral claims.

The approximate location of the Catface group of claims is shown on the accompanying claim location map (Fig. 1). The relationship of the Catface group of claims to other claim groups in the area is imperfectly known at present.

LOCATION AND ACCESS

Approximate Co-ordinates: Latitude, $49^{\circ} 17'$ North
Longitude, $125^{\circ} 57'$ West

The Catface group is situated about 10 miles northwest of Tofino, B. C. in the Alberni Mining Division on the west coast of Vancouver Island. The claims are located on the north side of the Catface Range to the south and southwest of Whitepine Cove and adjacent to Falconbridge's Catface property.

Access to the claims is by boat or float plane from Tofino, B. C.

PHYSIOGRAPHY

The relief on the claims varies from sea level to 2,000 ft. above sea level. The claims are densely forested with considerable undergrowth of salal and other scrub brush.

HISTORY

The mineral claims that are presently held by Fort Reliance Minerals Ltd. were staked during November of 1968. The ground was formerly held by other stakers who had conducted a limited amount of physical work on the old claims.

During the summer of 1969, reconnaissance geochemical stream sediment and soil sampling, geological mapping and prospecting were conducted on the PW, RW, JB, RH and W claims by Western Geological Services for Fort Reliance Minerals Ltd. Results from these surveys were encouraging and a field program was proposed for the following year.

GENERAL GEOLOGY

The local geology of the Catface group was mapped by P. E. Hirst, P. Eng., and R. C. M. Roberts, Geologist, on a scale of 1 in. = 1000 ft. in the summer of 1969. A geological map is included as part of their report on the property titled "Geological and Geochemical Report - PW, RW, JB, RH and W Claims." The map indicates a series of northwest trending foliated rocks of varying dips underlying the claims of interest. Most of the claims are underlain by limestone and siliceous tuffs and chert intercalated with andesite flows and undifferentiated volcanics, mainly pyroclastics of andesitic and dacitic composition. An area covering half of the northeast corner of Claim PW 15 and part of Claims PW 17 and PW 2 is mapped as metadiorite. Traces of pyrite and chalcopyrite were noted in the diorite (P. E. Hirst). Feldspar porphyry dykes are mapped cutting the metasediments and volcanics in some localities. To the south and along higher elevations, on Claims PW 35 and PW 58, occasional pyritized diorite float was noted (P. E. Hirst, L. W. Saleken).

The areas where the 1970 survey was conducted is covered by a mantle of glacial drift of varying thickness. Outcrops are generally sparse and moss covered.

WORK PROGRAMME - 1970

The field work was conducted between April 22, 1970 and May 13, 1970 under the field supervision of L. W. Saleken, B. Sc., Geologist. A five-man crew including the supervisor was employed for 22 days. A tent camp was established on a small inlet adjacent to Whitepine Cove on Claim JB 1. Camp equipment was supplied by Fort Reliance Minerals Ltd. Access to the claims where the survey work was conducted was by motorboat.

Two grid systems were established on the claims of interest, North Grid and South Grid, and survey work was confined to the following claims:

North Grid: PW 2, PW 4, PW 15, PW 16, PW 17, PW 18,
PW 19, PW 20, RW 43.

South Grid: PW 22, PW 24, PW 26, PW 34, PW 35, PW 58.

The North grid was cut, chained and picketed on 50-foot centers at a line spacing of 200 ft. The South grid was chained, flagged and soil sampled at 100-foot centers using a 400-foot line spacing.

MAGNETOMETER SURVEY

a. Instrument

The survey was conducted using an audio-null fluxgate magnetometer model G-100 manufactured by Geotronics Instruments Ltd., Vancouver, B. C. The G-100 has a sensitivity of 20 gammas per dial division and a range of 100,000 gammas. Read-out is obtained by a precision dial to absolute value of vertical field in gammas. An earphone is used to indicate null. The instrument has a temperature coefficient of less than 2 gammas per degree Centigrade.

b. Field Procedure

The magnetic survey was confined to the North grid. Readings were taken in gammas at 50-foot intervals along the cut lines.

c. Interpretation of Results

The magnetic results of the survey were plotted on a map (Fig. 2) to a scale of 1 in. = 200 ft. and contoured at an interval of 50 gammas (Fig. 3).

The contour map shows a general northwest magnetic trend that coincides with the regional geologic structure of the area. The magnetic relief in general is low and slight in anomalous areas. The background is approximately 5300 gammas. Areas that contain magnetic highs of greater than 5500 gammas are considered anomalous. No magnetic lows of importance are noted. The maximum relief is 1501 gammas ranging from a low of 5150 gammas to a high of 6651 gammas.

One mag high occurs at L 14 N, 7+50W (6651 gammas) and is underlain by andesite. The anomaly was checked by detailing the zone and found to be localized and lense-like in plan. The zone is characteristic of a small magnetic lense or plug located close to surface. Other anomalies that were located elsewhere on the claims are subtle, generally isolated and occur in metavolcanics and sediments. These anomalies probably represent occurrences of weakly mineralized or deeply buried magnetic masses. The anomalies that occur on the claims are not characteristic of skarn deposits which may be expected to occur in the limy sediments associated with the volcanics. No economic importance is attached to the anomalies.

GEOCHEMICAL SURVEYS

a. Field Procedure

The soil samples were collected by a hand auger. The "B" horizon was sampled where possible but "A" horizon samples were taken where necessary. The depth, type of soil and soil environment was recorded in a field notebook for each soil sample. All samples were placed in standard-sized heavy duty kraft envelopes and dried at the base camp prior to shipping to a commercial laboratory for analysis.

Samples were collected at 50-foot intervals over the North Grid and at 100-foot intervals over the South Grid.

b. Soil

The soil on both grids is a glacial drift having a moderate to poorly developed eluvial horizon. The "B" horizon is located 6 to 36 inches below the surface and ranges in colour from brown-orange to rust. The "A" horizon has a varied thickness and is dark-coloured and peaty in poorly drained areas. In general the soils that occur along slopes are well drained and contain a moderately developed "B" horizon. The soils fall into the taxonomic classification of brunisolic to podzolic.

c. Method of Geochemical Analysis

The samples were analyzed by a commercial laboratory (Bondar-Clegg, North Vancouver, B. C.) for copper, zinc and arsenic. Prior to analysis, the samples at the laboratory were screened to minus 80 mesh. A one-gram sample was digested in hot aqua regia and separate aliquots of the sample solution were analyzed for copper and zinc. A separate one-gram sample was digested in hot acid ($\text{HNO}_3 - \text{HClO}_3$) for arsenic determinations.

Copper and zinc were determined by atomic absorption spectrophotometry and arsenic was determined by the colorimetric procedure.

d. Interpretation of Results

The geochemical results of the survey were plotted on maps and contoured at intervals above threshold values. The backgrounds and threshold values were calculated graphically using a simplified statistic approach. The method of constructing the graphs is patterned after Claude Lepeltier's method, and is briefly described below:

1. Select a precise set of geochemical data.
2. Group the values in classes.
3. Calculate the frequency of occurrence in each class.
4. Calculate the cumulated frequencies of each class.
5. Plot the cumulative frequencies of each class in percent against the lower limits of each class on log probability paper.
6. Read background at 50%, threshold at 2.5% or at breaks in the graph.
7. If the data does not plot as straight lines apply another statistical model.

Five graphs were constructed and are included in the appendix of this report. The contour maps are in the folder.

A summary of backgrounds and thresholds for the two grids appears below:

<u>North Grid</u>	<u>Map</u>	<u>B. G.</u>	<u>Threshold (min. and max.)</u>
Copper	Fig. 4	47 ppm	82 and 180 ppm
Zinc	Fig. 5	40 ppm	84 and 230 ppm

N.B. Minimum Threshold - "B" horizon soils.
Maximum Threshold - "A" horizon soils.

<u>South Grid</u>	<u>Map</u>	<u>B. G.</u>	<u>Threshold (min. and max.)</u>
Copper	Fig. 6	43 ppm	90 ppm
Zinc	Fig. 7	28 ppm	40 ppm
Arsenic	Fig. 8	27 ppm	40 ppm

On the North grid, two distinct types of anomalies occur, a Cu-Zn zone and a Cu zone. For convenience, the anomalous zones have been classified as follows:

- Area 1 - Cu-Zn anomaly
- Area 2 - Cu-Zn anomaly
- Area 3 - Cu anomaly

Area 1 is a broad, northwest trending Cu-Zn anomaly located near L 14 N. The zone is underlain by meta-andesites, tuffs, limy sediments and related rocks. Both "A" and "B" soils are present. Cu and Zn values that exceed the maximum threshold values of 180 ppm and 230 ppm, respectively, are associated with marshy areas and "A" soils. The anomaly is located down-dip from a gently sloping ridge. Even though no obvious mineralization is present to account for the anomaly, the extent of the zone and the high geochem values indicate an area for further investigation.

Area 2 is a spotty but extensive Cu-Zn anomaly located near L 26 N, 4 E. The anomaly is mapped as being underlain by massive crystal lithic tuffs occurring close to a metadiorite contact (P. E. Hirst). The high geochem values are related to "A" soils and poor drainage with some influence from the rock types. The anomaly is spread over an area of both north and south drainage directions. No obvious mineralization was seen to account for a positive source area. Further work is necessary.

Area 3 is a Cu anomaly containing no anomalous Zn values that is centered around L 16+50N, 14 E. The zone is northwest

trending and covers a large portion of the southeast corner of PW 15 and the NE-NW corners of PW 17 and PW 2. The area is underlain by metadiorites that contain reported traces of pyrite and chalcopyrite (P. E. Hirst). Much of the zone is a poorly drained, marshy area that is located at the foot of a northwest trending ridge. A major creek that drains into Whitepine Cove is located to the east of the zone. The reconnaissance stream sediment survey of 1969 indicates the sediments to have a Cu concentration of greater than 100 ppm. Hence, the anomaly is influenced by several factors: contamination from the stream to the east, highly organic "A" soils, poor drainage and different geological environment from Areas 1 and 2.

The difference in geology may explain why this anomaly contains only high copper values and no high zinc. Since the diorites are known to contain some trace pyrite and chalcopyrite, a possible source for the anomaly is evident. Further work is required.

The South Grid is mainly underlain by andesites and tuffs. Several spotty isolated Cu-Zn-As anomalies occur over the surveyed area. The anomalous values in general are discontinuous and lack continuity. The only significant anomaly is an arsenic zone located between L 4 S, 5 E and L 8 S, 5 E. At present, no explanation can be given for its occurrence. No further work presently appears warranted.

CONCLUSIONS AND RECOMMENDATIONS

The soil anomalies located by the 1969 reconnaissance program were reconfirmed and defined by the detailed soil surveys. The Cu-Zn-As anomalies occurring on the South Grid are too erratic and discontinuous to warrant immediate interest.

On the North Grid, no obvious mineralization was noted to explain the three definite Cu and Cu-Zn anomalies. From the magnetic survey results, it is apparent there is no distinctive magnetic correlation with the geochemical anomalies. Hence, the conclusion is that the soil anomalies are not related to typical skarn type mineralization. The present data suggests the anomalies are more likely caused by disseminated sulfide mineralization within the metadiorite and adjacent to the feldspar porphyry dykes.

To further evaluate the existing soil anomalies on the North Grid, a systematic prospecting program up-drainage from the anomalies is recommended. Although obvious outcrop is limited, detailed grub-hoe work may yield further exposure within and adjacent the anomalous areas.

Along with prospecting, a reconnaissance I.P. survey should be conducted to locate possible concentrations of disseminated sulfides. Initial coverage totalling about 4 survey miles is recommended at 400-foot line spacing to test the anomalous zones.

A cost estimate for the proposed follow-up work is as follows:

Geologist, 10 days @ \$90/day	\$ 900.00
I.P. Survey including operator and helpers, 4 miles @ \$450/mile	1,800.00
50% allowance for detailing and fill-in lines if warranted	900.00
Mobilization	1,200.00
Report	500.00
10% Contingency	<u>530.00</u>
	<u>\$ 5,830.00</u>

Respectfully submitted,

R. D. Westervelt, P. Eng.

R. D. WESTERVELT, P. Eng.

L. W. Saleken

L. W. SALEKEN, Geologist

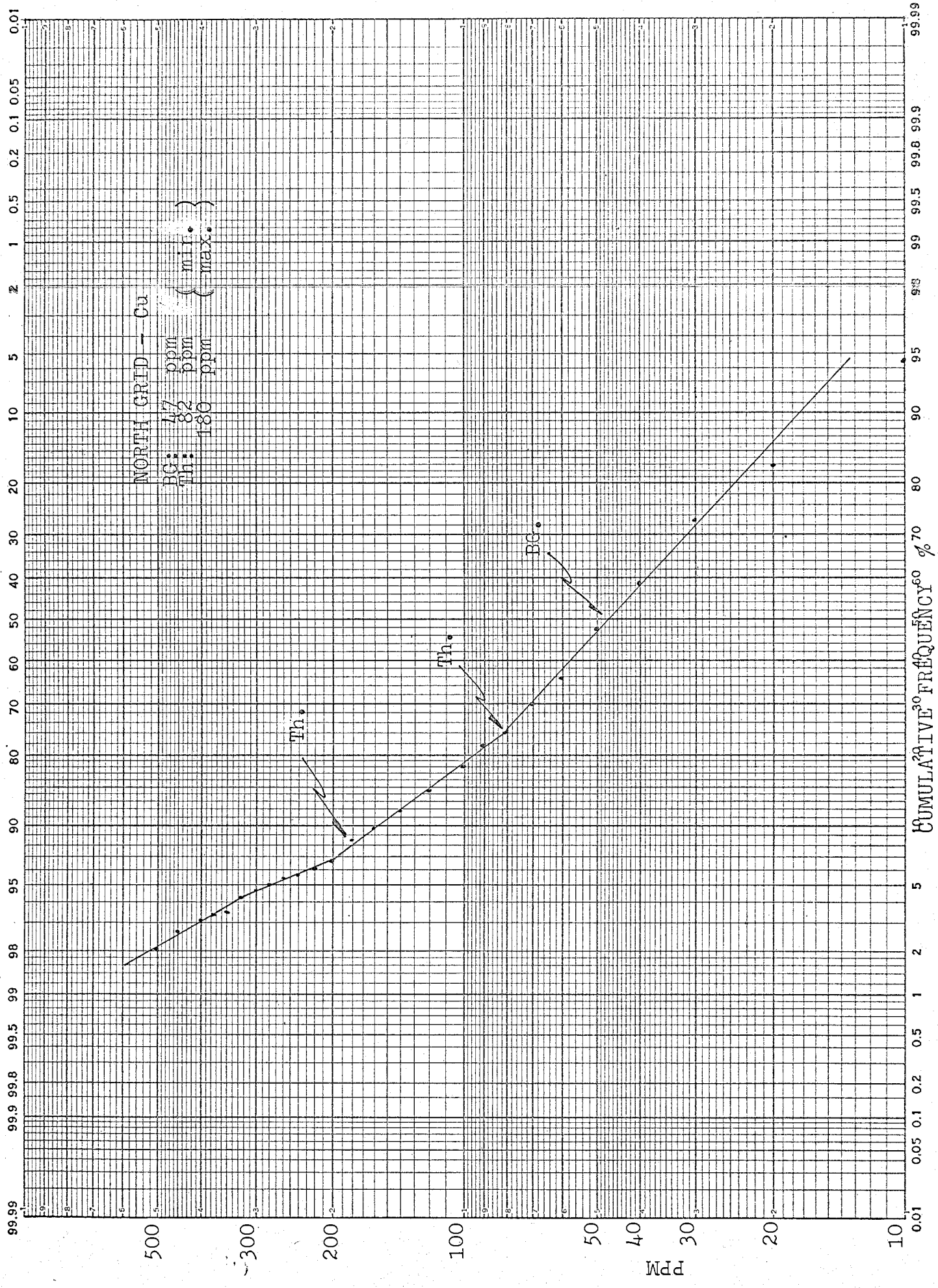


REFERENCES

- Hawkes, H.E., Webb, J.S., 1962, "GEOCHEMISTRY IN MINERAL EXPLORATION," Harper's Geoscience Series, New York.
- Hirst, P.E., 1969, "GEOLOGICAL AND GEOCHEMICAL REPORT - PW, RW, JB, RH, and W CLAIMS" report to Fort Reliance Minerals Ltd.
- Lepeltier, C., 1969, "A SIMPLIFIED STATISTICAL TREATMENT OF GEOCHEMICAL DATA BY GRAPHICAL REPRESENTATION" Ec. Geol. Vol. 64, 1969, pp. 538-550.
- Muller, J.E., Carson, D.J.T., 1969, "GEOLOGY AND MINERAL DEPOSITS OF ALBERNI MAP - AREA, B.C. (92F)." G.S.C. Paper 68-50.

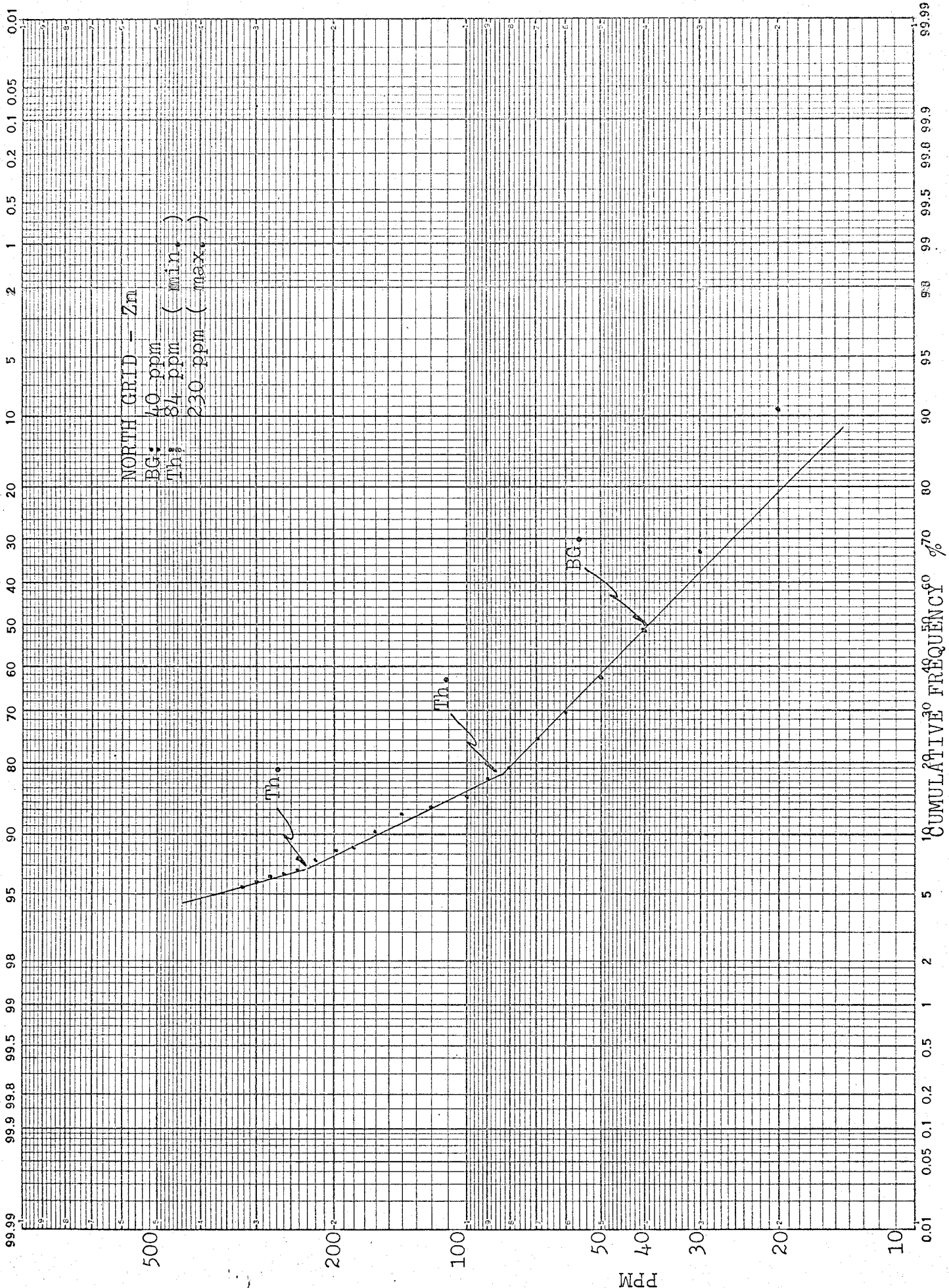
NORTH GRID - COPPER

<u>Class</u>	<u>Frequency</u>	<u>% Frequency</u>	<u>Cumulative Frequency</u>
0 - 9	37	5.5	100.0
10 - 19	78	11.7	94.5
20 - 29	71	10.6	82.8
30 - 39	94	14.1	72.2
40 - 49	91	10.6	58.1
50 - 59	78	11.7	47.5
60 - 69	43	6.4	35.8
70 - 79	36	5.4	29.4
80 - 89	16	2.4	24.0
90 - 99	24	3.6	21.6
100 - 119	24	3.6	18.0
120 - 139	19	2.9	14.4
140 - 159	12	1.8	11.5
160 - 179	9	1.4	9.7
180 - 199	11	1.8	8.3
200 - 219	3	.5	6.5
220 - 239	2	.3	6.0
240 - 259	2	.3	5.7
260 - 279	3	.5	5.4
280 - 299	2	.3	4.9
300 - 324	3	.5	4.6
325 - 349	5	.8	4.1
350 - 374	1	.1	3.3
375 - 399	1	.1	3.2
400 - 449	3	.5	3.1
450 - 499	4	.6	2.6
500 - 549	1	.1	2.0
550 - 599	1	.1	1.9
600 - 649	2	.3	1.8
650 - 699	2	.3	1.5
700 - 749	2	.3	1.2
750 - 799	1	.1	.9
800 - 849	2	.3	.8
900	2	.3	.5
1325	1	.1	.2
1500	1	.1	.1
	<u>667</u>	<u>100.0</u>	



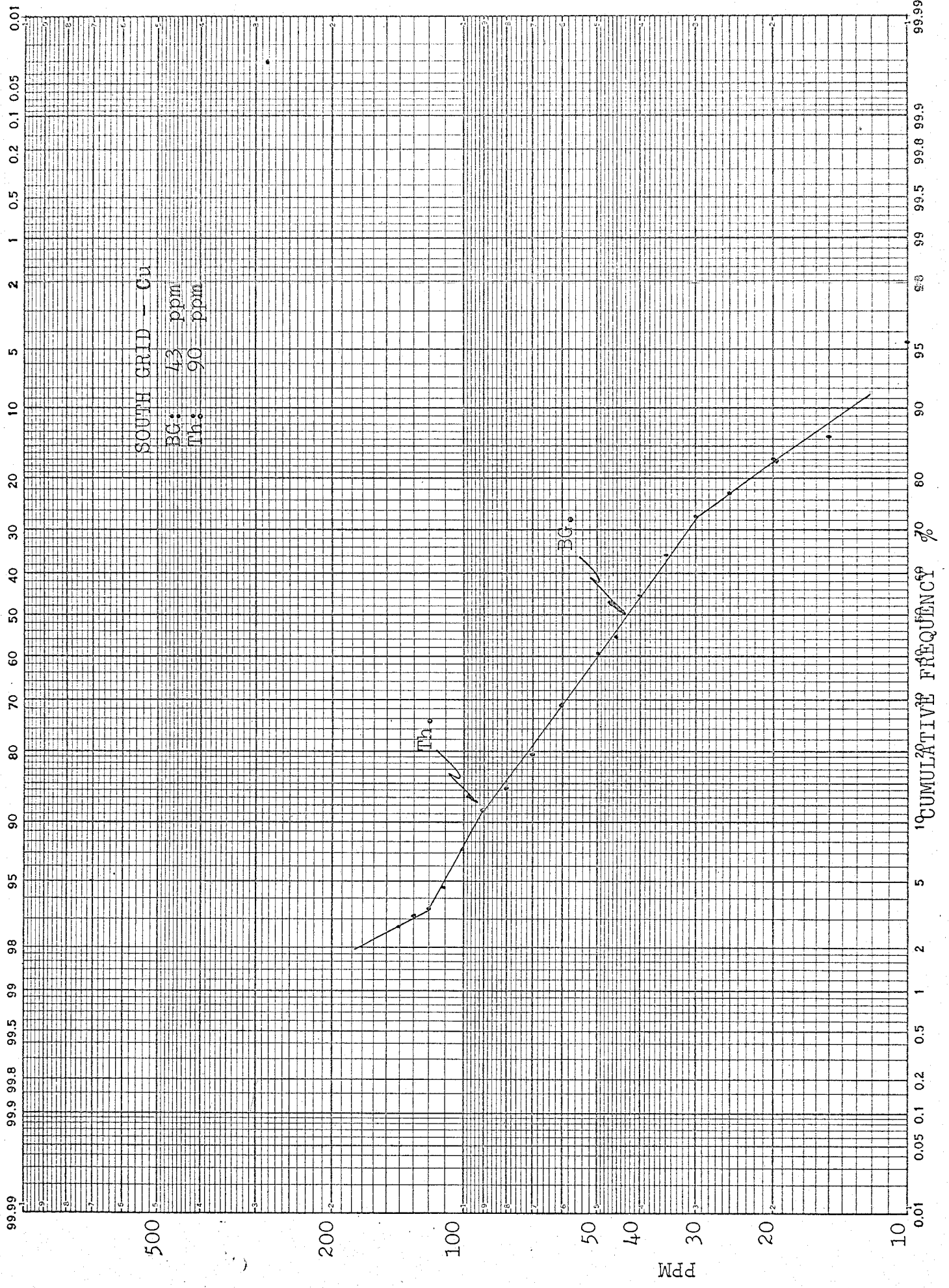
NORTH GRID - ZINC

<u>Class</u>	<u>Frequency</u>	<u>% Frequency</u>	<u>Cumulative Frequency</u>
1 - 9	61	9.1	100.0
10 - 19	164	24.4	90.9
20 - 29	123	18.3	66.5
30 - 39	70	10.5	48.2
40 - 49	52	7.8	37.7
50 - 59	38	5.7	29.9
60 - 69	23	4.8	24.2
70 - 79	14	2.1	19.4
80 - 89	15	2.3	17.3
90 - 99	9	1.4	15.0
100 - 119	7	1.1	13.6
120 - 139	15	2.3	12.5
140 - 159	9	1.4	10.2
160 - 179	5	.7	8.8
180 - 199	4	.6	8.1
200 - 219	4	.6	7.5
220 - 239	2	.3	6.9
240 - 259	3	.4	6.6
260 - 279	2	.3	6.2
280 - 299	1	.1	5.9
300 - 324	2	.3	5.8
325 - 349	3	.4	5.5
350 - 374	1	.1	5.1
375 - 399	3	.4	5.0
400 - 449	1	.1	4.6
450 - 499	4	.6	4.5
500 - 549	2	.3	3.9
550 - 599	2	.3	3.6
600 - 649	2	.3	3.3
650 - 699	2	.3	3.0
700 - 749	2	.3	2.7
750 - 799	3	.4	2.4
800 - 849	2	.3	2.0
850 - 899	1	.1	1.7
900 - 949	1	.1	1.6
950 - 999	3	.4	1.5
1125	2	.3	1.1
1175	1	.1	.8
1250	1	.1	.7
1700	1	.1	.6
1825	1	.1	.5
1875	1	.1	.4
2100	1	.1	.3
2200	1	.1	.2
3000	1	.1	.1
	<u>667</u>	<u>100.0</u>	



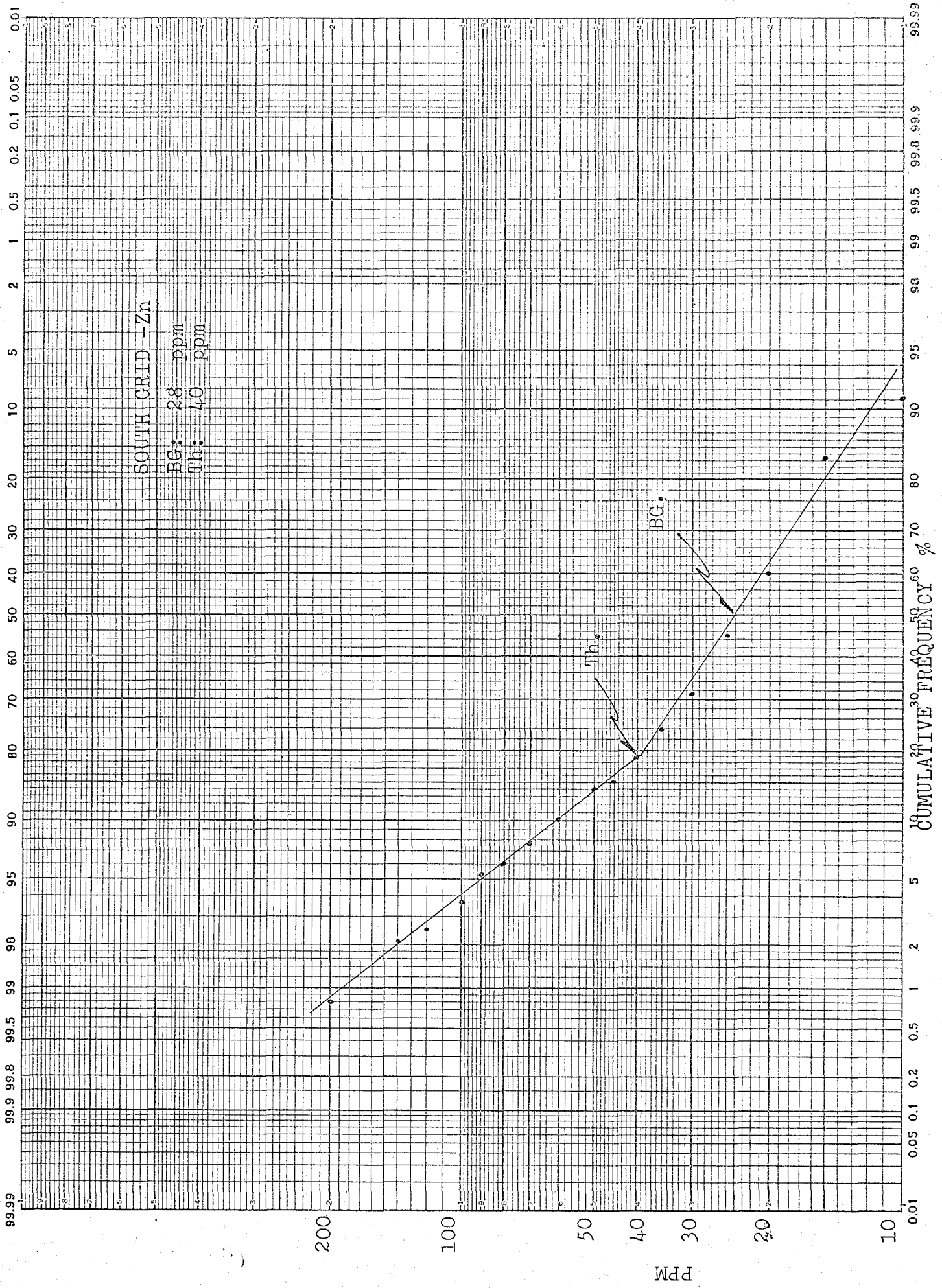
SOUTH GRID - COPPER

<u>Class</u>	<u>Frequency</u>	<u>% Frequency</u>	<u>Cumulative Frequency</u>
1 - 4	3	1.3	100.0
5 - 9	8	3.5	98.7
10 - 14	20	8.6	95.2
15 - 19	8	3.5	86.6
20 - 24	12	5.2	83.1
25 - 29	12	5.2	77.9
30 - 34	19	8.2	72.7
35 - 39	24	10.4	64.5
40 - 44	21	9.1	54.1
45 - 49	9	3.9	45.0
50 - 59	28	12.1	41.1
60 - 69	21	9.1	29.0
70 - 79	13	5.6	19.9
80 - 89	7	3.0	14.3
90 - 99	9	3.9	11.3
100 - 109	6	2.6	7.4
110 - 119	3	1.3	4.8
120 - 129	1	.4	3.5
130 - 139	1	.4	3.1
140 - 149	4	1.8	2.7
150 - 159	<u>2</u>	<u>.9</u>	-.-
	232	100.0	



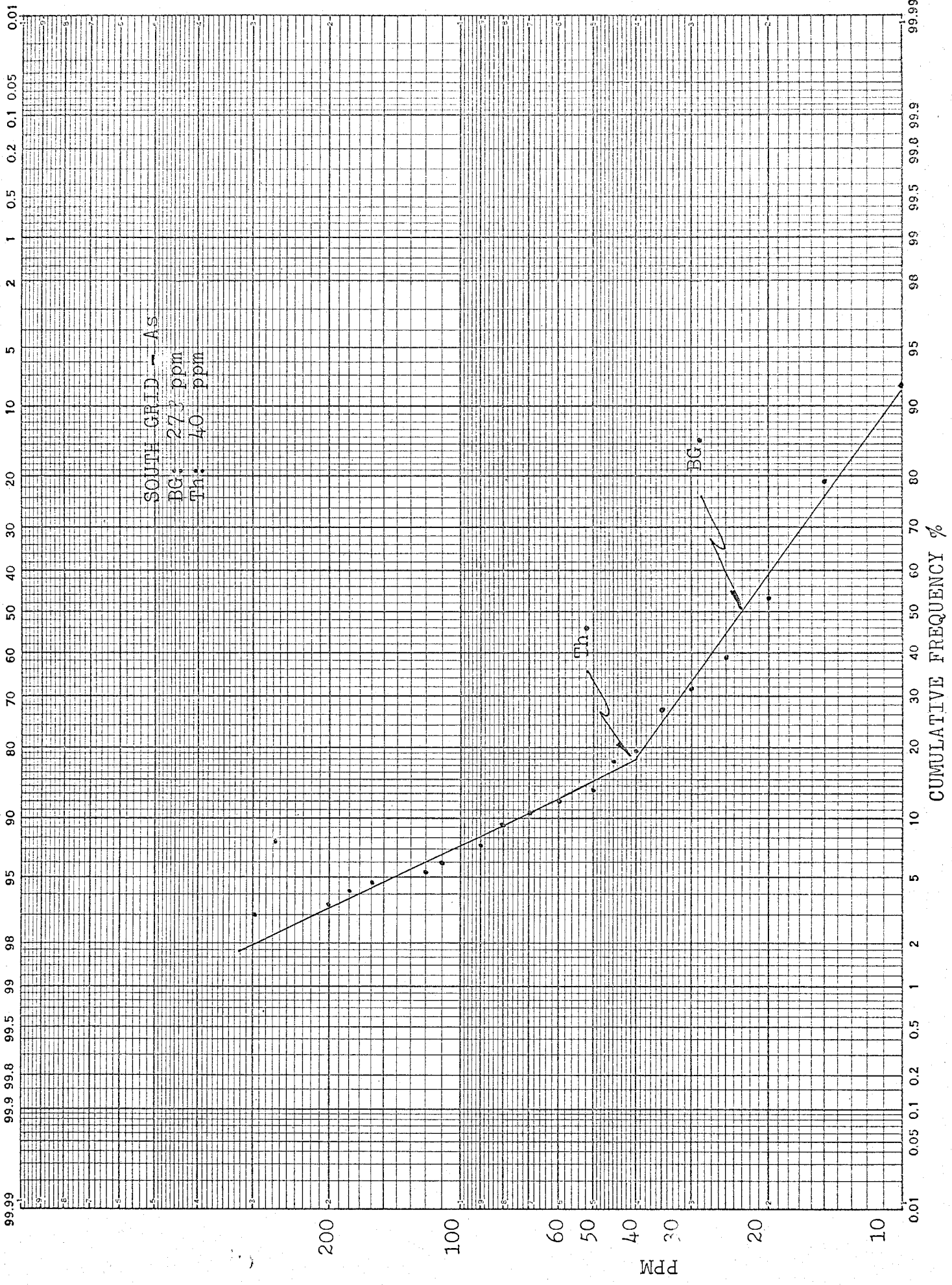
SOUTH GRID - ZINC

<u>Class</u>	<u>Frequency</u>	<u>% Frequency</u>	<u>Cumulative Frequency</u>
1 - 4	1	.4	100.0
5 - 9	20	8.6	99.6
10 - 14	18	7.8	91.0
15 - 19	51	22.2	83.2
20 - 24	37	16.0	61.0
25 - 29	32	13.8	45.0
30 - 34	17	7.3	31.2
35 - 39	12	5.2	23.9
40 - 44	6	2.6	18.7
45 - 49	5	2.2	16.1
50 - 59	9	3.9	13.9
60 - 69	5	2.2	10.0
70 - 79	4	1.8	7.8
80 - 89	2	.9	6.0
90 - 99	3	1.3	5.1
100 - 109	3	1.3	3.8
120 - 129	1	.4	2.5
140 - 149	3	1.3	2.1
190 - 199	1	.4	.8
245	<u>1</u>	<u>.4</u>	.4
	232	100.0	



SOUTH GRID - ARSENIC

<u>Class</u>	<u>Frequency</u>	<u>% Frequency</u>	<u>Cumulative Frequency</u>
1 - 4	3	1.3	100.0
5 - 9	15	6.5	98.7
10 - 14	29	12.5	92.2
15 - 19	62	26.6	79.7
20 - 24	34	14.5	53.1
25 - 29	16	6.9	38.6
30 - 34	12	5.2	31.7
35 - 39	16	6.9	26.5
40 - 44	4	1.8	19.6
45 - 49	10	4.3	17.8
50 - 59	3	1.3	13.5
60 - 69	3	1.3	12.2
70 - 79	4	1.8	10.9
80 - 89	4	1.8	9.1
90 - 99	3	1.3	7.3
110 - 119	2	.9	6.0
120 - 129	1	.9	5.1
160 - 169	1	.4	4.7
180 - 189	2	.9	4.3
200 - 300	1	.4	3.4
300 - 400	4	1.8	3.0
400	1	.4	1.2
540	1	.4	.8
550	<u>1</u>	<u>.4</u>	.4
	232	100.0	



STATEMENT OF EXPENDITURES

<u>Name</u>	<u>Category</u>	<u>Rate</u>	<u>Day Worked</u>	<u>Period</u>	
R. Westervelt	Prof. Eng.	\$150/day	May 10/May 13	4	\$ 600.00
L. W. Saleken	Geologist	90/day	April 22/May 13	22	1,980.00
J. Sladen	Helper	50/day	April 22/May 13	22	1,100.00
R. Simpson	Helper	50/day	April 22/April 29	8	400.00
D. Cary	Helper	50/day	April 22/May 13	22	1,100.00
B. Dodd	Helper	50/day	April 22/May 13	22	1,100.00
D. Mark	Helper	50/day	May 2/May 13	12	<u>600.00</u>

SALARIES (Appendix C) \$ 6,880.00

GEOCHEMICAL ANALYSIS:

900 samples @ \$1.70/sample \$1,530.00
 232 samples @ \$1.50/sample 348.00 1,878.00

MAGNETOMETER RENTAL 180.00

GROCERIES 532.58

FIELD SUPPLIES 43.50

BOAT RENTAL AND GAS 218.29

REPORT INCLUDING TYPING, MAPPING AND REPRODUCTION 540.00

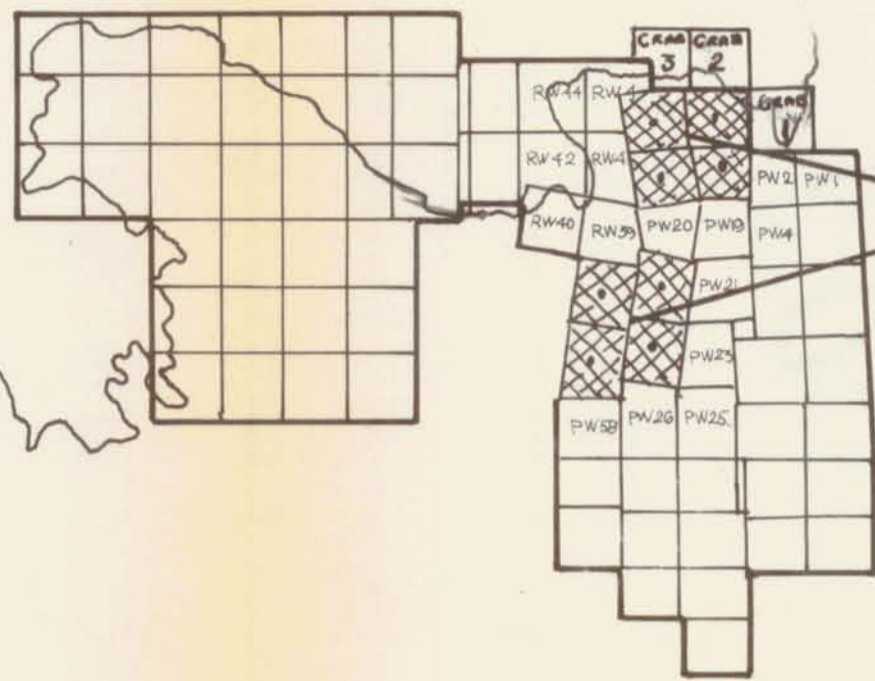
T O T A L \$10,272.37

Declared before me at the *City*
 of *Vancouver*, in the
 Province of British Columbia, this *3*
 day of *July* *1970*, A.D.

R. Westervelt, P. Eng.

Julie Turner
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public and for the Province of British Columbia
 SUBSTANTIAL RECORDING RECORDER

CATFACE PROPERTY



AREA OF SURVEY WORK: APRIL-MAY 1970

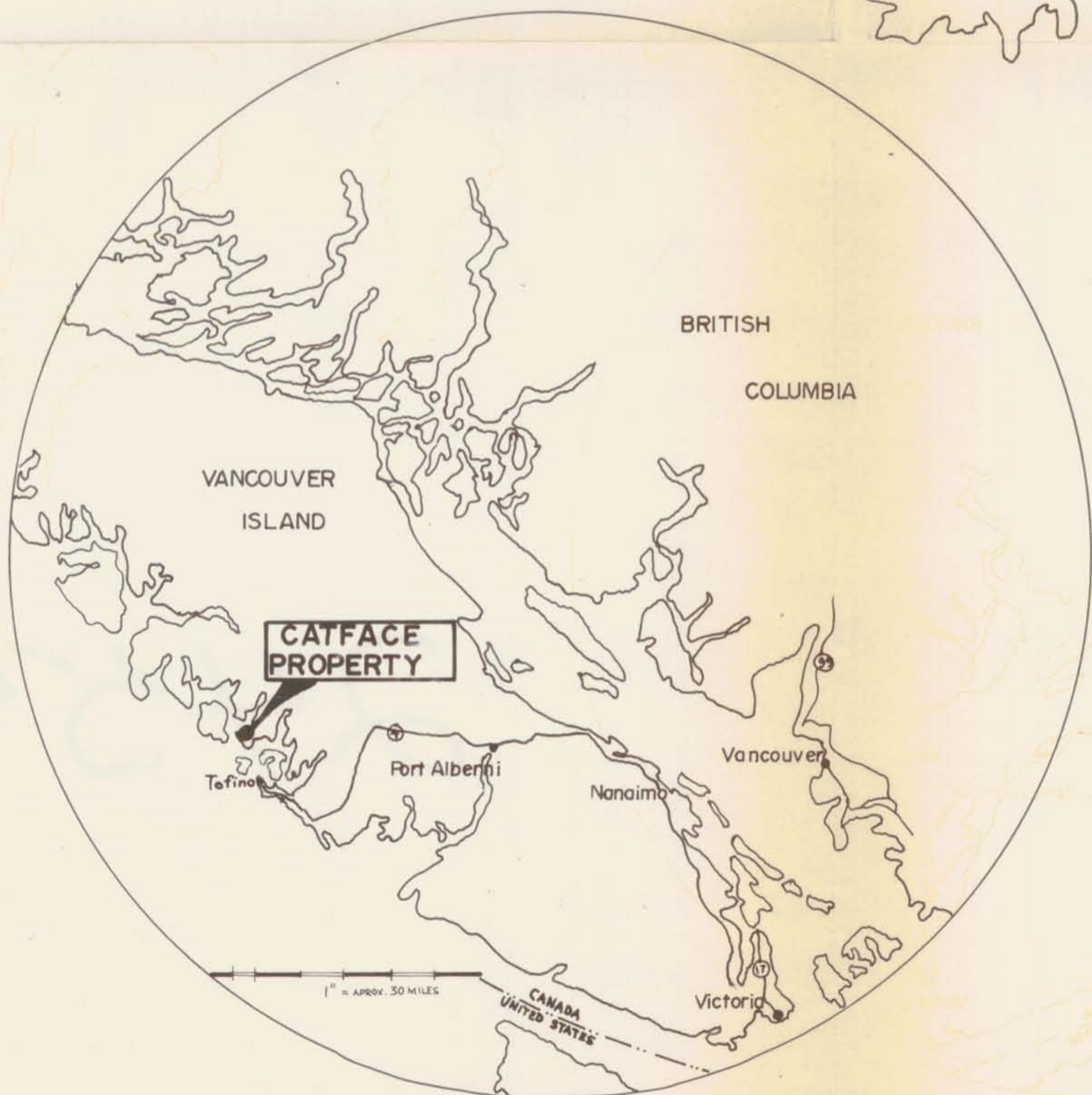
AHOUSAT



VARGAS ISLAND

MEARES ISLAND

TOFINO



2454

Department of
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ASSESSMENT REPORT
NO. 2454 MAP #1

FORT RELIANCE MINERALS LIMITED
CATFACE PROPERTY
ALBERNI M.D., B.C.
PW, RW, JB, RH & W CLAIMS

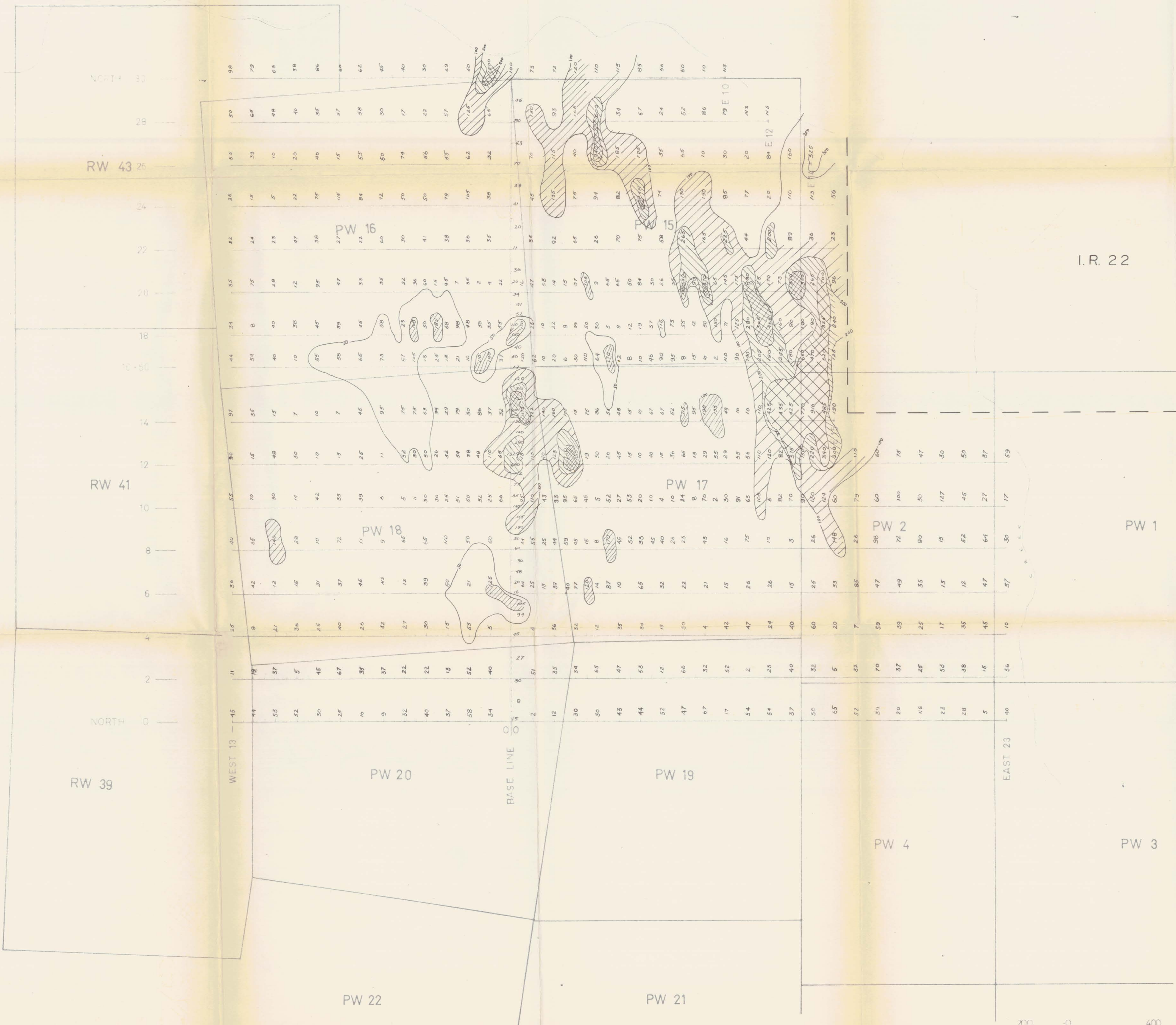


PROPERTY LOCATION MAP - FIG. 1
SCALE 1" = 1/4 mile

TO ACCOMPANY GEOLOGICAL AND MAGNETOMETER REPORT BY R. WESTERVELT, P.ENG. AND L.W. SALEKEN, GEOLOGIST ON THE PW, RW, JB, RH & W CLAIMS ALBERNI M.D., B.C., MAY 1970

2454

Whitepine Cove



LEGEND

BACKGROUND: 47 ppm
 TRESHOLD: min 82, max 180
 Contour interval 50 ppm
 100 200
 200 300
 > 300

I.R. 22

PW 1

PW 3

PW 4

PW 19

PW 21

PW 20

PW 22

PW 16

PW 17

PW 18

PW 15

PW 2

RW 39

RW 41

RW 43

scale 0 200 400
 1"=200'

2454

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 ASSESSMENT REPORT
 NO. 2454 MAP #4



FORT RELIANCE MINERALS LIMITED
 CATFACE PROPERTY
 ALBERNI M.D., B.C.

PW, RW, JB, RH & W CLAIMS 4

NORTH GRID
 COPPER SOIL GEOCHEMISTRY
 FIG. 4

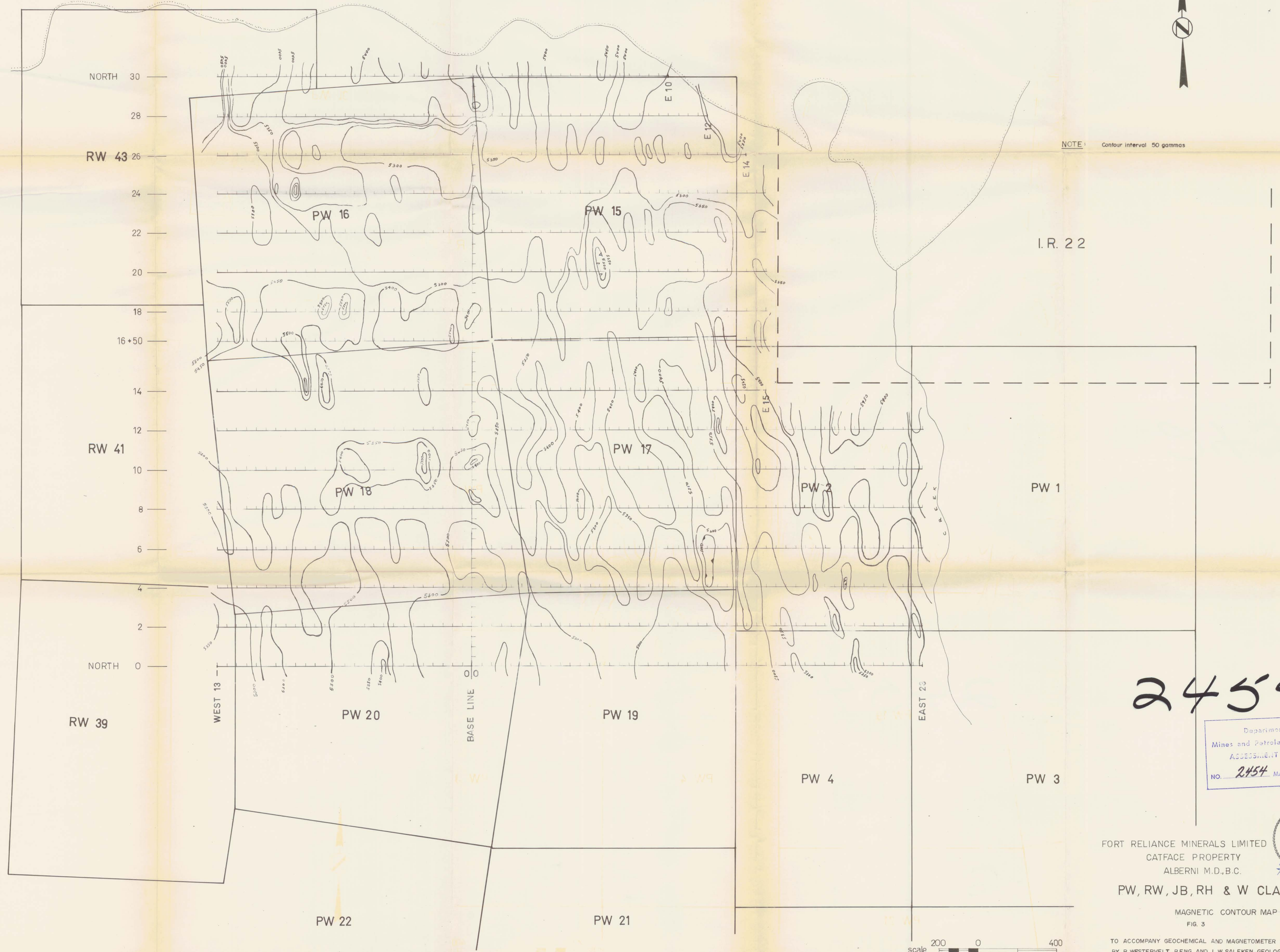
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 BY R. WESTERVELT, P. ENG. AND L.W. SALEKEN, GEOLOGIST,
 ON THE PW, RW, JB, RH & W CLAIMS, ALBERNI M.D., B.C., MAY 1970

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Whitepine Cove

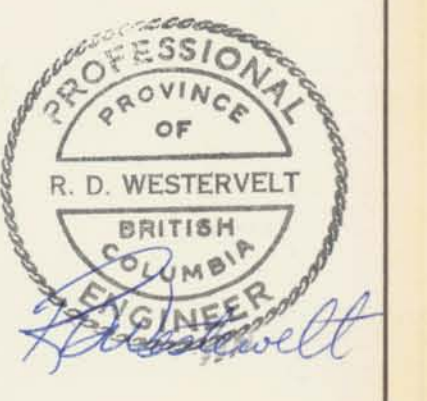


NOTE: Contour interval 50 gammas



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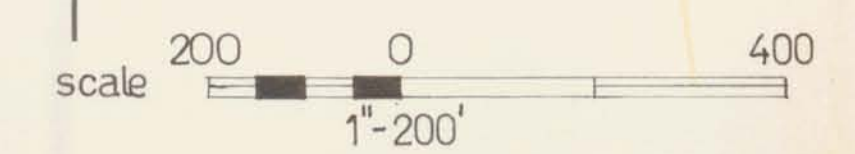
Department of
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ASSESSMENT REPORT
NO. 2454 MAP #3



FORT RELIANCE MINERALS LIMITED
CATFACE PROPERTY
ALBERNI M.D., B.C.

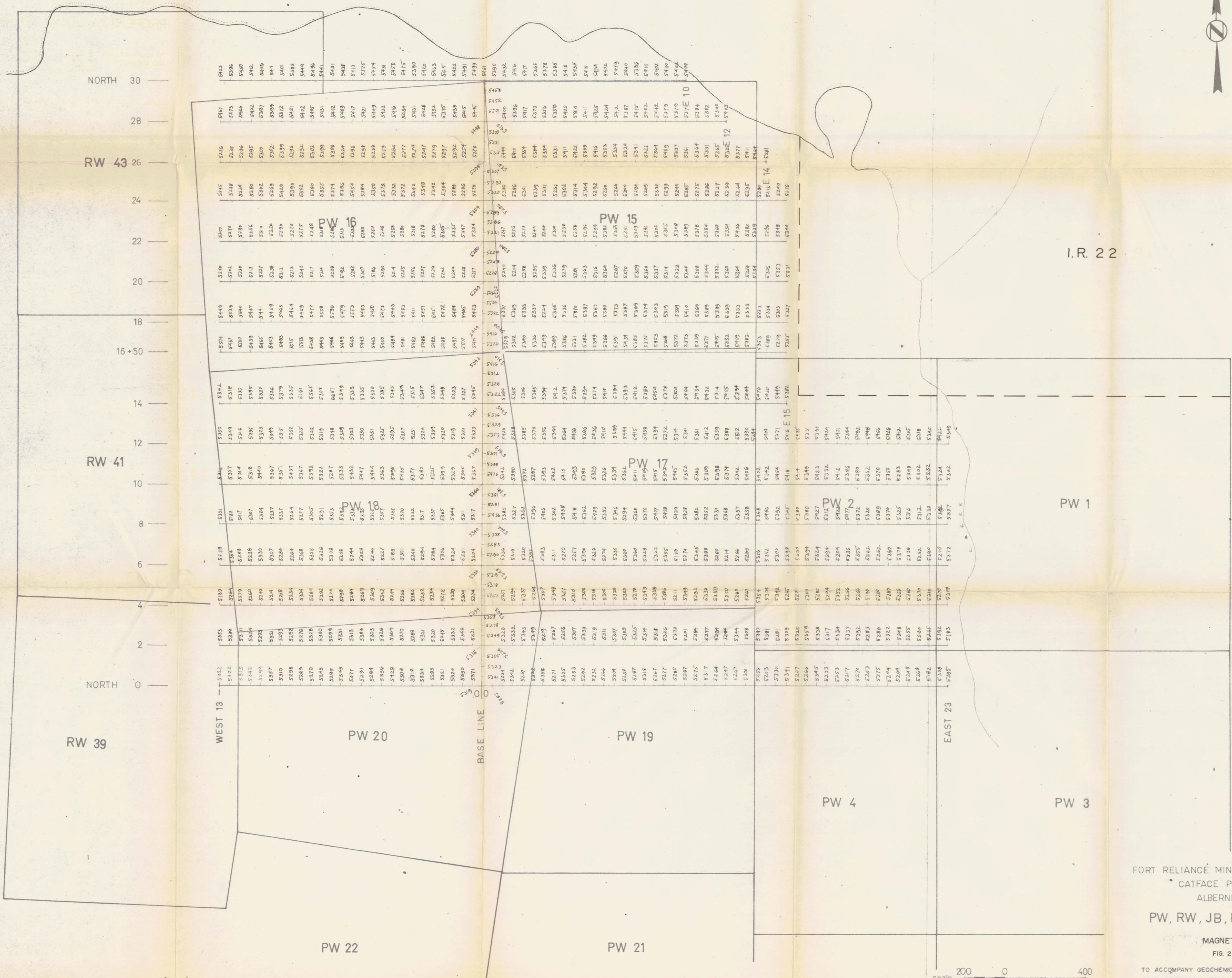
PW, RW, JB, RH & W CLAIMS

MAGNETIC CONTOUR MAP
FIG. 3



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Whitepine Cove



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ASSESSMENT REPORT
NO. 2454 MAP #2

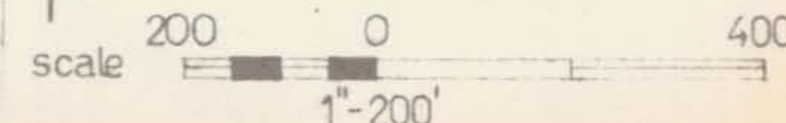


FORT RELIANCE MINERALS LIMITED
CATFACE PROPERTY
ALBERNI M.D., B.C.

PW, RW, JB, RH & W CLAIMS

MAGNETIC SURVEY RESULTS

FIG. 2



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RW 39

SOUTH 0

PW 21

PW 22

PW 34

4

8

12

16

20

SOUTH 24

WEST 4

EAST 25

PW 23

PW 24

PW 35

PW 26

PW 58

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LEGEND

BACKGROUND: 43 ppm
 THRESHOLD: 90 ppm
 Contour interval 25 ppm
 50
 75
 100-150
 150 <

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SCALE 200 0 400
 1" = 200'

FORT RELIANCE MINERALS LIMITED
 CATFACE PROPERTY
 ALBERNI M.D., B.C.



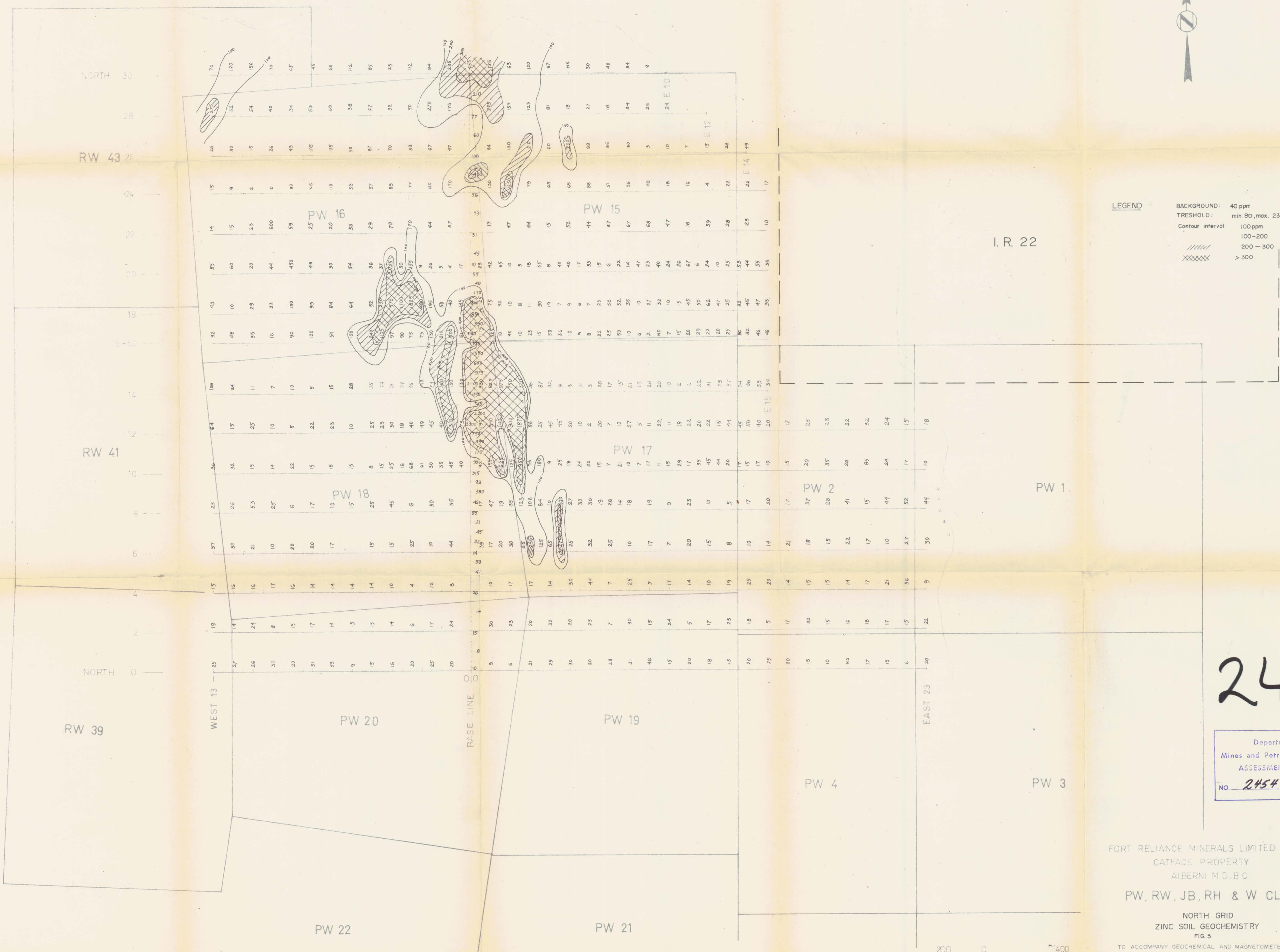
PW, RW, JB, RH & W CLAIMS

SOUTH GRID
 COPPER SOIL GEOCHEMISTRY

FIG. 6

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Whitepine Cove



LEGEND

BACKGROUND: 40 ppm
 TRESHOLD: min 80, max. 230
 Contour interval 100 ppm
 100-200
 200-300
 > 300

I. R. 22

PW 1

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FORT RELIANCE MINERALS LIMITED
 CATFACE PROPERTY
 ALBERNI M.D.B.C.
 PW, RW, JB, RH & W CLAIMS

NORTH GRID
 ZINC SOIL GEOCHEMISTRY
 FIG. 5

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scale 200 0 400
 1"=200'



LEGEND

BACKGROUND: 28 ppm.
 TRESHOLD: 40 ppm
 Contour interval 25 ppm
 // 50-75
 // 75

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 ASSESSMENT REPORT
 NO. 2454 MAP #7

2454

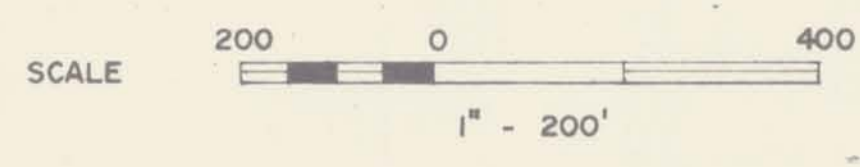


FORT RELIANCE MINERALS LIMITED
 CATFACE PROPERTY
 ALBERNI M.D., B.C.

PW, RW, JB, RH & W CLAIMS

SOUTH GRID
 ZINC SOIL GEOCHEMISTRY
 FIG. 7

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 ON THE PW, RW, JB, RH & W CLAIMS, ALBERNI M.D., B.C., MAY 1970





RW 39



SOUTH 0

4

8

12

16

20

SOUTH 24

WEST 4

PW 58

PW 26

EAST 25

PW 21

PW 23

PW 24

PW 35

PW 34

PW 22

EAST 15

LEGEND

BACKGROUND:	27ppm
TRESHOLD:	40 ppm
Contour interval	20 ppm
	40 - 60
	60 - 80
	80 - 100
	>100

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FORT RELIANCE MINERALS LIMITED
 CATFACE PROPERTY
 ALBERNI M.D., B.C.



PW, RW, JB, RH & W CLAIMS

SOUTH GRID
 ARSENIC SOIL GEOCHEMISTRY
 FIG. 8

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 NO. 2454 MAP #8

