3132

GEOCHEMICAL & MAGNETOMETER REPORT

NORTH CATFACE GROUP - WEST BLOCK

RW, RH, JB & W CLAIMS

LOCATION: CATFACE RANGE, APPROXIMATELY TEN MILES NORTH-NORTHWEST OF TOFINO, B.C., 49°, 125° SE
92 E/8E & 92 F/5W

REPORTED BY: A. D. WILMOT, P. ENG.
L. W. SALEKEN, GEOLOGIST

CLAIM OWNER: FORT RELIANCE MINERALS LTD.

DATE OF WORK: APRIL 30 TO MAY 19, 1971

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S U M M A R Y

The North Catface property - West Block is located ten miles north-northwest of Tofino, B. C., in the Alberni Mining Division. The property adjoins Falconbridge's Catface property on the north.

A detailed program of soil sampling and magnetic surveying was conducted as a follow-up to a reconnaissance evaluation of the claims in 1969. Three anomalies, A, B, and C, with coincident geochemical and magnetic anomalies were located. The significance of these anomalies remains to be determined by further work.

I N T R O D U C T I O N

The 1971 field programme was a follow-up of several soil and stream sediment anomalies located in 1969. The work programme consisted of a detailed soil survey and fluxgate magnetometer survey conducted over a cut and picketed grid located mainly on claims RH 1 - 12, JB 8, and JB 10. Work was conducted between April 30th and May 19, 1971 under the field supervision of A. D. Wilmot, Consulting Mining Engineer. Field personnel were supplied by L. W. Saleken & Associates Ltd., Geological Field Consultants, Vancouver, B. C.

This report describes the details and results of the 1971 field work.

PROPERTY:

The North Catface Group, West Block, consists of forty contiguous mineral claims that are owned by Fort Reliance Minerals Ltd. The claims have been grouped as follows:

Claim Name	Recording Number
RW 42-44 [incl.]	15165 - 15167
RW 47-50 [incl.]	15170 - 15173
RH 1-12 [incl.]	13550 - 13561
JB 1 - 3 [incl.]	13562 - 13564
JB 7-12 [incl.]	13568 - 13573
W 1-12 [incl.]	13538 - 13549

LOCATION, ACCESS, PHYSIOGRAPHY:

The property is situated approximately ten miles north-northwest of Tofino, B.C., in the Alberni Mining Division. Access to the claims is by boat or float plane from Tofino.

The claims are densely forested with considerable undergrowth of salal and other scrub brush. Elevations range between sea level and 1,200 feet A.S.L.

GENERAL GEOLOGY:

The local geology of the North Catface Group was mapped, on a reconnaissance basis, by P. E. Hirst and R.C.M. Roberts, on a scale of 1 inch = 1,000 feet, in the summer of 1969. The geological map which is included as part of their report on the property, dated December 2, 1969, indi-

cates a series of northwest trending foliated meta-volcanic, meta-sedimentary and meta-dioritic rocks of varying dips. A northwest trending contact between the meta-diorites and country rocks occurs on the claims but is indicated as uncertain.

In general, the geology is obscured by a thick mantle of glacial till.

WORK PROGRAMME - 1971:

The field work on the North Catface Group - West Block was conducted between April 30 and May 19, 1971. A tent camp was established on a small inlet on the east side of Bawden Bay on claim RH5. The camp served as a base for work on the property. Access to various parts of the claim group was by motor boat.

A series of cut and chained picket lines were established on a 400 foot grid for survey purposes. Soil samples were collected by auger at 100 foot intervals from the "B" horizon and shipped to Bondar-Clegg Laboratories, North Vancouver, B. C. for analysis. Magnetic readings were taken at 100 foot intervals using a McPhar fluxgate magnetometer. Both surveys were conducted over the entire grid.

MAGNETOMETER SURVEY:

Instrument:

A McPhar fluxgate magnetometer, model 500, with a visual-null was used to conduct the survey.

Field Procedure:

The survey was conducted over the cut grid with magnetic readings taken in gammas at 100 foot intervals. A base station to check magnetic fluctuations was established at base camp. The survey was conducted using the closed-loop method of magnetic surveying.

Discussion:

The magnetic results were plotted and contoured at 200 gamma intervals as indicated on Figure 3.

The total magnetic relief of the claims is 2,440 gammas with readings ranging from -340 to +2,100 gammas. The background is approximately 1,000 gammas. The magnetic susceptibility of the rock is low.

Anomalies that occur are of a low order suggesting weak magnetic content of the rocks. In general, the higher positive magnetics occur on the northern part of the claims with the highest positive response occurring at L20N, 9W. A strong negative anomaly occurs on L28S, 11W. The individual anomalies are relatively insignificant while the overall anomalies trend is important.

GEOCHEMICAL SURVEY:

Field Procedure:

The soil samples were collected at intervals of 100 feet along the cut picket lines at depths of 12 - 30 inches from the podzolic "B" horizon, using a hand auger. All samples were placed in standard-sized heavy duty kraft envelopes. The depth of sample, type of soil and soil environment was recorded in a field notebook for each sample.

Geochemical Environment:

The soil is a glacial drift having a moderate to poorly developed alluvial horizon. The "B" horizon is located from 12 - 30 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.

Method of Geochemical Analysis:

The samples were analyzed by a commercial laboratory for copper, zinc and arsenic. Prior to analysis, the samples were dried and screened to minus 80 mesh. One gram samples were digested in hot aqua regia and analyzed [ppm] by atomic absorption for copper and zinc. Additional

one-gram samples were digested in hot $HClO_4$ - HNO_3 acid and analyzed colorimetrically for arsenic. The results were reported in ppm.

Discussion:

The results of the geochemical survey are plotted and contoured on Figures 4a, 4b, and 4c; copper, zinc and arsenic respectively.

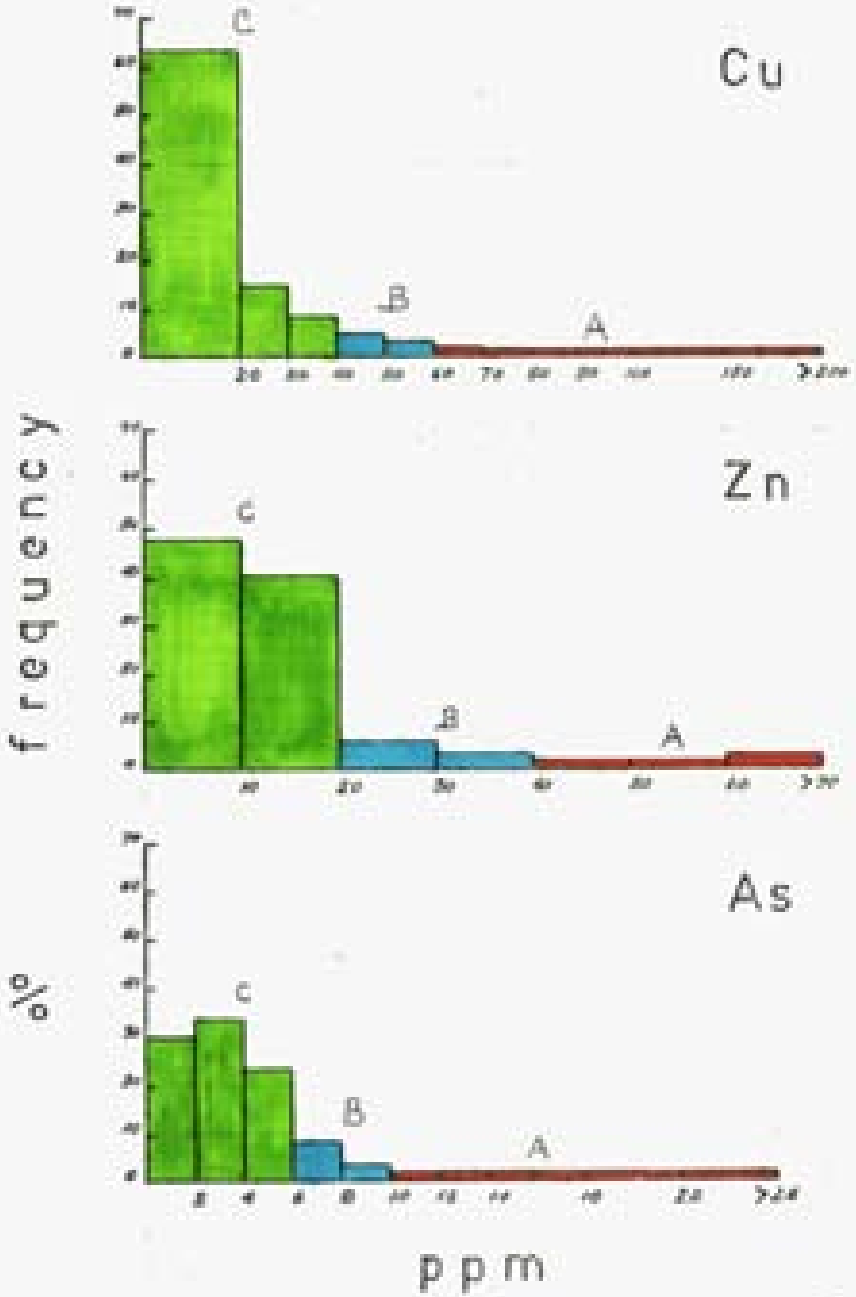
From the histogram plot, the following were determined:

	Background	Threshold	Anomalous
Cu	0 - 40	40 - 60	60
Zn	0 - 20	20 - 40	40
As	0 - 6	6 - 10	10

The contour maps show several anomalous areas that are related to single values. In general, the local slope and up-slope conditions control their extent. As individual anomalies, the values are too erratic and discontinuous to be of importance. Areas of coinciding anomalies are significant.

INTERPRETATION OF RESULTS:

An interpretation of the geochemical anomalies and magnetic trends is plotted on Figure 2. Three anomalous



HISTOGRAM

GEOCHEMICAL :

Bg C
Th B
An A

areas A, B, and C, with coinciding geochemical and magnetic responses are indicated.

Area A:

A strong copper response with coinciding strong arsenic and moderate zinc values occurs in an area of north trending magnetic highs. The anomaly covers an area of approximately 800 feet by 1,200 feet. The magnetics suggest that faulting or dykes with associated mineralization may be responsible for the anomalous soils. Local conditions, such as stream contamination, also contribute to some of the high metal ion concentrations.

Prospecting in the immediate area as well as upslope is required to substantiate the cause of the anomalous area.

Area B:

Located west of the baseline between L 24 S and L 28 S, Area B encompasses an area that is open on the south and west. The zone contains a strong negative magnetic response with an associated high positive trend. The area contains an extensive zinc response with corresponding strong copper and arsenic values. Meta-diorites are mapped in the area.

The magnetic trends within the meta-diorite

suggest a strong sub-surface structure possibly shearing or brecciation with associated mineralization. Some contamination from the adjacent stream [reported anomalous in Cu, Zn, As, reconnaissance survey, 1969] would add to the above average conditions.

Detailed geological investigation is warranted to clarify the anomalous zone.

Area C:

Area C, located between L 36 N and L 40 N, contains a strong arsenic response with associated anomalous zinc-copper values. The area has no magnetic trends suggesting the absence of major structure. The anomaly could be related to a single feature such as a quartz vein. Additional ground work would substantiate the cause of the anomaly.

CONCLUSIONS AND RECOMMENDATIONS:

The anomalous areas, A, B, and C, require further follow-up work to determine their causes. A programme of detailed prospecting and rock sampling is recommended. Additional geological mapping along the cut lines to complete the reconnaissance geological work of 1969 is warranted.

A cost estimate for further work is as follows:

Geologist, 20 days @ $90/day	$ 1,800.00
Geological Assistant, 20 days @ $50/day	1,000.00
Mobilization	1,000.00
Assaying & Equipment	500.00
Report	800.00
10% Contingency	500.00
	$ 5,600.00

Respectfully submitted,

A. D. Wilmot, P. Eng.

L. W. Saleken, Geologist

30 June, 1971

APPENDIX

STATEMENT OF EXPENDITURE

SALARIES

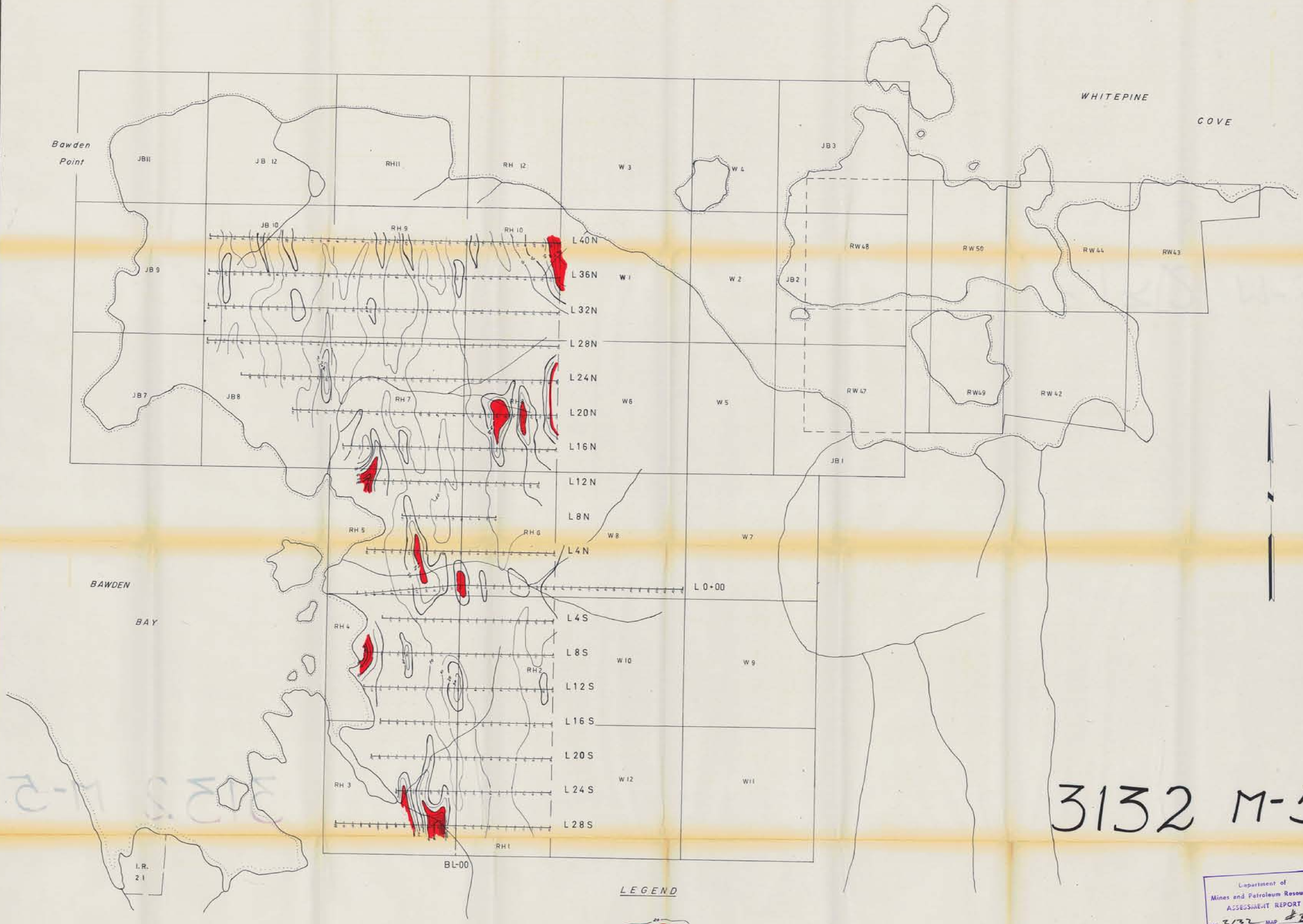
Name	Category	Rate	Days Worked	Period	Total
A. D. Wilmot	Consulting Mining Engineer	$150/day	20	April 30 - May 19	$ 3,000.00
L. W. Saleken	Consulting Geologist	$ 90/day	7	April 30 - May 6	540.00
J. E. Sladen	Field Technician	$ 50/day	20	April 30 - May 19	1,000.00
D. Cary	do.	$ 50/day	13	May 7 - May 19	650.00
M. Blanchflower	do.	$ 50/day	7	April 30 - May 6	350.00
W. Campbell	Line Cutter	$ 25/day	4	May 15 - May 18	100.00
B. Charlie	Line Cutter	$ 30/day	4	May 15 - May 18	120.00
				Total Salaries	$ 5,760.00

Geochemical Analysis 493 samples @ $3.20 per sample	1,577.60
Camp supplies, construction & groceries	900.00
Equipment and Boat Rental	840.00
Drafting and Report	825.00
Typing & Printing Costs of Report	250.00
Total	$ 9,852.60

Declared before me at the City of Vancouver, in the Province of British Columbia this 20th day of July 1971.

L.W. Saleken

A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.



LEGEND

Contour Interval: 10 ppm

Bg: 0 – 20 ppm
Th: 20 – 40 ppm
An: >40 ppm

3132 M-5

FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY
ALBERNI M.D., B.C.

RW, RH, JB & W CLAIMS—WEST BLOCK

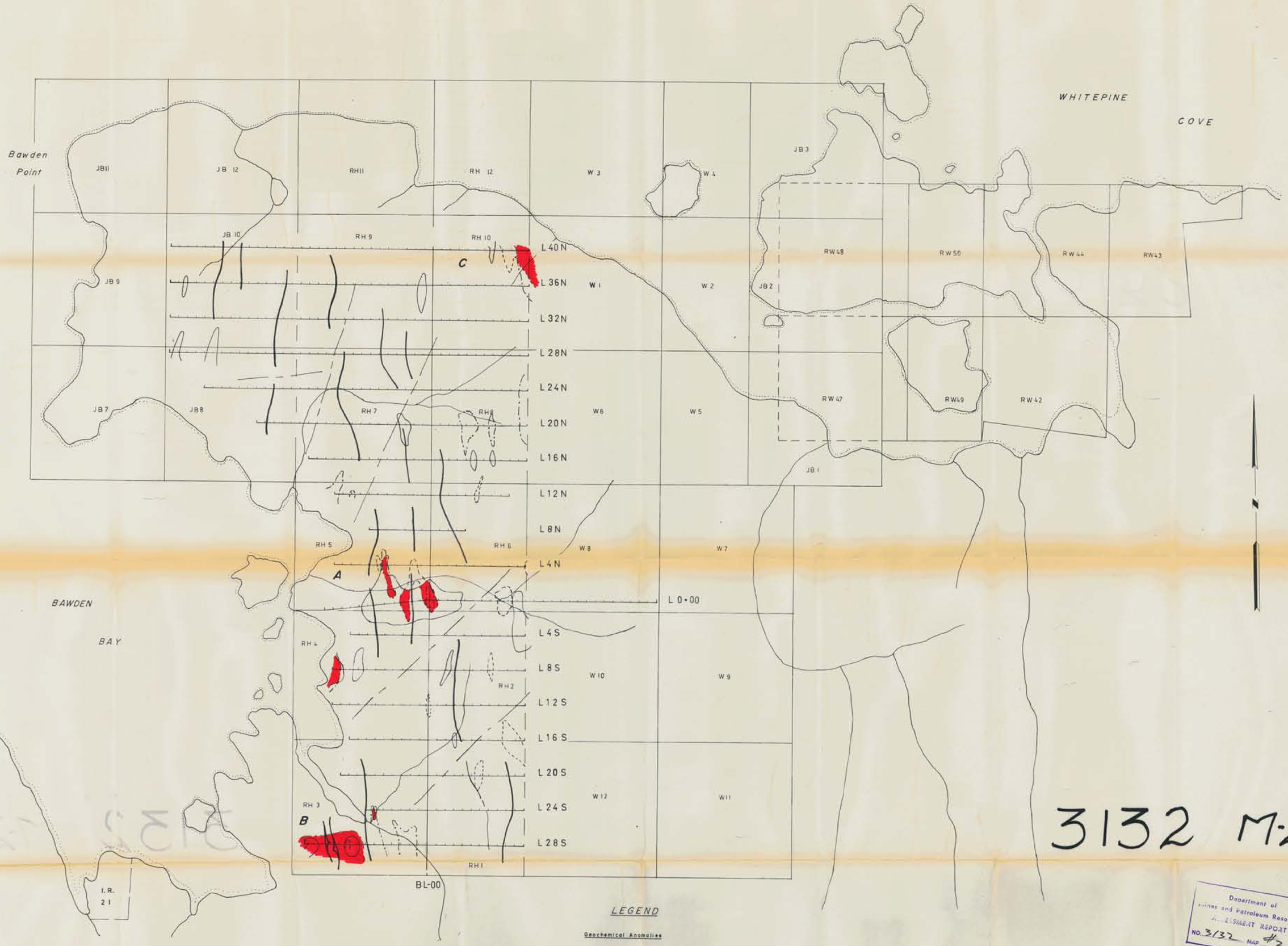
ZINC SOIL GEOCHEMISTRY

SCALE
Feet 400 0 400 800

To accompany Geochemical & Magnetometer Report by L.W. Saleken & A.D. Wilmot, P.Eng. on the RW, RH, JB & W Claims-West Block, Alberni M.D., B.C.

Fig. 4b

A.D. Wilmot
June 30/71



LEGEND

Geochemical Anomalies

Cu

Zn

As

Coinciding

Magnetic Trends

High

Low

Negative

3132 M-2

FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY

ALBERNI M.D., B.C.

RW, RH, JB & W CLAIMS—WEST BLOCK

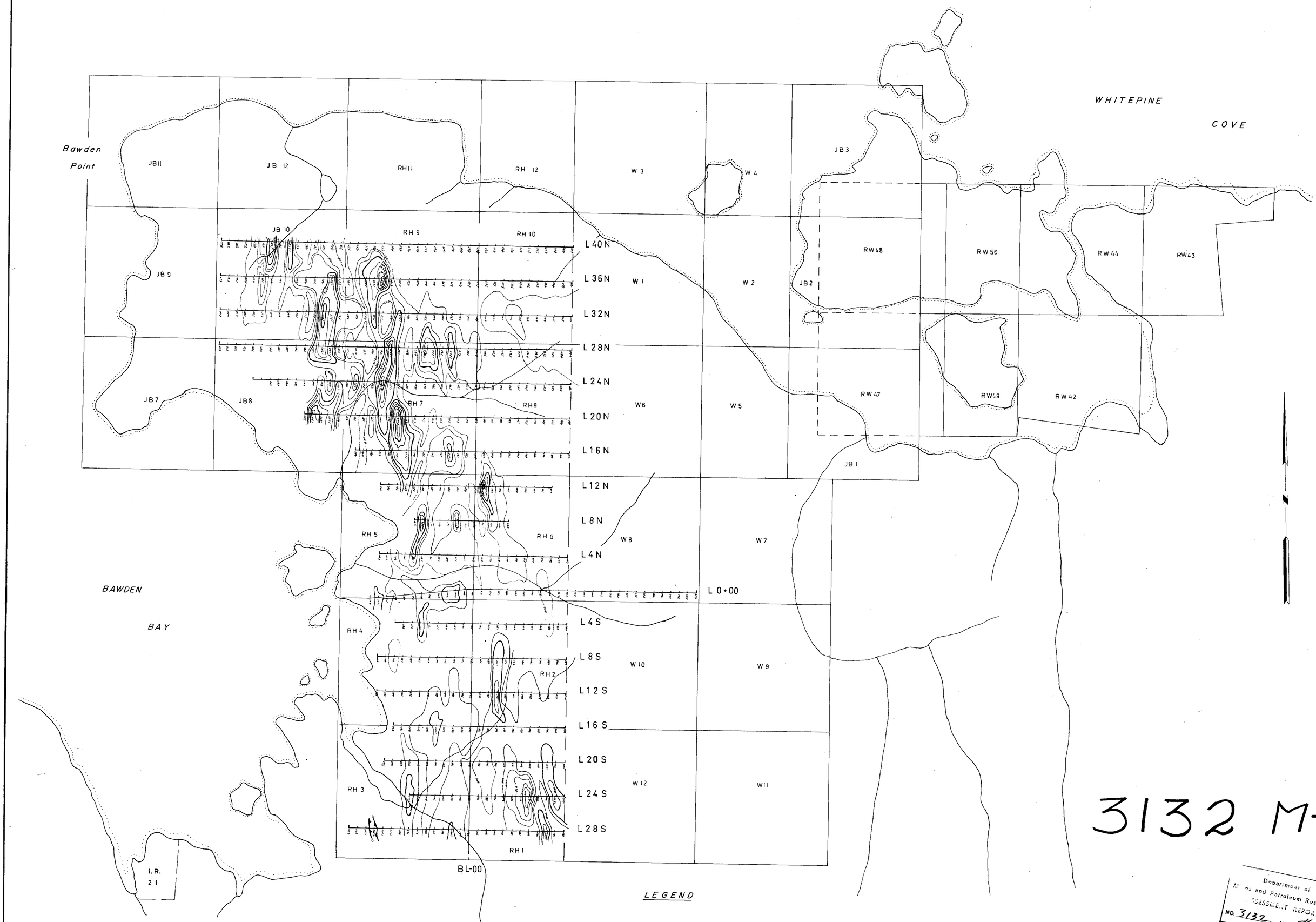
GEOCHEMICAL & MAGNETIC ANOMALY MAP

SCALE

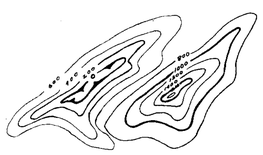
Feet 400 0 400 800

To accompany Geochemical & Magnetometer Report by L.W. Saleken & A.D. Wilmot, P.Eng. on the RW, RH, JB & W Claims-West Block, Alberni M.D., B.C.

Fig. 2 A.D. Wilmot June 30/71



LEGEND



Contour Interval : 200γ

3132 M-3

FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY

ALBERNI M.D., B.C.

RW, RH, JB & W CLAIMS—WEST BLOCK

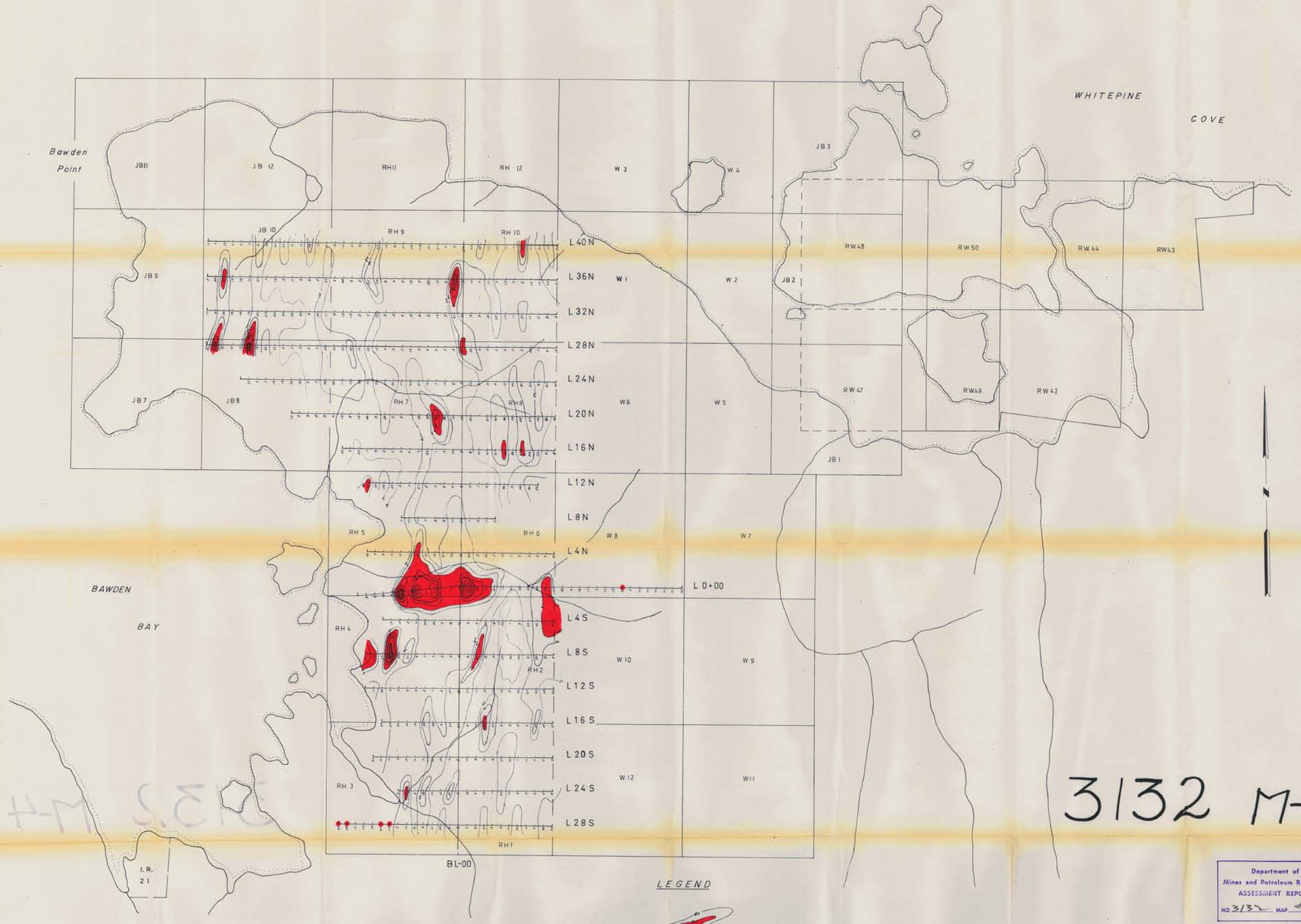
MAGNETIC CONTOUR MAP

SCALE

Feet 400 0 400 800

To accompany Geochemical & Magnetometer Report by L.W. Saleken & A.D. Wilmot, P.Eng. on the RW, RH, JB & W Claims—West Block, Alberni M.D., B.C.

Fig. 3 A.D. Wilmot June 30/71



LEGEND

Contour interval: 20 ppm

Bg : 0-40 ppm

Th : 40-60 ppm

As : >60 ppm

3132 M-4

FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY

ALBERNI M.D., B.C.

RW, RH, JB & W CLAIMS—WEST BLOCK

COPPER SOIL GEOCHEMISTRY

SCALE

Feet 400 0 400 800

To accompany Geochemical & Magnetometer Report by L.W. Saleken & A.D. Wilmot, P.Eng. on the RW, RH, JB & W Claims-West Block, Alberni M.D., B.C.

Fig. 4a

A.D. Wilmot
June 30/71

NORTH CATFACE PROPERTY

WEST BLOCK

EAST BLOCK

FLORES ISLAND

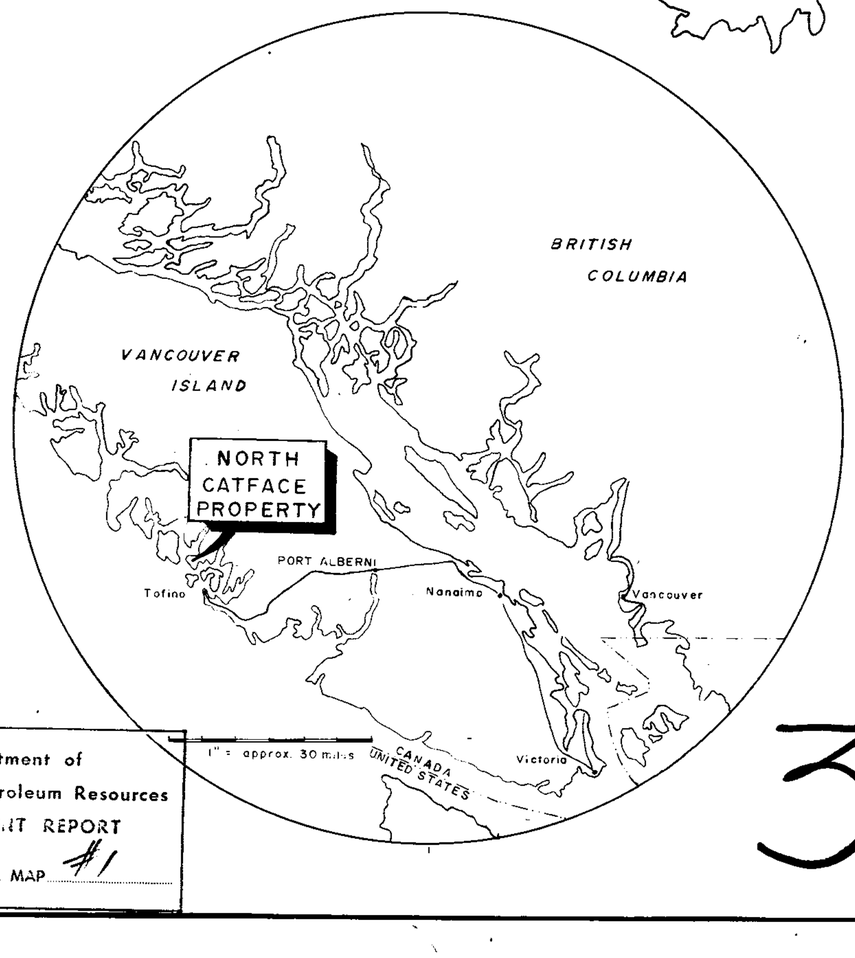
AHOUSAT

BEDWELL SOUND

VARGAS ISLAND

TOFINO

MEARES ISLAND



FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY

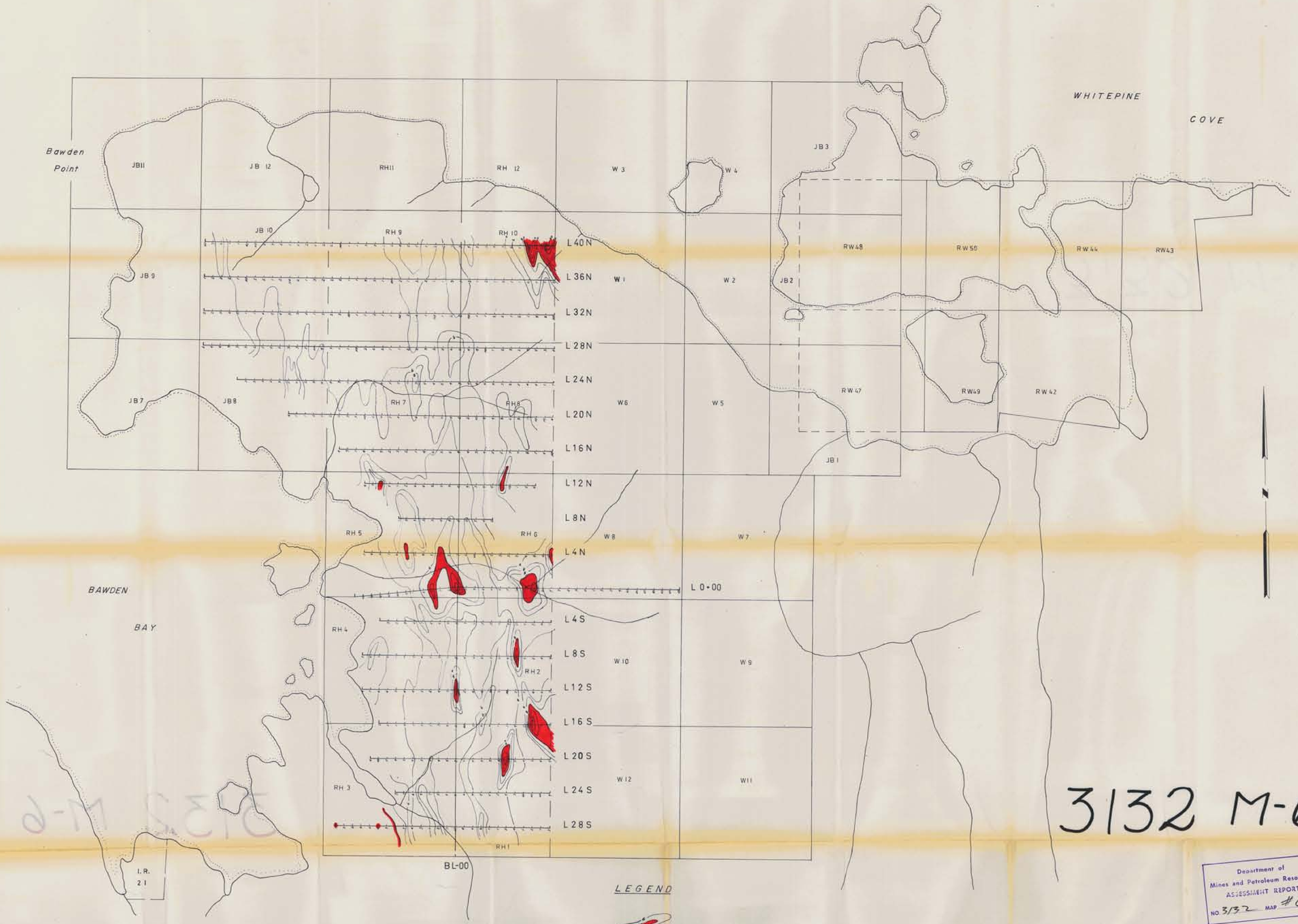
ALBERNI M.D., B.C.

RW, RH, JB, & W CLAIMS – WEST HALF

PROPERTY LOCATION MAP

Miles SCALE 1 0 1 2 3

Fig. 1



LEGEND

Contour interval: 2 ppm

Bg: 0 - 6 ppm
Th: 6 - 10 ppm
An: >10 ppm

3132 M-6

FORT RELIANCE MINERALS LIMITED

NORTH CATFACE PROPERTY
ALBERNI M.D., B.C.

RW, RH, JB & W CLAIMS — WEST BLOCK

ARSENIC SOIL GEOCHEMISTRY

SCALE
Feet 400 0 400 800

To accompany Geochemical & Magnetometer Report by L.W. Saleken & A.D. Wilmot, P.Eng. on the RW, RH, JB & W Claims-West Block, Alberni M.D., B.C.

Fig. 4c A.D. Wilmot June 30/71