REPORT ON A

GEOCHEMICAL SURVEY

ON THE MARBLE RIVER PROPERTY

OF

FOREST KERR MINES LTD.

AGILIS EXPLORATION SERVICES LTD.

FEBRUARY 26, 1968

# TABLE OF CONTENTS

		Page
INTRODUCTION	• • • • •	1
SUMMARY		1
LOCATION AND ACCESS		2
PHYSIOGRAPHY		2
CLAIMS		3
GEOLOGY	• • • • • •	3
FIELD WORK	• • • • •	4
Sampling Procedure		• • 5
GEOCHEMICAL TESTING		• • 5
RESULTS OF GEOCHEMICAL SURVEY		5
North Area	• • •, • •, •.	•, •, 5
South Area		6
CONCLUSIONS AND RECOMMENDATIONS.	• • • • • •	• • 7
CERTIFICATE		• • 9
•		
Maps		Scale
Claim Location Map		1 : 50,000
Surface Plan	·	1" = 400°
Geochemical Survey		1* = 400*

#### REPORT ON A

#### GEOCHEMICAL SURVEY

# ON THE MARBLE RIVER PROPERTY

OF

FOREST KERR MINES LTD.

### INTRODUCTION:

The Marble River Property of Forest Kerr Mines Ltd. consists of 62 contiguous mineral claims situated 12 miles south of Port Hardy on northern Vancouver Island, British Columbia.

During January and February, 1968, a tent camp was established on the property and a program of soil sampling plus reconnaissance mapping and a claims survey was carried out over the entire claim group.

This report summarizes the results of this program, which was carried out under the supervision of the writer, and recommends a further exploration program.

## SUMMARY:

The Forest Kerr property consists of 62 contiguous mineral claims at the mouth of the Marble River, 12 miles south of Port Hardy, on northern Vancouver Island. The claims are readily accessible by water from Coal Harbour 4 3/4 miles to the northwest.

Although overburden cover is extensive, most of the claim group is believed to be underlain by grey-brown, massive, crystalline limestone, while the extreme eastern boundary is underlain by volcanic rocks chiefly

amygdaloidal andesites. Traces of tetrahedrite and malachite were noted at one point in the limestone.

During January and February, 1968 a four man crew was engaged in soil sampling, mapping and a claims survey. A total of 19,200 feet of base lines were established and soil samples taken at 200 foot intervals on 232,800 feet of cross-lines. All samples were analyzed for total copper and several randomly distributed samples for total zinc.

Several significant copper anomalous areas are indicated with values 2 - 4 times background and peak values up to 20 times background. A number of these in the western portion of the claims may be associated with an indicated major northwesterly trending fault. The above mentioned copper mineralization was found within one of the anomalous areas.

Sampling was widely spaced and detailed surveys are required in the anomalous areas to more closely outline these anomalies. On the basis of the favorable results obtained to date a further program of detailed geochemical, geological, and geophysical surveys in selected areas, followed by possible trenching and drilling is recommended.

#### LOCATION AND ACCESS:

The claims lie astride the Marble River, for approximately 2 miles upstream from its mouth at Varney Bay. Port Hardy lies 12 miles to the north and Coal Harbour 4 3/4 miles to the northwest. Co-ordinates near the center of the claim group are 127° 30' west longitude, 50° 32' north latitude.

Access is by boat from Coal Harbour where a water taxi can be hired and most supplies obtained.

#### PHYSIOGRAPHY:

Topographic relief in the area of the claims is low with elevations varying from sea level to approximately 600 feet. Most of the area is relatively flat

although a few steep knolls exist. In its lower reaches the Marble River flows through a narrow precipitous canyon. Although outcrop is sparse throughout much of the claims area overburden is generally thin.

Most of the area is heavily timbered; underbrush is thick in open areas but sparse in the thickly timbered sections.

Rainfall is excessive during the fall and winter months, and snow was present during short periods while the work was in progress.

#### CLAIMS:

Originally the property consisted of 55 claims, but 7 additional claims were staked during the survey to cover open ground in the northern portion of the property.

Original Claims:	,	Tag No.
For 1 - 6 For 7 - 34 For 35 - 54 Bill 1	, ·	827237 - 42 827255 - 82 868025 - 44 827249
Recent Staking:	N	
For 55 - 60 For 1 Fraction		882805 <b>- 10</b> 882801

## GEOLOGY:

The claims are underlain for the most part by limestone belonging to the Quatsino Formation of Triassic Age. Underlying volcanic rocks of the Karmutsen Formation outcrop along the eastern edge of the property.

The limestone is mostly light grey-brown or grey, massive, and fine-grained, crystalline to dense. Fossils are abundant at one point along the east side of Varney Bay. Banding, striking from northwest to

southwest and dipping either north or south at shallow angles was noted in the limestone in the southwest portion of the claims. Pyrite is occassionally found, both finely disseminated and along fractures. Traces of tetrahedrite and malachite were noted at 28E, 08N, south of the Marble River.

Volcanic rocks in the northeast corner of the claims are mostly green amygdaloidal andesites striking north and dipping to the west. Vesicules are generally filled with chlorite and quartz. Magnetite is present in variable amounts in most of the volcanics.

The contact between the andesite and limestone is not exposed but appears to trend north or slightly west of north.

A major southeasterly trending fault is believed to exist along the south side of Varney Bay, passing through the south-western portion of the claim group. Several smaller north to northwest trending faults are indicated by drainage.

#### FIELD WORK:

A tent camp suitable for 5 men was established on the property at the mouth of the Marble River.

As the Marble River cannot be crossed in the area the property was worked in two sections referred to as the north and south areas. North of the Marble River a base-line runs N60°E, while south of the River an east-west base-line was established. Stations were marked at 100 foot intervals along both base-lines. Cross-lines were run by chain and compass at 400 foot intervals, marked by flagging, with stations marked every 200 feet. Soil samples were collected at 200 foot intervals along all cross-lines. A total of 19,200 feet of base lines and 232,800 feet of cross-lines were established.

Any outcrop encountered during the soil sampling survey was noted and subsequently plotted.

All claim posts were located and tied into the grid by chain and compass. Adjoining claims were

also tied into the grid to establish property boundaries. In addition seven claims were staked to cover open ground along the north boundary of the property.

# Sampling Procedure:

Sampling was carried out at 200 foot intervals on lines 400 feet apart. Samples were taken with an auger from the soil horizon immediately underlying the humous layer and varied from 6 - 36 inches in depth, although most samples were from 12 to 24 inches deep. At each sample location notes were made describing the soil type, topography, vegetation, outcrop, etc. to be used later in interpreting the results. Soil type varies, but is most commonly either a brown, fine to medium-grained sand or light brown sandy-clay.

## GEOCHEMICAL TESTING:

All samples were analyzed by Chemex Labs Ltd. of North Vancouver for total copper using the atomic absorption method, and results reported in parts per million. Several samples from different parts of the property were also tested for zinc to determine of this would be a suitable indicator.

Results were plotted at a scale of 1 inch = 400 feet and contoured at intervals of 20 ppm.

# RESULTS OF GEOCHEMICAL SURVEY:

Several copper anomalous areas are indicated, both north and south of the Marble River. No significant zinc values were indicated where it was analyzed.

### North Area: (north of Marble River)

Background is taken as approximately 30 ppm in the western portion and approximately 40 - 50 ppm to the east. Five anomalous areas, twice background or greater, occur in this area. In addition, a number of isolated high values several times background occur,

but are not considered significant as they consist of single readings.

An area of greater than 60 ppm copper extends from 20E, 30N to 40E, 28N measuring approximately 2500 by 300 feet. Within this, three separate areas of greater than 80 ppm exist while the peak value is 465 ppm copper. The anomalous area is in part controlled by a small N60°E trending draw. Limestone rubble occurs near the east end but no mineralization was noted which would account for the anomalous conditions.

The second, and largest anomalous area containing greater than 60 ppm copper in the western portion of these claims lies between 4 + 00E and 12 +00E, from 7N to 22N. The peak value here is 122 ppm copper. Most of this area is gently sloping to the west and no outcrop was noted.

An anomalous area approximately twice back-ground, measuring 1500 feet in a N60°E direction by 200 - 400 feet wide is centered on line 88E. 10N and defined on 4 lines. The peak value here is 200 ppm copper. Andesites occur a short distance to the north and east of the anomaly which trends across the drainage in the area.

Two small anomalous areas, each defined on 2 lines, occur south of the base line near the Marble River. One occurs at 24E, 12S and 28E, 10S, with, values of 114 and 104 ppm copper; the other at 44E, 8 - 10S, 48E, 10S with a peak value of 93 ppm copper.

# South Area: (south of Marble River)

Background is taken as 30 ppm throughout most of this area except for the extreme eastern portion where it is roughly 50 ppm.

A large irregular area approximately twice background occurs roughly from 12E to 36E and 1N to 27N. Within this large region 5 separate areas are found encompassing either 2 or 3 lines with values greater than 80 ppm. The peak value is 650 ppm, although in general the anomalous area is fairly weak. Scattered outcrop and limestone rubble are found throughout much of the area and overburden is generally thin.

Traces of tetrahedrite and malachite were found near station 28E, 8N where the soil value of 650 ppm copper was obtained.

The most significant anomaly located south of the Marble River occurs at the extreme western edge of the claims and on the adjoining property where a southwesterly trending zone is indicated on lines 0 + 00 and 4 + 00W, the latter the most westerly line sampled. High values on line 4W, 6 - 12N in part follow a linear northerly trending draw. Two other small anomalous areas are found north of this on lines 4W - 4E. No outcrop was found within the anomalous area, although limestone occurs nearby.

Values of 3 - 4 times background occur on line 12E between 14S and 20S. Limestone rubble with minor pyrite is found throughout part of this area.

Erratic high values up to 190 ppm copper occur at the south end of lines 52, 56, and 60E, to either side of a northwest flowing creek.

A small but intense anomaly is indicated at the eastern edge of the sampled area at 80E, 18N and 84E, 20N where values of 274 and 148 ppm copper were obtained. A value of 190 ppm copper was also found at 84E, 14N. Volcanic outcrop occurs in this area but was not examined in detail at the time of the sampling because of snow cover.

#### CONCLUSION AND RECOMMENDATIONS:

Several low intensity copper anomalies have been indicated by the geochemical survey. Most of these range between 2 and 3 times background although individual readings up to 650 ppm copper occur. Copper mineralization was noted at one point, but not elsewhere as overburden cover is extensive in most anomalous areas.

The majority of the property is underlain by massive limestone, while volcanic andesites outcrop in the extreme eastern portion. The anomalies in the south-western portion of the claims are in the vicinity of an inferred major north-west trending fault with which they

might be related.

The geochemical survey was of a reconnaissance nature to indicate any anomalous areas that might exist and more detailed surveys are required to more closely outline these anomalies. Emphasis should be placed on those anomalies occurring on For 56 and For 1 Fraction; the west side of For 21, For 19, and For 17; between For 23 and 24; and part of the large anomaly on claims 18, 20, 38 and 40. Detailed geological mapping should be carried out in the region of the two anomalies occurring in the volcanic rocks and the two small anomalies north of the Marble River.

In view of the favorable results obtained to date a program as outlined for Stage 2 in the writers report of December 6, 1967 should be initiated. This will consist of detailed geochemical, geological, and geophysical surveys followed by possible trenching and/or drilling.

Respectfully Submitted,

R. H. D. Philp, P. Eng.

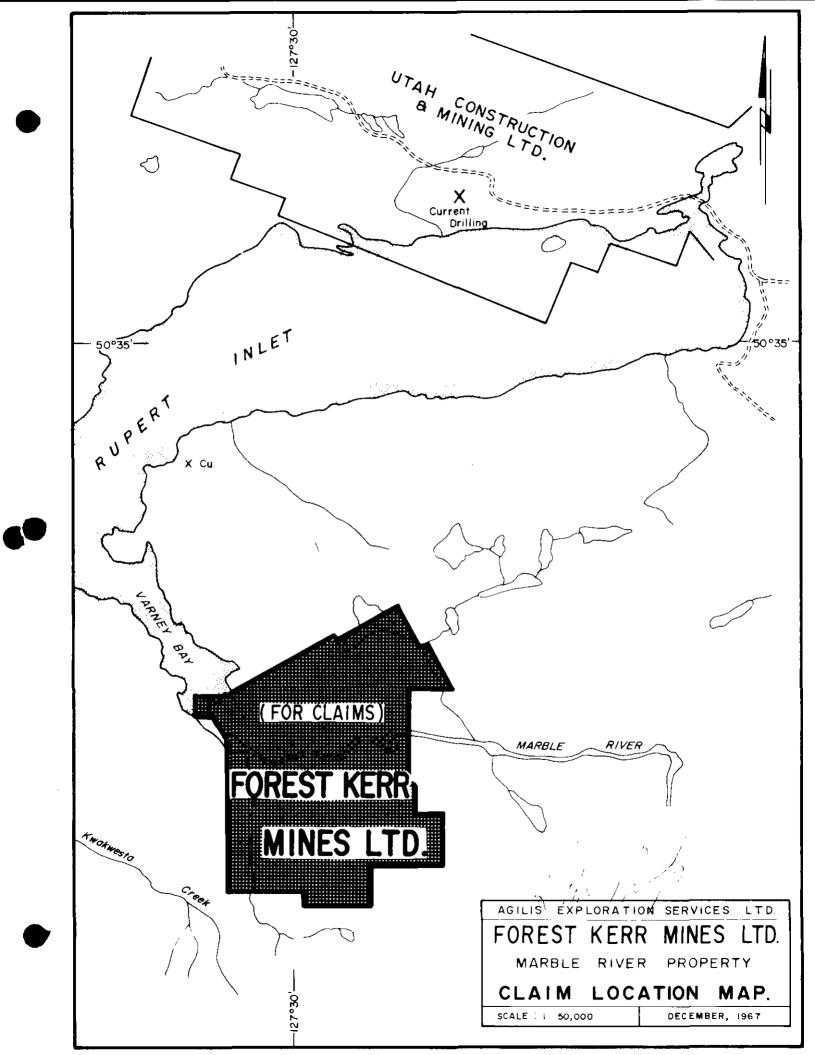
## CERTIFICATE

- I, Ronald H. D. Philp of 812 Blundell Road, Richmond, B. C., do hereby certify that:
- 1. I am a registered Professional Engineer of the Province of British Columbia.
- 2. I am a graduate from the University of British Columbia (B. A. Sc. 1961).
- 3. I have practiced my profession since 1961 while employed with Caseco Consultants Ltd., Asbestos Corporation (Explorations) Ltd., Alrae Exploration Limited, and Agilis Exploration Services Ltd.
- 4. I have personally supervised the work carried out on the Marble River Property of Forest Kerr Mines Ltd. (N.P.L.) during January and February. 1968.
- 5. I have no interest, nor do I expect to receive any interest, in the property described herein or securities of Forest Kerr Mines Ltd. (N.P.L.).

R. H. D. Philp, P. Eng

Vancouver, B. C.

February 26, 1968



## DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of the geochemical survey the For and Kerr Groups in the Nanaimo the geochemical survey over Mining Division.

ł. Ronald H. D. Philp

812 Blundell Road, Richmond, B. C. of

in the Province of British Columbia, do solemnly declare that the following personnel were employed and costs incurred in conducting the survey.

Personnel:

D. Reinke - soil sampler Jan. 4 - Feb. 7 = 35 days
C. Nelson - soil sampler Jan. 4 - Feb. 5 = 33 days
B. Reinke - helper Jan. 4 - Feb. 5 = 33 days
J. Rae - helper Jan. 9 - Feb. 4 = 28 days

Jan. 4 - 7 = 4 days D. Parker - helper

M. Cowan - geologist = 6 days

= 6 daysR. Philp - supervision, report

Portion of work carried out by Agilis Exploration Services
Contract Price = \$5962.50 \$59 Contract: \$5962.50 Ltd.

Non-Contract:

 		200000
D. Reinke	91 days @ \$41.00/day charged =	\$3 <b>7</b> 9.25
C. Nelson	6 days @ \$41.00/day charged =	266.50
B. Reinke	5 days @ \$34.00/day charged =	170.00
		246.50
J. Ray	71 days @ \$34.00/day charged =	
M. Cowan	3 days @ \$60.00/day charged =	180.00
	$2\frac{1}{4}$ days @ \$100.00/day charged =	225.00
R. Philp	24 days & \$100.00/day onargod	

Camp charges 33 man days @ \$7.50/day = Geochemical testing

Ground transportation, water taxis, boat, truck rental and miscellaneous charges

\$9345.05 Total Costs

\$1467.25 247.50 1262.80

405.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the Mesty

of Vancouver

, in the

Province of British Columbia, this 12th

day of December, 1968

, A.D.

aul Sub-mining Recorder

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

