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GEOCHEMICAL REPORT

ON THE

CHUCHI CLAIMS

N.T.S. 93-N-2

LAT. 55°13'N. LONG. 124°43'W

Vancouver, B. C.

February 10, 1971

Dr. I. L. Elliott

C O N T E N T S

LIST OF ILLUSTRATIONS

GEOCHEMICAL REPORT ON

THE CHUCHI CLAIMS

93-N-2

INTRODUCTION

During August of 1970, a geochemical soil reconnaissance program was carried out on the Chuchi claims, owned by Falconbridge Nickel Mines Ltd.

Four hundred and sixty-two soil samples were collected during this reconnaissance in order to determine anomalous areas following discovery of a mineralized outcrop in Little Klawli Creek.

The geochemical results for hot extractable silver and copper and cold extractable copper, are plotted on map 119-70-E-1.

LOCATION AND ACCESS: LAT. 55°13' AND LONG. 124°43'

The Chuchi claims are located 55 miles north of Fort St. James, and directly north of the lake at the extreme west end of Chuchi Lake, between Klawli River and Klawdetelle Creek. There is a secondary road from Fort St. James to the Nation Lake Lodge at the east end of Chuchi Lake. Reaching the west end of the lake involves a 16-mile boat trip, which takes approximately one and a half hours.

The geochemical soil survey described in this report, was carried out as shown on the accompanying map 119-70-E-1.

The following Chuchi claims were involved:

Chuchi #1 to #27 inclusive.

MAP 876A

MANSON CREEK

CASSIAR DISTRICT

BRITISH COLUMBIA

Scale, [illegible] or 1 Inch to 4 Miles

Miles 4 0 4 8 12

Approximate magnetic declination, 30° East.

Location Map

Chuchi Claims

93-N-2

METHOD OF SURVEY

A base line 8,000 feet long bearing due north, was established by chain and compass. Grid lines were turned off at right angles to the base line at 400 foot spacings, and sampled along these lines at 200 foot intervals. These grid lines were extended 1,400 feet westward, and to the swamp eastward, as shown on accompanying map 119-70-E-1. Lines 0+00N to 28+00N were extended to 4,200 feet eastward. A 6,000 foot control line was established parallel to, and 2,800 feet east of, the baseline originating at station 0+00N and 28+00E.

Soil samples were taken from the B horizon at a depth of approximately 12 inches, using grub hoes. All soil samples were placed in water-resistant paper packets on which the following information was recorded: sample number, date, location, sampling depth, horizon, colour and moisture content. The samples were shipped to Vancouver for analysis by the Falconbridge laboratory.

LABORATORY TECHNIQUES

The samples were dried in a gas-fired hot air drier and hand screened through 80 mesh standard nylon screens.

The minus 80 mesh portion of the dried sample was analysed for silver and copper by standard atomic absorption techniques, following digestion of the sample with boiling 10% nitric acid.

Cold extractable copper was determined after shaking 1.0 g of sample with 10 mil. of buffer solution for two minutes in a mechanical shaker. The buffer solution has a pH of 4.0, and consists of 100 grams of ammonium citrate and 100 grams of hydroxylamine hydrochloride dissolved

in 1 litre of demineralized water. The copper content of the leach solution was determined by standard atomic absorption methods.

REGIONAL GEOLOGY - after R. Wares

The Chuchi claims are located at the southern margin of the Hogem Batholith, a major structural and lithological feature of the eastern crystalline belt of B.C.

The property is located close to a syenite plug (as mapped by the G.S.C.) This intrusive is actually a composite granite/syenite plug that has been forcefully emplaced into the Hogem batholith. The term batholith is a misnomer as it actually consists of a number of composite intrusive centers ranging from quartz diorite to monzonite in character.

The host rock appears to be a unit of monzonitic affinities, generally deficient in free quartz, but its relationship to the overall character of the Hogem rocks is unknown.

RESULTS AND INTERPRETATION:

Concentration ranges for the various metals are summarized in the table below:-

	Regional Background	Local Background	Anomaly	Range	Mode
Cu	35	35-60	60	2-130	11-20
Ag	0.7	0.7-1.0	1.0	0.1-1.2	0.2
CxCu	5	5-15	15	1-45	3-4

The low-lying topography and the general location of the property with respect to the Nation Lakes system is suggestive of a considerable thickness of overburden. In the gorge of the Klawli River, approximately

half a mile to the west, cliff sections show overburden thickness in excess of 100 feet at approximately the same elevation as the Chuchi claims. This must be borne in mind when evaluating the relatively low order anomalies obtained during the survey.

Anomalous hot extractable copper values are almost all restricted to the immediate vicinity of Little Klawli Creek. There are two possible explanations for this:

(a) Erosion by Little Klawli Creek has undoubtedly led to shallower overburden conditions in the stream valley than occur over the remainder of the grid area. If widespread mineralization is present in the underlying bedrock, then its geochemical expression in the surface soil will be controlled in large measure by overburden depth. The shallower overburden expected in the stream valley would, under these conditions, lead to a concentration of anomalous values along the line of Little Klawli Creek.

(b) The vicinity of minor streams is a favourable locality for the secondary accumulation of trace metals from ground water. Such secondary accumulation could account for the observed concentration of anomalous copper values along the line of Little Klawli Creek.

Anomalous cold extractable copper values are also largely restricted to the line of Little Klawli Creek and there is a close correlation between cold and hot extractable copper anomalies.

The ratio of cold extractable to hot extractable copper provides a useful method of distinguishing secondary accumulation anomalies from those more closely related to bedrock mineralization. The anomalies

south of line 32N are interpreted as being largely of secondary accumulation origin. Anomalies located at 28N 6E, 40N 18E, and 64N 4W are also considered to result largely from secondary accumulation.

Hot extractable copper anomalies at 40N 2W to 40N 8E, 24N 22E and 64N 14E, have relatively low ratios, indicating that secondary accumulation is not a significant factor in the development of these anomalies, and suggesting a possible close relationship to bedrock mineralization. This is borne out in the case of the anomaly at 64N 14E, which is located close to the original weakly mineralized discovery.

The low order silver anomalies on the property show no correlation with anomalous copper values. Their significance is not clear.

CONCLUSIONS:

1. In view of the unfavourable overburden conditions, the survey results are moderately encouraging. The copper anomalies along the valley of Little Klawli Creek suggest that mineralization is more widespread than is indicated by the single known mineralized outcrop.
2. The most favourable areas for follow-up work are the hot extractable copper anomalies, at 40N 2W to 40N 8E, 24N 22E and 64N 14E. These areas should be examined in detail, by pitting if necessary, to determine the source of the anomalous copper and to expose any bedrock mineralization which may be present.

Vancouver, B.C.

February 10, 1971

I. L. Elliott

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of Geochemical Report on Lake Group of Mineral Claims.

I, David H. Brown

of 504 - 1112 W. Pender St., Vancouver 1, B.C.

in the Province of British Columbia, do solemnly declare that the following work was done:

17.6 miles of geochemical survey grid cut and flagged and sampled on a 200 ft spacing. The following personnel were involved:

Johnstone, L.	Geochemical operator & Party chief	Aug. 5-12/70	8 days @ $40/day	$320.00
Mahood, J.	Sampler	Aug. 5-12/70	8 days @ $35/day	$280.00
Samuelson, R.	Prospector & geochemical operator	Aug. 5-11/70	7 days @ $40/day	$280.00
Westfall, K.	Sampler	Aug. 5-12/70	8 days @ $35/day	$280.00
				$1,160.00
Laboratory charges - 462 soil samples @ $2.50/sample				1,155.00
			TOTAL:	$2,315.00

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 City of Vancouver, in the Province of British Columbia, this 31st day of March 1971, A.D.

D H Brown

G Phillips

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

SUB-MINER

FALCONBRIDGE NICKEL MINES LIMITED

1112 WEST PENDER STREET

VANCOUVER 1, B.C., CANADA

TELEPHONE: 682-6242

TELEX: 04-5938

February 10, 1971

The Chief Mining Recorder,
Omineca Mining Division,
Smithers, B.C.

Dear Sir:

Re: Statement of Qualification

This is to certify that the geochemical work done on the Chuchi claims was done under my supervision.

Messrs. Johnstone and Samuelson have been instructed by Falconbridge geochemist, Dr. R. B. Band, in geochemical survey techniques, and are fully qualified field geochemical operators.

Messrs. Mahood and Westfall were instructed in the field by Falconbridge geochemical operators, and are qualified as geochemical samplers.

The analyses and evaluation of the results were done under the direction of Dr. I. L. Elliott, Chief Geochemist, and Dr. R.B. Band, Assistant Geochemist for Falconbridge Nickel Mines Limited. Doctors Elliott and Band received their Doctorates from the Royal School of Mines, Imperial College, London, England.

Yours very truly,

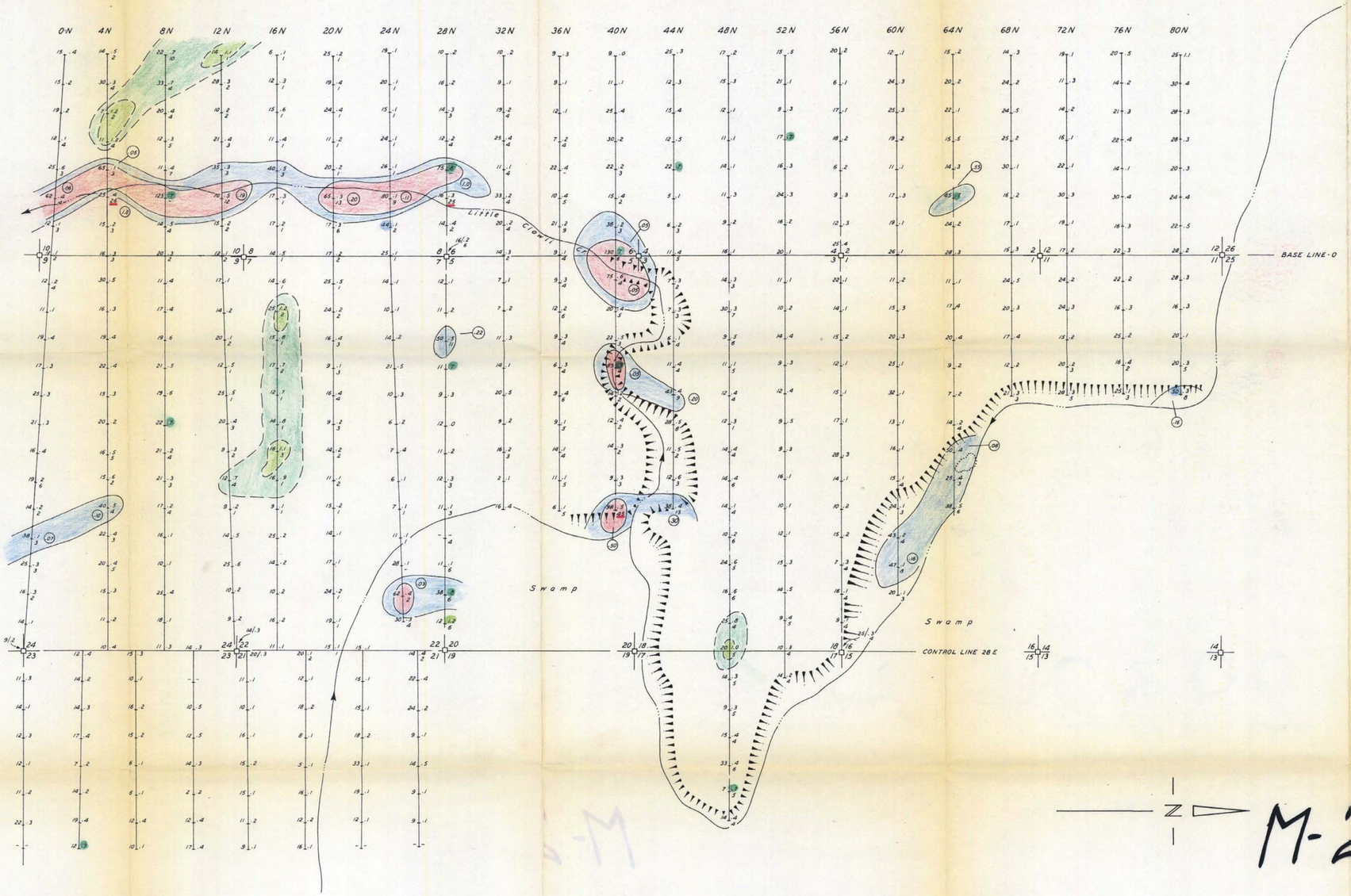
FALCONBRIDGE NICKEL MINES LIMITED

D. H. Brown

D. H. Brown, P.Eng. (B.C.)

D H Brown

MAP REF. NO.: 119-70-E-1
N.T.S.: 93-N-2



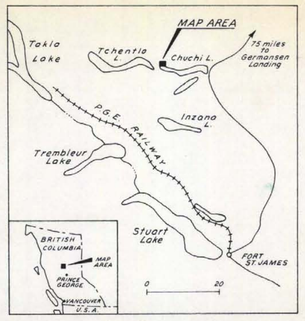
M-2

Note: All claims shown are 'Chuchi' claims, and part of the Chuchi Claim Group.

LEGEND

- Claim posts and claim numbers.
- Sample location.
- Hot HNO_3 soluble Cu
- Hot HNO_3 soluble Ag
- Cold extractable Cu
- Mineralised outcrop
- Cu(Cold) / Cu (Hot)
- 35-60 p.p.m. Cu (Hot)
- >60 p.p.m. Cu (Hot)
- 5-15 p.p.m. Cu (Cold)
- >15 p.p.m. Cu (Cold)
- 0.7-1.0 p.p.m. Ag
- >1.0 p.p.m. Ag

2932



To be included with the Geochemical Report on the Chuchi Claims by Dr. I. L. Elliott.

D.H. Brown

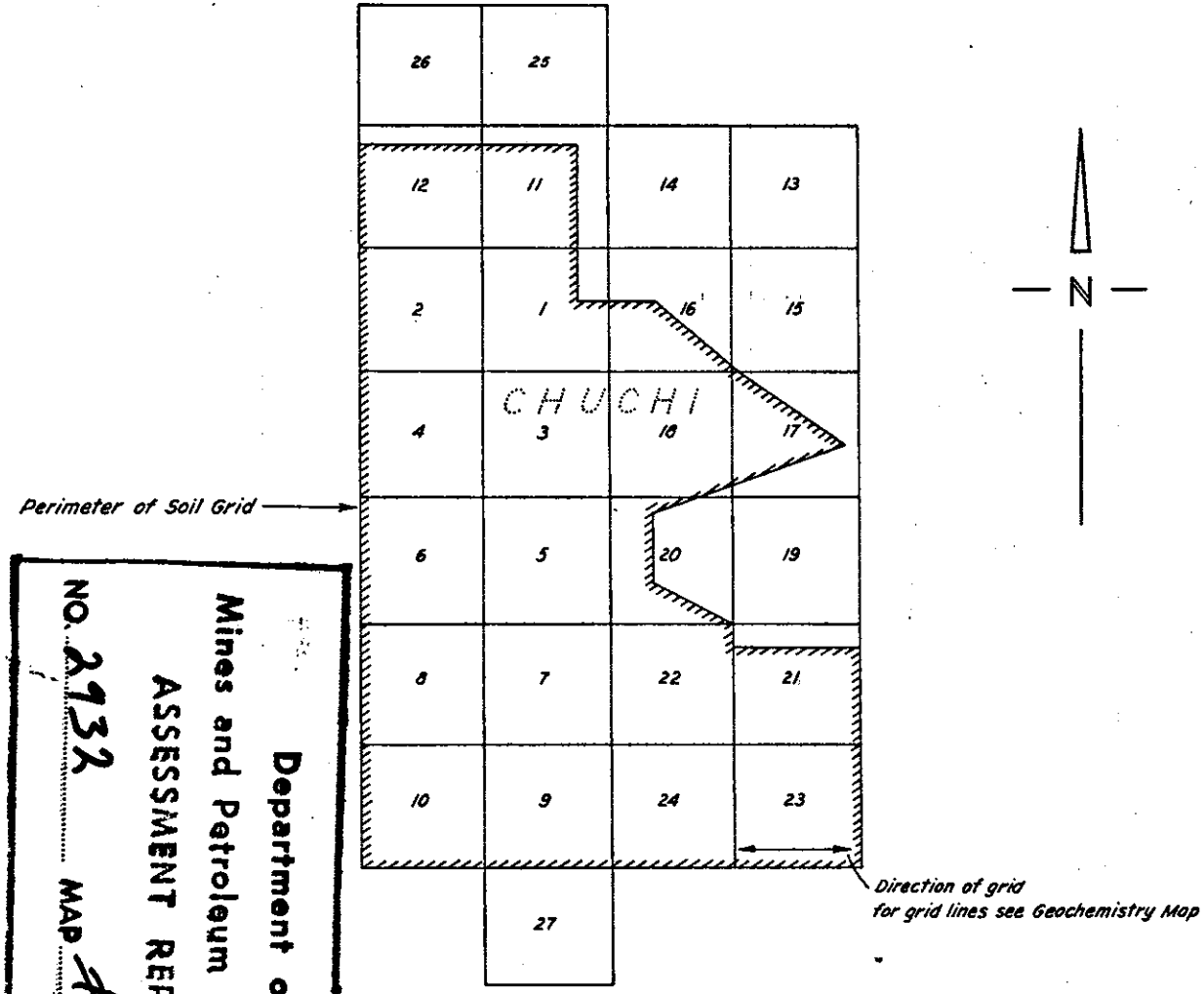
400 0 400 800 1200 1600 2000 2400 2800 3200 3600

SCALE: 1 INCH TO 400'

COMPANY . . FALCONBRIDGE NICKEL MINES LTD.
PROPERTY . . CHUCHI GROUP
LOCATION . . CHUCHI LAKE

WORKING PLACE . .
TYPE OF MAP . . Cu and Ag in Soil
BASED ON . . Base Map by L. Johnson

DATE . . Nov. 1970
DRAWN BY . . H.G.T.
DATE OF WORK . . Aug. 1970



MAP REF. No.: 119-E-2

N.T.S.: 93-N-2

RELATIONSHIP OF SOIL GRID
TO CHUCHI CLAIMS

FALCONBRIDGE NICKEL MINES LTD.

PROPERTY: CHUCHI COPPER

LOCATION: CHUCHI LAKE, B.C.

TYPE OF MAP:

BASED ON:

DATE OF WORK:

DATE: FEB. 1971

DRAWN BY: H.G.T.

SCALE: 1 INCH TO 1400' (approx.)