

GEOCHEMICAL REPORT  
ON  
TANIA GROUP MINERAL CLAIMS  
53° 29' N., 131° 58' W.  
FALCONBRIDGE NICKEL MINES LIMITED  
June 10-16 1969  
J. J. McDougall, P.Eng.

GEOCHEMICAL REPORT

ON

TANIA GROUP MINERAL CLAIMS

SKEENA M. D.

53° 20' N.

131° 58' W.

N.T.S. 105-G

Vancouver, B. C.

September, 1969

J. J. McDougall

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## GEOCHEMICAL REPORT

ON

### TANIA GROUP MINERAL CLAIMS

#### INTRODUCTION

During April and May of 1969 several geochemical survey grids were established at certain select areas on southern Graham Island in the Queen Charlotte Group. This work was a follow-up to discovery by Mr. E. Specogna and others of copper-molybdenum mineralization both as float and in place in several of the better incised streams cutting the poorly drained and largely overburdened area. Earlier silt sampling, based largely on molybdenum values, suggested a northerly trend and later soil grids were oriented accordingly. Copper-molybdenum values are plotted on map TC 2/69 enclosed.

#### LOCATION AND ACCESS

The geochemical soil survey described in this report was carried out as shown on accompanying map TC 1/69. The following mineral claims were involved:

MINO #30, 31, 38, 39, 40, 41, 53, 54, 55, 56, 59, 60.

These claims are located between Miller (Chinukundi) Creek and the Tlell River. They are approximately 6 miles north of Skidegate Mission on southeastern Graham Island and approximately 2 - 3 miles west of a paved highway connecting Skidegate Mission with Port Clements. Elevations range from 200 to 600 feet. The property is accessible by constructed trail but because of the thick and swampy nature of much of the ground a helicopter was utilized to effect efficiency.

### METHOD OF SURVEY

A grid 3700 feet long North-South and 4400 feet wide East-West was laid out with chain and compass and soil samples totaling 720 collected with grub hoes at 100 foot intervals along 200 foot spaced East-West lines.

All samples were placed in water resistant paper packets on which the following information was marked: line and sample number, date, depth, horizon, colour and moisture content. The samples were shipped to the Falconbridge Laboratory in Vancouver for analysis.

### 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 analyzed for copper and molybdenum by standard geochemical methods.

The copper analyses were done by standard Atomic Absorption techniques. Molybdenum was determined by fusing 250 m.g. of sample with alkaline flux to render the molybdenum soluble. The fusion was leached with demineralized water and an aliquot of the leach liquor treated with 2.5 per cent solution of hydroxylamine hydrochloride in hydrochloric acid and one per cent zinc dithiol solution. After shaking to develop the coloured molybdenum complex, the samples were compared with previously prepared standards to obtain the molybdenum concentration.

### GEOLOGY

Geologically the area under discussion, as described by Brown (Bulletin 54, B.C. Dept. of Mines) consists of a several mile long North-South oriented post-tectonic (Tertiary?) granodiorite to diorite pluton

which is in contact to the west and south with sediments and volcanics of the Yakoun (Jurassic) formation. Strong north to northwest trending faults are common and have resulted in wedges of Yakoun occurring well within the southern part of the intrusive. A strong regional fault near the contact with Tertiary sediments and volcanics bounds the pluton to the north and east. Mineralization consisting of chalcopyrite, sphalerite, molybdenite, and minor galena is found both within unfaulted wedges of sheared Yakoun and within the intrusive where north-south fault zones are favoured.

INTERPRETATION AND CONCLUSION

Concentration Levels in Soils:

<u>Grid</u>			<u>Regional</u> <u>Bkd.</u>	<u>Local</u> <u>Bkd.</u>	<u>Anom.</u>	<u>Range</u>	<u>Mode</u>
Tlell	p.p.m.	Cu.	< 20	21-25	> 25	0-55	5-10

The Tlell grid extends on either side of the Tlell River in boggy terrain of low relief. Overburden is believed to be quite thick. Only two molybdenum values were recorded and these occur very close to the only outcrop observed. Copper shows a close relationship to marshy ground and seepage areas adjacent to the rivers. None of the copper values justifies any further investigation.

J. J. McDougall

Vancouver, B.C.  
September, 1969

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of

GEOCHEMICAL REPORT ON

TANIA GROUP MINERAL CLAIMS

I, J. J. McDougall

of Vancouver, B. C.

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

Bacon, D.	- Sampler June 19 - June 22 4 days @ \$ 22.50 /day.....	\$ 90.00
McMullen, J.	- Party Chief June 19 - June 22 4 days @ \$ 27.50 /day.....	110.00
Preece, H.	- Sampler June 19 - June 22 4 days @ \$ 20.00 /day.....	80.00
Rotzien, J.L.	- Sampler June 19 - June 22 4 days @ \$ 22.50 /day .....	90.00
Seeman, D.	- Sampler June 19 - June 22 4 days @ \$ 20.00 /day .....	80.00
Samuelson, R.	- Prospector June 17 - June 20 4 days @ \$ 27.50 /day .....	110.00
Skidemore, D.	- Sampler June 19 - June 22 4 days @ \$ 22.50 /day .....	90.00
Thompson, G.	- Sampler June 18 - June 22 5 days @ \$ 20.00 /day .....	100.00
Zastavnikovich, S.	- Party Chief June 19 - June 22 4 days @ \$ 27.50 .....	110.00
Helgesen, D.H.	- Field Geologist June 17 - June 22 6 days @ \$ 30.00 /day .....	180.00
	Sub Total	\$1,040.00
Laboratory Charges:	- 720 samples @ \$ 3.00 /sample .....	2,160.00
	Total	3,200.00

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 day of October, 1969, A.D.

# FALCONBRIDGE NICKEL MINES LIMITED

1112 WEST PENDER STREET

VANCOUVER 1, B. C., CANADA

TELEPHONE: 682-6242

TELEX: 04-5938

## STATEMENT OF QUALIFICATIONS

The Mining Recorder,  
Vancouver, B. C.

Dear Sir:

This is to certify that the geochemical work on the Tania Group Mineral Claims was done under my supervision.

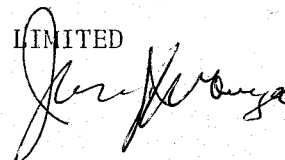
The geochemical field work was performed under the guidance of Mr. D. H. Helgesen of Vancouver, B. C. Mr. Helgesen attended Victoria College and University of British Columbia 1955-1959. From 1961-1964 he was employed as field assistant and geological assistant in Zambia, since 1964 he has been employed by Falconbridge as field geologist in mineral exploration in British Columbia.

The analyses and evaluation of the results were done under the direction of Dr. Ivor Elliott, Chief Geochemist for Falconbridge Nickel Mines Limited. Dr. Elliott received his Doctorate from the Royal School of Mines, Imperial College, London, England. He has been in charge of geochemical surveys in Africa for three years and the Dominican Republic for one year.

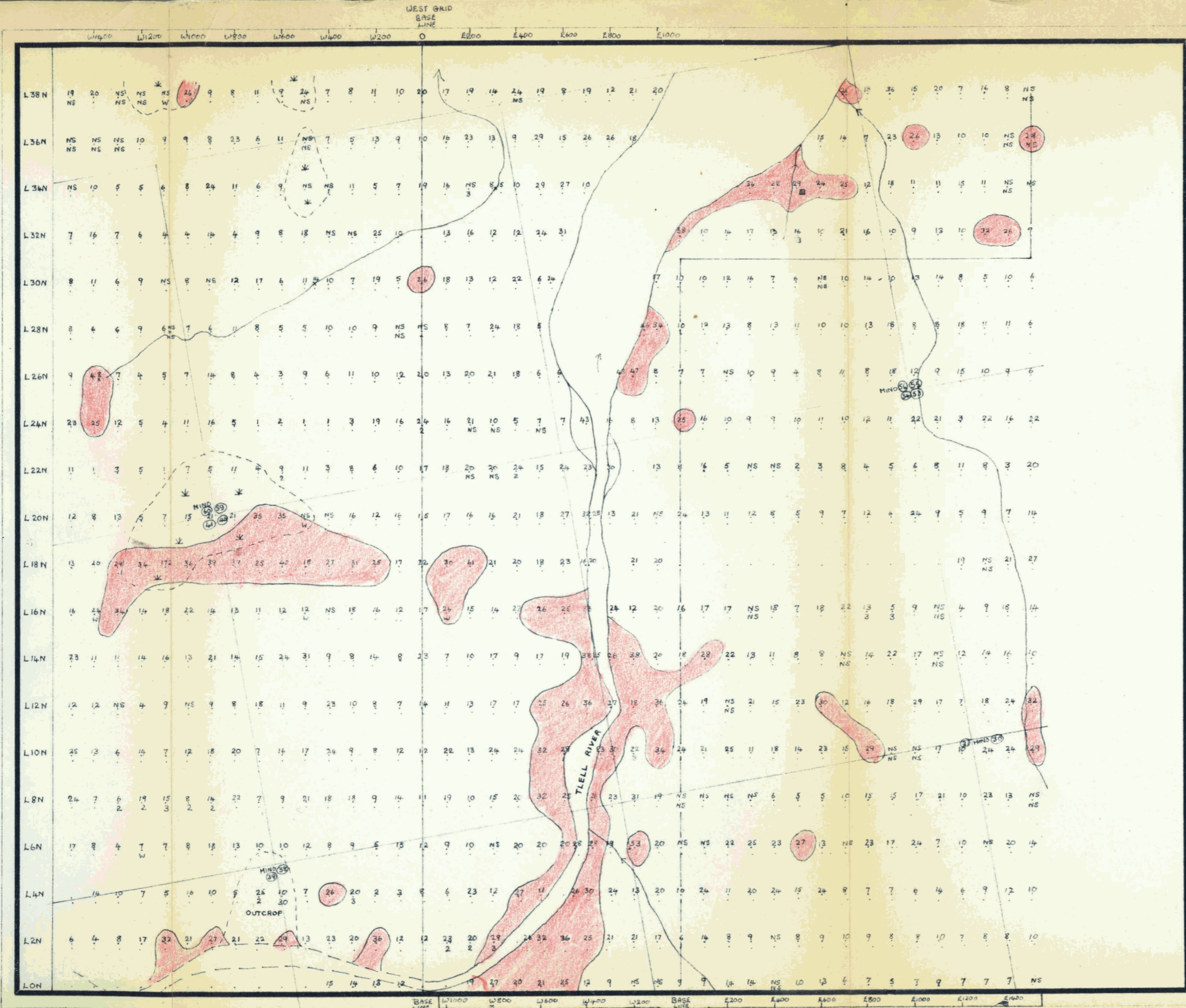
Yours very truly,

FALCONBRIDGE NICKEL MINES LIMITED

J. J. McDougall, P. Eng.





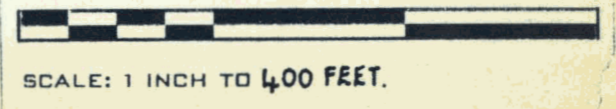


MAP REF. No.: TC2/69  
N.T.S.: 103-F-8

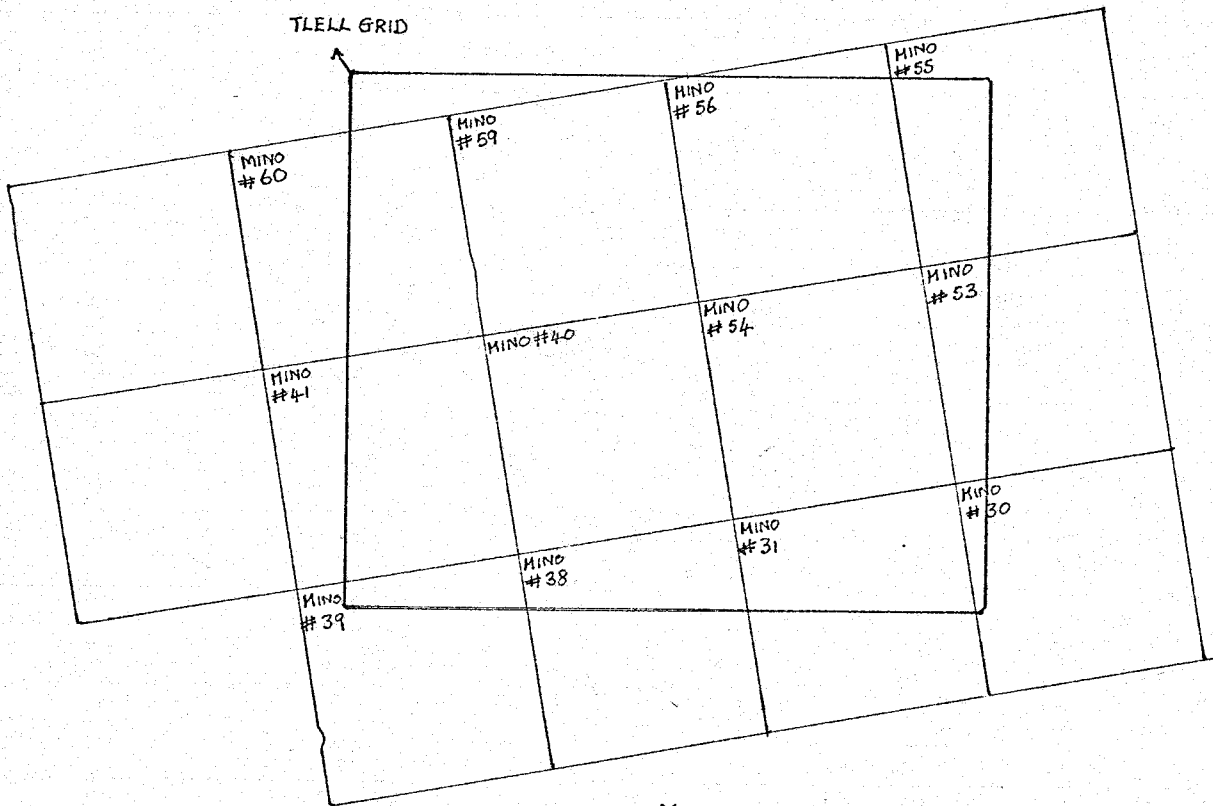
- Sample Position
- 26 Copper value in p.p.m.
- 2 Molybdenum value > 2 p.p.m.
- NS Molybdenum value < 2 p.p.m.
- NS No sample available
- Swamp
- Creeks
- MINO (53, 54, 55, 56) Approximate location of Mineral Claim.
- Cu > 25 p.p.m.



FALCONBRIDGE NICKEL MINES LTD.  
PROPERTY: TLELL GRID (TANIA GRID)  
LOCATION: GRAHAM ISLAND, Q.C.  
TYPE OF MAP: GEOCHEMICAL ASSAY RESULTS.  
BASED ON:  
DATE OF WORK: MAY, 1969.  
DATE: SEPT, 1969  
DRAWN BY: C.L.S.



TC 1/69  
TANIA GROUP



SCALE: 1" =  $\frac{1}{4}$  MILE

Sketch map showing claims of the Tania Group which cover the Tlell Grid