

1810

GEOLOGICAL REPORT

ON

OLD TOM, CRATER, WEBSTER, DOMINION,
LAVA, MARMOT, DOME CLAIMS

1968 - 1969

54°32' N., 127°06' W.

N.T.S. 93-L

Vancouver, B.C.
December 11, 1968

D. H. Brown

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MAPS

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GEOLOGICAL MAP - TELKWA RANGE.....	In pocket
GEOLOGICAL MAP - LORING CREEK.....	In pocket

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1810 MAP.....

FALCONBRIDGE NICKEL
MINES LTD.

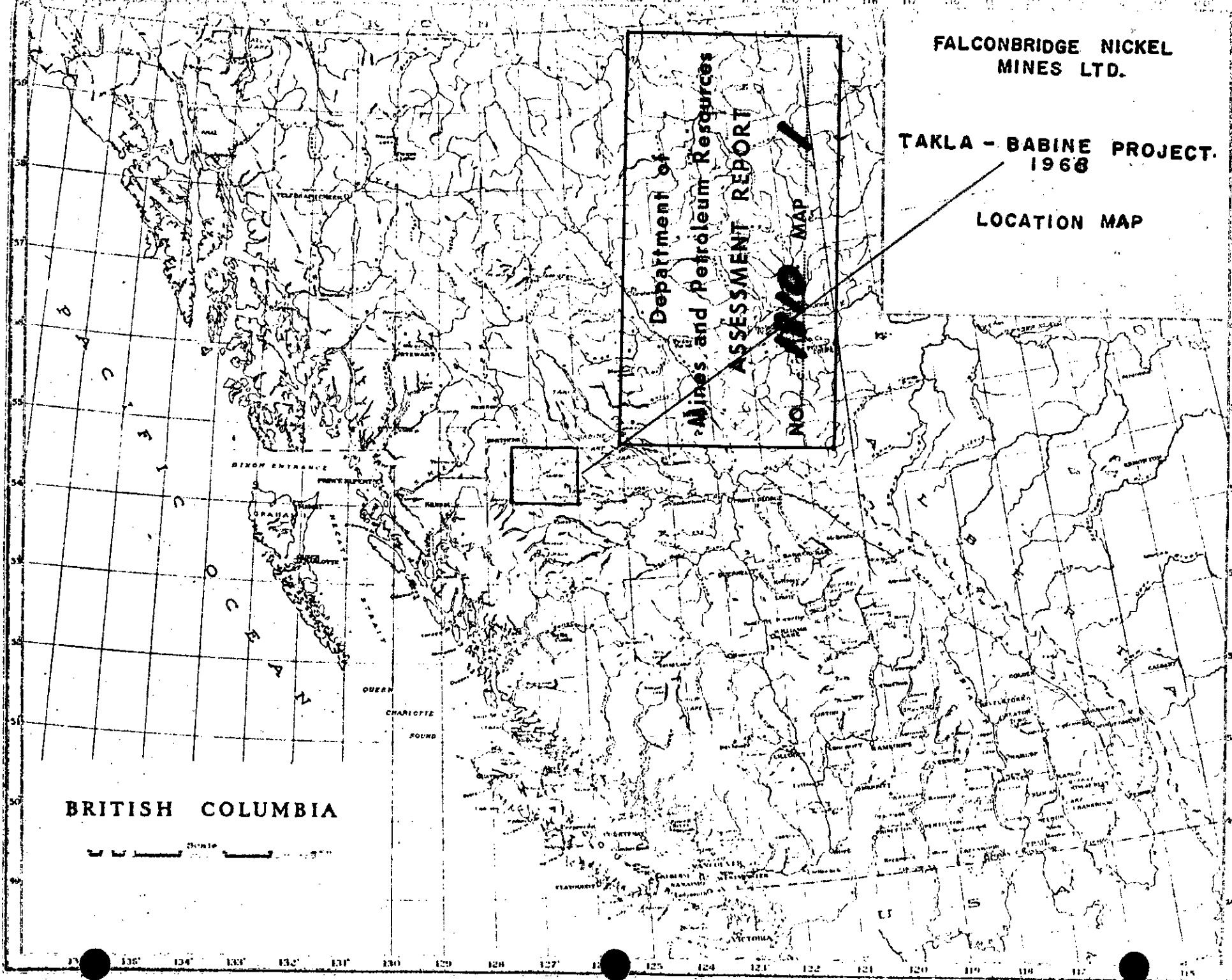
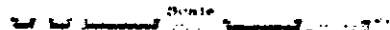
TAKLA - BABINE PROJECT.
1968

LOCATION MAP

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 1110 MAP 1

BRITISH COLUMBIA



GEOLOGICAL REPORT

ON

OLD TOM, CRATER, WEBSTER, DOMINION,
LAVA, MARMOT, DOME CLAIMS

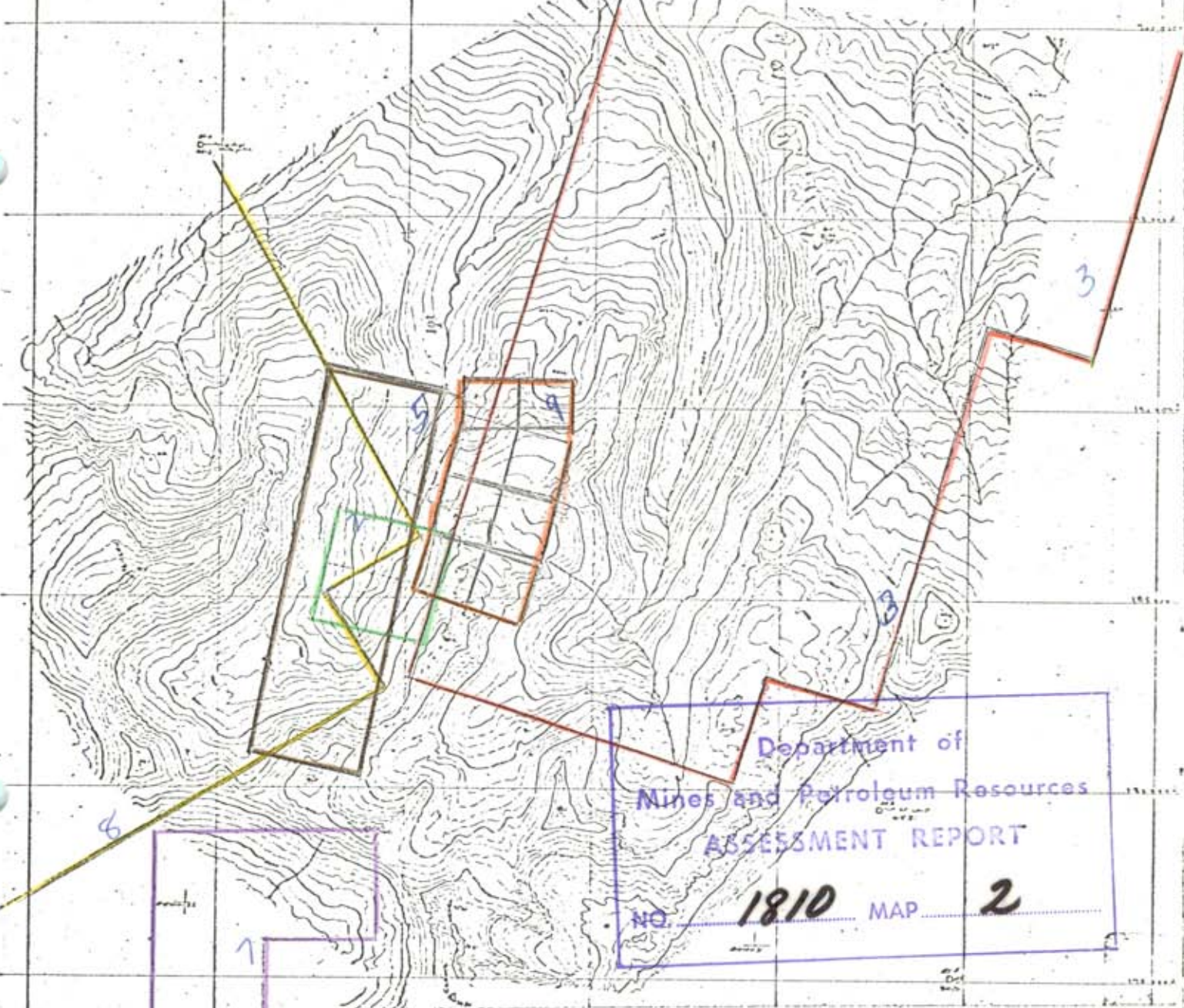
1968 - 69

LOCATION AND ACCESS

The Old Tom, Lava, Crater, Webster and Marmot claims are located approximately at latitude $54^{\circ}31'$ N. and longitude $127^{\circ}07'$ W. They can be reached from the village of Telkwa which is on the Bulkley River 32 miles north of Houston by the Telkwa Collieries and Hunter Basin roads and a six-mile horse trail which leaves the Hunter Basin road at a point 4.5 miles from the Colliery. However, the claims which are 12 miles from Telkwa are more readily reached by helicopter from Smithers. The Dome and Dominion claims which are located on the south side of the Telkwa Range in the Deny's Creek basin are only reached readily by helicopter.

METHOD OF SURVEY

A topographic map on a scale of one inch equals 1000 feet with 100 foot contours together with aerial photo blowups were produced from Federal Government aerial photos by Lockwood Survey Corp. Ltd. The 1000 foot topographic maps and corresponding aerial photos were then blown up to a scale of one inch equals 500 feet. A triangulation survey was carried out on the ground using government geodetic survey points Caesar and Blitzen on peaks within the map area and triangulation points were established at all strategic points within the map area.



FALCONBRIDGE NICKEL MINES LTD

Map Based on Claims Location

Property of Falconbridge

Claims under Option

3 Lava Group

1 Dominion Group

6 Dome "

2 Webster "

5 Marmot "

39 Crater "

4 Old Tom "

8 Property of Canadian & American Exp.

7 Property of Noranda

Scale 1" = 4000'

During a fourteen week period from June 1st to September 5th two geologists with two assistants carried out geological mapping traverses controlled by triangulation and stadia surveys using 500 ft. to one inch topographic maps and aerial photographs. Calibrated altimeters were used to check elevations. Field notes were transferred daily to a master plan which has been re-drafted and is shown as map L-G.1-68. A section of Loring Creek was mapped on a scale of 1" - 100'. The resulting map has been reproduced on a scale of 1" - 200' and is appended as map L-G.2-68.

GEOLOGY

The Telkwa Range is dominantly underlain by volcanic rocks of the Hazelton Group which consist of an apparently conformable succession of interbedded sedimentary and volcanic rocks ranging in age from pre-Middle Jurassic to Lower Cretaceous. The Hazelton Group is overlain by sediments of the Bowser formation of Lower Cretaceous age which outcrop in low parts of the valleys and in infolds in the Hazelton volcanics.

Intruding the Hazelton rocks in the central part of the Telkwa Range is a relatively large granodiorite or quartz monzonitic stock. Lesser diorite stocks and sills and dykes of granodiorite, felsite and rhyolite quartz porphyry cut the Hazelton rocks in diverse directions.

Structure is to a large extent controlled by intrusion of the granodiorite plug and bedding generally dips outward from the granodiorite. Block faults of variable displacement are common and in Loring Creek area most have their north side displaced downward. Vertical movement has been more important than horizontal movement and most of the faults are hinged. Occasional local flat-lying similar folds are perhaps a result of low angle faulting and bedding plane slippage.

Alteration and mineralization associated with the central granodiorite stock are related to a hornfelsed zone at the periphery of the stock and with porphyritic phases within the stock. The alteration within the hornfelsed zone is chiefly due to pyrite and magnetite mineralization. Within the porphyritic phases of the granodiorite, alteration is related to fracture controlled quartz stockworks bearing moderate pyrite and minor chalcopyrite and molybdenite.

Away from the central stock where small diorite stocks and sills intrude the volcanics, the mineralization is pyrite, chalcopyrite and minor bornite associated with epidote and minor chlorite. Within the volcanic series there are two types of mineral occurrence related to volcanic tuffs and pyroclastics. One is a pyrite - chalcopyrite - tetrahedrite assemblage associated with strong quartz and epidote alteration within bedded tuffs. The other is a bornite - minor chalcopyrite - specularite assemblage associated with scarnified pyroclastic beds and exhibiting strong epidote - garnet alteration.

CONCLUSIONS

Although no mineralization of economic significance has been uncovered to date, all types of occurrence show promise of further development. The solution to the problem seems to lie in more detailed geological mapping and solution of some of the complex structural situations created chiefly by faulting.

D. H. Brown

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

Vancouver, B.C.

December 11, 1968

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 To Wit:

In the Matter of

GEOLOGICAL REPORT ON
 OLD TOM, CRATER, WEBSTER,
 DOMINION, LAVA, MARMOT,
 DOME CLAIMS.

I, David H. Brown

of Vancouver, B.C.

in the Province of British Columbia, do solemnly declare that the following work was performed under my direction at a cost as outlined.

Geologists

D. H. Brown	June 1 to July 1	- 31 days @ \$45.00	\$ 1,395.00
	Aug. 29 to Sept. 23	- 31 days @ \$45.00	1,395.00
R. H. McMillan	June 1 to Sept. 3	- 95 days @ \$35.00	3,325.00
D. Kasian	June 1 to Sept. 5	- 97 days @ \$28.50	2,764.50

Geological Assistants

R. Samuelson	June 1 to Sept. 3	- 95 days @ \$30.00	2,850.00
K. Christiensen	June 1 to June 23	- 23 days @ \$30.00	690.00
D. Hamilton	June 1 to June 21	- 21 days @ \$28.50	598.50
J. Gillan	July 12 to Sept. 4	- 54 days @ \$28.50	1,539.00
G. Thomassen	May 26 to July 4	- 40 days @ \$29.00	1,160.00
G. Angus	June 5 to July 4	- 30 days @ \$26.25	787.50
			<u>16,504.50</u>

Engineering Services

Topographic Photo-mapping - Scale 1" = 1000'	- 1,347.58	
Enlargements	- 48.18	1,395.76

(See invoices following)

Monies expended for geological mapping over Telkwa Range mapping area and to be applied to the following claims at the rates specified. \$17,900.26

2 years each to be applied to:

<u>Loring Gp. 1:</u>		
Old Tom 1, 2	400.00	
Crater A.1 - H.8 incl.	1,600.00	
Marmot 1 - 14 incl.	<u>2,800.00</u>	4,800.00

3 years each to be applied to:

Webster 1 - 4 incl. claims		1,200.00
----------------------------	--	----------

2 years each to be applied to:

Marmot 15 and 16 claims		400.00
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\$6,400.00

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 March, A.D.

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

LOCKWOOD SURVEY CORPORATION LTD.

WEST COAST DIVISION

1409 West Pender Street • Vancouver 5, B. C., Canada • 683-6501 • Cables: Canlock

Falconbridge Nickel Mines Ltd.,
#500 - 1112 West Pender Street,
Vancouver, B.C.

INVOICE No 4750
DATE 30th April 1968
YOUR ORDER No
JOB No 68-57
TERMS: NET CASH
SHIPPED VIA

Authority: Mr. D. Brown.

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
	TO:		
	Completion, Engineering Services:		
	1) Topographic mapping at a scale of 1-inch equals 1000 feet with 100 foot contour intervals generally and 50 foot contour intervals where significant of three areas South of Smithers, B.C. 26 sq. miles @ \$38.50 per sq. mile	\$1,001.00	
	2) Enlarge mapped areas from 1000 ft/in to 500 feet equals 1-inch and supply film positives of each together with 3 ozalid copies of each	211.50	
	3) 3 double weight matte photo enlargements at 1-inch equals 1000 feet	<u>73.00</u>	
		\$1,285.50	
	1.2% Federal Sales Tax on \$1001.00	12.01	
	12% Federal Sales Tax on \$284.50	34.14	
	5% Provincial Sales Tax on \$318.64	<u>15.93</u>	
			<u>\$1,347.58</u>

PAID

P.O. No.	DATE	PAID	T.E.W.	F.S.T.	P.S.T.	FOR
D	6					

INTEREST MAY BE CHARGED ON OVERDUE ACCOUNTS

D.H. Brown PR 119 C.

INVOICE NO.	AMOUNT	CODING	O.K. TO PAY
119C3	1347.58		
TOTAL	1347.58		

RECEIVED BY

DATE

D.H. Brown
Apr. 5/68



LOCKWOOD SURVEY CORPORATION LTD.

WEST COAST DIVISION

1409 West Pender Street • Vancouver 5, B. C., Canada • 683-6501 • Cables: Canlock

No. 2212

Falconbridge Nickel Mines Limited,
500 - 1112 West Pender Street,
Vancouver, B. C.

DATE APR - 5 1968

YOUR ORDER No.

Attention: Mr. D. Brown.

Our JOB No. 68-57 and 68-57 Add 1

SHIP VIA Deliver

DFK/sbm

QUANTITY

DESCRIPTION

- One ✓ Pencil manuscript at 1000 feet equals 1-inch of areas 1 to 3 inclusive.
- Three ✓ Ozalid prints of the above.
- Six ✓ Cronaflex positives of areas 1 to 3 inclusive enlarged to 500 feet equals 1-inch.
- Three ✓ Ozalid copies of each of the above.
- Three ✓ Photo enlargements at approximate scale of 1000 feet equals 1-inch.
- One ✓ Set of photographs (returned):-

A14815: 124 to 128
 A14281: 19 to 23
 A15000: 30 to 34

PR 119

LOCKWOOD SURVEY CORPORATION LTD

RECEIVED BY

D. H. Brown

DATE

Apr. 5/68

LOCKWOOD SURVEY CORPORATION LTD.

WEST COAST DIVISION

1409 West Pender Street • Vancouver 5, B. C., Canada • 683-6501 • Cables Canlock

Falconbridge Nickel Mines Limited,
P.O. Box 38,
Telkwa, B.C.

INVOICE No 7747-C
DATE June 17, 1968
YOUR ORDER No Verbal
JOB No C-4033
TERMS: NET CASH
SHIPPED VIA
P/S No. 9944-C

Attention: Mr. Dave Brown

P.O. No.	EXT.	QUANTITY	TERMS	F.S.T.	P.S.T.	FOI
	<i>db</i>					

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
Two	Double weight matte prints of part of A14281:21 Approximate scale 1000 feet equals 1 inch.		
	Lump Sum	\$39.70	
	12% Federal Sales Tax	4.76	
		\$44.46	
	5% Provincial Sales Tax	2.22	
		\$46.68	
	Bus X	1.50	
			\$48.18

DA Brown
119

PAID

SUPPLIER NO.			
INVOICE NO.			
119B3	4818	CODING	O.K. TO PAY
		<i>B/M</i>	
		POSTED	
		<i>(d)</i>	
TOTAL	4818		

RECEIVED BY *DA Brown*
DATE *June 16/68*

FALCONBRIDGE NICKEL MINES LIMITED

1112 WEST PENDER STREET

VANCOUVER 1, B. C., CANADA

TELEPHONE: 682-6242

TELEX: 04-5938

December 11, 1968

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

Dear Sir:

This is to certify that the geological work done on the Lava Group, Webster Group and Marmot Group claims was done under my supervision.

Messrs. R. H. McMillan and D. Kasian are qualified geologists and Messrs. Samuelson, Christensen, Hamilton, Gillan, Thomassen and Angus are competent geological assistants capable of carrying out the instructions of their supervisor.

The compilation of data and interpretation of the results was done by Mr. R. H. McMillan and the writer.

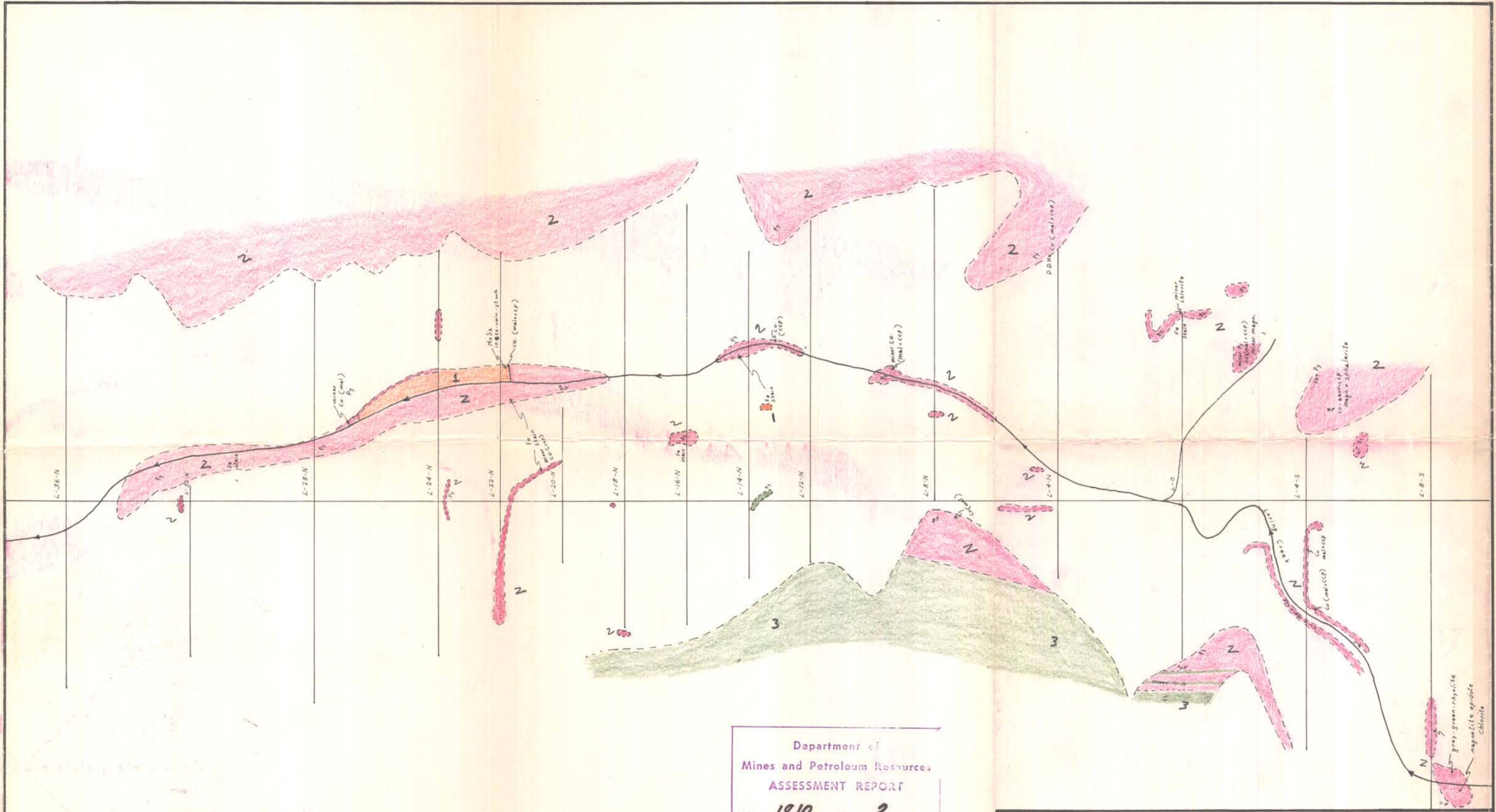
Yours very truly,

FALCONBRIDGE NICKEL MINES LIMITED



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

DHB:fm



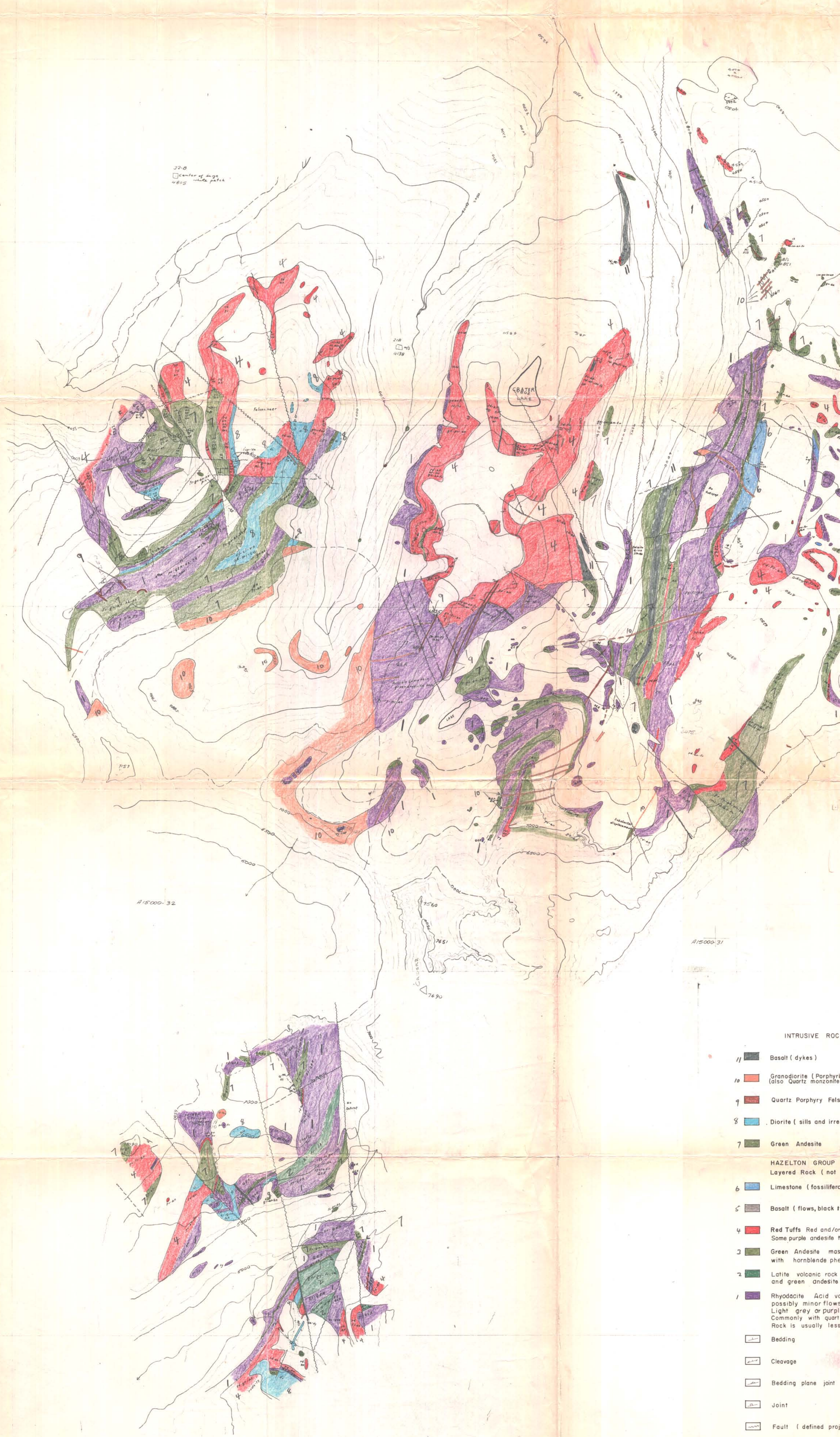
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1810 MAP 3

FALCONBRIDGE NICKEL MINES L.T.D.
Loring Creek Telkwa B.C.
Map Based on Geology
Scale 1" = 200'

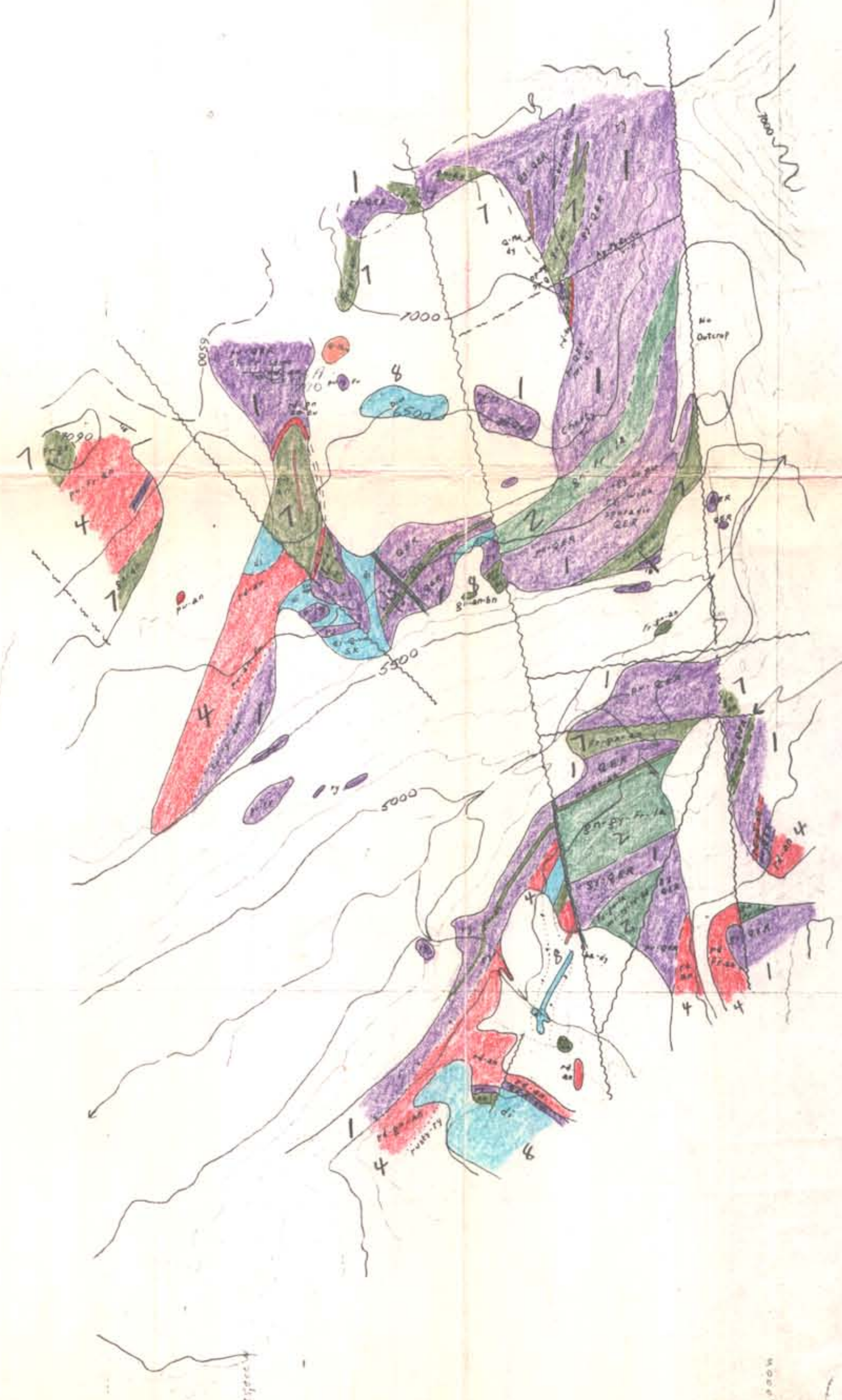
3	GREEN ANDESITE
2	RHYOLITE
1	FELSITE

1810
MAP L-G-2-68 (1)

To accompany report by D.H. Brown on OLD TOM CRATER, WEBSTER, DOMINION, KANA, MARMOT CLAIMS, DATED DECEMBER



- INTRUSIVE ROCK**
- 11 Basalt (dykes)
 - 10 Granodiorite (Porphyry also Quartz monzonite)
 - 9 Quartz Porphyry Fels
 - 8 Diorite (sills and irr
 - 7 Green Andesite
- HAZELTON GROUP Layered Rock (not**
- 6 Limestone (fossilifer
 - 5 Basalt (flows, black
 - 4 Red Tuffs Red and/or Some purple andesite
 - 3 Green Andesite mas with hornblende phe
 - 2 Latite volcanic rock and green andesite
 - 1 Rhyolite Acid vo possibly minor flows Light grey or purpl Commonly with quart Rock is usually less
- Bedding
 Cleavage
 Bedding plane joint
 Joint
 Fault (defined prop



LEGEND

INTRUSIVE ROCK (in order)	ABBREVIATIONS
11 Basalt (dykes)	an - andesite
10 Granodiorite (Porphyritic Quartz Monzonite) (dykes and plugs) (also Quartz monzonite dykes of Dominion basin area)	ar - argillite
9 Quartz Porphyry Felsite (dykes and sills)	am - agglomerate
8 Diorite (sills and irregular crosscutting intrusives some may be meta diorite)	ba - basalt
7 Green Andesite	bd - bedded
	br - brown
	bx - breccia
	ib - interbedded
	cc - coarse
	cl - chlorite
	dk - dark
	ds - disseminated
	dy - dyke
	di - diorite
	e - eye
	ep - epidote
	fn - fine
	fl - feldspar
	fr - fragmental
	gr - grain
	gn - green
	gy - grey
	hb - hornblende
	hy - heavy
	k - potassium
	la - laite
	lm - limy
	ls - limestone
	md - medium
	mg - magnetite
	mi - minor
	mo - moly
	ms - massive
	pu - purple
	py - pyrite
	pi - pink
	ph - phenos
	q - quartz
	ry - rhyolite
	rd - red
	sk - stockwork
	sp - specular
	tu - tuff
	vn - vein
	qer - quartz eye rhyolite

HAZELTON GROUP
 Layered Rock (not in lithologic order)

6 Limestone (fossiliferous)	
5 Basalt (flows, black to dark green massive rock commonly limy)	
4 Red Tuffs Red and/or Green Fragmentals (agglomerates) and Red Argillite Some purple andesite tuffs minor clastic sediments	
3 Green Andesite massive fine grained flow rock some vesicular and/or with hornblende phenocrysts	
2 Latite volcanic rock intermediate in Composition between rhyodacite and green andesite	
1 Rhyodacite Acid volcanic rock mainly tuffaceous in origin possibly minor flows. Fine grained to aphanitic groundmass. Light grey or purple less commonly black or red in colour. Commonly with quartz eyes and/or white or pink feldspar phenocrysts. Rock is usually less commonly thinly bedded or fragmental	

	Bedding
	Cleavage
	Bedding plane joint
	Joint
	Fault (defined projected or assumed)

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 1810 MAP 4

FALCONBRIDGE NICKEL MINES LTD
 GEOLOGICAL MAP
 of part of Telkwa Range
 Scale 1:50,000
 MAP L-G-1/68

To accompany report by D.H. Brown on gold tenement, Carleton Place, Ontario, 1968. Includes map, report, and mineral claims data sheets.