

GEOPHYSICAL
REPORT

ON

LAVA #21-30, #45-62,
#83-98 CLAIMS

54°00' - 54°40' N. -
126°00' - 127°20' W.

July 2 - ~~Aug~~ 27, 1968

FALCONBRIDGE NICKEL
MINES LIMITED

Omineca
MINING DIVISION

D. H. Brown, P. Eng.

Van., B.C.
Dec. 17/68



1880

GEOPHYSICAL REPORT

ON

LAVA AND WEBSTER CLAIMS

1968

N.T.S. 93-L

OMINECA MINING DIVISION

D. H. Brown

Vancouver, B.C.
December 15, 1968

C O N T E N T S

	<u>Page</u>
INTRODUCTION.....	1
LOCATION AND ACCESS.....	1
METHOD OF SURVEY.....	1
GEOPHYSICAL INTERPRETATION.....	3
CONCLUSIONS AND RECOMMENDATIONS.....	4
STATEMENT OF WORK DONE.....	5
STATEMENT OF QUALIFICATIONS.....	6

ILLUSTRATIONS:

Table Mtn. - Magnetometer	Map L-GP.1-68.....	Pocket
Loring Creek - Magnetometer	Map L-GP.2-68.....	Pocket
Table Mtn. - S.P. Survey	Map L-GP.3-68.....	Pocket

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 1880	MAP

GEOPHYSICAL SURVEY ON LAVA GROUP CLAIMS

1968

INTRODUCTION

Between June 30 and August 27, 1968, work necessary to complete ground magnetic and self-potential geophysical surveys was carried out on the Lava Group of claims in the eastern portion of the Telkwa Range. The magnetometer survey was suggested by apparently anomalous conditions experienced in using compasses while running claim lines late in 1967. The same area was surveyed using self-potential methods. The results of the two surveys are illustrated on the accompanying maps.

LOCATION AND ACCESS

The geophysical surveys were carried out on Lava Group claims Nos. 45 to 62 (incl.), Nos. 83 to 98 (incl.) and Nos. 21 to 30 (incl.) which are located adjacent to and east of Loring Creek which is the most easterly tributary of Cabinet Creek in the eastern Telkwa Range. The centre of the claims lies approximately four miles south of the confluence of Cabinet and Goathorn Creeks. The claims are partly below and partly above timberline and range from 4000 feet to 6000 feet in elevation.

METHOD OF SURVEY

On Table Mountain a 9800-foot north-south control line was cut and surveyed. Then slightly more than twenty miles of base lines were cut, chained and picketed. The base lines were run in an east-west direction at 400-foot intervals along the control line and varied from 3500 feet to 6000 feet in length.

In Loring Creek a 4800-foot north-south control line was cut and surveyed and 16,800 feet of east-west base lines were cut, chained and picketed. The base lines were located at 400-foot intervals along the control line and varied from 600 feet to 1900 feet in length.

The following geophysical surveys were carried out on the Table Mountain and Loring Creek grids. The surveys were carried out by two competent geophysical operators.

(1) Magnetometer readings using a tripod-mounted Askania torsion magnetometer Gfz were taken at 50-foot centres along all lines.

(a) On the Table Mountain grid approximately 2120 readings were taken, corrected as required and plotted as per Map L-GP.1-68.

(b) On the Loring Creek grid approximately 336 readings were taken, corrected as required and plotted as per Map L-GP.2-68.

(2) Using standard self-potential equipment the same stations used for the magnetometer work were occupied. The base pot and measuring potentiometer were set up at a station on the base line and a moving pot used to measure the potential at the remote stations. Pocket 1-watt radios were used for communication.

On the Table Mountain, grid readings were taken at 50-foot stations, corrected as required and plotted as per Map L-GP.3-68.

The theory of the self-potential method has been covered many times and need not be repeated here. The equipment employing a movable field electrode and variable potentiometer was manufactured to our specification by Engineering Geophysics of Toronto.

GEOPHYSICAL INTERPRETATION

(a) Magnetic:

Table Mountain Grid

The range of magnetic readings over the Table Mtn. grid is not large and appears to be chiefly due to topographic effects. Magnetic lows correspond with water courses and magnetic highs with valley rims or sudden changes in relief. The only anomalies that are not explained by topography are on lines L-76 and L-80 at their west ends and on lines L-66 and L-82 on their eastern extremities. Those on the western extremities do correspond with geochemical highs and with sulphide mineralization observed on the ground. Those on the east end of L-66 to L-82 are most anomalous and will have to be investigated further on the ground.

Loring Creek Grid

The magnetic highs over the Loring Creek grid correspond to a local flexure in the andesite-rhyolite contact. Rock exposure in this area is poor but the few outcrops mapped do show sulphide mineralization. Relatively strong copper-silver mineralization was mapped in well exposed outcrop near this contact approximately 2000 feet south along Loring Cr.

(b) Self-Potential:

Table Mountain

The self-potential survey carried out over the Table Mtn. grid showed little correspondence with the magnetometer survey results except at the western extremities of lines L-62 to L-80 where values over 50 millivolts correspond with a magnetic high and sulphide mineralization mapped on the ground. Two small S.P. anomalies near the eastern extremities of lines L-80 and L-84 also correspond to magnetic highs.

CONCLUSIONS AND RECOMMENDATIONS

Since there is some correspondence between the magnetic and self-potential results on Table Mtn. and since these anomalies correspond closely with geological and geochemical indications, further exploration of these areas should be carried out during the 1969 field season.

In the Loring Creek grid area, the coincidence of a magnetic high with a geologically favourable structure suggests that further detailed exploration should be carried out in this area.

The value of these two geophysical methods in this environment appears to be practical.



D. H. Brown

Vancouver, B.C.
December 15, 1968

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

In the Matter of GEOPHYSICAL REPORT ON LORING GROUP #1,
 LORING GROUP #2 AND WEBSTER GROUP.

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.

Geophysical Operators

A. Smith	July 23/68 - August 9/68	-	25 days @ \$25.00	\$ 625.00
	August 21/68 - August 27/68	-		
R. McPhee	July 23/68 - August 9/68	-	25 days @ \$32.50	712.50
	August 21/68 - August 27/68	-		

Geophysical Assistants

G. Thomassen	July 5/68 - August 18/68	-	45 days @ \$29.00	1,305.00
G. Angus	July 5/68 - July 10/68	-	5 days @ \$26.25	131.25
D. Yank	July 2/68 - July 12/68	-	11 days @ \$26.25	288.75
H. Cote	June 20/68 - July 12/68	-	12 days @ \$28.50	342.00
D. Alex	June 30/68 - July 5/68	-	6 days @ \$30.00	180.00
J. Prince	June 30/68 - July 5/68	-	6 days @ \$30.00	180.00
T. Evans	July 2/68 - July 12/68	-	11 days @ \$30.00	330.00

Geological Supervisor

D. H. Brown	July 2/68 - July 29/68	-	28 days @ \$45.00	1,260.00
				<u>5,354.50</u>

Total expended for geophysical work on the Loring Group claims and to be applied to the following claims at the rate of one year each.

Loring Group #1

Lava claims 12 - 16, 18, 20, 22, 24, 47,
 49, 111, 113 - 116 (all incl.) = 16

Loring Group #2

Lava claims 9 - 11, 21, 23, 25 - 32, 34,
 36, 45, 48, 50, 51 - 64,
 70 - 72, 120, 121 = 37

At \$100 per claim 53 \$5,300.00
 =====

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 27th
 day of March, 1969, A.D.

D.H. Brown

[Signature]
 A Commissioner for Making Affidavits for British Columbia or
 A Notary Public in and for the Province of British Columbia.

In the Matter of

Statutory Declaration
(CANADA EVIDENCE ACT)

FALCONBRIDGE NICKEL MINES LIMITED

1112 WEST PENDER STREET

VANCOUVER 1, B. C., CANADA

TELEPHONE: 682-6242

TELEX: 04-5938

December 15, 1968

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

Dear Sir:

This is to certify that the geophysical work done on the Lava Group of claims was done under my supervision.

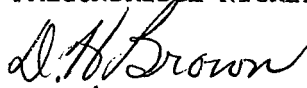
Mr. A. Smith and Mr. R. McPhee of Falconbridge Nickel Mines Limited are qualified geophysical operators with six years' experience between them in the geophysical methods employed.

Other members of the Falconbridge staff listed on the Statement of Work are qualified as geophysical assistants.

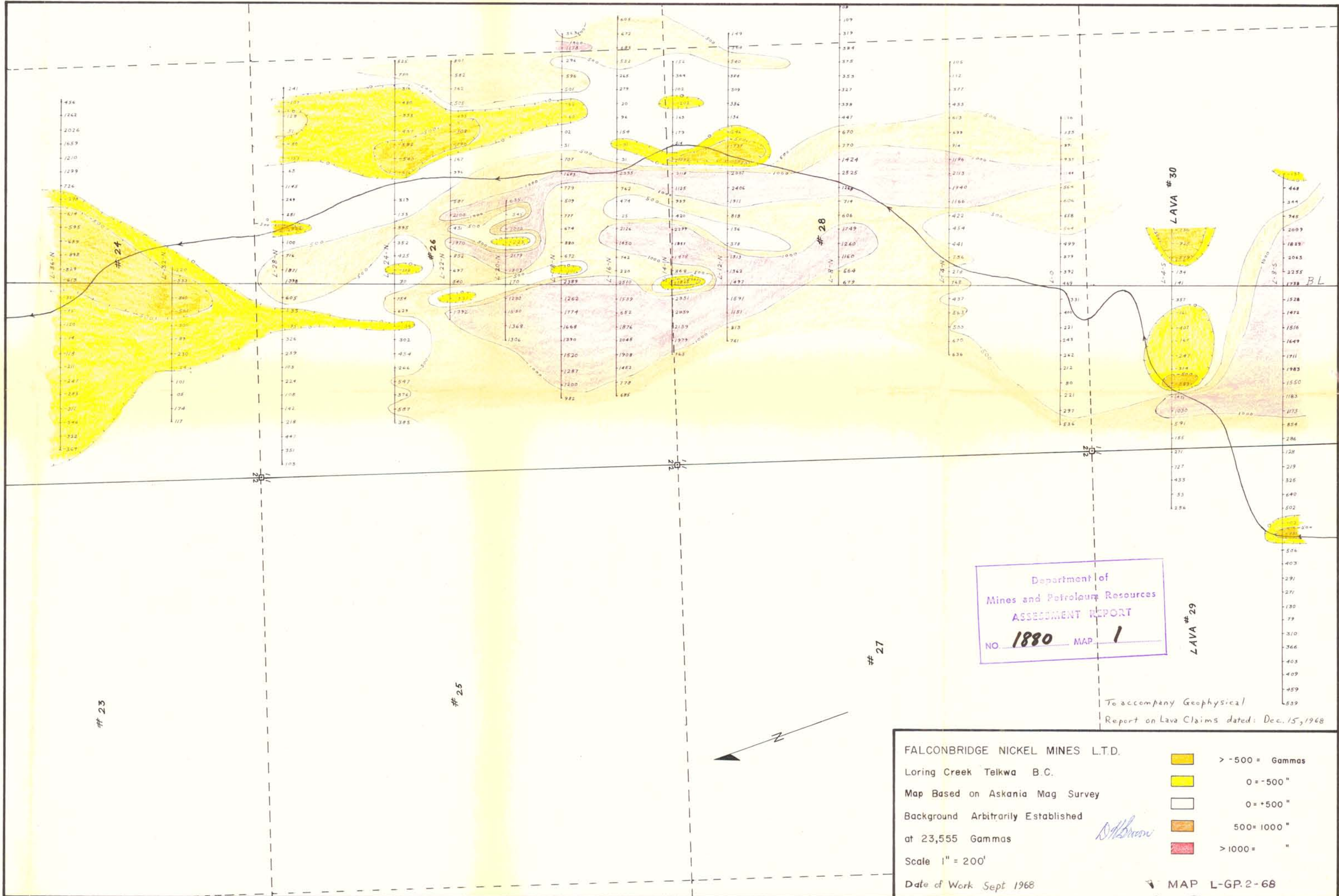
Interpretation was done by the writer and by Mr. S. Presunka, a qualified geophysical operator on the Falconbridge staff.

Yours very truly,

FALCONBRIDGE NICKEL MINES LIMITED



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



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1880 MAP 1

LAVA # 29

To accompany Geophysical
Report on Lava Claims dated: Dec. 15, 1968

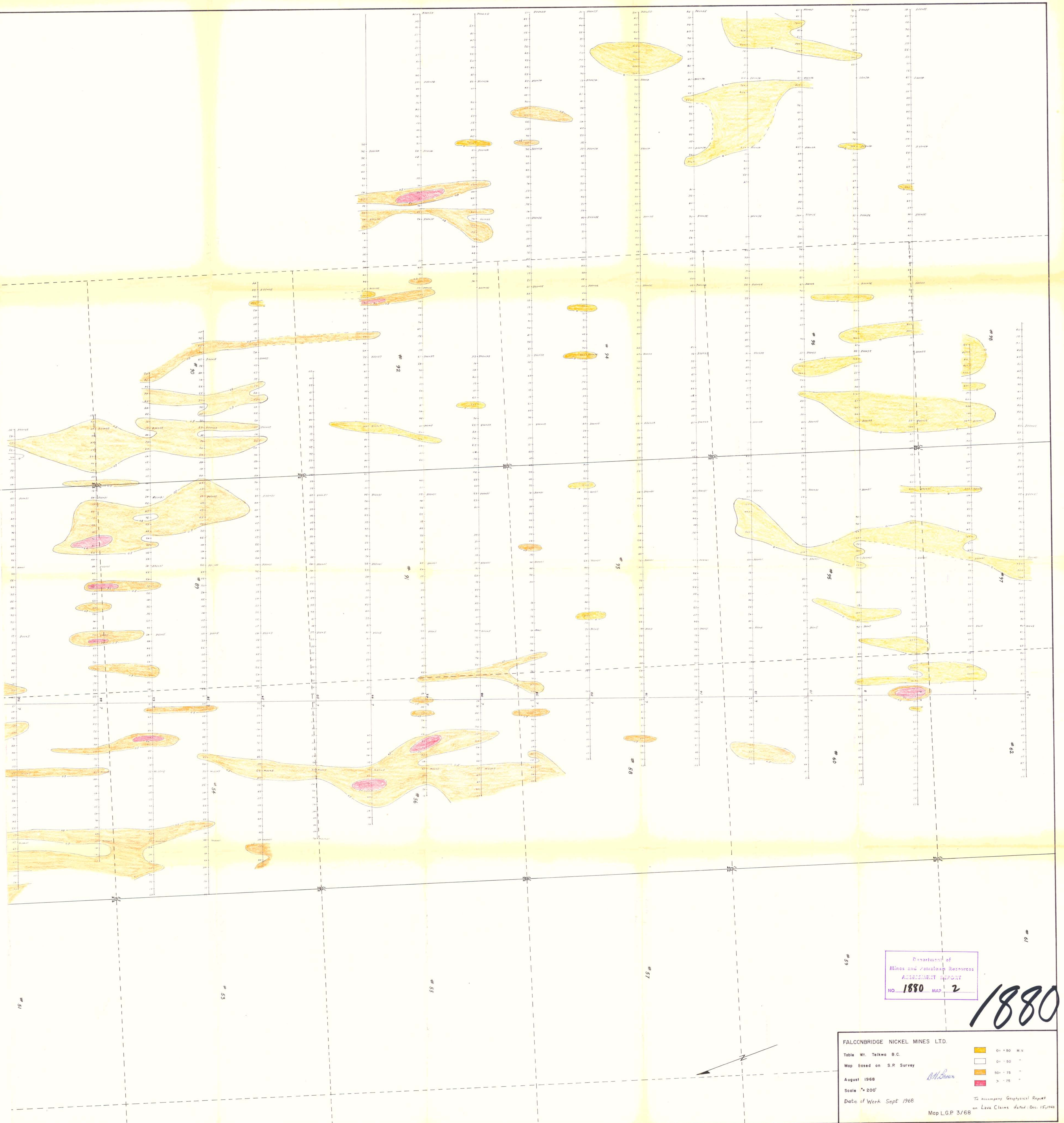
FALCONBRIDGE NICKEL MINES L.T.D.
Loring Creek Telkwa B.C.
Map Based on Askania Mag Survey
Background Arbitrarily Established
at 23,555 Gammas
Scale 1" = 200'
Date of Work Sept 1968

	> -500 = Gammas
	0 = -500 "
	0 = +500 "
	500 = 1000 "
	> 1000 = "

D.H. Brown

MAP L-GP.2-68

1880



Department of
Mines and Geotechnical Resources
ASSESSMENT REPORT
NO. 1880 MAP 2

1880

FALCONBRIDGE NICKEL MINES LTD.

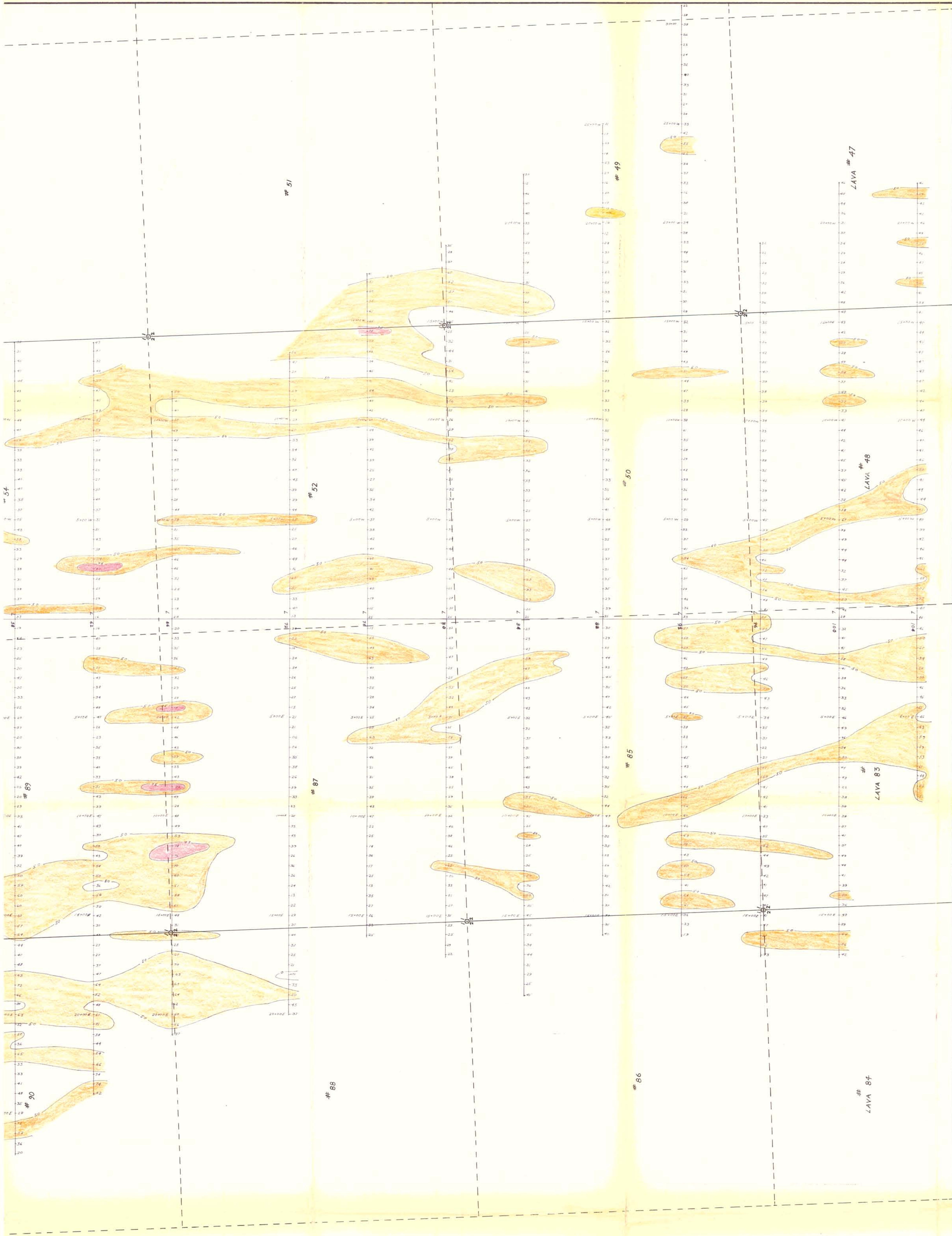
Table Mt. Teikwa B.C.
Map Based on S.P. Survey
August 1968
Scale 1" = 200'
Date of Work Sept. 1968

Map L.G.P. 3/68

To accompany Geophysical Report
on Lava Claims dated Dec. 15, 1968

01 - 50 M.V.
01 - 50 "
50 - 75 "
> 75 "

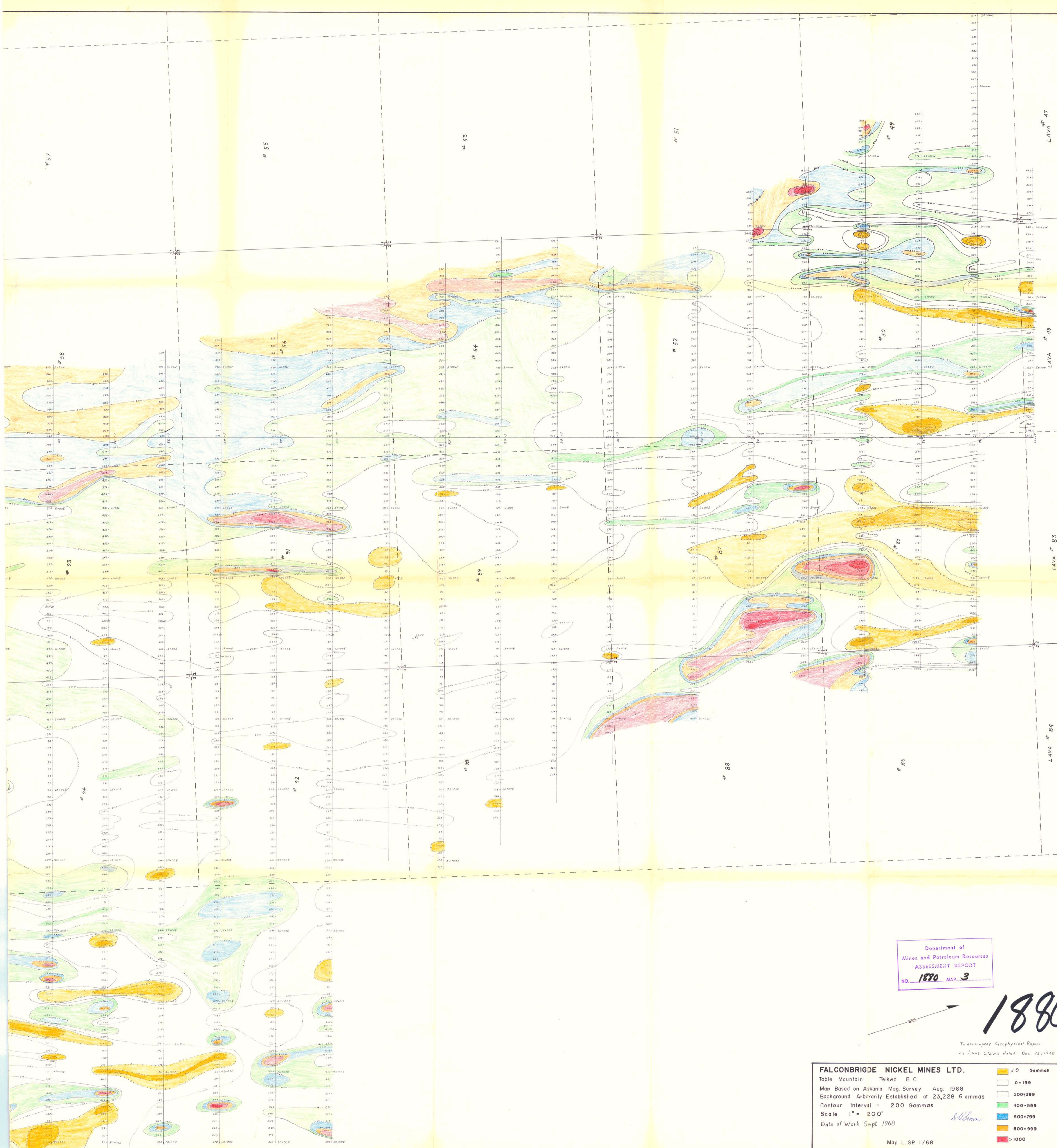
B.H. Brown



1880

5

1880



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1870 MAP 3

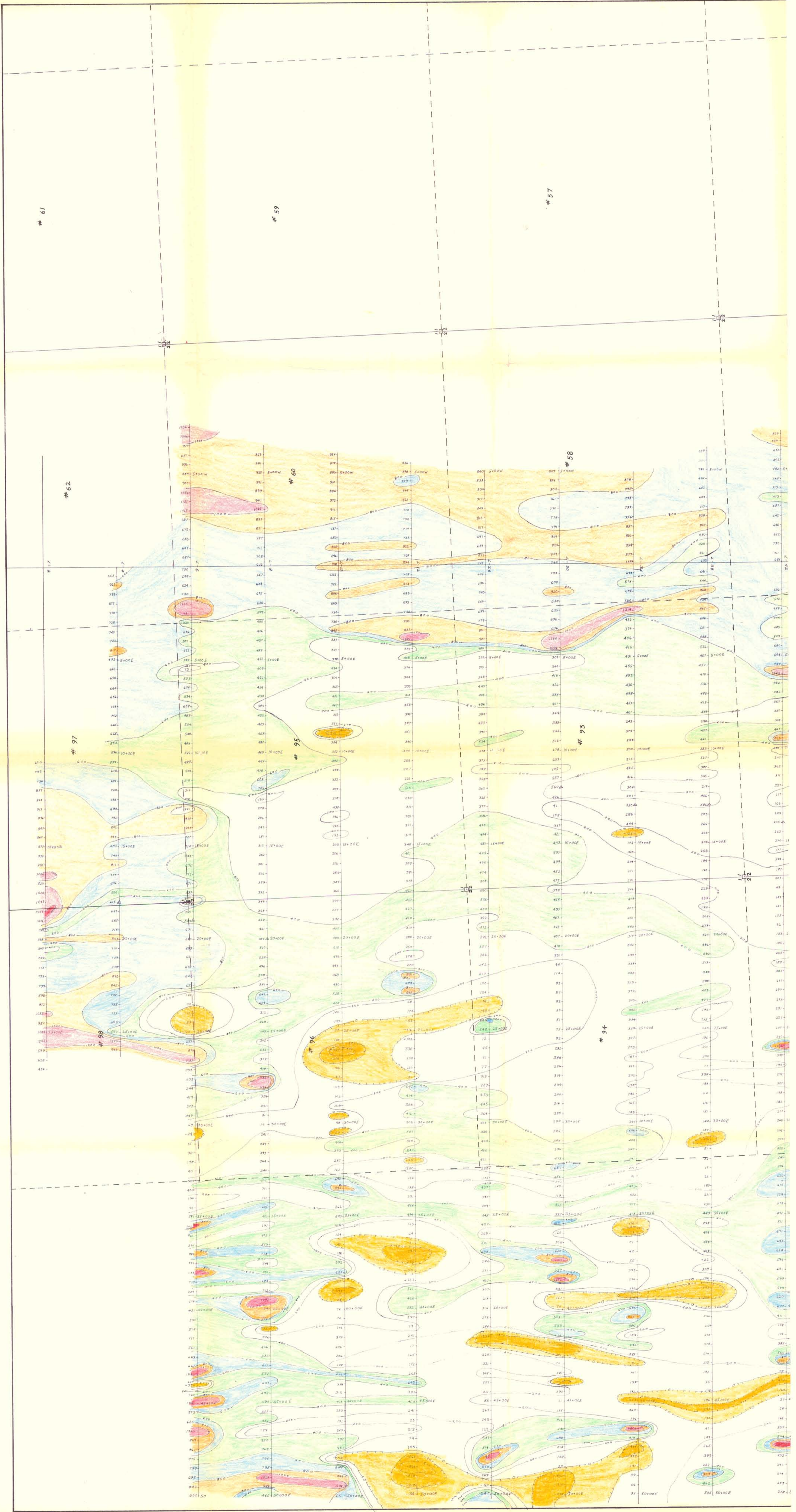
1880

To accompany Geophysical Report
on Lava Claims dated Dec. 15, 1968

FALCONBRIGDE NICKEL MINES LTD.
Table Mountain Telkwa B.C.
Map Based on Askania Mag. Survey Aug. 1968
Background Arbitrarily Established at 23,228 G Gammas
Contour Interval = 200 Gammas
Scale 1" = 200'
Date of Work Sept 1968

<math>< 0</math> Gammas
 0-199
 200-399
 400-599
 600-799
 800-999
 > 1000

J. Wilson
Map L.G.R. 1/68



61

59

57

62

58

97

95

93

94

1880
3