4041

MAGNETOMETER AND GEOCHEMICAL REPORT

ON THE

PLUG CLAIMS

situated near

DESMOND LAKE

some 22 airmiles southwest of Kamloops

Kamloops Mining Division

British Columbia

Latitude 50°25' North; Longitude 120°40' West

N.T.S. 92 I/7

and on behalf of

TEXADA MINES LTD.

of

Vancouver, B.C.

Field Work Between July 27 and October 3, 1972

Report by:

Gary Nordin, B.Sc.
John DeLeen, BA Sc. P. Eng.
Vancouver, B.C.
December 8th, 1972.

C O N T E N T S

SUMMARY

Between July 27 and October 3, 1972, a two-man field crew employed by Texada Mines Ltd. completed 11 miles of line cutting, 14.5 line miles of a magnetometer survey, and 10 miles of geochemical sampling.

Between October 16 and October 26, 1972, 1,400 linear feet of percussion drilling was done for Texada Mines Ltd. by Canadian Longyear Ltd.

The work was conducted on the PLUG claims located near Desmond Lake, some 22 air miles southwest of Kamloops, B.C.

This report describes the field and data processing and discusses the results obtained. Geochemical, geophysical (magnetometer survey), geological, and claim maps are located at the end of the report. Reference is also made to a geophysical report on an Induced Polarization survey by Cochrane Consultants Ltd.

CONCLUSION

Four geochemical soil anomalies were outlined by the soil survey and one magnetomer anomaly was outlined by the magnetometer survey.

LOCATION AND ACCESS

The Plug Claims are located in the Kamloops Mining Division about 22 miles southwest of Kamloops, B.C. (See Figure 5.) Access to the property is by vehicle from the Logan Lake - Ashcroft Road.

The claims are centered about Latitude 50° 25' N and Longitude 120° 40' W, while the N.T.S. code for the area is 92 I/7.

CLAIM OWNERSHIP (Figure 2)

The sixty-Seven Plug claims covered by this report are optioned or staked by Texada Mines Ltd. The claims are divided into Group 1 and Group 2 as follows:

Group 1

Plug 1 to 8 inclusive	103373 to 103380	8
Plug 11 to 16 inclusive	104616 to 104621	6
Plug 21 to 30 inclusive	104626 to 104635	10
Plug 51 to 60 inclusive	105514 to 105523	10
Plug 72 Fraction	121463	1
Plug 73 Fraction	121464	1
Plug 61 Fraction	121213	1
		37 claims

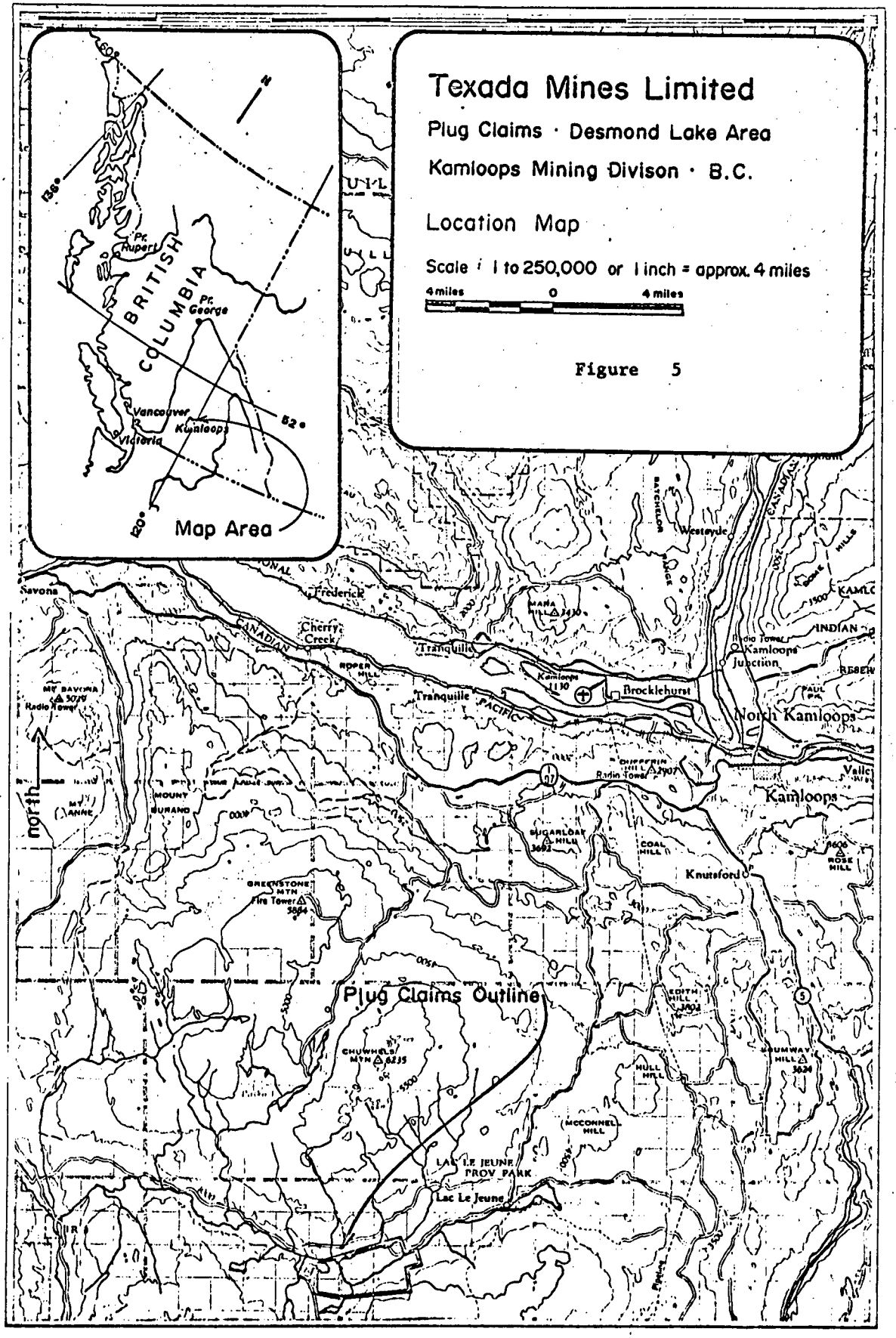
Group 2

Plug 9, 10	103381, 103382	2
Plug 17 to 20 inclusive	104622 to 104625	4
Plug 31 to 50 inclusive	104636 to 104655	20
Plug 74 to 77 Fraction	121465 to 121468	4
		30 claims

GEOLOGY

a) Regional Geology

The claims lie between the Guichon Batholith (to the west) and Central Nicola Batholith (to the east). They are underlain by Triassic Nicola group of rocks, consisting largely of andesitic to basaltic volcanics with minor intercolated beds of sediments.


Texada Mines Limited
Plug Claims · Desmond Lake Area
Kamloops Mining Divison · B.C.
Location Map
Scale 1 to 250,000 or 1 inch = approx. 4 miles
4 miles 0 4 miles
Figure 5
Map Area
Pt. Rupert
BRITISH COLUMBIA
Pt. George
Vancouver
Victoria
Kamloops
138°
120°
52°
Plug Claims Outline
north
Savona
Frederick
Cherry Creek
Tranquille
Brocklehurst
North Kamloops
Kamloops
Knutsford
Westsyde
Kamloops Junction
Lac Le Jeune
LAC LE JEUNE PROV PARK
Greenstone Mtn Fire Tower
Sugarloaf Hill
Coal Hill
Rose Hill
McConnel Hill
Hull Hill
Chumhals Mtn
Mt. Dawina Radio Tower
Mount Lanne
Mount Durand
Canadian Pacific

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4041 MAP #5

b) Detailed Geology (Figure 4)

The area is covered by an extensive mantle of glacial drift with about 4 percent of rock outcroppings in the west central and south central portion of the claims group.

West Central

Sparse outcroppings along Meadow Creek consist of altered andesite, lapilli tuff and several minor lens of limy sediments which strike east to southeast and dip steeply to the north. A quartz-maraposite-carbonate rock outcrops along Meadow Creek from E8 - E12 and has a contact with a chlorite-mica schist that strikes N 20° W and dips 65 - 90° to the east. The quartz-maraposite-carbonate rock is an unusual rock and probably represents a limy sediment which has undergone a low pressure chromium metasomatism. The chlorite-mica-feldspar schist represents a dynamically metamorphosed volcanic rock. The andesitic lapilli tuff has been altered to chlorite, epidote, carbonate, and hematite - only the gross textural features are visible. To the south of Meadow Creek at E 0 - S 20 the altered andesitic lapilla tuff is in contact with a hemititic amygdaloidal basalt which strikes N 25° E and has a sub vertical dip.

South Central

Thick glacial drift covers 90 percent of the south central area. However the general structure of the area can be resolved. Along Meadow Creek from E 62 to S 70 highly contorted metamorphic rocks are exposed on a ridge. The chlorite-mica-feldspar schist, and basic dioritic to hornblende andesite sills form an asymmetrical syncline whose axis plunges to the southeast. The hornblende diorite becomes medium grained to the west and the sills are fine grained equivalents of small dioritic plugs or apophysis lying to the west of E 62 - S 13. A thin layer of granite gneiss (about 20' thick) and quartz-maraposite schist (5 - 10') outcrop on the north side of the ridge and along the road. It strikes east-west and dips 75°

to the south. The quartz-maraposite schist contains minor amounts of silver bearing galena-sphalerite-chalcopyrite. Some drilling was completed in 1959 to test the silver bearing maraposite schist. The results of this drilling are unknown.

An outcrop of highly pyritized quartz-feldspar porphyry containing minor amounts of chalcopyrite occurs to the northeast of the ridge and outcrops at E 70 - S7. This was the main area of interest and seven percussion drill holes were drilled to test the mineralization. The drill results indicate the quartz-feldspar porphyry to be an irregular sill plunging to the south and east with a maximum thickness of 100 feet at E 70 - S7.

On the extreme south central portion of the claims are located altered massive and tuffaceous andesitic volcanics in contact with an intrusive hornblende andesite. The contact strikes N 70° E and dips 85° N. The maraposite-carbonate rock which outcrops at E 54 - S 40, is cut by numerous hornblende diorite sills and dykes.

A granite sill which appears to strike northwest outcrops on line E 78 from S 28 - S 34. Its structural relations are uncertain however it appears to crosscut both the altered volcanics and intrusive hornblende diorite. This granite is porphyritic in part with minor pyrite and may be the feeder of the quartz-feldspar porphyry sills exposed at E 70 - S 7 and in the percussion holes.

GEOCHEMICAL SURVEY (See Figure 1)

A geochemical soil survey was conducted over a large portion of the claim group. A grid system was laid out in the central portion of the claim group and 10 miles of line were cut and sampled at 200' intervals. Two hundred and sixty-eight samples were taken as follows: 142 samples on the east portion of the grid which were assayed for Cu, Zn, Ag, and 126 samples on the west side of the grid which were assayed for Cu only.

The Zn values, 15 - 122 ppm and Ag values 0.5 - 1.5 ppm show no significant variation and their values which were plotted on Figure 1 were not contoured.

A statistical study of the copper geochemical values indicated 0 - 40 ppm to be below background, 40 - 100 ppm to be weakly anomalous and greater than 100 ppm to be anomalous.

The copper values 15 - 143 ppm were contoured at intervals of 40 ppm, 60 ppm, 100 ppm and are shown on Figure 1.

The soil which was sampled was generally a light brown rocky glacial till containing rounded to subrounded glacial boulders two to five inches in diameter. A soil sample of brown-brown red "B" soil horizon was taken with a shovel or auger at intervals of 200' from a central baseline. The average depth of the sample was from 1.0 - 1.5 feet. The samples were bagged and sent to Vancouver Geocehmical Laboratories Ltd. in Vancouver to be assayed.

METHOD OF ASSAY

The samples were dried and sifted; the -80 mesh fraction dissolved by hot $HClO_4$ and HNO_3 digestion and the assay value of Cu or Cu, Zn, Ag were determined by an Atomic Absorption unit.

RESULTS

A statistical study of the copper geochemical values indicated 0 - 40 ppm to be below background, 40 - 100 ppm to be weakly anomalous and greater than 100 ppm to be anomalous.

Four weakly anomalous zones were outlined by the soil geochemical survey and are numbered A, B, C, and D on Figure 1.

Anomaly A

Anomaly A is an irregular U-shaped anomaly of 60 ppm Cu located in the south central portion of the claim extending from E64 - E82 and from S5 - S15. This anomaly coincides with a magnetometer and an I.P. chargeability anomaly. The percussion drilling and geological mapping

indicates that the anomaly is due to minor chalcopyrite mineralization in a series of thin quartz feldspar porphyry sills.

Anomaly B

Anomaly B is a WNW - ESE trending narrow elongate anomaly which extends from E8 on the base line to E58 on the base line. The weak anomaly corresponds with a NE trending I.P. chargeability anomaly centered on E12 - B.L. The outcrop of quartz-maraposite-carbonate in the north east portion of the anomaly contains 1 - 2 percent pyrite with minor amounts of chalcopyrite. Altered volcanics with no visible mineralization were encountered in a percussion hole located at E12 - S4 drilled to test anomaly B.

The anomaly may be due to minor pyrite-chalcopyrite mineralization in the quartz-maraposite-carbonate in the glacial till.

Anomaly C

Anomaly C is a small SE - NE trending anomaly located in the central portion of the claims. A percussion hole was located to test this anomaly at E56 - N6. No bedrock was encountered in this drill hole to a depth of 80 feet. The anomaly is probably due to glacially transported till.

Anomaly D

Anomaly D is an elongate E - W weak anomaly of 600 ppm Cu located in the NW portion of the claims. No outcrop is present in this area but its trend and shape are very similar to anomaly B and may be due to glacially transported till.

GEOPHYSICAL SURVEY (See Figure 3)

A magnetometer survey totalling 14.5 miles was conducted over the entire property and plotted on Figure 3. Readings were taken at 200 foot intervals on grid lines cut north and south of a central base line. A total of 416 readings were taken.

METHOD

Readings were normalized by tying into a base station 2 -3 times a day and tying to a crossover point on the base line at intervals of no greater than two-hour periods.

The magnetometer reading in gammas was plotted at the station of the reading and the values contoured at intervals of 200 gammas.

INSTRUMENT

A SCINTREX magnetometer No. MF-2 measuring the magnetic vertical component was employed.

RESULTS

A statistical study (frequency histogram) of the magnetometer values indicates two distinct populations centering on 50,000 gammas and 50,800 gammas with a crossover at 50,600 gammas.

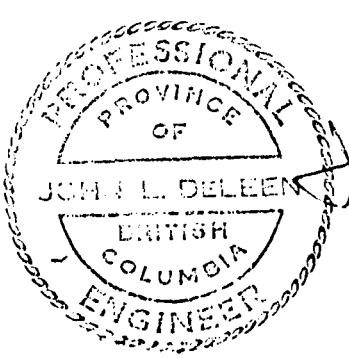
The majority of the readings lie around 50,000 gammas and indicate a NE - SW magnetic trend characterized by an elongate magnetic low of less than 50,000 gammas crossing the base line between E36 - E78.

A strong roughly circular magnetic anomaly of 600 gammas, from E62 base line to E88 base line and extending from N30 to S20, disturbs this trend. The circular high is broken into two parts by a low of 600 gammas paralleling Meadow Creek and is probably due to a fault.

The complex internal nature of the circular high is probably due to a combination of folding as seen by the geological mapping and faulting as indicated by the strong low paralleling Meadow Creek.

Respectfully submitted,

Gary Nordin, B.Sc



John DeLeen, BA Sc. P. Eng.

Vancouver, B.C.
December 8th, 1972.

SURVEY COSTS

GEOCHEMICAL SURVEY

Assays	268 samples for Cu, Ag, Zn for total of		$ 463.60
Labout	Geologist, G. Nordin,	10 days @ $41.82/day	418.20
	Helper, B. Rose,	10 days @ $26.54/day	265.40
Drafting	Geologist G. Nordin	2 days @ $41.82/day	83.64
Room and Board		10 days @ $29.00/day	290.00
Transportation	4 x 4 vehicle	12 days @ $10.45/day	125.40
			$1,646.24
	APPLIED FOR ASSESSMENT		$1,200.00

MAGNETOMETER SURVEY AND LINE CUTTING

Magnetometer Survey

14.5 line miles @ $30.80/line mile $ 446.68

Geologist, G. Nordin,	7 days @ $41.82/day	$292.74
Magnetometer Rental,	7 days @ $10.00/day	70.00
Drafting, Geologist G. Nordin	2 days @ $41.82/day	83.74
		$446.68

Line Cutting

11 miles @ $100.95/mile $1,110.50

Geologist, G. Nordin,	10 days @ $41.82/day	$ 418.20
Helper, B. Rose,	10 days @ $26.54/day	265.40
Board and Room	10 days @ $29.00/day	290.00
Transportation	12 days @ $10.45/day	125.50
20 rolls flagging tape @ $.57/roll		11.40
		$1,110.50

$1,557.18

APPLIED FOR ASSESSMENT $1,400.00

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J. H. L. DELEEN

John DeLeen, BA Sc. P. Eng.

TO HIGHWAY 97 17 miles

TO LOGAN LAKE

SURREY LAKE ROAD

L 0+00 | L 4 E | L 8 E | L 12 E | L 16 E | L 36 E | L 58 E | L 62 E | L 64 E | L 66 E | L 70 E | L 74 E | L 78 E | L 82 E | L 88 E | L 112 E

60 N | 50 N | 40 N | 30 N | 20 N | 10 N | 0+00 | 10 S | 20 S | 30 S | 40 S | 50 S | 60 S

Melba Creek

Meadow Creek

DESMOND LAKE

to 80S

A | B | C | D

N

Legend

- Lake
- Bridge
- Creek
- Road
- Survey Line
- Plug Claims outline

VALUES IN PPM

100 Cu
50 Zn
1.0 Ag

CONTOURS FOR Cu

- 100 PPM
- 60 PPM
- 50 PPM
- 40 PPM

4041 M-1

Texada Mines Ltd.

Plug Claims
Desmond Lake Area - Kamloops Mining Division B.C.

SOIL GEOCHEMISTRY

Figure 1

Scale 1 inch = 400 feet

400 feet 0 400'

TO ACCOMPANY A REPORT BY G.NORDIN B.Sc AND J. DELEEN P.Eng DECEMBER 7, 1982

TO HIGHWAY 97 17 miles

TO LOGAN LAKE

SURREY LAKE ROAD

L 0+00 E

L 12 E

L 36 E

L 58 E

L 64 E

L 70 E

L 78 E

L 88 E

L 112 E

60 N

50 N

40 N

30 N

20 N

10 N

0+00

10 S

20 S

30 S

40 S

50 S

60 S

Melba Creek

Meadow Creek

Plug 1
Plug 2
Plug 3
Plug 4
Plug 5
Plug 6
Plug 7
Plug 8
Plug 9
Plug 10
Plug 11
Plug 12
Plug 13
Plug 14
Plug 15
Plug 16
Plug 17
Plug 18
Plug 19
Plug 20
Plug 21
Plug 22
Plug 23
Plug 24
Plug 25
Plug 26
Plug 27
Plug 28
Plug 29
Plug 30
Plug 31
Plug 32
Plug 33
Plug 34
Plug 35
Plug 36
Plug 37
Plug 38
Plug 39
Plug 40
Plug 41
Plug 42
Plug 43
Plug 44
Plug 45
Plug 46
Plug 47
Plug 48
Plug 49
Plug 50
Plug 51
Plug 52
Plug 53
Plug 54
Plug 55
Plug 56
Plug 57
Plug 58
Plug 59
Plug 60
Plug 61 Fr.
Plug 62
Plug 63
Plug 64
Plug 65
Plug 66
Plug 67
Plug 68
Plug 69
Plug 70
Plug 71 Fr.
Plug 72 Fr.
Plug 73 Fr.
Plug 74 Fr.
Plug 75 Fr.
Plug 76 Fr.
Plug 77 Fr.
Plug 78 Fr.
Plug 83 Fr.
Plug 84 Fr.
Plug 85 Fr.
Plug 86 Fr.

DESMOND LAKE

N

Legend

- Lake
- Bridge
- Creek
- Road
- Survey Line
- Plug Claims outline
- Claim Post
- Plug Group 1
- Plug Group 2

4041 M-2

TO ACCOMPANY A REPORT BY G. NORDIN B.Sc. AND J. DELEEN P.Eng. DECEMBER 7, 1972.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA JOHN L. DELEEN

Scale - 1 inch = 400 feet

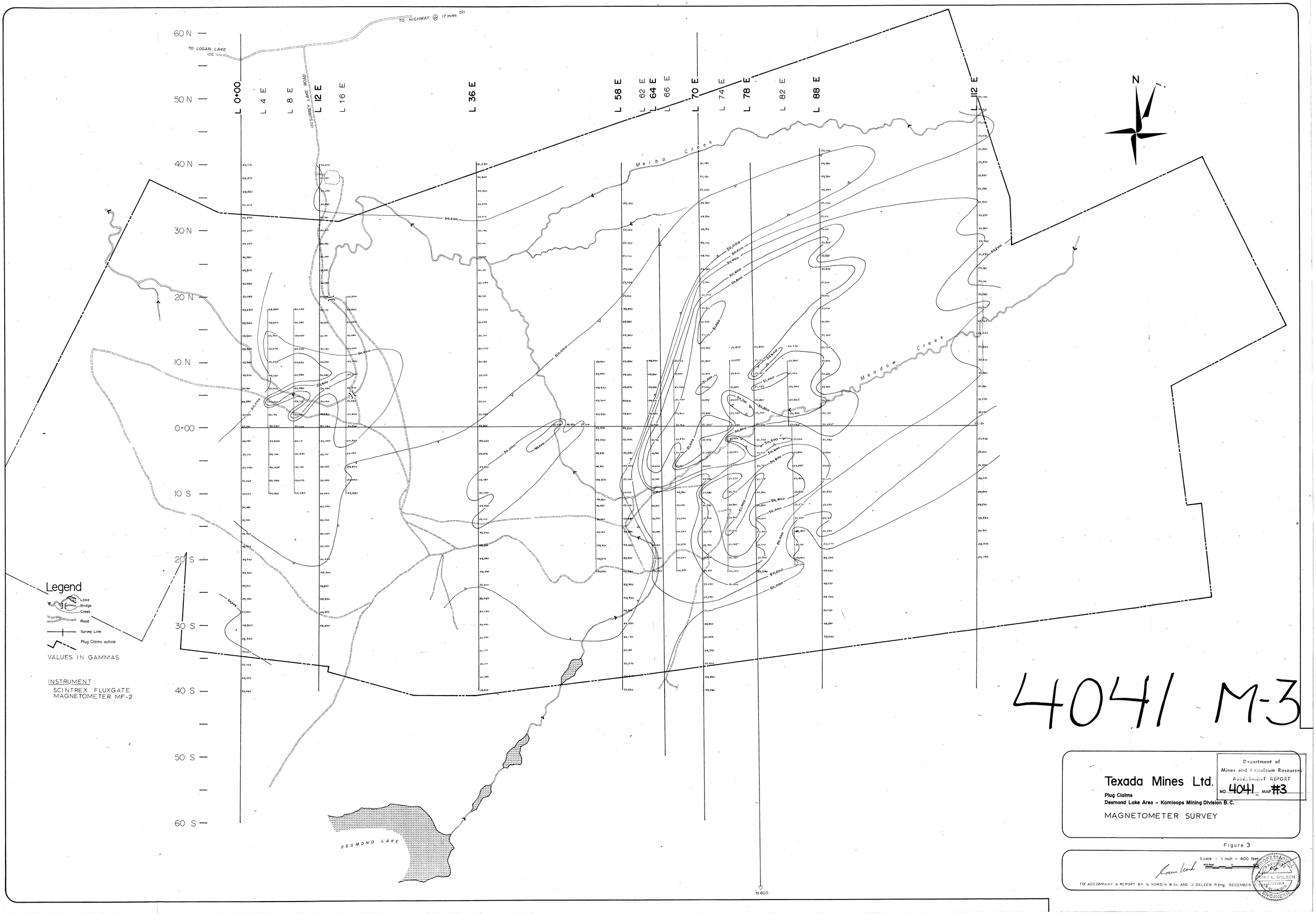
Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 4041 MAP #2

Texada Mines Ltd.

Plug Claims
Desmond Lake Area - Kamloops Mining Division B.C.

BASE MAP - CLAIMS, GRID, ROADS & WATERCOURSES

Figure 2



4041 M-3

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4041 MAP #3

Texada Mines Ltd.

Plug Claims
Desmond Lake Area - Kamloops Mining Division B.C.

MAGNETOMETER SURVEY

Figure 3

Scale 1 inch = 400 feet

TO ACCOMPANY A REPORT BY G. NORDIN B.Sc. AND J. DELEEN P.Eng. DECEMBER 6, 1972

PROFESSIONAL ENGINEER
J. H. L. DELEEN
REGISTERED ENGINEER

TO HIGHWAY 97 17 miles

TO LOGAN LAKE

SURREY LAKE ROAD

L 0+00 | L 4 E | L 8 E | L 12 E | L 16 E | L 36 E | L 58 E | L 62 E | L 64 E | L 66 E | L 70 E | L 74 E | L 78 E | L 82 E | L 88 E | L 112 E

60 N | 50 N | 40 N | 30 N | 20 N | 10 N | 0+00 | 10 S | 20 S | 30 S | 40 S | 50 S | 60 S

Melba Creek

Meadow Creek

P-72-1 P-72-2 P-72-3 P-72-4 P-72-5 P-72-6 P-72-7 P-72-8

DESMOND LAKE

to 80S

N

Legend

- Lake, Bridge, Creek
- Road
- Survey Line
- Plug Claims outline
- CORE BOXES
- ROCK OUTCROP
- ANGULAR FLOAT BOULDERS
- P-72-1 PERCUSSION DRILL HOLE

8 chlorite-mica-feldspar schist

7 altered volcanics
MASSIVE - TUFFACEOUS, PERVASIVE CHLORITE, EPIDOTE, HEMATITE ALTERATION

6 hematitic amygdaloidal basalt

5 limy sediments

5 quartz-mariposite-carbonate

INTRUSIVE

4 granite

3 hornblende andesite

2 hornblende diorite
FINE-MEDIUM GRAINED

1 quartz feldspar porphyry

4041 M-4

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4041 MAP #4

Texada Mines Ltd.

Plug Claims
Desmond Lake Area – Kamloops Mining Division B.C.

GEOLOGY

Figure 4

Scale 1 inch = 400 feet

TO ACCOMPANY A REPORT BY G. NORDIN B.Sc AND J. DELEEN P.Eng DECEMBER 7, 1972

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA