

SID 132-15339

9/87

A Geological Report
on the
GOV 5 Claim
situated
40 km north
of
Creston, B.C.
in the
Nelson Mining Division

N.T.S. 82/F/7E

Lat: $49^{\circ}25'24.8''$ N Long: $116^{\circ}43.5'$ W

by

Owner/Operator: D.R. Morgan, P. Eng.

Dates of Work: 11-13 September 1986

Date of Report: 9 November 1986

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,339

SUB-RECORDER
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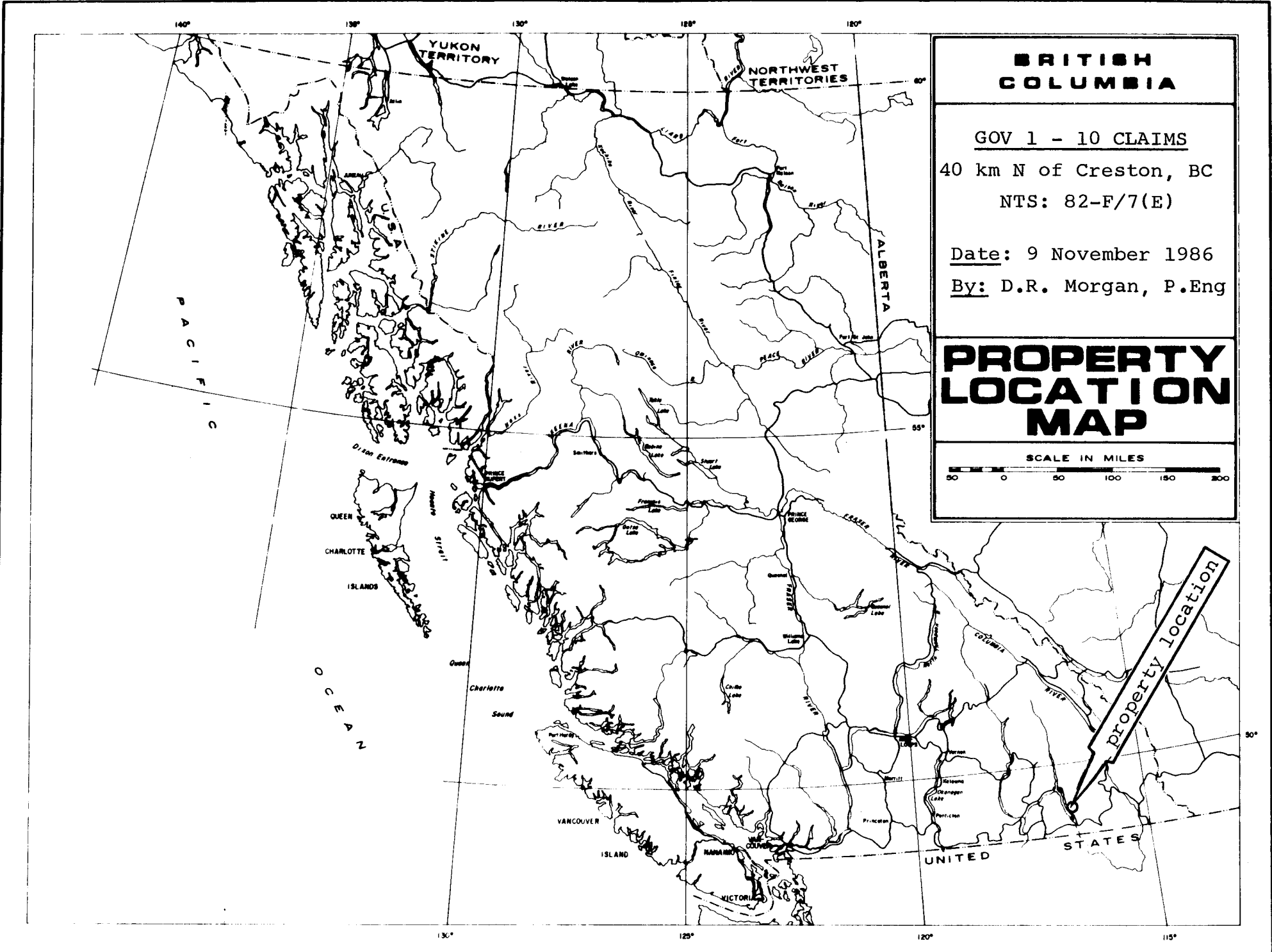
M.R. # _____ \$ _____
VANCOUVER, B.C.

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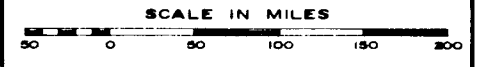


BRITISH COLUMBIA

GOV 1 - 10 CLAIMS
40 km N of Creston, BC
NTS: 82-F/7(E)

Date: 9 November 1986
By: D.R. Morgan, P.Eng

PROPERTY LOCATION MAP



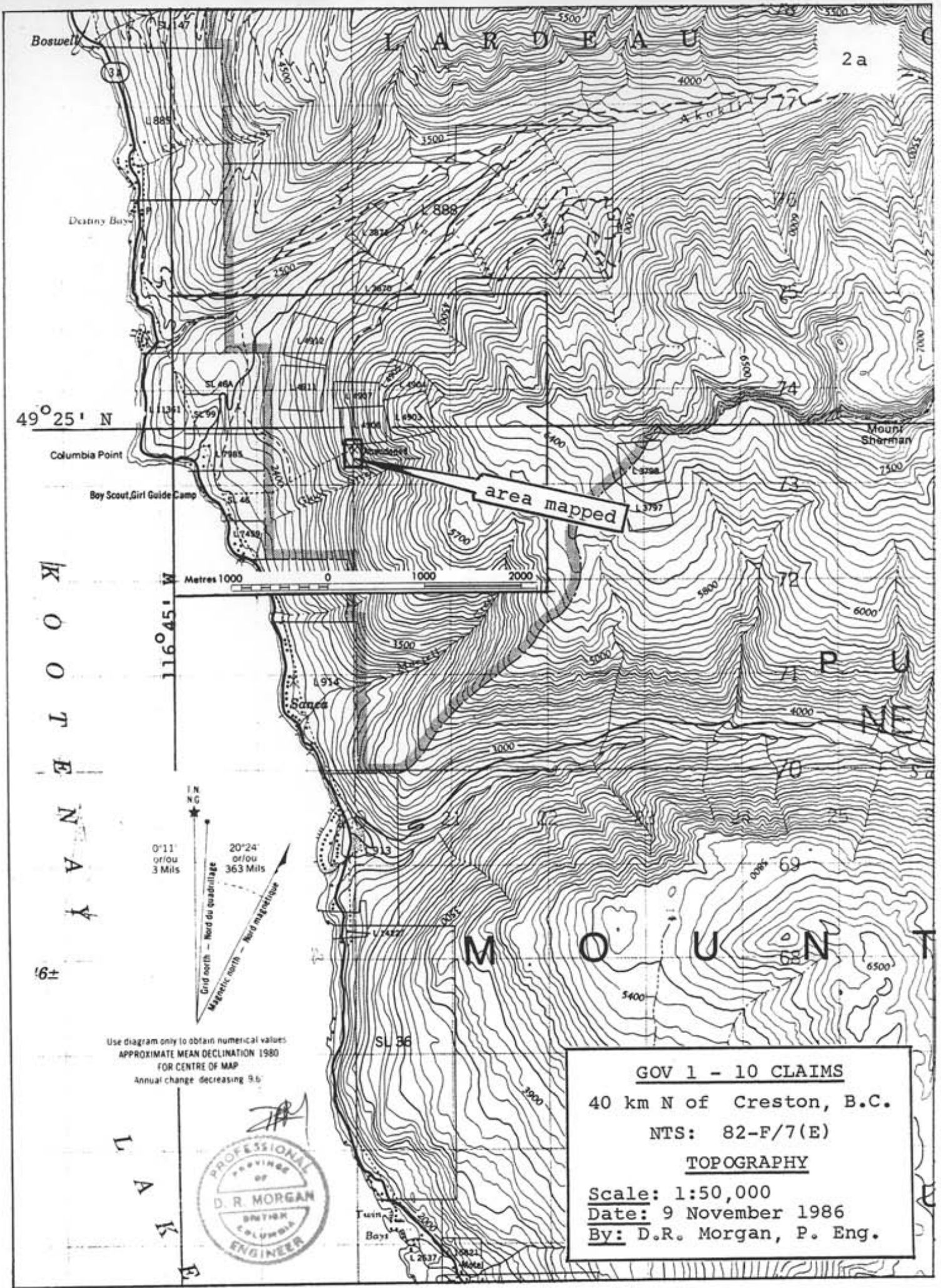
Property location

1 - 0 SUMMARY: (Fact)

1. Mapping on the Gov 5 claim near Sanca, 40 km north of Creston, B.C. showed that the claim is underlain by medium grained, grey granodiorite.
2. The exposure of the Valparaiso Vein on the Gov 5 claim, occupies a fault in these intrusives that strikes 350° and dips 40° east.
3. A parallel vein, the Sarah (formerly the 'Imperial') lies to the east of and 700 feet vertically above the Valparaiso.
4. Additional quartz veins have been reported to occur between these two veins. (Min. of Mines AN. rep for 1926)
5. The master set of fractures in the granodiorite in the mapped area are parallel to the vein fault.

2 - 0 CONCLUSIONS: (Opinion)

1. The well fractured granodiorite host rock raises the possibility of additional undiscovered veins or vein systems parallel to the Valparaiso.
2. Besides continuing exploration of the Valparaiso Vein, future work should also explore for any such veins or vein systems.
3. Geological mapping and geochemical surveys will play an important part in future exploration.



2a

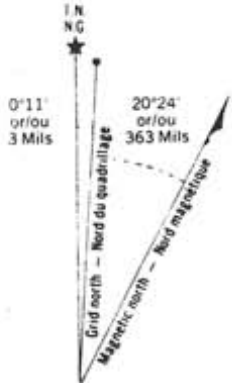
49° 25' N

116° 45' W



area mapped

K
O
O
T
E
N
A
Y



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1980
FOR CENTRE OF MAP
Annual change decreasing 9.6



GOV 1 - 10 CLAIMS
40 km N of Creston, B.C.
NTS: 82-F/7(E)
TOPOGRAPHY
Scale: 1:50,000
Date: 9 November 1986
By: D.R. Morgan, P. Eng.

L
A
K
E

L A R D R E A U

M O U N T

T R U
M E

Mount Sherman

Columbia Point

Boy Scout, Girl Guide Camp

Boswell

Deatny Bay

Samoa

Taxin Bay

6+

3 - 0 INTRODUCTION:

3 - 1 Scope & Dates of Report: This report describes geological mapping carried out by the writer on the Gov 5 claim between the 11th and 13th September 1986. This work was initiated and paid for by the writer.

3 - 2 Title: The writer, David R. Morgan, 3424 West 6th Avenue, Vancouver, B.C., V6R 1T3, is the full and undivided owner of the claims listed below:

<u>Claims</u>	<u>Name</u>	<u>Record #</u>	<u>Lot #</u>	<u>Recorded</u>	<u>Expiry Date</u>
6	Gov 1-6	4233-38	--	26 Sept '85	26 Sept 1989
4	Gov 7-10	4451-54	--	15 Sept '86	15 Sept 1989
1	Martilde	4288	L 3870	21 Nov '85	21 Nov 1989
1	Schmulka	4289	L 3871	21 Nov '85	21 Nov 1989

Acceptance of the work described in this report will put these claims in good standing until the expiry date shown.

A Statement of Exploration & Development was filed at the Sub-Recorder's Office in Vancouver on 15 September 1986.

4 - 0 GEOGRAPHY:

4 - 1 Location: The property lies on the moderately steep west facing slopes of the Purcell Mountains on the east side of Kootenay Lake between Akokli and Sanca Creeks, near Boswell and approximately 40 km north of Creston. The claims are in National Topographic System area 82-F/7(E), are in the Nelson Mining Division and have a latitude of $49^{\circ}25.1'$ north and a longitude of $116^{\circ}43.4'$ west.

4 - 2 Access: Highway 3A is taken for 40 km north of Creston. Approximately 3.5 km north of Sanca a logging road leads northeast up the south side of Akokli Creek. From this point it is 5.4 km by dirt road to the property.

4 - 3 Topography: The claims cover the west facing slopes of a spur between Akokli and Sanca Creeks. Elevations range from 3,700 to 5,400 feet. The climb from Highway 3A on the shore of Kootenay Lake at 1,750 elevation to the mine workings at 3,950 is 2,200 feet (670 m).

49° 30' N

DAVE 4

4

LOCKHART I
1627(5)
(141 933)
(145 933)

222(6)

DAVE 5

481 (7)

Holiday Cr.

Squam Cr.

NELSON CR. M.D.
FORT STEELE M.D.

116° 45' W

MT. DAVIE

AKOKLI MT

McGregor Cr.

HOT G
2487(9)
(130 x 90)

HOT H
2488(9)
(130 x 90)

GOV
7 - 10
claims

HOT E
2371(7)
(120 x 80)

KIG I
3460(8)
25 x 45

HOT
1143(8)

775(8)
14912

3871
C. P. 10
3870

HOT 'K'
2784(9)
(130 x 90)

1146(8)

RUBY
3607(12)
25 x 35

776(8)
14911

7 8
1 2
3 4
5 6

GOV 1 - 6
claims

L 3798
3657(1)

HOT 'B'
1145(8)

HOT 'A'
1144(8)

529(8)
129(8)

HOT 'J'
2563(12)
(120 x 80)

529(8)
129(8)

Sanca

E 20
2490
(10)



GOV 1 - 10 CLAIM MAP

40 km N of Creston, B.C.

Nelson M.D.

NTS: 82-F/7(E)

Scale: 1:50,000

Date: 9 November 1986

By: D.R. Morgan, P. Eng

5 - 0 HISTORY:

- 1898 - A claim was staked on the Imperial Vein. This is now known as the Sarah (M.I. 82FSE055) and is covered by claim GOV 3.
- 1900 - The Valparaiso Gold Mining Company acquitted 7 claims and drove the Valparaiso x-cut 200 feet east to the vein.
- 1919 - A 130 foot x-cut was driven to the Imperial vein.
- 1933 - Canada Smelters Ltd., shipped 324 tons of 'development heading' ore to the Trail Smelter (Average grade: Au: 0.33 Ag:3.3 ozs/ton) The Government shaft was sunk to 275 feet and 600 feet of lateral work was done in the Government and Valparaiso workings.
- 1954 - Akokli Tungsten Mines Ltd., built a headframe, compressor house and mill. A line was built to bring power to these facilities. Drifting and 1,500 feet of long-hole percussion drilling was carried out underground.
- 1955 - The Company ran drift in the Government workings and put a raise to the surface 300 feet north of the shaft. From 533 tons of mill feed 11,200 pounds of pyrite-tungsten concentrate was produced.
- 1956 - The Government workings were mapped and sampled by G. Hougland.
- 1981 - A drill-access road was built above the Government workings. Four diamond drill holes were drilled from this 900 meter road.
- 1984 - The claims surrounding the Valparaiso and Government Crown Grants came open and were staked by the writer.

6 - 0 REGIONAL GEOLOGY:

The property lies mainly in granodiorites of a west-projecting lobe of the Bayonne batholith, locally intrusive into Purcell sediments. The contact between the granodiorite and the sediments trends northeast and lies approximately 1,600 meters north of the mapped area.

The Valparaiso vein, a northerly striking fissure vein with an easterly dip of 45° has been exposed by 160 meters of drift in the Government workings, by 198 meters of drift in the Valparaiso workings immediately to the north and by pits, trenches and outcrop for about 650 meters to the north of the Valparaiso workings, making a total exposure of approximately 1,000 meters.

The Valparaiso vein is a quartz filled fissure vein which varies in width from one to twenty five feet (ref.2, p.66) and is mineralized with pyrite, arsenopyrite, sphalerite, galena, chalcopyrite, wolframite and gold. Sulphide minerals occur as bands, blebs and disseminations in the vein quartz (ref. 4, p.10) Wolframite occurs mainly in sheared sections of the granite footwall. Assay results indicate that gold and silver values are generally confined to quartz-sulphide material.

The Sarah (formerly Imperial) vein lies parallel to the Valparaiso vein and 700 feet vertically above it and to the east. This vein, has been traced for about 120 meters in pits and cuts. A ten ton shipment from it in 1906 ran: Au: 0.6 ozs/ton Ag: 22 ozs/ton.

7 - 0 GEOLOGY OF THE PROPERTY:

7 - 1 Mapping Procedure: The road system in the vicinity of the Government underground workings was surveyed with a topofil thread chain and compass. Outcrops were mapped in during this survey. Outcrops were numbered in the sequence visited and specimens retained.

7 - 2 General: Grey, medium grained granodiorites of the Bayonne Batholith underlie the area mapped and host the Valparaiso Vein, which here has a strike of 350° and a dip of 40° to the east. The vein follows the road southwards from the raise portal, through the inclined shaft portal and is last seen near the small creek at the south end of the road.

7 - 3 Rock Types:

Granodiorite: This is the main rock type in the area mapped. It is medium grained, pale grey, generally equi-granular and typically has the following composition:

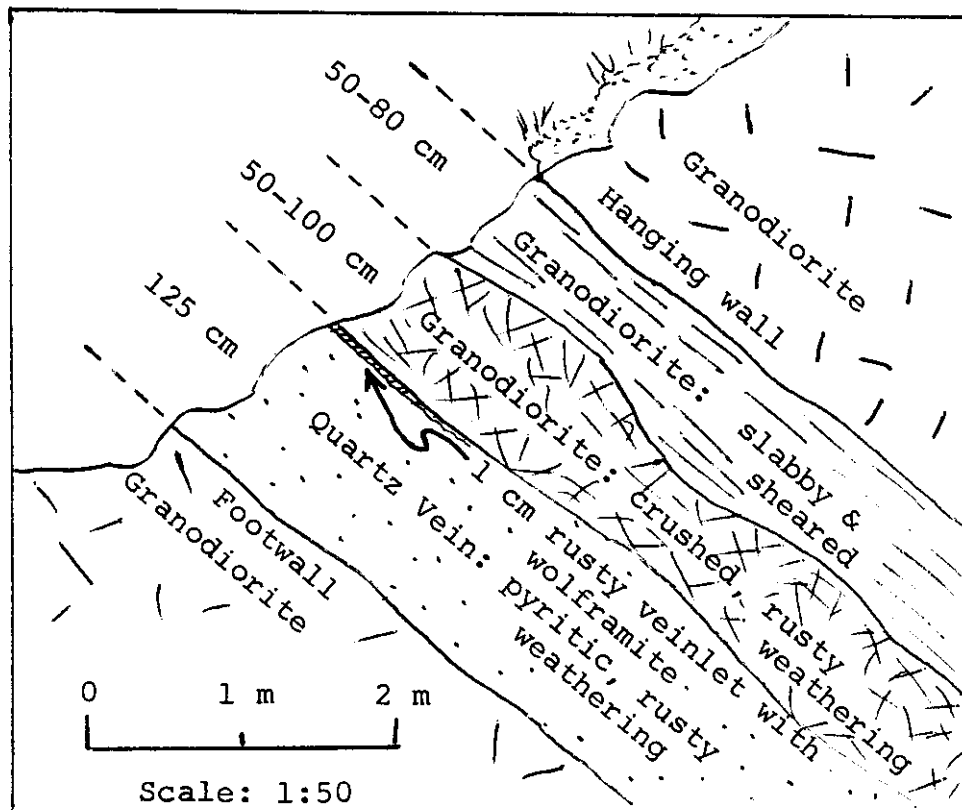
White feldspar (no twinning seen):	60%
Quartz:	25%
Biotite:	15%

Occasional porphyritic phases are seen with indistinct feldspar phenocrysts as large as 40 by 15 mm. Jointing is well developed, with the master set having the same attitude as the vein fault ($350^{\circ}/40^{\circ}$ E). In general, this rock type is nowhere massive and is easily broken.

Lamprophyre Dyke: This rock type was observed only at outcrop # 2, which is adjacent to the Valparaiso Vein. It is a greenish buff coloured, rusty weathering porphyry. The groundmass is aphanatic and pea green with evenly dispersed black flecks of pin point size. The phenocrysts (not identified) are lustrous, pearly flakes, square or hexagonal in plan but needle like in section. This rock type seems to decay easily.

7 - 4 Mineralization: The Valparaiso Vein is the only exposure of mineralization in this area. It is best exposed on the Government Crown Grant at the portal of the raise at 73,445 N - 19,990 E. A drawing of this exposure appears below.

In this exposure, pyrite mineralization is disseminated through the vein quartz, with a 1 cm veinlet at the upper contact of the quartz. This veinlet was mineralized with a mineral that appears like magnetite but is non magnetic; it is assumed to be wolframite.



Raise Portal at 73,445 N - 19,990 E
(Vertical Section facing north)

8 - 0 REFERENCES:

1. Curtin, C.J. "Gold Relief Claims," February 1936.
2. Rice H.M.A. "Nelson Map Area, East Half," Memoir 228,
G.S.C., 1941.
3. Hougland, E. "Palouse Company Property," for Palouse Co.,
Ltd, January 1959.
4. Reeve, A.F. "Destiny Bay Properties," for North Pacific
Mines Ltd., 20 May 1964.
5. Greene, A.S. "Destiny Bay Properties - Hot Group of Claims,"
for Custom Mining Ltd., 12 November 1981.

Annual Reports, B.C. Minister of Mines:

Year:	'00	'02	'03	'24	'26	'27	'32	'33	'34	'53	'54	'55
Page:	85	302	242	449	285	320	195	200	A27	121	129	54

9 - 0 STATEMENT OF COSTS:

I hereby certify that the following costs were incurred in carrying out the geological mapping of the GOV 5 claim 40 km north of Creston, B.C., 82-F/7(E), between 11 and 13 September 1986, and in report preparation.

Geologist: (D.R. Morgan)

Geological mapping: Sept 11 (½), 12 & 13 (2½ days)
 Travel: 2 days
 Drafting & Report writing: 3 days
 Total: 7½ days at \$350/day:

2,625.

Room & Board:

Motels: 28.89/52.92/29.96
 Meals & food: 53.64/20

111.77
 73.64

Transportation:

Car: 778 km at 25¢/km 194.50
 Truck rental: 159.37
 Gas: 114.75

468.62

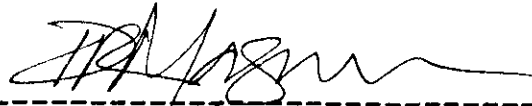
Printing, Xeroxing, report preparation:

30.00

TOTAL EXPENSES:

3,309.03

Signed,



 David R. Morgan, Geologist, P. Eng.
 Vancouver, B.C. 9 November 1986

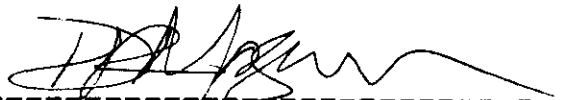


10 - 0 STATEMENT OF QUALIFICATIONS:

I, David R. Morgan of 3424 West 6th Avenue, Vancouver, B.C., V6R 1T3, do hereby certify that:

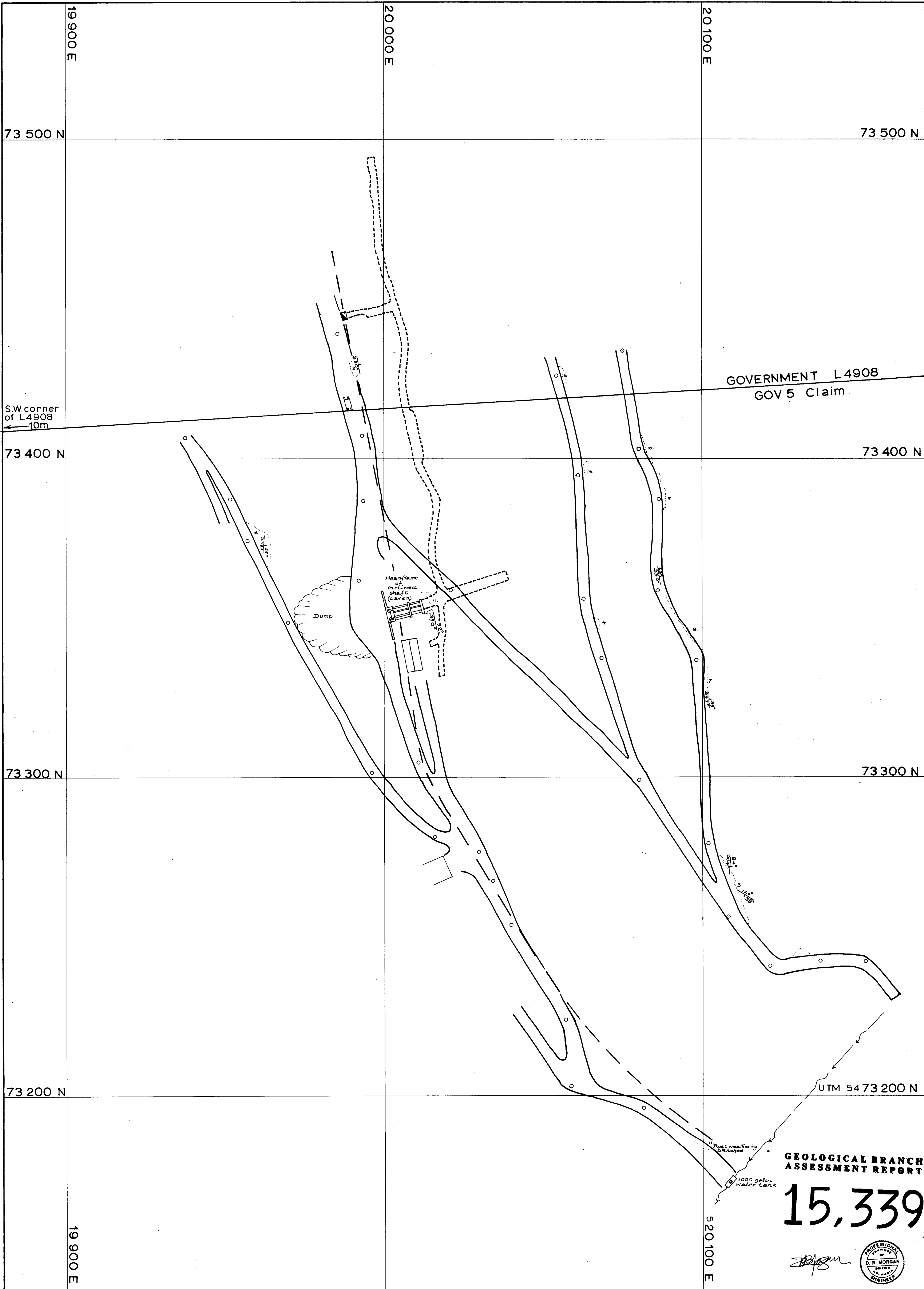
1. I am a 1954 graduate of McGill University, Montreal with a B.Sc Degree in Honours Geology.
2. I am a registered member, in good standing, of the Association of Professional Engineers of the Province of British Columbia.
3. I personally carried out the mapping of the GOV 5 claim 40 km north of Creston, B.C., 82-F/7(E), as described in this report.

Signed,



David R. Morgan, Geologist, P. Eng.
Vancouver, B.C. 9 November 1986





GOVERNMENT L4908
GOV 5 Claim

S.W. corner
of L4908
← 10m

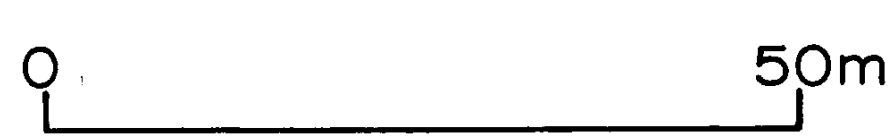
GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,339

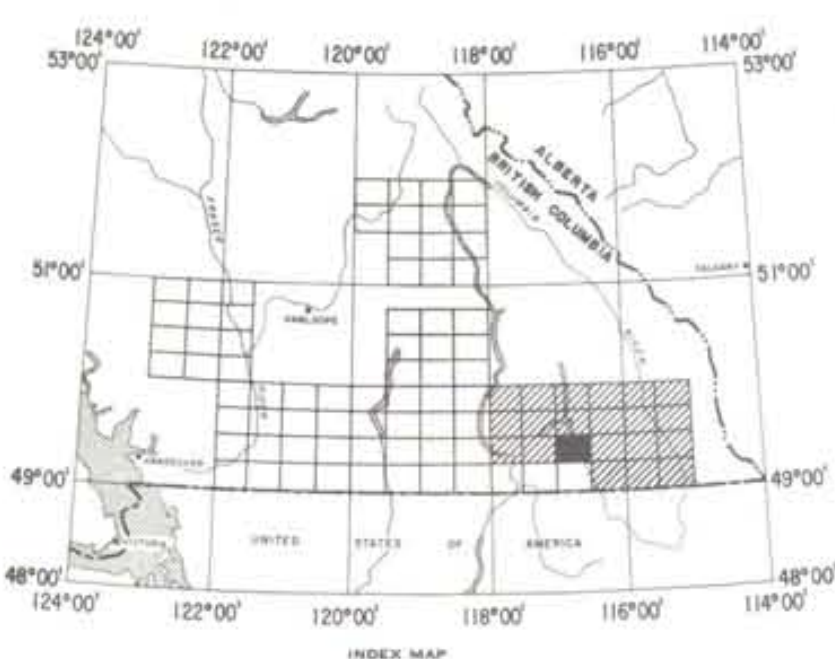
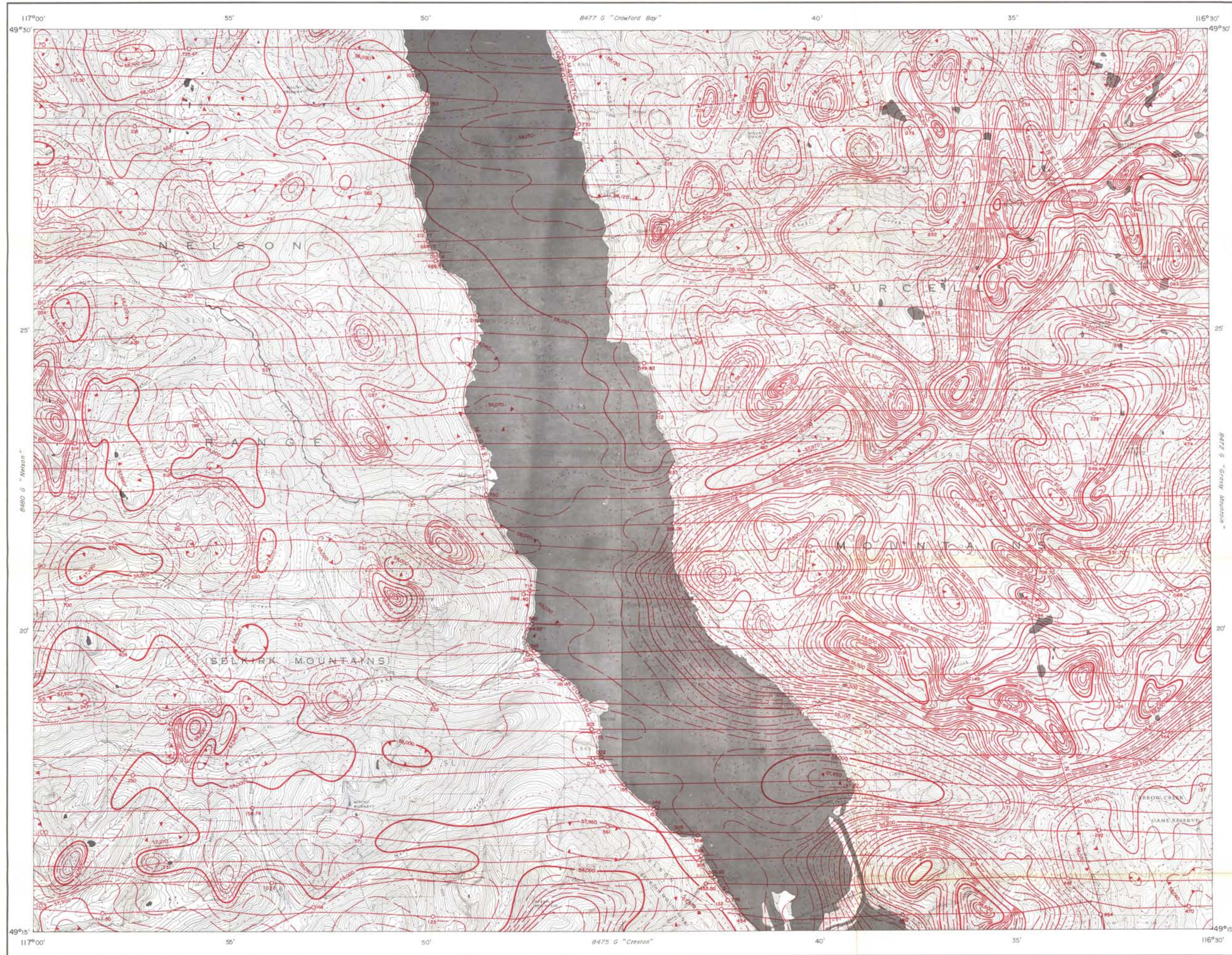
[Signature]
D. R. MORGAN
PROFESSIONAL
ENGINEER

LEGEND

	Vein
	Lamprophyre dyke (Outcrop 2)
	Granodiorite (Outcrop 1, 3-12)



GOV 5 Claim Boswell, Nelson MD, N.T.S: 82-F/7	
GEOLOGY	
Scale: 1:500 (1cm to 5m)	Date: 9 November 1986
By: D.R. Morgan, P.Eng.	



ISOMAGNETIC LINES (absolute total field)

- 500 gammas
- 100 gammas
- 20 gammas
- 10 gammas
- Magnetic depression
- Flight lines 15 687
- Flight altitude 1000 feet above ground level

MAP 8476G

BOSWELL
BRITISH COLUMBIA

Scale: One Inch to One Mile = $\frac{1}{63,360}$ Miles



Airborne Magnetic Survey by Geotrex Limited, from Sept. 1969 to June 1970.

Survey flown with a helicopter owned by Klondike Helicopters at an average speed of 90 m.p.h.

The topography for this map was obtained from topographical map sheets published by the Department of Energy, Mines and Resources, Ottawa.

No correction has been made for regional variation.

The magnetic data on this map were compiled from information recorded along the flight lines shown. The anomalies expressed by the magnetic contours are dependent on the variable magnetic intensities of the underlying rocks, and may be due to conditions near, or at unknown depths below the surface. High magnetic anomalies normally indicate the presence of basic rocks, such as diabase, gabbro, or serpentinite, which have a relatively high iron content, but in special instances may be due, or partly due, to concentrations of magnetic minerals. By means of the magnetic anomalies, various rock bodies or structural features, such as faults or folds, may be traced into, or across, areas of few or no outcrops. In many instances, however, no interpretation of particular anomalies may be possible without further geological information.

MAP 8476G
BOSWELL
BRITISH COLUMBIA
SHEET 82 ^F/₇