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LOG NO: 1221	RD.
ACTION:	
FILE NO: 87-926-16666	

GEOLOGICAL AND GEOCHEMICAL REPORT

on the

SECOND CLAIM GROUP

CLINTON MINING DIVISION, BRITISH COLUMBIA

Latitude $51^{\circ} 03' 21''$ North

Longitude $122^{\circ} 03' 14''$ West

N.T.S. 920/1E

SUB-RECORDER RECEIVED	
DEC 16 1987	
M.R. #	\$
VANCOUVER, B.C.	

by

JOHN A. McCLINTOCK, P.Eng. (B.C.)

Owner/Operator: Rudolf M. Durfeld

December 9, 1987

Vancouver, B.C.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

FILMED

16,666

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A. INTRODUCTION

1. Location

The Second property, comprised of the Second mineral claim group in the Clinton Mining Division, is located thirty-three kilometers due west of the Village of Clinton and seven kilometers west of the Fraser River. (Figure 1) More precisely it is located at 51 degrees 3 minutes north latitude and 122 degrees 3 minutes west longitude. (National Topographic System Map 920/1)

2. Access and Physiography

Access to the property is via 80 kilometers of seasonal gravel road from the Village of Lillooet, or by helicopter from Williams Lake or Lillooet.

The property is bisected by the steep, immature and narrow V-shaped valleys of Second Creek and its tributaries. The elevation on the property varies from 700 meters (2,300 feet) in lower Second Creek in the north, to summits of 1,750 meters (5,800 feet) in the south.

Vegetation on the Second property is characterized by open forests of mature fir and pine with undergrowth of grass that is typical of the dry climate (mean annual precipitation of less than 30 centimeters) in this area. Locally, in areas of recent forest fires, the forest cover consists of closely spaced, immature fir and pine.

3. Ownership

The Second property is comprised of seven contiguous modified grid mineral claims for a total of 110 claim units. The status of these claims is summarized below and the relative claim locations are plotted on figure 2.



DURFELD GEOLOGICAL
 SECOND CLAIM GROUP
 Clinton Mining Division
 NTS-92 0/1 1:50,000

Fig 1 22°00'

<u>Claim Name</u>	<u>Record Number</u>	<u>Number of Units</u>	<u>Record Date</u>
SECOND 1	2082	20	Sept. 19, 1986
SECOND 2	2083	20	Sept. 19, 1986
SECOND 3	2097	10	Oct. 16, 1986
SECOND 4	2098	12	Oct. 16, 1986
SECOND 5	2298	18	June 29, 1987
SECOND 6	2299	15	June 29, 1987
ULCER	2322	15	Aug. 12, 1987

Early exploration in this area would have coincided with the Gold Rush on the Fraser River and subsequent placer mining in Watson Bar Creek, just to the north of the Second property, during the period 1860 to 1900.

In June 1980, E and B Exploration staked much of what is now the Second property as the Carolyn 1 to 8 claims. E and B Explorations Inc. staked the ground to acquire several large alteration zones in Jackass Mountain Group Sedimentary rocks. Subsequent exploration by E and B consisted of prospecting, contour soil sampling and rock geochemistry. Dome Mines also staked claims over what is now part of the Second property in 1980. These claims, called the Leon 1 to 5, were prospected and grid-soil sampled by Dome.

Work by E and B Explorations on the Carolyn claims identified a northwesterly trending zone of silicification, kaolinization and carbonitization that is coincidentally anomalous in mercury, arsenic and gold.

5. Purpose of Program

Much of this anomaly on the Carolyn claims has subsequently been covered by the Second 1, 2 and Ulcer mineral claims. To further evaluate this anomaly, additional mapping at a scale of

1:5,000, in conjunction with limited geochemical sampling, was undertaken.

B. GEOCHEMICAL SURVEY

As a first pass evaluation of the claims, both conventional silt samples (SEC 1 to 4), and pan concentrated silt samples (SEC 11 to 13), were collected from Second creek and its tributaries. To assess a zone of intensely silicified and carbonitized Jackass Mountain Group rocks and quartz-feldspar porphyry, a test line of soil samples (DS 1 to 8) was collected.

The pan concentrate samples were sieved in the field to -40 mesh, panned and checked for visible gold. The concentrates were placed in plastic sample bags. Silt samples were collected from the active part of the stream channel, while soil samples were obtained from the "B" soil horizon. Silt and soil samples were placed into kraft paper envelopes and, along with the pan concentrates, sent to Acme Analytical Laboratories in Vancouver for analyses for gold and 29 other elements.

Gold analysis was carried out on a 10 gram sub of -80 mesh material for the soil and silt samples after a hot aqua regice digestion and a M.I.B.K. extraction. A 10 gram subsample of the -35 mesh pan concentrate underwent a similar digestion and extraction. The extract was analyzed for gold by standard atomic absorption techniques. Twenty-nine other elements were analysed by standard ICP methods on 0.5 gram subsamples. Sample results are plotted on Figure 2 and listed in Appendix I of this report.

An insufficient number of soil samples was collected to carry out a meaningful statistical analysis. However, comparison with results obtained from soil sampling by E and B Exploration, indicates the samples are anomalous for both arsenic and gold (except sample DS-3).

Silt samples SEC 1 to 3 show elevated copper values, but otherwise returned background values in gold, antimony and copper, arsenic and zinc values.

C. GEOLOGY

1. Regional Geology

The vicinity of the Second property has been mapped by H.W. Tipper of the Geological Survey of Canada (92/0, Open File 534). Tipper shows the claim area to cover a northerly trending splay of the Fraser River Fault that brings rhyolitic to dacitic pyroclastic and flow rocks of Eocene-age in contact with clastic sedimentary rocks of the lower Cretaceous-age Jackass Mountain Group.

2. Second Property Geology

The Second property was mapped at a scale of 1:5,000 using a photographic enlargement of a government published 1:50,000 for control (Figure 2).

Lithography:

The oldest rocks on the Second property are a thick sequence of coarse to fine clastic sedimentary rocks of the Cretaceous-age Jackass Mountain Group (Unit Sd). On the claims, these rocks are predominantly medium bedded arkoses and greywaches interbedded with minor siltstone. Polymictic conglomerates containing granitoid and volcanic clasts were observed in the west of the property on the boundary between the Second 3 and 6 mineral claims.

In the northern area of the Second 2 mineral claim, the Jackass Mountain sedimentary rocks have been intruded by a stock-shaped body of medium grained, hypidiomorphic granular to porphyritic granodiorite (Unit Gd). Elsewhere on the claims, the sedimentary rocks are cut by dykes of feldspar porphyry dykes (Unit

FP) which are believed to be apotheses of the main granodiorite stock. The feldspar porphyry and granodiorite are thought to be late Cretaceous or early Tertiary in age. These intrusive rocks are in turn intruded by quartz porphyry dykes (Unit QP) of probably Tertiary-age.

Structure:

The structure in the Second property area is dominated by the north-northwesterly trending splay of the Fraser River Fault which has brought Eocene volcanic rocks in contact with the Jackass Mountain Group rocks.

West of the fault, the Jackass Mountain Group strata strikes northeasterly and has a moderately westerly dip. Several fault and shear zones are present in these clastic sedimentary rocks. These fault and shear zones have north-northwesterly trends and are believed to be subsidiary faults to the main Fraser River Fault.

Alteration and Mineralization:

Hydrothermal alteration as an overprinting of silicification, argillization and carbonatization, has been mapped on the Second property (Figure 2). Silicification consists of both fracture-fillings and pervasive replacement of the rock. Quartz veins are characteristic of open space filling, with both drusy and banded textures common. Much of the quartz is chalcedonic and often interbanded with carbonate. Argillic alteration consists of kaolinization of feldspars. Carbonatization varies from fracture fillings and widely spaced veins to replacement of the matrix of the clastic sedimentary rocks.

From the distribution of these alteration assemblages, it is evident that the carbonate, argillic and silicification alteration zones are generally coincident and broadly concordant with the trend of the main north-westerly fault.

Pyrite was noted as disseminations or dry fracture fillings in all lithologies except the Eocene-age volcanics. Chalcopyrite and malachite occurs as disseminations in altered granodiorite and in quartz veins.

Accessory minerals observed on the quartz-carbonate veins in order of abundance are pyrite, chalcopyrite, stibnite, cinnibar and galena.

The fact that flakes of gold were panned in several locations in Second Creek, suggests the potential for lode gold mineralization in the drainage area.

D. CONCLUSIONS

In the area of the Second property, a north-northwesterly trending splay of the Fraser River fault cuts clastic rocks of the Lower Cretaceous Jackass Mountain Group. This structure and related subsidiary structures may have acted as a focus for the hydrothermal alteration.

The presence of anomalous gold in soil samples suggests potential for lode gold mineralization in areas of altered rock.

APPENDIX 1

Geochemical Analyses

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO₃-H₂O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOIL/SILT P3-PAN CONC P4-ROCK AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: OCT 20 1986

DATE REPORT MAILED:

*Oct 28/86*ASSAYER: *D. Toy* DEAN TOYE. CERTIFIED B.C. ASSAYER.

DURFELD GEOLOGICAL FILE # 86-3290

PAGE 1

SAMPLE#	Mo PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe %	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca %	P %	La PPH	Cr PPH	Mg %	Ba PPH	Ti %	B PPH	Al %	Na %	K %	W PPH	Au# PPB
DS-1	3	143	8	97	.3	22	16	569	6.04	418	5	ND	2	81	1	6	2	124	.74	.038	8	19	.56	263	.02	9	2.05	.16	.06	1	18
DS-2	6	77	9	89	.3	35	15	451	4.96	313	5	ND	2	71	1	2	2	97	.53	.024	7	35	.70	369	.08	7	2.45	.08	.10	1	25
DS-3	4	64	9	90	.2	32	21	1132	4.54	114	5	ND	1	166	1	2	2	68	2.61	.036	10	18	.58	399	.04	9	1.55	.08	.11	1	3
DS-4	3	77	5	95	.2	38	21	645	5.92	295	5	ND	2	112	1	2	2	108	.83	.038	5	31	1.10	212	.09	8	2.45	.15	.20	1	10
DS-5	3	215	11	97	.4	29	18	438	6.12	715	5	ND	3	74	1	9	2	109	.60	.038	9	24	.90	534	.02	8	2.63	.09	.08	1	44
DS-6	2	162	9	90	.2	14	16	902	4.33	24	5	ND	3	75	1	2	2	82	.64	.053	17	12	1.34	163	.02	6	3.40	.07	.25	1	14
DS-7	5	91	9	69	.1	26	13	356	4.85	196	5	ND	2	41	1	5	2	91	.40	.036	6	25	.41	179	.07	9	1.39	.06	.11	1	11
DS-8	6	147	12	75	.3	32	16	536	5.33	261	5	ND	2	73	1	2	2	103	.59	.038	10	32	1.01	209	.07	10	2.61	.10	.16	1	22
SEC-1	3	62	8	53	.2	26	11	424	3.58	96	6	ND	2	202	1	4	2	79	3.62	.064	4	31	.70	282	.05	14	.97	.09	.07	1	1
SEC-2	3	63	6	65	.1	31	13	534	3.54	47	5	ND	2	119	1	2	2	74	1.69	.062	5	28	.98	127	.08	12	1.30	.09	.06	1	8
SEC-3	2	32	8	66	.2	36	11	532	3.10	23	5	ND	2	76	1	2	2	67	.88	.057	6	34	.75	74	.13	8	1.32	.06	.06	1	2
SEC-4	2	40	9	78	.2	24	11	502	3.44	41	5	ND	2	130	1	2	2	81	.89	.052	5	25	.76	161	.11	13	1.63	.07	.07	1	4

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Pan Con

SAMPLE#	Mo PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Ni PPH	Co PPH	Mn PPH	Fe %	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca %	P %	La PPH	Cr PPH	Mg %	Ba PPH	Ti %	B PPH	Al %	Na %	K %	W PPH	Au# PPB
SEC-11	2	60	16	105	.1	70	24	667	13.79	98	16	ND	5	256	1	2	2	434	1.15	.090	37	193	1.18	1323	.40	2	.97	.15	.07	13	5
SEC-12	1	85	10	96	.1	68	23	630	10.25	229	8	ND	3	147	1	6	2	308	1.51	.091	32	128	1.34	833	.31	11	1.05	.16	.06	1	1
SEC-13	11	90	31	714	.1	83	28	3401	24.39	9	5	ND	4	35	2	2	2	1012	.34	.042	29	242	.62	115	1.59	2	.81	.10	.02	1	10

APPENDIX II
ITEMIZED COST STATEMENT

TECHNICAL STAFF

Geologists:

R. Durfield	Sept. 19, 20, 21, 22, 23 and 24, 1986 June 4, July 13, 14, 15, Sept. 18, 19, 20 and 24, 1987	14 days @ \$250.00 per day	\$ 3,500.00
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J. McClintock	Sept. 19, 20, 21 and 33, 1986 Sept. 18, 19 and 20, 1987	7 days @ \$250.00 per day	1,750.00
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Assistants:

D. Dunlop	Sept. 20 and 21, 1986 July 13, 14 and 15, 1987	5 days @ \$150.00 per day	750.00
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TRUCK RENTALS

12 days @ \$50.00 per day	600.00
Truck Fuel	300.00

ROOM AND BOARD

26 man days @ \$20.00 /man/day	520.00
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<u>GEOCHEMICAL ANALYSES</u>	150.00
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<u>REPORT PREPARATION AND DRAFTING</u>	500.00
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TOTAL COST OF PROGRAM	\$ 8,750.00
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R.M. Durfeld, B.Sc.
(Geologist)


APPENDIX III

Statement of Qualifications

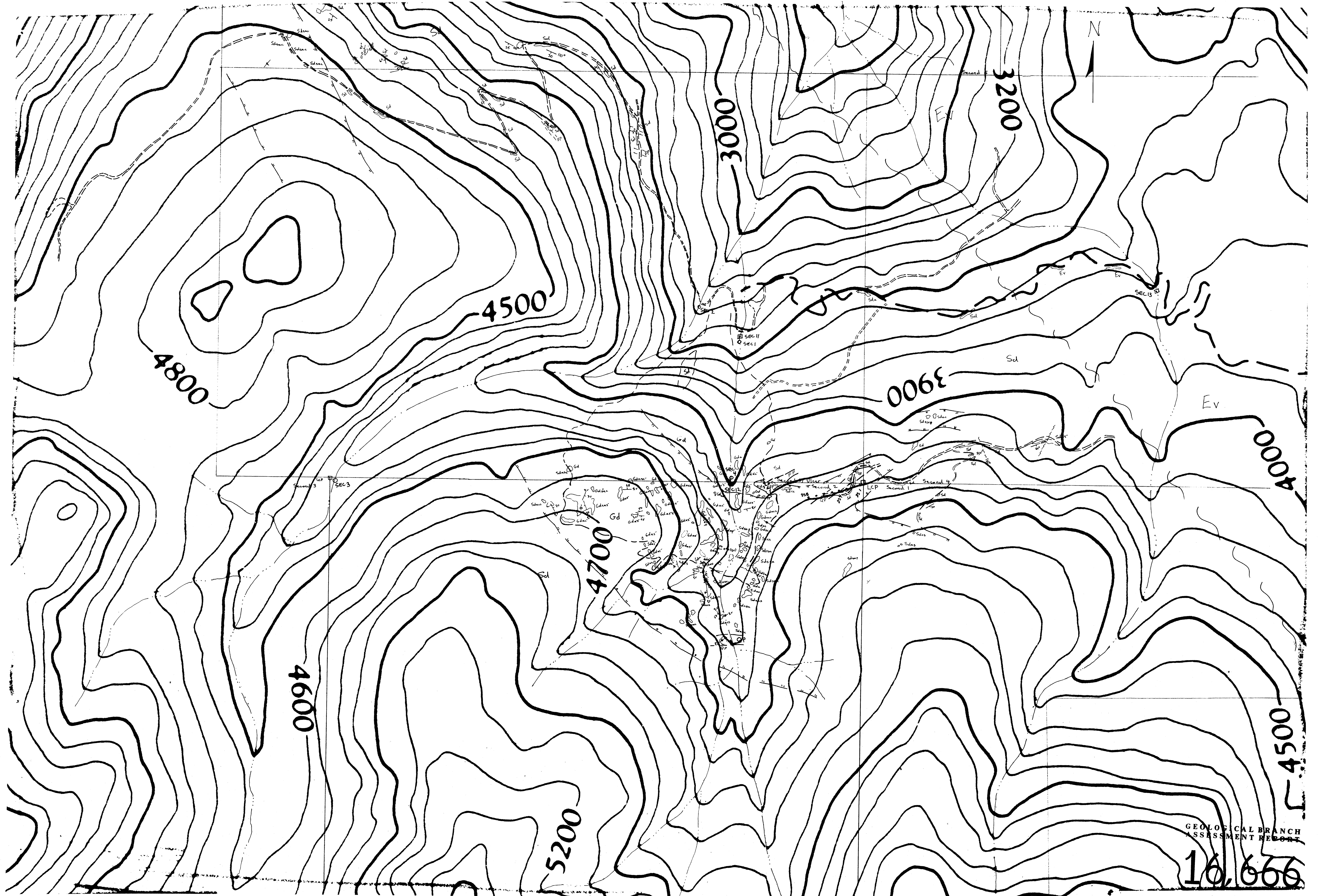
I, JOHN A. McCLINTOCK, do hereby certify:

1. That I am a consulting geologist with offices at 32841 Ashley Way, Abbotsford, B.C.
2. That I am a graduate of the University of British Columbia, B.Sc. Geology 1973, and have practiced my profession with various mining and/or exploration companies and as an independent geological consultant since graduation.
3. That I am a Professional Engineer registered with the Association of Professional Engineers in the Province of British Columbia.
4. That I am the author of this report that is based on geological mapping and geochemical sampling that was conducted on the Second property during the period September 20th, 1986 to October 15th, 1987.

Dated at Abbotsford, British Columbia; this 16 day of December 1987.

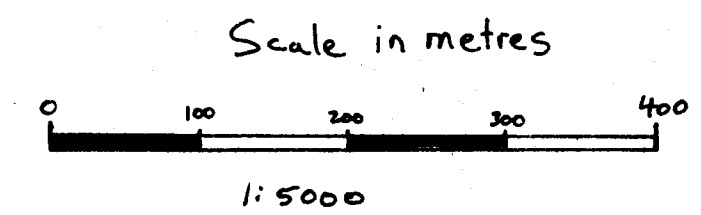


John A. McClintock, B.Sc., P.Eng.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,666



Rock Types

Ev... Basalt: tuffs, flows
 QP... Quartz Porphyry
 FP... Feldspar Porphyry
 Gd... Granodiorite
 Sd... Jackass Mountain Group:
 clastic sedimentary rocks, sandstone, siltstone, minor conglomerate.

Modifiers

S... silicification, pyroxene and quartz veins
 a... argillification, trace mineralization
 c... carbonatization, calcic veining
 g... quartz veining
 p... pyrite
 sp... chalcoprite
 h... hematite

GA... Outcrop
 LG... Geological Contact
 SL... Strike/Dip Reading
 SD... Strike/Dip quartz vein
 F... Fault
 SA... Silicified, argillically altered zone

Sec I... Heavy Mineral Sample
 Sec II... Soil Sample
 DS... Soil Sample

J. M. O'Neil GEOLOGY

Figure 2