1989 Prospecting Report
on the
SCUD NORTH PROPERTY
GRAN9, GRAN10 and CANYON17 Claims

Liard Mining Division
NTS: 104G/6
Lat: 57° 17' N
Long: 131° 18'W

Owners: Homestake Mineral Development Company
1000 - 700 W. Pender St.
Vancouver, B.C.
and
Equity Silver Mines Ltd.
Suite 13 - 1155 Melville St
Vancouver, B.C.

Operator: Homestake Mineral Development Company

R.G. Carmichael
D.E. Marud
June 30, 1989

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SUMMARY

The Scud North property is located in the Stikine region of British Columbia. The property consists of three claims (GRAN9, GRAN10, CANYON17) totalling 56 units and is owned by Homestake Mineral Development Company and Equity Silver Mines Ltd.

Work on the property was carried out on June 5 and June 14, 1989 and involved prospecting as well as the collection of 6 rock samples, 21 soil samples and 2 heavy mineral samples.

The geology of the claim group is well summarized on the 1:50 000 scale geology map by Brown and Gunning (BCDM Open File 1989-7) and was found to be accurate. Due to the size of this property and the extreme topography over some of it, much of the claim was not visited.

Based on the results of this work program, no further work is recommended on the Scud North claim group.

1.0 INTRODUCTION

1.1 Location and Access

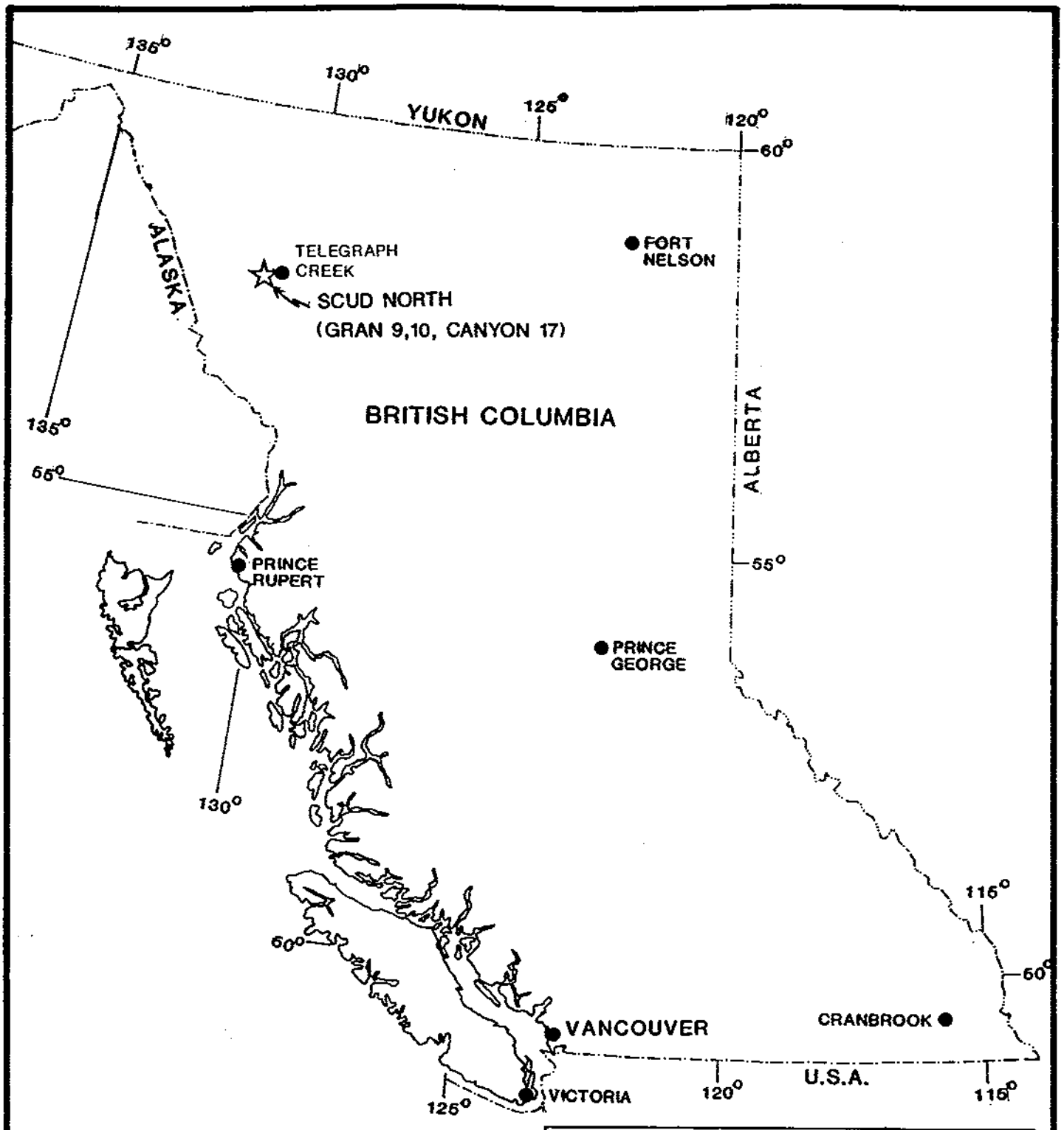
The Scud North property is located in the Stikine region of northwestern British Columbia approximately 70 km south-southwest of the village of Telegraph Creek (Figure 1.1). The claims are centred at 57° 17' N latitude and 131° 19' W longitude on NTS map sheet 104G/6.

Access to the property is via helicopter from Telegraph Creek, which is connected to Dease Lake by an all-weather road and serviced by fixed-wing flights from Smithers, B.C. The Stikine River provides navigable water access from Wrangell, Alaska north to Telegraph Creek.

1.2 Claim Status

The Scud North Group consists of three claims totalling 56 units. The claims were recorded on June 14, 1988 and are owned by Homestake Mineral Development Company and Equity Silver Mines Ltd. Assuming acceptance of this assessment work, claim data will be as follows:

CLAIM	UNITS	RECORD #	RECORDING DATE	EXPIRY DATE
GRAN9	18	4666	June 14, 1988	June 14, 1990
GRAN10	18	4667	June 14, 1988	June 14, 1990
CANYON17	20	4673	June 14, 1988	June 14, 1990



HOMESTAKE MINERAL DEVELOPMENT COMPANY

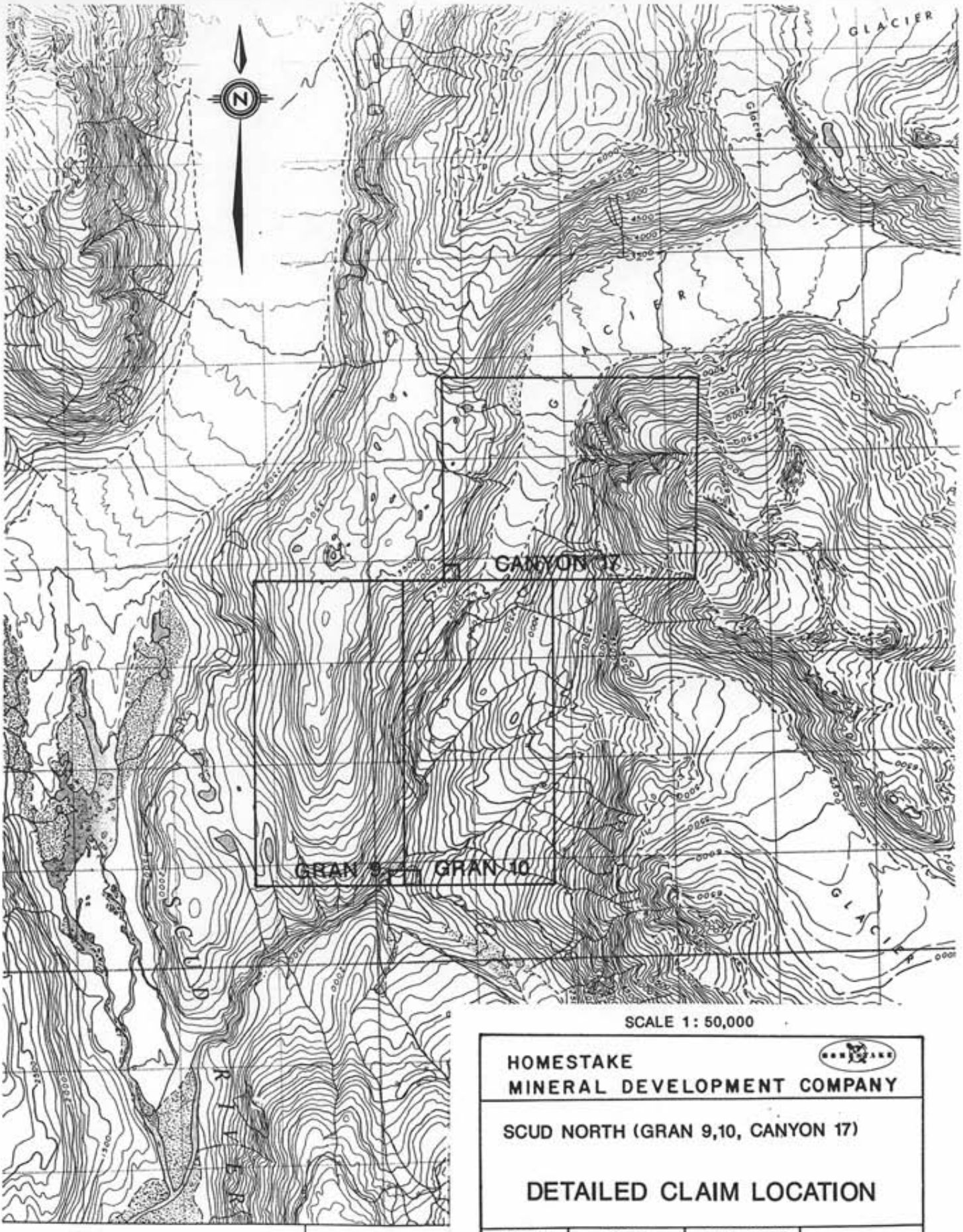
GRAND CANYON PROJECT, B.C.

SCUD NORTH

(GRAN 9,10, CANYON 17)

LOCATION MAP

DRAWN	DATE	FILE CODE	
KMc	11/87	104G	FIGURE 1.1
Revised			



SCALE 1: 50,000

HOMESTAKE
MINERAL DEVELOPMENT COMPANY

SCUD NORTH (GRAN 9,10, CANYON 17)

DETAILED CLAIM LOCATION

DRAWN	DATE	FILE CODE	FIG. 2.2
P.H.	Aug., 10, 89	104G/3,6	
Revised			

IVAL ..... 100 FEET

1.3 Physiography

The Scud North property is characterized by extremely rugged topography and is partially covered by glaciers. A deep, narrow canyon bisects the property. On the CANYON17 claim, only the extreme eastern part was visited as the central area is covered by a glacier and the western part is inaccessible. A long, level ridge with very steep slopes runs down the middle of GRAN9. This ridge was snow covered during the program. GRAN10 is largely inaccessible due to large cliffs. Elevations on the property vary from 390m to 1700m, and vegetation, where present, is mainly slide alder with some spruce and balsam forest.

1.4 Exploration History

No previous work is recorded in the vicinity of the property.

1.5 Present Work

The 1989 work program outlined in this report was designed to locate areas of anomalous metal values and to assess the economic potential of the property. It consisted of rock sampling, stream sediment sampling, heavy mineral sampling and prospecting.

One day (June 5) was spent by two 2-man crews prospecting and collecting geochemical samples and one day (June 14) was spent by one 2-man crew collecting soil samples.

2.0 REGIONAL GEOLOGY

The property lies on the boundary between the Coast and Intermontane tectonic belts. This area is underlain by rocks of the Stikine Terrane (Stikinia) consisting of Paleozoic schists, phyllites and greenstones of the Stikine Assemblage, Mid to Upper Triassic sedimentary and volcanic rocks of the Stuhini Group (Kerr, 1948), and Late Cretaceous to Tertiary continental volcanic arc assemblages of the Sloko Group (Logan and Koyanagi, 1989).

Three stages of plutonism are recognized in the area. The Hickman batholith is composed of Early to Middle Triassic quartz diorites and Middle Jurassic quartz monzonites. The third series of intrusive rocks are alkalic, generally syenitic, rocks of Early Jurassic age. These Early Jurassic rocks are associated with mineralization in the area, including the Galore Creek and Schaft Creek porphyry deposits.

These rocks have undergone multiple stages of deformation, forming a complex structural pattern which is complicated by large differences in the competence of the different units. North- and northwesterly-trending normal faults are dominant with narrow west-trending extensional fault zones postdating them (Souther, 1972).

132° 00'
45'
30'
15'
131° 00'
58° 00'
45
30
15'

1 : 250,000
0 6 12 18 Kilometres

MAP MODIFIED FROM SOUTHER, 1971

SCUD NORTH
(GRAN 9,10, CANYON 17)

HOMESTAKE
MINERAL DEVELOPMENT COMPANY

GRAND CANYON PROJECT
TELEGRAPH CREEK B.C.

SCUD NORTH
(GRAN 9,10, CANYON 17)

REGIONAL GEOLOGY

DRAWN	DATE	FILE CODE	
MJD	08/89		FIGURE 3.1

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

29 Fluviatile gravel; sand, silt; glacial outwash, till, alpine moraine and colluvium

28 Hot-spring deposit, tufa , aragonite

27 Olivine basalt, related pyroclastic rocks and loose tephra; younger than some of 29

TERTIARY AND QUATERNARY
UPPER TERTIARY AND PLEISTOCENE

26 Rhyolite and dacite flows, lava domes, pyroclastic rocks and related subvolcanic intrusions; minor basalt

25 Basalt, olivine basalt, dacite, related pyroclastic rocks and subvolcanic intrusions; minor rhyolite; in part younger than some 26

CRETACEOUS AND TERTIARY
UPPER CRETACEOUS AND LOWER TERTIARY
SLOKO GROUP

24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments

22 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills
23. Porphyritic biotite andesite, lava domes, flows and (?) sills

SUSTUT GROUP

21 Chert-pebble conglomerate, granite-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal

20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite; in part equivalent to 22

19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite

JURASSIC AND/OR CRETACEOUS
POST-UPPER TRIASSIC PRE-TERTIARY

18 Hornblende diorite

17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite

JURASSIC
MIDDLE (?) AND UPPER JURASSIC
BOWSER GROUP

16 Chert-pebble conglomerate, grit, greywacke, subgreywacke, siltstone and shale; may include some 13

MIDDLE JURASSIC

15 Basalt, pillow lava, tuff-breccia, derived volcaniclastic rocks and related subvolcanic intrusions

LOWER AND MIDDLE JURASSIC

14 Shale, minor siltstone, siliceous and calcareous siltstone, greywacke and ironstone

LOWER JURASSIC

13 Conglomerate, polymictic conglomerate; granite-boulder conglomerate, grit, greywacke, siltstone; basaltic and andesitic volcanic rocks, peperites, pillow-breccia and derived volcaniclastic rocks

TRIASSIC AND JURASSIC
POST-UPPER TRIASSIC PRE-LOWER JURASSIC

12 Syenite, orthoclase porphyry, monzonite, pyroxenite

HICKMAN BATHOLITH

10 11 10. Hornblende granodiorite, minor hornblende-quartz diorite 11. Hornblende, quartz diorite, hornblende-pyroxene diorite, amphibolite and pyroxene-bearing amphibolite

MESOZOIC

TRIASSIC
UPPER TRIASSIC

9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)

8 Augite-andesite flows, pyroclastic rocks, derived volcaniclastic rocks and related subvolcanic intrusions; minor greywacke, siltstone and polymictic conglomerate

7 Siltstone, thin-bedded siliceous siltstone, ribbon chert, calcareous and dolomitic siltstone, greywacke, volcanic conglomerate, and minor limestone

6 Limestone, fetid argillaceous limestone, calcareous shale and reefoid limestone; may be in part younger than some 7 and 8

5 Greywacke, siltstone, shale; minor conglomerate, tuff and volcanic sandstone

MIDDLE TRIASSIC

4 Shale, concretionary black shale; minor calcareous shale and siltstone

PALEOZOIC

PERMIAN
MIDDLE AND UPPER PERMIAN

3 Limestone, thick-bedded mainly bioclastic limestone; minor siltstone, chert and tuff

PERMIAN AND OLDER

2 Phyllite, argillaceous quartzite, quartz-sericite schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone

MISSISSIPPIAN

1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite

B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic

A Ultramafic rocks; peridotite, dunite, serpentinite; age unknown, probably pre-Lower Jurassic

Geological boundary (defined and approximate, assumed) .....
Bedding (horizontal, inclined, vertical, overturned) .....
Anticline .....
Syncline .....
Fault (defined and approximate, assumed) .....
Thrust fault, teeth on hanging-wall side (defined and approximate, assumed) .....
Fossil locality ..... Ⓕ
Mineral property 15x
Glacier .....

INDEX TO MINERAL PROPERTIES

1. Liard Copper	5. Bam	9. MH	13. Ann, Su
2. Galore Creek	6. Gordon	10. BIK	14. SF
3. QC, QCA	7. Limpoke	11. JW	15. Goat
4. Nabs	8. Poke	12. Copper Canyon	16. Mary

GRAND CANYON PROJECT B.C.

GEOLOGICAL LEGEND

The most economically important exploration targets are porphyry copper-gold-silver deposits and peripheral mesothermal and shear zone-hosted precious metal veins (Logan et al, 1989).

3.0 PROPERTY GEOLOGY

The Scud North property is underlain by Permian limestone and metamorphosed mafic volcanics which have been intruded by rocks of the Hickman Batholith. GRAN9 and GRAN10 are underlain by the limestone and mafic volcanics while CANYON17 is almost completely underlain by quartz monzonite and hornblende gabbro.

The limestone seen on the property is typically grey, homogeneous and massive and carries no mineralization. Two phases of the Hickman Batholith are present, a quartz monzonite phase and a hornblende gabbro phase. Both are unmineralized and homogeneous. The limestone/intrusive contact is a fault contact where it was seen, however it is not accessible in most places and may be an intrusive contact somewhere on the property. The mafic volcanics are reported by Brown and Gunning (1989) to be amphibolite-grade metamorphic rocks which are locally foliated.

Alteration zones along faults represent the most significant mineralization seen on the property. A quartz-carbonate alteration zone with abundant mariposite (?) was noted along the fault contact between the quartz diorite and the limestone at the eastern boundary of CANYON17. A 1cm wide quartz vein with 30% chalcopyrite was seen in the limestone adjacent to this fault. At the contact between the intrusive and the mafic volcanics in the northwestern area of CANYON17, the volcanics carry 2 - 3% pyrite.

4.0 GEOCHEMISTRY

Three types of geochemical samples (heavy mineral, rock and soil) were collected during the work program. Sample locations and results are plotted on Figure 4.1.

4.1 Analytical Methods

Six rock samples were collected from the property and shipped to Acme Analytical Labs. Thirty element ICP and gold by fire assay was done on each sample, and sample locations were marked in the field by metal tags and orange flagging tape.

Twenty soil samples and one silt sample were collected using a maddock, placed in kraft paper bags and air dried. They were then shipped to Acme Analytical Labs where 30 element ICP and gold by fire assay was done. As with other samples, locations were marked in the field with metal tags and orange flagging tape.

Two heavy mineral samples were taken from the creek which drains the main glacier on the property. Stream sediment was sieved through a 20 mesh screen and collected in large plastic sample bags. A standard sample weight of 8kg was used. The samples were shipped to C.F. Mineral Research Ltd. of Kelowna, B.C. for heavy mineral and magnetic separation of the -150 mesh and 150-60 mesh fractions. The heavy non-magnetic fractions were then shipped to Acme Analytical Labs of Vancouver B.C. for analysis by 30-element ICP and gold by fire assay. A portion of each sample was retained and sent to Acme where it was analyzed in the same manner as the stream sediment samples.

4.2 Results

In general, the analytical results from the Scud North Group samples are not encouraging. None of the soil, silt or heavy mineral samples returned significant results. Of the six rock samples collected, three returned interesting results.

Sample 31165 is from a rusty quartz-carbonate alteration zone with abundant (10%) apple green mica. This sample contained 164ppm As and 11ppm Sb. A second sample from the same lithology (31430) contained 41ppm As and 3ppm Sb.

Sample 31166 is from a small (5-10cm wide) quartz - calcite breccia vein within quartz monzonite. This vein carried an average of 1% chalcopyrite as small (1 - 2cm) massive pods. Malachite staining was conspicuous. This sample returned 9002ppm Cu and 4.4ppm Ag.

Sample 31429 is from a small (1 - 10cm wide) quartz vein carrying pods of massive chalcopyrite. The vein is hosted in limestone and cuts a well defined fault surface. The fault is oriented at 300/76, and the vein is at 050/78. The sample represents a high grade grab of massive chalcopyrite and vein material. Results include 62202ppm Cu, 8.6ppm Ag, 304ppm Sb and 70ppb Au.

The heavy mineral samples returned the following results:

sample #	geochemical	-60 to -150 mesh		-150 mesh	
	Au(ppb)	Ag(ppm)	Au(ppb)	Ag(ppm)	Au(ppb)
31097	4	0.3	38	0.6	2238
31167	17	0.1	5	0.1	60

Sample results greater than 8000 ppb gold and/or 3.0 ppm silver are considered anomalous.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The most interesting areas on the property are the intrusive contacts and faults found on CANYON17 and also near the eastern boundary of GRAN10. Much of the

rest of the property is underlain by quartz monzonite or diorite of the Hickman Batholith, or massive Permian limestone. Most of the higher potential areas were visited and samples, with generally poor results. The only significant sample results were from high grade samples of small veins. The economic potential of the claim group appears limited and no further work is recommended.

6.0 REFERENCES

Brown, D.A. and Gunning, M. (1989): "Geology of the Stikine River Area, Northwestern B.C.", B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Field Work, 1988, Paper 1989-1, pp. 251-267.

Holbek, P.M. (1988): "Geology and Mineralization of the Stikine Assemblage, Mess Creek Area, Northwestern British Columbia.", University of British Columbia MSc thesis.

Kerr, F.A. (1948): "Lower Stikine and Western Iskut River Areas, B.C.", GSC Memoir 246.

Logan, J.M. and Koyanagi, V.M. (1989): "Geology and Mineral Deposits of the Galore Creek Area, Northwestern B.C.", B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Field Work, 1988, Paper 1989-1, pp. 269-284.

Souther, J.G. (1972): "Telegraph Creek Map Area, B.C.", GSC Paper 71-44.

7.0 STATEMENT OF COSTS

Labour		
Project Geologist	1 day @ $253/day	$ 253.00
Geologist	1 day @ $165/day	$ 165.00
Senior Assistant	2 days @ $115/day	$ 230.00
Junior Assistant	2 days @ $ 90/day	$ 180.00
Food and Accommodation		
	6 mandays @ $ 90/day	$ 540.00
Geochemical Analysis + Freight		
Rock Samples	6 @ $ 25/sample	$ 150.00
Soil Samples	21 @ $ 25/sample	$ 525.00
Heavy Mineral Samples	2 @ $100/sample	$ 200.00
Supplies		$ 200.00
Mob/Demob		$ 200.00
Helicopter Support (including fuel)		
	4.1 hrs @ $700/hr	$2870.00
Report Preparation	1 days @ $165/day	$ 165.00
TOTAL		$5678.00

APPENDIX I

Analytical Results

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

MASTER N.S. STIKINE/CANYON 11. BC 1046 DMB/AKET.

ICP - .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 SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUN 29 1989 DATE REPORT MAILED: July 5/89. SIGNED BY. C. Leong. D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

HOMESTAKE MINERAL DEV. PROJECT 5711 CN #34 File # 89-1850

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
CN 17-1 31096	1	120	2	63	.1	43	19	1193	4.57	2	5	ND	2	91	1	2	3	94	8.73	.093	8	98	2.48	58	.01	8	.74	.01	.04	1	1
CN 17-1 31165	1	138	4	46	.1	212	26	1222	3.94	164	5	ND	3	186	1	11	2	33	11.07	.041	2	94	3.95	42	.01	4	.18	.01	.09	1	2
CN 17-1 31166	7	9002	7	31	4.4	13	11	1282	4.55	2	5	ND	2	270	1	2	2	57	8.76	.099	5	23	1.42	51	.01	6	1.76	.01	.12	2	9
CN 17-1 31428	13	187	4	25	.8	40	18	204	3.64	60	5	ND	1	22	1	2	2	47	2.05	.133	5	12	.57	23	.06	13	1.95	.03	.06	3	4
CN 17-1 31429	2	62202 ✓	4	73	8.6	74	15	578	7.86	45	5	ND	1	58	1	304	2	1	4.21	.001	2	1	.75	14	.01	5	.04	.01	.01	1	70
CN 17-1 31430	1	78	2	42	.1	67	14	1169	4.23	41	5	ND	2	205	1	3	3	29	11.94	.050	3	49	4.24	36	.01	10	.19	.01	.10	1	1

- ASSAY REQUIRED FOR CORRECT RESULT -

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
31097	1	43	4	35	.1	16	6	241	4.13	7	5	ND	2	29	1	2	3	110	1.22	.092	8	53	.51	37	.06	8	.83	.01	.04	1	4
31334	1	26	5	32	.1	17	6	265	3.69	2	5	ND	1	19	1	2	6	78	.98	.056	11	39	.50	59	.06	3	.66	.02	.06	1	2

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
31526	2	15	17	33	.9	7	4	155	3.67	6	8	ND	1	17	1	2	2	89	.19	.071	8	41	.23	47	.22	6	1.62	.01	.05	2	4
31527	1	91	12	100	.5	41	16	637	4.28	2	9	ND	1	20	1	2	2	78	.53	.089	12	102	1.41	72	.12	9	3.27	.01	.08	1	1
31528	1	28	12	29	.3	8	4	122	4.03	3	5	ND	1	10	1	2	2	70	.12	.060	10	40	.31	30	.38	4	3.23	.01	.03	1	4
31529	2	47	13	42	.8	17	7	225	4.86	6	5	ND	1	18	1	2	2	86	.22	.056	7	68	.60	38	.18	2	2.81	.01	.06	1	1
31530	2	20	12	35	.2	10	4	151	5.64	5	5	ND	1	13	1	2	2	96	.14	.051	10	44	.29	25	.16	2	2.99	.01	.03	1	3
31546	1	19	15	33	.3	6	4	244	6.60	7	5	ND	2	11	1	2	2	90	.10	.083	12	42	.25	28	.14	2	4.15	.01	.02	1	1
31547	1	30	20	35	.1	4	3	151	6.10	7	6	ND	4	5	1	2	2	87	.05	.056	12	47	.21	20	.08	4	5.76	.01	.02	1	1
31548	2	27	12	40	.2	11	5	206	6.74	9	5	ND	3	9	1	2	2	105	.11	.036	8	53	.37	21	.20	2	3.93	.01	.03	1	1
31549	2	47	13	44	.4	20	7	304	6.74	13	9	ND	4	10	1	2	2	119	.15	.062	7	66	.63	37	.20	5	2.25	.01	.03	1	1
31550	2	26	9	39	.1	8	3	97	5.15	3	5	ND	1	7	1	2	3	73	.07	.058	12	177	.15	21	.15	2	4.27	.01	.02	1	1
31551	2	29	17	46	.3	13	5	317	6.28	10	9	ND	1	11	1	2	2	99	.12	.081	14	59	.38	39	.13	3	3.58	.01	.03	2	2
31552	1	25	17	60	.4	28	8	687	6.43	11	5	ND	3	15	1	2	3	114	.19	.059	10	84	.72	43	.20	7	2.84	.01	.04	1	1
31553	4	24	15	58	.4	21	8	611	8.86	11	9	ND	2	9	1	2	2	133	.10	.054	9	98	.49	36	.35	3	2.61	.01	.04	1	1
31554	3	23	16	55	.6	23	7	382	9.21	15	5	ND	1	10	1	2	2	177	.12	.106	5	88	.59	33	.24	4	2.16	.01	.03	1	1
31555	1	16	17	52	.3	15	5	331	3.92	3	5	ND	1	9	1	2	2	83	.13	.057	11	51	.32	36	.15	3	2.78	.01	.03	1	1
31556	1	24	17	93	.1	12	13	934	3.34	5	7	ND	1	6	1	3	2	25	.35	.124	22	32	.33	93	.04	2	6.49	.01	.01	1	1
31557	1	20	23	56	.1	14	6	331	9.87	15	5	ND	2	6	1	2	2	140	.07	.030	10	62	.42	26	.19	2	2.73	.01	.03	1	1
31558	1	23	12	132	.4	27	11	586	4.18	4	8	ND	1	14	1	2	3	77	.61	.043	11	51	1.19	42	.14	13	2.50	.02	.05	1	1
31559	1	22	17	78	.1	19	8	319	5.06	6	5	ND	1	7	1	2	2	78	.31	.087	12	49	.38	24	.15	2	3.23	.01	.03	1	1
31560	4	16	24	99	.1	17	6	180	8.78	17	5	ND	1	4	1	2	2	99	.26	.055	11	35	.24	48	.09	2	3.24	.01	.04	1	1
STD C/AU-S	17	58	40	131	6.8	67	30	994	4.18	40	19	7	36	48	18	14	18	58	.50	.087	38	53	.86	175	.07	36	1.96	.06	.13	12	51

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB	H.M. %	H.M. GM	MAG. WT GM
31167	1	58	4	29	.7	245	20	328	2.56	2	5	ND	1	21	1	2	2	44	.72	.057	3	183	3.45	64	.10	13	.71	.04	.07	1	17	9.00	45.90	6.8

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .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 SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Pulp AU** ANALYSIS BY FA/ICP FROM TOTAL SAMPLE.

DATE RECEIVED: JUL 18 1989 DATE REPORT MAILED: July 29/89. SIGNED BY. C. Leong. D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

HOMESTAKE MINERAL DEV. CO. PROJECT 5711 File # 89-2244 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au** PPB
CC-29-4-31452 -60+150	2	520	6	43	.1	22	20	136	2.24	18	5	ND	2	98	1	2	2	25	1.03	.274	10	26	.43	63	.06	2	.34	.01	.06	44	575
CC-29-4-31457 -60+150	1	425	6	25	.2	16	17	169	2.27	15	5	ND	1	88	1	2	2	27	.69	.162	7	19	.40	56	.06	5	.32	.01	.08	10	18
DD054-31170 -60+150	3	253	38	25	.3	57	61	144	12.78	23	5	ND	2	25	1	2	2	25	.43	.062	7	19	.31	8	.07	8	.37	.01	.02	2	20
DD054-31171 -60+150	3	870	220	143	19.9	49	297	120	21.51	82	5	52	14	20	1	2	15	11	.38	.030	6	4	.15	5	.03	2	.20	.01	.02	108	1061
GX-9-4-31028 -60+150	1	713	67	97	2.5	31	144	180	13.55	210	5	ND	3	23	1	2	2	37	.67	.071	7	5	.20	7	.10	5	.51	.01	.01	1	6300
GX074-31081 -60+150	2	228	20	48	.3	22	78	284	6.42	43	5	ND	2	62	1	2	2	74	.98	.069	7	8	.53	11	.15	6	.84	.01	.01	1	191
BMG-13-4-31055 -60+150	3	525	43	203	3.3	91	99	166	20.83	259	5	3	2	12	4	3	2	27	.44	.035	4	17	.29	6	.07	33	.39	.01	.01	1	146
BMG-13-4-31057 -60+150	2	218	12	224	1.0	30	94	202	16.32	103	5	3	7	31	5	2	2	31	.59	.065	5	8	.32	13	.11	2	.41	.01	.01	1	2167
LC924-31154 -60+150	1	154	28	38	.1	10	9	121	1.58	14	5	ND	16	15	1	2	2	27	.30	.025	4	18	.27	45	.07	2	.28	.01	.01	22	63
LC924-31177 -60+150	1	100	3	18	1.9	7	4	97	.80	14	5	ND	3	16	1	2	2	24	.30	.023	7	20	.21	128	.09	2	.24	.01	.01	7	1255
LC82-4-31085 -60+150	3	688	152	342	7.3	117	98	135	24.18	408	5	5	2	32	6	30	2	23	.35	.030	2	8	.16	6	.02	3	.24	.01	.02	13	520
LC11-4-31255 -60+150	5	178	16	78	.1	21	17	193	3.70	52	5	ND	27	31	1	5	2	43	.51	.046	20	13	.33	76	.16	5	.35	.01	.02	56	16091
CM17-2-31057 -60+150	4	1042	16	53	.3	29	31	150	3.56	51	18	ND	122	24	1	2	2	42	.64	.062	16	12	.54	28	.22	4	.34	.01	.01	11	38
CM10-4-31167 -60+150	1	223	2	19	.1	93	9	99	.72	4	5	ND	4	11	1	2	2	9	.36	.052	5	28	1.39	86	.04	8	.19	.01	.01	1	5
MC20-4-31089 -60+150	1	71	9	66	.1	51	82	184	4.50	16	5	ND	21	19	1	2	3	14	.85	.054	102	6	.22	26	.10	2	.24	.01	.01	1	13
MC214-31094 -60+150	2	188	30	71	2.4	36	159	68	8.21	113	5	ND	31	24	2	3	3	13	1.30	.158	47	5	.17	15	.08	3	.30	.01	.01	39	44
CC-29-4-31449 -60+150	1	579	14	72	.1	25	39	138	5.51	19	5	ND	1	58	1	2	2	24	.46	.084	3	16	.24	28	.05	2	.29	.01	.08	5	44
MK-53-4-31374 -60+150	1	76	9	34	.1	19	20	227	1.99	9	5	ND	1	16	1	2	2	55	1.03	.074	5	21	.73	62	.61	2	.59	.01	.13	1	6
BR32-4-31611 -60+150	5	860	272	311	42.6	179	116	225	26.06	186	5	34	8	22	3	11	97	19	.41	.053	4	9	.20	7	.15	7	.30	.01	.01	22	99999 *
BR32-4-31612 -60+150	34	1236	885	871	9.3	76	144	153	17.20	637	105	ND	507	31	9	4	86	34	.38	.120	101	7	.17	14	.14	8	.43	.01	.04	103	117
BR-32-4-31510 -60+150	5	1062	156	471	5.4	183	126	257	24.30	213	5	3	9	23	6	3	2	43	.51	.051	5	6	.27	6	.25	2	.43	.01	.01	4	2953
MN84-4-31243 -60+150	9	86	11	46	.1	22	72	215	19.82	19	5	4	6	33	3	11	2	66	.34	.067	22	17	.32	9	.03	2	.38	.01	.01	1	8
DD24-4-31398 -60+150	3	801	50	33	.6	19	52	124	2.49	31	5	ND	23	22	1	3	2	20	.34	.039	13	20	.36	50	.07	6	.32	.01	.01	35	10
STD C/AU-S	18	56	43	132	7.1	67	28	925	3.85	43	16	7	36	47	18	14	21	58	.48	.093	38	54	.95	175	.07	34	1.88	.06	.14	11	49

* Gold values ≈ 10600 ppb.

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au** PPB
CC-29-4-31452 -150	1	538	16	57	.1	31	21	244	2.86	39	5	ND	10	326	1	2	2	55	3.29	.993	30	40	.67	61	.08	7	.64	.02	.08	73	3849
CC-29-4-31457 -150	7	557	36	52	3.3	25	25	323	3.49	92	5	12	8	634	1	2	2	88	5.96	1.850	55	29	.58	51	.07	9	.69	.02	.10	72	19892
DD054-31170 -150	6	193	29	53	.7	62	61	408	12.40	23	5	ND	5	42	1	2	2	64	1.18	.277	22	28	.47	27	.08	4	.67	.01	.03	1	160
DD054-31171 -150	5	772	55	82	5.1	43	239	150	14.33	71	65	ND	228	26	1	3	52	15	1.09	.224	19	5	.17	8	.06	3	.32	.02	.02	253	11215
GR-8-4-31028 -150	1	68	11	39	6.8	5	9	237	1.27	12	5	49	8	29	1	2	2	60	2.65	.286	10	8	.44	30	.22	17	1.52	.01	.01	7	12123
GR074-31081 -150	1	321	43	89	4.9	27	122	239	15.10	246	5	6	5	23	2	2	2	49	1.81	.270	11	4	.23	8	.13	8	1.01	.01	.02	1	20361
BMG-13-4-31055 -150	2	413	44	145	3.0	77	104	335	16.21	399	5	3	5	30	1	8	6	53	.86	.089	9	19	.49	9	.12	50	.74	.01	.02	1	5809
BMG-13-4-31057 -150	1	242	45	95	3.1	33	115	197	19.97	162	5	6	3	21	1	2	1	35	1.05	.157	7	6	.21	7	.12	5	.55	.01	.01	1	2622
LC024-31158 -150	3	107	14	68	5.3	11	11	219	2.12	49	5	21	5	36	1	2	2	54	.87	.149	11	20	.46	71	.12	5	.54	.01	.01	99	18225
LC024-31177 -150	2	138	19	53	6.5	12	10	168	1.99	43	5	22	13	56	1	2	2	44	1.27	.289	19	22	.32	66	.15	2	.48	.01	.04	204	20225
LC02-4-31065 -150	6	897	198	379	11.9	123	101	261	26.79	942	5	4	5	46	5	29	2	35	.62	.061	5	9	.22	4	.05	3	.33	.01	.04	36	19173
LC11-4-31155 -150	5	145	15	59	27.2	19	17	229	3.40	58	5	104	30	87	1	6	2	56	1.78	.420	31	15	.40	73	.14	7	.65	.02	.05	475	99999 *
CN17-3-31097 -150	15	1430	125	77	.6	28	41	156	2.96	166	5	2	440	50	1	2	19	32	4.10	1.021	79	11	.24	30	.12	17	.26	.01	.02	114	2238
CN10-4-31167 -150	1	156	10	32	.1	352	28	377	2.23	43	5	ND	14	16	1	2	2	17	.59	.153	10	30	5.17	51	.05	8	.23	.01	.02	1	60
NC20-4-31089 -150	3	190	15	133	.3	85	127	207	6.73	127	5	ND	73	25	1	2	7	19	1.16	.117	160	5	.20	31	.13	5	.29	.01	.02	23	194
NC214-31094 -150	5	179	34	59	1.0	31	103	86	4.83	178	40	ND	170	34	1	2	13	13	2.55	.457	42	4	.22	32	.09	7	.39	.02	.02	83	335
CC-29-4-31449 -150	3	1112	44	80	.6	49	77	276	11.05	111	5	ND	5	466	2	2	2	60	3.39	1.090	32	25	.45	14	.06	2	.50	.01	.09	21	1885
MR-53-4-31374 -150	1	117	27	68	.1	26	31	313	2.76	21	5	ND	21	129	1	2	3	43	3.75	.946	34	31	.77	50	.16	2	.67	.01	.11	2	1683
BR32-4-31611 -150	7	1259	119	256	38.2	206	130	368	24.15	328	5	28	17	64	2	6	15	24	1.26	.380	21	13	.34	6	.19	5	.58	.01	.03	36	77034
BR32-4-31612 -150	70	943	801	539	7.7	43	89	145	4.66	980	1300	ND	2012	33	6	6	170	37	1.60	.371	88	7	.11	29	.14	10	.38	.02	.04	296	1941
BR-32-4-31510 -150	7	1230	212	406	19.8	206	160	396	27.08	600	5	28	15	64	4	5	2	23	.98	.251	17	7	.22	7	.11	6	.39	.01	.02	1	13065
MM84-4-31243 -150	2	129	28	65	.1	17	38	319	5.56	27	5	ND	16	45	2	2	9	51	2.01	.675	70	16	.33	203	.10	2	.80	.02	.02	3	195
DD24-4-31398 -150	10	407	116	49	4.9	26	43	289	3.82	62	5	12	58	78	1	2	6	56	1.12	.187	47	18	.60	76	.09	2	.72	.01	.02	68	1924
STD C/AU-S	18	59	42	132	7.1	70	29	1029	3.96	42	22	7	36	47	18	15	22	58	.46	.094	37	54	.95	182	.07	34	1.92	.06	.14	11	52

* Gold value ≈ 12500 ppb.

APPENDIX II

Sample Summary

NORTH SCUD GEOCHEM (GR 9,10,CN17)

	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION	MINERALIZATION
CN-17	31096	o/c	dk.green,f.g. mafic volcanic	1-2%f.g. diss. pyrite(carbonitized)
	31097	heavy	min.	
	31165	o/c	listwanite?med. grained altered q. monz.	
	31166	o/c	qtz/carbonate breccia vein	2%cpy,5-10 cm width w/ pods of mass. cpy
	31167	heavy	min.	
	31428	o/c	green black v.f.g. grabbro?	finely diss.py 5% + 5% mt.
	31429	o/c	qtz vein 1-10cm wide	massive cpy
	31430	o/c	listwanite?med. grained altered q.monz.	
GR-09	31334	silt		
	31526	soil	minor roots, brown,'B'	
	31527	soil	5%orgs.,brown 'B'	
	31528	soil		
	31529	soil		
	31530	soil	few orgs,red/brown,'B'	
	31546	soil	rusty-brown,'B'	
	31547	soil	rusty brown,'B'	
	31548	soil	1%org,rusty/brown,'B'	
	31549	soil	2%org, orange brown, 'B'	
	31550	soil	orange brown,'B'	
	31551	soil	2%orgs.,brown-orange,	
	31552	soil	1%org,orange-brown,'B'	
	31553	soil	4%orgs,brown-orange,'B'	
	31554	soil	5%org,orange-brown, 'B'	
	31555	soil	10%org, dark brown, 'B'	
	31556	soil	orange-brown,'B'	
	31557	soil	2%org, orange-brown,'B'	
	31558	soil	4%org,brown,'B'	
	31559	soil	5%org., orange brown,	
	31560	soil	3%org, orange-brown,'B'	

NORTH SCUD GEOCHEM (GR9,10 CN17)

STIKINE GEOCHEM RESULTS

CLAIM GROUP	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DESCRIPTION	MINERALIZATION	Au ppb	Cu ppm	Pb ppm	Zn ppm	Mo ppm	W ppm	Sb ppm	As ppm
CN 09	31526		soil'B', brown, minor organics		4	15	17	33	2	2	2	6
CN 09	31527		soil'B', brown, 5% organics		1	91	12	100	1	1	2	2
CN 09	31528		soil		4	28	12	29	1	1	2	3
CN 09	31529		soil		1	47	13	42	2	1	2	6
CN 09	31530		soil'B', red-brown		3	20	12	35	2	1	2	5
CN 09	31546		soil'B' rusty-brown		1	19	15	33	1	1	2	7
CN 09	31547		soil'B', rusty-brown, 2-3% organics		1	30	20	35	1	1	2	7
CN 09	31548		soil'B', rusty-brown, 1% organics		1	27	12	40	2	1	2	9
CN 09	31549		soil'B', brown, 2% organics		1	47	13	44	2	1	2	13
CN 09	31550		soil'B', brown		1	26	9	39	2	1	2	3
CN 09	31551		soil'B', brown, 2% organics		2	29	17	46	2	2	2	10
CN 09	31552		soil'B', brown, 1% organics		1	25	17	60	1	1	2	11
CN 09	31553		soil'B', brown, 4% organics		1	24	15	58	4	1	2	11
CN 09	31554		soil'B', brown, 5% organics		1	23	16	55	3	1	2	15
CN 09	31555		soil'B', dk.brown, 10% organics		1	16	17	52	1	1	2	3
CN 09	31556		soil'B', brown		1	24	17	83	1	1	3	5
CN 09	31557		soil'B', orange-brown, 2% organics		1	20	23	56	1	1	2	15
CN 09	31558		soil'B', brown, 4% organics		1	23	12	132	1	1	2	4
CN 09	31559		soil'B', brown, 5% organics		1	22	17	78	1	1	2	6
CN 09	31560		soil'B', orange-brown, 3% organics		1	16	24	99	4	1	2	17
CN 17	31334		silt		2	26	6	32	1	1	2	2
CN 17	31097	silt			4	43	4	35	1	1	2	7
	31097	h.min.	-60+150 mesh		38	1042	16	53	4	11	2	51
		h.min.	-150 mesh		2238	1430	125	77	15	114	2	166
CN 10	31167	silt			17	58	4	29	1	1	2	2
	31167	h.min.	-60+150 mesh		5	223	2	19	1	1	2	16
	31167	h.min.	-150 mesh		60	156	10	32	1	1	2	43

APPENDIX III

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Darcy Edward Marud, of Apt. 101, 1529 East Third Avenue, Vancouver, British Columbia, Canada, hereby certify that:

1. I am a graduate of the University of Saskatchewan, having been granted the degree of Bachelor of Sciences -Honours degree in Geology in 1985.

2. I have practiced my profession as a geologist in mineral exploration since 1985.

3. I am presently employed as a geologist with Homestake Mineral Development Company of #1000 - 700 West Pender Street, Vancouver, British Columbia.

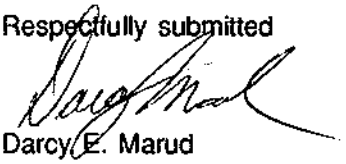
4. The work done in the accompanying report was done under my supervision and with my participation.

5. I am the author/co-author of the above report.

6. I have no direct or indirect financial interest in any companies known by me to have an interest in the mineral properties described by this report, nor do I expect to receive any such interest.

Dated at Vancouver, B.C. this 10th day of August, 1989

Respectfully submitted



Darcy E. Marud

I, Robert G. Carmichael of 4058 West 32 Avenue, Vancouver B.C. do hereby state that:

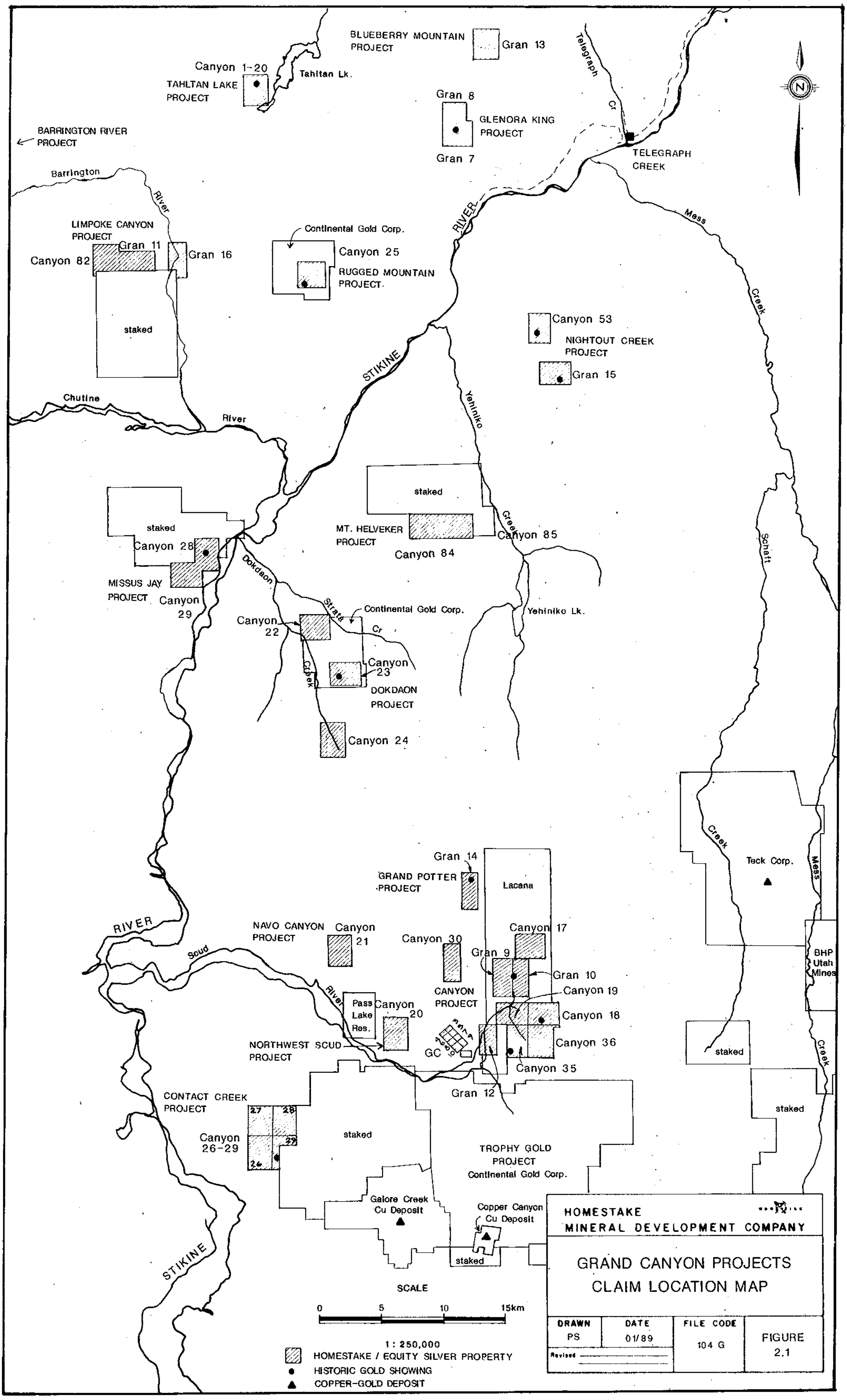
- I graduated with a Bachelor of Applied Science in Geological Engineering in 1987 from the University of British Columbia;

- I have been employed by Homestake Mineral Development Company since May of 1989;

- I was employed by Esso Minerals Canada Limited from May 1987 to February 1989;

- I was employed by Noranda Exploration Company during the summer months of 1985 and 1986.

Robert G. Carmichael
July 27 1989



369 000 E | 131° 20' W | 360 000 E | 361 000 E | 362 000 N | 363 000 E | 364 000 E

6 356 000 N
6 355 000 N
6 354 000 N
6 353 000 N
6 352 000 N
6 351 000 N
6 350 000 N

31096 (0.1) (1)
QUARTZ MONZONITE
GOSSANOUS MAFIC VOLCANICS
Straight Clk
31430 (0.1) (1) qtz - carb. altn.
DBR88-213
31165 (0.1) (2)
31429 (8.6) (70)
LIMESTONE
GLACIER
31097 (0.1) (4)
(.06) (2238)
(.03) (36)
ARGILLITE
CANYON 17
MAFIC VOLCANICS
31428 (0.8) (4)
31166 (4.4) (9)
MMG88-50
QUARTZ MONZONITE

31526 (0.8) (4)
31527 (0.5) (1)
31528 (0.3) (4)
31529 (0.8) (1)
31530 (0.2) (3)
31546 (0.3) (1)
31547 (0.1) (1) ← SIL. ARGILLITE / CHERT
31548 (0.1) (1)
31549 (0.4) (1)
31550 (0.1) (1)
31551 (0.3) (2)
31552 (0.4) (1)
31553 (0.8) (1) ← INTRUSIVE
31554 (0.6) (1)
31555 (0.3) (1)
31556 (0.1) (1)
31557 (0.1) (1)
31558 (0.4) (1)
31559 (0.1) (1) ← LIMESTONE
31560 (0.1) (1)
INTRUSIVE
LIMESTONE

△ 31334 (0.1) (2)
Granite boulders

31167 (0.7) (17) — (0.1) (60) (0.1) (5)
GRAN 9
GRAN 10

LEGEND

- ⊗ Rock Sample
- ▲ Silt
- ■ Soil
- ● Heavy Mineral
- • Mapping Station
- – – Geological Contact/Limit of Outcrops
- ∿∿∿ Fault
- ⁘ Outcrop

Ag-ppm Au-ppb

⊗ 31395 (0.5) (93)
Sample Number
Sample Site

● 31395 (0.5) (93)
(1000) (10000) Heavy Mineral - 150 mesh
(500) (2000) Heavy Mineral - 60 + 150 mesh

Py	Pyrite
Po/Pr	Pyrrhotite
Mg/Mag	Magnetite
qtz vn	Quartz Vein
Sil	Silicified
EP	Epidote
Bi	Biotite
cp	Calchopyrite
F.G	Fine Graned

SCALE 1: 10000

0 100 200 300 400 600 800
METERS

HOMESTAKE MINERAL DEVELOPMENT COMPANY
NORTH SCUD PROPERTY
B.C.
(GRAN 9,10; CANYON 17)

GEOLOGY AND SAMPLE LOCATIONS

DRAWN	DATE	FILE CODE	
P.H.	JULY, 31, 1989	104 G / 6	FIG.4.1

Revised