

LOG NO: 0914	PD
ACTION:	
FILE NO:	

1989 Prospecting Report
on the
RUGGED MOUNTAIN PROPERTY
Canyon 25 Claim

FILMED

Liard Mining Division
NTS: 104G/13
Lat: 57 49'N
Long: 131 36'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
P.M. Holbek
July 21, 1989

BRANCH
SCIENTIFIC REPORT

19,072

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SUMMARY

The Canyon25 property is located in the Stikine region of British Columbia. The property consists of 20 units and is owned by Homestake Mineral Development Company and Equity Silver Mines Ltd.

Work on the property was carried out on June 9, 1989 by a crew of four people. In addition to prospecting, 10 rock and 5 soil and silt samples were collected.

One day of hand trenching and sampling is recommended for this property. Two areas of extremely gossanous soils and ferricrete were located at the syenite-sediment contact. Additional prospecting is recommended to be concentrated along the contact between the syenite intrusive and the hornfelsed sedimentary rocks.

1.0 INTRODUCTION

1.1 Location and Access

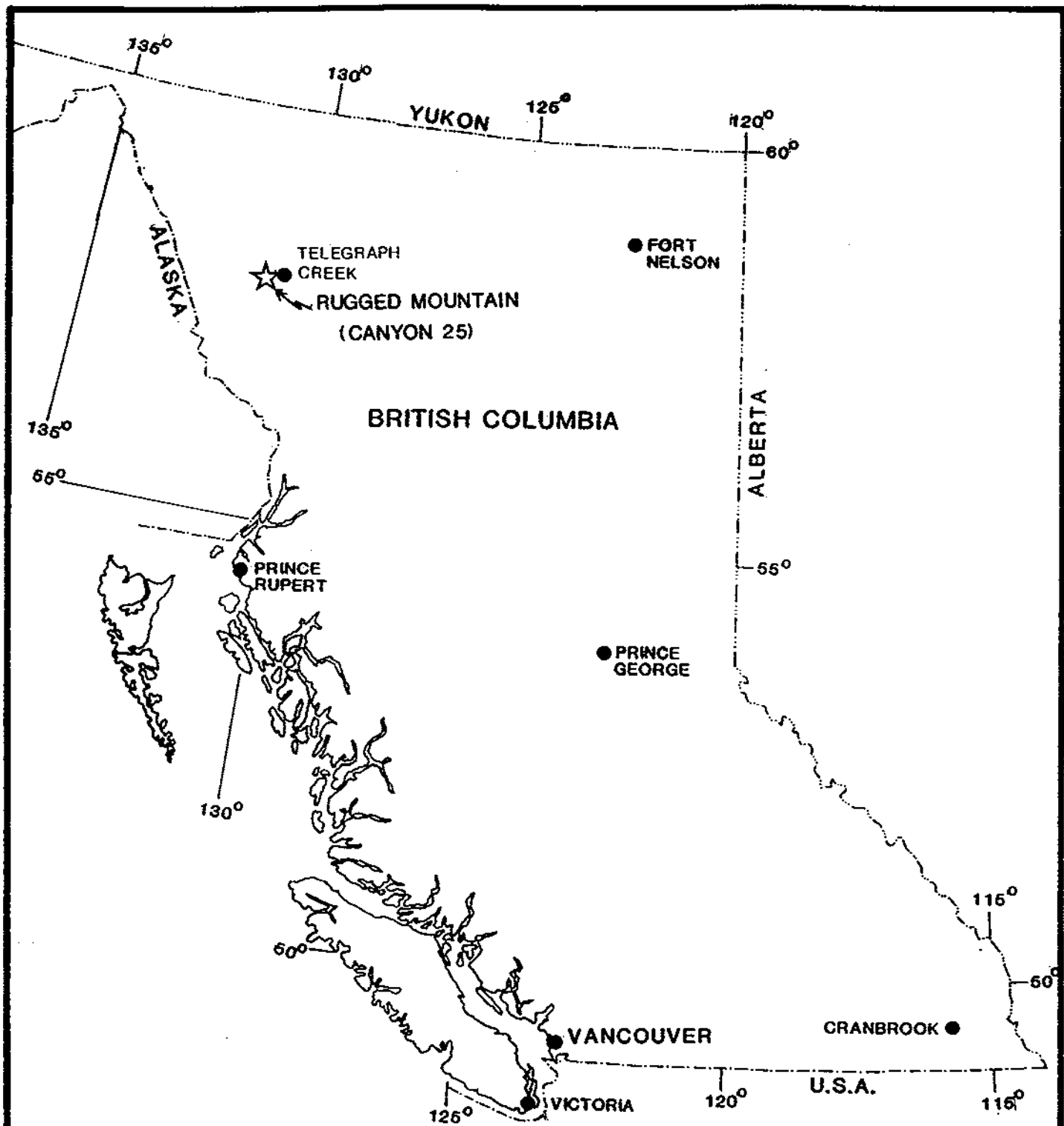
The Canyon 25 property is located in the Stikine region of northwestern British Columbia approximately 25 km southwest of the village of Telegraph Creek (Figure 1.1). The claim is centered at 57° 49'N latitude and 131° 36'W longitude on NTS map sheet 104G/13.


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.

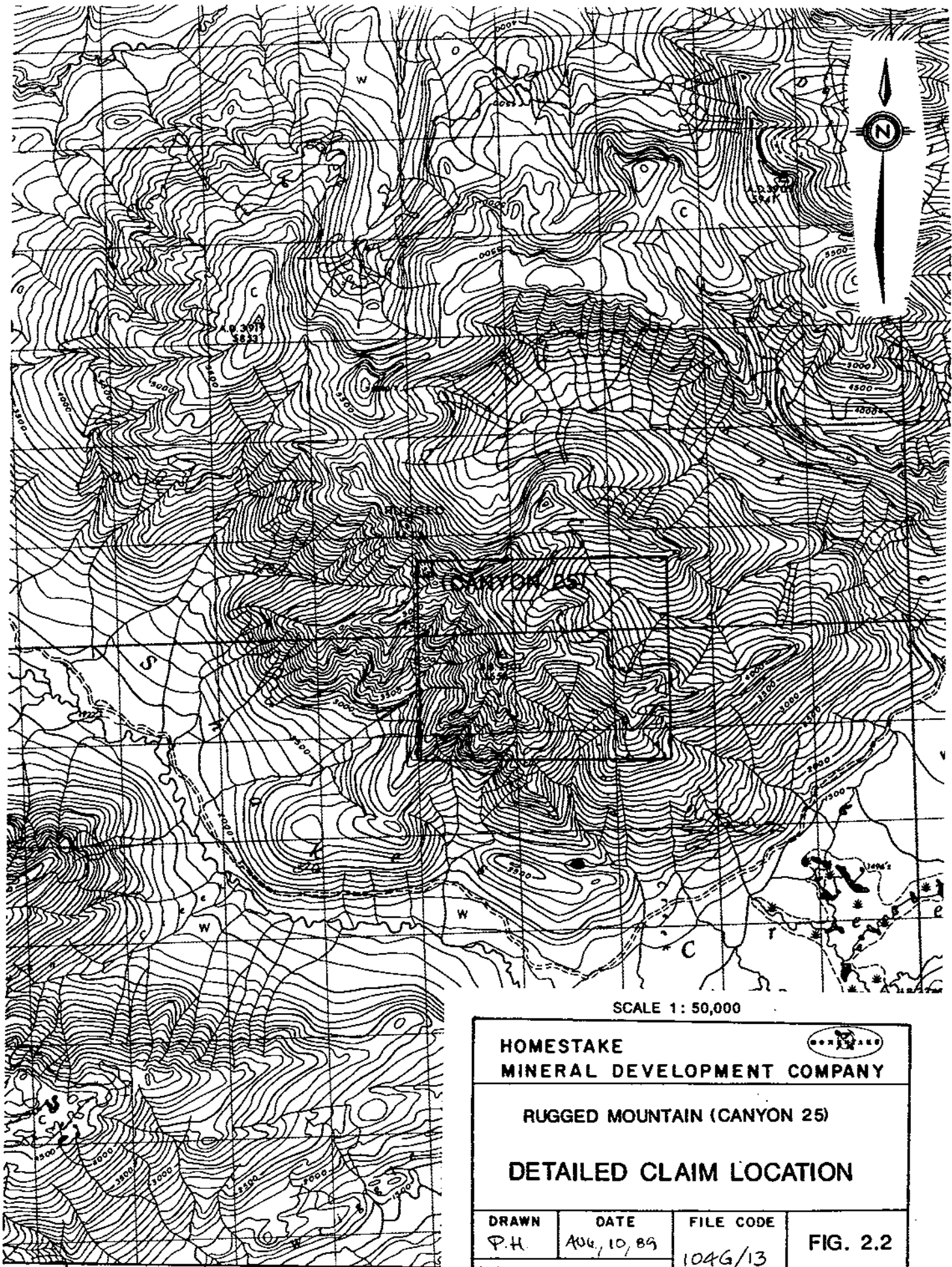
1.2 Claim Status

The Canyon25 property consists of one claim totalling 20 units. The claim was recorded on June 28, 1988 and is 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 #	RECORD DATE	EXPIRY DATE
Canyon25	20	4729	June 28, 1988	June 28, 1990



HOMESTAKE 			
MINERAL DEVELOPMENT COMPANY			
GRAND CANYON PROJECT, B.C.			
RUGGED MOUNTAIN			
(CANYON 25)			
LOCATION MAP			
DRAWN KMc	DATE 11/87	FILE CODE 104G	FIGURE 1,1
Revised _____			



SCALE 1: 50,000

HOMESTAKE MINERAL DEVELOPMENT COMPANY			
RUGGED MOUNTAIN (CANYON 25)			
DETAILED CLAIM LOCATION			
DRAWN P.H.	DATE Aug, 10, 89	FILE CODE 104G/13	FIG. 2.2
Revised _____			

41 | 40' | 42 | 43 | 44 | 45
 | (00) | | | | |

1.3 Physiography

The property covers the southeast spur of Rugged Mountain and is characterized by very precipitous topography to the west and more moderate slopes to the east. Elevations range from 1060m to 1725m and vegetation is primarily alpine tundra.

1.4 Previous Work

No previous work is reported on 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, soil sampling and prospecting. In total, 10 rock and 5 silt and soil samples were collected. Geology and sample locations are shown on Figure 4.1.

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'



**RUGGED MOUNTAIN
(CANYON 25)**

**HOMESTAKE
MINERAL DEVELOPMENT COMPANY**
**GRAND CANYON PROJECT
TELEGRAPH CREEK B.C.
RUGGED MOUNTAIN
(CANYON 25)
REGIONAL GEOLOGY**

DRAWN MJD	DATE 08/89	FILE CODE	FIGURE 3.1
--------------	---------------	-----------	------------

0
6
12
18
Kilometres

MAP MODIFIED FROM SOUTHER, 1971

LEGEND

- QUATERNARY**
PLEISTOCENE AND RECENT
- 29 Fluvialite 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 volcanoclastic 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 volcanoclastic 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
- TRIASSIC**
UPPER TRIASSIC
- 9 Undifferentiated volcanic and sedimentary rocks (units 5 to 8 inclusive)
 - 8 Augite-andesite flows, pyroclastic rocks, derived volcanoclastic 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, oolitic black shale; minor calcareous shale and siltstone
- 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-schist, chlorite schist, greenstone, minor chert, schistose tuff and limestone
- MISSISSIPPIAN**
- 1 Limestone, orinoidal 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

CENOZOIC

MESOZOIC

PALEOZOIC

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

INDEX TO MINERAL PROPERTIES

1. Laird 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 Canyon25 property is underlain by sedimentary rocks, predominantly siltstone, which have been hornfelsed by a large syenite intrusive which occupies the centre part of the claim. The hornfels carries 10% to 40% disseminated pyrite and is responsible for a large gossanous area near the peak of Rugged Mountain. A black, medium grained rock containing 40% to 50% magnetite and a like amount of biotite occurs at the contact between the syenite and the sediments. This unit is best exposed on the steep, westerly-facing cliffs along the western boundary of the claim. It is cut by numerous pink, porphyritic syenite dykes ranging from 1cm to 2m wide and contains widespread malachite staining which is related to calcite stringers. In places, the syenite is pegmatitic with feldspar phenocrysts up to 5cm long.

4.0 GEOCHEMISTRY

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

4.1 Analytical Methods

Ten 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.

Two stream sediment samples were taken from the Canyon25 property. The samples were collected with a hand trowel or by hand and placed in kraft sample bags, air dried and shipped to Acme Analytical Labs of Vancouver, B.C. Sample analysis consisted of 30 element ICP and gold by fire assay. Sample sites were located by elevation and topography and marked by metal tags and orange flagging tape.

Three soil samples 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.

4.2 Results

The analytical results are presented in Appendix I.

The magnetite - biotite rock which occurs at the contact between the syenite and the sediments is black, fine to medium grained and very magnetic. It weathers easily to black, magnetic sand. The composition is primarily magnetite and biotite, with 5% pink feldspar phenocrysts. Calcite stringers and malachite staining are common. This rock is represented by grab samples 31019 and 31329. These samples are anomalous in copper (10079ppm and 3704ppm), silver (6.9ppm and 2.2ppm), and gold (700ppb and 81ppb).

The hornfelsed sediments are very fine grained and typically carry 5 - 10% disseminated pyrite. Grab samples 31023, 31330 and 31331 are from this unit. These samples carry 552ppm, 268ppm and 600ppm copper and 21ppm, 19ppm and 14ppm arsenic. Sample 31331 contained 15ppm molybdenum. The concentrations of other metals are low.

The syenite intrusive is a very distinct unit, displaying beautiful orthoclase phenocrysts to 5cm in length. This rock type is represented by grab samples 31020, 31021, 31324, 31417 and 31250. The latter two samples show weak silicification and trace disseminated pyrite. Samples 31020 and 31021 returned low metal values. Samples 31324 and 31250 contained 12ppm and 67ppm molybdenum and 13ppb and 35ppb gold. Sample 31417 returned 2204ppm copper, 1.6ppm silver and 98ppb gold.

One soil sample (31022) and two talus fine samples (31418, 31419) were collected from the property. The soil sample returned 369ppm molybdenum, 1.8ppm silver, 20ppm arsenic and 39ppb gold. This sample was taken from very gossanous soil approximately overlying the syenite/hornfels contact. The talus fine samples returned 21ppm and 15ppm molybdenum, 341ppm and 1346ppm copper, 49ppm and 759ppm lead, 110ppm and 296ppm zinc, and 40ppb and 21ppb gold. These samples were collected from syenite talus characterized by rusty weathering and ankerite veinlets.

Two moss mat samples were collected from the main southeast flowing creek on the property. Analytical results for these two samples are virtually identical and show low metal values, except for 11ppb and 91ppb gold.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The presence of the syenite intrusive and the pyritic hornfels give this property some potential. The massive magnetite/biotite unit is also interesting as it carries widespread copper mineralization and gold up to 700ppb. One day of hand trenching is recommended in order to investigate the source of the gossanous soils and ferricrete seen at the syenite/hornfels contact. Further sampling of the magnetite - biotite unit is recommended to follow up the 700ppb gold result from sample 31019.

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

Food and Accommodation

4 mandays @ \$ 90/day	\$	360.00
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Geochemical Analysis + Freight

Rock Samples	10 @ \$ 25/sample	\$	250.00
Silt Samples	2 @ \$ 25/sample	\$	50.00
Soil Samples	3 @ \$ 25/sample	\$	75.00

Supplies	\$	200.00
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Mob/Demob	\$	200.00
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Helicopter Support (including fuel)

1.0 hrs @ \$700/hr	\$	700.00
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Report Preparation

1 day @ \$165/day	\$	165.00
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TOTAL	\$	2640.00
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APPENDIX I
Analytical Results

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 NH 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: P1 ROCK P2 SOIL AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

*MASTER
 NTS STIKNE/RUGGED MTN
 11 BC 1046
 2MB/ACCT.*

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

HOMESTAKE MINERAL DEV. CO. PROJECT 5711 RM #23 File # 89-1839 Page 1

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Mi	Co	Mn	Fe	As	U	Au	Tb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	AU*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	%	%	%	%	PPM	PPB
RM 25-1 31019	1 10079	22	90	6.9	13	29	1092	7.76	10	5	ND	2	230	2	2	5	303	4.40	.468	31	14	1.74	124	.20	6	2.14	.01	1.04	1	700	
RM 25-1 31020	1	36	8	34	.1	3	3	529	1.41	2	5	ND	2	192	1	2	2	64	1.64	.020	14	3	.24	60	.01	10	.57	.02	.15	1	1
RM 25-1 31021	3	199	15	76	.3	5	9	755	3.27	5	5	ND	3	158	1	2	2	138	1.84	.091	17	5	.92	46	.10	6	1.78	.01	.09	1	3
RM 25-1 31023	5	552	14	21	.3	40	9	276	7.10	21	5	ND	1	33	1	1	2	45	2.73	.116	7	20	.52	5	.10	15	1.77	.02	.02	1	19
RM 25-1 31250	67	46	12	17	.4	12	8	181	3.77	8	5	ND	1	73	1	2	2	32	.75	.030	3	17	.44	6	.10	5	.94	.04	.04	2	13
RM 25-1 31324	12	202	16	32	.5	20	17	471	9.59	8	6	ND	6	76	1	2	2	99	1.34	.028	19	4	.39	9	.09	7	1.37	.03	.05	5	35
RM 25-1 31329	1	3704	8	45	2.2	16	11	480	4.54	3	5	ND	2	102	1	2	16	164	2.24	.239	9	51	1.05	46	.12	3	.88	.02	.05	2	81
RM 25-1 31330	7	268	12	30	.3	30	19	211	5.87	19	5	ND	1	19	1	2	2	90	1.01	.095	7	39	.88	11	.15	5	1.41	.03	.06	2	12
RM 25-1 31331	15	600	37	64	.4	23	12	466	3.20	14	5	ND	2	133	1	2	2	87	4.77	.155	10	45	1.24	30	.12	6	1.84	.01	.23	2	1
RM 25-1 31417	1	2204	10	79	1.6	11	21	1079	6.40	5	5	ND	3	151	1	2	11	261	4.75	.297	18	16	1.76	168	.31	4	2.47	.13	1.30	2	98
STD C/AU-R	18	61	42	132	6.6	68	30	1056	4.10	37	20	7	37	49	18	15	21	59	.52	.088	38	57	.91	174	.07	35	1.99	.06	.13	12	490

- ASSAY REQUIRED FOR CORRECT RESULT -

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Hg	Ba	Ti	B	Al	Na	K	W	AU*
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM
31022	369	332	47	35	1.8	4	7	128	8.78	20	5	ND	1	35	1	3	2	60	.31	.081	13	6	.14	40	.01	2	.52	.01	.08	2	39
31251	8	198	9	97	.1	20	23	831	6.12	9	5	ND	1	234	1	3	2	241	2.97	.331	20	37	1.21	41	.13	2	1.00	.02	.09	2	11
31252	1	104	9	88	.1	20	23	826	9.07	7	5	ND	1	237	1	2	2	269	2.99	.342	19	38	1.12	39	.13	7	1.65	.02	.07	1	91
31413	21	341	49	110	.1	20	28	996	6.79	7	5	ND	1	90	1	2	2	185	.95	.136	11	40	1.66	47	.13	2	2.73	.01	.29	1	40
31419	15	1346	759	296	1.1	11	39	1634	14.27	10	5	ND	1	93	1	2	2	241	.78	.148	57	23	1.35	13	.08	2	2.87	.01	.12	1	21
STD C/AU-5	18	58	38	131	7.1	67	30	954	4.03	37	17	6	36	49	18	16	22	58	.48	.089	38	55	.82	178	.07	32	1.92	.06	.13	12	49

APPENDIX II
Sample Summary

RUGGED MTN SAMLES (CN25)

SAMPLE NO.	SAMPLE TYPE	DESCRIPTION	MINERALIZATION
CN-25	31019 o/c	med. grained mafic intrusive biot.-40%,mt.-40%,kfsp-10%	1%py, trace cpy, malachite staining
	31020 o/c	syentite pegmatite,kfsp to 6 cm	
	31021 o/c	syenite pegmatite,40%kfsp,20%mt., 30%hbl and biotite	2% diss. pyrite in 50cm wide gossanous fracture
	31022 soil	B' horizon,red-orange colour	
	31023 o/c	hornfelsed tuff or silstone,10-15% calcite	5% white pyrite
	31250 o/c	orthoclase porphyry syenite	diss,steely gray py.
	31251 silt	moss matt	
	31252 silt	moss matt	
	31324 o/c	megacrystic orthoclase porphyry syenite	diss and fracture fill py.
	31329 o/c	med-coarse gr. mafic phase of syenite	minor malachite staining
	31329	0-5% kfsp,60-100% mt and biot	
	31330 o/c	rusty hornfels,v.f.g.grey non descrip ^{tr} k	10-15% pyrite
	31331 o/c	rusty hornfels,1-2% calcite stringers	tr. diss. py., malachite staining
	31417 r/c	variety of syenite compositions and textures	diss. cpy within aggregates
	31418 soil	talus fines,syenite-wk alt'n zone def'nd by ank. veinlets;'B',surface,red/brown trace orgs	
	31419 soil	talus fines,rust brown,2cm,'B' &'C',	pyrite

APPENDIX III


Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Peter Holbek, DO HEREBY CERTIFY THAT:

- 1) I am a project geologist presently employed by Homestake Mineral Development Company located at 1000 - 700 West Pender Street, Vancouver, B.C. V6C 1G8
- 2) I graduated from the University of British Columbia with a B.Sc. (Hons.) in geology in 1980 and an M.Sc. in geology in 1988.
- 3) I have actively practiced my profession in North America since 1975.
- 4) The work described herein was done by me or under my direct supervision.

DATED THIS 8th DAY OF AUGUST, 1989 AT VANCOUVER, B.C.



Peter Holbek

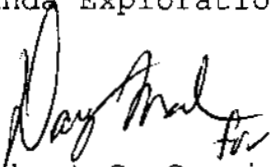
I, Robert G. Carmichael of 4058 West 32 Avenue, Vancouver B.C. do hereby state that:

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

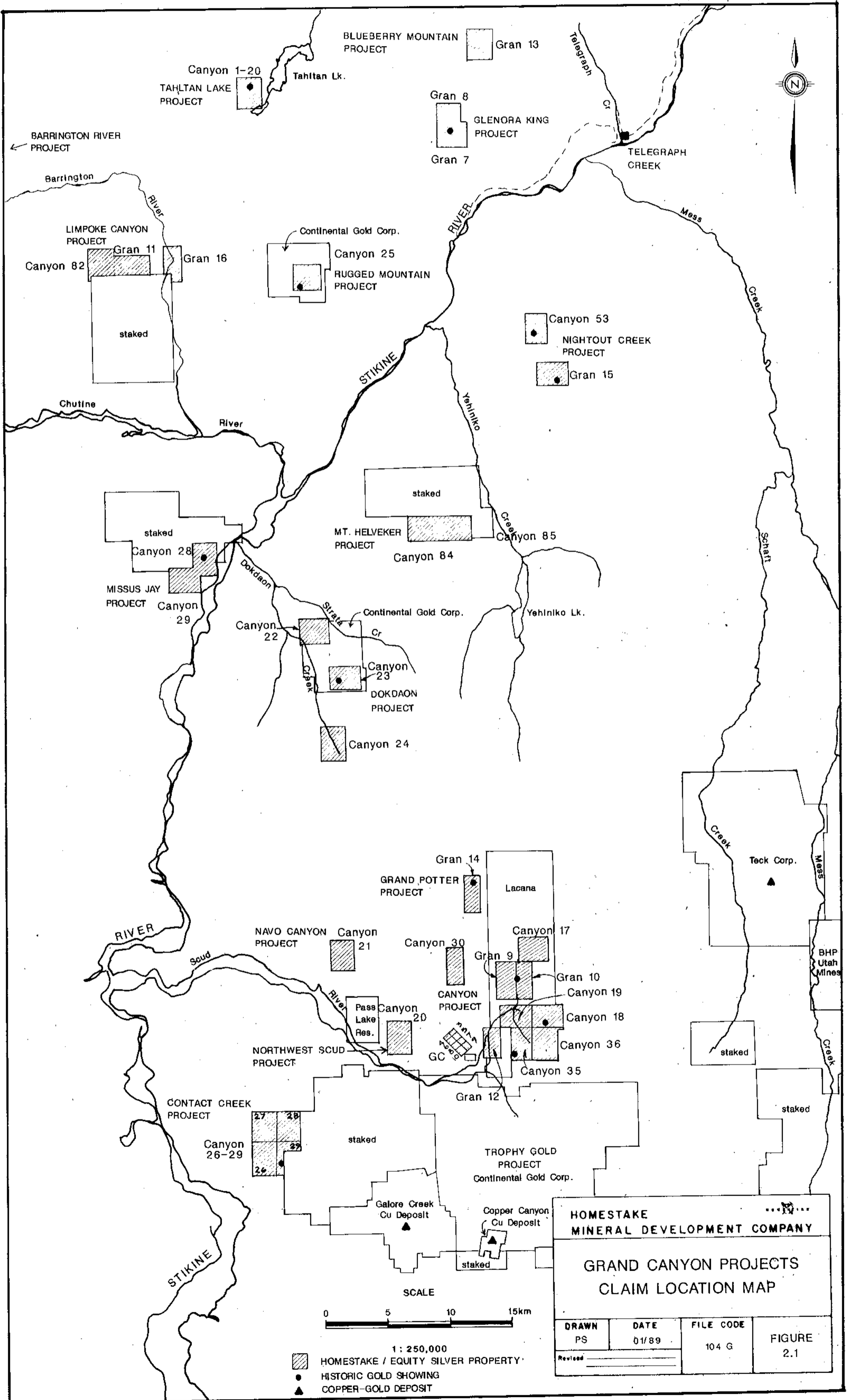
- I have been employed by Homestake Mineral Development Company since May of 1989;

- 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

19,072



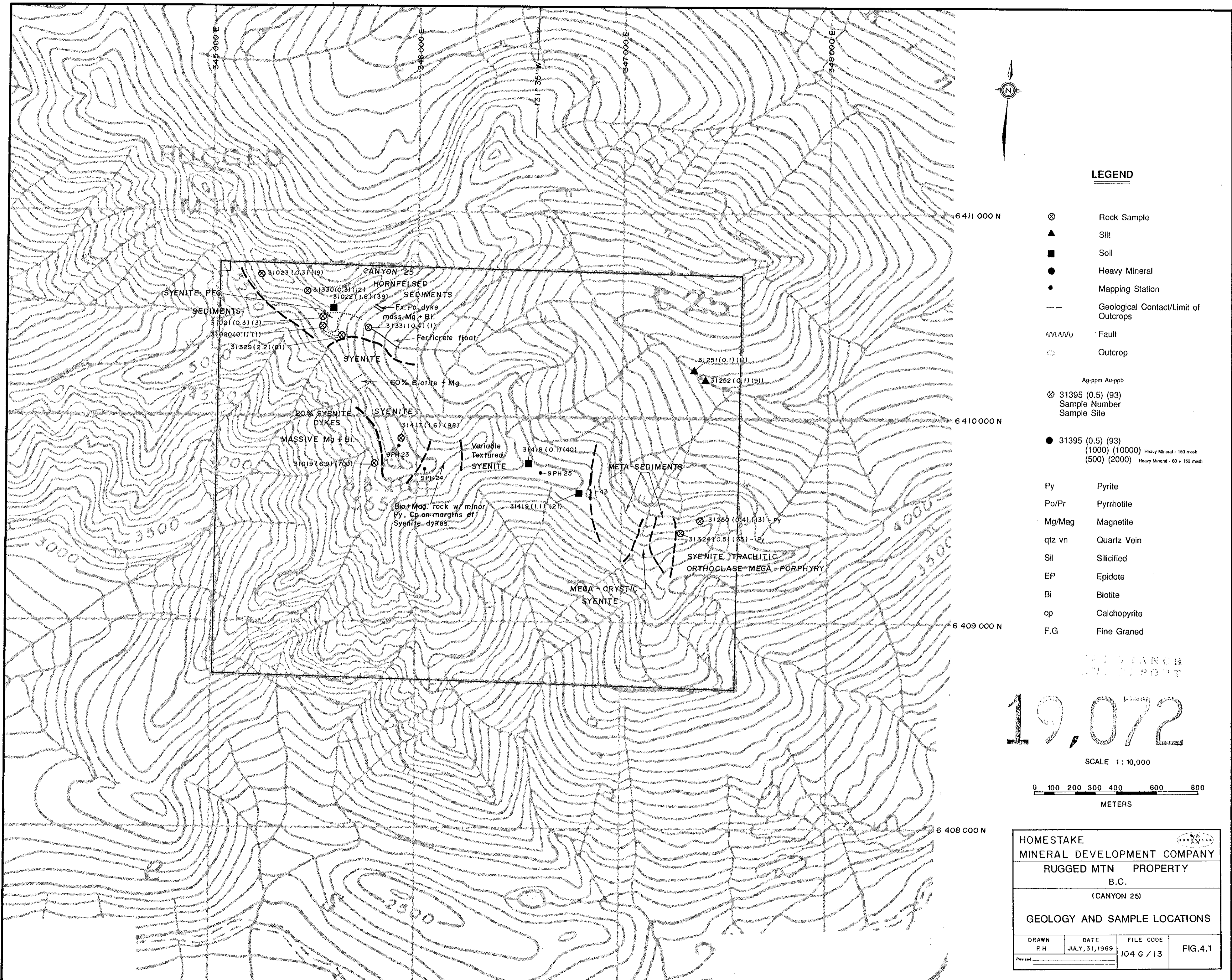
**HOMESTAKE
MINERAL DEVELOPMENT COMPANY**

**GRAND CANYON PROJECTS
CLAIM LOCATION MAP**

DRAWN PS	DATE 01/89	FILE CODE 104 G	FIGURE 2.1
Revised _____			

1 : 250,000

HOMESTAKE / EQUITY SILVER PROPERTY
 HISTORIC GOLD SHOWING
 COPPER-GOLD DEPOSIT



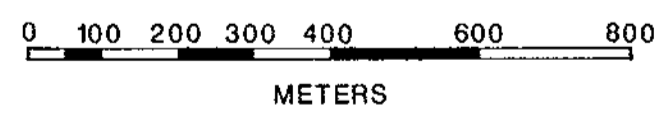
LEGEND

- ⊗ 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 Grained

SEARCH REPORT

19,072

SCALE 1:10,000



HOMESTAKE MINERAL DEVELOPMENT COMPANY			
RUGGED MTN PROPERTY B.C.			
(CANYON 25)			
GEOLOGY AND SAMPLE LOCATIONS			
DRAWN P.H.	DATE JULY, 31, 1989	FILE CODE 104 G / 13	FIG. 4.1
Revised _____			