1989 Geological Report
on the
Limpoke Group
(Canyon 82 [4996] Gran 11 [4668])
Liard Mining Division
NTS: 104G/13
Lat: 57 49'N
Long: 131 49'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
Date: August 7, 1989
Author: Darcy Marud

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TABLE OF FIGURES

SUMMARY

The Limpoke Group property is located in the Stikine region of British Columbia. The property consists of two mineral claims (Canyon 82 and Gran II) totalling 38 units and is owned by Homestake Mineral Development Company and Equity Silver Mines Ltd.

Work on the property was carried out on June 2 and June 10, 1989 and involved prospecting as well as the collection of 2 rock samples, 6 stream silt samples, and 5 heavy mineral samples.

Further work is recommended for the Limpoke Group to try find the source of gold bearring quartz vein float in Limpoke Creek and porphyritic syenite boulders in tributaries to the north. Special emphasis should be placed on the evaluation of the highly anomalous stream sediments and heavy mineral samples found in Limpoke Creek and its northern tributaries.

1.0 INTRODUCTION

1.1 Location and Access

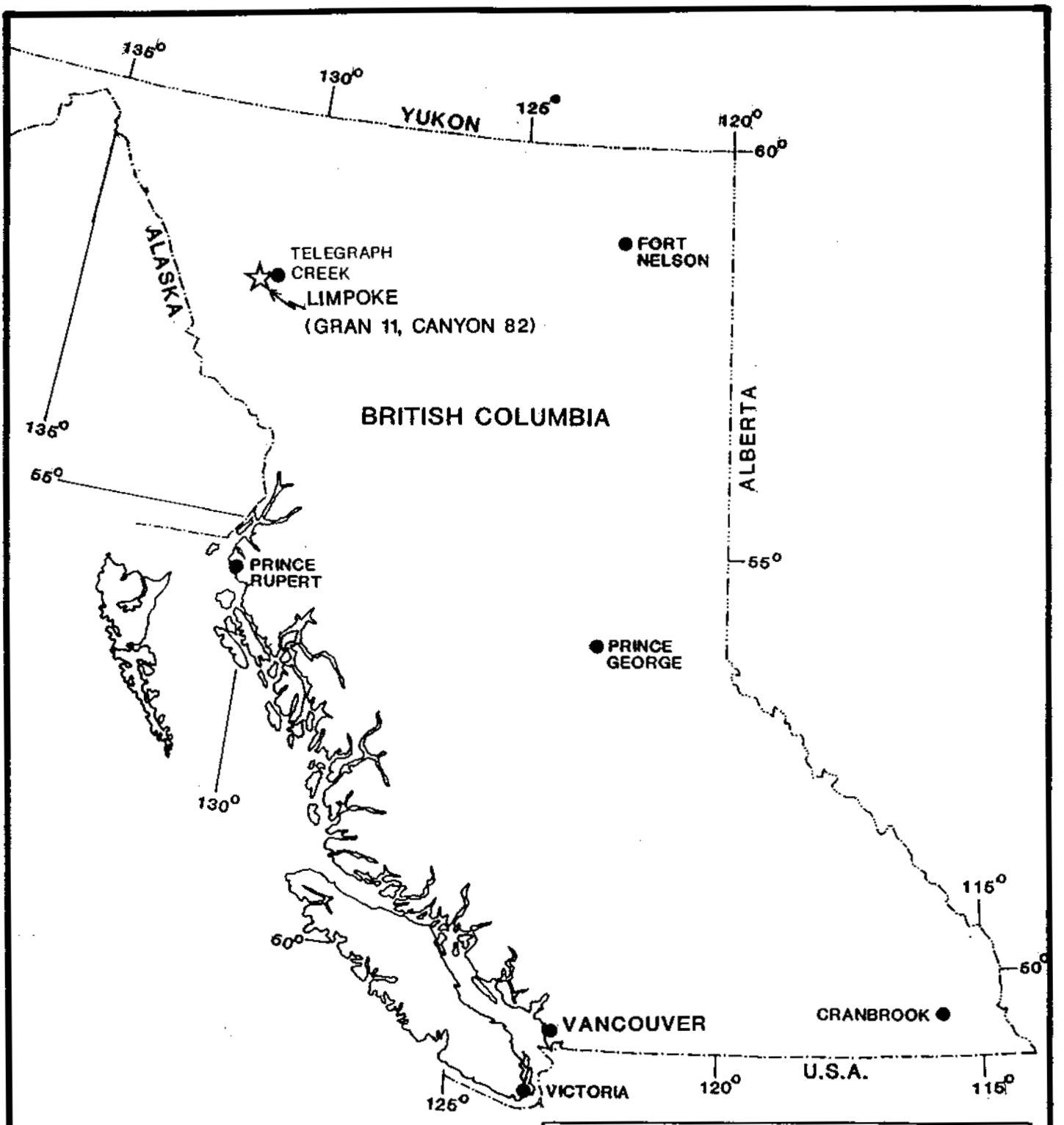
The Limpoke Group is located in the Stikine region of northwestern British Columbia approximately 41 km east-southeast of the village of Telegraph Creek near the head waters of Limpoke Creek (Figure 1.1). The claims are centred at 57 49'N latitude and 131 49'W longitude on NTS map sheet 104G/13.

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 Limpoke Group consists of two mineral claims totalling 38 units. The claims were recorded on June 14 and August 3, 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	EXPIRYDATE
Gran 11	18	4668	06/14/88	06/14/90
Canyon 82	20	4996	08/03/88	08/03/90



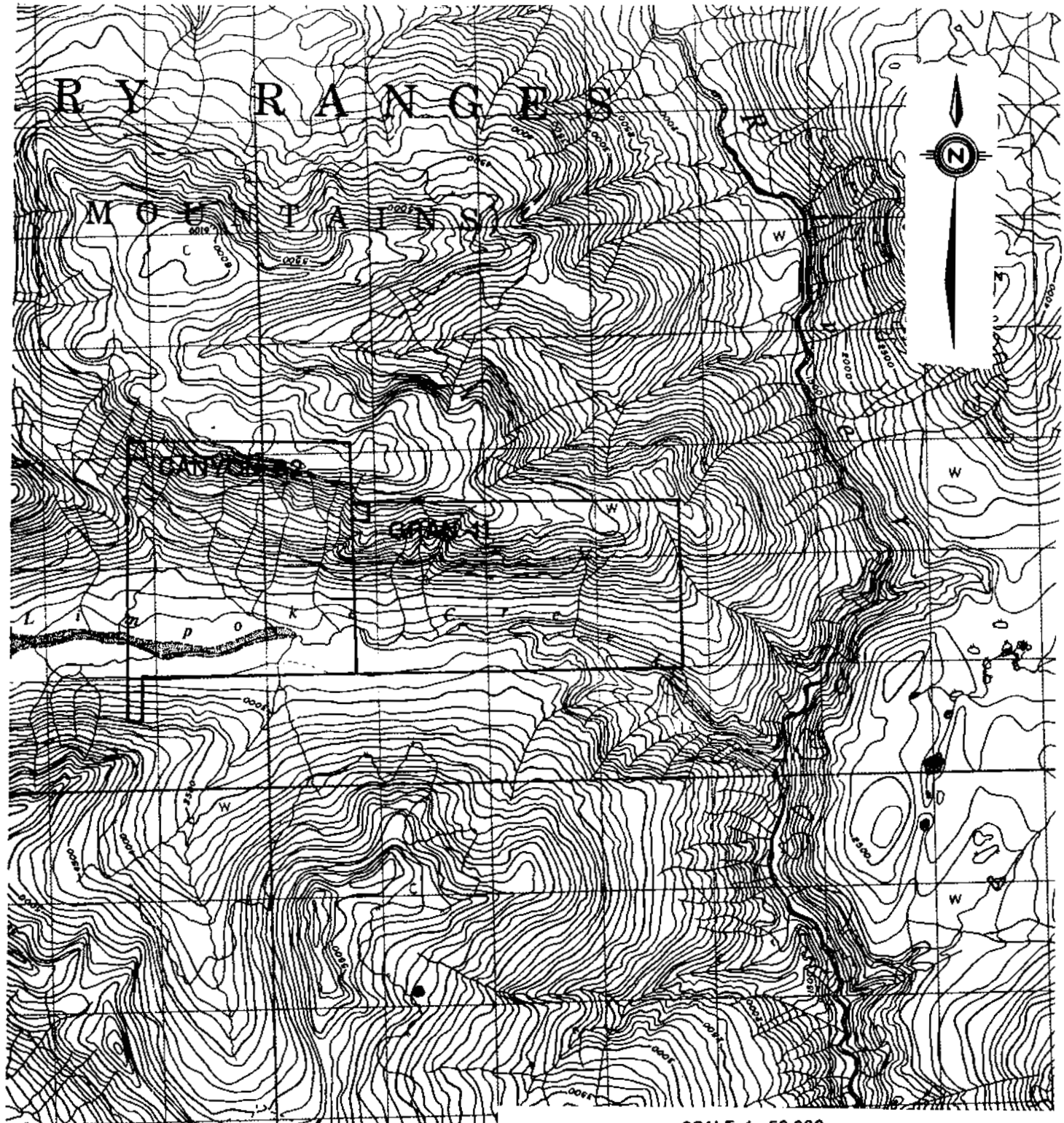
HOMESTAKE MINERAL DEVELOPMENT COMPANY

GRAND CANYON PROJECT, B.C.

LIMPOKE
(GRAN 11, CANYON 82)

LOCATION MAP

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



SCALE 1 : 50,000

HOMESTAKE
MINERAL DEVELOPMENT COMPANY

LIMPOKE (GRAN 11, CANYON 82)

DETAILED CLAIM LOCATION

DRAWN	DATE	FILE CODE	FIG. 2.2
P.H.	AUG., 10, 89	1046/13	
Revised			

1.3 Physiography

The Limpoke Canyon property lies within semi-rugged terran north of the Chutine River. Elevations range form 425m to 1825m with treeline at 1050-1200m. Several small snowfields exist yearround at higher elevations to the west of the claims. Vegetation consists of spruce, pine and alder along Limpoke at lower elevations along Limpoke Creek and typical sub-alpine to alpine shrub cover above 1100m.

1.4 Exploration History

Previous work in the vicinity of the Limpoke Canyon project dates back to the 1920's with the discovery and investigation of several copper-molybdenum showings. Kennco Explorations Ltd. conducted a program of soil sampling, an IP-survey , and diamond drilling in the vicinity of the Poke showing (minfile 1046 001) in 1963, and prospecting and geochemical sampling on the Gordon showing (minfile 1046 002) in 1966 (AR 847)

Dupont staked the bar claims in 1980 on the basis of anomalous gold in a regional stream sediment survey, and conducted follow-up geologic mapping an soil sampling the same year. These claims overlap with canyon 82 and Garn II claims (AR 9193)

The Limp #2 claim was staked in March, 1980 by Teck Explorations Ltd. and a soil geochemistry survey was conducted in July, 1988. This claim overlaps the southeast portion of Canyon 82. (AR 9092)

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 prospecting, rock sampling, stream sediment sampling, and heavy mineral sampling.

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.

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

LIMPOKE
(GRAN 11, CANYON 82)

Telegraph Creek

0 6 12 18 30 Kilometres

1 : 250,000

MAP MODIFIED FROM SOUTHER, 1971

HOMESTAKE
MINERAL DEVELOPMENT COMPANY

GRAND CANYON PROJECT
TELEGRAPH CREEK B.C.
LIMPOKE
(GRAN 11, CANYON 82)
REGIONAL GEOLOGY

DRAWN	DATE	FILE CODE	FIGURE 3.1
MJD	08/89		

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 16×
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

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).

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 Limpoke Canyon property is underlain by andesitic volcanic rocks of the upper Triassic Stuhini Group. These rocks are locally intruded by dikes and plugs of Jurrassic/Cretaceouws granodiorite and quartz diorite. A large intrusion of this type lies immediately south of the property north of Mount Barrington. Numerous syenite float boulders have been found in tributaries north of Limpoke Creek draining the Canyon 82 and Gran II claims.

4.0 GEOCHEMISTRY

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

4.1 Stream Sediment Samples

Seven sediment samples were taken from the Limpoke Group. 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.

Of the seven silt samples taken from the property, four of them returned anomalous gold values of >20ppb Au. One sample, 31087, returned a high value of 158ppb Au. Other anomalous samples include 31088, 31013 and 31152 returning 77, 41 and 27 ppb Au respectively. All anomalous samples were along Limpoke Creek. Copper values for the most part were only weekly anomalous while most other elements where not anomalous.

All sample descriptions and values are tabulated in Appendices I and II.

4.2 Heavy Mineral Samples

Four heavy mineral samples were taken from Limpoke Creek and tributories to the north. 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.

All four heavy mineral samples reported anomalous values for gold. As is standard for the heavy mineral samples, most of the gold reports in the finer -150 mesh sample. Results are listed below.

Sample No.	-150 mesh		-60+150mesh	
	Au ppb	Ag ppm	Au ppb	Ag ppm
31085	19,173	11.5	520	7.3
31154	18,226	5.3	63	0.1
31155	125,000	27.2	16,081	0.1
31177	20,229	6.5	1,255	1.9

Sample 31085 is from Limpoke Creek while the other three samples are from tributaries drainage the north slopes.

4.3 Rock Samples

Two 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 samples of quartz vein float were sampled along the course of Limpoke Creek. Sample 31010 was described as quartz vein rock, hosting 1% galena, 5% py and 5% tetrahedrched, and yielded geochemical results of 400 ppb Au, 171 ppm Cu, 6.7 ppm Ag and 426 ppm Pb. A second quartz vein (31179) boulder sampled further downstream contained semi-mv Py and returned geochemcial assay of 26200 ppb Ai, 207 ppm Cu and 291 ppm W. In both instances neither samples was assumed to be close to source but transported form the north side drainage of Limpoke Creek.

. All samples descriptions and values are tabulated in Appendices 1 and 2.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Stream sediment and heavy mineral sampling of Limpoke Creek has shown that the Limpoke Creek drainage system is anomalous with respect to Au and Cu. Boulders of porphyritic syenite found in tributaries to the north and mineralized quartz veins found within Limpoke Creek, imply good geological potential for precious mineral deposits on the Canyon 82 and Gran II claims. A follow-up program to 1) locate the source of the quartz vein and syenite boulders and 2) do airphoto controlled prospecting mapping of the mineral claims is recommended.

6.0 REFERENCES

B.C. Ministry of Mines, Assessment Report #847, 9092 and 9193

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.

MMAR, Annual Report 1930 pg 119, 1963 pg 7, 1966 pg 22

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

7.0 STATEMENT OF COSTS

Labour		
Geologist	3 days @ $165/day	$495.00
Senior Assistant	1.5 days @ $115/day	$172.50
Junior Assistant	1.5 days @ $ 90/day	$135.00
Food and Accommodation		
	6 mandays @ $ 90/day	$540.00
Geochemical Analysis + Freight		
Rock Samples	3 @ $ 25/sample	$ 75.00
Silt Samples	6 @ $ 25/sample	$150.00
Heavy Mineral Samples	5 @ $100/sample	$500.00
Supplies		$200.00
Mob/Demob		$200.00
Helicopter Support (including fuel)		
	2.8 hrs @ $700/hr	$1960.00
Report Preparation		
	1 days @ $165/day	$ 165.00
TOTAL		$4592.50

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
NTS: STIKINE/LIMPOKE CANYON
11-BC. 1046.
2MB/ACCT.

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: P1 ROCK P2 SOIL 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. CO. PROJECT 5711 LC #5 File # 89-1823 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
LC 82-1 31010	4	171	426	13	6.7	9	6	71	1.24	5	5	ND	1	4	1	2	2	4	.19	.001	2	10	.05	1	.01	9	.08	.01	.01	1	400
LC 82-1 31179	3	207	3	4	2.3	8	18	62	2.00	5	5	14	2	6	1	2	2	4	.12	.015	5	9	.03	41	.01	2	.25	.01	.13	291	26200

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
31011	2	111	5	93	.2	17	15	666	3.82	32	5	ND	1	131	1	2	2	91	3.10	.090	5	19	1.07	97	.08	8	1.68	.03	.12	1	17
31012	2	106	7	86	.2	17	14	653	3.84	31	5	ND	1	119	1	2	2	90	2.96	.091	5	20	1.09	91	.08	4	1.65	.02	.12	1	9
31013	2	100	8	89	.3	17	15	599	4.05	36	5	ND	1	110	1	2	2	95	2.82	.103	5	21	1.08	90	.08	2	1.63	.02	.13	1	26
31086	2	98	6	101	.3	17	13	636	3.59	35	5	ND	1	132	1	2	2	82	3.30	.093	5	19	1.02	92	.07	9	1.55	.03	.13	1	12
31087	2	97	4	101	.3	21	15	645	4.11	46	5	ND	1	93	1	3	2	95	2.60	.096	5	24	1.17	88	.08	5	1.72	.02	.10	1	158
31088	2	92	5	90	.3	18	14	602	3.75	42	5	ND	1	97	1	2	2	85	2.58	.094	5	21	1.07	86	.07	3	1.55	.02	.11	1	77
31152	2	97	11	92	.3	16	14	625	3.85	51	5	ND	1	117	1	2	2	82	2.98	.097	5	19	1.04	93	.06	2	1.53	.02	.13	1	41
STD C/AU-S	18	63	41	132	6.8	70	30	967	4.06	44	22	7	38	49	19	15	18	59	.52	.092	39	52	.91	175	.07	37	2.03	.06	.13	12	52

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
31085	2	88	8	84	.4	16	12	578	3.68	37	5	ND	1	116	1	3	2	86	2.72	.090	5	21	1.03	102	.08	2	1.57	.03	.15	1	10
31154	2	105	11	96	.2	16	17	666	4.55	17	5	ND	1	52	1	2	2	120	1.00	.086	6	29	1.18	75	.09	5	1.88	.02	.06	1	18
31155	2	79	10	83	.3	15	12	438	3.67	22	5	ND	1	55	1	3	5	97	.72	.101	6	22	.99	93	.08	4	1.57	.04	.13	1	65
31177	2	70	4	82	.3	15	12	501	3.61	19	5	ND	1	48	1	2	2	98	.72	.101	6	23	1.11	96	.09	2	1.73	.03	.13	1	74
31253	7	249	36	87	.3	28	25	710	5.32	5	5	ND	1	102	1	2	4	160	1.73	.083	7	39	2.07	56	.16	2	2.37	.02	.33	1	10
31254	5	418	33	140	.4	27	36	1091	6.68	13	5	ND	1	81	1	2	2	202	1.00	.100	6	39	1.55	92	.17	3	2.49	.01	.12	1	8
31257	6	450	26	111	.5	24	34	823	6.69	16	5	ND	2	101	1	2	2	187	1.01	.065	5	30	1.68	54	.18	4	2.75	.01	.20	1	3
31258	40	772	12	54	.7	23	48	822	15.85	13	6	ND	2	161	2	2	2	202	1.90	.103	6	13	1.30	13	.12	3	1.84	.01	.08	1	9
31259	6	638	22	55	.4	24	41	803	6.61	10	5	ND	1	174	1	2	2	185	1.18	.088	8	20	1.40	42	.13	6	2.60	.02	.10	1	60
31260	5	603	20	65	.4	19	63	1293	7.02	13	5	ND	1	246	1	2	3	175	1.56	.098	7	16	1.54	66	.11	2	3.12	.01	.15	1	16
31261	35	400	38	55	.3	24	44	597	6.68	4	5	ND	1	67	1	2	19	101	.94	.072	6	15	.95	32	.10	2	1.92	.01	.09	1	14
31351	2	101	9	61	.2	14	12	490	4.14	16	5	ND	2	73	1	2	2	115	1.86	.112	10	21	.73	76	.08	5	1.22	.02	.07	3	26
31352	2	90	8	60	.2	14	11	481	3.48	12	5	ND	1	70	1	2	2	95	1.74	.106	10	19	.73	77	.08	2	1.24	.02	.07	1	23
31353	1	84	8	60	.3	13	12	486	3.90	12	5	ND	3	49	1	2	2	106	1.15	.105	10	21	.72	73	.08	6	1.28	.02	.08	1	45
STD C/AU-S	18	62	43	132	6.7	70	30	1016	4.13	43	18	7	39	50	18	15	23	60	.51	.091	39	57	.92	180	.07	35	2.02	.06	.13	11	50

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	8	43	.1	22	20	136	2.24	18	5	ND	2	98	1	2	2	25	1.03	.274	10	26	.63	63	.06	2	.34	.01	.06	44	675
CC-29-4-31457 -60+150	1	425	6	25	.2	16	17	149	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	255	38	25	.3	57	61	144	12.78	23	5	ND	2	25	1	2	2	23	.43	.062	7	19	.31	8	.07	8	.37	.01	.02	2	20
DD054-31171 -60+150	3	879	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
GR-8-4-31029 -60+150	1	713	67	97	2.5	31	144	180	18.55	210	5	ND	3	23	1	2	2	37	.67	.071	7	5	.20	7	.10	5	.51	.01	.01	1	6300
GR074-31081 -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-12-4-31055 -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	22	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
LC824-31154 -60+150	1	154	28	34	.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
LC824-31177 -60+150	1	100	3	19	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
LC11-4-31155 -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	16081
CW12-2-31097 -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
CW10-4-21167 -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
NC20-4-31089 -60+150	1	71	9	56	.1	51	82	144	4.50	16	5	ND	21	19	1	2	3	14	.85	.054	102	6	.22	26	.10	2	.24	.01	.01	1	13
NC214-31094 -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
HR-53-4-31374 -60+150	1	76	9	34	.1	19	20	227	1.99	9	5	ND	1	18	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	101	117
BR-32-4-31510 -60+150	5	1062	156	871	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
MH84-4-31243 -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	.68	.093	38	54	.95	175	.07	34	1.88	.06	.14	11	49

* Gold values ≥ 106000 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	9	.13	8	1.01	.01	.02	1	20361
RMG-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
RMG-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
LC824-31154 -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
LC824-31177 -150	2	138	18	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	20229
LC82-4-31665 -150	6	897	198	379	11.9	123	101	261	26.79	942	5	4	5	46	3	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	10	87	1	6	2	56	1.78	.420	31	15	.40	73	.14	7	.65	.02	.05	475	99999 *
CN.7-3-31057 -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
MC20-4-31039 -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
MC214-31994 -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	408	2	2	2	60	3.59	1.090	32	25	.45	14	.06	2	.50	.01	.09	21	1885
MR-53-4-31374 -150	1	117	27	68	.1	25	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	.54	.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	396	1941
BR-32-4-31510 -150	7	1230	212	406	19.8	204	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
MR84-4-31243 -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	1934
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

LIMPOKE CREEK GEOCHEM (GR 11,CN 82)

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
LC	31010	float	quartz vein boulder	1% ga, 5% Py, 5% tetrahedrite?	400	171	426	13	4	1	2	5
LC	31011	silt			17	111	5	93	2	1	2	32
LC	31012	silt			9	106	7	86	2	1	2	31
LC	31013	silt			26	100	8	89	2	1	2	36
LC-82	31085	silt			10	88	8	84	2	1	3	37
	31085	h.min.	-60+150 mesh	(5ppm Au)	520	688	152	342	3	13	30	5
		h.min.	-150 mesh		19173	897	198	379	6	36	29	942
LC	31086	silt			12	98	6	101	2	1	2	35
LC	31087	silt			158	97	4	101	2	1	3	46
LC	31088	silt			77	92	5	90	2	1	2	42
LC	31152	silt			41	97	11	92	2	1	2	51
LC-82	31153	h.min.										
LC-82	31154	h.min.	-60+150 mesh		63	154	28	34	1	22	2	14
	31154	h.min.	-150 mesh		18226	107	14	68	3	99	2	49
LC-11	31155	silt			65	79	10	83	2	1	3	22
	31155	h.min	-60+150mesh		16081	178	16	78	5	15	5	52
		h.min.	-150 mesh		125000	145	15	59	5	475	6	58
LC	31159	h.min.			18	105	11	96	2	1	2	17
LC-82	31177	silt			74	70	4	82	2	1	2	19
	31177	h.min.	-60+150 mesh		1255	100	3	18	1	7	2	14
		h.min.	-150 mesh	(22ppm Au)	20299	138	18	53	2	204	2	43
LC-82	31178	float	bull wht coarse qtz	2-3% py								
LC	31179	float	quartz vein boulder	semi-massive Py	26200	207	3	4	3	291	2	5

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.

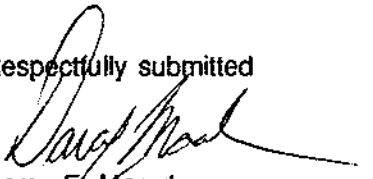
4. The work done in the accompanying report was done under my supervision and with my participation.

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

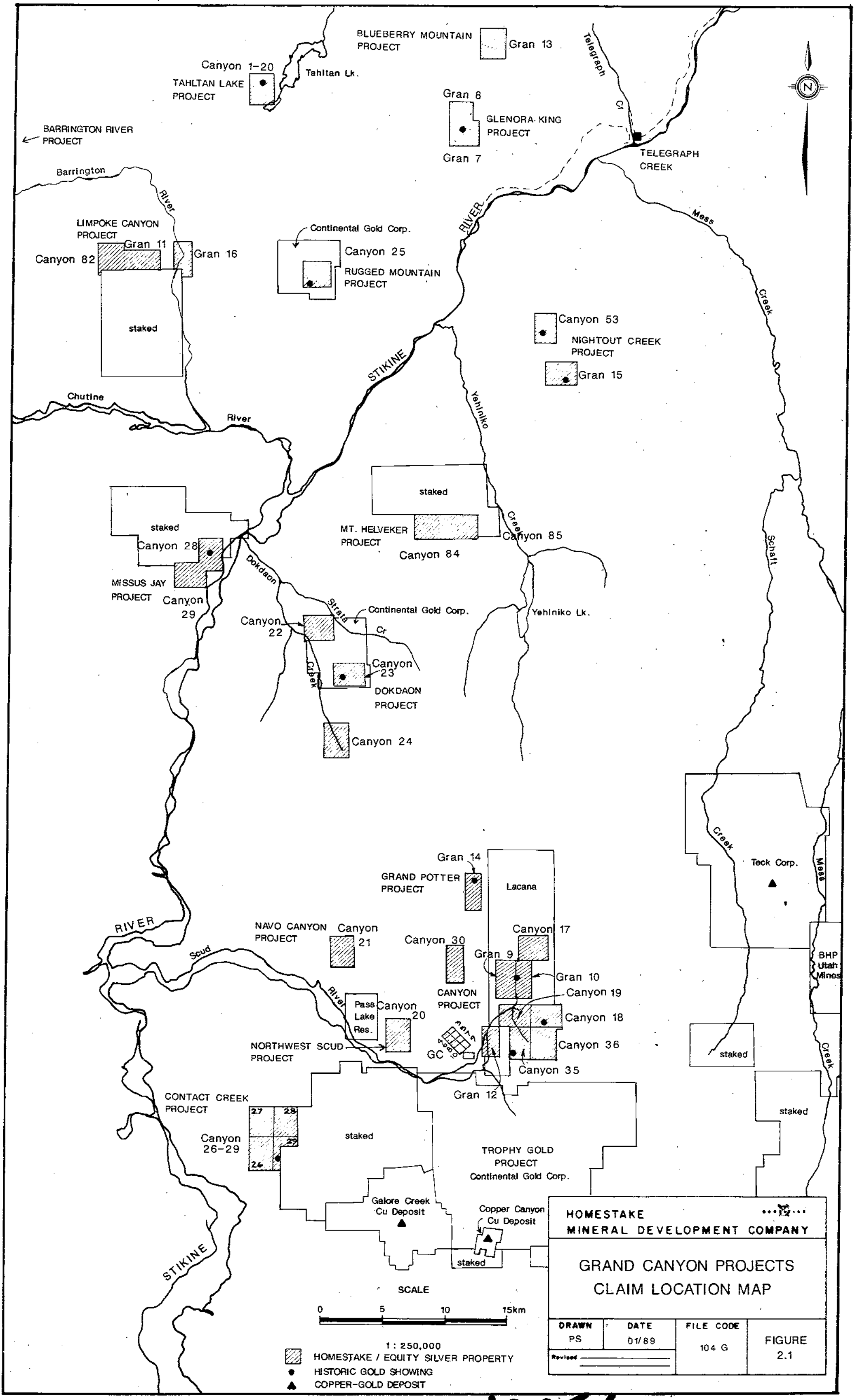
6. I have no direct or indirect financial interest in any companies known by me to have an interest in the mineral properties described by this report, nor do I expect to receive any such interest.

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

Respectfully submitted



Darcy E. Marud


BLUEBERRY MOUNTAIN PROJECT
Gran 13
Canyon 1-20
TAHLTAN LAKE PROJECT
Tahltan Lk.
Telegraph Cr
Gran 8
GLENORA-KING PROJECT
Gran 7
BARRINGTON RIVER PROJECT
TELEGRAPH CREEK
Barrington River
LIMPOKE CANYON PROJECT
Gran 11
Canyon 82
Gran 16
staked
Continental Gold Corp.
Canyon 25
RUGGED MOUNTAIN PROJECT
RIVER
Mess Creek
Canyon 53
NIGHTOUT CREEK PROJECT
Gran 15
STIKINE
Yehlniko
Chutine River
staked
Canyon 28
MISSUS JAY PROJECT
Canyon 29
Dokdaon
Strata Cr
Continental Gold Corp.
Canyon 22
Creek
Canyon 23
DOKDAON PROJECT
Canyon 24
staked
MT. HELVEKER PROJECT
Canyon 84
Creek
Canyon 85
Yehlniko Lk.
Schaft Creek
Gran 14
GRAND POTTER PROJECT
Lacana
Teck Corp.
Mess Creek
BHP Utah Mines
RIVER
NAVO CANYON PROJECT
Canyon 21
Canyon 30
Canyon 17
Gran 9
Gran 10
Canyon 19
Canyon 18
Canyon 36
Canyon 35
Scud River
Pass Lake Res.
Canyon 20
CANYON PROJECT
NORTHWEST SCUD PROJECT
GC
Gran 12
staked
CONTACT CREEK PROJECT
Canyon 26-29
27
28
29
26
staked
TROPHY GOLD PROJECT
Continental Gold Corp.
Galore Creek Cu Deposit
Copper Canyon Cu Deposit
staked
STIKINE
SCALE
0 5 10 15km
1 : 250,000
HOMESTAKE / EQUITY SILVER PROPERTY
HISTORIC GOLD SHOWING
COPPER-GOLD DEPOSIT
HOMESTAKE MINERAL DEVELOPMENT COMPANY
GRAND CANYON PROJECTS
CLAIM LOCATION MAP
DRAWN PS
DATE 01/89
FILE CODE 104 G
FIGURE 2.1
Revised

19056

329 000 E
330 000 E
331 000 E
131° 50' W
332 000 E
333 000 E
334 000 E
335 000 E
336 000 E
6 414 000 N
6 413 000 N
6 412 000 N
6 411 000 N
57° 50' N
N
MT. ROWGEEN
CANYON 82
GRAN 11
GRAN 16
9092
Pegmatic Syenite float
Mineralized qtz. vein and qtz. carbonate breccia boulders
Syenite dykes
Trend of Syenite dykes
Aug Ø Andesite flows
MAFIC VOLC
MAFIC VOLC WITH SYENITE DYKES
SYENITE
F.G. mafic, 1% Py, 5% Mg.
60% SYENITE DYKES IN HORNFELS & METAVOLCANIC ROCKS
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
19,056
SCALE 1: 10,000
0 100 200 300 400 600 800
METERS
HOMESTAKE
MINERAL DEVELOPMENT COMPANY
LIMPOKE CANYON PROPERTY
B.C.
(GRAN 11,CANYON 82)
GEOLOGY AND SAMPLE LOCATIONS
DRAWN P.H.
DATE JULY, 25, 1989
FILE CODE 104 G/13
FIG.4.1