

LOG NO:	0723	RD.
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**REPORT OF ACTIVITIES  
ON THE  
GLENORA KING PROPERTY  
(Gran 7 and 8)**

**LIARD MINING DIVISION  
NTS: 104 G 14**

**OWNERS: Homestake Mineral Development Company  
1000 - 700 West Pender Street  
Vancouver, B.C.**

and

**Equity Silver Mines Ltd.  
Suite 13 - 1155 Melville Street  
Vancouver, B.C.**

**OPERATOR: Homestake Mineral Development Company**

**GEOLOGICAL ASSESSMENT REPORT**

**20, 147**

**Darcy Marud  
May, 1990**

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## **7.0 SUMMARY AND CONCLUSIONS**

The Glenora King Property is comprised of the Gran 7 and Gran 8 claims totalling 32 units and is located near Winter Creek approximately fourteen kilometers north of Telegraph Creek, B.C.

Exploration on the Glenora King property highlighted several areas of anomalous gold and copper associated with fault zones within hornfelsed mafic volcanic rocks adjacent hornblende porphyry dykes. Some of the better results include .087 oz/ton gold and 2.90% copper and .051 oz/ton gold and 9602 ppm copper from two grab samples. The strike extent of the altered and mineralized fault zones is still unknown.

A program of detailed mapping and sampling should be undertaken on the main mineralized zone in an attempt to gain a better understanding of the extent of the mineralization. Coincident with the detailed mapping program, regional prospecting should be initiated to both the east and west of the present claims. Should similar mineralization be found, additional ground should be acquired.

## **1.0 INTRODUCTION**

### **1.1 LOCATION**

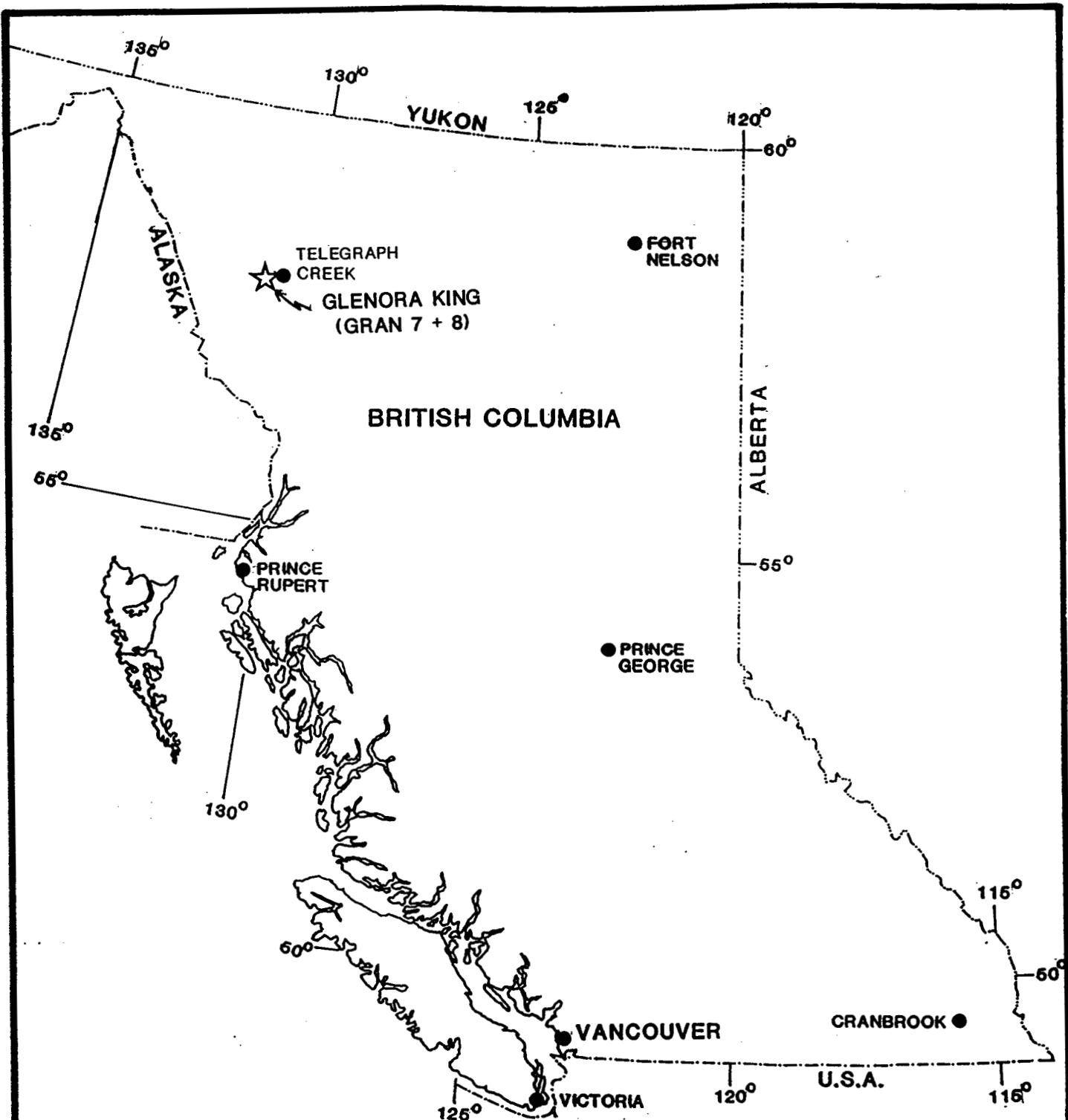
The Glenora King property is located approximately 14 kilometres west - northwest of Telegraph Creek on the north side of Winter Creek (Figure 2.1 and 2.2). The claims are centered at 57° 55' N latitude and 131° 24'W longitude on NTS map sheet 104G 14W.

### **1.2 PHYSIOGRAPHY**

Topography in the area is moderately rugged with elevations ranging from 915 to 1860 meters. Treeline on the property is at approximately 1000 meters elevation.

### **1.3 ACCESS**

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. A gravel airstrip capable of handling aircraft as large as DC-3's is located at the Galore Creek camp just south of the Scud River.



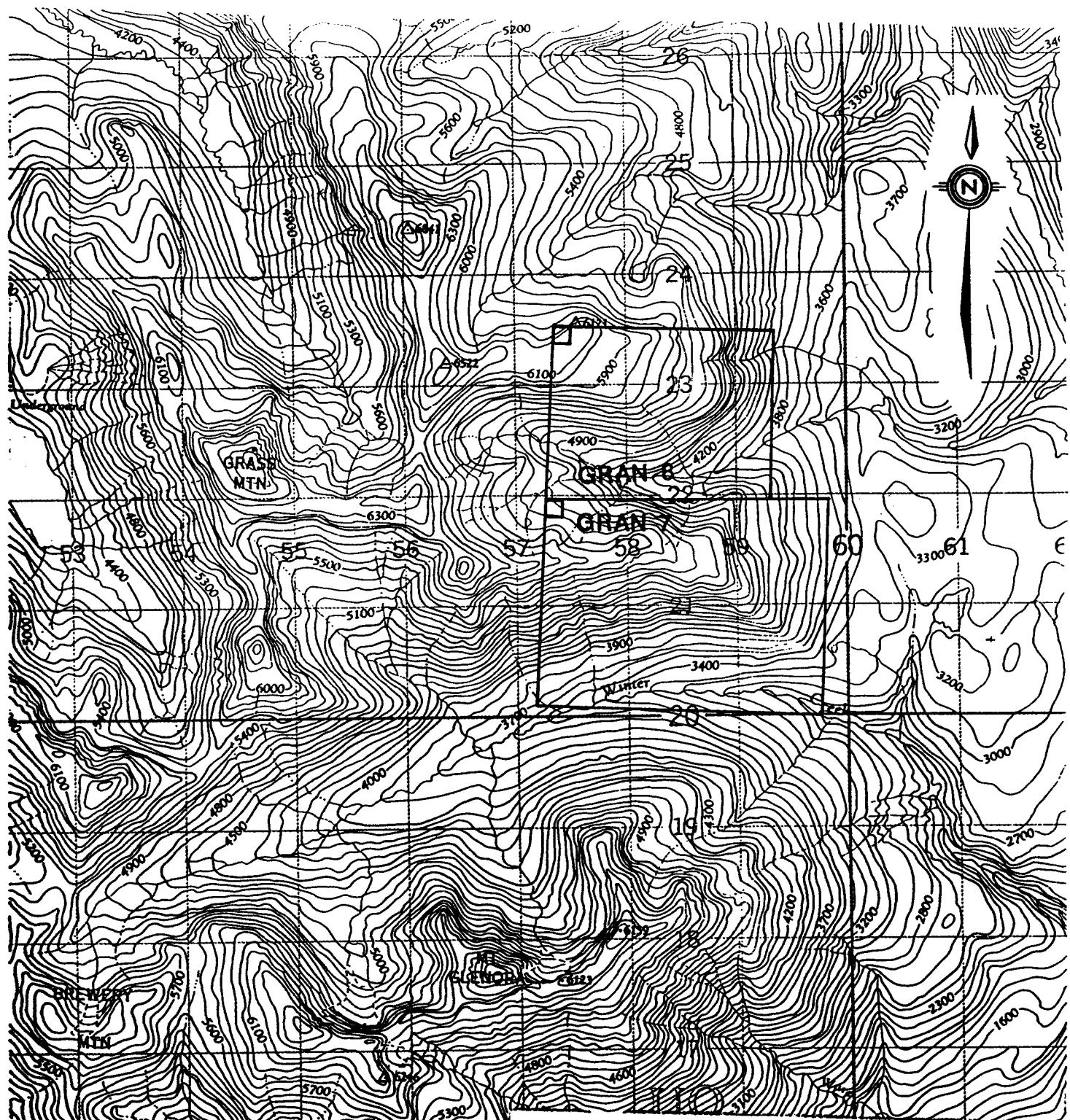
HOMESTAKE  
MINERAL DEVELOPMENT COMPANY

GRAND CANYON PROJECT, B.C.

GLENORA KING (GRAN 7 + 8)

**LOCATION MAP**

DRAWN KMc	DATE 11/67	FILE CODE	104G
Revised _____		FIGURE 1.1	



SCALE 1 : 50,000

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MINERAL DEVELOPMENT COMPANY**

GLENORA KING (GRAN 7 + 8)

**DETAILED CLAIM LOCATION**

DRAWN P.H.	DATE AUG. 10, 89	FILE CODE 104G/14W	Figure 2.2
Reviewed _____	_____	_____	_____

## **2.0 CLAIM STATUS**

The Glenora King property consists of two claims totalling thirty-two units. The claims were recorded on June 14, 1988 and are currently owned by Homestake Mineral Development Company and Equity Silver Mines Ltd. Current claim data is as follows:

CLAIM	UNITS	RECORD#	RECORD	EXPIRY
Gran 7	20	4664	06/14/88	06/14/90
Gran 8	12	4665	06/14/88	06/14/90

## **3.0 EXPLORATION HISTORY**

Exploration in the vicinity dates back to 1917 when copper mineralization was discovered on the south facing slope of Winter Creek at an elevation of 1300 meters. Kerr (1948) reports assays of 0.12 oz/ton Au, 0.92 oz/ton Ag and 5.8% Cu from a small massive sulphide body containing pyrrhotite and chalcopyrite. The area was staked and abandoned several times: as the Glenora and King groups in 1929 and as the NP Group in 1962.

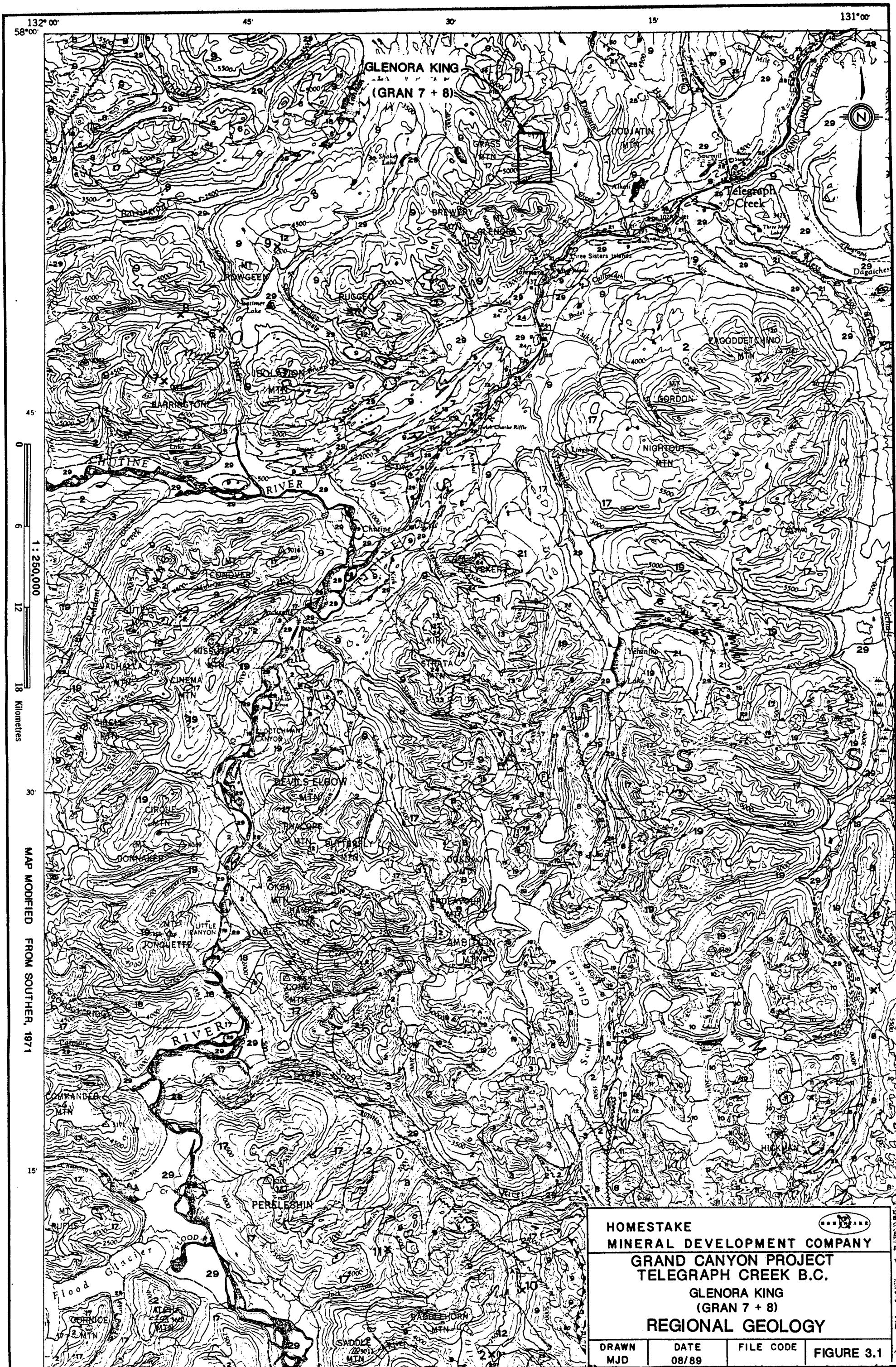
The Kit claims were recorded in 1974 by Ecstall Mining Co. who carried out geological mapping and geochemical sampling in 1974, and trenching and sampling in 1976 (B.C. Assessment reports #5509 and 6010).

The King 1 and King 2 claims were recorded by C. Graf of Atlantic Mineral Exploration Ltd. in 1983; prospecting and rock chip sampling were carried out the same year (B.C. Assessment report #11316).

## **4.0 REGIONAL GEOLOGY**

The property lies on the boundary between the Coast Plutonic Complex and Intermontane Belts and is underlain by rocks of the Stikine terrane. The terrane in this area can be divided into four tectonostratigraphic packages: a Late Palaeozoic to Middle Jurassic island arc suite represented by the Stikine assemblage of Monger (1977) and the Stuhini Group (Kerr, 1948); Middle Jurassic to early Late Cretaceous successor-basin sediments of the Bowser Lake Group (Tipper and Richards, 1976); Late Cretaceous to Tertiary volcanic arc assemblages of the Sloko Group (Aiken, 1959); and Late Tertiary to Recent post - orogenic plateau basalts of the Edziza and Spectrum Ranges.

Three stages of plutonism are recognized in the area. The Hickman batholith is composed of Early to Middle Triassic quartz monzonite to quartz diorite. The Yehiniko and Galore Creek Intrusions are composed of quartz diorite to syenite of Early to Middle Jurassic age. Numerous dykes and sills of monzonite to diorite of Tertiary age occur throughout the project area.



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 northwest trending normal faults are dominant and are cut by narrow west-trending extensional faults (Souther, 1972).

## 5.0 PROPERTY GEOLOGY

The property is underlain by Stuhini Group volcanic rocks which have been intruded by granodiorite of probable Jurassic age and a number of hornblende porphyry dykes of unknown age. A number of prominent faults trend across the property with a strike of 150° and dip of 50° to 70° to the northwest.

## 6.0 EXPLORATION PROGRAM AND RESULTS

### 6.1 PROSPECTING AND LITHOGEOCHEMICAL SAMPLING

Because of limited outcrop exposure, prospecting and lithogeochemical sampling was concentrated in drainages on the property and the rock faces north of Winter Creek. Major lithologies and structures were plotted on 1:10,000 base maps (Figure 4).

During the course of the program, a total of thirteen rock samples were collected. All sample locations and corresponding gold and silver geochemical values are plotted on Figure 4.

The program was carried out as a follow up evaluation of work completed in June, 1989 (B.C. Assessment Report 19071).

#### 6.1.1 Results and Interpretations

A 1300 meter wide, east-trending slice of Stuhini Group volcanic rocks occurs along the claim line common to both Gran 7 and 8. The volcanic rocks are bounded to the north by a medium-grained granodiorite and to the south by a hornblende diorite. The two intrusives are probably of similar age. To the west of the claims, the volcanic rocks are in fault contact with hornblende diorite; these prominent fault structures trend 150° to 180° and dip 50° to 70° west to northwest. Several faults of similar orientation cut the volcanic rocks in the west part of Gran 7. Numerous hornblende porphyry dykes have been noted along these fault structures. The volcanic rocks adjacent these fault zones and dykes are often hornfelsed and extremely gossanous due to oxidation of local zones of semi-massive to massive pyrite and minor chalcopyrite and pyrrhotite. The majority of lithogeochemical sampling was from this zone of altered and faulted volcanic rocks. Some of the more significant results from this zone are as follows:

SAMPLE NO	Au (ppb)	Ag (ppm)	Cu (ppm)
31763	116	0.8	2914
31808	0.087 opt	7.7	2.90 %
31822	0.051 opt	7.3	9602
31823	661	2.4	2804
31824	303	1.9	2141
31825	615	1.6	3433
31826	307	1.2	1358

## 6.2 SOIL GEOCHEMICAL PROGRAM

Two contour soil lines were run on the north part of the property in an effort to assess areas largely covered by overburden. The soil lines were run at elevations of 5000 and 5500 feet with a sample spacing of 50 meters. One other line of soils was run up the drainage in the southern part of the Gran 8 claim.

### 6.2.1 Results and Interpretations

The soil program was moderately successful in delineating potential zones of anomalous precious metal and copper mineralization. Values for the various elements varied from <5 to 101 ppb for gold, <0.2 to 0.7 for silver and 18 to 514 ppm for copper. Although the values are not high, they do fall into two distinct groups. The first group consists of samples collected north of the granodiorite-volcanic contact on Gran 8. Here, gold averages 10 ppb, silver <2 ppm and copper 118 ppm. South of the granodiorite-volcanic contact the average values are as follows: gold - 36 ppb, silver - <2 ppm, copper - 216 ppm. The property south of the contact returned consistently higher values for most elements, the exception being barium which is highly anomalous north of the contact. The sharp contrast between these two groups implies: 1.) a weak mineralized system south of the granodiorite contact or 2.) a geochemical contrast between the two lithologies.

## 8.0 REFERENCES

Allen, D.G., Panteleyev, A. and Armstrong, A.T. (1976) "Galore Creek" in Porphyry Deposits of the Canadian Cordillera, Special Volume 15, pg. 402 - 417.

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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.

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	1931, pg 50
	1958, pg 6
	1963, pg 7
	1966, pg 22, 24
	1968, pg 38

Ney, C.S. and Hollister, V.F. (1976): "Geological Setting of Porphyry Deposits of the Canadian Cordillera" in Porphyry Deposits of the Canadian Cordillera, Special Volume 15, pg 21 - 30

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

**APPENDIX I**  
**(Sample Descriptions)**

## GLENORA KING (GRAN 7 AND 8)

SAMPLE	NO	TYPE	DESCRIPTION	MINERALIZATION
GK-07	31762	grab	Quartz-ankerite-calcite breccia	
	31763	grab	ankeritic mafic volcanics	trace py
	31764	grab	grey quartz vein	10 to 15% po, 1 to 2% cpy
	31765	grab	quartz-carbonate alt'n zone in mafic volc.	trace malachite
GK-08	31771	silt	moss mat	
GK-07	31772	grab	carbonatized volc.	
	31807	grab	intermediate volc.	trace py
	31808	grab	shear zone in mafic volc.	3 to 4% cpy, 5 to 7% py
	31809	grab	intermediate volc.	5 to 10% py
	31810	grab	carbonatized volcanic	1% f.g. py
	31821	grab	quartz-carbonate alt'n zone	
	31822	grab	silicified mafic volc. adjacent diorite	5 to 10% py, 1 to 5% po, 1 to 2% cpy
	31823	soil	talus fines	
	31824	soil	talus fines	

## **APPENDIX II**

**(Sample Results)**

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PROJECT: 57116K

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
R2 GK-7 31762		<5	<0.2	59	9	<0.5	41	<1	8	13	2	38
R2 GK-7 31763		116	0.8	65	10	<0.5	<2	<1	7	32	6	2914
R2 GK-7 31764		8	<0.2	29	28	<0.5	<2	<1	<5	60	37	422
R2 GK-7 31807		<5	<0.2	26	14	<0.5	2	<1	6	16	<1	151
R2 GK-7 31808		3696	7.7	161	2	<0.5	12	<1	<5	325	<1	>20000
R2 GK-7 31809		18	<0.2	64	6	<0.5	2	<1	<5	20	40	355

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Ti PPM	No PPM	Nb PPM	NI PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
R2 GK-7 31762		157	<1	13	<1	98	13	126	<20	82	6	<20
R2 GK-7 31763		18	3	3	1	9	7	12	<20	8	10	<20
R2 GK-7 31764		14	<1	9	3	7	16	4	<20	7	6	<20
R2 GK-7 31807		17	2	4	1	15	4	6	<20	9	11	<20
R2 GK-7 31808		166	<1	27	4	92	34	113	<20	79	5	<20
R2 GK-7 31809		26	<1	21	3	12	15	2	<20	6	8	<20

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SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
R2 GK-7 31762		161	17	120	53	35	5	31	5
R2 GK-7 31763		14	<10	<10	103	<10	7	165	1
R2 GK-7 31764		14	<10	<10	86	<10	3	23	3
R2 GK-7 31807		34	<10	12	138	<10	7	42	2
R2 GK-7 31808		39	<10	110	70	<10	7	79	9
R2 GK-7 31809		4	<10	<10	136	<10	5	34	4

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPB	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
R2 GK-07-1 31822		1994	7.3	200	8	<0.5	<2	<1	<5	438	7	9602

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
R2 GK-07-1 31822		20	<1	17	31	17	39	9	<20	16	6	<20

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SAMPLE NUMBER	ELEMENT UNITS	Au PPM	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
R2 31765		<5	0.3	88	149	<0.5	41	<1	5	12	15	855
R2 31772		<5	<0.2	30	16	<0.5	6	<1	<5	13	30	7
R2 31779		86	0.8	246	114	<0.5	41	<1	6	21	47	212
R2 31810		<5	<0.2	84	14	<0.5	3	<1	<5	22	8	116
R2 31821		<5	<0.2	78	13	<0.5	4	<1	<5	19	15	89

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
R2 31765		156	<1	12	2	97	34	106	<20	72	6	<20
R2 31772		18	<1	5	<1	21	15	8	<20	15	20	<20
R2 31779		115	<1	13	6	57	9	114	<20	69	10	<20
R2 31810		21	<1	5	1	14	11	5	<20	13	19	<20
R2 31821		22	<1	4	1	17	12	14	<20	12	13	<20

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SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
R2 31765		71	<10	108	75	<10	6	90	5
R2 31772		54	<10	20	227	<10	10	49	3
R2 31779		136	12	80	86	13	6	30	4
R2 31810		24	<10	13	172	<10	8	94	2
R2 31821		29	<10	15	101	<10	6	195	2

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
S1 GK-07-2 31823		661	2.4	358	128	<0.5	45	<1	10	179	12	2804
S1 GK-07-2 31824		303	1.9	243	45	<0.5	42	<1	7	147	7	2141
S1 GK-07-2 31825		615	1.6	812	107	<0.5	31	<1	12	168	15	3433
S1 GK-07-2 31826		307	1.2	>2000	73	<0.5	47	<1	22	168	10	1358

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
S1 GK-07-2 31823		111	<1	29	12	58	45	124	<20	94	22	<20
S1 GK-07-2 31824		97	<1	28	10	52	34	140	<20	95	30	<20
S1 GK-07-2 31825		107	1	29	8	54	43	123	<20	87	24	<20
S1 GK-07-2 31826		119	4	29	7	54	45	133	<20	132	38	<20

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SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	U PPM	H PPM	Y PPM	Zn PPM	Zr PPM
S1 GK-07-2 31823		102	22	81	219	<10	11	314	5
S1 GK-07-2 31824		7	<10	90	230	<10	6	201	4
S1 GK-07-2 31825		43	18	87	254	<10	16	182	6
S1 GK-07-2 31826		37	<10	92	235	<10	19	500	6

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SAMPLE NUMBER	ELEMENT	Cu
	UNITS	PCT

R2 GK-7 31808	2.90
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SAMPLE NUMBER	ELEMENT UNITS	WT G	WT-100 G	WT+100 G	Au DUP OPT	Au DUP OPT	Au AVG OPT	Au+100 OPT	Au+100 MG	Au TOT OPT
R6 GK-07-1 31822		29.17	954.7	28.25	0.051	0.051	0.051	0.05	0.053	0.051

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SAMPLE NUMBER	ELEMENT UNITS	WT G	WT-100 G	WT+100 G	Au DUP OPT	Au DUP OPT	Au AVG OPT	Au+100 OPT	Au-100 MG	Au TOT OPT
R6 GK-7 31808		29.17	919.3	37.52	0.091	0.085	0.088	0.07	0.094	0.087

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A handwritten signature in black ink, appearing to read 'P. Johnson'.

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: U89-U6899.N

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PROJECT: GK-S711

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
S1 GK-7-2-I-P2 D+MIF		12	<0.2	<5	111	<0.5	3	<1	5	28	17	146
S1 GK-7-2-L-P2 N+SNE		7	<0.2	<5	184	<0.5	4	<1	<5	32	21	151
S1 GK-7-2-I-P2 1+MIF		24	<0.2	<5	92	<0.5	<2	<1	<5	35	11	133
S1 GK-7-2-L-P2 1+SNE		11	<0.2	<5	103	<0.5	4	<1	6	31	16	165
S1 GK-7-2-I-P2 2+MIF		26	<0.2	<5	99	<0.5	4	<1	9	52	9	174
S1 GK-7-2-L-P2 2+SNE		42	<0.2	<5	110	<0.5	4	<1	8	34	20	168
S1 GK-7-2-I-P2 3+MIF		56	<0.2	12	129	<0.5	2	<1	11	39	21	207
S1 GK-7-2-L-P2 4+MNE		59	<0.2	26	104	<0.5	4	<1	7	57	14	228
S1 GK-7-2-I-P2 4+SIF		63	<0.2	22	132	<0.5	4	<1	12	68	15	387
S1 GK-7-2-L-P2 5+SNE		30	<0.2	<5	142	<0.5	5	<1	12	54	14	223
S1 GK-7-2-I-P2 6+MIF		31	<0.2	<5	116	<0.5	4	<1	15	38	9	215
S1 GK-7-2-L-P2 6+SNE		92	<0.2	24	124	<0.5	3	<1	16	58	16	336
S1 GK-7-2-I-P2 7+MIF		22	<0.2	<5	132	<0.5	4	<1	12	53	17	269
S1 GK-7-2-L-P2 7+SNE		24	<0.2	<5	108	<0.5	2	<1	9	45	26	238
S1 GK-7-2-I-P2 8+MIF		37	<0.2	<5	121	<0.5	4	<1	8	48	16	258
S1 GK-8-2-L-P1 1+MIF		10	<0.2	<5	977	<0.5	4	<1	17	10	21	40
S1 GK-8-2-I-P1 1+SIF		15	<0.2	<5	1166	<0.5	2	<1	22	13	24	42
S1 GK-8-2-L-P1 1+MNE		23	<0.2	<5	>2000	<0.5	3	<1	20	13	14	44
S1 GK-8-2-I-P1 1+SIF		17	<0.2	<5	>2000	<0.5	5	<1	23	21	8	88
S1 GK-8-2-L-P1 2+MIF		7	<0.2	<5	1106	<0.5	2	<1	22	11	14	30
S1 GK-8-2-I-P1 2+SIF		8	<0.2	<5	>2000	<0.5	5	2	15	15	<1	45
S1 GK-8-2-L-P1 3+MIF		<5	<0.2	<5	363	<0.5	2	<1	13	7	5	23
S1 GK-8-2-I-P1 3+SIF		<5	<0.2	<5	352	<0.5	3	<1	22	10	14	28
S1 GK-8-2-L-P1 4+MIF		7	<0.2	<5	1393	<0.5	2	<1	21	8	9	36
S1 GK-8-2-I-P1 4+SIF		<5	<0.2	<5	>2000	<0.5	3	<1	58	11	47	38
S1 GK-8-2-L-P1 5+MIF		6	<0.2	<5	>2000	<0.5	5	<1	28	14	13	61
S1 GK-8-2-I-P1 5+SIF		<5	<0.2	<5	1750	<0.5	<2	<1	35	12	24	32
S1 GK-8-2-L-P1 6+MIF		<5	<0.2	<5	464	<0.5	3	<1	28	11	18	22
S1 GK-8-2-I-P1 6+SIF		<5	<0.2	<5	234	<0.5	<2	1	25	14	12	38
S1 GK-8-2-L-P1 7+MIF		<5	<0.2	<5	311	0.6	2	<1	19	9	5	18
S1 GK-8-2-I-P1 7+SIF		<5	<0.2	<5	445	0.8	<2	<1	31	13	15	29
S1 GK-8-2-L-P1 8+MIF		<5	<0.2	<5	289	0.9	3	1	18	8	4	17
S1 GK-8-2-I-P1 8+SIF		<5	<0.2	<5	425	0.7	3	<1	15	9	3	18
S1 GK-8-2-L-P1 9+MIF		<5	<0.2	12	476	1.4	3	<1	25	14	<1	21
S1 GK-8-2-I-P1 9+SIF		<5	<0.2	26	450	1.3	6	<1	39	18	1	31
S1 GK-8-2-L-P1 10+MIF		<5	<0.2	16	517	1.7	6	<1	27	16	3	33
S1 GK-8-2-I-P1 10+SIF		<5	<0.2	33	309	<0.5	4	<1	23	16	3	36
S1 GK-8-2-L-P1 11+MIF		6	<0.2	38	841	<0.5	3	<1	27	14	9	41
S1 LD1-07 1		9	<0.2	12	277	<0.5	<2	<1	9	6	<1	295
S1 LD1-07 2		13	<0.2	34	434	<0.5	3	<1	11	10	10	40

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# Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	In PPM	Ti PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
S1 GK-7-2-1-P2 0+NNF		13	4	17	3	6	18	<2	55	8	8	<20
S1 GK-7-2-L-P2 0+5NE		15	4	18	4	8	22	7	45	13	7	<20
S1 GK-7-2-1-P2 1+NNF		13	3	15	2	8	17	4	<20	11	6	<20
S1 GK-7-2-L-P2 1+5NE		13	5	11	4	7	19	6	<20	6	6	<20
S1 GK-7-2-1-P2 2+NNF		15	7	18	5	7	22	6	<20	9	15	<20
S1 GK-7-2-L-P2 2+5NE		13	6	14	3	8	21	6	26	9	4	<20
S1 GK-7-2-1-P2 3+NNF		14	8	16	3	8	24	8	<20	13	7	<20
S1 GK-7-2-L-P2 4+0NE		16	6	17	7	9	17	13	40	15	9	<20
S1 GK-7-2-1-P2 4+5NF		17	10	17	7	8	19	15	<20	17	11	<20
S1 GK-7-2-L-P2 5+5NE		16	8	18	4	7	21	<2	<20	7	12	<20
S1 GK-7-2-1-P2 6+NNF		12	10	11	6	5	13	<2	23	9	13	<20
S1 GK-7-2-L-P2 6+5NE		16	12	17	8	6	20	3	<20	19	11	<20
S1 GK-7-2-1-P2 7+NNF		11	9	11	4	6	24	<2	<20	9	24	<20
S1 GK-7-2-L-P2 7+5NE		13	7	13	4	6	23	<2	<20	9	18	<20
S1 GK-7-2-1-P2 8+NNF		15	7	16	4	7	23	<2	<20	6	15	<20
S1 GK-8-2-L-P1 0+0NN		10	8	8	2	9	18	19	<20	8	2	<20
S1 GK-8-2-1-P1 0+5NN		13	11	8	2	9	23	11	<20	5	4	<20
S1 GK-8-2-L-P1 1+0NN		14	7	8	2	9	14	30	40	9	3	<20
S1 GK-8-2-1-P1 1+5NN		16	11	9	1	9	9	49	57	<5	6	<20
S1 GK-8-2-L-P1 2+0NN		12	4	9	<1	7	12	<2	69	6	3	<20
S1 GK-8-2-1-P1 2+5NN		18	5	10	<1	6	4	<2	43	<5	4	<20
S1 GK-8-2-L-P1 3+0NN		11	3	7	<1	5	5	<2	84	<5	2	<20
S1 GK-8-2-1-P1 3+5NN		9	4	8	<1	5	12	<2	106	<5	3	<20
S1 GK-8-2-L-P1 4+0NN		13	6	9	<1	5	9	<2	88	<5	3	<20
S1 GK-8-2-1-P1 4+5NN		14	13	15	<1	10	48	<2	100	<5	4	<20
S1 GK-8-2-L-P1 5+0NN		14	7	13	<1	7	12	<2	89	<5	3	<20
S1 GK-8-2-1-P1 5+5NN		13	8	11	<1	7	20	<2	79	<5	3	<20
S1 GK-8-2-L-P1 6+0NN		11	6	8	<1	4	16	<2	61	<5	3	<20
S1 GK-8-2-1-P1 6+5NN		13	5	6	<1	7	11	3	72	<5	3	<20
S1 GK-8-2-L-P1 7+0NN		12	4	5	<1	4	6	<2	50	<5	2	<20
S1 GK-8-2-1-P1 7+5NN		13	7	8	1	6	12	<2	122	<5	3	<20
S1 GK-8-2-L-P1 8+0NN		13	4	6	<1	5	5	<2	85	<5	2	<20
S1 GK-8-2-1-P1 8+5NN		10	2	7	<1	4	3	<2	113	<5	3	<20
S1 GK-8-2-L-P1 9+0NN		16	9	4	<1	3	1	<2	68	7	7	<20
S1 GK-8-2-1-P1 9+5NN		18	13	4	1	3	4	<2	84	9	9	<20
S1 GK-8-2-L-P1 10+0NN		15	7	4	1	3	4	<2	111	6	9	<20
S1 GK-8-2-1-P1 10+5NN		21	10	4	2	8	5	7	<20	6	6	<20
S1 GK-8-2-L-P1 11+0NN		21	8	7	2	8	7	6	<20	6	5	<20
S1 LD1-I17 1		21	5	7	<1	13	2	14	<20	<5	5	<20
S1 LD1-I17 2		20	3	10	2	11	8	<2	<20	6	3	<20

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**Geochemical  
Lab Report**

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SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
S1 GK-7-2-I-P2 0+MIF		76	<10	<10	120	<10	5	67	5
S1 GK-7-2-L-P2 0+SNE		63	<10	<10	142	<10	4	77	3
S1 GK-7-2-I-P2 1+MIF		104	<10	<10	97	<10	3	59	4
S1 GK-7-2-L-P2 1+SNE		80	<10	<10	115	<10	6	97	2
S1 GK-7-2-I-P2 2+MIF		158	20	<10	119	<10	10	116	4
S1 GK-7-2-L-P2 2+SNE		70	<10	<10	121	<10	6	84	1
S1 GK-7-2-I-P2 3+MIF		101	14	<10	130	<10	7	102	2
S1 GK-7-2-L-P2 4+MNE		97	<10	<10	157	<10	8	154	4
S1 GK-7-2-I-P2 4+SIF		145	11	<10	143	<10	12	143	4
S1 GK-7-2-L-P2 5+SNE		105	19	<10	135	<10	11	140	6
S1 GK-7-2-I-P2 6+MIF		47	<10	<10	136	<10	15	152	4
S1 GK-7-2-L-P2 6+SNE		68	<10	<10	167	<10	12	127	2
S1 GK-7-2-I-P2 7+MIF		45	15	<10	196	<10	16	130	4
S1 GK-7-2-L-P2 7+SNE		57	16	<10	161	<10	13	115	4
S1 GK-7-2-I-P2 8+MIF		82	<10	<10	154	<10	12	119	4
S1 GK-8-2-L-P1 0+MMW		107	<10	<10	66	<10	5	79	3
S1 GK-8-2-I-P1 0+SMM		118	<10	<10	64	<10	8	73	9
S1 GK-8-2-L-P1 1+MMW		129	<10	<10	56	<10	6	74	4
S1 GK-8-2-I-P1 1+SMM		208	<10	<10	57	<10	18	116	6
S1 GK-8-2-L-P1 2+MMW		82	<10	<10	55	<10	6	70	5
S1 GK-8-2-I-P1 2+SMM		127	<10	<10	33	<10	10	73	3
S1 GK-8-2-L-P1 3+MMW		199	<10	<10	39	<10	5	52	4
S1 GK-8-2-I-P1 3+SMM		121	<10	<10	52	<10	4	53	4
S1 GK-8-2-L-P1 4+MMW		308	<10	<10	45	<10	6	59	3
S1 GK-8-2-I-P1 4+SMM		180	<10	<10	46	<10	7	47	4
S1 GK-8-2-L-P1 5+MMW		83	<10	<10	53	<10	9	59	5
S1 GK-8-2-I-P1 5+SMM		80	<10	<10	57	<10	9	58	4
S1 GK-8-2-L-P1 6+MMW		163	<10	<10	56	<10	5	48	4
S1 GK-8-2-I-P1 6+SMM		111	<10	<10	47	<10	6	73	4
S1 GK-8-2-L-P1 7+MMW		282	<10	<10	42	<10	6	52	4
S1 GK-8-2-I-P1 7+SMM		135	<10	<10	52	<10	8	60	7
S1 GK-8-2-L-P1 8+MMW		210	<10	<10	46	<10	7	45	3
S1 GK-8-2-I-P1 8+SMM		259	<10	<10	49	<10	5	47	3
S1 GK-8-2-L-P1 9+MMW		59	<10	<10	63	<10	31	92	5
S1 GK-8-2-I-P1 9+SMM		57	<10	<10	80	<10	36	80	8
S1 GK-8-2-L-P1 10+MMW		58	<10	<10	66	<10	24	76	5
S1 GK-8-2-I-P1 10+SMM		62	<10	<10	67	<10	27	108	3
S1 GK-8-2-L-P1 11+MMW		67	<10	<10	79	<10	15	100	3
S1 LD1-07 1		269	<10	<10	40	<10	7	65	2
S1 LD1-07 2		214	<10	<10	63	<10	4	105	2

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SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ag PPM	As PPM	Br PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
S1 LD1-07 3		9	<0.2	147	1781	<0.5	38	<1	31	13	7	39
S1 LD1-07 4		8	<0.2	138	697	<0.5	44	<1	33	15	11	47
S1 LD1-07 5		11	<0.2	145	856	<0.5	50	<1	26	12	5	42
S1 LD1-07 6		12	0.2	159	>2000	<0.5	40	<1	13	11	5	50
S1 LD1-07 7		28	<0.2	28	>2000	<0.5	<2	<1	16	10	11	51
S1 LD1-07 8		11	<0.2	109	1373	<0.5	51	<1	24	13	4	69
S1 LD1-07 9		15	<0.2	36	611	<0.5	<2	<1	12	16	16	50
S1 LD1-07 10		24	<0.2	27	1426	<0.5	2	<1	14	11	14	37
S1 LD1-07 11		16	<0.2	35	830	<0.5	<2	<1	15	12	11	51
S1 LD1-07 13		23	0.2	35	544	<0.5	<2	<1	25	15	14	49
S1 LD1-07 14		29	<0.2	32	311	<0.5	<2	<1	23	14	10	34
S1 LD1-07 16		19	<0.2	38	301	<0.5	3	<1	25	9	5	21
S1 LD1-07 17		22	<0.2	22	403	<0.5	<2	<1	14	6	3	18
S1 LD1-07 18		15	<0.2	30	452	<0.5	3	<1	18	12	6	28
S1 LD1-07 19		11	<0.2	28	531	<0.5	<2	<1	19	15	4	31
S1 LD1-07 20		13	<0.2	43	434	<0.5	2	<1	24	14	2	22
S1 LD1-07 21		11	<0.2	48	506	<0.5	3	<1	17	14	8	35
S1 LD1-07 22		10	<0.2	159	224	<0.5	43	<1	24	14	7	37
S1 LD1-07 23		11	<0.2	51	175	<0.5	4	<1	15	9	10	35
S1 LD1-07 24		11	<0.2	174	223	<0.5	60	<1	38	18	24	51
S1 LD1-07 25		14	<0.2	54	288	<0.5	5	<1	42	23	7	43
S1 LD1-07 26		21	<0.2	44	224	<0.5	4	<1	25	18	6	71
S1 LD1-07 27		28	<0.2	64	359	<0.5	<2	<1	38	29	5	167
S1 LD1-07 28		38	<0.2	103	131	<0.5	3	<1	8	21	16	142
S1 LD1-07 29		30	<0.2	149	125	<0.5	41	<1	6	27	14	178
S1 LD1-07 30		43	<0.2	53	128	<0.5	2	<1	9	24	16	142
S1 LD1-07 31		27	<0.2	162	136	<0.5	61	<1	9	26	14	162
S1 LD1-07 32		26	<0.2	55	89	<0.5	4	<1	7	27	19	257
S1 LD1-07 33		20	0.2	57	116	<0.5	<2	<1	5	29	17	233
S1 LD1-07 34		71	<0.2	114	310	<0.5	4	<1	5	52	16	305
S1 LD1-07 35		32	<0.2	141	114	<0.5	35	<1	12	39	14	214
S1 LD1-07 36		19	0.2	59	147	<0.5	<2	<1	9	50	24	327
S1 LD1-07 37		27	0.5	70	56	<0.5	2	<1	10	86	21	375
S1 LD1-07 38		66	0.7	195	182	<0.5	52	<1	11	74	7	514
S1 LD2-07 1		46	0.2	192	129	<0.5	50	<1	17	24	16	139
S1 LD2-07 2		19	0.3	117	179	<0.5	3	<1	7	31	19	202
S1 LD2-07 3		25	0.2	118	179	<0.5	4	<1	9	31	18	222
S1 LD2-07 5		21	0.4	148	189	<0.5	56	<1	12	42	12	307
S1 LD2-07 6		15	0.2	162	257	<0.5	39	<1	5	53	2	347
S1 LD2-07 7		28	0.4	66	235	<0.5	2	<1	12	32	17	225

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SAMPLE NUMBER	ELEMENT UNITS	Ge PPM	Ta PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
S1 LD1-07 3		124	6	17	5	66	10	158	<20	91	6	<20
S1 LD1-07 4		119	4	17	4	62	23	140	<20	93	7	<20
S1 LD1-07 5		118	4	16	2	62	17	145	<20	89	5	<20
S1 LD1-07 6		111	5	17	1	58	13	135	<20	91	5	<20
S1 LD1-07 7		20	5	12	1	8	11	19	<20	5	3	<20
S1 LD1-07 8		118	8	16	5	59	19	135	<20	89	2	<20
S1 LD1-07 9		19	5	12	2	8	12	<2	<20	5	5	<20
S1 LD1-07 10		19	5	11	2	8	11	<2	<20	5	2	<20
S1 LD1-07 11		22	5	11	2	9	11	<2	<20	5	2	<20
S1 LD1-07 13		22	7	10	2	12	11	<2	<20	5	3	<20
S1 LD1-07 14		19	7	7	3	6	8	3	<20	7	5	<20
S1 LD1-07 16		15	7	6	1	6	6	<2	23	7	4	<20
S1 LD1-07 17		19	6	11	<1	6	4	<2	<20	5	1	<20
S1 LD1-07 18		18	7	6	2	5	5	5	<20	5	<1	<20
S1 LD1-07 19		18	7	5	2	5	5	5	<20	7	1	<20
S1 LD1-07 20		19	9	5	3	8	3	10	<20	10	5	<20
S1 LD1-07 21		22	5	8	2	7	6	15	<20	8	<1	<20
S1 LD1-07 22		114	9	16	2	59	18	136	<20	79	3	<20
S1 LD1-07 23		17	5	7	2	8	6	11	<20	7	<1	<20
S1 LD1-07 24		118	11	19	1	62	28	139	<20	98	6	<20
S1 LD1-07 25		23	16	6	3	9	9	8	<20	10	12	<20
S1 LD1-07 26		23	10	10	2	9	6	10	<20	8	7	<20
S1 LD1-07 27		23	15	11	3	8	7	9	<20	8	18	<20
S1 LD1-07 28		22	3	15	3	10	14	6	<20	12	7	<20
S1 LD1-07 29		115	2	22	4	64	20	137	<20	82	12	<20
S1 LD1-07 30		21	4	12	3	10	12	11	<20	10	11	<20
S1 LD1-07 31		121	2	19	5	64	23	131	<20	92	11	<20
S1 LD1-07 32		22	2	10	2	10	21	9	<20	11	22	<20
S1 LD1-07 33		24	2	15	2	11	17	11	<20	9	12	<20
S1 LD1-07 34		23	<1	18	3	10	19	<2	<20	19	9	<20
S1 LD1-07 35		123	<1	21	4	67	26	147	<20	84	13	<20
S1 LD1-07 36		25	3	14	3	11	29	5	<20	10	21	<20
S1 LD1-07 37		25	4	14	2	11	29	15	<20	9	22	<20
S1 LD1-07 38		136	<1	23	3	66	30	171	<20	96	19	<20
S1 LD2-07 1		130	4	24	1	61	31	145	<20	98	9	<20
S1 LD2-07 2		24	2	17	3	9	18	12	<20	17	11	<20
S1 LD2-07 3		24	3	15	3	10	17	12	<20	18	8	<20
S1 LD2-07 5		128	3	26	4	66	21	154	<20	89	18	<20
S1 LD2-07 6		127	<1	26	2	64	21	145	<20	91	19	<20
S1 LD2-07 7		24	5	16	2	10	20	11	<20	9	14	<20

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# Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

DATE PRINTED: 31-OCT-89

PROJECT: GK-5711

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REPORT: V89-N6899.N

SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
S1 LD1-07 3		470	<10	92	82	<10	11	117	4
S1 LD1-07 4		206	29	99	90	<10	8	119	4
S1 LD1-07 5		257	<10	93	78	<10	11	172	4
S1 LD1-07 6		275	<10	105	75	<10	8	188	3
S1 LD1-07 7		120	<10	<10	65	<10	6	147	<1
S1 LD1-07 8		223	18	102	63	<10	11	118	2
S1 LD1-07 9		75	<10	<10	92	<10	5	106	1
S1 LD1-07 10		158	<10	<10	64	<10	5	92	<1
S1 LD1-07 11		191	<10	<10	70	<10	6	74	2
S1 LD1-07 13		81	<10	<10	76	<10	8	103	3
S1 LD1-07 14		52	<10	<10	80	<10	11	91	<1
S1 LD1-07 16		82	<10	<10	66	<10	10	60	<1
S1 LD1-07 17		87	<10	<10	56	<10	6	92	<1
S1 LD1-07 18		124	<10	<10	62	<10	7	90	<1
S1 LD1-07 19		65	<10	<10	76	<10	12	115	<1
S1 LD1-07 20		98	<10	<10	72	<10	16	70	2
S1 LD1-07 21		72	<10	<10	76	<10	7	116	<1
S1 LD1-07 22		42	18	95	88	<10	10	83	3
S1 LD1-07 23		34	<10	<10	63	<10	6	87	1
S1 LD1-07 24		39	<10	99	108	25	12	110	5
S1 LD1-07 25		44	<10	<10	132	<10	48	116	<1
S1 LD1-07 26		54	<10	<10	101	<10	17	99	2
S1 LD1-07 27		29	<10	<10	155	<10	73	133	3
S1 LD1-07 28		53	<10	<10	120	<10	7	85	2
S1 LD1-07 29		69	14	116	150	11	11	91	8
S1 LD1-07 30		54	<10	<10	118	<10	12	99	3
S1 LD1-07 31		79	<10	100	146	<10	9	119	3
S1 LD1-07 32		47	<10	<10	175	<10	15	142	5
S1 LD1-07 33		57	<10	<10	141	<10	9	145	2
S1 LD1-07 34		251	<10	<10	141	<10	4	76	2
S1 LD1-07 35		73	<10	104	164	<10	9	180	4
S1 LD1-07 36		84	<10	<10	208	<10	14	147	2
S1 LD1-07 37		36	<10	<10	142	<10	15	133	2
S1 LD1-07 38		82	<10	109	181	<10	16	212	5
S1 LD2-07 1		27	<10	115	163	<10	8	213	3
S1 LD2-07 2		46	<10	<10	154	<10	7	311	2
S1 LD2-07 3		72	<10	<10	153	<10	8	177	<1
S1 LD2-07 5		81	<10	104	195	<10	17	237	3
S1 LD2-07 6		114	<10	100	192	<10	14	230	5
S1 LD2-07 7		65	<10	<10	140	<10	15	172	1

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REPORT: V89-N6899.N				DATE PRINTED: 31-OCT-89								
SAMPLE NUMBER	ELEMENT UNITS	Au PPM	Ag PPM	As PPM	Ba PPM	Be PPM	Bi PPM	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM
S1 L02-N7 8		101	0.2	1911	145	<0.5	48	<1	12	35	12	242
T1 GK-N8-N4 31771		40	<0.2	44	122	<0.5	3	<1	14	20	11	86

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: V89-06899.0

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SAMPLE NUMBER	ELEMENT UNITS	Ga PPM	La PPM	Li PPM	Mo PPM	Nb PPM	Ni PPM	Pb PPM	Rb PPM	Sb PPM	Sc PPM	Sn PPM
S1 LD2-07 8		123	3	22	4	611	25	145	<20	78	111	<20
T1 GK-08-04 31771		22	4	11	2	10	11	14	<20	11	6	<20

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SAMPLE NUMBER	ELEMENT UNITS	Sr PPM	Ta PPM	Te PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
S1 LD2-07 8		34	<10	98	170	15	11	207	3
T1 GK-08-04 31771		50	<10	<10	117	<10	9	83	1

**APPENDIX III**  
**(Sample Methods)**

## SAMPLING METHODS

### Rock

Approximately one to two kilograms were collected with a rock hammer with care being taken to sample as much unweathered material as possible. The sample was placed in a 3 mil plastic sample bag and shipped to Acme Analytical Labs or Bondar-Clegg & Company for 30 element ICP and geochemical analysis of gold.

### Stream Silt

The samples were collected with a hand trowel or by hand and placed in kraft sample bags, air dried and shipped to Acme Analytical Lab or Bondar-Clegg and Company for analysis of 30 elements by ICP and gold by geochemistry.

### Heavy Mineral

Stream sediment was sieved through a 20 mesh screen and collected in large 3 mil plastic sample bags. A standard sample weight of 8 kilograms 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 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.

### Soil Samples

Samples were collected from the B horizon using a maddock, placed in kraft paper bags and air dried. The samples were shipped to Acme Analytical Labs or Bondar-Clegg and Company where they were analyzed by 30 element ICP and geochemical gold.

In all instances, sample locations were marked in the field with orange flagging tape and metal tags bearing the sample number, date and samplers name.

## **APPENDIX IV**

**(Analytical Methods)**



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## Determination of Elements by Plasma Emission Spectroscopy

### Lefort Aqua-regia Digestion

The samples of 0.5 grams in weight are digested in test tubes with concentrated nitric and hydrochloric acids. These tubes are heated in hot water baths for two and one-half hours. The sample is then diluted and mixed. This solution is analyzed on the Plasma Emission Spectrograph by using the appropriate emission line for each element. The emissions are compared to standard solutions to determine the amount of each element that is present.

### Multi-acid Digestion

A sample weight of 0.5 grams is transferred to a teflon test tube. It is then treated with a mixture of hydrofluoric, nitric and perchloric acids. The sample and acid mixture is heated in an aluminum block until the volume is reduced and there are strong perchloric fumes. The residue is dissolved with hydrochloric acid and the solution is then diluted to 20 ml. with demineralized water and mixed. These solutions are analyzed on the Plasma Emission Spectrograph using the appropriate emission line for each element. The emissions are compared to standard solutions to determine the amount of each element that is present. These are run within one hour of digestion in order to minimize precipitation problems.

### Contamination Prevention

The test tubes are used for DC Plasma analysis only and are discarded after use. A solution of de-ionized water or dilute acid is run between samples to prevent contamination during analysis.



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## PROCEDURE FOR ASSAY Au ANALYSIS

### FIRE ASSAY PROCEDURE:

A prepared sample of one assay ton (29.166 grams) is mixed with a flux which is composed mainly of lead oxide. The proportions of the flux components (the litharge, soda, silica, borax glass, and flour) are adjusted depending upon the nature of the sample. Silver is added to help collect the gold. The samples are fused at 1950 F until a clear melt is obtained. The 30-40 gram lead button that is produced contains the precious metals. It is then separated from the slag. Heating in the cupellation furnace separates the lead from the noble metals. The normal-sized precious metal beads that are produced are transferred to test tubes and dissolved with aqua-regia. This solution is analyzed using Atomic Absorption by comparing the absorbance of these solutions with that of standard solutions. In the case of high grade samples, greater than 0.200 OPT, the precious metal bead is parted in dilute HNO<sub>3</sub> acid to dissolve the silver and the remaining gold is weighed.

### COMMENTS:

As part of our routine quality control we run a duplicate analysis for 2 out of each batch of 24 as well as a standard. These total about 12% of the samples. Also, all samples which are over 0.20 OPT on the original fusion are run again to verify the results. If a sample gives erratic results, such as 0.10, 0.020, 0.30, we will indicate this on the report. We suggest that a new split should be taken from the reject for preparation and analysis by our metallics sieve procedure. Certified standards and in house pulp standards as well as synthetic solution standards are run with each report or batch of samples.

## PROCEDURE FOR FIRE ASSAY SILVER

- 1) One assay ton (29.16 grams) of homogeneous pulp is weighed into a fireclay crucible and fluxed appropriately with litharge, borax, soda ash and silica.
- 2) No inquart is added, only flour or niter to control button size.
- 3) Fusion takes place in a furnace of about 1900 degrees F. The same procedure is used for fusing gold.
- 4) A standard for silver is run with each silver fusion.
- 5) All buttons are made up to the same weight with silver-free lead foil.
- 6) Controlled temperatures and a watchful cupeller ensure minimal silver losses in cupellation.
- 7) Corrections are applied to final results based on checks and standards.



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#### SILVER DETERMINATION (WET ASSAY)

A 3.0 gm sample is analytically weighed into a beaker. It is digested with hot nitric, hydrochloric, and hydrofluoric acids which breaks down the ore. Once digested, the sample is boiled in a dilute acid solution, transferred to a flask, and carefully diluted to exactly 100 mls. The samples are analyzed on the atomic absorption unit along with certified standards, in house standards and duplicates.

Total CU,PB,ZN,FE,Ni,Cd,Co BY A.A.

A 0.5 gram sample is weighed into a beaker and digested with HNO<sub>3</sub>, HCl, and HF on a hotplate. The sample is taken down to dryness and then HCl is added with water and KClO<sub>3</sub> to boil the sample into solution. The sample is then run on the atomic absorption unit along with pulp standards and synthetic standards. Any sample over 10% will be rerun by titration methods.

**APPENDIX V**  
**(Statement of Qualifications)**

## STATEMENT OF QUALIFICATIONS

I, Darcy Edward Marud, of 2205 Graveley Street, 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 6<sup>th</sup> day of *July 1980*

Respectfully submitted

  
Darcy E. Marud

**APPENDIX VI**  
**(Statement of Costs)**

GLENORA KING

1.0 SALARIES AND WAGES

Project Geologist	3 days	@	250/day	750
Geologist	4 days	@	180/day	720
				1470

2.0 GEOCHEMISTRY AND ASSAYING

Geochemistry	17 rock	@	17.5/smpl	297.5
	81 soil	@	14.82/spl	1200.2
Assaying	1 copper	@	6.75/smpl	6.75
	2 gold	@	41.75/smpl	83.5
				1577.35

3.0 ADMINISTRATION

Travel expenses and airfare	400
Maps, publications and photos	100
Communications	20
Freight and shipping	50
	570

4.0 SURFACE WORK

Accomodation	1487.5	
Field Materials	100	
Air Support	4.5 hrs @ 611.37/hr	2751.15
	4338.65	

5.0 MACHINERY AND EXPENSES

Rentals - Motorola radios	20
	20
<b>TOTAL</b>	<b>7976</b>

**GEOLOGICAL ASSESSMENT REPORT**

