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**PRELIMINARY ROCK GEOCHEMISTRY FROM THE NORTHEASTERN  
CRAIG A-1 QUADRANGLE, ALASKA**

by

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THIS REPORT HAS NOT BEEN REVIEWED FOR  
TECHNICAL CONTENT (EXCEPT AS NOTED IN  
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## INTRODUCTION

This preliminary report lists the results from geochemical analyses of 49 rock samples collected September 6-10, 1990 north of the Dolomi Bay area, Prince of Wales Island, Southeast Alaska. The samples were collected as part of an initial reconnaissance for a geologic mapping project of the Craig A-1 Quadrangle. Analyses and rock descriptions are listed in Tables 1 and 2, sample locations are shown on Plate 1.

This on-going study of the Craig A-1 quadrangle is being conducted as part of a cooperative agreement between the U.S. Bureau of Mines and the Alaska Division of Geological and Geophysical Surveys to investigate the geology and mineralization of the Ketchikan Mining District.

## SAMPLING AND ANALYTICAL METHODS

Most rock samples represent individual grab samples of approximately 1 kg. Composite and chip samples are noted in the sample descriptions.

Samples were analyzed by either Chemex Labs, Inc., North Vancouver, B.C. or Bondar Clegg & Company Ltd., North Vancouver, B.C. as noted in Table 1. Sample preparation methods and analytical techniques, including detection and upper limits used by the two labs are listed in the appendix to this report. In addition, analytical techniques are abbreviated below each element in Table 1 as follows:

FA+AA 30g	Fire assay + Atomic absorption, 30 g sample
FA+AA 10g	Fire assay + Atomic absorption, 10 g sample
FA - Grav.	Fire assay, gravimetric
AAS	Atomic absorption spectroscopy
ICP	Inductively coupled arc-plasma
XRF	X-ray fluorescence

Results are listed in parts per million(ppm) unless otherwise indicated.

Table 1. Rock analyses from the Dolomi area, Prince of Wales Island, Southeast Alaska  
(Values listed in parts per million unless otherwise noted.)

Map no.	Field no.	Lab.1	Au ppb FA+AA 30g	Au ppb FA+AA 10g	Au oz/T FA-Grav.	Ag AAS	Al% ICP	Ba ICP	Ba XRF	Be ICP	Bi ICP	Ca% ICP	Cd ICP	Co ICP	Cr ICP
1	90SAL269	C	35	-	-	<0.5	7.90	180	-	3.0	<2	5.96	<0.5	32	59
2	90KC131a	C	<5	-	-	<0.5	9.23	190	-	1.0	<2	1.25	<0.5	2	18
3	90SAL266	C	>10000	-	0.354	<0.5	0.14	10	-	4.0	44	12.30	<0.5	63	21
4	90KC118	C	4070	-	-	<0.5	0.23	20	-	0.5	44	13.90	<0.5	19	31
5	90SAL267	C	560	-	-	<0.5	0.17	20	-	<0.5	42	13.90	<0.5	7	114
6	90BT416	B	-2	1526	-	0.4	2.64	6	<20	-	<1	1.20	<1	47	258
7	90BT415	B	-	<5	-	0.9	0.05	7	300	-	<1	>10.00	<1	9	62
8	90KC148	C	<5	-	-	<0.5	6.73	70	-	<0.5	2	1.26	<0.5	13	61
9	90SAL233	C	80	-	-	<0.5	5.31	210	-	<0.5	4	1.07	<0.5	6	63
10	90KC116	C	450	-	-	<0.5	0.40	50	-	<0.5	8	3.66	<0.5	18	280
11	90KC167	C	>10000	-	0.878	<0.5	0.26	10	-	3.5	26	11.90	<0.5	190	58
12	90BT425	B	-	1029	-	0.6	0.13	<5	<20	-	<1	2.16	<1	12	13
13	90KC114	C	>10000	-	1.874	23.5	0.33	20	-	<0.5	128	0.03	<0.5	14	100
14	90KC135	C	<5	-	-	<0.5	5.75	110	-	<0.5	2	9.18	<0.5	19	40
15	90BT426	B	-	<5	-	0.6	0.16	17	90	-	<1	2.36	<1	9	8
16	90KC130	C	10	-	-	<0.5	0.65	90	-	<0.5	104	22.60	<0.5	<1	14
17	90KC168	C	650	-	-	<0.5	0.19	10	-	<0.5	4	17.40	<0.5	6	63
18	90BT451	B	-	<5	-	0.4	1.72	106	2000	-	<1	0.21	<1	38	62
19	90KC163	C	<5	-	-	<0.5	9.32	1300	-	1.5	<2	2.88	<0.5	9	17
20	90KC165	C	135	-	-	<0.5	0.54	30	-	<0.5	32	0.41	<0.5	550	220
21	90KC141	C	<5	-	-	<0.5	4.81	190	-	0.5	2	0.53	<0.5	223	178
22	90SAL232	C	15	-	-	<0.5	7.56	540	-	<0.5	<2	5.47	<0.5	13	143
23	90KC149a	C	<5	-	-	<0.5	6.77	20	-	<0.5	42	2.22	<0.5	29	389
24	90KC149b	C	<5	-	-	<0.5	9.14	1480	-	0.5	20	1.45	<0.5	8	76
25	90KC157	C	<5	-	-	<0.5	7.92	710	-	1.0	<2	3.61	<0.5	9	65

1B = Bondar Clegg & Company Ltd., North Vancouver, B.C.; C = Chemex Labs, Inc., North Vancouver, B.C.

2- = Not analyzed

Table 1. Rock analyses from the Dolomi area, Prince of Wales Island, Southeast Alaska (cont.)

Map no.	Cu ICP	Fe% ICP	K% ICP	Mg% ICP	Mn ICP	Mo ICP	Na% ICP	Ni ICP	P ICP	Pb ICP	Sr ICP	Ti % ICP	V ICP	W ICP	Zn ICP
1	575	7.60	0.69	2.48	1765	6	3.40	17	980	10	268	0.71	297	<10	132
2	7	3.86	3.53	0.41	430	4	4.60	1	310	6	32	0.09	<1	<10	16
3	474	16.20	0.04	5.53	515	4	<0.01	31	<10	<2	174	<0.01	10	<10	32
4	165	12.70	0.06	6.51	730	<1	<0.01	6	<10	34	175	<0.01	7	<10	50
5	2630	4.42	0.06	6.54	870	<1	0.04	4	<10	2	220	<0.01	8	<10	60
6	116	5.90	<0.05	2.79	700	<1	<0.05	92	-	<2	41	-	61	<10	262
7	28	7.31	<0.05	6.35	800	<1	<0.05	4	-	4	127	-	10	<10	29
8	22	5.07	0.15	1.19	1425	<1	3.52	4	470	2	318	0.32	87	<10	74
9	30	2.78	1.28	0.83	465	2	1.39	1	290	4	77	0.08	8	<10	56
10	108	4.08	0.11	1.81	260	<1	0.05	9	60	<2	64	<0.01	10	<10	24
11	60	22.50	0.06	5.18	670	3	0.02	28	<10	8	166	<0.01	14	<10	46
12	32	3.31	<0.05	>10.00	800	<1	<0.05	3	-	3	189	-	13	<10	19
13	>10000	12.50	0.06	<0.01	60	<1	<0.01	30	<10	94	6	<0.01	2	<10	102
14	65	6.49	0.84	1.77	970	1	1.96	7	540	<2	161	0.31	95	<10	68
15	4	2.76	0.08	8.31	700	<1	<0.05	12	-	3	242	-	16	<10	31
16	2	2.12	0.26	9.68	795	<1	0.05	6	<10	<2	273	0.01	20	<10	38
17	>10000	5.29	0.08	8.91	1140	5	0.04	6	<10	<2	194	<0.01	11	<10	56
18	124	7.17	0.33	1.17	400	2	<0.05	40	-	<2	5	-	42	<10	50
19	8	2.52	1.21	0.78	650	1	5.81	8	410	<2	160	0.19	58	<10	34
20	452	>25.00	<0.01	0.40	120	<1	0.05	59	300	24	19	0.08	59	<10	58
21	403	4.40	0.65	0.28	130	<1	2.67	36	730	2	98	0.13	53	<10	16
22	58	3.64	1.91	1.53	345	4	0.96	21	1300	4	253	0.40	229	<10	72
23	29	8.34	0.07	5.75	920	2	0.25	182	850	<2	102	1.24	219	<10	190
24	81	6.26	2.37	2.68	360	6	0.68	11	1410	4	210	0.79	361	<10	110
25	86	3.88	1.41	1.48	290	1	3.74	15	1430	<2	122	0.35	239	<10	82

Table 1. Rock analyses from the Dolomi area, Prince of Wales Island, Southeast Alaska (cont.)

Map no.	As ICP	Sb ICP	Te ICP	La ICP	Y ICP	Sn XRF	Hg AA
1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	10	<5	<10	<1	5	9	0.042
7	10	<5	<10	<1	3	<5	0.06
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12	9	<5	<10	<1	6	<5	0.025
13	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-
15	5	<5	<10	2	16	<5	0.014
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	8	<5	<10	2	7	<5	0.034
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-

Table 1. Rock analyses from the Dolomi area, Prince of Wales Island, Southeast Alaska (cont.)

Map no.	Field no.	Lab.1	Au ppb FA+AA 30g	Au ppb FA+AA 10g	Au oz/T FA-Grav.	Ag AAS	Al% ICP	Ba ICP	Ba XRF	Be ICP	Bi ICP	Ca% ICP	Cd ICP	Co ICP	Cr ICP
26	90BT446	B	-2	<5	-	0.7	0.17	70	440	-	<1	<0.05	<1	8	228
27	90BT447	B	-	<5	-	0.7	5.28	102	1600	-	<1	0.64	<1	24	25
28	90KC159	C	<5	-	-	<0.5	8.42	110	-	<0.5	28	4.47	<0.5	37	46
29	90BT402	B	-	75	-	5.1	1.24	20	80	-	<1	4.77	<1	292	57
30	90BT437	B	-	<5	-	0.4	1.17	129	1800	-	<1	1.37	<1	9	75
31	90BT444B	B	-	<5	-	0.8	2.59	49	330	-	<1	0.29	<1	21	111
32	90BT443	B	-	<5	-	0.4	0.90	11	<20	-	<1	0.58	<1	34	65
33	90BT441	B	-	<5	-	0.6	2.26	27	20	-	<1	0.87	<1	18	23
34	90BT440	B	-	<5	-	<0.2	1.12	26	210	-	<1	0.89	<1	45	148
35	90BT438	B	-	<5	-	0.5	3.71	75	1300	-	<1	0.24	<1	11	41
36	90KC100	C	190	-	-	<0.5	3.22	90	-	<0.5	20	11.25	1.0	230	31
37	90BT408	B	-	8	-	4.5	0.62	28	<20	-	<1	8.6	41	116	57
38	90BT448	B	-	<5	-	0.5	2.26	15	50	-	<1	0.38	<1	5	81
39	90KC113	C	20	-	-	1.5	3.66	200	-	<0.5	46	0.15	<0.5	6	211
40	90KC161	C	90	-	-	12.5	3.99	160	-	<0.5	<2	7.60	<0.5	28	73
41	90BT419	B	-	<5	-	0.3	0.29	7	<20	-	<1	1.07	<1	<1	37
42	90SAL237	C	10	-	-	<0.5	8.51	800	-	<0.5	36	2.33	<0.5	17	328
43	90BT421	B	-	27	-	0.9	0.42	19	120	-	<1	>10.00	<1	47	190
44	90SAL245	C	<5	-	-	0.5	2.37	410	-	<0.5	82	15.75	<0.5	<1	433
45	90SAL261	C	<5	-	-	<0.5	7.40	220	-	<0.5	36	5.69	<0.5	17	40
46	90SAL216	C	5	-	-	<0.5	4.15	300	-	<0.5	24	9.68	<0.5	32	553
47	90KC125	C	70	-	-	<0.5	0.19	70	-	<0.5	<2	>25.00	<0.5	<1	8
48	90BT424	B	-	<5	-	0.7	0.13	<5	110	-	<1	2.09	<1	12	14
49	90SAL217	C	10	-	-	1.0	0.78	70	-	<0.5	<2	>25.00	<0.5	1	22

1B = Bondar Clegg & Company Ltd., North Vancouver, B.C.; C = Chemex Labs, Inc., North Vancouver, B.C.

2- = Not analyzed

**Table 1. Rock analyses from the Dolomi area, Prince of Wales Island, Southeast Alaska (cont.)**

Map no.	Cu ICP	Fe% ICP	K% ICP	Mg% ICP	Mn ICP	Mo ICP	Na% ICP	Ni ICP	P ICP	Pb ICP	Sr ICP	Ti% ICP	V ICP	W ICP	Zn ICP
26	112	>10.00	0.05	<0.05	<100	7	<0.05	16	-	3	8	-	11	<10	<1
27	77	>10.00	<0.05	5.00	600	1	<0.05	10	-	4	27	-	146	<10	172
28	103	10.75	0.13	4.46	890	<1	0.23	19	1900	2	272	1.06	473	<10	184
29	3450	>10.00	0.07	0.20	1500	3	<0.05	6	-	32	421	-	29	<10	97
30	48	6.10	0.23	1.24	<100	14	<0.05	11	-	4	34	-	113	<10	69
31	97	7.29	0.11	1.72	1200	10	<0.05	42	-	15	18	-	125	<10	146
32	7	5.66	0.28	0.14	800	2	<0.05	7	-	3	22	-	66	<10	5
33	147	>10.00	<0.05	1.22	900	<1	0.11	5	-	3	84	-	201	<10	55
34	76	5.20	0.20	0.32	<100	12	<0.05	80	-	<2	29	-	42	<10	28
35	143	>10.00	0.12	1.92	500	1	<0.05	7	-	<2	20	-	126	<10	145
36	3850	15.10	0.16	1.09	6740	46	0.03	2	110	80	546	0.06	169	<10	1135
37	625	8.37	<0.05	0.13	19100	12	<0.05	3	-	32	37	-	21	<10	17593
38	38	6.94	<0.05	1.37	600	3	<0.05	4	-	<2	14	-	70	<10	111
39	195	21.80	0.77	0.22	175	22	0.64	45	390	28	68	0.17	127	<10	36
40	69	19.95	0.70	0.80	690	16	1.03	66	550	22	254	0.31	178	<10	48
41	3	6.27	0.21	0.27	600	3	0.07	1	-	3	9	-	2	<10	6
42	52	13.65	2.04	1.20	635	12	1.80	79	1320	12	248	0.51	269	<10	50
43	88	4.50	0.29	5.40	300	1	<0.05	541	-	4	200	-	30	<10	208
44	5	2.48	1.06	7.84	755	<1	0.38	97	<10	4	378	0.05	67	<10	96
45	37	3.60	3.78	3.59	110	2	0.27	6	220	2	237	0.30	169	<10	74
46	43	4.49	1.47	4.61	375	<1	0.43	106	1040	4	180	0.17	152	<10	54
47	6	1.44	0.04	2.68	780	<1	0.02	9	160	2	139	0.01	10	<10	24
48	31	3.22	<0.05	9.94	800	<1	<0.05	3	-	4	183	-	13	<10	18
49	16	2.62	0.30	3.12	430	2	0.17	4	100	4	348	0.04	21	<10	16





Table 2. Rock sample descriptions

Map no.	Field no.	Description
1	90SAL269	Pyritic, light-colored phase(?) (possibly dike) in syenite quarry
2	90KC131A	Brick red-colored med. grained hornblende(?) syenite, carbonate veinlets with pyrite, mafic minerals very altered
3	90SAL266	Chalcopyrite/pyrite pod in quartz-carbonate zone
4	90KC118	Pods to 5 cm in diam. of massive pyrite and chalcopyrite in 5 m wide zone of quartz-carbonate breccia
5	90SAL267	Black phyllitic shale
6	90BT416	Quartz-carbonate zone with pods of pyrite and chalcopyrite, chip-channel over 1 m
7	90BT415	Disseminated sulfides in muscovite-rich schist and dolomite; two zones each about 10 m thick sampled
8	90KC148	Limonite encrusted outcrop of actinolite schist
9	90SAL233	Pale green schist with pyritic quartz veins.
10	90KC116	Pyrite-chalcopyrite bearing quartz-carbonate breccia
11	90KC167	Massive pyrite/chalcopyrite pods to 10 cm diam. in quartz-carbonate breccia
12	90BT425	Pyrite pods in quartz carbonate zone 2-3 m thick, chip-channel across 2 m
13	90KC114	Chalcopyrite-bearing quartz vein, 10 cm wide
14	90KC135	Quartz chlorite schist interlaminated with siliceous pyrite-rich layers, sample from 15 cm wide pyritic zone
15	90BT426	Pyrite pods in quartz carbonate
16	90KC130	Quartz-carbonate breccia zone with trace pyrite, abundant quartz veining
17	90KC117	Quartz-carbonate breccia with chalcopyrite
18	90BT451	Pyrite-rich quartz sericite schist zone, 6 m thick, part of larger felsic meta-tuff horizon
19	90KC163	Numerous small cross-cutting barite(?) veinlets in light green calcareous quartz sericite schist
20	90KC165	Massive pyrite from 20 x 60 cm vug at margin of fine grained mafic dike
21	90KC141	Iron-stained quartz chlorite schist with minor pyrite and chalcopyrite in 10 cm wide quartz vein
22	90SAL232	Calcareous quartz muscovite schist, pyrite along foliations
23	90KC149A	Light gray-green, siliceous aphanitic dike about 1 m wide, finely disseminated sulfides
24	90KC149B	Dark gray calcareous graphitic quartz muscovite schist, finely disseminated sulfides along foliations
25	90KC157	Iron stained, gray, calcareous graphitic actinolite schist, most of outcrop is gray-green quartzite

**Table 2. Rock sample descriptions (cont.)**

Map no.	Field no.	Description
26	90BT446	1.2 m thick quartz vein with ferricrete vug fillings and calcite breccia
27	90BT447	Pyrite-rich quartz sericite schist horizon; 1 m chip channel
28	90KC159	Iron-stained quartz muscovite schist associated with minor quartz veining
29	90BT402	Chalcopyrite, pyrite, and magnetite in folded layers within greenschist; sampled over 1 m interval
30	90BT437	Pyrite-rich quartz-sericite schist; part of larger felsic metatuff section; 2 m thick chip-channel
31	90BT444b	Gossanous quartz sericite schist horizon in marble/schist unit
32	90BT443	Gossanous, tuffaceous semischist with ferricrete fracture fillings; 2 m chip-channel
33	90BT441	Pyrite-rich quartz sericite schist horizon, 3 meters thick; believed to be stratigraphically equivalent to no. 34
34	90BT440	Pyrite-rich quartz sericite schist layer 1 m thick; part of larger meta-tuff package; believed to be stratigraphically equivalent to no. 35
35	90BT438	Pyrite-rich quartz sericite schist zone; 2.5 m chip channel
36	90KC100	Sulfide-magnetite-garnet zone in metasomatic(?) zone within chlorite actinolite schist
37	90BT408	Sulfide-magnetite-garnet zone in amphibole-rich metasomatic(?) zone within chlorite actinolite schist, sampled over 2 m
38	90BT448	Pyrite-rich quartz sericite schist, 2 m chip channel
39	90KC113	Quartz sericite schist, pyrite and chalcopyrite along foliations
40	90KC161	Quartz sericite schist, sulfides along foliations
41	90BT419	Mineralized sericite-sulfide metakeratophyre tuff; grab sample over 3 meters
42	90SAL237	Pyritic, gossanous material
43	90BT421	Sulfide-bearing meta-andesite or basalt
44	90SAL245	Dolomite and mica schist with green stain, some dendritic pyrite
45	90SAL261	Pyritic, calcareous mica schist; mica mineral is green
46	90SAL216	Limestone with green malachite(?) stain and pods of micaceous schist (about 1% of rock)
47	90KC125	FeO-stained, quartz carbonate altered zone (igneous origin?) 10 m wide, cutting gray marble
48	90BT424	Malachite-stained calcite veins in bleached marble
49	90SAL217	Pyritic marble

## APPENDIX

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Bondar-Clegg & Company Ltd.  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 V7P 2R5

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au 10g Gold - Fire Assay	5 PPB	Fire-Assay	Fire Assay AA
2	Ag Silver	0.2 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
3	Cu Copper	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
4	Pb Lead	2 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
5	Zn Zinc	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
6	Mo Molybdenum	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
7	Ni Nickel	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
8	Co Cobalt	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
9	Cd Cadmium	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
10	As Arsenic	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
11	Sb Antimony	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
12	Fe Iron	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
13	Mn Manganese	0.01 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
14	Te Tellurium	10 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
15	Ba Barium	5 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
16	Cr Chromium	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
17	V Vanadium	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
18	W Tungsten	10 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
19	La Lanthanum	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
20	Al Aluminum	0.02 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
21	Mg Magnesium	0.05 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
22	Ca Calcium	0.05 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
23	Na Sodium	0.05 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
24	K Potassium	0.05 PCT	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
25	Sr Strontium	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
26	Y Yttrium	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Ind. Coupled Plasma
27	Bi Bismuth	1 PPM	HNO <sub>3</sub> -HCl Hot Extr.	Atomic Absorption
28	Hg Mercury	0.010 PPM	HNO <sub>3</sub> -HCl-SnSO <sub>4</sub>	Cold Vapour AA
29	Ba Barium	20 PPM		X-Ray Fluorescence
30	Sn Tin	5 PPM		X-Ray Fluorescence

Chemex Labs Ltd.  
994 West Glendale Ave., Suite 7  
Sparks, Nevada, 89431

SAMPLE PREPARATION		
CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
		map no. 3, 4, 11, 13, 17, 20, 36, 39
208	8	Assay ring to approx 150 mesh
294	8	Crush and split (0-10 pounds)
290	8	Assay total ICP digestion charge

SAMPLE PREPARATION		
CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	22	Geochem ring to approx 150 mesh
294	22	Crush and split (0-10 pounds)
232	22	PERCHLORIC-NITRIC-HYDROFLUORIC D

ANALYTICAL PROCEDURES				
CHEMEX CODE	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
578	Ag ppm: 24 element, rock & core	AAS	0.5	200
573	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	Be ppm: 24 element, rock & core	ICP-AES	0.5	10000
561	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	Cd ppm: 24 element, rock & core	ICP-AES	0.5	10000
563	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	K %: 24 element, rock & core	ICP-AES	0.01	20.0
570	Mg %: 24 element, rock & core	ICP-AES	0.01	20.0
568	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	Na %: 24 element, rock & core	ICP-AES	0.01	5.00
564	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	Pb ppm: 24 element, rock & core	ICP-AES	2	10000
582	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	Zn ppm: 24 element, rock & core	ICP-AES	2	10000
396	Au oz/T: 1/2 assay ton	FA-GRAVIMETRIC	0.003	20.000