BEEKEEPER 1, 2 and 3 MINERAL CLAIMS ASSESSMENT REPORT

Specific Claims:

Name	Record #	# Units
Beekeeper 1	2055	9
Beekeeper 2	not yet received	8
Beekeeper 3	not yet received	8

Located within the Cariboo Mining Division

NTS Location 93A/6W

Latitude 52° 21'

Longitude 121° 21'

Owner of Claims: JAMES W. MORTON

Operator of Claims: JAMES W. MORTON

Author of Report: JAMES W. MORTON

Submitted: September 30, 1981

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INTRODUCTION

Location and Physiographic Position:

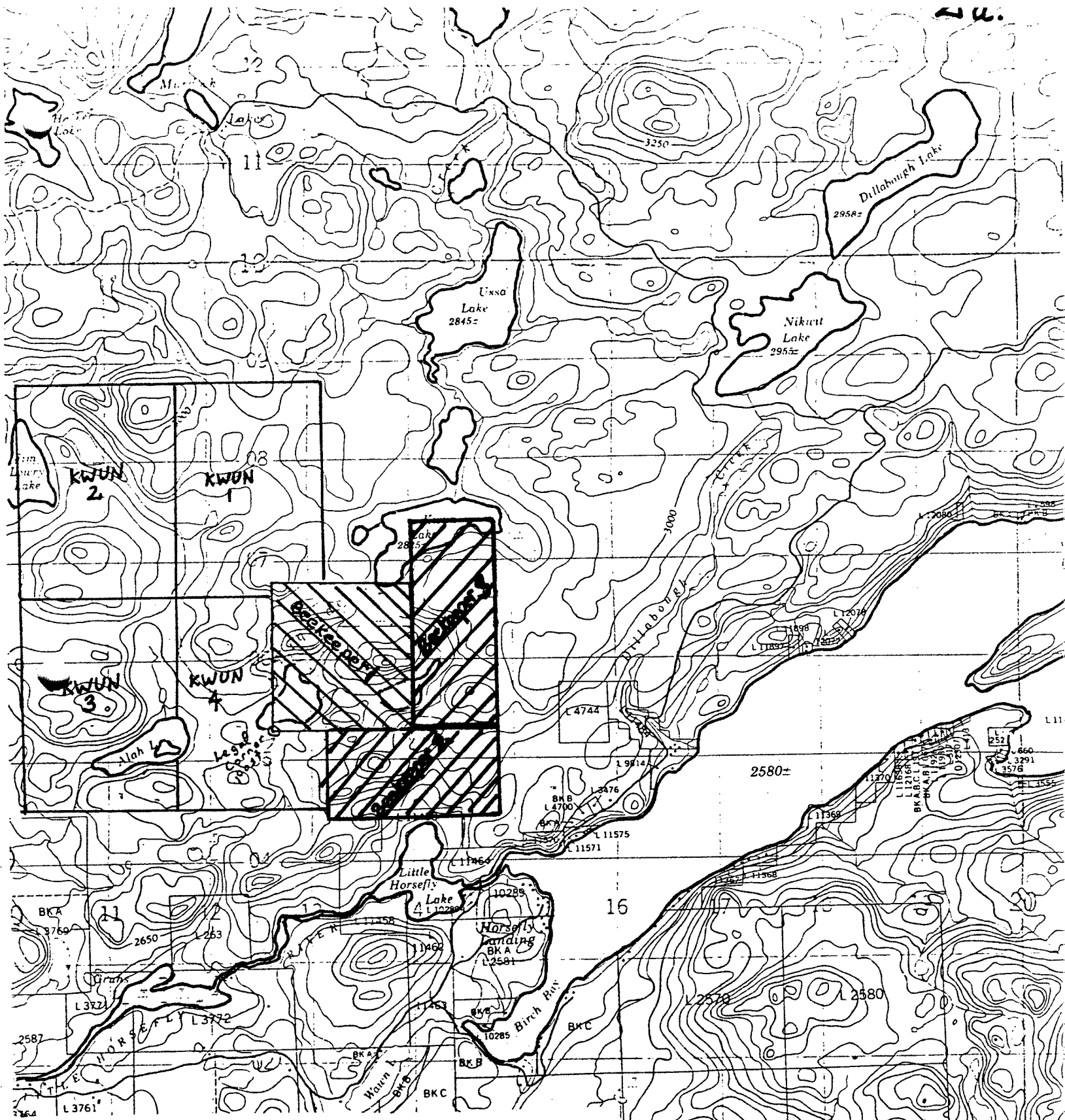
The Beekeeper claim group is located approximately five (5) kilometers northwest of Horsefly Lake in central British Columbia. The claim occurs in a moist vegetative zone dominated by combinations of coniferous fir-pine-(cedar) and deciduous poplar-birch-willow. Considerable adjacent land has been cleared and converted to improved pasture. Soils are predominantly luvisolic in type and derived from ablation tills, basal tills, and lacustrine deposits. Soils generally are neutral to slightly acidic in reaction and are usually heavy in soil texture (loams to clay loams predominating). The terrain is moderately undulating with elevations ranging between 825 and 950 meters (2,750 to 3,050 feet).

The property is accessable by pickup truck along a bush road that connects with an all-weather road approximately ten (10) kilometers from the property.

Property Definition and Geology:

The Beekeeper claims occur within the eastern region of the Quesnel Trough, located at the western edge of the Cariboo Mountains. The Quesnel Trough consists of thick successions of triassic submarine and subareal volcanics interbedded with associated sedimentary rocks. Several synvolcanic stocks occur within the trough. These stocks, which range in composition from diorite to syenite, are thought to represent conduit zones from which much of the volcanic sequences were erupted. The Beekeeper claim lies adjacent to and is partially intersected by one of these stocks (the Kwun Lake stock discovered in 1973). The Kwun Lake stock is zoned and ranges in composition from augite-diorite to syeno-diorite. The stock is heavily pyritized and contains low grade chalcopyrite bornite and gold. This stock cuts a sequence of altered volcanic rocks consisting predominantly of calcareous tuff breccia palagonite tuff and meta-diabase. Rock outcrop is limited within the claim group and geochemical techniques were selected as a first step in examining this property.

The Beekeeper claims are owned and operated by James W. Morton.



INDEX MAP 93A6 (NTS)

BEEKEEPER CLAIM

SCALE 1:50,000

0 1000 meters

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SUMMARY OF WORKS

Grid Establishment:

A total of 19 kilometers of flagged, cut and picketed line was established on the property.

Geochemistry:

A total of 215 soil samples and 15 rock samples were collected for analysis.

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SUMMARY OF COSTS

Establishing Grid:

April 3	Morton @ $150/day	$ 150.00
	Zahn @ $ 75/day	75.00
April 7 - April 10	Morton @ $150/day	600.00
	Dupe @ $ 75/day	300.00
April 14 - April 17	Morton @ $150/day	600.00
April 21 - April 24	Morton @ $150/day	600.00
April 25 - April 26	Morton @ $150/day	300.00
	Dunlop @ $ 75/day	150.00
April 28 - April 30	Morton @ $150/day	450.00
May 2 - May 3	Morton @ $150/day	300.00
	Dunlop @ $ 75/day	150.00

Sampling:

May 16 - May 31	Eberlee @ $1,500/month	$ 750.00

Vehicle Costs:

4 x 4	30 trips - Williams Lake to Horsefly to Williams Lake 4,800 km @ $ .20/km	$ 960.00

Gas, Oil and Chainsaw Costs: $ 100.00

Flagging and Topolite Chain String:

	2 cases of each	$ 150.00

Preparing Report:

Sept. 13 - Sept. 15	Morton @ $150/day	$ 450.00

Assay Costs:

117 Soil - samples for Cu, Zn, Au @ $7	$ 819.00
98 Soil - samples for Cu, Zn, Au, Hg @ $10.50	1,029.00
92 Soil - samples additional run for Ag @ $1.75	161.00
15 Rock - samples for Cu, Au, Hg @ $11.75	176.25
TOTAL COSTS CLAIMED	$8,870.00

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AUTHOR'S QUALIFICATIONS - JAMES W. MORTON

B(sc) (Geology)	Carleton University, Ottawa 1971
M(sc) (Soils)	University of British Columbia, Vancouver 1976
Experience:	Prospectors Assistant, Bralorne-Canter Mines 1969
	Geological Assistant, Bralorne-Canter Mines 1970
	Sub-Party Chief, Giant Mascot Mines 1971
	Party Chief, Sumitomo Mines 1972
	Senior Assistant, Fox Geological Consultants 1973
	M(sc) in Mine Reclamation 1974-1975
	Range Management, B.C.F.S., Range Div. 1975-1979
	President, Western Horizontal Wells 1980 - present
	Manager of Exploration, Alexis Joint Venture 1981 - present

GEOCHEMICAL REPORT

Grid Establishment:

A total of nineteen (19) kilometers of grid was established. The grid consists of a central baseline running due east from station OOE OON. Grid lines run north and south from the baseline at 100 meter intervals. In establishing the grid system some slashing of heavy windfall was required. The baseline is cut out with a power saw as are most of the lines in the far eastern region of the claim. Lines in the central and western region of the claim were established with only moderate amounts of limbing and windfall cutting required. Axes were used for this work in this region of the claim. Grid lines were marked with ribbon and measured using a Topolite belt chain. Stations were established and marked with double coloured ribbons at 100 meter intervals.

Methods of Conducting Rock Geochemical Survey:

In advance of the main sampling program a sample of pyritized diabase was selected and given a multi-element semiquantative spectrographic analyses hoping to outline potential pathfinder elements. Some additional experimentation was done with arsenic, tellurium, tungsten, mercury, antimony, cadmium and cobalt determinations. In the end copper, gold, zinc and mercury were selected for the survey. Part way through the analyses mercury was dropped from the list of elements to be analyzed for. Following the first approximation of the designation of anaomalous zones, silver was determined for samples in the vicinity of these zones.

Soils are, for the most part, luvisolic on the Beekeeper claims. Soil horizons typically occur as follows:

Liller	+6 cm to 0 cm
Ae	0 cm to -4 cm
Btf	-4 cm to -14 cm
BC	-14 cm to -30 cm
C	below -30 cm

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Sampling was done by digging into the soil with a grub hoe and carefully sampling the Btf horizon. Samples were placed in kraft brown paper sample bags and were dried in the bags prior to shipment to the lab.

A total of 215 samples were collected and shipped to Chemex Labs in North Vancouver for geochemical analyses. Samples were prepared by Chemex staff for analyses by dry seiving to obtain an ASTM 80 mesh sample. Samples were then hot digested in a perchloric-nitric acid mixture and analyzed on an atomic adsorption unit. Gold determinations were preceded by firing a sample to obtain a homogeneous sample pellet. A complete lab procedure is given in the appendix of this report. Geochemical analyses were all conducted by Chemex Labs Ltd. of 212 Brooksbank Avenue, North Vancouver, B.C.

GEOCHEMICAL INTERPRETATION

Soil Results:

Anomalous levels determined as follows:

anomalous copper	60 p.p.m.
anomalous gold	10 p.p.b.
amomalous silver	0.2 p.p.m.
anomalous mercury	100 p.p.b.
anomalous zinc	150 p.p.m.

Soil reaction appears to increase in acidity from west to east. The range in acidity is from nearly neutral (pH 6.7 at station 04E 01N) to slightly acidic (pH 6.0 at station 11E 05N). At this slight acidity mobilities of copper, silver, gold, zinc and mercury would be expected to be, at best, moderate. Of these elements, zinc and mercury would be expected to have somewhat better mobilities than the others in this list due to their more volatile nature. The more acid conditions in the eastern regions of the claim group would increase the mobilities of these elements beyond that exhibited in the western portions with its typically more deciduous forest types.

Air photo interpretation reveals a general linemant of 285° inter-

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preted to represent direction of glacial transport.

A major cluster of gold, silver and copper values occurs in the western portion of the property. This cluster has dimensions of approximately 400 meters by 600 meters and has a center position located approximately at station 1+50N, 3+0E. With the exception of a lone ridge of hornfelsic diabase running eastwest along approximately the 1+00N stations and a single outcrop of syeno-diorite located at 0+00E, 4+0N, this cluster occurs on undetermined depths of glacial till. This cluster of geochemical values is given the status of the primary anomaly located in the survey.

Two secondary anomalies occur. The first secondary anomaly coincides with a 200 meter by 200 meter cluster of gold values centered around station 0+00N, 11+00E. This anomaly crowds up against the eastern boundary of the Beekeeper 1 claim and is possibly derived from a source located east of this claim. Palagonite tuffs are known to occur within this cluster but are not considered a likely source of the soil gold.

The second secondary anomaly corresponds to a 200 meter by 300 meter cluster of gold silver values centered around station 6+00E, 6+00S. This anomaly crowds the southern boundary of the Beekeeper 1 claim and extends onto the Beekeeper 2 claim. Bedrock type is unknown in this region and depth of glacial till is thought to be considerable.

Rock Results:

Results for rock geochemistry is at present quite limited because of the relatively few samples that have been analyzed. Samples BKR-3 and BKR-4 located at 5+00E, 1+00N and 5+00E, 0+60N respectively, representing a hornfelsic grade metamorphosed volcanic breccia, contain significant concentrations of mercury (cinnebar). Samples BKR-11 and BKR-15 located at 4+00E, 1+00N and 3+30E, 1+60N respectively, representing hornfelsic grade metamorphosed diabase, contain appreciable concentrations of geochemical gold (190 and 80 p.p.b. respectively). Sample BKR-10 located at 4+00E, 5+00N and representing an altered trachyte tuff and sample BKR-11 located at 4+00E, 1+00N

and representing a hornfelsic grade metamorphosed diabase contain appreciable geochemical copper (450 and 370 p.p.m. respectively).

These limited rock geochemical results demonstrate the existence of a rock suite originating from a copper gold mineralized magma and indicate the potential for an economic deposit.

Recommendations:

A trenching program should be attempted within the primary anomaly in an attempt to improve knowledge as to rock types, the presence of surface mineralization and the depth of overburden. If this trenching is successful and does in fact verify the presence of surface mineralization then an induced polarization survey should be considered.

BEEKEEPER GEOCHEMISTRY

STATION	SAMPLE NO.	ZN	CU	AU	HG	pH	AG
0E0N	BK-196	72	16	<10	20		
0E0.5N	BK-197	72	18	<10	10		
0E1N	BK-198	52	38	<10	20		
0E1.5N	BK-199	80	35	<10	120		0.2
0E2N	BK-200	90	63	<10	280		0.2
0E2.5N	BK-201	100	91	<10	630		0.3
0E3N	BK-202	100	25	<10	50		0.5
0E3.5N	BK-203	122	145	<10	70		
0E4N	BK-204	172	38	<10	40		
0E4.5N	BK-205	94	14	<10	30		0.2
0E5N	BK-182	190	20	<10	10		0.2
0E6N	BK-183	72	26	<10	30		
1E2S	BK-195	90	13	<10	10		
1E0O	BK-193	154	33	<10	30		
1E0.5N	BK-192	52	57	10 ←	70		
1E0.75N	BK-194	102	14	<10	20		
1E1N	BK-191	94	26	<10	20		0.2
1E1.5N	BK-190	56	34	10 ←	90		
1E2.5N	BK-189	94	14	<10	10		
1E3N	BK-188	90	45	10 ←	50		
1E3.5N	BK-187	92	24	<10	20		
1E4N	BK-186	230	56	<10	30		
1E4.5N	BK-185	80	16	10 ←	30		
1E6N	BK-180	98	17	<10			
1E7N	BK-179	80	12	<10			
2E0.5S	BK-160	56	12	<10	10		
2E0O	BK-161	66	29	10 ←	30		
2E0.5N	BK-162	150	49	10 ←	80		
2E1N	BK-163	66	71	<10	120		
2E1.5N	BK-164	82	25	<10	40		0.3
2E2N	BK-165	78	19	<10	30		
2E2.5N	BK-166	100	31	<10	10		
2E3N	BK-167	90	63	10 ←	50		
2E3.5N	BK-168	134	33	<10	20		
2E4N	BK-169	170	22	<10	30		
2E4.5N	BK-170	120	21	<10	10		
2E5N	BK-171	70	32	<10			
2E6N	BK-172	160	16	<10			
2E7N	BK-173	50	30	<10			
3E1S	—						
3E0.5S	BK-159	130	40	<10	40		0.3
3E0O	BK-158	98	24	<10	20		0.2
3E0.5N	BK-157	100	73	<10	90		0.3
3E1N	BK-156	194	57	<10	150		0.2
3E1.5N	BK-155	120	22	<10	40		0.2
3E2N	BK-154	100	43	<10	100		
3E2.5N	BK-153	152	21	<10	30		0.2
3E3N	—						
3E3.5N	BK-152	100	29	<10	50		0.2

BEEKEEPER GEOCHEMISTRY

STATION	SAMPLE NO.	ZN	CU	AU	HG	PH	AG
3E 4N	BK-151	100	15	<10	30		0.3
3E 4.5N	BK-150	108	22	<10	30		
3E 5N	BK-149	132	23	<10	30		
3E 6N	BK-148	98	27	<10			
3E 7N	BK-147	74	20	<10			
* 4E 2S	BK-122	62	28	<10	30		
4E 1S	BK-123	56	34	<10	70		
4E 1.5S	BK-174	170	32	10 ←	30		0.4
4E 0O	BK-124	78	36	<10	30		
4E 1N	BK-132	70	147	<10	3100	6.7	
4E 2N	BK-133	90	18	<10	50		
4E 3N	BK-134	70	49	10 ←	50		
4E 4N	BK-135	96	26	<10	20		
4E 5N	BK-136	88	42	<10	20		
4E 6N	BK-137	84	25	<10			
4E 7N	BK-138	94	20	<10			
* 5E 6.7S	BK-125	118	215	20 ←			0.2
5E 6S	BK-126	74	30	<10			
5E 5.2S	BK-127	58	24	<10			
5E 4S	BK-128	60	34	<10			
5E 3S	BK-129	118	47	<10			
5E 2S	BK-130	54	42	<10	60		
5E 1.5S	BK-177	88	23	<10	20		
5E 1S	BK-131	80	23	<10	40		
5E 0O	BK-114	170	48	<10	30		
5E 1N	BK-115	72	31	<10	120		
5E 2N	BK-116	108	39	<10	50		
5E 3N	BK-117	230	38	<10	40		
5E 4N	BK-118	78	34	<10	30		
5E 5N	BK-119	108	20	<10	30		
5E 6N	BK-120	150	19	<10			
5E 7N	BK-121	54	36	<10			
* 6E 4S	BK-109	92	35	<10			
6E 3S	BK-110	98	22	<10			
6E 2S	BK-111	72	63	<10			
6E 1S	BK-112	64	34	<10	30		
6E 0S	BK-113	64	33	<10	40		
6E 1N	BK-20	64	63	<10	30		0.2
6E 2N	BK-21	64	30	<10	30		
6E 3N	BK-22	80	26	<10	30		
6E 4N	BK-23	50	34	<10			
6E 5N	BK-24	80	22	10 ←			
6E 6N	BK-25	72	28	<10			
6E 7N	BK-26	50	30	<10			
7E 6.6S	BK-99	120	36	<10			
7E 6S	BK-100	130	18	<10			
7E 5S	BK-101	64	34	<10			
7E 4S	BK-102	54	36	10 ←			
7E 3S	BK-103	80	21	<10			
7E 2S	BK-104	70	24	<10			
7E 1S	BK-105	240	17	<10	20		
7E 0O	BK-91	60	28	<10			
7E 1N	BK-92	230	54	<10	60		
* 6E 6.4S	BK-106	63	76	<10			
6E 6S	BK-107	21	120	<10			
6E 5S	BK-108	31	144	<10	40		
4E 0.5S	BKA-173	170	44	<10			
5E 0.5S	BK-178	140	38	10 ←			0.4

BEEKEEPER GEOCHEMISTRY

STATION	SAMPLE NO.	ZN	CU	AU	HG	PH	AG
3E 4N	BK-151	100	15	<10	30		0.3
3E 4.5N	BK-150	108	22	<10	30		
3E 5N	BK-149	132	23	<10	30		
3E 6N	BK-148	98	27	<10			
3E 7N	BK-147	74	20	<10			
* 4E 2S	BK-122	62	28	<10	30		
4E 1S	BK-123	56	34	<10	70		
4E 1.5S	BK-174	170	32	10 ←	30		0.4
4E 0O	BK-124	78	36	<10	30		
4E 1N	BK-132	70	147	<10	3100	6.7	
4E 2N	BK-133	90	18	<10	50		
4E 3N	BK-134	70	49	10 ←	50		
4E 4N	BK-135	96	26	<10	20		
4E 5N	BK-136	88	42	<10	20		
4E 6N	BK-137	84	25	<10			
4E 7N	BK-138	94	20	<10			
* 5E 6.7S	BK-125	118	215	20 ←			0.2
5E 6S	BK-126	74	30	<10			
5E 5.2S	BK-127	58	24	<10			
5E 4S	BK-128	60	34	<10			
5E 3S	BK-129	118	47	<10			
5E 2S	BK-130	54	42	<10	60		
5E 1.5S	BK-177	88	23	<10	20		
5E 1S	BK-131	80	23	<10	40		
5E 0O	BK-114	170	48	<10	30		
5E 1N	BK-115	72	31	<10	120		
5E 2N	BK-116	108	39	<10	50		
5E 3N	BK-117	230	38	<10	40		
5E 4N	BK-118	78	34	<10	30		
5E 5N	BK-119	108	20	<10	30		
5E 6N	BK-120	150	19	<10			
5E 7N	BK-121	54	36	<10			
* 6E 4S	BK-109	92	35	<10			
6E 3S	BK-110	98	22	<10			
6E 2S	BK-111	72	63	<10			
6E 1S	BK-112	64	34	<10	30		
6E 0S	BK-113	64	33	<10	40		
6E 1N	BK-20	64	63	<10	30		0.2
6E 2N	BK-21	64	30	<10	30		
6E 3N	BK-22	80	26	<10	30		
6E 4N	BK-23	50	34	<10			
6E 5N	BK-24	80	22	10 ←			
6E 6N	BK-25	72	28	<10			
6E 7N	BK-26	50	30	<10			
7E 6.6S	BK-99	120	36	<10			
7E 6S	BK-100	130	18	<10			
7E 5S	BK-101	64	34	<10			
7E 4S	BK-102	54	36	10 ←			
7E 3S	BK-103	80	21	<10			
7E 2S	BK-104	70	24	<10			
7E 1S	BK-105	240	17	<10	20		
7E 0O	BK-91	60	28	<10			
7E 1N	BK-92	230	54	<10	60		
* 6E 6.4S	BK-106	63	76	<10			
6E 6S	BK-107	21	120	<10			
6E 5S	BK-108	31	144	<10	40		
4E 0.5S	BKA-173	170	44	<10			
5E 0.5S	BK-175	140	38	10 ←			0.4

BEEKEEPER GEOCHEMISTRY

10d

STATION	SAMPLE NO.	ZN	CU	AU	HG	pH	AG
11E1N	BK-11	90	49	<10			
11E2N	BK-10	82	20	<10			
11E4N	BK-9	70	19	<10	30		
11E5N	BK-8	90	41	<10	50	6.0	
11E5.7N	BK-7	54	29	<10			
11E7N	BK-13	70	20	<10			
12E7S	BK-140	130	18	<10			
12E6S	BK-145	110	22	<10			
12E3S	BK-82	72	12	10 ←	40		
12E2S	BK-81	50	16	<10	20		
12E1S	BK-80	144	62	<10	60		
12E00	BK-59	100	43	10 ←			
12E2N	BK-57	74	16	<10			
12E4N	BK-56	80	11	<10			
12E5N	BK-55	164	15	<10	30		
12E6N	BK-54	50	40	<10	40		
13E7S	BK-141	72	54	<10			
13E6S	BK-144	100	14	<10			
13E3S	BK-77	70	37	<10			
13E2S	BK-78	70	27	<10			
13E1S	BK-79	74	23	<10			
13E00	BK-73	60	30	10 ←			
13E1N	BK-72	152	23	10 ←	30		
13E2N	BK-71	74	21	<10			
13E3N	BK-70	110	20	<10	50		
13E5N	BK-69	74	13	<10	20		
13E6N	BK-68	74	42	<10	40		
13E6.6N	BK-67	50	13	<10	20		
14E7S	BK-142	108	21	<10	20		
14E6S	BK-143	230	22	<10			
14E2.7S	BK-76	74	32	<10			
14E2S	BK-75	82	25	<10			
14E1S	BK-74	88	31	10 ←			
14E00	BK-60	80	34	<10			
14E1N	BK-61	90	34	10 ←			
14E2N	BK-62	72	31	<10	20		
14E3N	—						
14E4N	BK-63	78	18	10 ←	40		
14E5N	BK-64	80	24	<10			
14E6N	BK-65	72	20	<10			
14E6.6N	BK-66	76	16	<10			
9.7E4.5S	BKSt-1	56	90	<10			
6E01N	BKSt-2	82	34	10 ←			
9E4S	BKSt-3	74	56	<10			

Beekeeper Geochemistry Rocks.

Station	Sample #	Cu p.p.m	Mo p.p.m	Zn p.p.m	Au. p.p.b	Hg. p.p.b.	Ag. p.p.m.
12E 6N	BKR-1	28	—		<10	50	
11E 1S	BKR-2	130	—	62	<10	—	0.1
5E 1N	BKR-3	56	—	40	<10	710,000	0.1
5E 0.6N	BKR-4	36	—	24	<10	8,200	0.1
1E 2S	BKR-5	68	—	60	<10	120	0.1
vein at 5E 1N	BKR-6	48	—		<10	—	—
3E 0.3N	BKR-7	44	-		<10	330	0.1
0E 4N	BKR-8	34	1		<10	—	—
6E 5S	BKR-9	66	—	—	<10	30	—
4E 5N	BKR-10	450	—	—	<10	10	—
4E 1N	BKR-11	370	—	—	190	110	—
9.6E 3N	BKR-12	118	—	—	<10	10	—
5.2E 0N	BKR-13	64	—	—	20	20	—
3E 1N	BKR-14	96	—	—	10	2400	—
3.3E 1.6N	BKR-15	83	1	—	80	—	0.1

14 a

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-001-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH	
BK-1	201	6	108	<10	20	DELAYED	--
BK-2	201	22	54	<10	--	--	--
BKST-1	201	90	56	<10	--	--	--
BK-3	201	88	44	<10	--	--	--
BK-4	201	24	56	<10	--	--	--
BK-5	201	47	56	<10	--	--	--
BK-6	201	37	108	<10	--	--	--
BK-7	201	29	54	<10	--	--	--
BK-8	201	41	90	<10	50	DELAYED	--
BK-9	201	19	70	<10	30	--	--
BK-10	201	20	82	<10	--	--	--
BK-11	201	49	90	<10	--	--	--
9K-13	201	20	70	<10	--	--	--
BK-14	201	26	80	<10	--	--	--
BK-15	201	22	52	<10	20	--	--
BK-16	201	27	88	<10	190	--	--
BK-17	201	17	164	<10	--	--	--
BK-18	201	28	94	<10	--	--	--
BK-19	201	27	88	<10	--	--	--
BKST-2	201	34	82	10	--	--	--
BK-20	201	63	64	<10	30	--	--
BK-21	201	30	64	<10	30	--	--
BK-22	201	26	80	<10	30	--	--
BK-23	201	34	50	<10	--	--	--
BK-24	201	22	80	10	--	--	--
BK-25	201	28	72	<10	--	--	--
BK-26	201	30	50	<10	--	--	--
BK-27	201	15	150	<10	--	--	--
BK-28	201	34	240	<10	--	--	--
BK-29	201	29	92	<10	--	--	--
BK-30	201	23	94	<10	30	--	--
BKST-3	201	56	74	<10	--	--	--
BK-31	201	22	180	<10	40	--	--
BK-32	201	21	70	<10	30	--	--
BK-33	201	25	160	<10	40	DELAYED	--
BK-34	201	41	82	<10	--	--	--
BK-35	201	36	112	<10	--	--	--
BK-36	201	21	180	<10	--	--	--
BK-37	201	18	96	<10	--	--	--
BK-38	201	24	130	<10	--	--	--

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-002-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH	
BK-39	201	31	114	<10	--	--	--
BK-40	201	45	90	10	--	--	--
BK-41	201	39	112	<10	--	--	--
BK-42	201	51	90	<10	--	--	--
BK-43	201	25	120	<10	--	--	--
BK-44	201	13	72	<10	--	--	--
BK-45	201	34	72	<10	30	--	--
BK-46	201	24	112	<10	30	--	--
BK-47	201	24	70	<10	--	--	--
BK-48	201	24	72	<10	--	--	--
BK-49	201	17	112	<10	--	--	--
BK-50	201	26	58	<10	--	--	--
BK-51	201	18	72	<10	--	--	--
BK-52	201	20	140	10	20	--	--
BK-53	201	24	80	<10	30	--	--
BK-54	201	40	50	<10	40	--	--
BK-55	201	15	164	<10	30	--	--
BK-56	201	11	80	<10	--	--	--
BK-57	201	16	74	<10	--	--	--
BK-58	201	31	66	<10	--	--	--
BK-59	201	43	100	10	--	--	--
BK-60	201	34	80	<10	--	--	--
BK-61	201	34	90	<10	--	--	--
BK-62	201	31	72	<10	20	--	--
BK-63	201	18	78	10	40	--	--
BK-64	201	24	80	<10	--	--	--
BK-65	201	20	72	<10	--	--	--
BK-66	201	16	76	<10	--	--	--
BK-67	201	13	50	<10	20	--	--
BK-68	201	42	74	<10	40	--	--
BK-69	201	13	74	<10	20	--	--
BK-70	201	20	110	<10	50	--	--
BK-71	201	21	74	<10	--	--	--
BK-72	201	23	152	<10	30	--	--
BK-73	201	30	60	<10	--	--	--
BK-74	201	31	88	10	--	--	--
BK-75	201	25	82	<10	--	--	--
BK-76	201	32	74	<10	--	--	--
BK-77	201	37	70	<10	--	--	--
BK-78	201	27	70	<10	--	--	--

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CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-003-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH	
BK-79	201	23	74	<10	--	--	--
BK-80	201	62	144	<10	60	--	--
BK-81	201	16	50	<10	20	--	--
BK-82	201	12	72	10	40	--	--
BK-83	201	55	72	<10	--	--	--
BK-84	201	58	88	<10	20	--	--
BK-85	201	27	200	<10	30	--	--
BK-86	201	26	98	<10	20	--	--
BK-87	201	28	106	<10	40	--	--
BK-88	201	24	100	<10	30	--	--
BK-89	201	32	120	<10	--	--	--
BK-90	201	51	48	<10	--	--	--
BK-91	201	28	60	<10	--	--	--
BK-92	201	54	230	<10	60	--	--
BK-93	201	52	60	<10	--	--	--
BK-94	201	14	70	<10	--	--	--
BK-95	201	46	58	<10	--	--	--
BK-96	201	31	56	<10	--	--	--
BK-97	201	36	64	<10	--	--	--
BK-98	201	13	92	<10	--	--	--
BK-99	201	36	120	<10	--	--	--
BK-100	201	18	130	<10	--	--	--
BK-101	201	34	64	<10	--	--	--
BK-102	201	36	54	10	--	--	--
BK-103	201	21	80	<10	--	--	--
BK-104	201	24	70	<10	--	--	--
BK-105	201	17	240	<10	20	--	--
BK-106	201	63	76	<10	--	--	--
BK-107	201	21	120	<10	--	--	--
BK-108	201	31	144	<10	40	--	--
BK-109	201	35	92	<10	--	--	--
BK-110	201	22	98	<10	--	--	--
BK-111	201	63	72	<10	--	--	--
BK-112	201	34	64	<10	30	--	--
BK-113	201	33	64	<10	40	--	--
BK-114	201	48	170	<10	30	--	--
BK-115	201	31	72	<10	120	--	--
BK-116	201	39	108	<10	50	--	--
BK-117	201	38	230	<10	40	--	--
BK-118	201	34	78	<10	30	--	--

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CTA MEMBER CANADIAN TESTING ASSOCIATION

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TELEPHONE (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-004-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH	
BK-119	201	20	108	<10	30	--	--
BK-120	201	19	150	<10	--	--	--
BK-121	201	36	54	<10	--	--	--
BK-122	201	28	62	<10	30	--	--
BK-123	201	34	56	<10	70	--	--
BK-124	201	36	78	<10	30	--	--
BK-125	201	215	118	10	--	--	--
BK-126	201	30	74	<10	--	--	--
BK-127	201	24	58	<10	--	--	--
BK-128	201	34	60	<10	--	--	--
BK-129	201	47	118	<10	--	--	--
BK-130	201	42	54	<10	60	--	--
BK-131	201	23	80	<10	40	--	--
BK-132	201	147	70	<10	3100	DELAYED	--
BK-133	201	18	90	<10	50	--	--
BK-134	201	49	70	10	50	--	--
BK-135	201	26	96	<10	20	--	--
BK-136	201	42	88	<10	20	--	--
BK-137	201	25	84	<10	--	--	--
BK-138	201	20	94	<10	--	--	--
BK-139	201	16	122	20	--	--	--
BK-140	201	18	130	<10	--	--	--
BK-141	201	54	72	<10	--	--	--
BK-142	201	21	108	<10	20	--	--
BK-143	201	22	230	<10	--	--	--
BK-144	201	14	100	<10	--	--	--
BK-145	201	22	110	<10	--	--	--
BK-146	201	35	70	<10	--	--	--
BK-147	201	20	74	<10	--	--	--
BK-148	201	27	98	<10	--	--	--
BK-149	201	23	132	<10	30	--	--
BK-150	201	22	108	<10	30	--	--
BK-151	201	15	100	<10	30	--	--
BK-152	201	29	100	<10	50	--	--
BK-153	201	21	152	<10	30	--	--
BK-154	201	43	100	<10	100	--	--
BK-155	201	22	120	<10	40	--	--
BK-156	201	57	134	<10	150	--	--
BK-157	201	73	100	<10	90	--	--
BK-158	201	24	78	<10	20	--	--

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TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-005-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH	
BK-159	201	40	130	<10	40	--	--
BK-160	201	12	56	<10	10	--	--
BK-161	201	29	66	10	30	--	--
BK-162	201	49	150	10	80	--	--
BK-163	201	71	66	<10	120	--	--
BK-164	201	25	82	<10	40	--	--
BK-165	201	19	78	<10	30	--	--
BK-166	201	31	100	<10	10	--	--
BK-167	201	63	90	10	50	--	--
BK-168	201	33	134	<10	20	--	--
BK-169	201	22	170	<10	30	--	--
BK-170	201	21	120	<10	10	--	--
BK-171	201	32	70	<10	--	--	--
BK-172	201	16	160	<10	--	--	--
BK-173	201	30	50	<10	--	--	--
BKA-173	201	44	170	<10	--	--	--
BK-174	201	32	170	<10	30	--	--
BK-177	201	23	88	<10	20	--	--
BK-178	201	38	140	10	--	--	--
BK-179	201	12	80	<10	--	--	--
BK-180	201	17	98	<10	--	--	--
BK-182	201	20	190	<10	10	--	--
BK-183	201	26	72	<10	30	--	--
BK-185	201	16	80	10	30	--	--
BK-186	201	56	230	<10	30	--	--
BK-187	201	24	92	<10	20	--	--
BK-188	201	45	90	<10	50	--	--
BK-189	201	14	94	<10	10	--	--
BK-190	201	34	56	<10	90	--	--
BK-191	201	26	94	<10	20	--	--
BK-192	201	57	52	10	70	--	--
BK-193	201	33	154	<10	30	--	--
BK-194	201	14	102	<10	20	--	--
BK-195	201	13	90	<10	10	--	--
BK-196	201	16	72	<10	20	--	--
BK-197	201	18	72	<10	10	--	--
BK-198	201	38	52	<10	20	--	--
BK-199	201	35	80	<10	120	--	--
BK-200	201	63	90	<10	280	--	--
BK-201	201	91	100	<10	630	--	--

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CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111272-006-A
INVOICE # : I8111272
DATE : 11-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Zn ppm	Au -(AA) ppb	Hg ppb	pH pH		
BK-202	201	25	100	<10	50	--	--	
BK-203	201	145	122	<10	70	--	--	
BK-204	201	38	172	<10	40	--	--	
BK-205	201	14	94	<10	30	--	--	

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CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8112470-001-A
INVOICE # : I8112470
DATE : 30-JUL-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Ag ppm						
BK- 1	214	0.1	--	--	--	--	--	
BK- 2	214	0.1	--	--	--	--	--	
BK- 3	214	0.1	--	--	--	--	--	
BK- 5	214	0.1	--	--	--	--	--	
BK- 14	214	0.1	--	--	--	--	--	
BK- 20	214	0.2	--	--	--	--	--	
BK- 21	214	0.1	--	--	--	--	--	
BK- 23	214	0.1	--	--	--	--	--	
BK- 24	214	0.1	--	--	--	--	--	
BK- 25	214	0.1	--	--	--	--	--	
BK- 27	214	0.1	--	--	--	--	--	
BK- 28	214	0.1	--	--	--	--	--	
BK- 40	214	0.1	--	--	--	--	--	
K- 41	214	0.1	--	--	--	--	--	
BK- 42	214	0.1	--	--	--	--	--	
BK- 59	214	0.1	--	--	--	--	--	
BK- 60	214	0.1	--	--	--	--	--	
BK- 61	214	0.1	--	--	--	--	--	
BK- 72	214	0.1	--	--	--	--	--	
BK- 73	214	0.1	--	--	--	--	--	
BK- 74	214	0.1	--	--	--	--	--	
BK- 77	214	0.1	--	--	--	--	--	
BK- 78	214	0.1	--	--	--	--	--	
BK- 79	214	0.1	--	--	--	--	--	
BK- 80	214	0.1	--	--	--	--	--	
BK- 81	214	0.1	--	--	--	--	--	
BK- 82	214	0.1	--	--	--	--	--	
BK- 85	214	0.1	--	--	--	--	--	
BK- 91	214	0.1	--	--	--	--	--	
BK- 92	214	0.1	--	--	--	--	--	
BK- 93	214	0.1	--	--	--	--	--	
BK-105	214	0.1	--	--	--	--	--	
BK-106	214	0.1	--	--	--	--	--	
BK-107	214	0.1	--	--	--	--	--	
BK-111	214	0.1	--	--	--	--	--	
BK-112	214	0.1	--	--	--	--	--	
BK-113	214	0.1	--	--	--	--	--	
BK-114	214	0.1	--	--	--	--	--	
BK-115	214	0.1	--	--	--	--	--	
K-116	214	0.1	--	--	--	--	--	

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TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8112470-002-A
INVOICE # : I8112470
DATE : 30-JUL-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Ag ppm					
BK-117	214	0.1	--	--	--	--	--
BK-118	214	0.1	--	--	--	--	--
BK-122	214	0.1	--	--	--	--	--
BK-123	214	0.1	--	--	--	--	--
BK-124	214	0.1	--	--	--	--	--
BK-125	214	0.2	--	--	--	--	--
BK-132	214	0.1	--	--	--	--	--
BK-133	214	0.1	--	--	--	--	--
BK-134	214	0.1	--	--	--	--	--
BK-135	214	0.1	--	--	--	--	--
BK-151	214	0.3	--	--	--	--	--
BK-152	214	0.2	--	--	--	--	--
BK-153	214	0.2	--	--	--	--	--
BK-154	214	0.1	--	--	--	--	--
BK-155	214	0.2	--	--	--	--	--
BK-156	214	0.2	--	--	--	--	--
BK-157	214	0.3	--	--	--	--	--
BK-158	214	0.2	--	--	--	--	--
BK-159	214	0.3	--	--	--	--	--
BK-161	214	0.1	--	--	--	--	--
BK-162	214	0.1	--	--	--	--	--
BK-163	214	0.1	--	--	--	--	--
BK-164	214	0.3	--	--	--	--	--
BK-165	214	0.1	--	--	--	--	--
BK-166	214	0.1	--	--	--	--	--
BK-167	214	0.1	--	--	--	--	--
BK-168	214	0.1	--	--	--	--	--
BK-169	214	0.1	--	--	--	--	--
BK-173	214	0.1	--	--	--	--	--
BK-174	214	0.4	--	--	--	--	--
BK-178	214	0.4	--	--	--	--	--
BK-182	214	0.2	--	--	--	--	--
BK-185	214	0.1	--	--	--	--	--
BK-186	214	0.1	--	--	--	--	--
BK-187	214	0.1	--	--	--	--	--
BK-188	214	0.1	--	--	--	--	--
BK-189	214	0.1	--	--	--	--	--
BK-190	214	0.1	--	--	--	--	--
BK-191	214	0.2	--	--	--	--	--
BK-192	214	0.1	--	--	--	--	--

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CTA MEMBER CANADIAN TESTING ASSOCIATION

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NORTH VANCOUVER, B.C
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8112470-003-A
INVOICE # : I8112470
DATE : 30-JUL-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Ag ppm						
BK-193	214	0.1	--	--	--	--	--	
BK-194	214	0.1	--	--	--	--	--	
BK-196	214	0.1	--	--	--	--	--	
BK-197	214	0.1	--	--	--	--	--	
BK-198	214	0.1	--	--	--	--	--	
BK-199	214	0.2	--	--	--	--	--	
BK-200	214	0.2	--	--	--	--	--	
BK-201	214	0.3	--	--	--	--	--	
BK-202	214	0.5	--	--	--	--	--	
BK-203	214	0.1	--	--	--	--	--	
BK-204	214	0.1	--	--	--	--	--	
BK-205	214	0.2	--	--	--	--	--	

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CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
GENERAL DELIVERY
ALEXIS CREEK, B.C.
V0L 1A0

CERT. # : A8110879-001-B
INVOICE # : I8110879
DATE : 12-MAY-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	As ppm	Au -(AA) ppb	W ppm	Hg ppb	Sb ppm	Te ppm
ALX-RY	205	9	<10	--	110	0.2	<0.1
RBR-1	205	--	<10	1	--	--	--
BKR-1	205	4	<10	--	50	--	<0.1
BKR-2	205	--	<10	--	--	--	--
BKR-3	205	9	<10	--	>10000	--	<0.1
BKR-4	205	17	<10	--	8200	--	<0.1
BKR-5	205	3	<10	--	120	--	<0.1
BKR-6	205	--	<10	--	--	--	--
BKR-7	205	--	<10	--	330	--	<0.1
BKR-8	205	--	<10	--	--	--	--

Certified by Hart Bickler

CTA MEMBER CANADIAN TESTING ASSOCIATION

14 K

CHEMEX LABS LTD.

212 BROOKSBANK AVE
NORTH VANCOUVER, B C
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
GENERAL DELIVERY
ALEXIS CREEK , B.C.
V0L 1A0

CERT. # : A8110879-001-A
INVOICE # : I8110879
DATE : 12-MAY-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Mo ppm	Zn ppm	Ag ppm	Cd ppm	Co ppm
ALX-RY	205	4	--	--	0.1	--	2
RBR-1	205	8	1	--	0.1	--	--
BKR-1	205	28	--	68	0.1	0.1	14
BKR-2	205	130	--	62	0.1	0.1	16
BKR-3	205	56	--	40	0.1	0.1	14
BKR-4	205	36	--	24	0.1	0.1	4
BKR-5	205	68	--	60	0.1	0.1	10
BKR-6	205	43	--	--	--	--	--
BKR-7	205	44	--	32	0.1	--	--
BKR-8	205	34	1	--	--	--	--

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX 043-52597

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CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8111335-001-A
INVOICE # : I8111335
DATE : 12-JUN-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Mo ppm	Zn ppm	Au -(AA) ppb	W ppm	Hg ppb
BGR-1	205	1200	--	34	<10	3	30
BGR-2	205	142	--	78	<10	5	40
BGR-3	205	10	--	10	<10	2	10
BGR-4	205	106	--	20	10	1	10
BKR-9	205	66	--	--	<10	--	30
BKR-10	205	450	--	--	<10	--	10
BKR-11	205	370	--	--	190	--	110
BKR-12	205	118	--	--	<10	--	10
BKR-13	205	64	--	--	20	--	20
BKR-14	205	96	--	--	10	--	2400
LKR-1	205	14	1	--	<10	--	--

Certified by .....

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE (604)984-0221
TELEX 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MORTON, MR. BILL
BOX 4438
WILLIAMS LAKE, B.C.

CERT. # : A8112152-001-A
INVOICE # : I8112152
DATE : 28-JUL-81
P.O. # : NONE
ALEXIS JOINT VENTURE

Sample description	Prep code	Cu ppm	Mo ppm	Ag ppm	W ppm	AU-FA+AA ppb	
BK R 15	205	83	1	0.1	--	50	--
BG R 13	205	22	1	0.1	1	5	--
BG R 14	205	9	1	0.1	1	20	--
BG R 15	205	7	1	0.1	1	25	--
BG R 16	205	19	1	0.1	1	10	--
BG R 17	205	10	1	0.1	1	5	--
BG R 18	205	10	1	0.4	1	10	--
BG R 19	205	24	1	0.1	15	15	--

Certified by .....

CTA MEMBER CANADIAN TESTING ASSOCIATION

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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

Backpage

CERTIFICATE NO. SP 915

TO: ALEXIS JOINT VENTURE
c/o Mr. Bill Morton
Box 4438
Williams Lake, B.C.

Also on A8110620

INVOICE NO. 41715

RECEIVED April 1, 1981

ATTN: PROJECT: AJV

ANALYSED April 10, 1981

SAMPLE NO. :	Lower Concentration Limit (PPM)	ROCK -1 EF	ROCK -2 BK	ROCK -3 ALX
Aluminum	0.02%	-	-	-
Antimony	100	bcl	bcl	1000
Arsenic	100	bcl	bcl	1000
Barium	2	-	-	-
Beryllium	5	bcl	bcl	bcl
Bismuth	10	bcl	bcl	bcl
Boron	20	20	bcl	70
Cadmium	50	bcl	bcl	bcl
Calcium	0.05%	-	-	-
Chromium	10	100	100	50
Cobalt	20	bcl	20	20
Copper	2	50	30	5000
rmanium	10	-	-	-
ıron	0.05%	-	-	-
Lead	10	150	50	20
Magnesium	0.02%	-	-	-
Manganese	5	700	700	1000
Molybdenum	100	bcl	bcl	bcl
Nickel	20	bcl	bcl	20
Niobium	200	-	-	-
Potassium	0.5%	-	-	-
Silica	0.05%	-	-	-
Silver	1	2	bcl	10
Sodium	0.1%	-	-	-
Thorium	200	bcl	bcl	bcl
Tin	10	bcl	bcl	bcl
Titanium	20	700	2000	1500
Vanadium	50	bcl	100	100
Zinc	20	150	70	150
Zirconium	20	100	50	70

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm = > 5000 ppm		50 ppm	= 25–100 ppm
5000 ppm = 2500–10000 ppm		20 ppm	= 10–50 ppm
2000 ppm = 1000–4000 ppm		10 ppm	= 5–20 ppm
1000 ppm = 500–2000 ppm		5 ppm	= 2–10 ppm
500 ppm = 250–1000 ppm		2 ppm	= 1–4 ppm
200 ppm = 100–400 ppm		1 ppm	= 0.5–2 ppm
100 ppm = 50–200 ppm		bcl	= below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

STA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: A.B. Thal

GEOCHEMICAL PROCEDURES

1. Geochemical samples (soils, silts) are dried at 80°C for a period of 12 to 24 hours. The dried sample is sieved to -80 mesh fraction through a nylon and stainless steel sieve. Rock geochemical materials are crushed, dried and pulverized to -100 mesh.

2. A 1.00 gram portion of the sample is weighed into a calibrated test tube. The sample is digested using hot 70% $HClO_4$ and concentrated HNO_3. Digestion time = 2 hours.

3. Sample volume is adjusted to 25 mls. using demineralized water. Sample solutions are homogenized and allowed to settle before being analysed to atomic absorption procedures.

4. Detection limits using Techtron A.A.5 atomic absorption unit.

	Copper	- 1 ppm
	Molybdenum	- 1 ppm
	Zinc	- 1 ppm
*	Silver	- 0.2 ppm
*	Lead	- 1 ppm

* Ag & Pb are corrected for background absorption.

5. Elements present in concentrations below the detection limits are reported as one half the detection limit, i.e. Ag - 0.1 ppm.

GOLD:

5 gm samples ashed @800°C for one hour, digested with aqua regia to dryness - taken up in 25% HCl, the gold then extracted as the bromide complex into MIBK and analyzed via A.A.
Detection limit - 10 PPB

TUNGSTEN:

0.50 gm sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten is complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting color is visually compared to similarly prepared standards.
Detection limit - 2 PPM

BARIUM:

A 0.20 gm sample is digested with a mixture of HF-$HClO_4$ - NHO_3 acids to dryness. The baked residue is leached with 25 ml of 10% HCl with NaCl added to reduce ionization effects in the A.A. flame. Analysis is by AAS using a N_2O - C_2H_2 gas mixture.

GEOCHEM PROCEDURES

PPB Gold: 5 gm samples ashed @ 800°C for one hour, digested with aqua regia - twice to dryness - taken up in 25% HCL-, the gold then extracted as the bromide complex into MIBK and analyzed via A.A.
Detection limit - 10 PPB

PPB Mercury: The sample is digested with nitric acid plus a small amount of hydrochloric acid. Following digestion the resulting clear solution is transferred to a reaction flask connected to a closed system absorption cell. Stannous sulfate is rapidly added to reduce mercury to its elemental state. The mercury is then flushed out of the reaction vessel into the absorption cell where it is measured by cold vapour atomic absorption methods with a Jarrell Ash Multi-Versatility Spectrophotometer. The absorbance of samples is compared with the absorbance of freshly-prepared mercury standard solutions carried through the same procedure. The detection limit of this method is 5 ppb.

PPM Arsenic: a 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digest is acidified, reduced with Kl and mixed. A portion of the reduced solution is converted to arsine with $NaBH_4$ and the arsenic content determined using flameless atomic absorption.
Detection limit - 1 PPM

PPM Silver: a 1.0 gm portion of sample is digested in conc. perchloric-nitric acid ($HClO_4$ - HNO_3) for approx. 2 hours. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Silver is determined by atomic absorption technique using background correction on analysis.
Detection limit - 0.2 PPM

PPM Molybdenum: A 1.0 gm portion of sample is digested in conc. perchloric-nitric acid ($HClO_4$-HNO_3) for approx. 2 hours. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Copper and Molybdenum are determined by atomic absorption techniques.
Detection Limit - 1.0 PPM

BEEKEEPER MINERAL PROSPECT

1 : 2000

0 meters 100

Grid line
Station
Swamp

Cu. p.p.m
Au. p.p.b.
ANOMALOUS COPPER
ANOMALOUS GOLD

SOIL GEOCHEMISTRY

COPPER GOLD MAP 2

LINE 7N
6N
5N
4N
3N
2N
1N
BASE LINE 0
1S
2S
3S
4S
5S
6S
LINE 7S

0 1 2 3 4 6

Kwun Lake
Beekeeper 1
Beekeeper 3
Tommy Lake
Loon Lake
Beekeeper 2.

Legal corner post Beekeeper 1
Legal corner post Beekeeper 2
Legal corner post Beekeeper 3

control by compass and Topolite chain.

BEEKEEPER MINERAL PROSPECT

SOIL GEOCHEMISTRY

SILVER ZINC MERCURY MAP 3

1 : 2000

0 meters 100

Grid line
Station
Swamp

Hg p.p.m.
Hg p.p.b
Zn p.p.m.
ANOMALOUS SILVER
ANOMALOUS ZINC

control by compass and Topolite chain

KWUN LAKE

TOMMY LAKE

LOON LAKE

7N 6N 5N 4N 3N 2N 1N 0 1S 2S 3S 4S 5S 6S 7S

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Legal corner post Beakerpar 1

450 10 210

83 80

96 2400 10

370 110 190

56 210

78 vein 210

96 8200 210

64 20 20

68 120 410

66 30 410

118 10

28 50

130

N (est)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9750
NO.

LEGEND

BEEKEEPER

GEOCHEMISTRY

ROCK

GRID STATION

ROCK SAMPLE

ANOMALOUS SAMPLE

SCALE 1:2,000

0 meters 100

MAP 4