

FOX GEOLOGICAL CONSULTANTS LTD

84-1309 - 12989

10/85

HOT PROPERTY

GEOLOGICAL AND GEOCHEMICAL REPORT

FORT STEELE MINING DIVISION

NTS 82G/14E 115°28'W; 49°49'N

HOT 1 MINERAL CLAIM

by

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Work paid for by

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Toronto, Ontario

December 20, 1984

**G E O L O G I C A L B R A N C H
A S S E S S M E N T R E P O R T**

12,989

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INTRODUCTION

Exploration work carried out on the Hot 1 claim, located near Fort Steele in southeastern B.C., during 1984 included geological mapping and geochemical soil and rock-chip surveys. The field work was completed between July 12 and August 9, 1984. The purpose of this report is to describe the work done and present the results.

LOCATION AND ACCESS

The Hot 1 mineral claim is situated 17 kilometres north-northeast of Fort Steele at the headwaters of the Wild Horse River (see Location Maps, Figures 1 and 2). The property lies within the Hughes Mountain Range between elevations 1,830m and 2,440m, in moderate to steep mountainous terrain. Treeline is at about 2,060m, so that much of the property is covered by alpine vegetation.

Access is by logging road from Fort Steele following the Wild Horse River for a distance of about 25 kilometres to the site of the Hot 1 claim. The road crosses the southwest corner of the claim.

CLAIM INFORMATION

The Hot 1 claim (see Figure 3) consists of 15 units and is within the Fort Steele Mining Division in NTS Map Sheet 82G/14E. The claim was staked in 1983 and recorded on October 31, 1983.

CLAIM NAME	RECORD NO.	UNITS	EXPIRY DATE
Hot 1	2012	15	October 31, 1984

1984 FIELD PROGRAM

The 1984 field work, completed between July 12 and August 9, 1984, consisted of grid preparation, soil and rock chip sampling and geological mapping. The base line is 2,300m long, trending N10° E, with cross lines at regular 100m or 200m intervals. A total of 27.5 kilometres of flagged cross-lines were completed covering about 80 percent of the claim.

Soil samples were collected at 50 metre intervals along the survey lines. A total of 566 soils were collected from the B-soil horizon immediately below the organic layer. They were transported to Acme Analytical Laboratories in Vancouver for preparation and analyses. A 0.5 gram sub-sample was analysed by 30 element I.C.P. analysis and for Hg by atomic absorption. The lab reports are included in the Appendix of this report. In addition to the soil geochemistry a total of 88 rock chip samples were collected from scattered



DOME EXPLORATION (CANADA) LTD.

PROPERTY LOCATION PLAN

HOT 1 CLAIM

FOX GEOLOGICAL CONSULTANTS LTD.

DATE		N.T.S.	Dwg No.
12-20-84			1

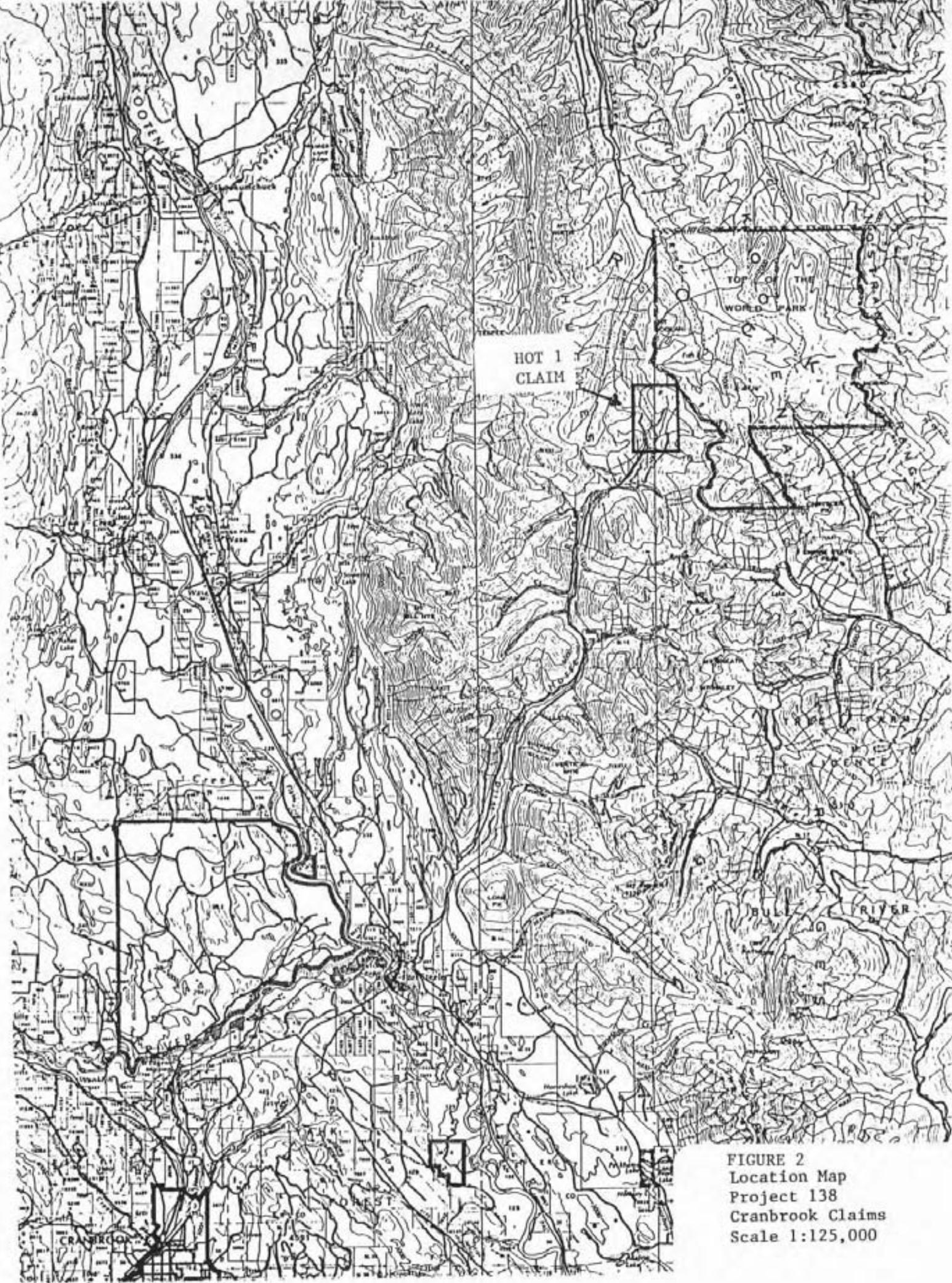


FIGURE 2
Location Map
Project 138
Cranbrook Claims
Scale 1:125,000

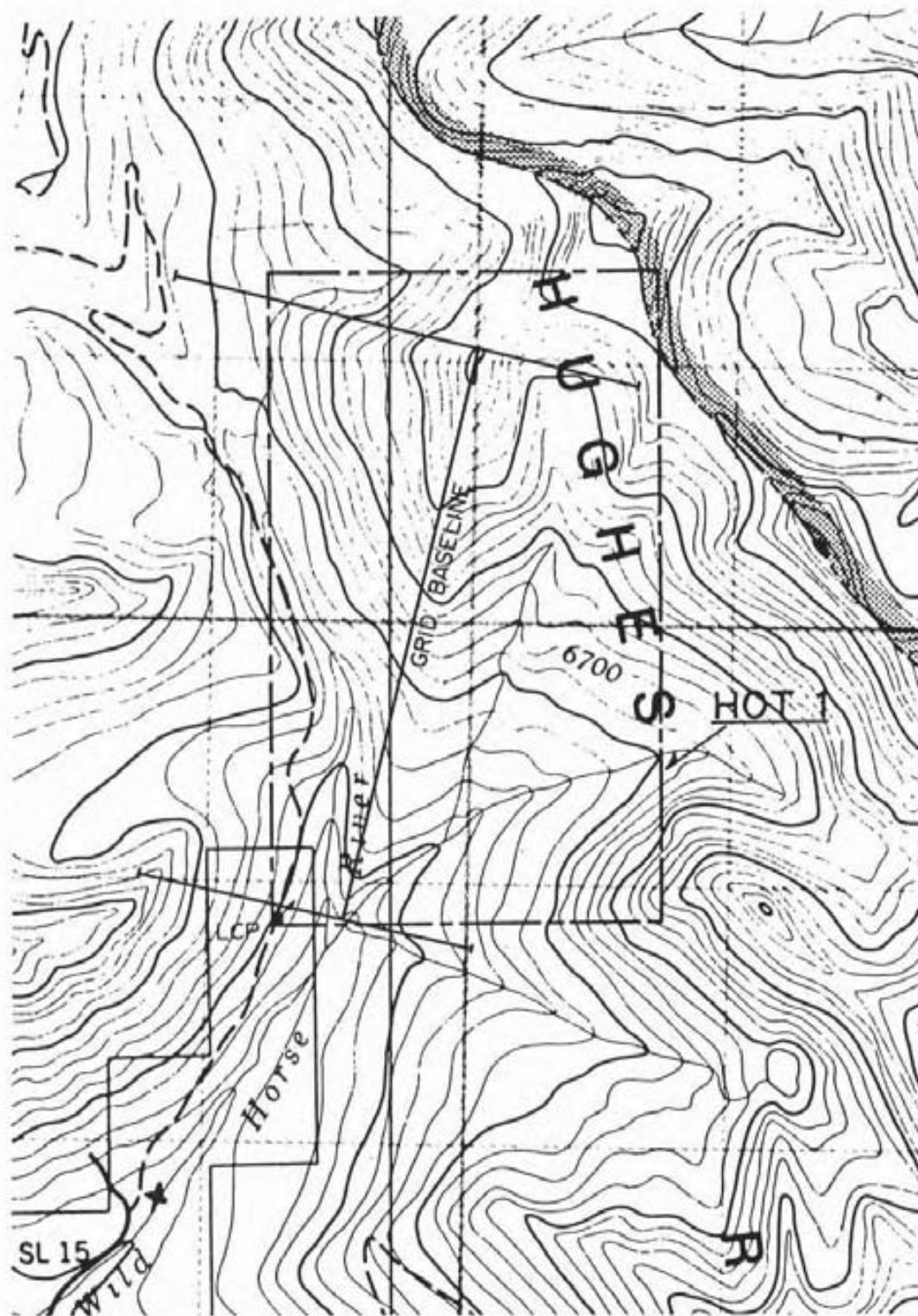


Figure 3
CLAIM MAP HOT 1 Claim
Fort Steele Mining Division
NTS 82G/14E

Scale 1:25,000

localities. The rock samples were pulverized and analysed at Acme Labs in the same manner as the soils.

In addition to the geochemical sampling, geological mapping at 1:5,000 scale was completed.

GEOLOGY

The property is underlain by a sequence of Cambrian-Ordovician carbonates including the Jubilee, McKay and Beaverfoot Formation (see Geology map, Figure 4). A northerly trending tightly folded overturned anticline, including McKay Fm. limestones and Beaverfoot Fm. dolomites, is exposed in the steep cliffs on the east side of the property. This sequence is separated from McKay Fm. carbonaceous limestone and shale and Jubilee Fm. dolomites on the west side of the property by a northerly trending recent fault. The late faulting was accompanied by hot spring activity as indicated by the occurrence of several calcareous sinter deposits and an active hot spring situated just south of the Hot 1 claim.

The sequence on the west side of the fault has been intruded by irregular plugs and dykes of feldspar porphyry, including syenitic and monzonitic intrusives, and by associated quartz veining and silica flooding accompanied by moderate (to 3%) disseminated pyrite.

GEOCHEMISTRY

Soil geochemical results for copper, arsenic, mercury and antimony are illustrated on Figures 5 to 7. Mean, threshold and anomalous levels were determined from cumulative frequency plots for copper, arsenic and mercury as shown below. No significant anomalies are present for antimony or the additional elements analysed.

	Background		Threshold (Anomalous) Levels	
	Mean	Range	T1	T2
Copper	24 ppm	1 to 90 ppm	95 ppm	160 ppm
Arsenic	7 ppm	2 to 18 ppm	19 ppm	28 ppm
Mercury	34 ppb	5 to 60 ppb	65 ppb	100 ppb

For convenience anomalous levels of 100 ppm Cu, 20 ppm As and 50 ppb Hg were used in contouring the soil geochemical maps.

Copper anomalies (see Figure 5) occur in a north trending linear belt along the west side of the grid extending for about 1,700m from Line 1N to Line 18N. The north portion of the anomaly lies in an area largely underlain by feldspar

porphyry intrusion and the south portion follows approximately the contact of the intrusive area. Minor amounts of malachite occur in some of the intrusions likely giving rise to the copper soil anomaly.

A moderate arsenic anomaly (see Figure 6) occurs on the west side of the grid from Line 8N to Line 11N, corresponding in part to the copper anomaly. The arsenic anomaly lies near the contact of the area that is underlain by feldspar porphyry intrusions. This anomaly and the copper anomaly lie on a moderate to steep easterly dipping slope, hence their source areas may occur uphill to the west.

The mercury soil map (see Figure 7) shows a random scattering of moderate highs occurring over much of the soil grid. No distinct trends or anomalous areas can be recognized with the possible exception of three anomalous values corresponding to the arsenic anomaly.

The rock chip geochemical analyses for copper and silver are plotted on Figure 8. A few samples collected from the feldspar porphyry intrusions and from skarn near the intrusions ran high in copper (up to 1,004 ppm). There are no significant anomalous values for As, Hg, Ag or any of the additional elements analysed. All of the results are included in the Appendix.

CONCLUSIONS AND RECOMMENDATION

Minor copper mineralization occurs in monzonitic to syenitic feldspar porphyry stocks, dykes, etc. that intrude and alter the Cambrian-Ordovician carbonate formations. Soil anomalies for copper, arsenic and minor mercury reflect the area of mineralization.

Further exploration is required in the area of intrusions and related silicification and quartz veining. The work should include additional geochemical sampling, assay sampling and geophysical surveys.

EXPENDITURE STATEMENT

Salaries - Grid preparation, Soil Sampling and Mapping,
July 12 to August 9, 1984

R. Cameron, B.Sc.	5 days @ \$160	\$ 800
G. Goodall, B.Sc.	7 days @ \$136	1,088
L. Hunt, assistant	9 days @ \$144	1,296
I. McCosh, assistant	10 days @ \$120	1,200
	-----	\$ 4,384.00

Accommodation and Board

32 man-days at \$35.00 per day	1,120.00
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Vehicle Rent, operation, maintenance

2 - 4-wheel drives - 13 vehicle days at \$48 per day	624.00
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Equipment and Supplies

Maps and Photocopying

Geochemical Analyses (Acme Analytical Laboratories)

88 rock samples @ \$11.75 each	1,034.00
566 soil samples @ \$ 9.60 each	5,433.60

Consulting

P. E. Fox, Ph.D., P.Eng. - 2days @ \$400	800.00
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Report Preparation

TOTAL	\$ 14,170.60
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Prepared by

FOX GEOLOGICAL CONSULTANTS LIMITED

R. W. Oddy, M.Sc.
December 20, 1984

APPENDIX I

Geochemical Analyses

FOX PROJECT # 138-C FILE # 84-2033

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SAMPLE	NO	CU	PB	ZN	AG	NI	CO	HM	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	MG	RA	TI	H	AL	MA	K	N	HS	PPM
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM									
HOT 8466R-73	4	113	15	9	.2	26	8	117	1.25	7	5	ND	13	46	1	2	2	22	1.69	.06	16	35	.45	17	.11	19	2.20	.12	.21	2	5	
HOT 8466R-74	2	14	20	11	.3	6	2	237	.45	2	5	ND	12	46	1	2	2	16	1.76	.07	21	12	.46	25	.06	18	1.37	.16	.07	2	5	
HOT 8466R-75	3	48	19	37	.1	17	6	352	1.23	7	5	ND	16	39	1	2	2	19	2.41	.05	22	17	1.51	32	.06	23	1.27	.04	.14	2	5	
HOT 8466R-76	2	3	6	3	.1	4	1	246	.81	10	5	ND	2	393	1	2	2	10	22.87	.02	6	4	3.50	60	.01	18	.18	.01	.01	2	5	
HOT 8466R-77	1	5	2	7	.1	5	1	138	.48	5	5	ND	2	117	1	2	2	9	21.39	.03	6	5	3.54	24	.01	20	.57	.01	.02	2	20	
HOT 8466R-78	2	4	7	2	.1	10	3	200	.92	3	5	ND	3	37	1	2	2	16	22.71	.04	8	18	1.84	30	.03	21	1.15	.01	.11	2	10	
HOT 8466R-79	1	3	4	3	.1	8	2	167	.49	3	6	ND	2	33	1	3	2	9	22.82	.03	7	11	1.43	16	.01	18	.44	.01	.08	2	30	
HOT 8466R-80	1	3	3	2	.1	8	2	121	.57	4	6	ND	2	60	1	2	2	7	22.71	.03	5	9	1.06	18	.01	20	.50	.01	.07	2	40	
HOT 8466R-81	5	183	2	13	.3	142	21	85	2.87	8	5	ND	5	25	1	2	2	22	2.51	.21	5	155	1.64	43	.11	12	1.52	.01	.46	2	5	
HOT 8466R-82	1	8	4	5	.1	11	3	206	.78	3	5	ND	2	116	1	2	2	8	22.65	.04	7	14	1.10	27	.01	31	.66	.01	.08	2	10	
HOT 8466R-83	2	2	1	2	.1	8	2	202	.71	3	7	ND	2	53	1	2	2	5	22.68	.03	2	2	1.25	26	.01	17	.14	.01	.06	2	5	
HOT 8466R-84	2	2	4	2	.1	11	2	223	.74	6	5	ND	2	62	1	2	2	7	22.28	.03	4	9	2.18	30	.01	31	.43	.01	.11	2	10	
HOT 8466R-85	3	115	12	17	.2	5	5	617	1.75	6	5	ND	16	92	1	2	2	50	2.42	.11	26	4	.24	159	.02	36	.41	.04	.13	2	40	
HOT 8466R-86	1	7	6	5	.1	2	1	249	.50	3	5	ND	2	292	1	2	2	5	22.34	.13	9	1	.22	19	.01	33	.27	.01	.01	2	5	
HOT 8466R-87	2	50	6	8	.1	4	1	182	.52	6	5	ND	2	58	1	2	2	8	22.10	.02	4	5	5.33	22	.01	14	.38	.02	.07	2	10	
HOT 8466R-88	1	6	4	3	.1	1	1	164	.19	2	5	ND	2	54	1	2	2	3	20.29	.01	2	2	8.27	15	.01	16	.08	.01	.01	2	5	
HOT 84CSR 128	1	9	1	5	.3	6	2	126	.52	4	5	ND	2	57	1	3	2	6	35.71	.02	5	4	.90	56	.01	2	.34	.01	.24	2	5	
HOT 84CSR 129	1	4	2	5	.2	4	1	69	.40	5	5	ND	2	54	1	2	2	7	33.10	.02	6	6	2.95	36	.01	2	.47	.01	.22	2	5	
HOT 84CSR 130	2	27	9	8	.2	6	6	1589	4.13	42	5	ND	2	71	1	3	2	23	34.60	.02	2	2	.98	94	.01	2	.18	.01	.01	2	220	
HOT 84CSR 131	1	6	7	1	.2	7	2	170	.82	5	5	ND	2	218	1	2	2	2	35.89	.03	4	2	.15	12	.03	2	.15	.01	.01	2	5	
HOT 84CSR 132	1	11	6	2	.1	38	7	234	1.90	3	5	ND	2	137	1	2	2	15	15.05	.13	15	33	.48	18	.04	2	.33	.01	.05	2	10	
HOT 84CSR 133	1	13	2	1	.1	26	6	133	1.51	2	5	ND	2	96	1	3	2	12	8.62	.14	7	29	.12	17	.11	2	.15	.01	.06	2	5	

FOX GEOLOGICAL PROJECT # 138-C FILE # 84-1798

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SAMPLE#	NO	CU	PB	ZN	AS	XT	CO	RM	FE	AS	U	AU	TH	SR	CD	SB	SI	V	CA	P	LA	CR	ME	BA	TI	S	AL	MA	K	B	HE
		PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
HOT ZN 103+00E	2	18	24	.38	.3	14	5	328	2.54	2	2	ND	4	17	2	3	8	32	2.07	.10	7	14	1.31	80	.03	6	1.78	.01	.04	2	80
HOT ZN 103+00E	2	28	23	.49	.4	28	8	484	3.21	3	2	ND	7	47	1	2	2	31	4.56	.19	27	50	4.35	103	.05	8	3.05	.02	.07	2	60
HOT ZN 104+00E	2	12	18	.51	.1	17	6	227	2.53	2	2	ND	2	8	1	3	2	33	.47	.12	3	26	3.75	104	.05	7	2.21	.01	.03	2	20
HOT ZN 104+00E	2	11	27	.50	.1	15	5	250	3.24	3	2	ND	4	7	1	2	2	30	.54	.13	13	15	.83	85	.02	2	2.53	.01	.02	2	20
HOT ZN 105+00E	1	15	27	.50	.1	16	5	253	3.12	4	2	ND	5	8	1	2	2	33	.54	.09	11	17	.93	121	.09	3	4.19	.01	.03	2	50
HOT ON 96+00E	2	115	20	.57	.1	15	5	583	2.54	2	2	ND	4	28	1	2	2	34	5.08	.15	20	19	5.76	79	.07	13	2.42	.01	.07	2	40
HOT ON 97+00E	2	45	30	.61	.1	15	6	478	2.59	2	2	ND	5	16	1	2	2	39	1.04	.12	9	19	3.44	104	.09	10	2.39	.01	.06	2	30
HOT ON 97+00E	2	52	23	.55	.2	11	4	452	2.14	2	2	ND	5	34	1	3	2	33	6.15	.18	9	17	3.51	78	.05	4	2.16	.01	.05	2	40
HOT ON 98+00E	3	46	28	.56	.2	26	14	661	4.54	2	2	ND	2	6	1	2	2	45	.44	.30	5	17	8.74	72	.04	117	2.75	.01	.02	2	20
HOT ON 98+00E	3	48	21	.49	.2	21	8	543	3.19	3	2	ND	4	10	2	4	2	45	.26	.13	7	23	3.23	87	.05	30	2.16	.01	.04	2	20
HOT ON 99+00E	1	46	18	.36	.2	16	5	500	1.80	5	2	ND	3	80	1	4	2	25	9.37	.12	12	19	1.84	64	.04	5	1.31	.02	.06	2	40
HOT ON 99+00E	1	108	22	.22	.1	15	7	326	2.22	2	2	ND	7	14	1	2	2	44	.53	.09	13	15	2.35	51	.05	11	1.58	.01	.05	2	5
HOT ON 100+00E	2	47	20	.41	.1	19	6	541	1.93	4	2	ND	4	50	1	3	2	23	7.00	.15	14	24	3.83	57	.03	6	1.58	.01	.05	2	30
HOT ON 100+00E	1	25	27	.64	.1	30	8	510	3.29	7	2	ND	7	12	1	2	3	35	.76	.14	17	28	1.78	141	.05	3	3.18	.01	.06	2	50
HOT ON 101+00E	1	78	19	.37	.1	30	8	347	3.55	4	2	ND	7	9	1	2	4	51	.25	.11	18	34	1.99	80	.03	2	2.81	.01	.05	2	20
HOT ON 102+00E	1	24	58	101	.1	27	10	412	3.82	13	2	ND	5	17	1	2	3	41	.77	.11	12	43	1.79	202	.01	2	2.55	.01	.05	2	40
HOT ON 102+00E	2	42	16	.23	.2	25	6	572	2.23	4	2	ND	6	116	1	4	2	24	10.42	.15	39	26	3.32	48	.03	4	1.57	.02	.05	2	30
HOT ON 103+00E	1	27	24	.23	.1	27	7	961	2.56	2	2	ND	5	36	1	3	2	28	4.29	.15	24	51	3.94	76	.03	7	1.90	.01	.05	2	50
HOT ON 103+00E	1	24	24	.32	.1	29	8	543	2.54	5	2	ND	4	76	1	2	2	29	7.76	.13	19	32	3.25	67	.04	6	2.08	.01	.07	2	50
HOT ON 104+00E	2	19	22	.24	.1	29	9	568	2.38	10	2	ND	4	96	1	3	2	23	9.05	.13	29	27	2.92	70	.02	5	1.40	.01	.06	2	20
HOT ON 104+00E	1	11	27	.29	.1	17	5	127	2.02	5	2	ND	3	8	1	2	2	37	.52	.04	6	17	.89	93	.04	3	3.04	.01	.05	2	10
HOT ON 105+00E	1	10	18	.22	.1	17	5	50	3.56	4	2	ND	4	4	1	2	4	52	.11	.08	5	19	.38	108	.12	2	4.31	.01	.03	2	40
STD G-1/FA-AU	97	126	119	187	36.7	158	83	507	3.19	125	100	40	178	129	87	89	95	59	.56	.13	130	65	.58	125	.08	150	1.46	.27	.21	68	85

