DEPARTMENT OF INTERIOR

GEOLOGICAL SURVEY

GOLD ANOMALIES AND MAGNETOMETER PROFILE DATA ESTER DOME AREA, FAIRBANKS DISTRICT, ALASKA

U. S. GEOLOGICAL SURVEY RESEARCH CONTRACT 14-08-0001-10919

By

D. L. Stevens
R. B. Forbes
D. B. Hawkins

University of Alaska
College, Alaska

1969

This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards and nomenclature.

CONTENTS

TABLE OF ILLUSTRATIONS

TABLES

GOLD ANOMALIES AND MAGNETOMETER PROFILE DATA
ESTER DOME AREA, FAIRBANKS DISTRICT,
ALASKA

By

D. L. Stevens, R. B. Forbes and D. B. Hawkins[1/]

Abstract

Gold analysis of grab and auger samples of bedrock taken along the new Ester Dome Road reveals that this road cuts several mineralized zones characterized by anomalous concentrations of gold. The results of a magnetometer traverse along this road indicate that the negative magnetic anomalies along the traverse may be correlative with the gold anomalies. The presence of previously unreported gold anomalies indicates that additional prospecting may be warranted.

1/ Geology Department, University of Alaska, College, Alaska

EXPLANATION

The purpose of this brief report is to present previously unpublished data on the gold mineralization in the Ester Dome Area, Fairbanks District, Alaska. These data were obtained by the University of Alaska as part of the U. S. Geological Survey's Heavy Metals Program (Contract No. 14-08-0001-10919).

PREVIOUS WORK

The more productive gold-bearing quartz veins in the district lie in a belt that extends from the Fairbanks Creek area southwest to Pedro Dome and extends for about 10 miles farther southwest from Pedro Dome. The Ester Dome gold-bearing lodes about 20 miles southwest of Pedro Dome define the southwest terminus of the mineralized belt. The intervening area appears to be barren of mineralization. Hill (1933, p. 44-45) suggested that the northeastern part of the mineralized belt was coincident with an anticline. Later work by Forbes and Brown (1961), and Brown (1962) reinforced this theory and showed that the Ester Dome lodes appear to be localized on the southeast flank of a structural dome, which suggests that metalliferous veins are related to late arching and accompanying fracture and shear.

Intensive prospecting in the early 1900's followed by recurrent mining and development activity up to the present has delineated the more obvious Ester Dome lodes and/or vein systems. Chapman and Foster (1967) have compiled and summarized published and unpublished data on the Ester Dome lodes, including the locations of various claims, prospects and mines with recorded production.

THIS STUDY

Outcrops are scarce on the higher elevations of Ester Dome; consequently, bedrock data for this area are limited. Prior to the present study, bedrock data from lower elevations were gained from prospect pits, trenches and mine workings.

In 1966, a new road was constructed which traversed the east flank of Ester Dome. This construction produced many road cuts and rubble crops which were not available to earlier workers. These exposures permitted the sampling of extensions of possible lodes and/or mineralized zones which had been detected by previous work.

During the summer of 1968, both outcrop (grab) and auger samples were taken along this road. Samples of bedrock were obtained from auger holes drilled at 100 ft. intervals and from grab samples taken where road cuts and rubble crops were available.

Analytical Methods

Gold Assay

The gold assay values reported here were determined by atomic absorption spectrometry at the University of Alaska using an aqua-regia digestion procedure. The routine detection limit for gold by this method is 0.02 ppm (parts per million). A value of 0.10 ppm or more gold probably represents an anomalous concentration of gold in the rocks of this district.

Spectrographic Analysis

With the exception of gold, the concentration of various trace elements was determined spectrographically at the University of Alaska using a modification of the method utilized by the U. S. Geological Survey.

The method employed at the University of Alaska differs from that of the U. S. Geological Survey in that the spectrographic plates were read by means of a densitometer and the 6-step method of reporting the analytical results was not utilized.

Magnetometer Traverse

Geomagnetic data were taken with a Sharpe fluxgate (vertical) magnetometer

at each of the auger stations. Corrections were applied to the magnetometer readings, based on diurnal magnetrograms recorded at the College observatory.

RESULTS

The results of the gold analyses and the magnetometer traverse are plotted on Plate I. For those samples not part of the Ester Dome Road traverse, only those containing anomalous quantities of gold are shown plotted in Plate I. The gold assay values and trace element data of all samples are given in Table 1. Blank spaces in the columns of Table 1 for the various trace elements indicate that these elements were sought but not detected in the spectrographic analysis.

CONCLUSIONS

The gold values plotted on Plate I show that the new Ester Dome Road cuts several mineralized zones characterized by anomalous concentrations of gold and that such anomalies may be correlative with negative magnetic anomalies. In some areas, previously unreported anomalies have been detected and additional prospecting may be warranted.

REFERENCES

Brown, J. M., 1962, Bedrock geology and ore deposits of the Pedro Dome area, Fairbanks mining district, Alaska: Alaska Univ., College, M.S. thesis, 137 p.

Chapman, R. M., and Foster, R. L., 1967, Locations and descriptions of lode mines and prospects in the Fairbanks district, Alaska: U.S. Geol. Survey open-file rept.

Forbes, R. B., and Brown, J. M., 1961, Preliminary geologic map of the Fairbanks mining district, Alaska: Alaska Div. Mines and Minerals Rept. 1-194.

Hill, J. M., 1933, Lode deposits of the Fairbanks district, Alaska: U.S. Geol. Survey Bull. 849-B, p. 29-163.

(page 6 follows)

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-1	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	5.25	.48	<.10	220	177	
-2	"	"		<.02	3.90	.62	<.10	205	164	
-3	"	"		<.02	3.67	.50	.74	1720	568	
-4	"	"		<.02	6.37	1.27	.12	306	213	
-5	"	"		<.02	3.12	.41	1.01	2310	781	
-6	"	"		<.02	7.35	1.17	<.10	264	191	
-7	"	"		<.02	5.57	.68	.21	528	408	
-8	"	"		<.02	4.95	.89	<.10	242	207	
-9	"	"		<.02	3.07	.48	.29	686	674	
-10	"	"		<.02	14.25	1.27	.31	739	550	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-1		164				26	25							33				265
-2		190				23	20							29				327
-3		114				20	27			3				24				308
-4		434				100	18			23			140	121				185
-5		53				19	39							16				327
-6		534				100	23			17			114	119				162
-7		200				33	33							47				327
-8		190				25	12							41				207
-9		45				16	7							17				236
-10		735				96	27			27			219	117				597

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-11	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	5.25	.39	.15	347	182	
-12	"	"		<.02	3.83	.60	.16	4880	324	
-13	"	"		<.02	2.93	.37	.22	4220	275	
-14	"	"		<.02	8.10	.83		10030	90	
-15	"	"		<.02	15.60	2.48	.20	10030	710	
-16	"	"		<.02	9.90	1.86	.24	6070	816	
-17	"	"		<.02	5.70	1.04	.13	8180	200	
-18	"	"		<.02	8.55	1.49	<.10	6070	315	
-19	"	"		<.02	13.55	1.49	<.10	7130	176	
-20	"	"		<.02	11.85	2.11	<.10	13200	271	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-11		108				27	2							28				327
-12		127				35	18		28	7			398	24				347
-13		67				28	14		35				369	21				443
-14	37	247				85	18		9			13	931	63				366
-15	157	387				117	62		60	23			989	81				404
-16	96	321				46	31			15			543	39				616
-17	88	361				72	23		22	12			776	48				376
-18	76	468				48	51		18				543	47				443
-19	182	468				100	81		29	27			989	91				385
-20	190	441				146	37		17	40		37	1125	120				289

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-21	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	8.40	1.30	.24	13200	488	
-22	"	"		<.02	11.85	1.49	.17	13200	426	
-23	"	"		<.02	3.23	.63	.45	4090	310	
-24	"	"		<.02	6.75	1.30	1.32	6600	887	
-25	"	"		<.02	2.88	.35	.50	2640	362	
-25A	"	Sample Depth 2'-8'		<.02	7.36	1.56	<.13	15480	167	
-26	"	Surface		<.02	5.55	.62	.19	1610	674	
-27	"	"		<.02	3.23	.33	.24	3170	248	
-27A	"	Sample Depth 3'-6'	1430	<.05	9.98	1.51	.51	10200	548	
-27A	"	Sample Depth 6'-9'	1050	<.02	11.24	2.19	.22	12080	228	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-21	142	334				82	32		20	16		32	951	107				308
-22	115	294				60	43		19	17		26	815	99				279
-23	28	214				42	10		16	10			495	42				284
-24	26	267				49	14		29				640	65				366
-25		132				23	11		15	5			339	15				233
-25A	50	1280				260	74.3		11.2	16.8		14.3		125				134
-26		60				27	11		31				243	18				233
-27		90				25	11		14				374	23				246
-27A	50	720				222	88.8		41	9.5		13		95				445
-27A	100	2000				310	96.1		17.3	16.3		16.3		157				228

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-27A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 9'-10'	950	<.05	7.15	1.08	.17	11140	171	
-28	"	Surface		<.02	7.20	1.28	<.10	6600	408	
-29	"	"		<.02	8.70	1.17	.27	10560	373	
-29A	Qtz-Mica Schists & Micaceous Qtzites & Gouge	Sample Depth 2.5'-7.5'		>150	6.31	1.82	.18	9820	304	
-29A	"	Sample Depth 2.5'-7.5'		>150						
-29A	"	Sample Depth 2.5'-7.5'		> 32						
-30	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	5.85	.97	.25	7130	514	
-31	"	"		<.02	10.50	1.30		9240	288	
-32	"	"		<.02	4.05	.26	<.10	6340	202	
-32A	"	Sample Depth 3'-6'	1150	.11	10.30	1.11	.30	15480	301	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-27A	49	810				156	88.8		18.5	13.6		13.5		85				360
-28	158	1000				69	24		15	11		27	931	83				265
-29	136	668				112	31		14	24		40	1940	124				247
-29A	49	1280				184	107		9.6	24.5		14.0		125				137
-29A																		
-29A																		
-30	112	334				69	23		17	8		29	931	87				181
-31	142	374				96	43		17	20			1125	84				318
-32	162	307				50	15		22	8			621	54				392
-32A	138	1270				260	96.1		32.5	8.8		15.5		136				495

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-32A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 6'-11'		<.02	8.83	1.62	<.13	15480	244	
-32A	"	Sample Depth >11'	950	.11	7.04	.36	<.13	6420	135	
-33	"	Surface		<.02	14.40	1.43	.12	10560	231	
-33A	"	Sample Depth 2.5'-5'		<.02	10.93	2.42	.13	12080	834	
-33A	"	Sample Depth 5'-7'		<.02	10.56	2.42	<.13	13590	799	
-33A	"	Sample Depth 7'-9'		<.02	7.78	1.81	<.13	11140	288	
-34	"	Surface		<.02	12.30	1.24	<.10	>13200	215	
-35	"	"		<.02	4.20	.60		7130	124	
-36	"	"		<.02	12.90	.66		8180	147	
-37	"	"		<.02	9.30	1.43	.14	7130	302	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-32A	100	2000				296	68.9		15.5	15.9		15.0		146				215
-32A	44	520				98	56.2		18.1	<9.0				59				268
-33	205	1340				154	54		21	50		51	>2000	167				189
-33A	84	2000				310	94.3		15.8	14.5		15.7		164				172
-33A	86	2000				344	94.3		15.5	18.3		17.2		170				174
-33A	70	1280				230	73.4		14.0	21.9		13.4		142				152
-34	200	668				139	42		41	40		44		147				303
-35	180	347				63	23		16	13				93				303
-36	79	334				74	27		15	17				84				578
-37	138	347				69	28		16	17				75				308

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-37A	Qtz-Mica Schists and Micaceous Qtzites	Sample depth 2.5'-5'		<.02	9.46	2.19	.17	13590	210	
-37A	"	Sample Depth 5'-8'		<.02	9.67	2.55	.16	15480	306	
-37A	"	Sample Depth 8'-10.5'		<.02	9.25	2.55	<.13	15480	349	
-37A	"	Sample Depth 10.5'-11.5'		<.02	8.20	.69	.27	6800	304	
-38	"	Surface		.20	9.30	.52		9240	109	
-39	"	"		<.02	11.40	1.93	.20	13200	435	
-39A	"	Sample Depth 2'-3'		<.02	5.47	.40	<.13	10200	114	
-39A	"	Sample Depth 3'-7'		<.02	4.83	.69		15480	<114	
-39A	"	Sample Depth 7'-10'		<.02	3.68	.34	<.13	11140	<114	
-39A	"	Sample Depth 10'-12'		<.02	3.47	.42	<.13	12270	<114	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-37A	97	2000				400	68.9		25.0	15.5		17.3		177				273
-37A	113	2000				370	107.0		21.8	18.8		17.5		167				243
-37A	113	2000				400	61.6		16.8	15.5		19.8		212				210
-37A	20.5	222				86	68.9		16.5					55				322
-38	192	468				97	39		15	30				99				347
-39	200	468				100	42		18	32		42.0		119				294
-39A	76	680				118	67.1		26	6.5				78				340
-39A	130	2000				400	70.7		23.3	14.8		16.8		175				214
-39A	72	930				212	47.1		15.5	12.9		12.0		81				390
-39A	75	1280				200	28.3		18.9	13.9		13.5		106				370

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-39A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 12'-14'		<.02	7.34	.17	<.13	4530	121	
-40	"	Surface		<.02	12.30	1.65	.36	8710	443	
-41	"	"		<.02	3.19	.73	1.28	4820	541	
-42	"	"		<.02	4.65	.82	1.15	5810	692	
-42A	"	Sample Depth 2.5'-3.5'	2250	.77	5.94	1.00	.15	10190	137	
-42A	"	Sample Depth 3.5'-4.0'	1900	.17	6.31	.94	.52	6800	559	
-43	"	Surface		.18	8.10	.81	1.05	7130	665	
-44	"	"		<.02	7.20	.37		8710	253	
-44A	"	Sample Depth 2'-5.5'		<.02	7.36	1.59	.13	13600	187	
-45	"	Surface		<.02	10.20	1.02	.37	8180	439	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-39A	49	270				114	49		34	<9				41				315
-40	240	468				112	42		17	39		43		133				327
-41	58	140				32	8		23	8				34				366
-42	37	170				35	26		36	9				38				404
-42A	81	1000				230	54.4		11.5	25.2		13.5		120				165
-42A	31	450				120	73.4		20	<12.9		9.5		58				270
-43	40	194				45	21		33	13				63				443
-44	124	267				54	42		20	16		39		118				303
-44A	47	2000				238	63.5		14	25.2		15.5		130				190
-45	120	428				131	52		16	21		40		108				332

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-46	Qtz-mica Schists and Micaceous Qtzites	Surface		<.02	8.70	.77	.20	6600	550	
-46A	"	Sample Depth 1.5'-7'	2150	<.21	8.83	1.72	.16	13600	251	
-47	"	Surface		<.02	10.20	.77	.24	9240	550	
-48	"	"		<.02	11.10	.62	.15	6600	226	
-49	"	"		<.02	12.90	.24	<.10	6600	136	
-49A	"	Sample Depth 2.5'-4.5'	1150	.60	7.04	.34		8120	128	
-49A	"	" " 4.5'-10'	940	.12	5.78	.37	<.13	8120	<114	
-49A	"	" " 10'-14'	1050	.33	4.41	.31	<.13	7170	<114	
-49A	"	" " 14'-16'	1600	1.35	6.67	.49	<.13	11800	<114	
-50	"	Surface		<.02	4.95	.19		4750	55	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-46	160	374				82	25			16		35		97				270
-46A	48	2000				250	73.4		12.2	24.5		16		150				160
-47	182	428				139	26		24.0	31		55		137				351
-48	138	334				69	25		21.0	16				99				294
-49	135	294				72	39		25.0	18				94				356
-49A	51	810				172	85.2		30.0	16.8				94				170
-49A	38	860				200	92.5		28.0	20.7		14.3		98				280
-49A	34	540				150	56.2		14.0	16.8		10.7		86				195
-49A	85	2000				244	143.2		23.0	35.5		16.5		120				200
-50	43	220				55	25		25.0	6				52				404

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-51	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	18.00	1.14	.25	8180	621	
-52	"	"		<.02	5.25	.37	<.10	7130	244	
-52A	"	Sample Depth 2.5'-4.5'		.29	5.38	.51	<.13	11800	244	
-53	"	Surface		<.02	3.60	.21	.16	4490	200	
-54	"	"		<.02	6.60	.25	<.10	6070	206	
-54A	"	Sample Depth 1.5'-5'		<.02	9.98	1.17	<.13	15800	388	
-55	"	Surface		<.02	4.13	.28	<.10	4090	275	
-56	"	"		<.02	11.55	.61	.12	5150	298	
-57	"	"		<.02	6.00	1.30	.19	7130	1046	
-58	"	"		<.02	5.70	1.07	.16	6340	275	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-51	180	1340				146	27		40	32.0		68.0		191				270
-52	135	668				100	27		25	13.0		42.0		105				219
-52A	75	1550				196	132.3		36	12.9		13.5		115				260
-53	83	321				51	25		22	5.0				61				227
-54	60	334				66	29		29	13.0				61				371
-54A	59	2000				280	101.5		26	28.4		17.5		155				220
-55	83	321				52	22		32	11.0				59				371
-56	110	267				51	39		35			37.0		46				414
-57	180	868				119	31		33	29.0				110				291
-58	182	468				108	25		22	20.0				118				320

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-59	Qtz-Mica Schists and Micaceous Qtzites	Surface		.19	3.60	1.03	1.83	6340	399	
-60	"	"		<.02	4.27	.84	<.10	4490	226	
-61	"	"		<.02	3.41	.52	.13	2240	237	
-62	"	"		.02	4.80	.84	.13	4880	200	
-63	"	"		<.02	6.45	1.27	.25	5150	559	
-64	"	"		<.02	12.30	1.30	.17	6470	506	
-65	"	"		<.02	3.97	.88	.26	6340	399	
-66	"	"		<.02	15.00	1.74	.23	8980	674	
-67	"	"		<.02	4.20	1.18	<.10	4750	248	
-68	"	"		<.02	3.49	.57	.17	3560	200	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-59	190	401				85	27		31	20				94				361
-60	100	334				74	13		21					69				313
-61	102	200				44	12		21					48				279
-62	114	334				63	13		22	11				71				323
-63	102	254				71	28		17	11				63				279
-64	152	868				96	92		37					80				219
-65	59	468				77	30		19	12				67				351
-66	112	1336				146	52		28	40				144				318
-67	103	217				45	10		15	9				52				419
-68	91	200				51	13		16	10				48				419

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-69	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.02	11.70	2.11	.19	6340	514	
-70	"	"		<.02	4.27	.92	.49	2900	443	
-71	"	"		<.02	12.30	2.11	.19	5540	834	
-72	"	"		<.02	9.30	1.99	.24	6340	639	
-73	"	"		<.02	10.80	1.68	.18	6340	461	
-74	"	"		<.02	9.60	1.99	.18	6070	745	
-75	"	"		<.015	10.80	1.68	.15	6340	435	
-76	"	"		<.015	8.10	1.55	.24	5020	692	
-77	"	"		<.015	4.20	1.14	.16	3830	514	
-78	"	"		<.015	12.15	1.45	.26	7130	470	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-69	190	668				131	39		26	38		49		125				217
-70	76	180				39	15		25	8				36				501
-71	103	347				91	40		18	25		38		92				313
-72	165	494				108	32		16	33		42		117				234
-73	100	401				100	39		17	22		33		102				327
-74	195	668				92	29		20	19				99				250
-75	165	441				115	42		27	22		41		105				356
-76	157	441				85	26		20	22				80				318
-77	103	301				55	18		15	13				75				212
-78	112	668				95	43		15	22		31		91				313

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-79	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.015	12.00	2.21	.23	7390	452	
-80	"	"		<.015	8.10	1.17	.88	6340	887	
-81	"	"		<.02	4.13	.89	.28	4220	514	
-82	"	"		<.015	10.50	1.68	.17	7660	585	
-83	"	"		<.02	10.80	1.49	.18	7660	639	
-84	"	"		.015	15.00	1.45	.21	7660	350	
-85	"	"		<.015	5.70	1.04	.25	7130	284	
-86	"	"		.60	5.25	1.04	.17	4880	426	
-86A	"	Sample Depth 2'-6'	3170	2.80	6.62	.32	.17	5850	126	
-86A	"	" 6'-7'	4500	.075	8.83	.51	.20	8680	116	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-79	176	1270				139	54		12	39		42		128				195
-80	71	401				82	25		18	26		27		87				327
-81	108	301				45	22		11	7				60				161
-82	142	468				115	31		13	40		41		135				219
-83	125	468				98	35		15	39		35		118				215
-84	175	868				117	40		22	36		37		104				337
-85	142	668				98	42		20	25		33		102				281
-86	122	334				66	24		21	8				52				530
-86A	38.5	405				184	112.4		38					52				405
-86A	66	930				296	85.2		46	<9		13.5		94				300

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-87	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.015	10.20	1.28	.20	7660	310	
-88	"	"		.075	7.20	.53	.42	4220	603	
-89	"	"		.075						
-90	"	"		.11	5.40	.57	.31	7130	435	
-90A	"	Sample Depth 4'-5.5'	1050	<.08	6.25	1.20	.55	11140	388	
-90A	"	" 5.5'-7.5'	1140	.25	5.44	.35	.15	8680	128	
-90A	"	" 7.5'-9'		.15	4.57	.62	.17	12270	119	
-90A	"	" 9'-13'	940	.15	4.68	.37	.16	6420	123	
-90A	"	" 13'-15.5'	945	<.02	2.10	.24	.15	3970	<114	
-90A	"	" 15.5'-17'		<.02	4.83	1.27	.22	12270	219	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-87	185	668				115	54.0		27.0	22.0		42.0		102				283
-88	107	261				60	28.0		36.0	9.0				52				491
-89																		
-90	120	347				75	34.0		25.0	12.0				67				337
-90A	57	930				196	92.5		30.5	9.0		13.6		100				222
-90A	35.5	460				86	96.1		23.2	<9.0				55				408
-90A	89	1000				216	40.8		17.9	14.2		13.4		102				328
-90A	38.5	440				128	58.0		21.0	<9.0				52				285
-90A	16.3	212				79	44.4		15.3	<9.0				30				250
-90A	59	1000				310	61.6		22.5	24.9		14.2		118				190

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-90A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 17'-19'		.11	4.10	.63	.18	6800	180	
-90A	"	" 19'-23'	1230	.14	3.28	.65	.15	10200	<114	
-90A	"	" 23'-24.5		.23						
-90A	"	" 24.5'-27'		<.02	2.89	.69	.15	15480	<114	
-90A	"	" 27'-29'		<.015	3.57	.54	<.13	8680	<114	
-91	"	Surface		<.02	4.57	.58	.76	4490	435	
-92A	"	Sample Depth 5'-7.5'		<.02	6.83	.95	<.13	15480	215	
-92A	"	" 7.5'-9'		<.02	7.36	.52	<.13	12270	156	
-92A	"	" 9.5'-12'		<.02	10.93	.29	<.13	8680	160	
-92A	"	12'-13.5'		<.02	8.83	.54		10380	<114	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-90A	25	520				106	59.8		19.6	9.0				67				323
-90A	71	930				200	37.2		17.5	15.5		11.6		98				230
-90A																		
-90A	106	1530				310	27.2		13.8	13.6		13.0		126				200
-90A	80	930				184	37.2		12.8	<9.0		10.0		99				207
-91	34	187				51	17.0		31.0	6.0				36				292
-92A	62	2000				236	96.1		24.0	22.1		14.6		123				242
-92A	75	1000				184	101.5		26.3	14.8		14.2		107				260
-92A	57	540				148	101.5		37.0	12.9				70				232
-92A	86	2000				236	81.6		18.0	27.1		15.4		140				248

Emission Spectrograph Analyses in ppm unless otherwise Indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-94A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 6'-7.5'		<.02	6.73	1.03	.22	12270	235	
-94A	"	" 7.5'-9'		<.02	8.19	.77	.15	12270	274	
-94A	"	" 9'-12'		<.02	3.94	.51	<.13	12270	<114	
-94A	"	" 12'-14'		.08	5.36	.56	<.13	15480	116	
-94A	"	" 14'-15'		<.02	11.25	.43	<.13	6800	151	
-95	"	Surface	3250	.15	7.80	.23	<.10	5210	174	
-96	"	"		<.015	3.83	.25	<.10	8450	195	
-97	"	"		<.015	10.80	.25	.16	7130	298	
-97A	"	Sample Depth 2'-5.5'	1030	.07	6.73	.31	.28	7550	194	
-97A	"	" 5.5'-7'		<.02	4.78	.54	.37	7550	279	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-94A	71.5	1280				236	112.4		31.0	20.9		13.2		112				245
-94A	68.0	1280				260	126.9		33.0	25.2		13.0		106				246
-94A	73.0	1110				252	74.3		27.0	14.7		12.6		119				178
-94A	102.0	2000				344	101.5		25.2	21.0		15.8		136				260
-94A	33.0	760				244	92.5		36.0	14.2	325			72				196
-95	98.0	247				47	32.0		28.0	15.0				42				327
-96	165.0	347				75	28.0		45.0	10.0				65				414
-97	89.0	334				65	40.0		43.0	12.0		38.0		93				294
-97A	16.0	2000				79	58.8		54.0	<9.0				45.5				660
-97A	11.9	2000				142	52.6		54.0	<9.0				40.5				620

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-97A	Qtz-Mica Schists and Micaceous Qtzites	Sample Depth 7'-13'		<.02	5.99	.95	.36	10200	349	
-98	"	Surface		<.015	7.20	.34	<.10	9240	208	
-99	"	"		.50	7.20	.21	<.10	7390	139	
-99A	"	Sample Depth 3'-5.5'		.11	7.46	.26	<.13	7550	343	
-99A	"	" 5.5'-7'		.50	7.15	.64	<.13	12272	269	
-100	"	Surface		<.015	3.90	.31	<.10	8450	126	
-101	"	"		<.015	10.20	.28	<.10	7130	293	
-101A	"	Sample Depth 4'-10'	1700	.35	4.88	.51	<.13	10200	158	
-101A	"	" 10'-14'	2050	.22	5.68	.38	.16	6800	121	
-102	"	Surface		<.015	13.80	.26	.20	11090	541	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-97A	26.5	580				252	67.1		59	21.9				64				500
-98	152	454				95	40.0		29	13.0	340	37.0		93				404
-99	117	347				60	46.0		22	10.0				72				313
-99A	32	560				106	61.6		40	<12.9				64				365
-99A	53	1290				200	91.4		59	<9.0		15.3		105				355
-100	152	401				92	44.0		29	13.0		33.0		94				311
-101	152	314				89	49.0		39	17.0				83				385
-101A	31	860				190	52.6		30	<12.9		7.4		180				390
-101A	39	540				126	59.8		27	<12.9		10.5		70				280
-102	89	207				139	92.0		50	12.0		51.0		246				313

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-103	Qtz-Mica Schists and Micaceous Qtzites	Surface		<.015	4.05	1.43	.41	9240	550	
-104	"	"		<.015	8.70	1.37	.27	8180	328	
-105	"	"		<.015	21.00	.37	.29	5150	381	
-106	"	"		<.015	4.80	.37	.18	4360	550	
-107	"	"	1750	.045	16.50	.34	.18	5680	541	
-108	"	"	1730	<.015	13.50	.29	.18	4880	399	
-109	"	"	2060	<.015	4.13	.14	<.10	1620	235	
-110	"	"		<.015	8.70	.77	.24	4750	302	
-111	"	"		<.015	17.25	1.99	.33	8180	745	
-112	"	"	1830	.60	17.25	.27	<.10	4750	341	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-103	160	247				69	17		24	27				78				414
-104	182	1270				115	34		21	27				139				246
-105	148	387				74	39		29	34				73				433
-106	89	227				39	32		28	8				43				308
-107	126	334				79	49		41	25				88				279
-108	132	281				72	40		35	22				75				443
-109	60	82				28	24		22					28				189
-110	112	321				57	39		34	16				60				371
-111	210	1270				169	65		37	52		55		144				265
-112	123	281				75	43		56	18				73				289

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-113	Qtz Mica Schists and Micaceous Qtzites	Surface		1.13	14.70	.79	.12	7390	674	
-113A	"	Sample Depth	1400	.26	2.00	.12	<.13	11140	<114	
-113A	"	Sample Depth 2.5'-4' 20'West	840	.03	6.09	.45	<.13	7550	173	
-113A	"	Sample Depth 4'-8.5' 20'West		<.02	3.99	.32	<.13	7550	139	
-113A	"	Sample Depth 8.5'-13' 20'West		<.02	5.25	.37	<.13	7550	116	
-113A	"	Sample Depth 0'-2.5' 10'East	1550	.21	5.36	.51	35.06	10190	210	
-113A	"	Sample Depth 2.5'-5' 10'East	1350	.26	3.84	.39	.29	10190	148	
-114	"	Surface		.18	6.00	.68	<.10	8180	211	
-114A	"	Sample Depth 4'-5.5' 15'West		<.02	6.78	.39	<.13	15480	171	
-114A	"	Sample Depth 5.5'-7' 15'West		.06	13.24	.40	.13	12270	196	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-113	240	668				146	62		60	40	160	53		125				277
-113A	36	135				78	23.6		17	<12.9				98				215
-113A	470	860				176	81.6		25	16.8		12		100				180
-113A	37	680				188	56.2		27	14.2		10		75				210
-113A	35	720				188	70.7		26	18.1		11.5		84				210
-113A	53	760				290	56.2		71	12.9		12.0		120				105
-113A	55	560				270	39.9		49	<12.9		11.5		100				165
-114	130	134				112	39		26	9				137				246
-114A	47	680				260	81.6		48	<12.9		16.5		140				235
-114A	45	760				370	117.8		58	<12.9		19.5		96				120

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-115	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	3.63	.27		7550	169	
-116	"	"		<.015	2.22	.22	<.13	5570	183	
-117	"	"		<.015	4.26	.10		3960	219	
-117	"	"		<.015						
-118	"	"	1575	<.015	5.50	.18	<.13	4270	548	
-119	"	"		<.015	1.93	.10		3120	148	
-120	"	"		<.015	2.10	.23	<.13	4270	251	
-121	"	"		<.015	4.03	.52	.29	6800	343	
-122	"	"		<.015	2.89	.12	<.13	3170	311	
-123	"	"		<.015	8.09	.56	<.13	6800	1131	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-115	59.0	322				99.0	49.9		27.5	40.7				74.0				320
-116	17.3	187				57.6	24.5		33.0					64.0				275
-117	13.5	132				45.0	33.5		36.0					47.0				345
-117																		
-118	23.0	131				48.0	85.2		35.0	<13.0				69.0				127
-119		91				26.4	21.9		28.3					28.8				272
-120	23.0	418				52.0	23.0		33.5	<13.0				41.0				300
-121	17.5	395				79.6	52.6		47.0	<13.0				90.0				220
-122	32.0	240				16.4	26.7		24.0					37.3				107
-123	19.5	760				77.0	88.8		76.0			15.6		108.0				232

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-124	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	5.41	.48	.83	8680	388	
-125	"	"		<.015	2.03	.09	<.13	8680	176	
-125A	"	Sample Depth 4'-9'		<.015	4.78	.82	.32	6040	605	
-126	"	Surface		<.015	4.57	.176	<.13	7170	295	
-127	"	"		<.015	6.46	.942	.93	9440	777	
-128	"	"		<.015	4.41	.24	<.13	8680	360	
-129	"	"		<.015	4.39	.57	.15	1020	439	
-130	"	"	1380	.11	6.94	.56	.13	8680	960	1.25
-131	"	"		<.015	6.10	.63	.23	7550	799	
-132	"	"		<.015	4.57	.51	.16	7170	617	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-124	7.0	81				118.0	62.5		51.0			15.3		152.0				167
-125	12.5	<40				99.0	29.6		26.5					158.0				312
-125A	12.0	170				130.0	72.5		54.0	<9.0		12.3		118.0				182
-126	10.0	100				109.0	92.5		28.8			12.6		127.0				116
-127	5.0	125				168.0	78.0		49.5			16.5		190.0				256
-128	<5.0	90				111.0	88.8		24.5			11.2		124.0				126
-129	21.0	108				240.0	83.9		42.0			14.8		160.0				290
-130	24.6	260				346.0	143.2		34.0	329.0		14.5		150.0			145	255
-131	49.0	100				200.0	70.7		40.0					124.0				180
-132	9.2	72				116.0	78.9		40.0	1.29				100.0				238

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-133	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	11.98	.65	.23	8680	1062	
-133A	"	Sample Depth 4-7.5'		<.015	5.47	.59	.18	6420	457	
-134	"	Surface		<.015	7.36	.80	.29	1020	742	
-135	"	"		<.015	3.47	.34	.16	8680	279	
-136	"	"		<.015	3.32	.32	.10	6800	206	
-136A	"	Sample Depth 3'-7'		<.02	4.57	.52	.16	7550	297	
-137	"	Surface		.17	7.36	.57	.39	5100	640	
-138	"	"		<.015	1.89	.50	.13	4120	381	
-139	"	"		<.015	7.00	.57	.15	8680	439	
-140	"	"		<.015	13.90	.60	.32	18880	754	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-133	35.5	112				296	119.7		62	27.1		17.5		160				182
-133A	96.0	760				176	78.0		43	161		13.3		98				280
-134	19.0	290				400	166.8		62			16.8		163				260
-135	9.7	<50				160	52.6		32					130				272
-136	15.5	135				156	49.9		30					105				218
-136A	52.0	1125				122	46.2		32.5	<12.9		10.0		77				175
-137	21.0	145				280	112.4		59			12.5		130				142
-138	35.5	415				112	30.5		13.5	<13.0				52				317
-139	65.0	560				244	157.0		56	27.1				114				190
-140	28.5	1000				136	157.0		130			14.7		187				450

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-141	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	4.40	.45	<.13	6040	959	
-142	"	"		<.015	4.78	.27	.16	4380	315	
-142A	"	Sample Depth 3'	1820	.23	5.94	.15	.17	1110	183	
-143	"	Surface		<.015	5.50	.35	<.13	5570	560	
-144	"	"	500	.89	15.13	.63	.16	11140	1510	
-144	"	"		.95						
-145	"	"		<.015	2.75	.37	<.13	8680	258	
-146	"	"		<.015	18.29	.42	<.13	8680	3540	
-147	"	"		<.015	5.25	.51	<.13	10200	183	
-148	"	"		<.015	2.57	.28	<.13	7170	164	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-141	31.5	420				77	52.6		35.5	47.1				53				258
-142	20.0	260				94	55.3		110.0	13.5				59				580
-142A	14.7	130				184	50.8		24.8	<9.0		21.0		193				300
-143	19.8	930				94	39.9		41.5	12.9				57				340
-144	88.0	1000				260	143.2		51.0	18.1		19.7		180				310
-144																		
-145	71.0	930				136	39.9		33.0	13.2				81				248
-146	43.0	760				188	92.5		108.0	21.0		13.6		105				195
-147	38.5	2000				260	68.9		28.5	32.5				111				205
-148	36.0	680				102	44.4		27.5	<12.9				66				380

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-149	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	4.08	.28	<.13	5290	178	
-150	"	"		<.015	6.99	.77	<.13	11139	578	
-151	"	"		.45	11.56	.44	<.13	5570	662	
-152	"	"		.26	1.12	.17	<.13	4399	128	
-153	"	"		<.015	4.78	.11	<.13	3870	203	
-153A	"	Sample Depth 5.5'-7.5'		<.015	5.68	.50	<.13	8120	270	
-154	"	Surface		<.015	8.62	.62	<.13	8685	393	
-155	"	Surface		<.015	2.52	.13	<.13	4003	146	
-155A	"	Sample Depth 7'-13.5'		<.015	3.96	.24	<.13	4720	480	
-156	"	Surface		<.015	1.82	.13	<.13	4380	160	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-149	31.5	360				90	56.2		42.5	<12.9				53				322
-150	125.0	2000				124	134.0		38.5	<9.0		11.8		100				327
-151	58.0	760				84	65.0		26.5	<9.0		9.0		71				218
-152	32.0	410				52.4	29.7		14.6	<9.0				39				280
-153	15.5	111				43	45.0		33.0	<9.0				36				372
-153A	64.0	1000				188	55.3		44.0	13.6		15.3		113				270
-154	31.0	2000				69	143.0		22.0	18.0		13.3		104				218
-155	20.5	208				45	33.5		24.0	<9.0				37.5				362
-155A	27.0	560				102	38.1		30.5	<9.0				63				208
-156	28.5	340				57.4	24.7		26.2	<9.0				36				255

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-157	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	1.89	.14	<.13	3738	196	
-157A	"	Sample Depth 11'-12.5' +8 mesh	940	.35	5.26	.36	<.13	4910	130	
-157A	"	Sample Depth 11'-12.5' -8 mesh		.08	3.15	.40	<.13	7550	128	
-158	"	Surface		<.015	2.99	.22	<.13	2832	260	
-159	"	"		<.015	3.47	.21	<.13	5815	190	
-159A	"	Sample Depth 4.5' - 12.5'		<.015	2.57	.25	<.13	4720	164	
-160	"	Surface		<.015	1.73	.12	<.13	4154	167	
-161	"	"		<.015	4.57	.13	<.13	5286	457	
-161A	"	Sample Depth 4'-9'		<.015	4.41	.51	<.13	5100	162	
-161A	"	Sample Depth 9'-16.5'		<.015	6.10	.63	<.13	4420	228	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-157	14.4	305				38.8	31.4		24.5					31.8				205
-157A	29.0	760				172.0	70.7		26.7	9.0		11.3		87.0				155
-157A	27.0	860				270.0	52.6		21.0	<9.0		11.5		100.0				185
-158	19.5	385				46.0	29.4		29.0	<9.0				40.0				265
-159	31.0	930				71.0	49.0		33.0	<9.0				45.0				322
-159A	19.0	500				72.0	32.6		25.0					51.0				200
-160	17.2	116				44.4	19.4		32.7	<9.0				25.0				330
-161	13.7	500				69.0	78.9		33.5	<9.0				44.2				377
-161A	8.6	670				118.0	49.9		34.5	<9.0				63.0				205
-161A	97.0	760				118.0	39.8		43.0	9.0		10.4		81.0				220

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-162	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	3.99	.27	<.13	6117	224	
-163	"	"		<.015	3.63	.21	<.13	4720	256	
-163A	"	Sample Depth 5'-14' +8 mesh		<.015	7.36	.42	<.13	5850	180	
-164	"	Surface		<.015	1.77	.13	<.13	3436	146	
-165	"	"		<.015	7.15	.14	<.13	5758	327	
-165A	"	Sample Depth 14'-16' +8 mesh		<.05	6.94	1.00	.91	8685	777	
-165A	"	Sample Depth 14'-16' -8 mesh		<.05	5.57	.48	.44	7571	594	
-166	"	Surface		<.015	2.33	.14	<.13	6117	189	
-166A	"	Sample Depth 1'-11'		<.05	5.47	.59	.26	8685	959	
-166A	"	Sample Depth	1050	<.05	7.78	.52	.38	8118	548	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-162	29.5	680				87.0	51.1		30.0	<9.0				56.0				185
-163	14.8	280				60.6	35.0		41.5	<9.0				42.2				267
-163A	58.0	760				134.0	61.6		30.7	15.9				86.0				210
-164	21.8	310				39.0	30.8		25.5					36.0				255
-165	32.5	275				75.0	30.3		34.5	<9.0				35.8				222
-165A	71.0	2000				310.0	97.9		52.0	25.2			536	105.0				225
-165A	68.0	1000				188.0	49.0		39.0	<13.0				74.0				405
-166	17.6	350				57.4	20.7		29.5	<9.0				39.0				360
-166A	110.0	1280				252.0	74.3		48.0	17.7		12.4		87.0				250
-166A	68.0	1000				344.0	78.0		72.0	13.6			595	68.0	17			328

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-167	Qtz Mica Schists and Micaceous Qtzites	Surface		<.015	3.47	.23	<.13	5853	146	
-168	"	"		<.015						
-168A	"	Sample Depth 21'-24'		<.015	5.26	.36	.28	5098	331	
-168A	"	Sample Depth 32'-35'		<.015	7.78	.85	.38	10195	731	
-168A	"	Sample Depth 42'-50'	1240	.09	4.83	.66	.18	8685	110	
-170	"	Surface		<.015	2.17	.11	<.13	3455	160	
-170A	"	Sample Depth 30'-33'		<.015	5.68	.40	.27	5853	210	
-172	"	Surface		<.015	2.94	.24	<.13	5532	194	
-172A	"	Sample Depth 30'-32'	1430	<.015	4.94	.34	.23	4910	270	
-173	"	Surface		<.015	1.86	.27	.14	4248	132	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-167	17.6	490				80.4	33.5		34.2	<9.0				56.0				403
-168																		
-168A	46.0	640				118.0	68.9		46.0				536	54.0				220
-168A	107.0	1280				272.0	85.2		30.0	36.8		21.5		126.0				187
-168A	134.0	1000				208.0	74.3		14.2	25.6		16.0		110.0				158
-170	12.0	108				41.2	18.7		34.2	<9.0				31.5				470
-170A	110.0	760				14.2	47.1		41.0	14.8			615	62.0				245
-172	9.0	318				66.0	22.3		28.2	<9.0				42.0				270
-172A	83.0	640				124.0	52.6		39.0	<13.0			496	53.0				232
-173	63.5	430				102	31.7		26.0	<13.0			480	43.0				505

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
EDR-174A	Qtz Mica Schists and Micaceous Qtzites	Sample Depth 40'-45'		<.015	1.73	.23	.37	3115	155	
-176A	"	Sample Depth 48'-49'	1350	<.015	3.99	.36	.55	6040	297	
-176A	"	Sample Depth 48'-49'		<.015						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
EDR-174A	22.5	260				504	22.7		21.5				<330	26.5				315
-176A	31.0	430				68	48.0		32.5	<12.9				52.0				340
-176A																		

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
HEN-1A	Qtz Mica Schists and Micaceous Qtzites	Sample Depth 8'-14'		<.02	4.24	.54	<.13	9440	256	
-1A	"	Sample Depth 14'-18'		<.02	5.57	.42	<.13	6140	128	
-1A	"	Sample Depth 18'-23'	1270	.20	6.62	.43	<.13	7550	121	
-1A	"	Sample Depth 23'-25'	1175	.12	4.83	.39		6140	<114	
-2A	"	Sample Depth 16'-20'		<.02	3.94	.48	.13	6800	139	
-3A	"	Sample Depth 7'-10'		.14	5.15	.93	.14	8680	155	
-5A	"	Sample Depth 8'-20'		<.02	7.36	1.30	.58	9440	1165	
-6A	"	Sample Depth 15'-17'		<.02	4.25	.69	.32	5570	388	
-7A	"	Sample Depth 15'-17'	1200	.14	5.57	.69	.78	6800	936	
-8A	"	Sample Depth 7'		<.02	5.68	.39	.14	5570	128	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
HEN-1A	45.0	860				230	58.0		34.0	25.2		15.0		130				175
-1A	34.0	440				132	74.3		27.0	16.1				74				230
-1A	40.0	590				140	88.8		29.0	<13.0		13.3		100				200
-1A	30.0	500				104	68.9		19.5	<13.0		10.5		80				220
-2A	105	520				124	52.6		25.0	<13.0		10.5		76				305
-3A	44.0	680				134	39.9		13.0	21.9		12.0		87				205
-5A	38.5	440				176	54.4		24.0	24.5		12.5		76				570
-6A	23.0	350				96	29.0		19.0	<13.0				53				200
-7A	19.0	370				124	46.2		37.0	<13.0				60				385
-8A	45.0	490				96	68.9		35.0	<13.0				56				210

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
HEN-8A	Qtz Mica Schists and Micaceous Qtzites	Sample Depth 7'-14'		<.02	4.57	.69	.19	8680	480	
-9A	"	Sample Depth 3'-7'		<.02	7.36	1.20	.28	8120	617	
-10A	"	Sample Depth 10'-13'	1160	.08	7.78	.86	1.58	8120	169	
-11A	"	Sample Depth 11'-13'		<.02	7.04	1.23	.19	9440	1009	
-12A	"	Sample Depth 22'-25'		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
HEN-8A	76	930				188	48.9		46.0	13.5		14.0		116				154
-9A	46	710				146	56.2		12.5	18.1		13.5		105				223
-10A	38	800				170	72.5		14.7	<12.9		12.3		115				126
-11A	48	860				184	77.9		35.0	17.4		14.5		117				170
-12A																		

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ESW-1	Qtz Mica Schists and Micaceous Qtzites	Surface		<.02	2.25	.47	.52	2740	585	
-2	"	"		<.02	1.79	.44	.70	3340	537	
-3	"	"		<.02	4.89	.93	.15	8680	228	
-4	"	"		<.02	4.03	.60	.21	6800	1165	
-5	"	"		<.02	6.54	.86	.25	10190	582	
-6	"	"		<.02	5.15	1.00	.31	8680	407	
-7	"	"		<.02	7.46	1.67	.21	10190	639	
-8	"	"		<.02	5.18	.89	3.87	6080	1416	
-9	"	"		<.02	5.41	1.03	<.13	7170	466	
-10	"	"		.07	5.36	1.13	.21	8680	576	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
ESW-1	24.0	136				44.0	18.5		23.0		290			26.0				235
-2		180				41.2	13.1		20.0	<12.9				24.5				310
-3	37.0	560				164.0	28.3		16.2	15.9		12.7		104.0				262
-4	42.0	455				74.0	25.4		33.0	<12.9		11.2		79.0				240
-5	34.0	760				166.0	48.9		23.0	18.1				112.0				340
-6	50.0	640				146.0	30.8		19.0	19.1				81.0				320
-7	38.0	1000				216.0	44.4		19.0	22.7		16.7		147.0				185
-8	41.0	620				132.0	44.4		23.4	13.6		13.2		79.0				265
-9	60.0	860				162.0	48.0		11.0	20.7		14.5		118.0				210
-10	57.0	760				184.0	38.1		13.5	16.8		15.5		132.0				210

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ESW-11	Qtz Mica Schists and Micaceous Qtzites	Surface		<.02	2.42	.50	.19	3870	434	
-12	"	"		<.02	1.94	.44	.37	2590	466	
-13	"	"		<.02	4.71	.85	.18	6800	509	
-14A	"	"		<.02	5.72	1.24	.31	6080	1039	
-14B	"	"		<.02	6.25	1.17	.38	8680	681	
-15	"	"		<.02	5.36	.95	.35	7550	685	
-16	"	"		<.02	6.04	.99	.25	6080	582	
-17				<.02	7.15	1.27	.16	6800	868	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
ESW-11	22.5	320				84	19.4		14.7	<13.0				55				224
-12	11.7	136				46	13.6		13.5	<13.0				36				290
-13	30.5	580				128	22.5		15.2	12.9		14.5		93				260
-14A	36.0	540				132	32.6		14.9	18.7		14.0		80				385
-14B	43.0	860				124	47.1		18.0	27.1		16.5		119				285
-15	59.0	580				154	25.7		17.7	21.3		15.2		91				570
-16	41.0	480				126	27.2		13.9	12.9		12.5		84				325
-17	41.0	800				152	46.2		15.7	19.8		14.5		108				395

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-1-2-1	Vein Qtz	Ester Dome Road		.14						
-1-5-1	Vein Qtz	Ester Dome Road		.18						
-1-5-2	"	Near Ester Dome Road		<.02						
-1-6-1	"	Ester Dome Road		.22						
-2-1-1	Micaceous Qtzite	Pit 4000' S.W. of VABM 2364		1.50						
-2-1-2	"	Pit 4000' S.W. of VABM 2364		<.02						
-2-4-1	Vein Qtz	N. of VABM 2364 on Ridge		<.02						
-2-4-2	"	" " "		<.02						
-3-2-1	Lamprophyre Dike	On placer tailings in Nugget Creek		<.02						
-6-1-1	Garnetiferous Micaceous Qtzite	On ridge N.W. of VABM 2364		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-6-2-1	Fe & Mn staining, Qtz Breccia	7000' N of VABM 2364		<.02						
-6-2-2	Fe & Mn staining, Qtz Breccia	7000' N of VABM 2364		<.02						
-6-3-1	Qtz Breccia float	Above West fork of Sheep Cr.		.02						
-6-4-1	Qtz Mica Schist	Between Forks of Sheep Cr.		.02						
-7-1-1	Vein Qtz; visible sulfides	Above S Fork of Sheep Cr.		1.20						
-7-2-1	Micaceous Qtzite	" " " "		<.02						
-7-3-1	Brecciated Qtz; visible sulfides	Dump of Michley Mine		.20						
-7-4-1	Qtz Mica Schist	Below upper forks of Sheep Cr.		<.02						
-7-4-2	Fe & Mn staining, Vein Qtz	Below upper forks of Sheep Cr.		<.02						
-7-5-1	Micaceous Qtzite	On ridge between Little Dome Creek & Happy Creek		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-7-5-2	Garnetiferous Micaceous Qtzite	On rdg btwn Little Dome Ck & Happy Ck		<.02						
-7-6	Qtz Mica Schist	Royal Flush Mine		.13						
-8-4-1	Garnetiferous Qtz Mica Schist	Bettis Property, S. of head of St. Patrick Cr.		<.02						
-8-4-2	Vein Qtz; visible sulfides	" " " "		128.0						
-8-4-2	" " " "	" " " "		78.0						
-8-4-3	" " " "	" " " "		.32						
-8-4-3	Qtz Breccia	" " " "		.50						
-8-4-4	Garnetiferous Micaceous Qtzite	" " " "		<.02						
-8-4-4	" " "	" " " "		<.02						
-8-4-5	Vein Qtz; visible sulfide	" " " "		28.0						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-8-4-5	Vein Qtz; visible sulfides	Bettis Property S of head of St. Patrick Cr.		33.0						
-9-1-1	Micaceous Qtzite	Anna May Property Between Sheep and Happy Cr. Hanging wall of adit	940	.06	9.04	.89	<.13	10190	183	
-9-1-2	Micaceous Qtzite	" " "		<.02	4.31	.29	<.13	2790	215	
-9-1-3	Micaceous Qtzite, highly altered	Above shear N of adit	1150	.64	5.57	.66	<.13	7550	<114	
-9-1-4	" " "	Below shear N of adit	1220	.11	2.94	.09	< .13	2640	116	
-9-1-5	" " "	N of adit near shear		<.02	1.45	.24		4150	<114	
-9-1-6	Gouge	N of adit in shear zone	970	.20	2.09	.19	<.13	3280	<114	
-9-1-7	Highly altered and crushed rock	N of adit near shear zone		.06	1.56	.14	<.13	3780	512	
-9-1-8	Altered Qtz mica schist	In footwall wall below vein		<.02	7.04	1.13	<.13	12120	130	
-9-1-9	" " " "	" " " " "		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
ED-8-4-5																		
-9-1-1	14.7	1510				260	46.4		40.5	31.0		16.8		140				180
-9-1-2	19.0	300				34.4	41.1		34.5					35				325
-9-1-3	102.0	760				154	44.4		44.0	32.5		12.2		105				200
-9-1-4	14.0	178				31.4	15.9		34.5					22				268
-9-1-5	62.0	380				64.0	46.4		12.0	<12.9				41				158
-9-1-6	33.0	240				74.0	38.1		25.0	28.4				40				79
-9-1-7	30.0	180				33.2	17.0		30.0	<12.9				29				385
-9-1-8	71.0	2000				252	28.3		59.0	27.1		19.0		155				265
-9-1-9																		

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-9-1-10	Qtz mica schist	Anna May Property Between Sheep and Happy Cr. In footwall wall below vein		< .02	1.91	.49	<.13	10190	<114	
-9-1-11	Garnet-bearing micaceous Qtzite	In hanging wall above vein		< .02	3.38	.28	<.13	2590	148	
-9-1-12	Gouge	First trench above adit	960	.20	3.84	.24	<.13	5570	114	
-9-1-13	Altered schist between parallel shear zones	" " " "		.11	1.97	.14	<.13	3590	116	
-9-1-14	Qtz boudins in shear zone	" " " "		.02	2.42	.11	<.13	1550	119	
-9-1-15	Gouge	" " " "		.04	3.89	.60	<.13	9440	116	
-9-1-16	Qtz from shear zone	Second trench above adit		.02	1.42	1.27	<.13	2790	126	
-9-1-17	Gouge	" " " "	800	<.02	6.20	.57	<.13	8680	123	
-9-1-18	Altered schists from hanging wall	" " " "		.13	2.76	.50	<.13	8680	2100	
-9-1-19	Vein quartz	Western end, upper trench		<.02	.91	.10	<.13	2420	<114	

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
ED-9-1-10	68.0	1110				196	29.4		12.7	22.5		15.0		123				210
-9-1-11	11.7	230				21.8	50.4		35.0					29				115
-9-1-12	74.0	620				120	29.7		34.0	51.3				84				270
-9-1-13	19.3	180				48.8	29.9		21.0	12.9				35				205
9-1-14	20.0	141				29.2	27.7		21.0	<12.9				29.5				
9-1-15	52.0	1270				192	52.6		24.0	20.0		14.2		125				178
9-1-16	17.0	146				33.2	14.1		22.0					29.5				212
9-1-17	107.0	1000				152	46.2		18.0	126.5		12.3		107				186
9-1-18	84.0	1520				162	27.2		25.5	26.5		12.3		102				227
9-1-19	20.0	78				19.6	29.0		24.0					23.5				270

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-9-1-20	Vein quartz	Anna May Property Between Sheep and Happy Cr. Eastern end, upper trench		<.02	.57	.08	<.13	595	<114	
-9-1-21	Vuggy qtz with clays	Upper stripped area	2620	1.46	1.43	.08	<.13	300	132	
-9-1-22	Vein Qtz with Mn-Fe stains and scorodite	" " "	2560	162.0	2.94	.09	<.13	510	114	7.50
-9-1-23	Gouge	" " "								
-9-1-24	Altered Qtz mica schists	" " "		.20	3.36	.51	<.13	9440	<114	
-10-1-1	Blue grey Qtz	4000' SE of Summit		<.02						
-10-2-1	Vein Qtz.	" " "		<.02						
-10-2-2	" "	" " "		<.02						
-11-1-1	" "	Ridge between Eva & Bullion Creeks		<.02						
-11-1-2	Altered Qtz-Mica Schist	" " " "		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr
ED-9-1-20	13.0	65				<10	12.0		17.7	<12.9				15.6				
-9-1-21	11.0	400				17.6	18.5		33.0	12.9				12.0				
-9-1-22	11.6	200		<1.0		17.6	31.0		30.0	<12.9				15.5				
-9-1-23																		
-9-1-24	82.0	1270				188	23.6		17.8	60.7		14.0		120.0				187
-10-1-1																		
-10-2-1																		
-10-2-2																		
-11-1-1																		
-11-1-2																		

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption

ESTER DOME TRACE ELEMENT DATA

SAMPLE NO.	MATERIAL	LOCATION	As	Au*	Fe%	Mg%	Ca%	Ti	Mn	Ag
ED-11-2-1	Vein Qtz	Ridge between Eva & Bullion Creeks		1.06						
-11-2-2	Qtz mica schist with Qtz boudins	" " " "		<.02						
-12-1-1	Vein Qtz	Ridge between St. Patrick & Happy Creeks		.11						
-12-1-2	" "	" " " "		<.02						
-12-2-1	Altered Qtz mica schists	" " " "		.17						
-12-3-1	Micaceous Qtzite	" " " "		.50						
-12-4-1	Vein Qtz	" " " "		.17						
-13-3-1	" "	On Ridge 1.75 mi. W of VABM 2364		<.02						
-13-5-1	Vein Qtz float	Tailings in Spire Creek elev. 850'		<.02						
-13-5-2	" " "	Tailings in Spire Creek elev. 800'		<.02						

SAMPLE NO	B	Ba	Be	Bi	Cd	Cr	Cu	Mo	Ni	Pb	Sb	Sc	Sr	V	W	Y	Zn	Zr

Emission Spectrograph Analyses in ppm unless otherwise indicated *Au determined by Atomic Absorption