60001922

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud underground channel sample data
AUTHOR	McCulla M; King S; Iannakis C; Kastelic B
DATE OF DOC(S)	1996-1997
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud deposit; South Ore Zone Hecla Mining Co.; Rosebud Project; Newmont Exploration Ltd
COMMODITY If not obvious	gold; silver
NOTES	Underground channel sample assays; geology; handwritten notes; sample map; correspondence statistics; list of samples to discard 12p.

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

SS: DP 9/10/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

39-7
Rosebud Assay Data

ROSEBUD . ASSAY DATA

6000 1922

4010

ROSEBUD DEPOSIT, South Ore Zone (Underground Channel Samples)

Assay averages using 5 feet @ 0.14 0pt Au as a cut-off

HECLA (XC17-RR - Samples)							SFPG (RBXC - Samples)				
From	To	Length	Au opt	GT (Au)	Ag opt	GT (Ag)	Au opt	GT (Au)	Ag opt	GT (Ag)	Spl Nr
55	60	5	**0.146**	0.730	**0.150**	0.75	**0.081**	0.405	**0.78**	3.9	1
60	65	5	**0.485**	2.425	**0.620**	3.10	**0.202**	1.01	**0.47**	2.35	2
65	70	5	**0.248**	1.240	**0.330**	1.65	**0.043**	0.215	**0.09**	0.45	3
70	75	5	**0.237**	1.185	**0.770**	3.85	**0.155**	0.775	**0.18**	0.9	4
75	80	5	**0.453**	2.265	**0.820**	4.10	**0.404**	2.02	**1.12**	5.6	5
80	85	5	**0.468**	2.340	**1.040**	5.20	**0.528**	2.64	**1.47**	7.35	6
85	90	5	**1.154**	5.770	**3.890**	19.45	**0.946**	4.73	**3.02**	15.1	7
90	95	5	**0.445**	2.225	**0.820**	4.10	**0.802**	4.01	**2.25**	11.25	8
95	100	5	**0.234**	1.170	**1.090**	5.45	**0.057**	0.285	**0.37**	1.85	9
100	105	5	**0.146**	0.730	**0.590**	2.95	**0.339**	1.695	**0.75**	3.75	10
105	110	5	**0.648**	3.240	**1.480**	7.40	**0.034**	0.17	**0.22**	1.1	11
110	115	5	**2.238**	11.190	**2.590**	12.95	**1.527**	7.635	**1.58**	7.9	12
115	119	4	**4.336**	17.344	**4.360**	17.44	**3.446**	13.784	**1.2**	4.8	13
119	124	5	**0.600**	3.000	**0.790**	3.95	**1.113**	5.565	**0.9**	4.5	14
123	128	5	**0.502**	2.510	**1.120**	5.60	**0.024**	0.12	**0.63**	3.15	15
128	133	5	**0.173**	0.865	**2.070**	10.35	**0.181**	0.905	**1.86**	9.3	16
133	138	5	**0.124**	0.620	**1.080**	5.40	**0.017**	0.085	**0.12**	0.6	17
138	143	5	**0.568**	2.840	**12.810**	64.05	**0.084**	0.42	**7.53**	37.65	18
143	148	5	**0.962**	4.810	**3.270**	16.35	**0.227**	1.135	**2.58**	12.9	19
148	153	5	**6.515**	32.575	**23.500**	117.50	**6.277**	31.385	**11.01**	55.05	20
153	158	5	**2.313**	11.565	**12.540**	62.70	**6.109**	30.545	**15.76**	78.8	21
158	163	5	**0.344**	1.720	**1.490**	7.45	**13.01**	65.05	**52.2**	261	22
163	164	1	**1.584**	1.584	**2.230**	2.23	**1.531**	1.531	**1.531**	1.531	23
164	168	4	**0.226**	0.904	**0.830**	3.32	**0.524**	2.096	**0.524**	2.096	24
168	173	5	**1.234**	6.169	**2.310**	11.55	**0.469**	2.345	**0.469**	2.345	25
173	178	5	**0.157**	0.785	**1.030**	5.15	**0.095**	0.475	**0.19**	0.95	26
178	183	5	**0.426**	2.130	**0.500**	2.50	**0.246**	1.23	**0.92**	4.6	27
TOTAL=		129 feet		123.931		406.49		182.261		540.772	

AVER.=129 feet @ 0.961 opt Au 3.151 opt Ag

Aver. Ag / Aver. Au 3.280

1.413 opt Au 4.364 opt Ag

Aver. Ag / Aver. Au = 3.088

W/O# 22=124 ft. @ 0.945 opt Au & 2.256 opt Ag

ROSEBUD PROJECT

ORE STOCKPILE GRAB SAMPLES (SFPG)

Sample Nr.	Au (opt)	Ag (opt)
RBSP 1	0.148	0.73
RBSP 2	0.295	1.81
RBSP 3	0.040	0.17
RBSP 4	0.641	2.32
RBSP 5	1.327	2.16
RBSP 6	0.135	1.42
RBSP 7	0.275	2.94
RBSP 8	0.536	1.68
RBSP 9	1.001	2.12
RBSP 10	0.467	1.42
RBSP 11	**21.148**	**56.9**
RBSP 12	0.778	4.44
RBSP 13	0.854	3.59
RBSP 14	0.950	3.68
RBSP 15	0.646	2.57
RBSP 16	0.888	3.48
RBSP 17	0.213	0.52
RBSP 18	0.907	2.42
RBSP 19	0.589	1.68
RBSP 20	0.185	0.69
RBSP 21	0.197	0.75

ALL SAMPLES:	**MEAN (opt) :**	**1.534**	**4.64**
	Minimum:	0.040	12.03
	Maximum:	21.148	56.90
	Standard Deviation:	4.508	12.03
	Stand. Error of Mean:	0.984	2.62
	Median:	10.594	28.54
	Mean Ag / Mean Au:	**3.026**	
	Au-Ag Corrl. Coef.	**0.926**	

Excluding RBSP-11:	**MEAN (opt):**	**0.554**	**2.03**
	Minimum:	0.040	0.17
	Maximim:	1.327	4.44
	Standard Deviation:	0.362	1.78
	Stand. Error of Mean:	0.081	0.26
	Median:	0.684	2.31
	Mean Ag / Mean Au:	**3.662**	
	Au-Ag Corrl. Coef.	**0.855**	

ROSEBUD PROJECT UNDERGROUND RIB SAMPLING, 1995

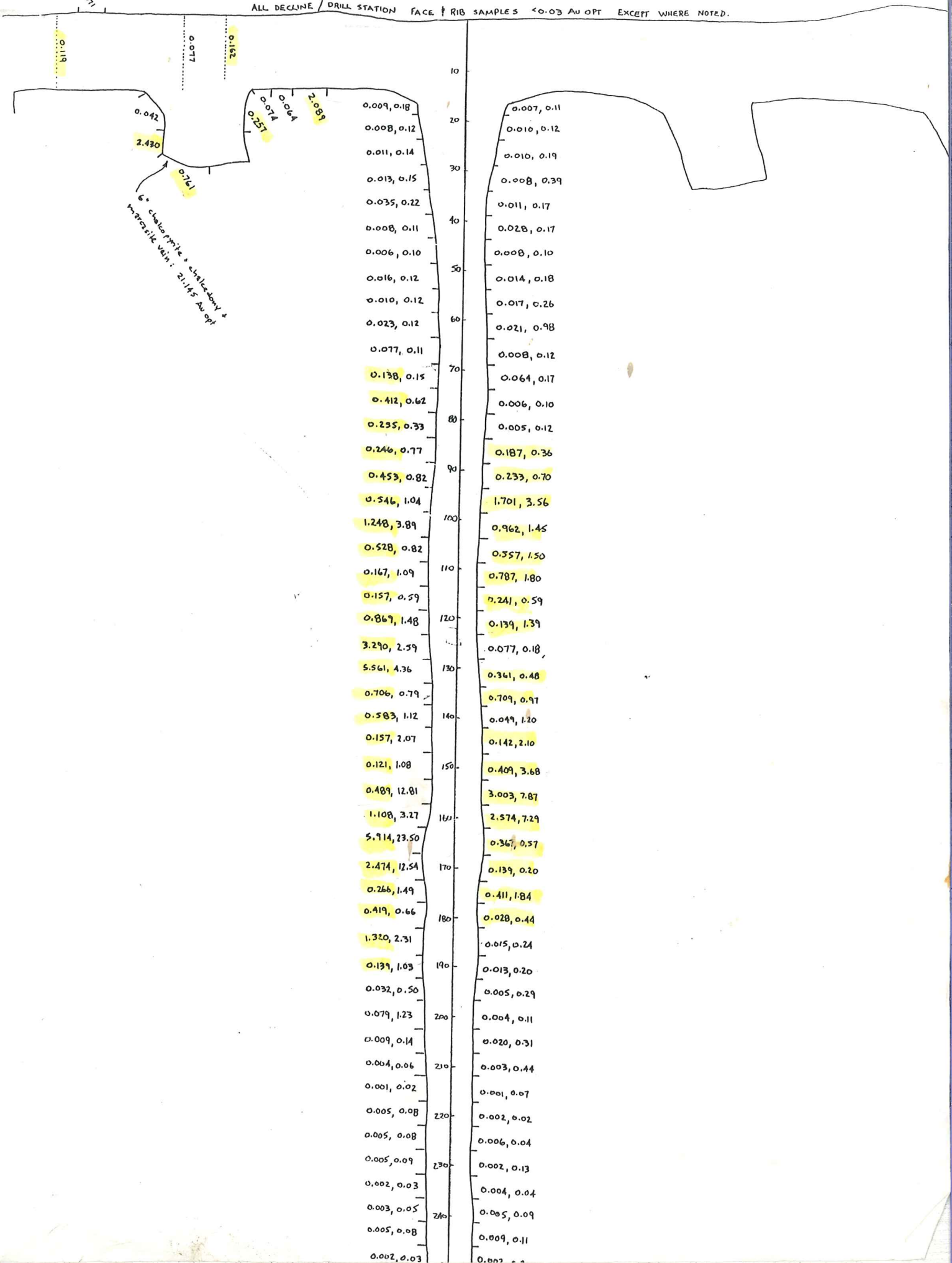
SAMPLE #	LOCATION	FROM	TO	MAP POINTS	RIB	GOLD OPT	SILVER OPT	SAMPLE DESCRIPTION
5502	CROSS-CUT #17	83.0	86.2	MP2-MP3	RIGHT	0.001	0.06	ARGILIC ALTERATION ZONE
5508	CROSS-CUT #17	80.4	76.0	MP2-MP3	RIGHT	0.003	0.04	LAPILLI TUFF BRECCIA W/MINOR SIO2.
5503	CROSS-CUT #17	80.4	83.0	MP2-MP3	RIGHT	0.001	0.05	ARGILIC ALTERATION ZONE
5509	CROSS-CUT #17	72.0	76.0	MP2-MP3	RIGHT	0.004	0.04	LAPILLI TUFF BRECCIA W/MOD SIO2
5510	CROSS-CUT #17	72.0	67.0	MP2-MP3	RIGHT	0.005	0.06	MOD PLANAR LAMINATED ASH TUFF.
5511	CROSS-CUT #17	67.0	62.0	MP2-MP3	RIGHT	0.004	0.05	MOD PLANAR LAMINATED ASH TUFF.
5513	CROSS-CUT #17	62.0	57.0	MP2-MP3	RIGHT UP	0.006	0.03	LSTWB
5512	CROSS-CUT #17	62.0	57.0	MP2-MP3	RIGHT LOW	0.004	0.05	MOD PLANAR LAMINATED ASH TUFF.
5526	CROSS-CUT #17	52.0	57.0	MP2-MP3	RIGHT	0.005	0.08	LST PROP
5527	CROSS-CUT #17	46.2	52.0	MP2-MP3	RIGHT	0.003	0.04	LST PROP
5528	CROSS-CUT #17	43.0	46.2	MP2-MP3	RIGHT	0.002	0.03	WHITE CLAY FRACTURE ZONE. ASSOC WITH 5521 LEFT RIB.
5537	CROSS-CUT #17	39.0	43.0	MP2-MP3	RIGHT UP	0.002	0.04	PLANAR LAM ASH TUFF, HARD, SIO2?, ASSOC W/5522 LEFT RIB
5529	CROSS-CUT #17	39.0	43.0	MP2-MP3	RIGHT LOW	0.003	0.03	MOD PLANAR LAM ASH TUFF, MIN WHITE CLAY, COMMON MARC VEINLETS.
5530	CROSS-CUT #17	36.7	39.0	MP2-MP3	RIGHT	0.005	0.04	MOD PLANAR LAM ASH TUFF
5531	CROSS-CUT #17	36.2	36.7	MP2-MP3	RIGHT	0.034	0.19	WHITE CLAY + SIO2 BX ZONE ASSOC W/5525 LEFT RIB
5532	CROSS-CUT #17	33.5	36.2	MP2-MP3	RIGHT	0.058	0.42	CS VOL BX
5533	CROSS-CUT #17	32.4	33.5	MP2-MP3	RIGHT	0.035	0.23	WHITE CLAY + SIO2 BX
5535	CROSS-CUT #17	28.8	32.4	MP2-MP3	RIGHT UP	0.036	0.11	MOD PLANAR LAM ASH TUFF, PROP, ASSOC W/5538 LEFT RIB
5534	CROSS-CUT #17	28.8	32.4	MP2-MP3	RIGHT LOW	0.026	0.18	MS LAPILLI VOLC BX
5551	CROSS-CUT #17	27.8	28.8	MP2-MP3	RIGHT	0.006	0.05	MS LAPILLI BX
5552	CROSS-CUT #17	27.0	27.8	MP2-MP3	RIGHT	0.022	0.40	NORMAL DIP SLIP FAULT, TT=0.5", ASSOC W/ 5544 LEFT RIB
5553	CROSS-CUT #17	22.7	27.0	MP2-MP3	RIGHT	0.204	0.29	MS LAPILLI BX
5554	CROSS-CUT #17	21.5	22.7	MP2-MP3	RIGHT	0.082	0.10	SMALL FAULT, TT=6.0", ASSOC ? W/5546 LEFT RIB
5555	CROSS-CUT #17	18.6	21.5	MP2-MP3	RIGHT	0.020	0.09	CREAM CLAY CLAST BX W/CHLOR STKWK, TT=1.5-2.5'
5556	CROSS-CUT #17	14.7	18.6	MP2-MP3	RIGHT	0.277	0.71	LST, PROP
5557	CROSS-CUT #17	14.7	14.2	MP2-MP3	RIGHT	0.885	2.00	SMALL FAULT, TT=0.5-2.0"
5559	CROSS-CUT #17	10.3	12.4	MP2-MP3	RIGHT LOW	0.250	0.49	C-G WEAKLY LAM ASH TUFF
5558	CROSS-CUT #17	10.3	14.2	MP2-MP3	RIGHT	1.517	1.80	LST, POT, ASSOC W/ 5550 LEFT RIB
5560	CROSS-CUT #17	8.3	10.3	MP2-MP3	RIGHT	0.718	0.85	C-G WEAKLY LAM ASH TUFF
5569	CROSS-CUT #17	8.3	10.3	MP2-MP3	RIGHT	1.923	3.21	SULFIDE AND QUARTZ VEINLETS "ONLY" (SAME SITE AS 5560)
5561	CROSS-CUT #17	7.8	8.3	MP2-MP3	RIGHT	4.041	7.82	OPEN SPACE FAULT-EXT FRACT W/ MARC + BARITE, TT=1-6"
5562	CROSS-CUT #17	4.5	7.8	MP2-MP3	RIGHT	0.609	0.85	F-G TO C-G PLANAR LAM ASH TUFF
5567	CROSS-CUT #17	4.5	7.8	MP2-MP3	RIGHT	16.607	32.50	SULFIDE VEINLETS "ONLY" (SAME SITE AS 5562)
5568	CROSS-CUT #17	4.5	7.8	MP2-MP3	RIGHT	0.175	2.60	ROCK W/ NO SULFIDE VEINLETS (SAME SITE AS 5562)
5563	CROSS-CUT #17	0.0	4.5	MP2-MP3	RIGHT	15.378	17.00	F-G TO C-G PLANAR LAM ASH TUFF
5564	CROSS-CUT #17	0.0	4.5	MP2-MP3	RIGHT	48.616	27.40	MARCASITE-SULFIDE FRACTURE FILL "ONLY" (SAME SITE AS 5563)
5565	CROSS-CUT #17	0.0	4.5	MP2-MP3	RIGHT	0.260	2.80	WALL ROCK "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5563)
5566	CROSS-CUT #17	0.0	4.5	MP2-MP3	RIGHT	6.458	26.00	MOST REPRESENTATIVE SAMPLE FOR AREA COVERED BY 5563
5588	CROSS-CUT #17	71.5	75.0	MP1-MP2	RIGHT UP	8.070	12.60	FAULT ASSOC W/ 5579 LEFT RIB, TT=4"
5587	CROSS-CUT #17	71.5	75.0	MP1-MP2	RIGHT LOW	11.668	15.20	F-G PLANAR LAM ASH TUFF, PROP
5590	CROSS-CUT #17	71.5	75.0	MP1-MP2	RIGHT	93.340	26.80	SULFIDE VEINLETS "ONLY" (SAME SITE AS 5587)
5591	CROSS-CUT #17	71.5	75.0	MP1-MP2	RIGHT	0.386	1.28	ROCK "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5587)
5589	CROSS-CUT #17	67.7	71.5	MP1-MP2	RIGHT	0.863	2.07	F-G PLANAR LAM ASH TUFF
5595	CROSS-CUT #17	63.0	67.5	MP1-MP2	RIGHT	0.116	1.46	F-G MASSIVE ASH TUFF
5596	CROSS-CUT #17	59.6	63.0	MP1-MP2	RIGHT	0.340	4.73	F-G MASSIVE ASH TUFF
5597	CROSS-CUT #17	56.0	59.6	MP1-MP2	RIGHT	0.059	0.46	F-G MASSIVE ASH TUFF
5598	CROSS-CUT #17	51.0	56.0	MP1-MP2	RIGHT	0.091	1.13	MS, MONO?, VOLC BX
5599	CROSS-CUT #17	48.0	51.0	MP1-MP2	RIGHT	0.035	0.58	MS, MONO?, VOLC BX

SAMPLE #	LOCATION	FROM	TO	MAP POINTS	RIB	GOLD OPT	SILVER OPT	SAMPLE DESCRIPTION
5600	CROSS-CUT #17	43.5	48.0	MP1-MP2	RIGHT	0.043	0.28	MS, MONO?, VOLC BX
5601	CROSS-CUT #17	43.2	43.5	MP1-MP2	RIGHT	1.540	1.37	LOW ANGLE REVERSE FAULT W/ LATER NORMAL MOVEMENT
5602	CROSS-CUT #17	38.1	43.2	MP1-MP2	RIGHT	9.139	14.20	HET, MS, VOLC BX, SIO2 + SULF VEINLETS.
5614	CROSS-CUT #17	38.1	43.2	MP1-MP2	RIGHT	217.800	127.00	SULFIDE + CACO3 VEINLETS "ONLY" (SAME SITE AS 5602)
5615	CROSS-CUT #17	38.1	43.2	MP1-MP2	RIGHT	0.446	1.28	ROCK W/ NO CACO3 + SULFIDE VEINING (SAME SITE AS 5602)
5603	CROSS-CUT #17	34.4	38.1	MP1-MP2	RIGHT	3.422	3.59	HET, MS, VOLC BX, SIO2 + SULF VEINLETS. (HIGHER DENSITY THAN 5602)
5616	CROSS-CUT #17	34.4	38.1	MP1-MP2	RIGHT	10.832	13.80	SULFIDE VEINLETS "ONLY" (SAME SITE AS 5603)
5617	CROSS-CUT #17	34.4	38.1	MP1-MP2	RIGHT	0.142	0.34	CLAST ROCK "ONLY" (SAME SITE AS 5603)
5618	CROSS-CUT #17	34.4	38.1	MP1-MP2	RIGHT	0.068	0.09	PINK MATRIX "ONLY" (SAME SITE AS 5603)
5604	CROSS-CUT #17	31.7	34.4	MP1-MP2	RIGHT	0.718	0.68	HET, MS, VOLC BX, SIO2 + SULF VEINLETS. (HIGHER DENSITY THAN 5602)
5619	CROSS-CUT #17	31.7	34.4	MP1-MP2	RIGHT	13.851	14.50	VEINING "ONLY" (SAME SITE AS 5604)
5620	CROSS-CUT #17	31.7	34.4	MP1-MP2	RIGHT	1.047	1.15	CLAST ROCK "ONLY" (SAME SITE AS 5604)
5621	CROSS-CUT #17	31.7	34.4	MP1-MP2	RIGHT	0.012	0.07	MATRIX "ONLY" (SAME SITE AS 5604)
5605	CROSS-CUT #17	31.5	31.7	MP1-MP2	RIGHT	55.420	20.80	MARC + SIO2 VEINLET, TT = 1-3" WIDE
5606	CROSS-CUT #17	28.7	31.5	MP1-MP2	RIGHT	0.379	0.92	HET, MS, VOLC BX, SIO2+CACO3+SULFIDE VEINLETS (LOWER DENSITY THAN 5603)
5660	CROSS-CUT #17	28.7	31.5	MP1-MP2	RIGHT	0.063	0.11	ROCK "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5606)
5607	CROSS-CUT #17	25.5	28.7	MP1-MP2	RIGHT	0.084	0.47	HET, MS, VOLC BX, SIO2+CACO3+SULFIDE VEINLETS (LOWER DENSITY THAN 5603)
5661	CROSS-CUT #17	25.5	28.7	MP1-MP2	RIGHT	0.023	0.09	ROCK "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5607)
5608	CROSS-CUT #17	24.8	25.5	MP1-MP2	RIGHT	0.180	0.64	CONTACT ZONE BETWEEN HET, MS, VOLC BX AND F-G MASSIVE ASH TUFF
5622	CROSS-CUT #17	21.0	24.8	MP1-MP2	RIGHT	0.064	0.24	F-G MASSIVE PINK ASH TUFF
5662	CROSS-CUT #17	21.0	24.8	MP1-MP2	RIGHT	0.011	0.10	ROCK "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5622
5623	CROSS-CUT #17	17.0	21.0	MP1-MP2	RIGHT	0.129	0.46	F-G MASSIVE PINK ASH TUFF ALTERED BE SMALL FAULT
5624	CROSS-CUT #17	11.7	17.0	MP1-MP2	RIGHT	0.498	1.45	HET, MS, VOLC BX, MOD SULFIDE + WHITE CLAY VEINLETS + SIO2
5625	CROSS-CUT #17	7.4	11.7	MP1-MP2	RIGHT	0.450	0.98	HET, MS, VOLC BX W/ COMMON WHITE CLAY + MARC VEINLETS + SIO2
5640	CROSS-CUT #17	7.4	11.7	MP1-MP2	RIGHT	5.612	15.40	WHITE CLAY + MARC "ONLY" (SAME SITE AS 5625)
5626	CROSS-CUT #17	5.0	7.4	MP1-MP2	RIGHT	0.784	3.16	HET, MS, VOLC BX W/ MINOR MARC + CLAY VEINLETS + SIO2
5627	CROSS-CUT #17	0.0	5.0	MP1-MP2	RIGHT	0.179	3.30	HET, MS, VOLC BX W/ COMMON WHITE CLAY + MARC VEINLETS + SIO2
5668	CROSS-CUT #17	84.3	89.2	MP0-MP1	RIGHT	0.160	0.62	F-G PLANAR LAM ASH TUFF
5669	CROSS-CUT #17	80.7	84.3	MP0-MP1	RIGHT	0.141	0.55	F-G PLANAR LAM ASH TUFF
5670	CROSS-CUT #17	75.8	80.7	MP0-MP1	RIGHT	0.100	0.28	F-G PLANAR LAM ASH TUFF
5671	CROSS-CUT #17	72.0	75.8	MP0-MP1	RIGHT	0.137	0.19	F-G PLANAR LAM ASH TUFF
5672	CROSS-CUT #17	70.8	72.0	MP0-MP1	RIGHT	0.268	0.29	SILICIFIED BX IN HINGE OF FOLD, F-G PLANAR LAM ASH TUFF
5673	CROSS-CUT #17	67.1	70.8	MP0-MP1	RIGHT	0.132	0.43	F-G PLANAR LAM ASH TUFF
5674	CROSS-CUT #17	64.3	67.1	MP0-MP1	RIGHT	0.221	0.37	F-G PLANAR LAM ASH TUFF
5675	CROSS-CUT #17	63.3	64.3	MP0-MP1	RIGHT	0.295	0.60	MINOR FAULT W/ WHITE CLAY + SULFIDES, ASSOC W/ 5689, TT=1-3"
5676	CROSS-CUT #17	61.3	63.3	MP0-MP1	RIGHT	0.009	0.08	F-G PLANAR LAM ASH TUFF
5677	CROSS-CUT #17	59.8	61.3	MP0-MP1	RIGHT	0.004	0.05	HET, MS, VOLC BX.
5678	CROSS-CUT #17	55.9	59.8	MP0-MP1	RIGHT	0.027	0.11	HET, MS, VOLC BX.
5705	CROSS-CUT #17	50.4	55.9	MP0-MP1	RIGHT	0.004	0.07	HET, MS, VOLC BX.
5706	CROSS-CUT #17	45.2	50.4	MP0-MP1	RIGHT	0.010	0.10	HET, MS, VOLC BX.
5707	CROSS-CUT #17	41.4	45.2	MP0-MP1	RIGHT	0.011	0.15	HET, MS, VOLC BX.
5708	CROSS-CUT #17	39.2	41.4	MP0-MP1	RIGHT	0.014	0.20	FRACTURE ZONE, W/ WHITE CLAY + MARC + BARITE. ASSOC W/ 5697 LEFT RIB.
5715	CROSS-CUT #17	39.2	41.4	MP0-MP1	RIGHT	0.010	0.58	WHITE CLAY + BARITE + MARC "ONLY". (SAME SITE AS 5708)
5709	CROSS-CUT #17	36.0	39.2	MP0-MP1	RIGHT	0.005	0.08	HET, MS, VOLC BX.
5710	CROSS-CUT #17	33.0	36.0	MP0-MP1	RIGHT	0.008	0.10	HET, MS, VOLC BX.
5711	CROSS-CUT #17	28.5	33.0	MP0-MP1	RIGHT	0.008	0.09	HET, MS, VOLC BX, W/ HIGH FRACTURE DENSITY W/ MARC + WHITE CLAY+/- BARITE.
5712	CROSS-CUT #17	24.0	28.5	MP0-MP1	RIGHT	0.009	0.09	HET, MS, VOLC BX.
5713	CROSS-CUT #17	21.9	24.0	MP0-MP1	RIGHT	0.008	0.11	FAULT/FRACTURE ZONE W/ WHITE CLAY + MARC + BARITE. ASSOC W/ 5702 LEFT RIB.
5714	CROSS-CUT #17	17.5	21.9	MP0-MP1	RIGHT	0.013	0.14	HET, MS, VOLC BX, W/ HIGH FRACTURE DENSITY W/ MARC + WHITE CLAY.
5501	CROSS-CUT #17	81.2	83.7	MP2-MP3	LEFT	0.004	0.07	ARGILIC ALTERATION ZONE
5505	CROSS-CUT #17	77.0	81.2	MP2-MP3	LEFT UP	0.006	0.05	MOD PLANAR LAMINATED TUFF. ARGILLIZED AML.
5504	CROSS-CUT #17	77.0	81.2	MP2-MP3	LEFT LOW	0.002	0.05	F-G LAPILLI TUFF BRECCIA

SAMPLE #	LOCATION	FROM	TO	MAP POINTS	RIB	GOLD OPT	SILVER OPT	SAMPLE DESCRIPTION
5506	CROSS-CUT #17	72.8	77.0	MP2-MP3	LEFT	0.001	0.03	F-G LAPILLI TUFF BRECCIA. MIN-MOD SIO2 FLOODING.
5507	CROSS-CUT #17	70.3	72.8	MP2-MP3	LEFT	0.008	0.04	SILICIFIED STRUCTURE AND SILICA HALO W/ MARCASITE.
5514	CROSS-CUT #17	65.0	70.3	MP2-MP3	LEFT	0.010	0.05	LSTWB ? W/MINOR LAMINATIONS.
5516	CROSS-CUT #17	60.0	65.0	MP2-MP3	LEFT UP	0.002	0.04	LSTWB
5515	CROSS-CUT #17	60.0	65.0	MP2-MP3	LEFT LOW	0.005	0.06	MOD PLANAR LAMINATED ASH TUFF.
5518	CROSS-CUT #17	55.0	60.0	MP2-MP3	LEFT UP	0.012	0.04	LSTWB
5517	CROSS-CUT #17	55.0	60.0	MP2-MP3	LEFT LOW	0.006	0.05	MOD PLANAR LAM ASH TUFF, SOFT, PROP+ARG
5520	CROSS-CUT #17	50.0	55.0	MP2-MP3	LEFT UP	0.016	0.02	LSTWB
5519	CROSS-CUT #17	50.0	55.0	MP2-MP3	LEFT LOW	0.005	0.04	MOD PLANAR LAMINATED ASH TUFF.
5521	CROSS-CUT #17	48.0	50.0	MP2-MP3	LEFT	0.012	0.03	2" WIDE FRACTURE ZONE WITH WHITE CLAY + SIO2
5522	CROSS-CUT #17	43.0	48.0	MP2-MP3	LEFT	0.002	0.00	PLANAR LAM ASH TUFF, HARD, SILICIFIED?
5523	CROSS-CUT #17	40.0	43.0	MP2-MP3	LEFT	0.167	0.12	MATRIX SUP LAPILLI-BLOCK BRECCIA. INCREASE IN MARK VEINLETS
5524	CROSS-CUT #17	36.7	40.0	MP2-MP3	LEFT	0.005	0.03	MATRIX SUP LAPILLI-BLOCK BRECCIA. INCREASE IN MARK VEINLETS
5536	CROSS-CUT #17	33.9	34.2	MP2-MP3	LEFT	0.064	13.00	VUG HOLE FILLED WITH SERICITIC? CLAY
5525	CROSS-CUT #17	33.0	36.7	MP2-MP3	LEFT	0.018	0.63	WHITE CLAY + SIO2 STOCKWORK BRECCIA. ABUNDANT WHITE CLAY.
5538	CROSS-CUT #17	28.0	33.0	MP2-MP3	LEFT UP	0.036	0.13	MOD PLANAR LAM ASH TUFF, PROP, ASSOC W/5535 RIGHT RIB
5539	CROSS-CUT #17	26.1	30.4	MP2-MP3	LEFT LOW	0.043	0.14	VOLC BX, POT, ASSOC W/5534
5540	CROSS-CUT #17	23.0	28.0	MP2-MP3	LEFT UP	0.032	0.12	MOD PLANAR LAM ASH TUFF, PROP
5541	CROSS-CUT #17	21.4	26.1	MP2-MP3	LEFT LOW	0.024	0.07	VOLC BX, POT
5542	CROSS-CUT #17	20.9	21.4	MP2-MP3	LEFT	0.008	0.06	MARCASITE FRACTURE
5543	CROSS-CUT #17	19.3	20.9	MP2-MP3	LEFT	0.008	0.05	VOLC BX, POT
5544	CROSS-CUT #17	19.0	19.3	MP2-MP3	LEFT	0.028	0.05	FAULT ZONE, NORMAL DIP SLIP
5545	CROSS-CUT #17	17.1	19.0	MP2-MP3	LEFT	0.036	0.05	MS VOLC BX, PROP
5546	CROSS-CUT #17	16.8	17.1	MP2-MP3	LEFT	0.010	0.14	MARCASITE VEINLET, UP TO 0.5" WIDE
5547	CROSS-CUT #17	12.2	16.8	MP2-MP3	LEFT	0.018	0.08	MS VOLC BX, PROP
5548	CROSS-CUT #17	10.8	12.2	MP2-MP3	LEFT	0.014	0.67	MS VOLC BX, LST CLASTS, ASSOC W/ FAULT?
5549	CROSS-CUT #17	8.0	10.8	MP2-MP3	LEFT	0.048	0.17	LST, PROP
5550	CROSS-CUT #17	5.5	8.0	MP2-MP3	LEFT UP	0.166	0.59	LST, PROP, W/ WHITE CLAY AND MARC FRACTURES
5573	CROSS-CUT #17	4.7	6.0	MP2-MP3	LEFT UP	0.467	2.68	LST PROP
5572	CROSS-CUT #17	4.3	5.3	MP2-MP3	LEFT UP	0.251	2.98	SMALL FAULT W/ WHITE CLAY, LST PROP, ASSOC? W/ 5561
5571	CROSS-CUT #17	4.3	4.9	MP2-MP3	LEFT LOW	0.205	0.42	SMALL FAULT W/ WHITE CLAY, LAM ASH TUFF, ASSOC ? W/ 5561
5570	CROSS-CUT #17	3.0	6.4	MP2-MP3	LEFT LOW	0.245	0.71	F-G TO C-G PLANAR LAM ASH TUFF
5574	CROSS-CUT #17	0.0	4.7	MP2-MP3	LEFT	0.388	0.42	F-G TO C-G PLANAR LAM ASH TUFF, POT
5575	CROSS-CUT #17	73.6	77.8	MP1-MP2	LEFT	0.215	1.01	C-G LAM ASH TUFF, POT
5576	CROSS-CUT #17	70.4	73.6	MP1-MP2	LEFT	0.602	2.28	F-G TO C-G ASH TUFF, PROP
5577	CROSS-CUT #17	66.4	70.4	MP1-MP2	LEFT LOW	0.788	1.73	F-G TO C-G PLANAR LAM ASH TUFF, PROP
5579	CROSS-CUT #17	65.6	66.4	MP1-MP2	LEFT	7.088	15.90	FAULT ZONE, TT=0.5-3.0"
5578	CROSS-CUT #17	64.4	66.4	MP1-MP2	LEFT MID	6.941	13.20	F-G TO C-G ASH TUFF, PROP, HIGH DENSITY CACO3 + MARC FRACTURES
5592	CROSS-CUT #17	64.4	66.4	MP1-MP2	LEFT	157.500	34.70	LARGE 1" FRACTURE FILLED W/ MARC +/- PYRITE, +SIO2 (SAME SITE AS 5578)
5593	CROSS-CUT #17	64.4	66.4	MP1-MP2	LEFT	18.080	24.80	LARGE CACO3 + MARC + WHITE CLAY FRACTURE, (SAME SITE AS 5578), TT=2-3"
5594	CROSS-CUT #17	64.4	66.4	MP1-MP2	LEFT	0.757	1.98	ROCK "ONLY" W/ NO CACO3 OR MARC VEINLETS (SAME SITE AS 5578
5580	CROSS-CUT #17	62.4	66.4	MP1-MP2	LEFT UP	0.761	7.59	F-G TO C-G MIN PLASNAR LAM ASH TUFF, PROP + , POT +/-
5581	CROSS-CUT #17	60.0	65.6	MP1-MP2	LEFT	0.743	6.77	F-G TO C-G ASH TUFF, PROP
5582	CROSS-CUT #17	55.0	60.0	MP1-MP2	LEFT	0.474	10.60	F-G MASSIVE ASHT TUFF, PROP+, POT+
5583	CROSS-CUT #17	50.0	55.0	MP1-MP2	LEFT	0.924	4.35	F-G MASSIVE ASHT TUFF, PROP+, POT+
5584	CROSS-CUT #17	46.0	50.0	MP1-MP2	LEFT	0.720	4.64	F-G MASSIVE ASHT TUFF, PROP+, POT+
5585	CROSS-CUT #17	43.8	46.0	MP1-MP2	LEFT	0.368	6.83	MS VOLC BX
5586	CROSS-CUT #17	43.4	43.8	MP1-MP2	LEFT	0.230	0.71	REVERSE FAULT W/ LATER DEXTRAL MOVEMENT, TT=1-4"
5609	CROSS-CUT #17	41.6	43.4	MP1-MP2	LEFT	1.546	6.57	HET, MS, VOLC BX, MINOR SULFIDE AND CACO3 VEINLETS
5610	CROSS-CUT #17	38.5	41.6	MP1-MP2	LEFT	0.391	0.32	HET, MS, VOLC BX W/ COMMON SIO2 + CACO3 + SULFIDE VEINLETS
5611	CROSS-CUT #17	35.4	38.5	MP1-MP2	LEFT	0.032	0.51	HET, MS, VOLC BX W/ COMMON SIO2 + CACO3 + SULFIDE VEINLETS
5663	CROSS-CUT #17	35.4	38.5	MP1-MP2	LEFT	1.181	4.40	SULFIDE VEINLETS +/- WHITE CLAY + SIO2 "ONLY" (SAME SITE AS 5611)

SAMPLE #	LOCATION	FROM	TO	MAP POINTS	RIB	GOLD OPT	SILVER OPT	SAMPLE DESCRIPTION
5664	CROSS-CUT #17	35.4	38.5	MP1-MP2	LEFT	0.017	0.10	CLASTS "ONLY" W/ NO SULFIDE VEINLETS (SAME SITE AS 5611)
5665	CROSS-CUT #17	35.4	38.5	MP1-MP2	LEFT	0.016	0.03	MATRIX "ONLY" (SAME SITE AS 5611)
5612	CROSS-CUT #17	31.3	35.4	MP1-MP2	LEFT	0.093	0.26	HET, MS, VOLC BX W/ MINOR SIO2+CACO3 VEINLETS
5666	CROSS-CUT #17	31.3	35.4	MP1-MP2	LEFT	0.004	0.04	CLASTS "ONLY" (SAME SITE AS 5612)
5667	CROSS-CUT #17	31.3	35.4	MP1-MP2	LEFT	0.006	0.03	MATRIX " ONLY" (SAME SITE AS 5612)
5613	CROSS-CUT #17	29.0	31.3	MP1-MP2	LEFT	1.036	3.33	SIO2 FRACTURE, TT=1"
5628	CROSS-CUT #17	26.5	29.0	MP1-MP2	LEFT	0.170	0.76	HET, MS, VOLC BX. TT=1.4'
5629	CROSS-CUT #17	24.6	26.5	MP1-MP2	LEFT	0.288	4.26	HET, MS, VOLC BX, W/ COMMON WHITE CLAY. TT = 1.6'
5638	CROSS-CUT #17	24.6	26.5	MP1-MP2	LEFT	0.134	2.33	WHITE CLAY + MARC "ONLY" (SAME SITE AS 5629)
5659	CROSS-CUT #17	24.6	26.5	MP1-MP2	LEFT	0.069	0.25	ROCK "ONLY" W/ NO CLAY (SAME SITE AS 5629)
5630	CROSS-CUT #17	22.1	24.6	MP1-MP2	LEFT	0.429	1.46	HET, MS, VOLC BX, W/ MINOR TO MOD MARC VEINLETS
5639	CROSS-CUT #17	22.1	24.6	MP1-MP2	LEFT	2.810	5.57	MARCASITE VEINLETS "ONLY" (SAME SITE AS 5630)
5657	CROSS-CUT #17	22.1	24.6	MP1-MP2	LEFT	0.056	0.17	CLAST MATERIAL "ONLY" (SAME SITE AS 5630)
5658	CROSS-CUT #17	22.1	24.6	MP1-MP2	LEFT	0.105	0.47	MATRIX "ONLY" (SAME SITE AS 5630)
5631	CROSS-CUT #17	20.7	22.1	MP1-MP2	LEFT	1.848	3.80	FRACTURE PLANE W/ COMMON MARC. TT = 1"
5632	CROSS-CUT #17	17.7	20.7	MP1-MP2	LEFT	0.525	1.22	HET, MS, VOLC BX, W/ MINOR MARC VEINLETS
5633	CROSS-CUT #17	13.5	17.7	MP1-MP2	LEFT	0.256	1.21	HET, MS, VOLC BX W/ MINOR WHITE CLAY + MARC VEINLETS
5634	CROSS-CUT #17	10.2	13.5	MP1-MP2	LEFT	0.493	1.79	HET, MS, VOLC BX, W/ MOD COMMON WHITE CLAY + MARC VEINLETS
5635	CROSS-CUT #17	7.6	10.2	MP1-MP2	LEFT	0.892	2.72	HET, MS, VOLC BX, W/ COMMON MARC + WHITE CLAY VEINLETS
5636	CROSS-CUT #17	4.0	7.6	MP1-MP2	LEFT	0.394	1.51	HET, MS, VOLC BX, W/ MINOR TO MOD MARC + WHITE CLAY VEINLETS
5637	CROSS-CUT #17	1.0	4.0	MP1-MP2	LEFT	0.910	1.80	HET, MS, VOLC BX, W/ COMMON MARC + WHITE CLAY VEINLETS
5679	CROSS-CUT #17	86.7	88.4	MP0-MP1	LEFT	0.408	0.40	HET, MS, VOLC BX.
5681	CROSS-CUT #17	83.5	86.7	MP0-MP1	LEFT UP	0.020	0.11	HET, MS, VOLC BX.
5680	CROSS-CUT #17	83.5	86.7	MP0-MP1	LEFT LOW	0.025	0.10	F-G MASSIVE ASH TUFF
5683	CROSS-CUT #17	80.6	83.5	MP0-MP1	LEFT UP	0.006	0.08	HET, MS, VOLC BX.
5682	CROSS-CUT #17	80.6	83.5	MP0-MP1	LEFT LOW	0.011	0.07	F-G MASSIVE ASH TUFF
5685	CROSS-CUT #17	77.0	80.6	MP0-MP1	LEFT UP	0.040	0.05	HET, MS, VOLC BX.
5684	CROSS-CUT #17	77.0	80.6	MP0-MP1	LEFT LOW	0.115	0.07	F-G MASSIVE ASH TUFF
5687	CROSS-CUT #17	73.0	77.0	MP0-MP1	LEFT UP	0.013	0.09	HET, MS, VOLC BX.
5686	CROSS-CUT #17	73.0	77.0	MP0-MP1	LEFT LOW	0.004	0.08	F-G MASSIVE ASH TUFF
5688	CROSS-CUT #17	67.0	73.0	MP0-MP1	LEFT	0.021	0.09	HET, MS, VOLC BX.
5689	CROSS-CUT #17	65.5	67.0	MP0-MP1	LEFT	0.094	0.24	SMALL FAULT ASSOC W/ 5675, 2 SHEARS APPROX 0.5-1" WIDE W/ BX BETWEEN
5691	CROSS-CUT #17	60.8	65.5	MP0-MP1	LEFT UP	0.005	0.08	HET, MS, VOLC BX.
5690	CROSS-CUT #17	60.8	65.5	MP0-MP1	LEFT LOW	0.011	0.13	HET, MS, VOLC BX, CLASTS APPEAR SQUASHED AND STRETCHED.
5692	CROSS-CUT #17	56.3	60.8	MP0-MP1	LEFT	0.007	0.07	HET, MS, VOLC BX.
5693	CROSS-CUT #17	51.7	56.3	MP0-MP1	LEFT	0.029	0.17	HET, MS, VOLC BX.
5694	CROSS-CUT #17	48.0	51.7	MP0-MP1	LEFT	0.005	0.08	HET, MS, VOLC BX.
5695	CROSS-CUT #17	47.0	48.0	MP0-MP1	LEFT	0.039	0.28	HET, MS, VOLC BX, FRACTURE ZONE W/ VUGS, BARITE, WHITE CLAY, MARC.
5696	CROSS-CUT #17	42.3	47.0	MP0-MP1	LEFT	0.002	0.07	HET, MS, VOLC BX.
5697	CROSS-CUT #17	37.5	42.3	MP0-MP1	LEFT	0.009	0.08	HET, MS, VOLC BX.
5698	CROSS-CUT #17	34.1	37.5	MP0-MP1	LEFT	0.035	0.15	HET, MS, VOLC BX.
5699	CROSS-CUT #17	29.7	34.1	MP0-MP1	LEFT	0.009	0.11	HET, MS, VOLC BX.
5700	CROSS-CUT #17	26.4	29.7	MP0-MP1	LEFT	0.011	0.08	HET, MS, VOLC BX.
5701	CROSS-CUT #17	23.6	26.4	MP0-MP1	LEFT	0.022	0.11	HET, MS, VOLC BX W/ INCREASED WHITE CLAY + MARC FRACTURES.
5702	CROSS-CUT #17	21.8	23.6	MP0-MP1	LEFT	0.013	0.10	FRACTURE ZONE, OPEN SPACE, W/ WHITE CLAY + MARC + BARITE + CAC0-3
5703	CROSS-CUT #17	18.4	21.8	MP0-MP1	LEFT	0.012	0.13	HET, MS, VOLC BX.
5704	CROSS-CUT #17	15.0	18.4	MP0-MP1	LEFT	0.007	0.12	HET, MS, VOLC BX.
5723	DECLINE 17-16	40.2	44.6	MP0-MP9	RIGHT	0.006	0.08	HET, MS, VOLC BX, W/ MOD TO COMMON CACO3 + MARC.
5722	DECLINE 17-16	36.6	40.2	MP0-MP9	RIGHT	0.004	0.06	HET, MS, VOLC BX, W/ MINOR CACO3.
5721	DECLINE 17-16	32.3	36.6	MP0-MP9	RIGHT	0.002	0.05	HET, MS, VOLC BX, W/ MINOR CACO3.
5720	DECLINE 17-16	29.0	32.3	MP0-MP9	RIGHT	0.002	0.04	HET, MS, VOLC BX.
5719	DECLINE 17-16	24.1	29.0	MP0-MP9	RIGHT	0.003	0.05	HET, MS, VOLC BX, W/ MOD TO COMMON CACO3 + MARC.

ALL DECLINE / DRILL STATION FACE & RIB SAMPLES <0.03 AU OPT EXCEPT WHERE NOTED.



0.015 , 0.10 SFPG CROSS CUT SAMPLE VALUES AU,AG
0.009 , 0.14 HECLA CROSS CUT SAMPLE VALUES AU,AG

ROSEBUD PROPERTY

CHANNEL SAMPLE CROSS CUT

BY: MIKE McCULLA	DATE: 02-16-96	PLOT DATE: 02-16-96	
DRAWN BY: C.D.D.	SCALE: 1" = 20'	FILE: RB-ADIT.DWG	

SANTA FE PACIFIC GOLD CORPORATION

IMPORTANT MESSAGE

TO Bob

DATE 8-6 TIME 9 A.M. P.M.

WHILE YOU WERE OUT

M Todd

OF American Assay

Area Code & Exchange 356-0606

TELEPHONED	✓	PLEASE CALL	✓
CAME TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		URGENT	
RETURNED YOUR CALL			

Message what should he do with your sample rejects?

Pitch all.

Operator LaTonna 8/11/97

OFFICE CITY™ 90153

6000 1922 4010

The Rosebud Mining Company LLC
P.O. Box 2610
Winnemucca, NV 89446
Phone (702) 623-6912
Fax (702) 623-6967
Hecla Mining Co. - Manager of Mining

FACSIMILE COVER SHEET

DATE: 10/17/97

TO: Sue King *FROM:* Bob Kastelic

NUMBER OF PAGES INCLUDING COVER: 2

MESSAGE: Here's the list of sample rejects to throw out.

Thanks,

Bob

IF YOU DO NOT RECEIVE LEGIBLE COPIES OF ALL PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.

The Rosebud Mining Company LLC
P.O. Box 2610
Winnemucca, NV 89446
Phone (702) 623-6912
Fax (702) 623-6967
Hecla Mining Co. - Manager of Mining

FACSIMILE COVER SHEET

DATE: July 31, 97

TO: Chris - American Assay ***FROM:*** Bob Kastelic

NUMBER OF PAGES INCLUDING COVER: 2

MESSAGE: Following is a list of rejects to be discarded

IF YOU DO NOT RECEIVE LEGIBLE COPIES OF ALL PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.

Newmont Exploration Limited
Rosebud Project

To: Chris Ionnakis, American Assay

From: Bob Kastelic

Subject: Drill Hole Reject Samples

Date: July 31, 1997

Chris,

To answer the question you had during your visit to Rosebud the other day, we are ready to discard some of the Rosebud drill hole bulk reject samples.

We would, however, like all remaining pulp samples returned to the Rosebud Exploration trailers when it's convenient for the pick-up driver.

The holes destined for reject disposal are as follows:

Hole No.	TD.	No. Samples
97-387	1000	200
97-388	920	184
97-389	1000	200
97-390	1000	200
97-391	1400	280
97-392	1200	240
97-393	1000	200
97-394	1200	240
97-395	1000	200
97-396	1000	200

Total No. Samples: 2,144

We will let you know shortly what we decide on the fate of the remaining reject samples. Please call with any questions.

Cheers,

Bob