60000827

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File - Hole No. D-24-94
AUTHOR	C. Winteer; C. Muerhoff; S. Fairclotb
DATE OF DOC(S)	1994
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Hecla Mining Co.; Rosebud Project South Zone
COMMODITY If not obvious	gold; silver
NOTES	Drill logs; geology; assay; total depth 260'; receipt; handwritten notes 11p.

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: DD 5/1/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

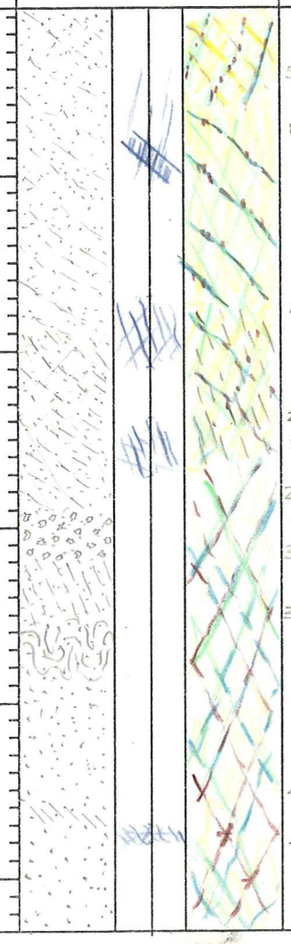
D-24-94

6000 0827
4010

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

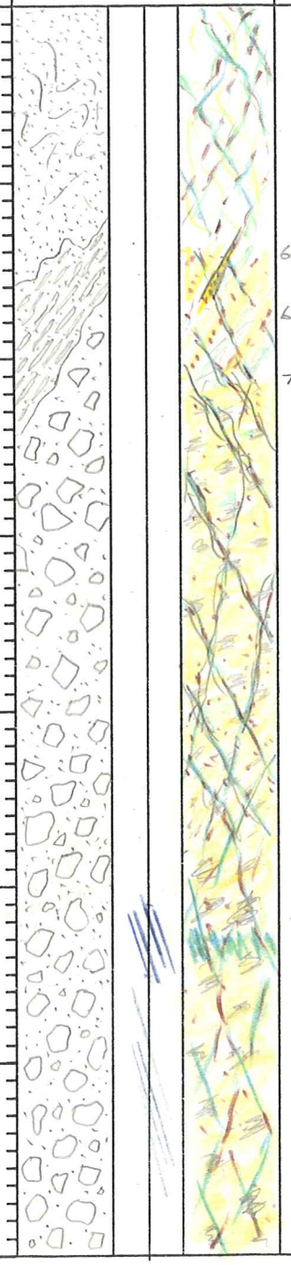
HOLE NUMBER	D-24-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF 4		NORTHING	2203563.7		AS ∡ TO CORE AXIS; CORE PHOTO'D;
DATE	9-9-94	EASTING	481481.4		WHOLE CORE ASSAY SAMPLES; COLLAR
LOGGED BY	CBWINETEER	ELEVATION	4708.7		LOC. DRILL STA. 8 ; SECTION
SCALE	1"=10'	AZIMUTH	125.0°		450N; NDBGM CORE
TOTAL DEPTH	260'	INCLINATION	+17°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-64' Fine-grained, well-sorted, planar-laminated to massive, thin to medium bedded, dense, moderately hard, pale greenish-grey to pale pink waterlain tephra/tuff.	10 20 30 40 50		5-8' Minor slides on 50°; 20' 8.5-9.5 fault bx on 50°; 20' stx's 17-21' crackle breccia w/ pale green clay gouge matrix & rounded to ang. frags on 20-30° stx's, 23.5-27' s.a.a. 19-27' dis-loc. planar-lam. 29-32 speckled, irreg. pale grn ang. clotts in a silic. pink matrix 32-36' planar-lam @ 25° 36-38' contorted lam's. 46-47' planar-lam. @ 45° 47-48' healed crackle bx w/ $CaCO_3$ flooded clay gouge matrix	0-6' mod. silic. w/ x-cutting $CaCO_3$ + f. to c.g. tarnished py w/ chl → arg. clay salvages wk py-17 (in g.m. Tr) chl on frac's & w/ $CaCO_3$ vnlts discont. SiO_2 micro stringers w/ pink salvages 6-17.5' Mod. silic.; wk py-17 (Tr); wk arg.; chl+py on mod density frac's 8-20/ft. minor $CaCO_3$ - py-ill-Q vnlts w/ vert/lat. segregat. 17.5-26 s.a.a. w/ incr. ill+o.s. Q+py discont. 30° stx's 26-64' wk silic; wk arg.; mod to wk chl lined frac's; wk py-17 (Tr-1% loc); frac. filling of $CaCO_3$-ill-sulf. - pale grn clay

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
0	5	5.0'	<0.001	.06		
5	10		.001	.11		
10	15		.001	.07		
15	20		<.001	.02		
20	25		.001	.04		
25	30		.002	.03		
30	35		.012	.08		
35	40		.004	.09		
40	45		.009	.47		
45	50		.068	.32		

HOLE NUMBER D-24-94 PAGE 2 OF

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		64-71' Coarse-grained, poorly-sorted, clast-supported, flow-laminated lithic tuff. Elongated, contorted tephra/tuff fragments in a fine-grained siliceous matrix.; 71-175' Coarse-grained, poorly-sorted, matrix-supported, chaotic bedded, lithic tuff breccia; heterolithic.	60 70 80 90 100 110 120		64' irreg. 40° micro bx on contact. 64-71' flow-lam. clasts@40° 71' $CaCO_3$ vn'd 25° undul. surf. 100-105' post-sulf slides @ 5-25° w/ c. xln $CaCO_3$ vnlts @ 103-104'	64-71' wk to mod. silic & arg. wk to mod. py-17 (1 to banded 4%); wk chl on frac's.; minor hairline $CaCO_3$+py±Tr spl. @ 20° 64.5' 0.75" hydrothermal breccia @ 30° w/ mod. dk grey silic. matrix w/ v.f. 5. py. 71-98' Mod. intense silic. of g.m.; wk to mod. arg. + sulf. of clasts; v. wk chl.; mod. py-17 (loc. 4-5% w/ aver. 2-3%); 1st order RR's pink matrix bx; incr. alt. ↓; frac-fill $CaCO_3$+ill+ open-space f.g. Q ± py + 35° & < 5° py fl more. 98-145' Mod to intense silic. g/m; mod. to intense silic & or arg. alt clasts w/ strong 2nd & 3rd order RR's; no chl.; ill-filled frac's 2-10/ft.; segregated $CaCO_3$-sulf-ill vnlts 4-10/ft.; py-17 mod 2-3% w/ loc. 5-7%: H.G. micro vnlt @ 5° 101-103' w/ segregated $CaCO_3$ vs ill-sulf. w/ ss + Ruby Ag + V.E. ± V.G.

ANALYTICAL DATA

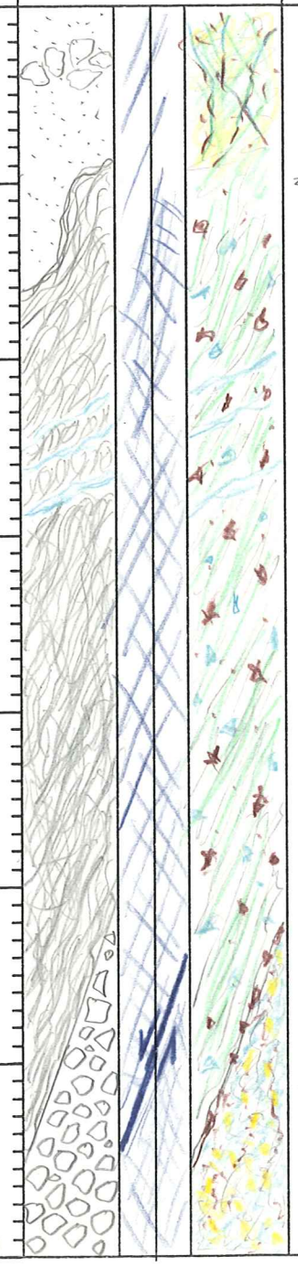
FROM	TO	W	Au	Ag	Au2	Ag2
50	55	5.0'	.040	.21		
55	60		.078	6.35		
60	65		.010	.17		
65	70		<.001	.02		
70	75		.016	.08		
75	80		.044	.15		
80	85	5.0'	.011	.32		
85	90		.007	.14		
90	95		.036	.44		
95	100		.011	.21		
* 100	105		.058	7.35	.057(g)	
105	110		.032	.48	.035	
110	115		.021	.94		
115	120		.003	.11		

HOLE NUMBER D-24-94 PAGE 3 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		145-150' Intense silic. of g/m & clasts, suggary f.g. texture, angular silic. clasts w/ 1ST to 3rd order RR's in silic. tan matrix; clast colors light to dark grey, brown & green. Hetero-lithic-fragments of planar-laminated, & massive f.g. tuff & f.g. spheroidal vitrophric tuff (air-fall). 150-175' Coarse-grained, heterolithic & polylithic, poorly-sorted lithic tuff breccia w/ pinkish brown siliceous tuffaceous matrix & increasing abundance of clay altered spheroidal vitrophere. 175-202' Very fine-grained, well-sorted, massive bedded, chloritized and weakly argillized airfall tephra/tuff w/ a vitroclastic groundmass & spherodal chloritic alt-/oc. homogeneous crackle bx. Close-up photo @ 180-180.5' w/ illitic + open-space Q x-cutting & dilutating earlier py-Carbonate micro vnlts.	130 140 150 160 170 180 190		165-172.5' slicks, micro bx vnlts on 10' stx. 175' apparent contact @ 55'	145-150' intense silic of g/m & clasts, strong 3rd order RR's; wk py-ij. (1-3%), wk chl. of clasts; minor ill-py @ 60-80' x-cutting $CaCO_3$ + marc. & py micro vnlts @65-70' + Acc. spl + Tr celest. 150-164.5' mod. intense silic. of g/m; weak to mod. chl + arg. of abund. clasts + pref. py-ij.; x-cutting $CaCO_3$ + tarnished marc. @ 30° & 45°; minor ill-py @ 30° Min. stx's 3-5/ft. 1ST & 2nd order RR's 164.5-172.5' S.A.A. w/ marked incr. in illite-filled frac. stkwk; decr. RR's/silic. & py-ij. 172.5-180' Wk to mod. silic. of g/m. mod. arg. + chl. + wk py-ij. of clasts; $CaCO_3$ + py micro vnlts & hairline chl + py; 1ST order RR's. 180-202 S.A.A. + 0.05-0.10" ill-0.5, @ 20° Q + bright yellow dimorphic cubic & py-ohedron py + $CaCO_3$ ± spl.

FROM	TO	W	Au	Ag	Au2	Ag2
120	125	5.0'	.025	.19		
125	130		.061	.42	.061	
130	135		.018	.21		
135	140		.015	.15		
140	145		.005	.11		
145	150		.002	.09		
150	155		.001	.04		
155	160		.001	.03		
160	165	5.0'	.002	.03		
165	169	4.0'	.003	.04		
169	172.5	3.5'	.005	.07		
172.5	176.0	3.5'	.002	.04		
176	180	4.0'	.001	.04		
180	185	5.0'	.008	.07	.009	
185	190	5.0'	.013	.03		

HOLE NUMBER D-24-94 PAGE 4 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		202-249' Fault breccia, clast- & matrix-supported w/ angular to rounded fine-grained tuff fragments in a chloritic-illitic clay gouge matrix.	200, 210, 220, 230, 240, 250, 260		201-203' contact @ 10' Fault breccia 202-249' w/ angular frags of f.g. tuff, $CaCO_3$ ± sulf in a chloric green clay gouge matrix. predom. clay minor $CaCO_3$ vns - late stage 214-219' @ 70'	202-249' v. wk silic, mod to intense arg. + mod to intense chl.; wk fragmental $CaCO_3$ & sulf.
		249-260' Fault breccia; clast-supported w/ angular to rounded fragments of siliceous and argillized fine-grained pale pink to cream tuff (DOZER) in a carbonate-flooded pale cream clay gouge matrix.			249' Footwall contact of SR Fault @ 20' w/ grey sulf-rich clay gouge	249-260' Fragmented $CaCO_3$/sulf/arg/silic. w/ $CaCO_3$ flooded matrix.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
190	195	5.0'	.003	.02		
195	200		.001	.02		
200	205		.004	.04		
205	210		.028	.15		
210	215		.012	.11		
215	220		.003	.06		
220	225		.002	.04		
225	230		.012	.26		
230	235		.022	2.00		
235	240		.103	2.02	.100(g)	
240	245		.426	16.98	.447(g)	
245	250		.065	.57	.054(g)	
250	255		.002		.02	
255	260	5.0'	.004		.04	

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-24-94 DATE: 9-9-94 LOGGED BY: RK / CBW PAGE 1 OF 3

DRILL RUN		SOLD CORE	TOTAL CORE	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO	RECOVERY (%)	RECOVERY (%)		DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	9	70	89	.61	1.8'	3000	1.7	40°	R	Chl-Ca-py	1.8'	540.5	220	2.46
9	19	70	83	.48	9.7'	600	2.3	35°	R	Chl-Ca-py-ill	9.7'	426.0	170	2.51
19	29	57	90	.46	27.0'	300	3.6	20°	R	chl-Ca-py-ill	27.0'	493.5	205	2.41
29	36	30	94	.23	34.0'	300	3.2	25°	R	S.A.A.	34.0'	214.0	80	2.67
36	45	50	83	.20	44.8'	300	2.8	30°	R	S.A.A.	44.8'	341.0	135	2.53
45	55	50	90	.63	49.6'	2475	2.2	40°	R	S.A.A.	49.6'	518.5	210	2.47
55	65	55	91	.48	58.4'	375	4.1	30°	S	Chl-Ca-py	58.4'	366.5	140	2.62
65	75	96	96	.78	66.35'	2700	0.8	30°	R	Ca-py	66.35'	316.5	130	2.44
75	85	52	93	.40	78.0'	3525	2.5	35°	R	ill-Ca-py	78.0'	434.5	180	2.41
85	95	70	100	.63			1.9	20°	R	Ca-ill-py	90	299	120	2.49
95	105	52	100	.41			3.4	60°	R	ill-ca-gouge-py	100	392.5	160	2.45

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-2A-94 DATE: 9-10-94 LOGGED BY: CBW PAGE 2 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
105	115	100	100	.81			0.9	20°	R	py-chl	110	456	190	2.40
115	125	95	98	.72			0.6	70°	R	ill-ca	119	340	140	2.43
125	135	78	95	.69			1.4	40°	R	ill-ca	131	397.5	170	2.34
135	145	97	97	.77			0.9	55°	R	ill-ca	141	442.5	185	2.39
145	155	69	93	.66			1.0	60°	R	ca-py	148	418	170	2.46
155	165	95	95	.86			0.4	50°	R	ill	160	315.5	130	2.43
165	175	48	98	.33			2.7	20°	K	chl-ill-py	171	218	90	2.42
175	185	80	98	.68			1.6	70°	S	ill-chl-py	179	276	115	2.40
185	195	59	98	.45			3.2	30°	R	ill	190	381.5	160	2.38
195	205	43	96	.37			3.3	40°	R	ill	200	370.5	150	2.47
205	215	10	90	.05			>>10	ALL	S	clay gouge	207	305.5	140	2.18

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-24-94 DATE: 9-10-94 LOGGED BY: CBW PAGE 3 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
215	225	0 Clay	63	0.0			>10	50°	S	clay	218	255.5	120	2.13
225	235	0 clay	50	0.0			>>10	ALL	S	clay	227	233.5	100	2.33
235	245	0 clay	83	0.0			>>10	ALL	S	clay	239	206	90	2.29
245	255	0 clay	90	0.0			>>10	ALL	S	clay	248.5	257	130	1.98
255	260	50	110	0.32			1.4	60°	R	gouge-bx	258	274.5	140	1.98

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: D-24-94
LABORATORY JOB No. : SP030953
SAMPLE TYPE :

RECEIVED : 20 SEP 1994
REPORTED : 4 OCT 1994
No. SAMPLES : 53

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-24-94
JOB NUMBER : SP030953
REPORTED : 4 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-24-94 000-005	<0.001			0.06
D-24-94 005-010	0.001			0.11
D-24-94 010-015	0.001			0.07
D-24-94 015-020	<0.001			0.02
D-24-94 020-025	0.001			0.04
D-24-94 025-030	0.002			0.03
D-24-94 030-035	0.012			0.08
D-24-94 035-040	0.004			0.09
D-24-94 040-045	0.009			0.47
D-24-94 045-050	0.068			0.32
D-24-94 050-055	0.040			0.21
D-24-94 055-060	0.078			6.35
D-24-94 060-065	0.010			0.17
D-24-94 065-070	<0.001			0.02
D-24-94 070-075	0.016			0.08
D-24-94 075-080	0.044			0.15
D-24-94 080-085	0.011			0.32
D-24-94 085-090	0.007			0.14
D-24-94 090-095	0.036			0.44
D-24-94 095-100	0.011			0.21
D-24-94 100-105	0.058		0.057	7.35
D-24-94 105-110	0.032	0.035		0.48
D-24-94 110-115	0.021			0.94
D-24-94 115-120	0.003			0.11
D-24-94 120-125	0.025			0.19

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-24-94
JOB NUMBER : SP030953
REPORTED : 4 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-24-94 125-130	0.061		0.061	0.42
D-24-94 130-135	0.018			0.21
D-24-94 135-140	0.015			0.15
D-24-94 140-145	0.005			0.11
D-24-94 145-150	0.002			0.09
D-24-94 150-155	0.001			0.04
D-24-94 155-160	0.001			0.03
D-24-94 160-165	0.002			0.03
D-24-94 165-169	0.003			0.04
D-24-94 169-172.5	0.005			0.07
D-24-94 172.5-176	0.002			0.04
D-24-94 176-180	0.001			0.04
D-24-94 180-185	0.008	0.009		0.07
D-24-94 185-190	0.013			0.03
D-24-94 190-195	0.003			0.02
D-24-94 195-200	0.001			0.02
D-24-94 200-205	0.004			0.04
D-24-94 205-210	0.028			0.15
D-24-94 210-215	0.012			0.11
D-24-94 215-220	0.003			0.06
D-24-94 220-225	0.002			0.04
D-24-94 225-230	0.012			0.26
D-24-94 230-235	0.022			2.00
D-24-94 235-240	0.103		0.100	2.02
D-24-94 240-245	0.426		0.447	16.98

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-24-94
JOB NUMBER : SP030953
REPORTED : 4 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-24-94 245-250	0.065		0.054	0.57
D-24-94 250-255	0.002			0.02
D-24-94 255-260	0.004			0.04