6000867

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-64-94
AUTHOR	C. Winchester; C. Muerhoff; S. Fairclotl
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 log; geology; assay; total depth 78'; receipt; handwritten notes 6p

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-64-94

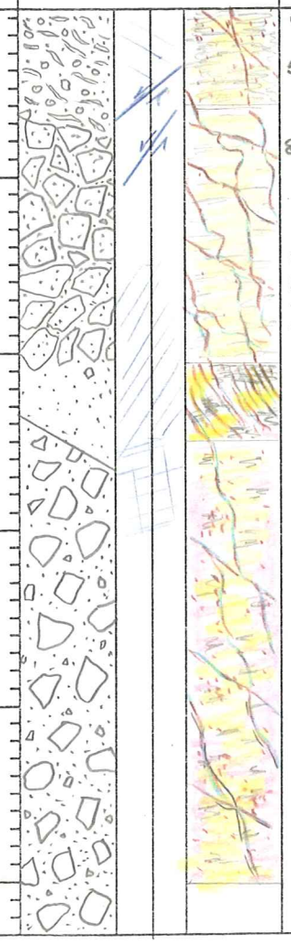
60000867
4010

6000 0867

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

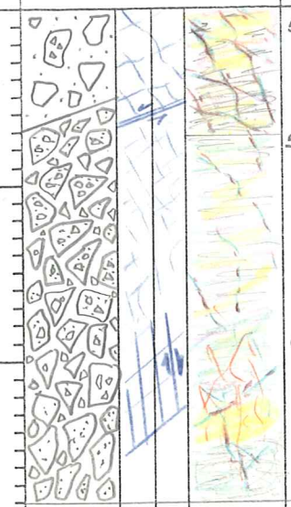
HOLE NUMBER	D-64-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF	2	NORTHING	2203836.4		AS ∡ TO CORE AXIS; CORE PHOTO'D
DATE	9-30-94	EASTING	481706.5		WHOLE CORE ASSAY SAMPLES; COLLAR
LOGGED BY	CB WINETEER	ELEVATION	4664.0		LOCATION DDS #18; SECTION 950N;
SCALE	1"=10'	AZIMUTH	305.5°		NDBGM CORE
TOTAL DEPTH	78'	INCLINATION	+81°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-6' Flow-laminated lithic tuff: roughly equal proportions of elongated flow-aligned & equant rounded white argillized f.g. lithic fragments in a siliceous light grey tuffaceous matrix. Flow-lam. at 70-80° & loc. contorted-flow-shear. 6-20.5' Lithic tuff breccia: clast-supported angular pink and sericitic green v.f.g. tephra fragments in minor pink-grey siliceous f.g. matrix. 20.5-25' Fine-grained tephra: pale green v.f.g. massive to finely planar, wavy and contorted laminated, fractured, argillized, of similar composition as clasts w/in underlying tuff breccia (6-20.5'). 25-56' Lithic tuff breccia: matrix-supported poorly-sorted, hetero lithic & polylithic predominately subangular to subrounded f.g. tephra & locally lithic tuff breccia fragments (argillized &/or silicified) in a f.g. siliceous pink (alunitic) tuffaceous matrix.	10 20 30 40 50		0-5' minor jointing @60° 5' post sulf ser slick@50 8.5' s.a.a. @35° 15-30' partly healed crackle bx w/ 5-10/ft sericitic slicks @ 25-40° & 25 & 5' & 70° & 30°	0-6' mod silic. + mod intense arg-T + 2-3% & decr. py-T + mod. ser-T; min7 frac's 2-4/ft @ 10° & 45° w/ py ± $CaCO_3$ ± ill 0.01-0.05" 6-20.5' mod. silic + wk to mod arg-T + mod ser-T + 1-3% py-T + hairline chl-T + alun-matrix & loc. clasts; 1st order RR's; min7 frac's 8-12/ft @ 10° & 60° w/ $CaCO_3$ + ser + py + marc ± chl. 0.01-0.05" 20.5-25' patchy-blotchy mod. intense silic + mod-int. arg-T + mod ser-T + patchy wk alun + Tr-1% bladed py-T + wk frac chl-T; min7 frac's @ 5-40° w/ $CaCO_3$ ± SiO_2 + py + marc + ser ± chl 0.05-0.15". 10-20/ft 25-50' mod int. silic + wk arg-T + 1-5% loc. py-T + wk to mod. alun + v. wk chl-T on frac's + wk ser-T; strong 2nd order RR's; min7 frac's 3-5/ft. @ 10-30° & syn 50° of .02-.10" $CaCO_3$ + marc + py + Q ± ill ± spl diss. dimorphic & py-ohedrons

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
0	6	6.0'	.032	.15		
6	11	5.0'	.083	.21	.096 (g)	
11	16	5.0'	.018	.09		
16	20.5	4.5'	.024	.06	.022	
20.5	25	4.5'	.089	.39		
25	30	5.0'	.130	.23	.155 (g)	
30	35	5.0'	<.001	<.02		
35	40	5.0'	<.001	<.02		
40	45	5.0'	<.001	.03		
45	50	5.0'	.001	.03		

HOLE NUMBER D-64-94 PAGE 2 OF 2

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		56-72.5' Lithic tuff breccia: clast-supported fault bx Δing + to crackle bx w/in matrix-supported lithic tuff breccia similar to unit below (25-56'), w/ subrounded polylithic fragments in a sericitic-chloritic pyritic-calcareous stockwork matrix. 72.5-78' Lithic tuff breccia: clast-supported crackle bx w/in silicified f.g. tephra + to 75.3' & vitroclastic-chloritized-argillized tephra + to 78' in a f.g. chloritic siliceous-hematitic matrix.	60 70		50-56' sericitic irreg. slicks @ 40', 70' incr. + to 1/2" fault bx @ 70' @ 56' 56-72' ser + chl + py slicks @ 25' & 55' 68-74' ser-chl-$CaCO_3$-py slicks @ 0-10' & 50'	50-57.3' similar to above w/ decr. silic + + incr. + arg-T / ser-T (frac-slicks & clasts) + decr. + py-T; 2nd-3rd order RR's; min7 frac's 3-6/ft. @ 50' & 25' 0.03-0.1" w/ $CaCO_3$ + marc + py ft marc + pyrr ± SiO_2 57.3-78' wk silic + incr. + chl-T + Tr alun + incr. + FeOx stn + Tr-1% py-T + mod int. ser-T decr. + + mod to wk arg-T; min7 frac's discont-irreg 1-2/ft 0.01-0.05" $CaCO_3$ + py; 2nd order RR's @ top decr. +	50 57.3 63 68 73	57.3 63 68 73 78	7.3' 5.7' 5.0' 5.0' 5.0'	.001 <.001 <.001 <.001 .002	.03 <.02 .03 <.02 .49		
		END OF HOLE @ 78'											

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-64-94 DATE: 9-30-94 LOGGED BY: CBW / RK PAGE 1 OF 2

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)
0	3													
3	8	90	100	.70	4	R3	1.0	60°	K	.05" ser-py	4	470.5	185	2.54
8	13													
13	18	95	100	.65	13	R3	0.8	35°/70°	K/R	s.a.q./.01" ca-more	13	386.5	160	2.42
18	23													
23	28	65	95	.19	23	R2	3.7	60°/20°	S	0.05" ser-py	23	318	140	2.27
28	33													
33	38	87	98	.69	33	R3	1.2	70°	R	0.05" ser-py	33	333.5	140	2.38
38	43													
43	48	100	100	.88	43	R3	0.3	60°	R	0.01" marc-$CaCO_3$	43	491.5	200	2.45
48	53													

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-64-94 DATE: 9-30-94 LOGGED BY: CBW/RK PAGE 2 OF 2

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)
53	58	83	95	.69	53	R3	1.3	55°	R	.05" sericitic slick-clay	53	370.5	155	2.39
58	63													
63	68	93	100	.86	63	R2	0.6	65°	R	.01" ser ± py	63	313.5	135	2.32
68	73													
73	78	68	94	.57	73	R2	0.8	65°	K-R	.05" ser+chl+py	73	379	160	2.37

ANALYSIS REPORT

American Assay Laboratories Inc.

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-64-94

LABORATORY JOB No. : SP031228

SAMPLE TYPE :

RECEIVED : 10 OCT 1994

REPORTED : 20 OCT 1994

No. SAMPLES : 15

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 Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-64-94
JOB NUMBER : SP031228
REPORTED : 20 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-64-94 0-6	0.032			0.15
D-64-94 6-11	0.083		0.096	0.21
D-64-94 11-16	0.018			0.09
D-64-94 16-20.5	0.024	0.022		0.06
D-64-94 20.5-25	0.089			0.39
D-64-94 25-30	0.130		0.155	0.23
D-64-94 30-35	<0.001			<0.02
D-64-94 35-40	<0.001			<0.02
D-64-94 40-45	<0.001			0.03
D-64-94 45-50	0.001			0.03
D-64-94 50-57.3	0.001			0.03
D-64-94 57.3-63	<0.001			<0.02
D-64-94 63-68	<0.001			0.03
D-64-94 68-73	<0.001			<0.02
D-64-94 73-78	0.002			0.49