60000837

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-35-94
AUTHOR	C. Winkteer; C. Muerhoff; S. Fairclotth
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 200'; 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-35-94

6060 0837
4010

6000 0837

Hecla MINING COMPANY

ROSEBUD PROJECT DIAMOND DRILL LOG

HOLE NUMBER	D-35-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF 4		NORTHING	2203634.5		AS ∡ TO CORE AXIS; PHOTO'D
DATE	9-29-94	EASTING	481547.0		CORE; WHOLE CORE ASSAY SAMPLES;
LOGGED BY	CB WINETEER	ELEVATION	4700.1		COLLAR LOCATION DRILL STA # 10;
SCALE	1" = 10'	AZIMUTH	131.5°		SECTION 550N; NQ CORE
TOTAL DEPTH	200'	INCLINATION	+40°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	MINZ FRAC /Ft.	ALTERATION AND MINERALIZATION
75	.21	0-28' Waterlain(?) tephra: fine-grained, well-sorted; generally massive bedded w/ local thin intervals of planar-lamination. Siliceous, dense, hard, pale greenish grey.	10		0-13' pale grn post-sulf slicks @ 30' incr. density ↓	6	0-19' dense hard wk silic + wk arg-T; speckled chl-T ND alun; Tr py-T. minz frac's f. to c. g. $CaCO_3$ + minor ill + py pseud omorphs ∡ marc.
88	.23		20		13-14' $CaCO_3$ flooded fault bx w/angular frags in a $CaCO_3$ + ser + chl + py matrix controlling stx's @ 30'. 17-19' $CaCO_3$ flooded fault bx w/ angular frag's in a $CaCO_3$ + ser. matrix; late-stage post sulf slicks w/ R&G stx's @ 30'	4	19-39.5' wk silic + wk arg + Tr-2% py-T + wk chl-T; loc. wk alun; mod. ser.; minz frac's $CaCO_3$ + py ± spl ± cpy (Tr) pseudo's ∡ marc/pyr
96	.48		30		19-39.5' post-sulf seri-slicks & microbx on 15° & 50° stx's 1/ft.		
95	.77	28-48' Waterlain, flow-laminated lithic tuff: w/ interbedded fine-grained planar laminated tephra. Matrix fine-grained siliceous tuffaceous w/ clast-supported angular elongated tephra fragments. Gradational ↓ into lithic tuff breccia. Flow-laminated elongated tephra frags @ 40'	40			2-3	39.5-72' mod. silic + mod. alun. + wk arg-T; matrix & clast ser.; ND chl-T; mod. py-T 2-3%; minz frac's $CaCO_3$ + marc Δ ing ↓ to py ∡ marc ± Tr elect. Δ ing ↓ $CaCO_3$ + py ∡ marc + cpy + sp + Ruby Ag (67-72') 1st order RR's ↓ 67; 2nd & 1st order ↓ 72'
96	.79		50				

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	5	5.0'	<.001	<.02		
5	10	5.0'	<.001	<.02		
10	13	3.0'	.001	<.02		
13	19	6.0'	.001	.02		
19	24	5.0'	.001	.02		
24	28	4.0'	.001	<.02		
28	33	5.0'	.001	<.02		
33	39.5	6.5'	.002	.02		
39.5	44	4.5	.003	.07		
44	49	5.0'	.005	.13	.006	

HOLE NUMBER D-35-94 PAGE 2 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE		ALTERATION AND MINERALIZATION
100	.95	48-88' Lithic tuff breccia: poorly-sorted angular heterolithic f.g. tephra fragments matrix-supported chaotic bedded siliceous tuffaceous matrix.	60			2 / 40'	
100	.91		70				
98	.74	76.9-77' mis-placed belongs @ 79.9-80'	80			7 / 40'	72-77' s.a.a. w/ incr'd arg-T - py-T - alun, 2nd RR min'l frac's $CaCO_3$ + py fr mar + py ± cor ± ss.
98	.58		90			2 / 40' / 10'	77-88' mod. silic + mod alun + mod arg-T + mod py-T 2-4% both cubic & bladed; weak 2nd, 3rd & 4th order RR's (apparent distal spatial relationship); min'l. frac's. 10' - marc - py + Tr ill + Tr Qz 40' - $CaCO_3$ marc + py + cov. ± Tr ss.
100 / ~~83~~ misplaced Stage block	.57	88-93 Healed crackle to fault breccia w/in lithic tuff breccia a.a.: Clast-supported rounded to angular fragments in a $CaCO_3$ + sericite + sulfide matrix. 93-101' Lithic tuff breccia: clast-supported, poorly-sorted, heterolithic, angular tephra fragments in a fine-grained pinkish-green siliceous matrix.	100		88-93' post-sulf. slicks w/ R&G stx's @ 35', 75' $CaCO_3$ flooded crackle to fault bx w/ ser + $CaCO_3$ + py matrix. 93' slicked contact @ 75'	8 / 30' / 5'	88-93' mod silic + mod-wk arg-T + $CaCO_3$ flooded + wk py-T 1-2%; wk alun; min'l. frac's discont. 30's v-cut by irreg s's. w/ $CaCO_3$ + py fr marc + py + spl
100	.74	101-110' Lithic tuff breccia: matrix-supported, poorly-sorted, heterolithic angular tephra fragments dominated by pale green vitroclastic tephra in a medium greenish-brown f.g. tuffaceous matrix. Gradational transition into clast-supported bx below.	110		101' slick-microbx contact @ 65' 101-106' slicks @ 25' 1/ft.	0 / 1 / 25'	93-101' v. wk silic + mod arg-T. + $CaCO_3$ flooded + 1-2% py-T + wk diss chl-T. 2nd order RR's; min'l frac's 1/100" discont. @ 30-60' 101-110' v. wk silic + mod. arg-T + wk chl-T + Tr to loc. spotty 1-2% py-T; ND alun., 2nd order RR's; min'l frac's 1/50" $CaCO_3$ - chl - py
97	.70	110-124.5' Lithic tuff breccia: clast-supported, poorly-sorted, heterolithic angular to subrounded f.g. tephra fragments (dominated by pale green vitroclastic tephra) in an argillized pinkish green clastic matrix.	120		116-124.5 2-3/ft 20-30' slicks		110-124.5' s.a.a. w/ local minor wk silic ± alun.; incr. chl-T & min'l frac's chl + py ± $CaCO_3$

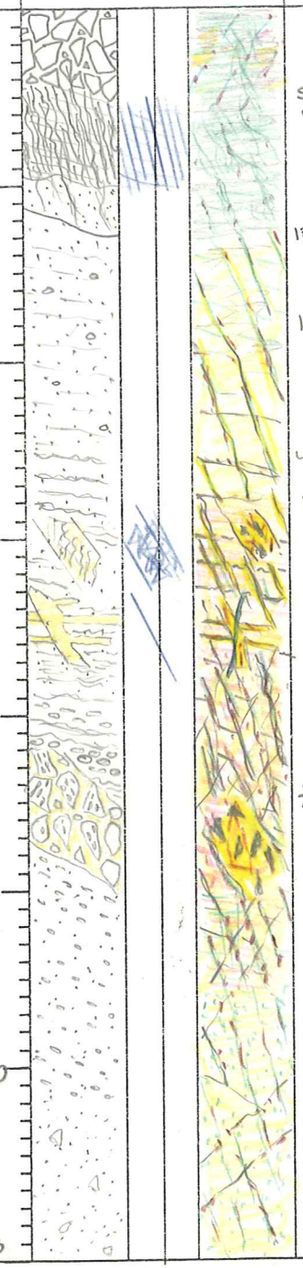
ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
49	54	5.0'	.031	.34		
54	59	5.0'	.092	4.60	.087 (g)	
59	63	4.0'	.012	.25		
63	67	4.0'	.020	.09		
67	72	5.0'	.026	3.18		
72	77	5.0'	.086	2.82	.083 (g)	
77	82	5.0'	.067	1.64	.068 (g)	
82	88	6.0'	.005	.25		
88	93	5.0'	.017	.96		
93	97	4.0'	<.001	.04		
97	101	4.0'	<.001	<.02		
101	105	4.0'	<.001	<.02		
105	110	5.0'	<.001	<.02		
110	115	5.0'	<.001	<.02		
115	120	5.0'	<.001	<.02		

HOLE NUMBER D-35-94 PAGE 3 OF 4

%REC	RQD	LITHOLOGY	FT
90	.42	124.5-131.2' Vitroclastic tuff-fault breccia ↓ 129.5' Clast-supported angular to rounded vitrophyric tephra w/ matrix of green clay gouge	130
94	.29	131.2-159' Fine-grained tephra; moderately well-sorted, siliceous, dense, hard, greenish grey, very finely-laminated (planar, wavy, x-planar), slightly porphyritic, w/ occ. isolated devitrified rounded pumice lapilli.	140
100	.67		150
96	.64	159-163' Interbedded silicified spotted leopard skin texture tuff & wavy-laminated tuff above	160
94	.77	163-168' Silicified crackle & vein breccia w/in siliceous spotted leopard skin texture tuff. 168-200' Fine-grained vesicular-spotted tuff grading downward into more massive pale green vitroclastic tephra w/ diss. chlorite microphenos & occ. rounded pumice "bombs".	170
100	.63		180
98	.59		190

GRAPHIC LOG

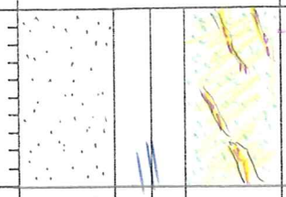


STRUCTURE		ALTERATION AND MINERALIZATION
Sheared fault bx w/ predom. slicks @ 15-20°	0	124.5-131.2' v.wk silic + mod. to wk arg-T + mod chl-T + wk py-T (Tr); ND alun.; min7 frac's chl ± py
131.2' bedded contact @ 70°	15	131.2-139.5' mod. silic + wk arg-T + Tr py-T + ND alun. + strong chl ± ill ± op. sp. Q ± brassy py ft marc. 0.01" stkwk
lam's @ 80-85'	20/80	139.5-148.5' s.a.a. w/ incr. unlt fill 0.05" + ss ± cpy ft marc.
wavy-lam's @ 85'	12 15/80	
148-150.5' silic crackle-vn bx w/ clast-rotation on 30° stx.	+20	148.5-156' mod to intense silic + wk to mod arg-T + banded alun + Tr-1% py-T + chl-T on frac's x-cut by SiO_2 ± alun ± FeOx which is x-cut by $CaCO_3$ + open-sp. Q + marc ± cpy ft marc + ill
153-156' silic to repl. on 30° stx & on bdding.	15	
*CST-19 160-160.5'	+20 15/30/75	156-170' mod. intense silic + Tr-1% py-T; banded vesicular alun.; relic frac controlled chl-T, min7 frac's discont. w/in silic bx w/ Q ± $CaCO_3$ + ill + cpy/py/ss ft marc. + Ruby Ag + ss. 0.1 up to 0.3" unlts
	15 s.a.a.	170-175' similar to above w/ marked decr. in ill-frac fill & incr. in chl-T. min7. frac's Q/chl → ill + py ft marc w/ blk carbon/ss coatings. 0.01 to 0.16" unlts
*CST-20 184.5-185'	5 5/30	175-191' mod silic + mod chl-T spotted & frac-fill; wk Tr py-T, ND alun; frac density & decr. w/ decr. ill, but when present contains Ruby Ag + ss.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
120	125	5.0'	<.001	.02		
125	131.2	6.2'	.001	.03		
131.2	135	3.8'	.003	.03		
135	139.5	4.5'	.005	.11		
* 139.5	143	3.5'	.006	.53		
* 143	145	2.0'	.233	12.30	.221 (g)	
* 145	148.5	3.5'	.011	.64		
* 148.5	150.5	2.0'	.017	.50		
* 150.5	156	5.5'	.124	4.52	.128 (g)	
* 156	160	4.0'	.356	3.14	.371 (g)	
* 160	165	5.0'	.150	2.14	.154 (g)	
** ill-ss 165	170	5.0'	.408	4.08	.406 (g)	
* 170	175	5.0'	.016	.30		
* 175	180	5.0'	.057	.34	.060 (g)	
180	185	5.0'	.033	.43		
185	191	6.0'	.025	.17		

HOLE NUMBER D-35-94 PAGE 4 OF 4

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
91	.61 200		200		Ba 7 silrc vn bx on 30°/10° sty 199-200'	191-200' wk silrc w/ lac silrc vuggy vnlts & vn bx's; wk arg-T, mod. chl-T spotted, blochty & frac's; wo alun., wk Tr py-T; minr frac's, 5' & 30' w/ 30's x-cut 5's; of massive py or opensp. @ tmanc till + bar.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
191	196	5.0'	.003	.07		
196	200	4.0'	.005	.08		

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-35-94 DATE: 9-29-94 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	10	41	See geo log		5	R3	4.5	55°	S	minor marc-ill	5	336.5	137	2.46
10	20	59			15	R1	2.8	50°	S	chl-$CaCO_3$-py	15	392	155	2.53
20	30	69			25	R1	1.6	15°	K-R	chl-ser-py	25	275	118	2.33
30	40	82			35	R3	1.1	50°	S	$CaCO_3$-py	35	372.5	160	2.33
40	50	89			45	R3	0.9	45°	R	py ± $CaCO_3$	45	292.5	125	2.34
50	60	94			55	R3	0.5	85°	R	py ± $CaCO_3$	55	421.5	170	2.48
60	70	94			65	R3	0.7	30°	S	py	65	361	155	2.33
70	80	91			75	R3	0.7	40°	arcuate S	py-$CaCO_3$	75	303.5	127	2.39
80	90	83			85	R3	0.9	30°	R	microbx	85	307.5	130	2.37
90	100	88			95	R3	0.9	25°	R-K	chl-ser-marc	95	282	120	2.35
100	110	93			105	R2	0.8	30°/s	K	s.a.a.	105	302	130	2.32

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-35-94 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)
110	120	75			115	R2	2.0	55°	K	ser-chl-py	115	287.5	125	2.3
120	130	44			125	R3	3.4	5°/20°	K	ser-chl slicks	125	311	130	2.39
130	140	42			135	R1	5.9	70°	S	chl-py	135	300	120	2.5
140	150	82			145	R3	2.7	80°	S	chl-py	145	316.5	135	2.34
150	160	70			155	R3	1.6	75°	R	ill-marc	155	366.5	150	2.44
160	170	65			165	R2	1.7	40°	R	ill-marc	165	309.5	135	2.30
170	180	65			175	R3	2.8	75°/25°	S/R	chl-ill-py	175	370	160	2.31
180	190	58			185	R3	1.0	0°	R	marc-ill-Q	185	408	175	2.33
190	200	70			195	R3	0.9	12°	R	chl-py-Q	195	460	200	2.30

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-35-94
LABORATORY JOB No. : SP031146
SAMPLE TYPE :

RECEIVED : 4 OCT 1994
REPORTED : 13 OCT 1994
No. SAMPLES : 19

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-35-94
JOB NUMBER : SP031146
REPORTED : 13 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-35-94 00-05	<0.001			<0.02
D-35-94 05-10	<0.001			<0.02
D-35-94 10-13	0.001			<0.02
D-35-94 13-19	0.001			0.02
D-35-94 19-24	0.001			0.02
D-35-94 24-28	0.001			<0.02
D-35-94 28-33	0.001			<0.02
D-35-94 33-39.5	0.002			0.02
D-35-94 39.5-44	0.003			0.07
D-35-94 44-49	0.005	0.006		0.13
D-35-94 49-54	0.031			0.34
D-35-94 54-59	0.092		0.087	4.60
D-35-94 59-63	0.012			0.25
D-35-94 63-67	0.020			0.09
D-35-94 67-72	0.026			3.18
D-35-94 72-77	0.086		0.083	2.82
D-35-94 77-82	0.067		0.068	1.64
D-35-94 82-88	0.005			0.25
D-35-94 88-93	0.017			0.96

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-35-94

LABORATORY JOB No. : SP031227

SAMPLE TYPE :

RECEIVED : 10 OCT 1994

REPORTED : 25 OCT 1994

No. SAMPLES : 24

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-35-94
JOB NUMBER : SP031227
REPORTED : 25 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-35-94 93-97	<0.001			0.04
D-35-94 97-101	<0.001			<0.02
D-35-94 101-105	<0.001			<0.02
D-35-94 105-110	<0.001			<0.02
D-35-94 110-115	<0.001			<0.02
D-35-94 115-120	<0.001			<0.02
D-35-94 120-125	<0.001			0.02
D-35-94 125-131.2	0.001			0.03
D-35-94 131.2-135	0.003			0.03
D-35-94 135-139.5	0.005			0.11
D-35-94 139.5-143	0.006			0.53
D-35-94 143-145	0.233		0.221	12.30
D-35-94 145-148.5	0.011			0.64
D-35-94 148.5-150.5	0.017			0.50
D-35-94 150.5-156	0.124		0.128	4.52
D-35-94 156-160	0.356		0.371	3.14
D-35-94 160-165	0.150		0.154	2.14
D-35-94 165-170	0.408		0.406	4.08
D-35-94 170-175	0.016			0.30
D-35-94 175-180	0.057		0.060	0.34
D-35-94 180-185	0.033			0.43
D-35-94 185-191	0.025			0.17
D-35-94 191-196	0.003			0.07
D-35-94 196-200	0.005			0.08