60000815

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-12-94
AUTHOR	C. Winchester; C. Murchott; 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 End: Station No. 5
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; total depth 150'; receipt; handwritten notes; underground drilling 8p.

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

UNDERGROUND DRILLING D-12-94 STA. NO. 5; SEC 300N

6000 0815
4010

60006815

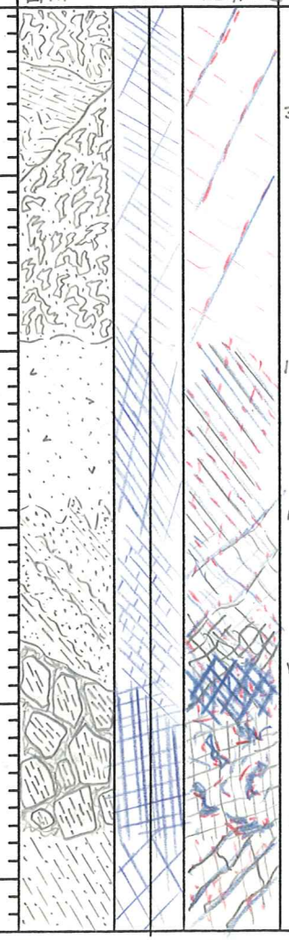
Hecla MINING COMPANY

ROSEBUD PROJECT DIAMOND DRILL LOG

HOLE NUMBER	D-12-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF	5	NORTHING	2,203,453.0		AS ∡ TO CORE AXIS; WHOLE CORE
DATE	7-6-94	EASTING	481,377.4		SAMPLES COLLECTED; CORE PHOTOGRAPHED.
LOGGED BY	CB WINETEER	ELEVATION	4731.5		COLLARED IN DRILL STA. NO 5; SECTION
SCALE	1" = 5'	AZIMUTH	130.5°		300N;
TOTAL DEPTH	150'	INCLINATION	+04°		

%REC	RQD	HARDNESS	COLOR	LITHOLOGY	FT	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
73%	.40 4 >4" 5	MOD HD – HD	MOTTLED Pale to Med grn w/pinkish grey	0 – 10.2' Fine-grained, laminated and soft-sediment contorted poorly-sorted (frags) dense green and grey matrix-supported water lain tephra breccia, w/ highly angular and irregular shaped fragments of pale green fine-grained well-sorted tephra in a fine-grained well-sorted pinkish grey tephra matrix; includes > core diameter block 2.7-3.3' w/ planar and wavy laminations – partly contorted	5	0-10.2 slicked pale grn clay-surf's @ 50-70° ± $CaCO_3$ ± hexagonal marc. 4-10/ft. $CaCO_3$ @ 30° occ. 3' Wavy & contorted lam's @ 70° X-cut by 40° soft-sed. bdd.	0-10.2 prop. alt. w/ $CaCO_3$ vnlts & micro vnlts @ 20-30° w/ v. f.g. py ± hexagonal c. xln marc. ± py coatings	0	5	5.0'	<0.001	<0.02		
82%	.55 6 >4" 10							5	10	5.0'	<0.001	0.02		
80%	.29 3 >4" 14.5		10.2 Flat Med GRN 14.5	10.2 – 14.5' Very-fine-grained, moderately well-sorted, dense green, massive bdd, aphanitic, water lain tephra w/ occ. isolated pumice lapilli w/ low (1:1 – 2:1) flattening ratio's.	10	10.2' Contact ∡ unknown rnd Redrill. 10.2-14.5' frac's @ 30-35, occ. 40' pred. & < @ 5-15' 8-12/ft. w/ $CaCO_3$ + smec/ill + hex. marc. + py ± Tr ga → ± pale grn to med grn slicked chl. clay. 14.5' Contact ∡ unkn.	10.2-14.5' clay altered (prop) assemblage @13' on 45° $CaCO_3$ + hexagonal marc. pseudomorphs composed of py ± cpy ± ga or sulfosalts	10	15	5.0'	0.003	0.07		
87%	.44 6 >4" 20	MOD HD 19.7	15.5 BANDED CREAM to PALE GRN & PINKISH GRY 19	14.5 – 19' Fine to medium-grained moderate to well-sorted, thin to medium-bedded, sandy textured (water lain) tephra; planar and wavy-laminated @ 40°	15	14.5-19' slicks @ 40-50° w/ pale to dk grn chl. clay ± sulf + $CaCO_3$; $CaCO_3$ + smec/ill + py ± marc. hex. pseudo's @ 30'-40' 10-20/ft. X-cutting $CaCO_3$-smec/ill @ 23' 18-19' smec/ill + py + $CaCO_3$ stkwk 19' wavy contact @ 60'	@15' on 40° $CaCO_3$ + phramboidal py ± minor spl. on 30° $CaCO_3$ + pale yellow-grn clay + yellow py after marc. + Tr spl. also @40' 0.15-0.20" $CaCO_3$ w/ thin hexagonal marc → repl. by aurian py & chalcopy colored sulfides (sulfosalts?)	15	20	5.0'	0.004	0.02		
89%	.33 4 >4" 25.5	SOFT-MOD SOFT 23.3 MOD HD	V. PALE GRN-GRY 24.5 BANDED CREAM-GRY & PINK-GRY	19 – 23.3' Very-fine grained-clayey thinnly bedded to laminated well-sorted, soft pale green water lain tephra, fractured to brecciated w/ a $CaCO_3$ + smec/ill + py ± spl ± dark grass grn chl. clay matrix – matrix-supported	20	20-23.3' fault clay gouge ± smec/ill ± carb. (frags) laminations – bdd @ 25'-40' w/ prin. frac's @ 5' & 70' + partings parallel to bdd @ 25-40' 23.3-27+ frac's parallel to bdd & @ 40° opposed to bdd. w/ smec/ill + py	@15.5'-16.5' diss. spl. on frac's & bdd planes ± Tr Ga or S.S. 19-20.3' $CaCO_3$ stkwk flooded tectonic cracks by $CaCO_3$ vnlts @ 40, 0, 20' prop. alt. assemblage $CaCO_3$ ± chloritic clay ± py/marc.	20	25	5.0'	0.003	0.03		

GRAPHIC LOG (LITH / STX / ALT/MINZ)



HOLE NUMBER D-12-94 PAGE 2 OF 5

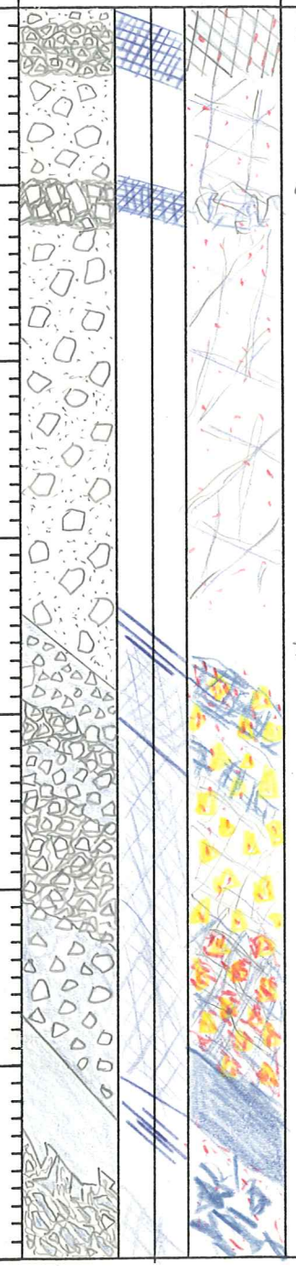
%REC	RQD	LITHOLOGY			FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
92%	.52 11>4"	MOD HD MOD MOD SOFT MOD HD	S.A.A. Pale grn w/ thin, dk grn & pink bands	23.3-41 Fine to medium grained planar laminated to thinly-bedded well-sorted, fractured waterlain tephra, graded bedding, inter-laminated cream & pink colored tephra, laminations at 30-40'	30 35		FRACTURING COINCIDENT W/ MINERALIZATION DISCUSSED AT RIGHT EXCEPT AS NOTED BELOW 28-34' Contorted, folded & brecciated laminations	23.3-41' parallel to & w/in laminations pale to med dk grass green chl. clay + < wht smec/ill + > $CaCO_3$ + f. to med. grd, cubic py + Tr to access. spl + v. v. f. grey gou? at 6-12/ft. @ 65-70' c. xln $CaCO_3$ + minor smec/ill & chl. clay + py ± minor marc. < 0.4/ft. @ 20-40' discont. $CaCO_3$ + Smec/ill + minor py .005-0.01'
71%	.07 1>4"	MOD SOFT - MOD			40		38.5'-41' Poor recovery w/in frac'd clay alt. $CaCO_3$ vnd s.a.a. lith. frac's + clay par. ollel to lam's @ 55' + post-conjugate set @ 35' & 20'	
96%	.735 12>4"	MOD HD SOFT-MOD MOD MOD HD	grnish gry matrix w/ cream to pink clasts pinkish gry matrix w/ wht, pink, gry clasts	41-78' Coarse grained (ash to 5.0 cm diam.), poorly-sorted, flow-laminated, matrix-support tuff breccia, w/ angular, elongated-stretched clasts composed largely of lam-inated fine-grained tephra w/ thin siliceous reaction rims, groundmass very fine-grained clayey-to siliceous.	45 50		41-46' elongated & imbri cated clasts define flow-fabric @ 75' 46-48' Frac'd rubble zone w/ principal frac's @ 35' & 20' grey slicks - minor f0-5' 48-53' 0.05-0.4" smec/ill + $CaCO_3$ + minor f.g. py @ 70' & 20' stkwk 5-10/ft.	41-48' Minor smec/ill + $CaCO_3$ ± v. f. g. py @ 70' & 20' 70's par. w/ flow-lam.
86%	.62 10>4"	MOD HD MOD MOD-MOD HD			55 60		convoluted laminations w/in clasts 59-59.8' FRAC'd rubble zone w/ clay gouge principal frac's @ 70' & 30'	53-59' V. minor, py + carb + smec/ill @ 50' & 5' ± py + $CaCO_3$ vnlt frags 59-62' smec/ill + $CaCO_3$ + py after marc. 0.05-0.15" Stkwk @ 50' & 10'

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
25	30	5.0'	0.012	0.08	0.012	
30	35	5.0'	0.007	0.05		
35	41	6.0'	0.044	0.09		
41	46	5.0'	0.005	0.06		
46	50	4.0'	0.011	0.26		
50	55	5.0'	0.027	0.32		
55	60	5.0'	0.016	0.35		

HOLE NUMBER D-12-94 PAGE 3 OF 5

%REC	RQD	LITHOLOGY	FT	STRUCTURE	ALTERATION AND MINERALIZATION
85%	.525 10 > 4"	S.A.A. SOFT-MOD; MOD HD w/ MOD CLASTS; S.A.A.; pale grn-gry matrix w/ gry pink? cream clasts; 41-78.3 Continued	65 70	60.5-62' frac'd rubble w/ clay gouge principal frac's @ 70°, 20° 65-66' Disaggregated frac'd rubble w/ frac's @ 45°, 75°, 0°	62-78' $CaCO_3$ + py ± marc. ± smec/ill at 70, 10, 40° wk, stkwk. w/ 1-2% diss cubic f.g. py.
92%	.825 13 > 4"	pinkish gry matrix w/ pale grn, gry, pink clasts; 78.3'-99' Fault breccia w/ local intervals of carbonate flooding as discussed at right. * South Ridge Fault	75 80	78.3' @ 50° fault contact silicified clast-supported fault bx + silic.-$CaCO_3$ flooded (healed fault bx (on 30°) in intervals: 78.3-80'; pale grn, gry, cream clay gouge w/ subang to rounded small silic. frags 81-82.5', 86-92.5'; 80-81, 82.5-86, 92.5-96'	78.3-80' $CaCO_3$ ± py flooded bx w/ angular frags of silic.-sulf-rich (marc + py) tuff bx. 81-82.5 $CaCO_3$ flooded silic. tuff bx - bx a.a.
77%	.21 5 > 4"	SOFT; MOD HD; MOD; SOFT-MOD - MOD HD Mix; MOD HD; pink, rd-brn & blu-gry	85 90		86-90' $CaCO_3$ flooded? partial open-space fault bx w/in intensely silic.-sulf-rich tuff bx; py + py-chalcop up to 25% sulf.
75%	.39 7 > 4"	White? bluish-gry; MOD HD & MOD MIXED	95		90-93.5' Coarse crystalline white Calcite vns at 40° top; bx'iated @ base



ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
60	65	5.0'	0.028	0.37		
65	70	5.0'	0.039	0.66	0.037	
70	75	5.0'	0.006	0.35		
75	78.3	3.3'	0.015	0.32		
78.3	82.5	4.2'	0.018	0.08		
82.5	86	3.5'	0.008	0.06		
86	90	4.0'	0.006	0.16		
90	93.5	3.5	0.011	0.05		
93.5	96	2.5'	0.039	0.09		

HOLE NUMBER D-12-94 PAGE 4 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		S.A.P. M. SOFT; pale grn-gry; M 99			96-99' angular frag's of pale grn gry f.g. tuff as below clast-supported w/strong frac + smec/ill clay on 33-50°	97-96' birefringing & kinked blue-gry $CaCO_3$ vnlts
	100		100		99' sharp planar fault contact @ 37° high-density fracturing @ 30-40° w/ decr. intensity ↓	97.5' 2.5" subrnd frag. composed of 80% high Z slightly yellow py-shedrons ± smec/ill + < $CaCO_3$
90%	.64 14>4"	MOD HD TO HD; 99-150' Pale greenish grey, dense siliceous fine to medium-grained, well-sorted, slightly porphyritic, massive bedded tuff; w/ minor $CaCO_3$ ± sulfide + smec/ill ± chloritic clay microvnlts; tabular green chloritized ferromag micropheno's & seritized grey feldspar micropheno's, local crackle breccia → to clast-supported breccia w/ increased $CaCO_3$ vnlts & flooding. Minor clay alt. f.g. lapilli.	105			
	110	* Dozer Fm.	110			
95%	.90 12>4"		115		decreasing frac. density from 5-10/ft. above to 1-3/ft. ↓ w/ decr. smec/ill & Δ to 45-50°	
	120		120		118-121.5' $CaCO_3$ filled crackle-bx	
93%	.865 16>4"		125		121.5-127' minor chl + $CaCO_3$ + py/mac @ 20°	
	130		130			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
96	99	3.0'	<0.001	0.07		
99	105	6.0'	<0.001	<0.02		
105	110	5.0'				
110	115	5.0'				
115	120	5.0'				
120	125	5.0'				
125	130	5.0'				

HOLE NUMBER D-12-94 PAGE 5 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
95%	.86 11>4" 140	S.A.A. S.A.A.	135 140			
77%	.34 8>4" 150	M.-M. HO	145 150			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
130	135	5.0'	<0.001	<0.02		
135	140	5.0'				
140	145	5.0'				
145	150	5.0'				

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:

posted

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: D-12-94
LABORATORY JOB No. : SP030015
SAMPLE TYPE :

RECEIVED : 20/07/94
REPORTED : 27/07/94
No. SAMPLES : 32

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-12-94
JOB NUMBER : SP030015
REPORTED : 27/07/94

posted

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-12-94 00-05	<0.001			<0.02
D-12-94 05-10	<0.001			0.02
D-12-94 10-15	0.003			0.07
D-12-94 15-20	0.004			0.02
D-12-94 20-25	0.003			0.03
D-12-94 25-30	0.012	0.012		0.08
D-12-94 30-35	0.007			0.05
D-12-94 35-41	0.044			0.09
D-12-94 41-46	0.005			0.06
D-12-94 46-50	0.011			0.26
D-12-94 50-55	0.027			0.32
D-12-94 55-60	0.016			0.35
D-12-94 60-65	0.028			0.37
D-12-94 65-70	0.039	0.037		0.66
D-12-94 70-75	0.006			0.35
D-12-94 75-78.3	0.015			0.32
D-12-94 78.3-82.5	0.018			0.08
D-12-94 82.5-86	0.008			0.06
D-12-94 86-90	0.006			0.16
D-12-94 90-93.5	0.011			0.05
D-12-94 93.5-96	0.039			0.09
D-12-94 96-99	<0.001			0.07
D-12-94 99-105	<0.001			<0.02
D-12-94 105-110	<0.001			<0.02
D-12-94 110-115	<0.001			<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-12-94
JOB NUMBER : SP030015
REPORTED : 27/07/94

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-12-94 115-120	<0.001			<0.02
D-12-94 120-125	<0.001			<0.02
D-12-94 125-130	<0.001			<0.02
D-12-94 130-135	<0.001			<0.02
D-12-94 135-140	<0.001			<0.02
D-12-94 140-145	<0.001			<0.02
D-12-94 145-150	<0.001			<0.02

American Assay Laboratories

INVOICE

Remit To: P.O. Box 71060
Reno, NV 89570
Phone No.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0030015-CM
INVOICE DATE: 08/03/94

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
	ROSEBUD	NET 30

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	CREDIT MEMO FOR PREP CHARGES PER TODD PROCESS		
32-	JAW CRUSHING CHARGE	1.20	38.40-
32-	COARSE MILLING CHARGE	4.00	128.00-
32-	SPLITTING CHARGE	.50	16.00-

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P.O. # 400004; line 4
Charles V. Muerhoff

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FREIGHT:	.00
INVOICE TOTAL:	127.68-