60001541

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-93-94
AUTHOR	C. Wheeler; C. Muerhoff; S. Fairclothe
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; Rosebud Project; Hecla Mining Co.; South Zone
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 246' handwritten notes 9p

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 5/29/08
Initials Date
DB: mah
Initials Date
SCANNED: NV Blue
Initials Date

Revised: 1/22/08

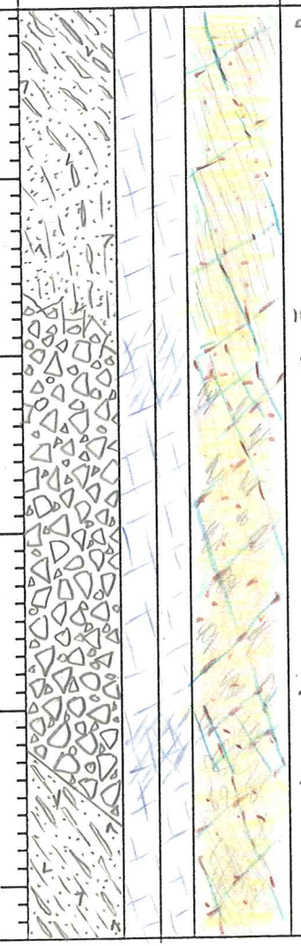
D-93-94

60001541 4010

Hecla
MINING COMPANY

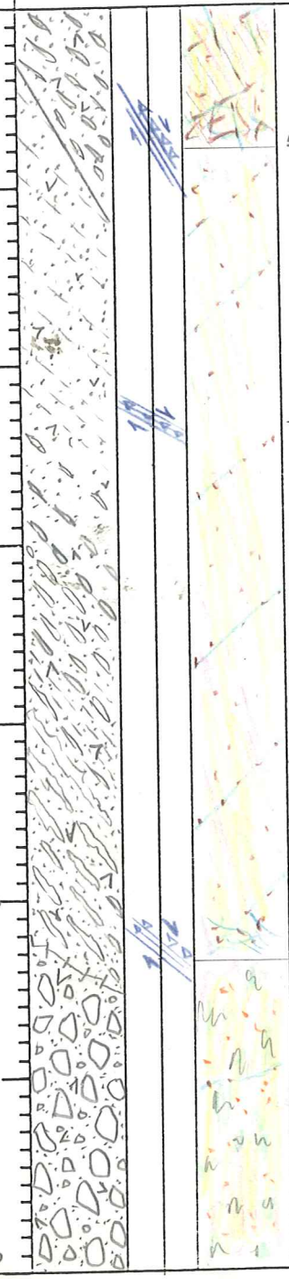
ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-93-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF	4	NORTHING	2203539.5		AS ∡ TO CORE AXIS; CORE
DATE	10-24-94	EASTING	481441.1		PHOTO'D; WHOLE CORE ASSAY
LOGGED BY	CB WINETEER	ELEVATION	4726.3		SAMPLES; DDS # 7; SECTION
SCALE	1"=10'	AZIMUTH	305.0°		400N; NDBGM CORE
TOTAL DEPTH	246'	INCLINATION	+76°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0–18' Flow-laminated, fine-grained waterlain tephra/tuff and lithic tuff. Laminations at 40° to 0°, locally contorted. Pale green cream, dense moderately hard.	10		0–58' frac'd 4-10/ft sericitic @ 0-10° & 70-80° discont. -as stk/wk	0–58' mod. silic + wk to wk-mod alun + 1-3% cubic py-T + wk ser-T + wk arg-T; wk 1ST order SiO_2-k RR's; min stx's 5/ft 0.005–0.3" w/ $CaCO_3$ + py ft marc + marc + tr spl. below 40' ± f.g. xln Q ± ill @ 20'-55'
		18–44.5' Clast-supported lithic tuff breccia: poorly-sorted, angular fine-grained tephra/tuff fragments in a fine-grained siliceous-alunitic-pyritic matrix. Pale pink, grey and green, moderately hard to hard. Moderate-sorted large clasts, generally < 2.0 cm	20		18' frac'd - faulted. contact @ unkn ∡ 18-23' Rubbly frac's crackle bx	
			30			
			40		40-45' rubbly frac'd crackle bx	
		44.5–103.5' Flow-laminated, fine-grained waterlain tephra/tuff interbedded w/ flow-laminated and flow-sheared lithic tuff: grey, green, pinkish tan. Mod-hard, fractured. Laminations generally @ 40°	50		44.5 $CaCO_3$ c.g. xln fld bx contact @ 50'	

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	5	5.0	<.001	.07		
5	10	5.0'	<.001	.02		
10	14	4.0'	<.001	<.02		
14	18	4.0'	<.001	<.02		
18	23	5.0'	<.001	.04		
23	28	5.0'	.003	.07		
28	33	5.0'	.003	.04		
33	38	5.0'	.010	.26	.009	
38	40	2.0'	.003	.49		
40	45	5.0'	.004	.07		
45	50	5.0'	<.001	.02		

HOLE NUMBER D-93-94 PAGE 2 OF 4

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		103.5–138.5' Lithic tuff breccia: matrix-supported (borders - clast-supported below 119'), poorly-sorted, heterolithic, upward coarsening, w/ angular fine-grained tephra/tuff fragments w/ strong 1st order reaction-rims. Moderately hard, green-grey, + to pink matrix w/ pale green clasts	60 70 80 90 100 110 120		57-58' fault bx w/grey slicks @ 80° 73-73.5' fault bx on 60° stx's 103.5' Rubbly fault bx contact @ 50°	58–103.5' wk silic/arg-T/alun/py-T/ser-T incr. ↓ to mod. : min stx's 1-4/ft @ 40° 0.001-0.05" w/ chl ± ferruginous $CaCO_3$ ± marc. ± ill (99.5–103.5) 103.5–144' wkly mod. silic + wk alun + tr FeOx + (mod ser-T + wk-mod arg-T of clasts) + tr-1% py-T; 1st order RR's; min stx's < 1/ft @ 80° 0.05-p.10" $CaCO_3$ + f.g. cubic & elongate tabular py.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
50	54	4.0'	<.001	.03		
54	58	4.0'	<.001	.02		
58	63	5.0'	<.001	<.02		
63	68	5.0'	<.001	<.02		
68	73	5.0'	<.001	<.02		
73	78	5.0'	<.001	<.02		
78	83	5.0'	<.001	<.02		
83	88	5.0'	<.001	<.02		
88	93	5.0'	<.001	<.02		
93	98	5.0'	<.001	<.02		
98	103.5	5.5'	.009	.03		
103.5	109	5.5'	<.001	<.02		
109	114	5.0'	<.001	<.02		
114	119	5.0'	<.001	<.02		

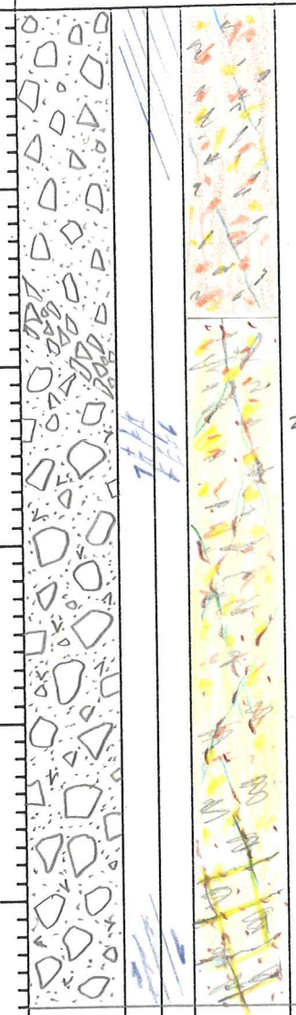
HOLE NUMBER D-93-94 PAGE 3 OF 4

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		138.5 – 144' Fine-grained, flow-laminated and flow-sheared waterlain tephral tuff & subequal lithic tuff interbedded. Laminations at 20-30' 144-246' Lithic tuff breccia: matrix-supported, poorly-sorted, homolithic ↓ 208.8' and heterolithic below 208.8'. Angular fine-grained massive & finely-laminated tephral tuff fragments - argillized & weakly to moderately hematite stained ↓ 208.8'. & angular to subrounded tephra/tuff fragments (massive & laminated & vitroclastic) w/ silicification &/or argillization sericitization below 208.8'. Medium to dark grey w/ red tint fine-grained matrix ↓ 208' w/ strong hematite stain. Matrix below 208' is siliceous, fine-grained & pinkish tan. Moderately hard, high RQD.	130 140 150 160 170 180 190		138-140' slicks @ 30' & ⊥ 30' minor offset of bkm's 138.5' bedded cont. contact @ 55' 144' gradational bedded contact @ 45-50' 188-198' rubbly slicks @ 20' 2-3/ft & ∠ pale cream clay slicks	144-207.5' wk silic + micro stkwk $CaCO_3$ + FeOx – clasts are wk to mod. argillized + patchy brown FeOx stain. Min stk rare 15-20' slicked $CaCO_3$

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
119	124	5.0'	<.001	<.02		
124	129	5.0'	<.001	<.02		
129	134	5.0'	<.001	<.02		
134	139	5.0'	<.001	<.02		
139	144	5.0'	<.001	<.02		
144	149	5.0'	<.001	<.02		
149	154	5.0'	<.001	<.02		
154	159	5.0'	<.001	<.02		
159	164	5.0'	<.001	<.02		
164	169	5.0'	<.001	<.02		
169	174	5.0'	<.001	<.02		
174	179	5.0'	<.001	<.02		
179	184	5.0'	<.001	<.02		
184	189	5.0'	<.001	<.02		

HOLE NUMBER D-93-94 PAGE 4 OF 4

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
			200, 210, 220, 230, 240, 250		214-216' $CaCO_3$ vn'd slicks & microbx @ 55-60° 239-246' frac'd rubbly on 20° $CaCO_3$ fldd slicks	207.5 – 246' wk to mod. silic (+ 235') + g/m wk alun (w/ relic clotts - specks of FeOx stain clasts are silic/ser/FeOx stained; tr-1% cubic py-T: 1st order RR's: min stx's discont @ 5° & 30° 0.005-0.05" 1-2/ft w/ chl-$CaCO_3$+ marc ±ill (237' +) ± f.g. xln Q (237' +)
		END OF HOLE @ 246'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
189	194	5.0'	<.001	<.02		
194	199	5.0'	<.001	<.02		
199	204	5.0'	<.001	<.02		
204	209	5.0'	<.001	<.02		
209	214	5.0'	<.001	<.02		
214	219	5.0'	<.001	.05	<.001	
219	224	5.0'	<.001	<.02		
224	229	5.0'	<.001	<.02		
229	234	5.0'	<.001	<.02		
234	239	5.0'	<.001	<.02		
239	242	3.0'	<.001	<.02		
242	246	4.0'	.007	.07	.010	

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-93-94

LABORATORY JOB No. : SP031477

SAMPLE TYPE :

RECEIVED : 29 OCT 1994

REPORTED : 3 NOV 1994

No. SAMPLES : 51

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	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-93-94
JOB NUMBER : SP031477
REPORTED : 3 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
D-93-94 00-05	<0.001		0.07
D-93-94 05-10	<0.001		0.02
D-93-94 10-14	<0.001		<0.02
D-93-94 14-18	<0.001		<0.02
D-93-94 18-23	<0.001		0.04
D-93-94 23-28	0.003		0.07
D-93-94 28-33	0.003		0.04
D-93-94 33-38	0.010	0.009	0.26
D-93-94 38-40	0.003		0.49
D-93-94 40-45	0.004		0.07
D-93-94 45-50	<0.001		0.02
D-93-94 50-54	<0.001		0.03
D-93-94 54-58	<0.001		0.02
D-93-94 58-63	<0.001		<0.02
D-93-94 63-68	<0.001		<0.02
D-93-94 68-73	<0.001		<0.02
D-93-94 73-78	<0.001		<0.02
D-93-94 78-83	<0.001		<0.02
D-93-94 83-88	<0.001		<0.02
D-93-94 88-93	<0.001		<0.02
D-93-94 93-98	<0.001		<0.02
D-93-94 98-103.5	0.009		0.03
D-93-94 103.5-109	<0.001		<0.02
D-93-94 109-114	<0.001		<0.02
D-93-94 114-119	<0.001		<0.02

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-93-94
JOB NUMBER : SP031477
REPORTED : 3 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
D-93-94 119-124	<0.001		<0.02
D-93-94 124-129	<0.001		<0.02
D-93-94 129-134	<0.001		<0.02
D-93-94 134-139	<0.001		<0.02
D-93-94 139-144	<0.001		<0.02
D-93-94 144-149	<0.001		<0.02
D-93-94 149-154	<0.001		<0.02
D-93-94 154-159	<0.001		<0.02
D-93-94 159-164	<0.001		<0.02
D-93-94 164-169	<0.001		<0.02
D-93-94 169-174	<0.001		<0.02
D-93-94 174-179	<0.001		<0.02
D-93-94 179-184	<0.001		<0.02
D-93-94 184-189	<0.001		<0.02
D-93-94 189-194	<0.001		<0.02
D-93-94 194-199	<0.001		<0.02
D-93-94 199-204	<0.001		<0.02
D-93-94 204-209	<0.001		<0.02
D-93-94 209-214	<0.001		<0.02
D-93-94 214-219	<0.001	<0.001	0.05
D-93-94 219-224	<0.001		<0.02
D-93-94 224-229	<0.001		<0.02
D-93-94 229-234	<0.001		<0.02
D-93-94 234-239	<0.001		<0.02
D-93-94 239-242	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-93-94
JOB NUMBER : SP031477
REPORTED : 3 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
D-93-94 242-246	0.007	0.010	0.07

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

Elko Office
2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV. 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Company: HECLA MINING CO.

Address:

Telephone Number: ( ) Fax Number: ( )

Project Name: ROSEBUD Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: Number of Packages: 51 [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED 10-24-94

D-93-94 SAMPLE				TYPE	ELEMENTS REQUIRED
0-5	68-73	144-149	219-224	CORE	2 AT FIRE ASSAY Au & Ag
5-10	73-78	149-154	224-229		W/ HECLA ROSEBUD
10-14	78-83	154-159	229-234		CUSTOM PREP
14-18	83-88	159-164	234-239		
18-23	88-93	164-169	239-242		
23-28	93-98	169-174	242-246		* GRAV. FINISH ON ALL
28-33	98-103.5	174-179			Au ≥ 0.05 opt
33-38	103.5-109	179-184			
38-40	109-114	184-189			
40-45	114-119	189-194			
45-50	119-124	194-199			
50-54	124-129	199-204			
54-58	129-134	204-209			
58-63	134-139	209-214			
63-68	139-144	214-219			

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[X] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[X] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

CLIENT FILE COPY