6000854

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-51-94
AUTHOR	C. Wineteer; C. Muerhoff; S. Faircloth
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 140'; receipt; handwritten notes 7p

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-51-94

60000854

4010

60000854

Hecla
MINING COMPANY

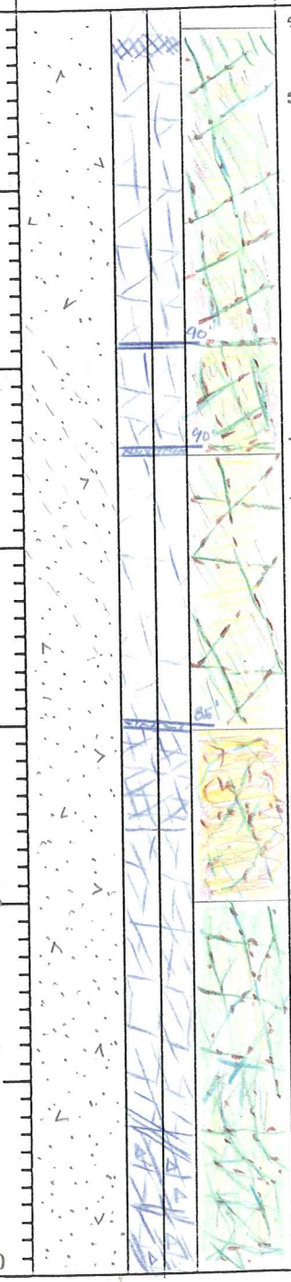
ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-51-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF 3		NORTHING	2203789.1		AS ∡ TO CORE AXIS; CORE PHOTO'D;
DATE	10-25-94	EASTING	481680.8		WHOLE CORE ASSAY SAMPLES;
LOGGED BY	CB WINETEER	ELEVATION	4657.1		DDS # 14 ; SECTION 756N;
SCALE	1" = 10'	AZIMUTH	130.5°		NDBGM CORE
TOTAL DEPTH	140'	INCLINATION	-35°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-7' Fine-grained flow-laminated waterlain tuff: flow-lamination @ 30'-70' w/ contorted lamination (flow-shear) common. Well-sorted finely-laminated to thin bedded. Siliceous, moderately hard, Pale pink & pale greenish-grey. 7-34.5' Lithic tuff breccia: chaotic-bedded, clast- to border-line matrix-supported, poor to moderate sorted larger clasts ash to 5.0 cm size; Clasts are angular-irregular consisting primarily of pale green fine-grained tuff (massive & finely-laminated. Matrix is siliceous-sericitic. Clasts decr. size ↓ & tighter-packing. 34.5-140' Fine to medium grained, well-sorted, massive to medium-bedded vaguely-laminated tuff. Variable alteration ± brecciation as described at right.	10 20 30 40 50	50° 40° 75	0-6' pale green sericitic-pyritic irreg. slides w/ R&G in stkwk - 5-10' stx's dom. 6-8' frac'd gradational contact w/ stx's @ 50' w/ c. xln barren white $CaCO_3$ fld - crackle bx 20-25' sericitic-pyritic slicks & microbx-rubbly w/ ser. matrix on 30° stx's 34.5' sharp bedded(?) contact @ 40' 38.5-44.5' tectonic crackle bx w/ $CaCO_3$ + ser ± py matrix w/ 75° controlling stx's, clast-supported angular frags. 44.5-51.5' densely frac'd w/ frac-fill as @ right.	0-8' wk to mod. silic + ↓ incr. tr-2% cubic py-T + wk mod. lam'd alun + wk ang-T + lam'd & frac ser-T: min stx's discont. 1-3/ft $CaCO_3$ + cubic py @ 20-40° 8-34.5' wk silic + wk ang-T + tr alun + mod. ser-T of clasts + 1-3% cubic + bladed py-T; min stx's 0.001-0.01" discont.-irreg. 30° & 80° w/ $CaCO_3$ + py ± py & marc ± spl. 34.5-51' wk silic + wkly mod. ang-T + lam'd & salvage ser-T + 1-3% v.f.g. cubic py-T + tr alun (s.a.a. as frags in bx 38.5-44.5') min stx's 0.005-0.2" ser-ill-cubic & dimorph py + spl / or $CaCO_3$ + py + spl + celestite / or chl - cubic to dimorphic py ± f.g. Q 4-7/ft.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	4	4.0'	<.001			
4	8	4.0'	.001			
8	14	6.0'	.001			
14	20	6.0'	.001			
20	25	5.0'	.001			
25	30	5.0'	.001			
30	34.5	4.5'	.001			
34.5	38.5	4.0'	.002			
38.5	44.5	6.0'	.004			
44.5	51	5.5'	.027			

HOLE NUMBER D-51-94 PAGE 2 OF 3

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
← good recovery	← low RQD 0.2-0.4		60, 70, 80, 90, 100, 110, 120		51.5-52.7' crackle bx w/ ser ± $CaCO_3$ ± sulf matrix on 40° & ⊥ 50° stx's 52.7-74.8' densely frac'd w/ ser ± $CaCO_3$ ± py @ 5-10°; 80-90°; 50-60° 8-20/ft. 74.8-75' fault bx on 90° stx's 75-90' mod. dense frac'd 2-10/ft. @ 5-10°; 80-90°; 50-60° w/ minor ser-chl ± sulf. 90-90.4' fault bx w/ $CaCO_3$ + sulf matrix on 85° stx 90.4-96' $CaCO_3$-ser-sulf fld crackle bx 96-112.5' dense frac'd w/ thin ser ± chl ± $CaCO_3$ ± sulf on 20°, 80°, 5° stx's 112.5-140' same as above w/ iner. clay gouge-fault bx (hanging wall of South Ridge fault).	51-75' wk silic + wk arg-T + banded ser-T & salvage ser-T + 2% v.f.g. cubic py-T; + tr alum; min stx's 5-10/ft @ 20°, 70°, 90° 0.05-0.10" chl → $CaCO_3$ + py + py ft marc + marc ± ser. ± tr ill 75-90' s.a.a. w/ decr. silic/alum/arg-T./ & min stx's - chl-$CaCO_3$ + granular f.g. py + marc. ± spl + ill 90-100' mod. silic + wk alum & arg-T - bleached + 1-2% py-T + frac-ser-T min stx's discont. irreg. 0.001-0.2" $CaCO_3$ + py + py ft marc ± ill + tr SiO_2 micro hairline stkwk 100-120' wk silic + tr alum + mod int. ser-T (salvage to chl frac's) patches & spots of f.g. cubic py-T + wk arg-T: min stx's 7-12/ft 0.05" chl → $CaCO_3$ - f. to m. g. py
88	.10 (115)					
50	.00 (120)					

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
51	55	4.0'	.103		.110 (Q)	
55	60	5.0'	.010			
60	65	5.0'	.011			
65	70	5.0'	.001			
70	75	5.0'	.003			
75	80	5.0'	.001			
80	85	5.0'	<.001			
85	90	5.0'	.001			
90	95	5.0'	.002			
95	100	5.0'	.002			
100	105	5.0'	.004			
105	110	5.0'	.002			
110	115	5.0'	.004			
115	120	5.0'	.006			

HOLE NUMBER D-51-94 PAGE 3 OF 3

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
30	.00 125					120–130' mod silic & alun g/m w/ med. grained int. ang-T grains + 3-5% f.g. cubic py-T + wk relic ser-T ; min stx's stkwk (argillization) ill + f.g py + marc + tr v.f.g ss.
66	.16 130	← 30% of total is redrill.	130		* CST-26	
20	.13 135				135–134.2' ↳ ALL OF CORE THAT IS NOT REDRILL	130–140' s.a.a. as frag-ments in a silic flooded bx – + py + py ft marc + tr spl + tr exsolved ss.
10	.00 140		140			
		END OF HOLE @ 140'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
120	125	5.0'	.009			
125	130	5.0'	.016			
130	135	5.0'	.076		.078 (g)	
135	140	5.0'	.096		.095 (g)	

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: [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED

D-51-94	SAMPLE	TYPE	ELEMENTS REQUIRED
0-4	75-80	CORE	2 AT FIRE ASSAY Au & Ag
4-8	80-85		W/ HECLA ROSEBUD
8-14	85-90		CUSTOM PREP
14-20	90-95		
20-25	95-100		
25-30	100-105		
30-34.5	105-110		* GRAV. FINISH ON ALL
34.5-38.5	110-115		Au ≥ 0.05 opt
38.5-44.5	115-120		
44.5-51	120-125		
51-55	125-130		
55-60	130-135		
60-65	135-140		
65-70			
70-75			

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

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-51-94
LABORATORY JOB No. : SP031519
SAMPLE TYPE :

RECEIVED : 4 NOV 1994
REPORTED : 17 NOV 1994
No. SAMPLES : 28

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-51-94
JOB NUMBER : SP031519
REPORTED : 17 NOV 1994

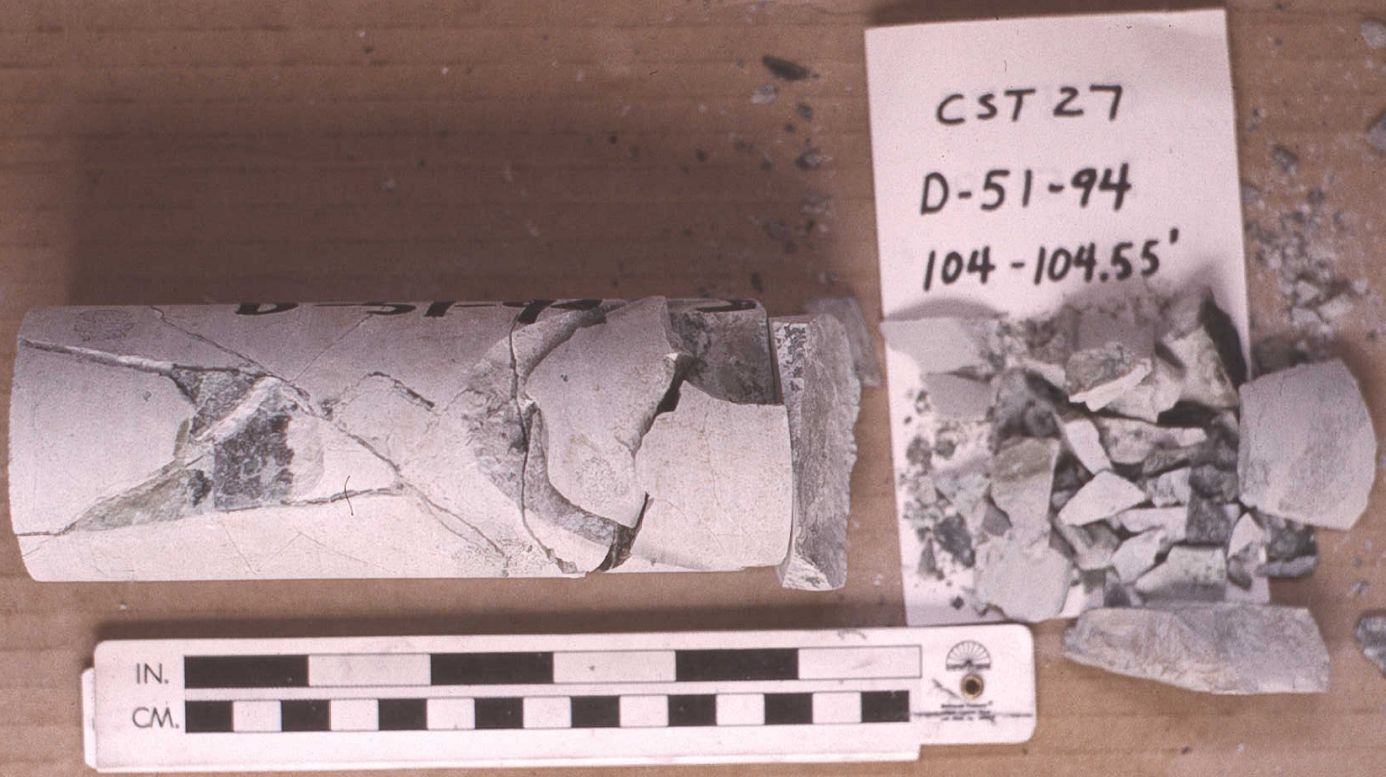
SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-51-94 0-4	<0.001			0.02
D-51-94 4-8	0.001			0.03
D-51-94 8-14	0.001			0.03
D-51-94 14-20	0.001			0.02
D-51-94 20-25	0.001			0.02
D-51-94 25-30	0.001			0.02
D-51-94 30-34.5	0.001			0.02
D-51-94 34.5-38.5	0.002			0.03
D-51-94 38.5-44.5	0.004			0.28
D-51-94 44.5-51	0.027			0.42
D-51-94 51-55	0.103		0.110	0.85
D-51-94 55-60	0.010			0.18
D-51-94 60-65	0.011			0.29
D-51-94 65-70	0.001			0.06
D-51-94 70-75	0.003			0.05
D-51-94 75-80	0.001			0.03
D-51-94 80-85	<0.001			0.04
D-51-94 85-90	0.001			0.05
D-51-94 90-95	0.002			0.05
D-51-94 95-100	0.002			0.05
D-51-94 100-105	0.004			0.04
D-51-94 105-110	0.002			0.03
D-51-94 110-115	0.004			0.25
D-51-94 115-120	0.006			0.05
D-51-94 120-125	0.009			0.07

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-51-94
JOB NUMBER : SP031519
REPORTED : 17 NOV 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-51-94 125-130	0.016			0.05
D-51-94 130-135	0.076		0.078	0.25
D-51-94 135-140	0.096		0.095	1.89


CST 27
D-51-94
104-104.55'
IN.
CM.

CST 27
D-51-94
104-104.55'
IN.
CM.

CST 27
D-51-94
104-104.55'
IN.
CM.

CST-26
D-51-94
134.2-135'

CST-26
D-51-94
134.2-135'