60000786

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. 7H-94-05
AUTHOR	C. Muerhoff
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
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 244' handwritten notes 8 pgs

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 4/30/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

TH-94-05

60600786
4010

6000 0786

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # TH-94-05 DATE: 3/94 LOGGED BY: C. Muerhoff PAGE 1 OF 3

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'	0	0	—	—	—	—	—	—	—	—	—	—	—
10'	15.5'	82	90	0	—	—	>10	40°	smooth w/ slicks	minor FeOx & illitic clay	—	—	—	—
15.5'	19.5'	89	92	49	16'	3750	0.8	35°	"	"	—	—	—	—
19.5'	26.5'	92	100	67	26'	6600	1.4	40°	"	"	—	—	—	—
26.5'	28'	100	100	50	—	—	1.5	45°	"	"	—	—	—	—
28'	38'	96	100	97	36'	3600	1.3	15° & 50°	"	"	—	—	—	—
38'	44.5'	78	80	78	—	—	1.1	15° → & 50° →	smooth & v. rough	" & "	—	—	—	—
44.5'	51'	98	98	91	46'	2700	1.3	40° → 60° →	irregular & smooth	" & "	—	—	—	—
51'	59'	98	100	78	56'	2850	0.5	50°	irregular	none	—	—	—	—
59'	69'	100	100	94	66'	2925	0.7	50°	"	minor FeOx	—	—	—	—
69'	79'	100	100	94	76'	3525	0.7	50°	"	"	—	—	—	—

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # TH-94-05 DATE: 3/94 LOGGED BY: C. Muerhoff PAGE 2 OF 3

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)
79'	89'	100	100	92	86'	2175	0.6	40°	irregular	minor FeO_x	—	—	—	—
89'	99'	100	100	97	96'	3900	0.8	40°	"	"	—	—	—	—
99'	109.5'	100	100	69	106'	2175	1.3	60° & 40°	"	"	—	—	—	—
109.5'	120'	97	100	92	115'	750	0.8	40°	very irregular	FeO_x & minor grey clay	—	—	—	—
120'	130.5'	91	100	88	125'	2850	0.7	60°	irregular	"	—	—	—	—
130.5'	141'	92	100	90	136'	1575	0.7	55° (bedding plane)	very smooth	"	—	—	—	—
141'	151'	100	100	82	146'	3450	1.1	55° (bedding plane)	"	minor FeO_x	—	—	—	—
151'	160.5'	100	100	97	Point Load Tester broke core is very hard to end of hole		0.5	65° → (bedding plane) 45° →	v. smooth → irregular	minor illitic clay	—	—	—	—
160.5'	170.5'	100	100	95			0.7	65°	irregular	"	—	—	—	—
170.5'	181'	100	100	89			1.3	55°	smooth	none to v. minor illitic clay	—	—	—	—
181'	191'	100	100	98			0.6	60°	"	"	—	—	—	—

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # TH-94-05 DATE: 3/94 LOGGED BY: C. Muenkoff

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)
191'	201'	97	97	93			0.4	20° → 50° →	irregular → very irregular →	none	—	—	—	—
201'	211'	100	100	100			0.3	65°	irregular	none	—	—	—	—
211'	221'	100	100	100			0.3	20°	"	"	—	—	—	—
221'	231'	100	100	100			0.4	60°	"	minor clays	—	—	—	—
231'	234'	100	100	100			0.3	60°	smooth	"	—	—	—	—
234'	241'	100	100	100			0	—	—	—	—	—	—	—
241'	244'	dropped core in hole - only 1 ft(±) recovered												
T.D. @	244'													

HECLA MINING COMPANY - ROSEBUD PROJECT

GEOTECHNICAL DRILL LOG

HOLE # TH-94-05

LOCATION : Tailings Impoundment

DATE : 3/94

TOTAL DEPTH : 244'

COLLAR BEARING : S30° E

COLLAR DIP : -75°

NORTHING : 2201323.961

EASTING : 476832.310

ELEVATION : 4859.935

CONTRACTOR : Cocks Drilling, Inc

DRILL TYPE : UDR-650

HOLE SIZE : HQ

TH-94-05 Geology Log C. Muerhoff 3/94

0'-10' Qal - no recovery

10'-43' Dozer Rhyolite. Moderately to locally strongly oxidized, bedded (30-40° to core axis) vfg, light grey ash tuff / flow with small, green (chloritic) phenos ± 1mm thick. Phenos are aligned parallel to bedding. Fractures & joints intensely oxidized w/ limonite &/or goethite + minor white illitic clays on fracture surfaces.

43'-50.5' Ash tuff becomes more massive in character & loses chlorite phenos. Cut by thin (≤ 1/8") illitic stringers @ 50°-90° to core axis. Heavy oxidation continues on fracture surfaces, but beginning to wane in rock mass. Slightly brecciated @ end of interval w/ calcite as bxa matrix.

50.5' Redox Boundary

50.5'-101.1' Light green-grey vfg tuff - weakly bedded in places. Same rock type as above. Illitic stringers continue

@ 65', grades into interbedded light grey & light green vfg tuff w/ bedding @ 20° to core axis.

↓

becomes weakly brecciated at depth & grades into flow breccia (auto-brecciation). Oxidation begins to occur on fracture surfaces past 80' downhole.

86.8'-87' breccia w/ angular fragments of unit above in vfg black groundmass.

101.1'-143' Second oxidation zone. Weakly bedded, brecciated vfg tuff. Cut by thin, white illitic clay stringers w/ no preferential orientation. Very strong

TH-94-05

FeOx on fractures – moderate to locally strong in rock mass.

117.3' fault @ 10°-20° to core axis.

@ 130', start to lose illite stringers.

143'-211' Light grey & light green thinly bedded vfg to nearly aphanitic flow w/ v. minor fg diss pyrite & v. minor illitic stringers.

↓

211'-240.5' grades into dark green extremely fg to massive flow breccia w/ light green mtx / groundmass

240.5'-243.6' matrix-supported breccia w/ black, aphanitic frags (aligned @ ± 45° to c.a.) in light green vfg groundmass.

243.6'-244' silicified, strongly hematized massive tuff w/ minor calcite veinlets.

T.D. @ 244'

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : TH-94-01
JOB NUMBER : SP030867
REPORTED : 15 SEP 1994

SAMPLES	Au	Au(R)	Ag
TH-94-02 180-190	<5		
TH-94-02 190-200	8		
TH-94-02 200-210	<5		
TH-94-02 210-220	<5		
TH-94-02 220-230	<5		
TH-94-02 230-240	<5		
TH-94-02 240-251	<5		
TH-94-03 39.5-49.5	9		
TH-94-03 49.5-60	<5		
TH-94-03 60-70	<5		
TH-94-03 70-79	<5	<5	
TH-94-04 17-21	<5		
TH-94-04 21-31	<5		
TH-94-04 31-41	<5		
TH-94-04 41-51	<5		
TH-94-04 51-61	<5		
TH-94-04 61-71	<5		
TH-94-05 10-20	5		
TH-94-05 20-30	<5		
TH-94-05 30-43	7		
TH-94-05 43-50.5	<5		
TH-94-05 50.5-60	<5		
TH-94-05 60-70	<5		
TH-94-05 70-80	<5		
TH-94-05 80-86.8	<5		

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT

CLIENT : HECLA MINING CO.
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REPORTED : 15 SEP 1994

TH-94-05 86.8-87	<5	
TH-94-05 87-101.1	<5	
TH-94-05 101.1-110	<5	
TH-94-05 110-120	8	
TH-94-05 120-130	<5	
TH-94-05 130-144	<5	<5
TH-94-05 144-154	9	
TH-94-05 154-164	<5	
TH-94-05 164-174	<5	
TH-94-05 174-184	<5	
TH-94-05 184-194	<5	
TH-94-05 194-204	5	
TH-94-05 204-211	<5	
TH-94-05 211-221	6	
TH-94-05 221-231	6	
TH-94-05 231-240.5	<5	
TH-94-05 240.5-244	11	
TH-94-06 22-32	18	21
TH-94-06 32-42	20	
TH-94-06 42-55.5	19	
TH-94-06 55.5-65.5	14	
TH-94-07 19-31	9	
TH-94-07 31-41	<5	
TH-94-07 41-51	<5	
TH-94-07 51-61	<5	