60001190

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-289-98
AUTHOR	S. King; K. Allen; A. Niles
DATE OF DOC(S)	1998
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Rosebud Mining Co. LLC Hecla Mining Co.
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; photographs; total depth 202'; receipt; hand written notes; downhole camera images 30p. 3 down hole camera images

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: DP 5/14/08
Initials Date

DB: mah
Initials Date

SCANNED: NB
Initials Date

Revised: 1/22/08

D-289-98

6000 1190 4010

6000 1190

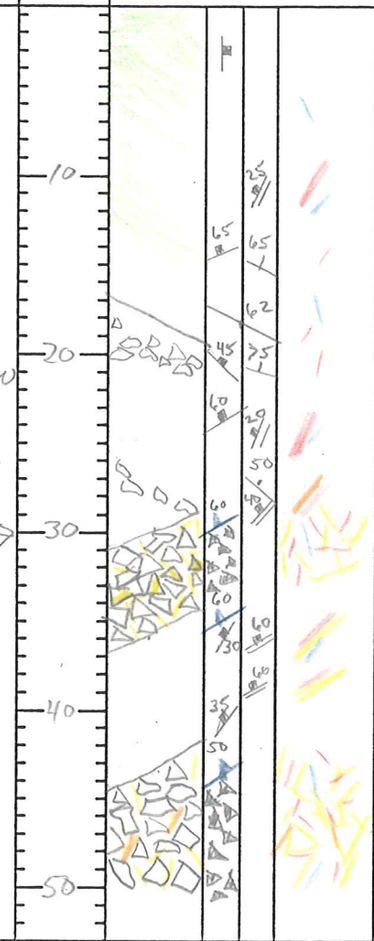
Hecla MINING COMPANY

- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- BARITE
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-289-98	LOCATION	STOPE 50 SEC 1475
PAGE	1 OF 4	NORTHING	
DATE	9/22-23/98	EASTING	
LOGGED BY	ALLYN NILES	ELEVATION	
SCALE	1"=10'	AZIMUTH	125
TOTAL DEPTH	202	INCLINATION	2

REMARKS



REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0.0 - 18.0 TOS		0.0 - 13.5 GREEN LAPILLI TUFF, PINK → GRAY → GREEN → WHITE LAPILLIS IN A GREEN FINE GRAIN VOLCANIC CLAY MATRIX. VERY RARE BEDDING FEATURES	10		0.0 - 18.5 VERY RARE NATURAL FRACTURES.	5.0 - 50.0 MINOR CALCITE, OFTEN ASSOC. W/ WHITE CLAY, MINOR BLADED MARC., QUARTZ.
		13.5 - 18.0 SAME AS 0.0 - 13.5 EXCEPT LAPILLIS & MATRIX HAVE PINK AS DOMINANT COLOR.				
18.0 - 62.0 F.G. MASSIVE		18.0 - 43.4 LT. PINK → VERY LT. GREEN → GRAY-GREEN VERY FINE GRAIN MASSIVE FLOW(S) W/ NO INTERNAL STRUCTURE EXCEPT AUTO BXA ZONES 18.0 - 30.0. AUTO BXA'S ARE ANGULAR CLASTS OF F.G. MASSIVE IN A PINKISH F.G. VOLCANIC CLAY MATRIX OFTEN W/ MINOR PYRITE/MARC. ESPECIALLY WHEN SULFIDE VN. CUTS THE BXA. PIMA →	20		18.0 CONTACT SHARP, UNEVEN	
			30		30.0 - 36.1 TECTONIC BXA, HOMOLITHIC, HEALED, MOSTLY CLAST SUPPORTED	30.0 - 36.1 CEMENTED W/ QUARTZ, WHITE CLAY PYRITE, MINOR CALCITE & BLADED MARC, MINOR ZONED SILICA REP. OF CLASTS
		43.4 - 62.0 FAULT ZONE/BXA COMPOSED OF ANGULAR F.G. MASSIVE CLASTS	40		43.4 - 62.0 HEALED BXA ZONE, MOSAIC CLAST SUPPORTED. VUGS & OPEN FRACTS FAIRLY COMMON.	43.4 - 62.0 CEMENTED W/ WHITE CLAY, QUARTZ & DRUZY QUARTZ, BLADED MARC., SOME PYRITE, MINOR PROPYLITIC CLAY. VUGS LINED W/ DRUZY QUARTZ, BLADED MARC
			50			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag
0.0	5.0					
5.0	10.0					
10.0	15.0					
15.0	18.0					
18.0	21.6					
21.6	25.0					
25.0	30.0					
30.0	33.4					
33.4	36.3					
36.3	39.5					
39.5	43.4					
43.4	47.0					
47.0	50.6					

HOLE NUMBER D-289-98 PAGE 2 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
18.0 - 62.0 F.G. MASSIVE		43.3 - 62.0 SEE DESCRIPTION PAGE 1					50.6	54.2				
							54.2	57.7				
							57.7	60.0				
			60				60.0	62.0				
62.0 - 160.5 PLANAR LAMINAR		62.0 - 87.7 LT. PINKISH TO GRAYISH-PINK, FINE GRAIN PLANAR FLOWS W/ FLOW BANDING & SOME VESICLE TRAINS.					62.0	67.0				
							67.0	70.3				
			70		70.3 - 73.3 HEALED MOSAIC, CLAST SUPPORT BXA	70.3 - 73.3 CEMENTED W/ QUARTZ, BLADED MARC., SOME PYRITE, MINOR WHITE CLAY	70.3	73.3				
							73.3	76.4				
					76.4 - 80.3 HEALED MOSAIC, CLAST SUPPORT BXA W/ COMMON VUGS & OPEN FRACTURES.	76.4 - 80.3 CEMENTED W/ STOCKWORK DRUZY QUARTZ, BLADED MARC. MINOR BARITE, WHITE CLAY, PYRITE, VUGS & OPEN FRACTS LINED W/ DRUZY QUARTZ, MARC., MINOR BARITE	76.4	80.3				
			80				80.3	84.0				
							84.0	88.0				
		87.7 - 112.5 BXA ZONE. MOSTLY CLAST SUPPORTED, MINOR MATRIX SUPPORTED. CLASTS DOMINANTLY ANGULAR, RARELY ROUNDED. STOCKWORK SILICA / QUARTZ IS PERVASIVE.			87.7 - 112.5 HEALED, MOSAIC, MOSTLY CLAST SUPPORTED BXA W/ VERY COMMON → ABUNDANT VUGS, OPEN FRACTURES. 91.5 3" REACTIVATED ZONE W/ CRUSHED SILICI FRAGS, IN A ROCK FLOUR MATRIX.	87.7 - 112.5 CEMENTED W/ STOCKWORK QUARTZ, DRUZY QUARTZ, BLADED MARC. VARIABLE WHITE → DUCK'S BUTTER CLAY, VUGS & OPEN FRACTURES LINED/FILLED W/ SAME 91.6 2" Ø SILIC. VEIN" WAS WALLROCK FROM WHICH CRUSHED SILIC. FRAGS WERE DERIVED. 101.0 - 106.0 VERY COMMON CLAY FILLING OPEN SPACES, MOD. BLADED MARC.	84.0	88.0				
			90				88.0	91.8				
							91.8	94.0				
							94.0	97.3				
			100				97.3	101.0				
							101.0	104.0				
							104.0	107.0				
							107.0	110.0				
			110		112.5 - 120.0 CRACKLE ZONE W/ 2 THIN BXA'S (3"-4" Ø).		110.0	112.6				
		112.5 - 147.0 SEE DESCRIPTION PAGE 3					112.6	117.0				
			120									

HOLE NUMBER D-289-98 PAGE 3 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
62.0	160.5	112.5 – 147.0 PINK, FINE GRAIN FLOW(S) WITH RARE FLOW STRUCTURES & ZONES OF VESICLES.	130		122.0 – 145.0 SEVERAL THIN (3" – 1' Ø) BXA's,	122.0 – 145.0 CEMENTED W/ HARD WHITE CLAY & QUARTZ (POSSIBLE MIXTURE) BLADED MARC., SOME PYRITE
PLANAR LAMINAR			PIMA → 140		143.0 – 145.0 MOD. VUGS & OPEN FRACTS.	143.0 – 145.0 VUGS/OPEN FRACTS LINED W/ DRUZY QUARTZ, MINOR MARC. & PYRITE.
		147.0 – 160.5 BXA ZONE. MOSTLY ANGULAR TO 158.0, ROUND 158.0 – 160.5, PINKISH PLANAR UNIT BXA CLASTS, CLAST SUPPORTED TO 158.0, MATRIX SUPPORTED	150		147.0 – 160.5 BXA ZONE MOSTLY MOSAIC CLAST SUPPORTED TO 158.0 MATRIX SUPPORT 158 – 160.5 158.0 – 158.5 WHITE CLAY GOUGE SUPPORTING SMALL ROUND PEA-LIKE SILIC. CLASTS.	147.0 – 160.5 CEMENTED W/ HARD GREENISH-WHITE CLAY, POSSIBLY MIXED W/ QUARTZ, MINOR QUARTZ, BLADED MARC. & PYRITE, MINOR VUGS LINED W/ DRUZY QUARTZ & BLADED MARC.
160.5 – 187.9		160.5 – 172.0 PINK → GREEN → DK. GRAY → WHITE ROUND BXA CLASTS OF PLANAR, DOZER, ALS? IN A LT. GREEN FINE GRAIN MATRIX, SOME CLASTS ARE SILICIFIED AND ISOLATED, INDICATING IMPORTATION.	160		160.5 – 168.0 MINOR → MOD. VUGS & OPEN FRACTS.	160.5 – 172.0 SILICA REPLACEMENT OF MATRIX & CLASTS IS WIDESPREAD & VARIABLE FROM WEAK TO COMPLETE, MOD → STRONG DISSEM. MARC. BLADES ASSOC. W/ SILICA & QUARTZ VEINS.
SRF		172.0 – 175.0 GREEN-GRAY → DK. GRAY, HETEROLITHIC BXA COMPLETE SILICA FLOODING OF ALL COMPONENTS, PIMA →	170		172.0 – 175.0 MOD. VUGS & OPEN/FILLED FRACTS.	172.0 – 175.0 MOD. – DISSEM. MARC., OPEN FRACTS, LINED W/ DRUZY QUARTZ, FILED W/ WHITE CLAY, MINOR BLADED MARC.
		175.0 – 185.0 LT. GREEN-GRAY → DK. GRAY, ROUND BXA FRAGS IN A FINE GRAIN MATRIX, VARIABLE SILICH REP. OF MATRIX & CLASTS. MOSTLY DOZER CLASTS, SOME PLANAR CLASTS. 185.0 – 187.9 SOFT, INCOMPETENT CLAY GOUGE DERIVED FROM PULVERIZED DOZER	180		175.0 – 185.0 OPEN FRACTURES VERY RARE.	175.0 – 185.0 MOD DISSEM MARC., VERY RARE OPEN FRACTS LINED W/ DRUZY QUARTZ, DISSEM PY. IN STRONG SILIC. ZONES. 185.0 – 187.9 VERY STRONG PYRITE IN GOUGE.
187.9 – 202		187.9 – 202.0	190			
DOZER						

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
117.0	121.5				
121.5	126.0				
126.0	130.0				
130.0	135.0				
135.0	137.2				
137.2	141.2				
141.2	145.0				
145.0	147.0				
147.0	151.0				
151.0	155.0				
155.0	158.0				
158.0	160.5				
160.5	163.0				
163.0	166.5				
166.5	170.0				
170.0	172.0				
172.0	175.0				
175.0	178.6				
178.6	182.5				
182.5	185.0				
185.0	187.9				

HOLE NUMBER D-289-98 PAGE 4 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
187.9 - 202.0 DOZER		187.9 - 202.0 LT. GRAY, FINE GRAIN, MASSIVE FLOW BANDED.	200 202		190.0 - 202.0 LATE STAGE PYRITE/QUARTZ VEINLETS ARE BOTH PARALLEL & @ 90° TO FLOW BANDS	187.9 - 194.3 MOD. SILICA FLOODING. 194.3 - 200.0 WEAK ARGILLIC ALT.	187.9	193.0				
							193.0	197.0				
		T.D. 202'.					197.0	202.0				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-289-98 DATE: 9/22/98 LOGGED BY: ALLYN VICES 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	92.0	100.0	79.0										
10.0	15.0	82.0	82.0	82.0										
15.0	25.0	100.0	100.0	44.0										
25.0	35.0	100.0	100.0	79.0										
35.0	45.0	100.0	100.0	90.0										
45.0	53.0	80.0	97.5	40.0										
53.0	60.0	95.7	104.2	74.3										
60.0	69.0	86.6	95.5	50.0										
69.0	79.0	97.0	97.0	83.0										
79.0	84.0	100.0	100.0	60.0										
84.0	94.0	98.0	103.0	70.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-289-98 DATE: 9/23/98 LOGGED BY: _____ PAGE 2 OF 3

DRILL RUN		SOLID CORE	TOTAL CORE	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO	RECOVERY (%)	RECOVERY (%)		DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
94.0	104.0	98.0	98.0	79.0										
104.0	114.0	92.0	100.0	60.0										
114.0	124.0	93.0	93.0	44.0										
124.0	130.0	98.3	98.3	43.3										
130.0	135.0	70.0	92.0	68.0										
135.0	145.0	99.0	103.0	33.0										
145.0	155.0	100.0	100.0	72.0										
155.0	163.0	80.0	100.0	56.2										
163.0	170.0	101.4	101.4	50.0										
170.0	175.0	92.0	100.0	60.0										
175.0	185.0	42.0	90.0	27.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-289-98 DATE: 9/23/98 LOGGED BY: ALLYN NILES. PAGE 3 OF 3

DRILL RUN		SOLID CORE	TOTAL CORE	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO	RECOVERY (%)	RECOVERY (%)		DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
185.0	186.0	0	60.0	0										
186.0	195.0	55.5	83.3	36.6										
195.0	202.0	90.0	90.0	75.7										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP0508 20

PO BOX 11530
RENO NV, USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-289-98 RECEIVED : 30 SEP 1998

No. SAMPLES : 58 REPORTED : 7 OCT 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(R)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

10/07/1998 16:07 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050820

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-289-98 00-05		0.003			0.07	
D-289-98 05-10		0.001			0.03	
D-289-98 10-15		0.002			0.04	
D-289-98 15-18		0.003			0.09	
D-289-98 18.0-21.6		<0.001			0.03	
D-289-98 21.6-25.0		0.003			0.04	
D-289-98 25-30		0.003			0.05	
D-289-98 30.0-33.4		0.016			0.10	
D-289-98 33.4-36.3		0.006			0.05	
D-289-98 36.3-39.5		0.023			0.18	
D-289-98 39.5-43.4		0.076		0.087	0.08	
D-289-98 43.4-47.0		0.029			0.05	
D-289-98 47.0-50.6		0.099		0.118	0.33	54.2=60'=
D-289-98 50.6-54.2		0.091		0.081	0.18	5.8'
D-289-98 54.2-57.7	3.5'	0.264		0.177	0.41	0.258 Au
D-289-98 57.7-60.0	2.3	0.248		0.191	0.39	0.40 Ag
D-289-98 60-62		0.072		0.055	0.09	
D-289-98 62-67		0.096		0.092	0.09	67-83=21'@
D-289-98 67.0-70.3	3.3	1.512		1.709	0.60	
D-289-98 70.3-73.3	3.0	0.055		0.092	0.09	0.370
D-289-98 73.3-76.4	3.1	0.062		0.079	0.07	0.21 Ag
D-289-98 76.4-80.3	3.9	0.181		0.147	0.19	
D-289-98 80.3-84.0	3.7	0.282		0.369	0.15	
D-289-98 84-88	4	0.169		0.223	0.15	
D-289-98 88.0-91.8		0.070		0.072	0.11	

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050820

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-289-98 91.8-94.0		0.034			0.08	
D-289-98 94.0-97.3		0.035			0.13	101-107=6'
D-289-98 97.3-101.0		0.046			0.11	
D-289-98 101-104	3	0.293		0.325	0.53	0.28 Au
D-289-98 104-107	3	0.143		0.166	0.15	0.34 Ag
D-289-98 107-110		0.010			0.08	
D-289-98 110.0-112.6		0.068		0.053	0.08	
D-289-98 112.6-117.0		0.029			0.20	
D-289-98 117.0-121.5		0.012			0.07	
D-289-98 121.5-126.0		0.009			0.09	
D-289-98 126-130		0.011			0.88	
D-289-98 130-135		0.044			0.09	
D-289-98 135.0-137.2		0.005			0.09	
D-289-98 137.2-141.2		0.012			0.10	
D 289 98 141.2-145.0		0.009			0.09	
D-289-98 145-147		0.021			0.07	
D-289-98 147-151		0.056		0.066	0.35	
D-289-98 151-155		0.012			0.10	
D-289-98 155-158		0.092		0.088	0.06	160.5-166.5
D-289-98 158.0-160.5		0.045			0.04	6'
D-289-98 160.5-163.0	2.5	0.171		0.253	0.06	0.333 Au
D-289-98 163.0-166.5	3.5	0.448			0.42	0.27 Ag
D-289-98 166.5-170.0		0.058		0.084	0.07	
D-289-98 170-172		0.107		0.118	0.11	
D-289-98 172-175		0.115		0.129	0.10	

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050820

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-289-98 175.0-178.6	0.004			0.08
D-289-98 178.6-182.5	0.004			0.06
D-289-98 182.5-185.0	0.002			0.03
D-289-98 185.0-187.9	0.018			0.09
D-289-98 187.9-193.0	0.003			0.03
D-289-98 193-197	0.002			0.02
D-289-98 197-202	0.003			0.04
43509	0.115			2.70

10/07/1998 16:07 7023561413 AMERICAN ASSAY LABS PAGE 04

American Assay Laboratories

INVOICE

Remit To: P.O. Box11530
Reno, Nevada 89510
Phone NO.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431-5902

(702)356-0606

INVOICE NO: SP 0050820-IN
INVOICE DATE: 10/08/98

INVOICE TO:
THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

CUSTOMER P.O.	PROJECT	TERMS
D-289-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
58	SAMPLES RECEIVED	.00	.00
57	JAW CRUSHING CHARGE	1.30	74.10
57	COARSE MILLING CHARGE	4.50	256.50
57	SPLITTING CHARGE	2.40	136.80
57	RING MILLING CHARGE	2.00	114.00
58	Au (1 A.T. FIRE ASSAY)	8.00	464.00
23	Au ANALYSES/GRAVIMETRIC	8.75	201.25
58	HYDROCHLORIC/NITRIC DIGESTION	2.00	116.00
58	Ag ANALYSES	1.00	58.00

86-5110-477
KM

NET INVOICE:	1,429.65
LESS DISCOUNT:	294.13
FREIGHT:	.00
INVOICE TOTAL:	1,135.52

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050820

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-289-98

No. SAMPLES : 58

MAIN SAMPLE TYPE : DRILL CORE

RECEIVED : 30 SEP 1998

REPORTED : 7 OCT 1998

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Au(OZ)	FA30	15%	OPT	0.001
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AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050820

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-289-98 00-05	0.003			0.07
D-289-98 05-10	0.001			0.03
D-289-98 10-15	0.002			0.04
D-289-98 15-18	0.003			0.09
D-289-98 18.0-21.6	<0.001			0.03
D-289-98 21.6-25.0	0.003			0.04
D-289-98 25-30	0.003			0.05
D-289-98 30.0-33.4	0.016			0.10
D-289-98 33.4-36.3	0.006			0.05
D-289-98 36.3-39.5	0.023			0.18
D-289-98 39.5-43.4	0.076		0.087	0.08
D-289-98 43.4-47.0	0.029			0.05
D-289-98 47.0-50.6	0.099		0.118	0.33
D-289-98 50.6-54.2	0.091		0.081	0.18
D-289-98 54.2-57.7	0.264		0.177	0.41
D-289-98 57.7-60.0	0.248		0.191	0.39
D-289-98 60-62	0.072		0.055	0.09
D-289-98 62-67	0.096		0.092	0.09
D-289-98 67.0-70.3	1.512		1.709	0.60
D-289-98 70.3-73.3	0.055		0.092	0.09
D-289-98 73.3-76.4	0.062		0.079	0.07
D-289-98 76.4-80.3	0.181		0.147	0.19
D-289-98 80.3-84.0	0.282		0.369	0.15
D-289-98 84-88	0.169		0.223	0.15
D-289-98 88.0-91.8	0.070		0.072	0.11

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050820

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-289-98 91.8-94.0	0.034			0.08
D-289-98 94.0-97.3	0.035			0.13
D-289-98 97.3-101.0	0.046			0.11
D-289-98 101-104	0.293		0.325	0.53
D-289-98 104-107	0.143		0.166	0.15
D-289-98 107-110	0.010			0.08
D-289-98 110.0-112.6	0.068		0.053	0.08
D-289-98 112.6-117.0	0.029			0.20
D-289-98 117.0-121.5	0.012			0.07
D-289-98 121.5-126.0	0.009			0.09
D-289-98 126-130	0.011			0.88
D-289-98 130-135	0.044			0.09
D-289-98 135.0-137.2	0.005			0.09
D-289-98 137.2-141.2	0.012			0.10
D-289-98 141.2-145.0	0.009			0.09
D-289-98 145-147	0.021			0.07
D-289-98 147-151	0.056		0.066	0.35
D-289-98 151-155	0.012			0.10
D-289-98 155-158	0.092		0.088	0.06
D-289-98 158.0-160.5	0.045			0.04
D-289-98 160.5-163.0	0.171		0.253	0.06
D-289-98 163.0-166.5	0.448			0.42
D-289-98 166.5-170.0	0.058		0.084	0.07
D-289-98 170-172	0.107		0.118	0.11
D-289-98 172-175	0.115		0.129	0.10

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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REFERENCE : D-289-98

REPORTED : 7 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-289-98 175.0-178.6	0.004			0.08
D-289-98 178.6-182.5	0.004			0.06
D-289-98 182.5-185.0	0.002			0.03
D-289-98 185.0-187.9	0.018			0.09
D-289-98 187.9-193.0	0.003			0.03
D-289-98 193-197	0.002			0.02
D-289-98 197-202	0.003			0.04
43509	0.115			2.70

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT $P050820

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

CLIENT REFERENCE No: D-289-98 RECEIVED : 30 SEP 1998

No. SAMPLES : 58 REPORTED : 7 OCT 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050820

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REFERENCE : D-289-98

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D-289-98 10-15	0.002			0.04
D-289-98 15-18	0.003			0.09
D-289-98 18.0-21.6	<0.001			0.03
D-289-98 21.6-25.0	0.003			0.04
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D-289-98 30.0-33.4	0.016			0.10
D-289-98 33.4-36.3	0.006			0.05
D-289-98 36.3-39.5	0.023			0.18
D-289-98 39.5-43.4	0.076		0.087	0.08
D-289-98 43.4-47.0	0.029			0.05
D-289-98 47.0-50.6	0.099		0.118	0.33
D-289-98 50.6-54.2	0.091		0.081	0.18
D-289-98 54.2-57.7	0.264		0.177	0.41
D-289-98 57.7-60.0	0.248		0.191	0.39
D-289-98 60-62	0.072		0.055	0.09
D-289-98 62-67	0.096		0.092	0.09
D-289-98 67.0-70.3	1.512		1.709	0.60
D-289-98 70.3-73.3	0.055		0.092	0.09
D-289-98 73.3-76.4	0.062		0.079	0.07
D-289-98 76.4-80.3	0.181		0.147	0.19
D-289-98 80.3-84.0	0.282		0.369	0.15
D-289-98 84-88	0.169		0.223	0.15
D-289-98 88.0-91.8	0.070		0.072	0.11

AMERICAN ASSAY LABORATORIES

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D-289-98 97.3-101.0	0.046			0.11
D-289-98 101-104	0.293		0.325	0.53
D-289-98 104-107	0.143		0.166	0.15
D-289-98 107-110	0.010			0.08
D-289-98 110.0-112.6	0.068		0.053	0.08
D-289-98 112.6-117.0	0.029			0.20
D-289-98 117.0-121.5	0.012			0.07
D-289-98 121.5-126.0	0.009			0.09
D-289-98 126-130	0.011			0.88
D-289-98 130-135	0.044			0.09
D-289-98 135.0-137.2	0.005			0.09
D-289-98 137.2-141.2	0.012			0.10
D-289-98 141.2-145.0	0.009			0.09
D-289-98 145-147	0.021			0.07
D-289-98 147-151	0.056		0.066	0.35
D-289-98 151-155	0.012			0.10
D-289-98 155-158	0.092		0.088	0.06
D-289-98 158.0-160.5	0.045			0.04
D-289-98 160.5-163.0	0.171		0.253	0.06
D-289-98 163.0-166.5	0.448			0.42
D-289-98 166.5-170.0	0.058		0.084	0.07
D-289-98 170-172	0.107		0.118	0.11
D-289-98 172-175	0.115		0.129	0.10

AMERICAN ASSAY LABORATORIES

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D-289-98 178.6-182.5	0.004			0.06
D-289-98 182.5-185.0	0.002			0.03
D-289-98 185.0-187.9	0.018			0.09
D-289-98 187.9-193.0	0.003			0.03
D-289-98 193-197	0.002			0.02
D-289-98 197-202	0.003			0.04
43509	0.115			2.70

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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Nevada 89431
Box 11530
Reno, NV 89510
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2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Mazatlan Office
Telephone/Fax
011-52-69-170035

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: ROSEBUD MINING LLC

Address: P.O. BOX 2610

City WINNEMUCCA State NV Zip 89445

Telephone Number: (702) 623-6912 Fax Number: (702) 623-6967

Project Name: DEVELOPMENT Purchase Order Number: _____

Date Submitted: 9-27-98 Number of Samples: _____

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [ ]

Au-Ag ACCORDING TO ROSEBUD

D-289-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED MINIF PROTOCOL
0-5	57.7-60	107-110		160.5-163
5-10	60-62	110-112.6		163-166.5
10-15	62-67	112.6-117		166.5-170
15-18	67-70.3	117-121.5		170-172
18-21.6	70.3-73.3	121.5-126		172-175
21.6-25	73.3-76.4	126-130	CORE	175-178.6
25-30	76.4-80.3	130-135		178.6-182.5
30-33.4	80.3-84	135-137.2		182.5-185
33.4-36.3	84-88	137.2-141.2		185-187.9
36.3-39.5	88-91.8	141.2-145		187.9-193
39.5-43.4	91.8-94	145-147		193-197
43.4-47	94-97.3	147-151		197-202
47-50.6	97.3-101.	151-155		
50.6-54.2	101-104	155-158		
54.2-57.7	104-107	158-160.5		

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

KURT ALLEN

Results to:

KURT ALLEN

Comments:

CLIENT FILE COPY

D-289-98	30	1	123.5
	100	0	123.7
	200	1	123.7

D - 289 - 98 BOX 2
DEPTH 9 - 18_5

D - 289 - 98 BOX 1
DEPTH 0 - 9

D - 289 - 98 BOX 3
DEPTH 18_5 - 28_5

D - 289 - 98 BOX 5
DEPTH 37_5 - 47

D - 289 - 98 BOX 4
DEPTH 28_5 - 37_5

D - 289 - 98 BOX 6
DEPTH 47 - 56_5

69
D - 289 - 98 BOX 8
DEPTH - 65 - 75

60
D - 289 - 98 BOX 7
DEPTH 56_5 - 65

D - 289 - 98 BOX 9
DEPTH 75 - 84

D - 289 - 98 BOX 11
DEPTH 93 - 102.5

D - 289 - 98 BOX 10
DEPTH 84 - 93

D - 289 - 98 BOX 12
DEPTH 102.5 - 112

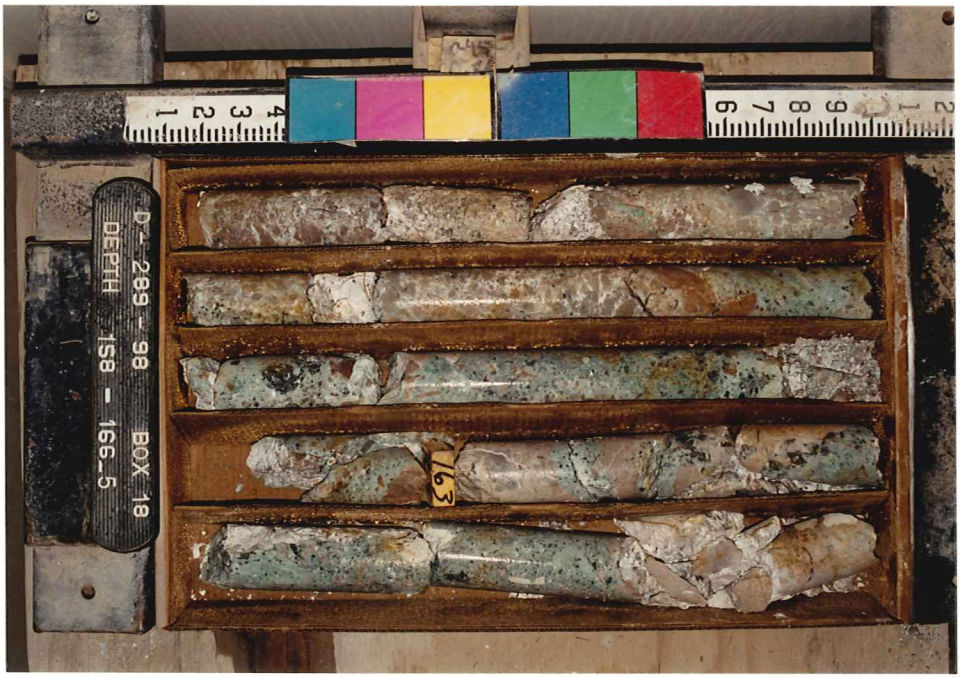
130
124
D - 289 - 98 BOX 14
DEPTH 121 - 130

114
D - 289 - 98 BOX 13
DEPTH 112 - 121

135
D - 289 - 98 BOX 15
DEPTH 130 - 140

155
D - 289 - 98 BOX 17
DEPTH 149 - 158

145
D - 289 - 98 BOX 16
DEPTH 140 - 149


163
D - 289 - 98 BOX 18
DEPTH 158 - 165.5

175
D - 289 - 98 BOX 20
DEPTH 175_5 - 185

170
D - 289 - 98 BOX 19
DEPTH 166_5 - 175_5

D - 289 - 98 BOX 21
DEPTH 185 - 195

D- 289 - 98 BOX 22
DEPTH 195 - 202 TD
TD
202

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hec/A
WELL NAME Rosebud
LEASE D289-98
TAKEN BY MCrnkovich
DEPTH 200
DATE 8-9-98
DRIFT ANGLE +2
DIRECTION S.E.
TYPE
JOB NO. 1
HI-1408

MIN
01
06
NW
30
NW

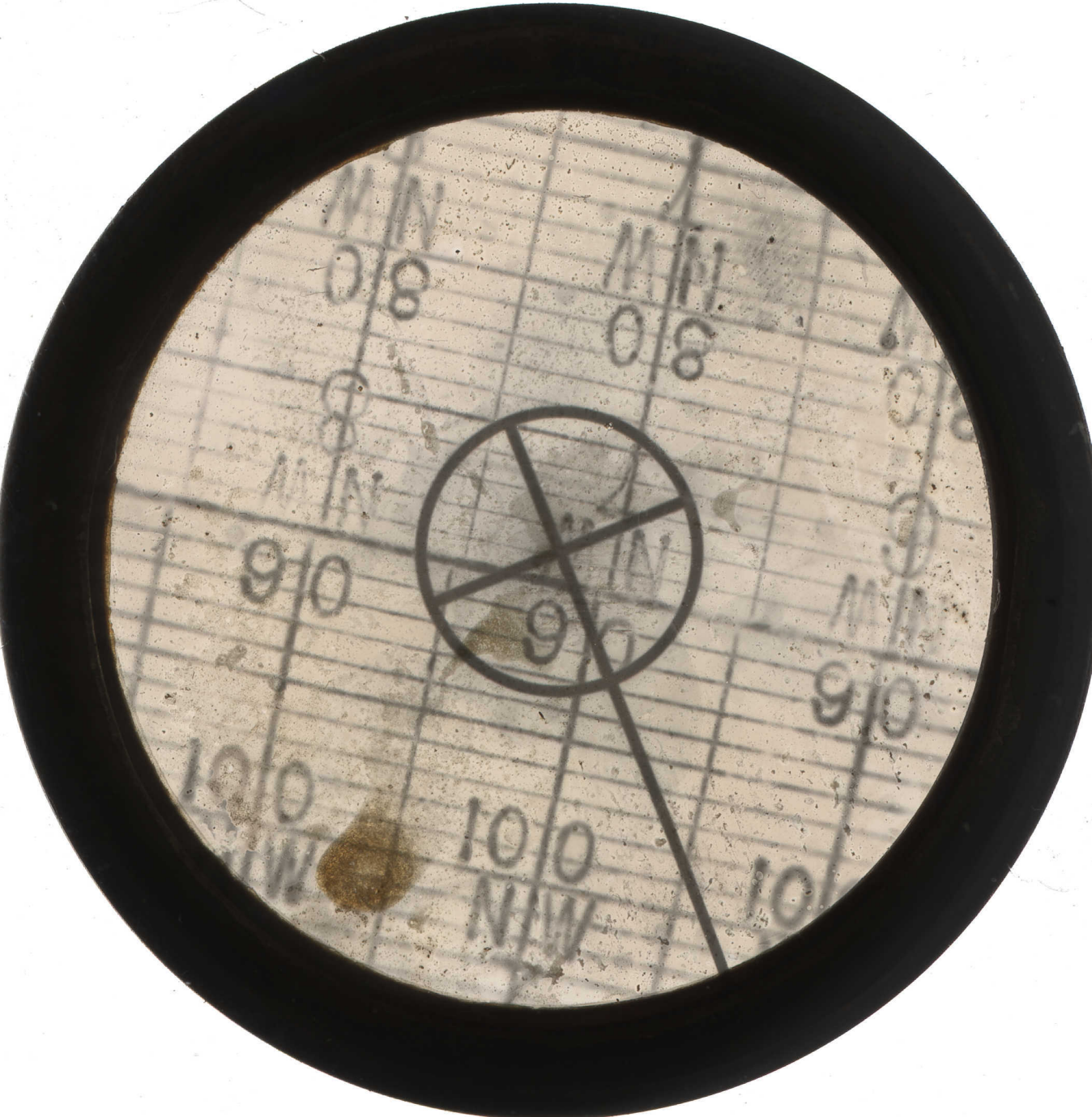
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME Rosebud
LEASE D28998
TAKEN BY MCrnkovich
DEPTH 100
DATE 8-9-98
DRIFT ANGLE +2
DIRECTION S.E.
TYPE
JOB NO. 1
HI-1408

MN
08
MN
90
100
NW

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME Rosebud
LEASE D28998
TAKEN BY MCrnkovich
DEPTH 30
DATE 8-9-98
DRIFT ANGLE +2
DIRECTION SE
TYPE
JOB NO. 1
HI-1408



90
100
NW