60001184

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-283-98
AUTHOR	S. King; K. Allen; R. Stoeberl
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 300' receipt; hand written notes; downhole camera images 36p. 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)

Revised: 1/22/08

	Initials	Date
SS:	DP	5/14/08
DB:	mah	
SCANNED:	NRB	

D-283-98

60001184 4010

6000 1184

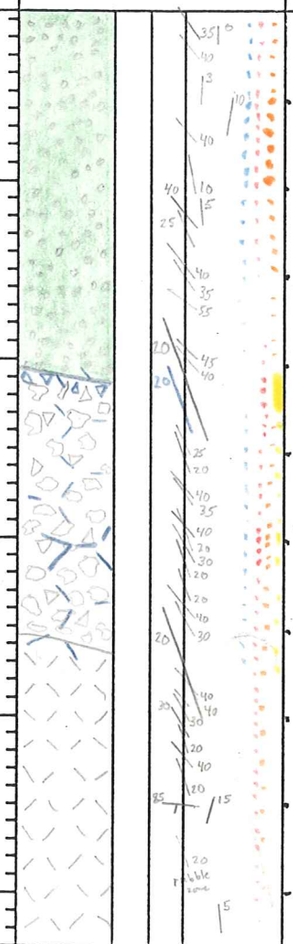
Hecla MINING COMPANY

- 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-283-98	LOCATION	North 1425
PAGE	1 OF 5	NORTHING	
DATE	9/14/98 9/15/98	EASTING	
LOGGED BY	Randell K. Stoeberl	ELEVATION	
SCALE	1" = 10'	AZIMUTH	S55E
TOTAL DEPTH	300	INCLINATION	82

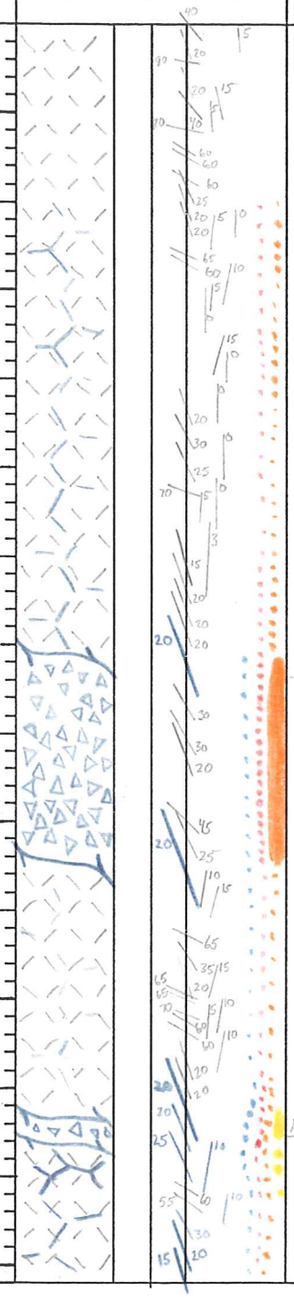
REMARKS

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-20.5 TOS Green, wht, lt grey, and Pale Green Polylithic tuff	0			0-5 - minor Calc, Mc veins 5-10 Inc vein density & sulf 10-15 - minor calc/sulf veins. 15-20.5 trace calc/sulf veins
		20.5' - 35.5 Pink Matrix Breccia ? Pink-red to Red-Brown, Pale Green & lt grey & wht auto breccia.	20		20.5-23' Brecciated contact. sl/d 23-25 wk Frax 25-37 wk Frax Lel mod: mod at 31-32'	20.5-23 Vuggy slfd Brx. Py & Mc in vugs wk sulfides in silica cement. 23-25 Calc ± silica in Frax wk to very wk overall 25-37 Calc ± silica and green clay cement on Frax seams
		35.5 - 166 Slight Planar Laminar lt Gray, lt Lav, and Pale Green, Fine to medium grained Slight Planar Laminar	40		37-60 slim to nothing	37-60 slim
			50			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag
0	5					
5	10					
10	15					
15	20					
20	23					
23	25					
25	30					
30	35					
35	40					
40	45					
45	50					

HOLE NUMBER D-283-98 PAGE 2 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		35.5 - 166' Slight Planar Laminar SAA	50			
		Note: * Pima Samples @ 1) 70' 2) 88' 3) 97' 4) 108'	60		60-85 very wk to wk Frax trace Lcl mod	60-85' wk Frax filled w/ calc, ± green clay and ± Sulf.; sulf = mc ; Py
			70			
			80		85' Slicks @ 20° 85 - 97' Brecciated → Fault Breccia.	85-97' Brecciated cemented w/ wht clay ± calc and Lcl sulf : Sulf = Py and Enh. Mc. No silica at all: Clay domin. cement.
			90			97-111' very wk to wk frax filled w/ calc ± green clay ; sulf.
			100			
			110		111-115' Intense Frax Brecciated at 112-113	111-115 Intense Frax ; Breccia w/ strg vugs. Open Space filled w/ Druzy Qtz, no Barite(?), Mod. Calcite Very wk clay and Mc. wk to mod Py.
			120			

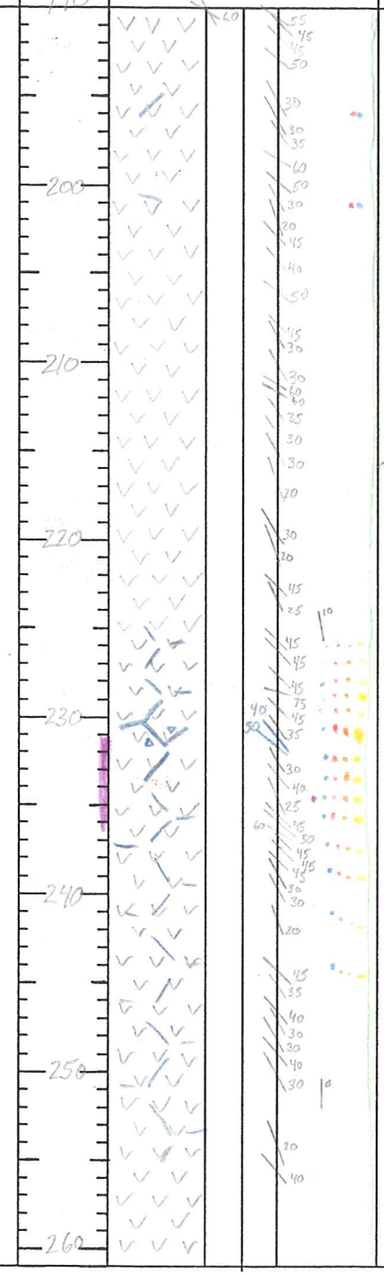
ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
50	55				
55	60				
60	65				
65	70				
70	75				
75	80				
80	85				
85	90				
90	95				
95	97				
97	100				
100	105				
105	110				
110	111				
111	115				
115	120				

HOLE NUMBER D-283-98 PAGE 3 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		35.5 - 166' Slight Planar Laminar SAA	120		115-130' Frax: wk-Lcl mod	115-130 Frax wk - lcl mod Cemented w/± wht clay, green clay and chlorite. ± calc Enh. Py ; mc trace vuggy Druzy Qtz @ 125'	120	125				
							125	130				
			130		130-155 trace to very wk Frax.	130-155 very wk to trace Frax - cement Same As 115-130 trace Lcl Druzy Qtz @ 133, 134, 137, 138, 141, 142 trace silica at 147 and 150'.	130	135				
							135	140				
			140				140	145				
							145	150				
			150		155-164 slim to trace Frax	155-164 slim	150	155				
							155	160				
			160			164-167 Trace Bleaching near minor Frax. Frax filled w/ calc ; chlorite & minor sulf.	160	164				
		166-262 Vitrophyre Pale Green, Dk Green Green and Purple. shattered looking Vitrophyre.			164-167 very wk to trace Frax		164	167				
			170		167-226 slim to nothing	167-226 slim very wk to wk alt. Chlorite green color	167	172				
							172	176				
			180				176	181				
							181	186				
			190				186	191				

HOLE NUMBER D-283-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		166-262 Vitrophyre SAA	190 200 210 220 230 240 250 260		226-235.5' minor wk fract. w/ Lcl mod-strg @ 231' 235.5-254' very wk fract: wk crackle	167-226 slim trace Lcl calc/mc veins @ 196', 201 226-235.5' Fract w/ drusy silica fly ; Trace mc. minor calc in vugs @ 230.8' to 231' minor vein Brx Slkt. wht clay in vugs under the scope, found one little piece of micro gold - VG @ 231 Trace Barite @ 235'. 235.5'-254' Very wk Dfract w/ ± drusy Qtz, calc. ; Suff Decreasing alt down hole

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
191	196				
196	201				
201	206				
206	211				
211	216				
216	221				
221	226				
226	231				
231	236				
236	241				
241	246				
246	250				
250	255				
255	260				

HOLE NUMBER D-283-98 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		262 - 300 . Planar Lams Dk Purp to Purp-red Planar Lams. Pale Green to Lav from 287 - 300' Note: 287 - 300 Pale may be starting to grade into PST ??	260 270 280 290 300	TD	290 - 300' very wk Fract crackle zone.	No Alteration 290 - 300' wk Fract : Fract Seams filled w/ Silf wt Pale Green clay : trace to minor calcite

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
260	265				
265	270				
270	275				
275	280				
280	285				
285	290				
290	295				
295	300	.25			
	TD				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-283-98 DATE: 9/14/98 LOGGED BY: Randall K Stoeberl. PAGE 1 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				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)
0	5	96	98	76										
5	10	100	100	96										
10	15	100	99	100										
15	20	100	96	96										
20	25	100	104	98										
25	30	100	104	100										
30	35	100	98	100										
35	40	100	98	94										
40	45	100	100	88										
45	50	96	100	44										
50	55	98	103	67										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-283-98 DATE: 9/14/98 LOGGED BY: RKS PAGE 3 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				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)
55	60	100	100	96										
60	65	100	98	84										
65	70	98	100	96										
70	75	100	100	100										
75	80	100	85	64										
80	85	100	104	82										
85	90	100	100	82										
90	95	100	108	96										
95	100	100	101	98										
100	105	100	102	84										
105	110	100	100	98										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-283-98 DATE: 9/14/98 LOGGED BY: RKS PAGE 3 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				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)
110	115	100	100	100										
115	120	100	96	90										
120	125	100	96	84										
125	130	100	105	82										
130	135	106	101	100										
135	140	100	100	60										
140	145	100	96	72										
145	150	100	101	100										
150	155	100	92	88										
155	160	98	98	82										
160	164	100	98	98										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-238-98 DATE: 9/14/98 LOGGED BY: RKS PAGE 4 OF 6

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	ROD	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)
164	167	100	100	78										
167	172	100	95	71										
172	176	100	109	92										
176	181	100	100	96										
181	186	100	94	100										
186	188	100	100	100										
188	191	100	102	94										
191	196	100	98	100										
196	201	100	104	98										
201	206	100	100	90										
206	211	100	96	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-283-98 DATE: 9/14/98 → 9/15/98 LOGGED BY: RKS PAGE 5 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				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)
211	216	100	101	96										
216	221	100	100	100										
221	226	100	100	98										
226	231	100	102	96										
231	236	100	100	92										
236	241	100	99	100										
241	246	100	100	100										
246	250	100	96	95										
250	255	96	102	92										
255	260	98	92	98										
260	265	96	100	89										

4.9
4.9

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-283-98 DATE: 9/15/98 LOGGED BY: RKS PAGE 6 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				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)
265	270	95	100	51										
270	275	99	89	60										
275	277	100	100	65										
277	280	98	96	0										
280	285	100	104	86										
285	290	100	102	100										
290	295	100	100	96										
295	300	100	101	86										
~	TD	~	~	~										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP0550645

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-283-98 RECEIVED : 18 SEP 1998

No. SAMPLES : 65 REPORTED : 30 SEP 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.

09/30/1998 15:10 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050645

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 30 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-283-98 00-05	0.002			0.03
D-283-98 05-10	0.011			0.02
D-283-98 10-15	0.005			<0.02
D-283-98 15-20	0.106		0.112	0.05
D-283-98 20-23	0.002			0.02
D-283-98 23-25	0.002			0.03
D-283-98 25-30	0.004			0.05
D-283-98 30-35	0.010			0.05
D-283-98 35-40	0.002			0.04
D-283-98 40-45	0.002			0.03
D-283-98 45-50	0.001			0.02
D-283-98 50-55	<0.001			0.02
D-283-98 55-60	<0.001			<0.02
D-283-98 60-65	<0.001			<0.02
D-283-98 65-70	<0.001			<0.02
D-283-98 70-75	0.009			0.02
D-283-98 75-80	0.004			0.02
D-283-98 80-85	0.002			0.07
D-283-98 85-90	<0.001			0.05
D-283-98 90-95	<0.001			0.04
D-283-98 95-97	0.002			0.10
D-283-98 97-100	0.001			0.03
D-283-98 100-105	0.001			<0.02
D-283-98 105-110	0.002			0.02
D-283-98 110-111	0.003			0.04

09/30/1998 15:10 7023561413 AMERICAN ASSAY LABS PAGE 02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050645

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 30 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-283-98 111-115	0.008			0.05
D-283-98 115-120	0.002			0.05
D-283-98 120-125	0.002			0.03
D-283-98 125-130	0.001			0.05
D-283-98 130-135	0.002			0.05
D-283-98 135-140	0.002			0.04
D-283-98 140-145	0.005			0.06
D-283-98 145-150	0.028			0.05
D-283-98 150-155	0.047			0.05
D-283-98 155-160	0.002			<0.02
D-283-98 160-164	<0.001			<0.02
D-283-98 164-167	<0.001			<0.02
D-283-98 167-172	<0.001			<0.02
D-283-98 172-176	<0.001			<0.02
D-283-98 176-181	<0.001			<0.02
D-283-98 181-186	<0.001			<0.02
D-283-98 186-191	<0.001			<0.02
D-283-98 191-196	0.014			0.15
D-283-98 196-201	0.001			0.08
D-283-98 201-206	0.002			0.12
D-283-98 206-211	0.015			0.05
D-283-98 211-216	0.002			0.03
D-283-98 216-221	<0.001			<0.02
D-283-98 221-226	0.001			<0.02
D-283-98 226-231	0.018			0.03

09/30/1998 15:10 7023561413 AMERICAN ASSAY LABS PAGE 03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050645

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 30 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-283-98 231-236	0.157		0.127	0.05
D-283-98 236-241	0.077		0.053	0.04
D-283-98 241-246	0.033			0.04
D-283-98 246-250	0.007			0.03
D-283-98 250-255	<0.001			0.02
D-283-98 255-260	<0.001			<0.02
D-283-98 260-265	<0.001			<0.02
D-283-98 265-270	<0.001			<0.02
D-283-98 270-275	<0.001			<0.02
D-283-98 275-280	<0.001			<0.02
D-283-98 280-285	<0.001			<0.02
D-283-98 285-290	0.001			<0.02
D-283-98 290-295	<0.001			0.02
D-283-98 295-300	<0.001			<0.02
40526	0.120			2.61

09/30/1998 15:10 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 0050645-IN
INVOICE DATE: 10/01/98

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-283-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
65	SAMPLES RECEIVED	.00	.00
64	DRYING	1.00	64.00
64	JAW CRUSHING CHARGE	1.30	83.20
64	COARSE MILLING CHARGE	4.50	288.00
64	SPLITTING CHARGE	2.40	153.60
64	RING MILLING CHARGE	2.00	128.00
65	Au (1 A.T. FIRE ASSAY)	8.00	520.00
3	Au ANALYSES/GRAVIMETRIC	8.75	26.25
65	HYDROCHLORIC/NITRIC DIGESTION	2.00	130.00
65	Ag ANALYSES	1.00	65.00

86-5110-477
AA

NET INVOICE:	1,458.05
LESS DISCOUNT:	291.61
FREIGHT:	.00
INVOICE TOTAL:	1,166.44

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

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-283-98 RECEIVED : 18 SEP 1998

No. SAMPLES : 65 REPORTED : 1 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 SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 00-05	0.002			0.03
D-283-98 05-10	0.011			0.02
D-283-98 10-15	0.005			<0.02
D-283-98 15-20	0.106		0.112	0.05
D-283-98 20-23	0.002			0.02
D-283-98 23-25	0.002			0.03
D-283-98 25-30	0.004			0.05
D-283-98 30-35	0.010			0.05
D-283-98 35-40	0.002			0.04
D-283-98 40-45	0.002			0.03
D-283-98 45-50	0.001			0.02
D-283-98 50-55	<0.001			0.02
D-283-98 55-60	<0.001			<0.02
D-283-98 60-65	<0.001			<0.02
D-283-98 65-70	<0.001			<0.02
D-283-98 70-75	0.009			0.02
D-283-98 75-80	0.004			0.02
D-283-98 80-85	0.002			0.07
D-283-98 85-90	<0.001			0.05
D-283-98 90-95	<0.001			0.04
D-283-98 95-97	0.002			0.10
D-283-98 97-100	0.001			0.03
D-283-98 100-105	0.001			<0.02
D-283-98 105-110	0.002			0.02
D-283-98 110-111	0.003			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 111-115	0.008			0.05
D-283-98 115-120	0.002			0.05
D-283-98 120-125	0.002			0.03
D-283-98 125-130	0.001			0.05
D-283-98 130-135	0.002			0.05
D-283-98 135-140	0.002			0.04
D-283-98 140-145	0.005			0.06
D-283-98 145-150	0.028			0.05
D-283-98 150-155	0.047			0.05
D-283-98 155-160	0.002			<0.02
D-283-98 160-164	<0.001			<0.02
D-283-98 164-167	<0.001			<0.02
D-283-98 167-172	<0.001			<0.02
D-283-98 172-176	<0.001			<0.02
D-283-98 176-181	<0.001			<0.02
D-283-98 181-186	<0.001			<0.02
D-283-98 186-191	<0.001			<0.02
D-283-98 191-196	0.014			0.15
D-283-98 196-201	0.001			0.08
D-283-98 201-206	0.002			0.12
D-283-98 206-211	0.015			0.05
D-283-98 211-216	0.002			0.03
D-283-98 216-221	<0.001			<0.02
D-283-98 221-226	0.001			<0.02
D-283-98 226-231	0.018			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 231-236	0.157		0.127	0.05
D-283-98 236-241	0.077		0.053	0.04
D-283-98 241-246	0.033			0.04
D-283-98 246-250	0.007			0.03
D-283-98 250-255	<0.001			0.02
D-283-98 255-260	<0.001			<0.02
D-283-98 260-265	<0.001			<0.02
D-283-98 265-270	<0.001			<0.02
D-283-98 270-275	<0.001			<0.02
D-283-98 275-280	<0.001			<0.02
D-283-98 280-285	<0.001			<0.02
D-283-98 285-290	0.001			<0.02
D-283-98 290-295	<0.001			0.02
D-283-98 295-300	<0.001			<0.02
40526	0.120			2.61

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

American Assay Laboratories

PO BOX 11850
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-283-98 RECEIVED : 18 SEP 1998

No. SAMPLES : 65 REPORTED : 1 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 SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 00-05	0.002			0.03
D-283-98 05-10	0.011			0.02
D-283-98 10-15	0.005			<0.02
D-283-98 15-20	0.106		0.112	0.05
D-283-98 20-23	0.002			0.02
D-283-98 23-25	0.002			0.03
D-283-98 25-30	0.004			0.05
D-283-98 30-35	0.010			0.05
D-283-98 35-40	0.002			0.04
D-283-98 40-45	0.002			0.03
D-283-98 45-50	0.001			0.02
D-283-98 50-55	<0.001			0.02
D-283-98 55-60	<0.001			<0.02
D-283-98 60-65	<0.001			<0.02
D-283-98 65-70	<0.001			<0.02
D-283-98 70-75	0.009			0.02
D-283-98 75-80	0.004			0.02
D-283-98 80-85	0.002			0.07
D-283-98 85-90	<0.001			0.05
D-283-98 90-95	<0.001			0.04
D-283-98 95-97	0.002			0.10
D-283-98 97-100	0.001			0.03
D-283-98 100-105	0.001			<0.02
D-283-98 105-110	0.002			0.02
D-283-98 110-111	0.003			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 111-115	0.008			0.05
D-283-98 115-120	0.002			0.05
D-283-98 120-125	0.002			0.03
D-283-98 125-130	0.001			0.05
D-283-98 130-135	0.002			0.05
D-283-98 135-140	0.002			0.04
D-283-98 140-145	0.005			0.06
D-283-98 145-150	0.028			0.05
D-283-98 150-155	0.047			0.05
D-283-98 155-160	0.002			<0.02
D-283-98 160-164	<0.001			<0.02
D-283-98 164-167	<0.001			<0.02
D-283-98 167-172	<0.001			<0.02
D-283-98 172-176	<0.001			<0.02
D-283-98 176-181	<0.001			<0.02
D-283-98 181-186	<0.001			<0.02
D-283-98 186-191	<0.001			<0.02
D-283-98 191-196	0.014			0.15
D-283-98 196-201	0.001			0.08
D-283-98 201-206	0.002			0.12
D-283-98 206-211	0.015			0.05
D-283-98 211-216	0.002			0.03
D-283-98 216-221	<0.001			<0.02
D-283-98 221-226	0.001			<0.02
D-283-98 226-231	0.018			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050645

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-283-98

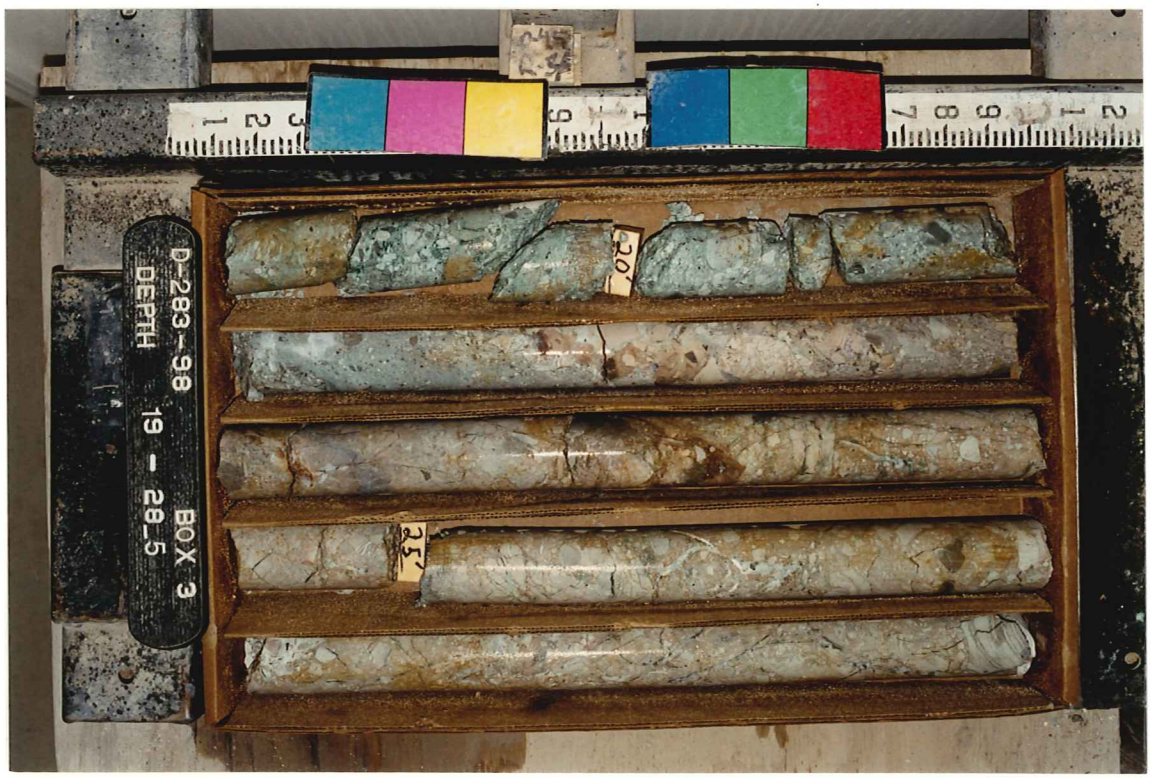
REPORTED : 1 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-283-98 231-236	0.157		0.127	0.05
D-283-98 236-241	0.077		0.053	0.04
D-283-98 241-246	0.033			0.04
D-283-98 246-250	0.007			0.03
D-283-98 250-255	<0.001			0.02
D-283-98 255-260	<0.001			<0.02
D-283-98 260-265	<0.001			<0.02
D-283-98 265-270	<0.001			<0.02
D-283-98 270-275	<0.001			<0.02
D-283-98 275-280	<0.001			<0.02
D-283-98 280-285	<0.001			<0.02
D-283-98 285-290	0.001			<0.02
D-283-98 290-295	<0.001			0.02
D-283-98 295-300	<0.001			<0.02
40526	0.120			2.61

D-283-98	0	80.75	126.7
	200	81	126.7
	300	80	124.7

15'
10'
D-283-98 BOX 2
DEPTH 9_5 - 19

5'
D-283-98 BOX 1
DEPTH 0 - 9_5


20'
25'
D-283-98 BOX 3
DEPTH 19 - 28_5

40'
45'
D-283-98 BOX 5
DEPTH 38 - 46_5

30'
35'
D-283-98 BOX 4
DEPTH 28_5 - 38

50'
55'
D-283-98 BOX 6
DEPTH 46_5 - 56

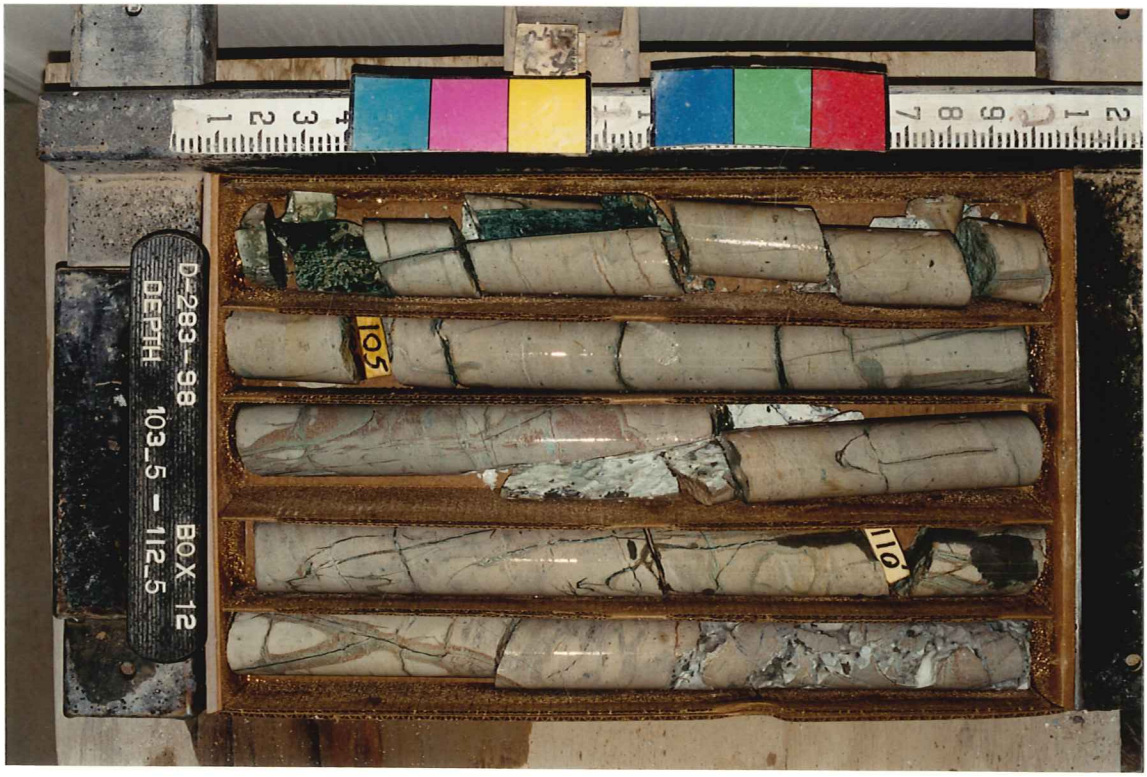
70'
D-283-98 BOX 8
DEPTH 65_5 - 75

65'
60'
D-283-98 BOX 7
DEPTH 56 - 65_5

75'
80'
D-283-98 BOX 9
DEPTH 75 - 84_5

95
100
D-283-98 BOX 11
DEPTH 94 - 103_5

90
85
D-283-98 BOX 10
DEPTH 84_5 - 94


105
110
D-283-98 BOX 12
DEPTH 103_5 - 112_5

D-283-98 BOX 14
DEPTH 122 - 131_5
125
130

D-283-98 BOX 13
DEPTH 112_5 - 122
115
120

D-283-98 BOX 15
DEPTH 131_5 - 140_5
135
140

155'
D-283-98 BOX 17
DEPTH 150 - 160

150'
D-283-98 BOX 16
DEPTH 140_5 - 150

160'
164'
167'
D-283-98 BOX 18
DEPTH 160 - 169_5

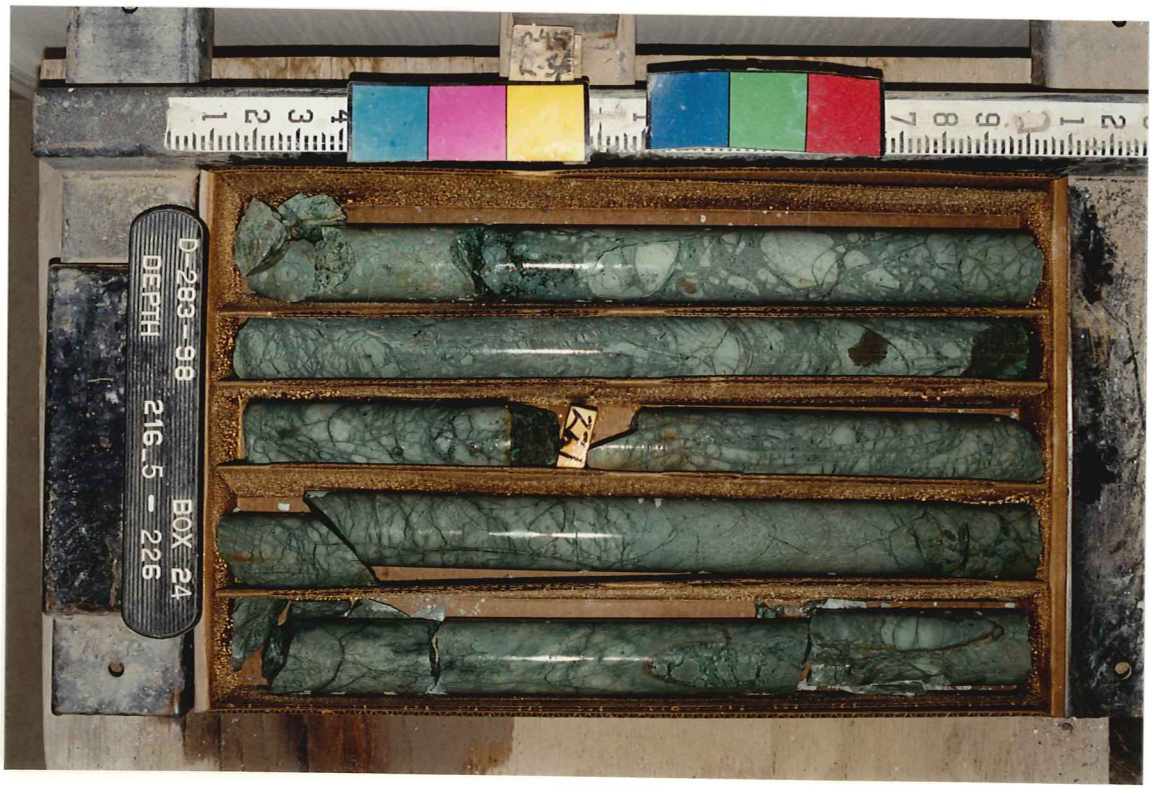
188
186
181
D-283-98 BOX 20
DEPTH 179 - 188_5

176
172
D-283-98 BOX 19
DEPTH 169_5 - 179

191
196
D-283-98 BOX 21
DEPTH 188_5 - 198

211
216
D-283-98 BOX 23
DEPTH 207_5 - 216_5

201
206
D-283-98 BOX 22
DEPTH 198 - 207_5


D-283-98 BOX 24
DEPTH 216_5 - 226

236
241
D-283-98 BOX 26
DEPTH 235 - 244

231
226
D-283-98 BOX 25
DEPTH 226 - 235

246
D-283-98 BOX 27
DEPTH 244 - 254

270'
265
D-283-98 BOX 29
DEPTH 263 - 272

255
260
D-283-98 BOX 28
DEPTH 254 - 263

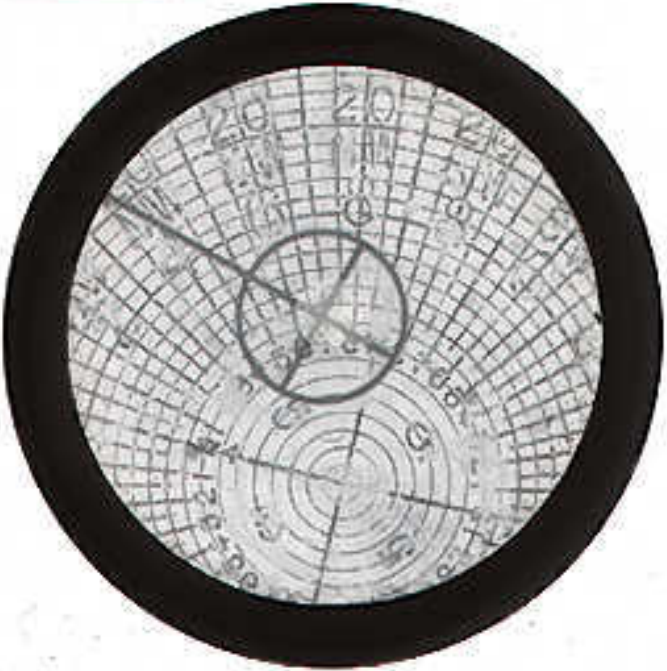
275
277
280
D-283-98 BOX 30
DEPTH 272 - 282

295
D-283-98 BOX 32
DEPTH 291_5 - 300 TD

285
290
D-283-98 BOX 31
DEPTH 282 - 291_5

SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D 283-98
LEASE
TAKEN BY BAMFORD
DEPTH COLLAR
DATE 7-28-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D 28398
LEASE
TAKEN BY BAMFORD
DEPTH 200
DATE 7-2898
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

20
NW
20
NW
20
NW

SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D 283-98
LEASE
TAKEN BY BAMFORD
DEPTH 360
DATE 7-28-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408