60001221

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-321-98
AUTHOR	S. King; K. Allen; Whitney
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 243' receipt; handwritten notes; downhole camera images 32p. 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: DD 5/14/08
Initials Date
DB: mah
Initials Date
SCANNED: NB
Initials Date

Revised: 1/22/08

D-321-98

60001221 4010

6000 1221

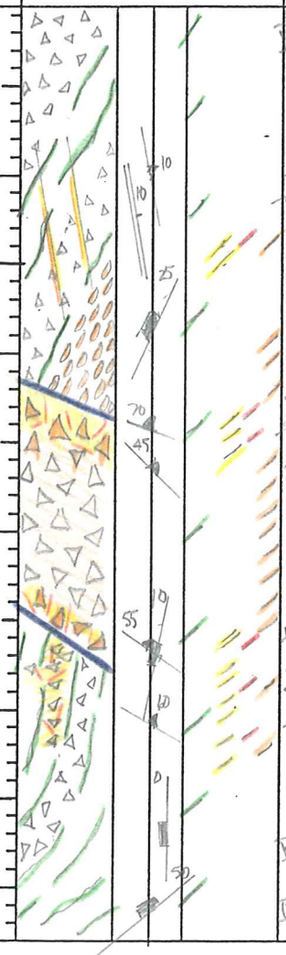
Hecla MINING COMPANY

- 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 321-98	LOCATION	Stope 50 Access, Section 1700
PAGE 1 OF		NORTHING	
DATE	11-06-98	EASTING	
LOGGED BY	Whitney	ELEVATION	
SCALE	1" = 10'	AZIMUTH	125°
TOTAL DEPTH	243'	INCLINATION	32°

REMARKS

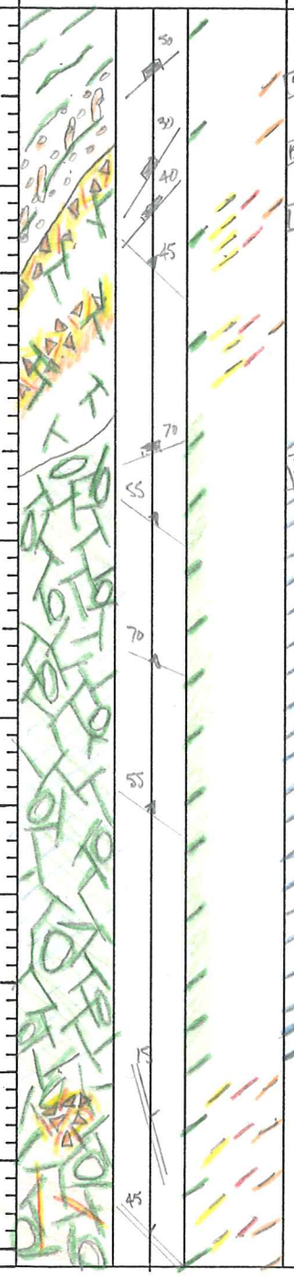
TH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0–61		PLANAR/LAMINAR med tan-gry fg volc. pronounced foliation. [1-7] bx. monolithic. P/L clasts-angular-in volc(?) matrix → autobx? [12.7-17.6] bx. monolithic - as previous [19.6-22.3] densely packed vesicles <2 mm.	10 20		[0-10] fx uncommon 70°, 40° to CA [9] fol. 25° to CA [10-22.3] common fx 5, 10, 45 to CA	[13.5-14.5] zone of 4 q-cly-marc-py veins, hairline to ½". 10° to CA. Accompanied by opaline vfg dk-S- that continues to 17'. [22.3-25] Si-replaced bx matrix. ± S- (~1%)
		22.3-35.9 FAULT brecciated to gouge. wk-str drg. clasts angular to rnk. size pebble to 6". spotty silicif w/ marcas-pyr. - as matrix replace	30		[22.3] cte(?) 70° to CA [22.3-35.9] common fx 10, 30, 45, 55, 70 to CA	[35] 4" Si-replaced bx matrix ~1% S-.
		[44-48] bx. monolithic. - as previous - autobx.	40 50		[35.9] cte(?) 55° to CA [36] fol. 10° to CA [35.9-75.5] uncommon fx 5, 60, 45 to CA [48] fol. // to CA [50] fol. 50° to CA	[37-43] zone of q-cly-±S- veins & bx matrix, both marc. & py. little alg to clasts

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	5					
5	9					
9	12.7					
12.7	17.6					
17.6	22.3					
22.3	26.5					
26.5	31.2					
31.2	35.9					
35.9	40					
40	44					
44	49					
49	53					

HOLE NUMBER D-321-98 PAGE 2 OF 4

DEPTH	OX/RED.	LITHOLOGY	STRUCTURE	ALTERATION AND MINERALIZATION
0-61		PLANAR/LAMINAR [55-61] vesicular [57-60] weakly developed wormy texture	[53] fol. 50° to CA [59] fol. 30° to CA [61] cte 40° to CA	[61-64] q-py-mare. crackle bx matrix. clasts wkly arg'd.
61-75.5		FINE-GRAINED MASSIVE med tan-gry, vfg volc aric. nonfoliated. distinguishing feature is crackle bx pattern. numerous small clots of chlorite - after lithics(?)		[68-70] q-py-mare crackle bx matrix. clasts mod arg'd.
75.5-121.2		VITROPHYRE med tan-gry, vfg, dense volc. nonfoliated. distinguishing feature is conchoidal crackle bx pattern, cores of crackle blocks contain devitrif.(?) xl masses - qtz & feldspar(?) & calcite. - wkly propylitic [111-] bx 6". shattered.	[75.5] cte 70° to CA [75.5+] rare fx 55,70° to CA	[75.5-] unmin'd. wkly-mod chloritic. calcareous - in hairline vnlts & disseminated [109] end calcite [111-119] several q-py-cly vnlts. 15,30,45,70 to CA. hairline to ¼".

GRAPHIC LOG



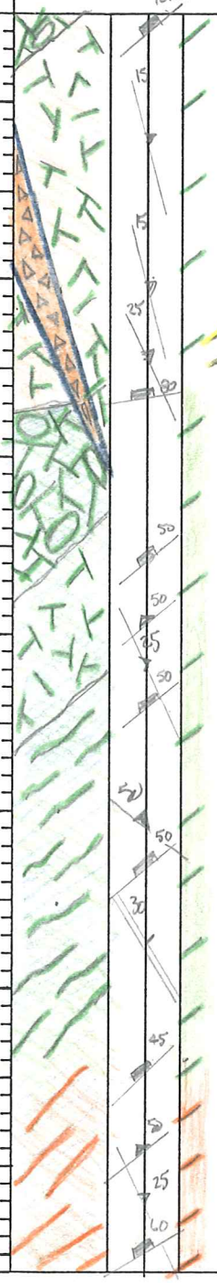
ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
49	53				
53	57				
57	61				
61	65				
65	69				
69	70.8				
70.8	75.5				
75.5	79				
79	84				
84	89				
89	94				
94	99				
99	104				
104	109				
109	114				
114	119				
119	121.2				

HOLE NUMBER D 321-98 PAGE 3 OF 4

LITH.	OX/RED.	LITHOLOGY
75.5 – 121.2		VITROPHYRE
121.2 – 142		FINE GRAINED MASSIVE med tan-grey, vfg vole as described previous, thin w/ chlorite clots to 12mm, possibly altd lithics. 135.4 - 139.4 FAULT gouge & silicified gouge & bx few ss.
142 - 151		VITROPHYRE as described previous. typical
151 - 159.5		FINE-GRAINED MASSIVE transitional to planar/laminar. - coarser than normal & occasional hint of foliation
159.5 - 221		PLANAR/LAMINAR 171-196.3 becomes dense, vfg, v. faintly foliated. transitional to FGM texture. 177-196 med rd. brn, dull hematitic stain, pervasive, w/ brighter, more or-red hemat on fks/vnlts.

FT



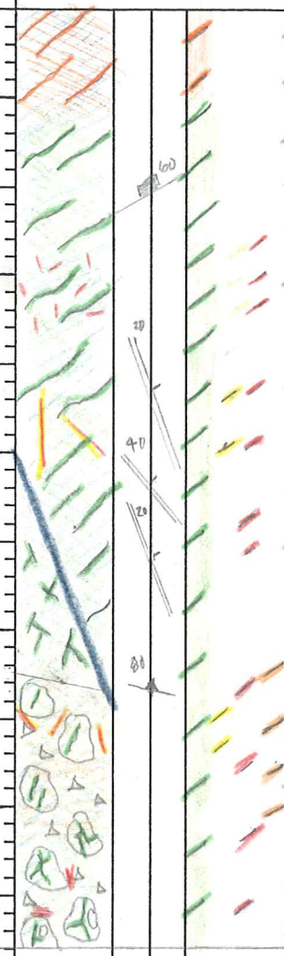
GRAPHIC LOG

STRUCTURE	ALTERATION AND MINERALIZATION
121.2 ctc 50° to CA	
125 fx common 15°, 60° to CA	
135.4 flt ctc 15° to CA SHATTERED	
139.4 flt ctc 25° to CA	
142 ctc 80° to CA	139.4 restart calcite - hairline vnlts & dissem. continue to TD
139.4 fx become bxe 25°, 60° against fol. 1 set w/ foliation	
151 ctc 50° to CA	
159.5 ctc 50° to CA	
161 fol. 50° to CA	
165 fol 50° to CA	
170 fol. 50° to CA	172.2 calcite matrix bx vnlt 30° to CA. 2" wide
180 fol. 45° to CA	179 end chlorite start hematitic stain dull
190 fol 60° to CA	

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
119	121.2				
121.2	125				
125	129				
129	132				
132	135.4				
135.4	139.4				
139.4	142				
142	146				
146	151				
151	155				
155	159.5				
159.5	164				
164	169				
169	174				
174	179				
179	184				
184	189				
189	194				

HOLE NUMBER D 321-98 PAGE 4 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
159.5–221		PLANAR/LAMINAR 196.3-199 med–crse textured w/ prominent foliation. 199 restart dense, faintly foliated	200 210 220 230 240 250 260		200 fol 60° to CA. 210 fol 60° to CA 218 fol 50° to CA 221 ctc is vnlt @ 20° to CA. 227.5 bx ctc 80° to CA	196 restart chlorite and hemat. 203-207 1-3% vfg mercos in hairline, dendritic vnlts; also rare regular vnlts & splotches, wkly bleached 207-211.4 ~ rare 211.4-214.5 wk bleaching w/ numerous hairline to ½" q-chl-py vnlts, 20°, 40° & crackle 218-221.5 several calc-q-hemat-chlor ± ~ vnlts. irregular. hairline to ½". 228.3-236 wk arg. common grey wavy chl-pyr vnlts. rare q-calc bx matrix & vnlts. 238.5-240.5 splotchy vfg-fg pyr. 1 calcite vnlt, 1" 20° to CA.
221–243 TD		FINEGRAINED MASSIVE (?) generally as described prev. this w/o chloritic clots. Crackle bx prominent, but also rare, faint foliation. Transitional texture. 227.5-TD bx. variable texture. Clast support to matrix support. Clasts angular to rnd. size crse sand to 1' blocks. Monolithic, but text from Plmflam to FGM to vitrophyre 240-TD – clasts are vitrophyre. appears to be auto bx (?) 243 TD				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
189	194				
194	199				
199	203				
203	205				
205	207				
207	209.3				
209.3	211.5				
211.5	214				
214	218.5				
218.5	221.5				
221.5	224.5				
224.5	227.5				
227.5	230.5				
230.5	233				
233	235.5				
235.5	238				
238	241				
241	243				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D 321-98 DATE: 11-06-98 LOGGED BY: WHITNEY PAGE 1 OF 3

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	80	90	26										
5	9	83	83	13										
9	14	82	96	12										
14	19	86	100	52										
19	24	96	100	8										
24	34	72	100	0										
34	44	87	95	24										
44	49	88	100	36										
49	57	91	96	13										
57	59	70	70	0										
59	69	72	92	12										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D 321-98 DATE: 11-06-98 LOGGED BY: WHITNEY PAGE 2 OF 3

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)
69	74	90	100	20										
74	79	91	106	68										
79	89	95	95	78										
89	99	98	98	74										
99	109	99	99	84										
109	119	92	92	59										
119	129	91	100	46										
129	132	88	113	68										
132	138	63	88	19										
138	141	86	117	42										
141	148	92	92	72										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D 321-98 DATE: 11-07-98 LOGGED BY: WHITNEY PAGE 3 OF 3

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)
148	153	92	ground core 92	62										
153	159	87	ground core 87	56										
159	169	100	100	65										
169	179	92	97	30										
179	189	97	97	9										
189	199	98	98	46										
199	207	78	88	16										
207	214	88	93	0										
214	223	81	89	35										
223	233	93	102	50										
233	243 TD	98	100	73										

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 0051562-IN
INVOICE DATE: 11/30/98

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-321-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
63	SAMPLES RECEIVED	.00	.00
62	DRYING	1.00	62.00
62	JAW CRUSHING CHARGE	1.30	80.60
62	COARSE MILLING CHARGE	4.50	279.00
62	SPLITTING CHARGE	2.40	148.80
62	RING MILLING CHARGE	2.00	124.00
63	Au (1 A.T. FIRE ASSAY)	8.00	504.00
63	HYDROCHLORIC/NITRIC DIGESTION	2.00	126.00
63	Ag ANALYSES	1.00	63.00

5110-477
86-
KM

NET INVOICE:	1,387.40
LESS DISCOUNT:	277.48
FREIGHT:	.00
INVOICE TOTAL:	1,109.92

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

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-321-98 RECEIVED : 13 NOV 1998

No. SAMPLES : 63 REPORTED : 13 NOV 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
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 0-5	<0.001		<0.02
D-321-98 5-9	<0.001		<0.02
D-321-98 9.0-12.7	<0.001		<0.02
D-321-98 12.7-17.6	0.014		0.02
D-321-98 17.6-22.3	0.003	0.003	0.04
D-321-98 22.3-26.5	0.003		0.03
D-321-98 26.5-31.2	0.003		<0.02
D-321-98 31.2-35.9	0.004		0.02
D-321-98 35.9-40.0	0.002		<0.02
D-321-98 40-44	0.004		0.04
D-321-98 44-49	0.001		<0.02
D-321-98 49-53	0.001		<0.02
D-321-98 53-57	<0.001		<0.02
D-321-98 57-61	0.001		<0.02
D-321-98 61-65	0.003		0.02
D-321-98 65-69	0.006		0.03
D-321-98 69.0-70.8	0.002		<0.02
D-321-98 70.8-75.5	<0.001		<0.02
D-321-98 75.5-79.0	<0.001	<0.001	<0.02
D-321-98 79-84	<0.001		<0.02
D-321-98 84-89	<0.001		<0.02
D-321-98 89-94	<0.001		<0.02
D-321-98 94-99	<0.001		<0.02
D-321-98 99-104	<0.001		<0.02
D-321-98 104-109	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 109-114	0.002		0.02
D-321-98 114-119	0.004		0.03
D-321-98 119.0-121.2	0.001	<0.001	0.03
D-321-98 121.2-125.0	0.001		0.02
D-321-98 125-129	<0.001		<0.02
D-321-98 129-132	<0.001		<0.02
D-321-98 132.0-135.4	0.002		0.02
D-321-98 135.4-139.4	0.002		<0.02
D-321-98 139.4-142.0	<0.001		<0.02
D-321-98 142-146	<0.001		<0.02
D-321-98 146-151	<0.001		<0.02
D-321-98 151-155	<0.001		0.02
D-321-98 155.0-159.5	<0.001		<0.02
D-321-98 159.5-164.0	0.005		<0.02
D-321-98 164-169	<0.001	<0.001	<0.02
D-321-98 169-174	<0.001		<0.02
D-321-98 174-179	<0.001		<0.02
D-321-98 179-184	<0.001		<0.02
D-321-98 184-189	<0.001		<0.02
D-321-98 189-194	<0.001		<0.02
D-321-98 194-199	<0.001		<0.02
D-321-98 199-203	<0.001		<0.02
D-321-98 203-205	<0.001		0.03
D-321-98 205-207	<0.001		<0.02
D-321-98 207.0-209.3	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 209.3-211.5	<0.001		<0.02
D-321-98 211.5-214.0	0.011		0.11
D-321-98 214.0-218.5	<0.001		<0.02
D-321-98 218.5-221.5	<0.001		<0.02
D-321-98 221.5-224.5	<0.001		<0.02
D-321-98 224.5-227.5	<0.001		<0.02
D-321-98 227.5-230.5	<0.001		<0.02
D-321-98 230.5-233.0	<0.001		<0.02
D-321-98 233.0-235.5	<0.001		<0.02
D-321-98 235.5-238.0	<0.001		<0.02
D-321-98 238-241	<0.001		<0.02
D-321-98 241-243	<0.001		<0.02
46595	0.508		5.16

xAMERICAN ASSAY LABORATORIES
ANALYSIS REPORT SP051562

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-321-98 RECEIVED : 13 NOV 1998

No. SAMPLES : 63 REPORTED : 13 NOV 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
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 0-5	<0.001		<0.02
D-321-98 5-9	<0.001		<0.02
D-321-98 9.0-12.7	<0.001		<0.02
D-321-98 12.7-17.6	0.014		0.02
D-321-98 17.6-22.3	0.003	0.003	0.04
D-321-98 22.3-26.5	0.003		0.03
D-321-98 26.5-31.2	0.003		<0.02
D-321-98 31.2-35.9	0.004		0.02
D-321-98 35.9-40.0	0.002		<0.02
D-321-98 40-44	0.004		0.04
D-321-98 44-49	0.001		<0.02
D-321-98 49-53	0.001		<0.02
D-321-98 53-57	<0.001		<0.02
D-321-98 57-61	0.001		<0.02
D-321-98 61-65	0.003		0.02
D-321-98 65-69	0.006		0.03
D-321-98 69.0-70.8	0.002		<0.02
D-321-98 70.8-75.5	<0.001		<0.02
D-321-98 75.5-79.0	<0.001	<0.001	<0.02
D-321-98 79-84	<0.001		<0.02
D-321-98 84-89	<0.001		<0.02
D-321-98 89-94	<0.001		<0.02
D-321-98 94-99	<0.001		<0.02
D-321-98 99-104	<0.001		<0.02
D-321-98 104-109	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 109-114	0.002		0.02
D-321-98 114-119	0.004		0.03
D-321-98 119.0-121.2	0.001	<0.001	0.03
D-321-98 121.2-125.0	0.001		0.02
D-321-98 125-129	<0.001		<0.02
D-321-98 129-132	<0.001		<0.02
D-321-98 132.0-135.4	0.002		0.02
D-321-98 135.4-139.4	0.002		<0.02
D-321-98 139.4-142.0	<0.001		<0.02
D-321-98 142-146	<0.001		<0.02
D-321-98 146-151	<0.001		<0.02
D-321-98 151-155	<0.001		0.02
D-321-98 155.0-159.5	<0.001		<0.02
D-321-98 159.5-164.0	0.005		<0.02
D-321-98 164-169	<0.001	<0.001	<0.02
D-321-98 169-174	<0.001		<0.02
D-321-98 174-179	<0.001		<0.02
D-321-98 179-184	<0.001		<0.02
D-321-98 184-189	<0.001		<0.02
D-321-98 189-194	<0.001		<0.02
D-321-98 194-199	<0.001		<0.02
D-321-98 199-203	<0.001		<0.02
D-321-98 203-205	<0.001		0.03
D-321-98 205-207	<0.001		<0.02
D-321-98 207.0-209.3	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051562

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-321-98 209.3-211.5	<0.001		<0.02
D-321-98 211.5-214.0	0.011		0.11
D-321-98 214.0-218.5	<0.001		<0.02
D-321-98 218.5-221.5	<0.001		<0.02
D-321-98 221.5-224.5	<0.001		<0.02
D-321-98 224.5-227.5	<0.001		<0.02
D-321-98 227.5-230.5	<0.001		<0.02
D-321-98 230.5-233.0	<0.001		<0.02
D-321-98 233.0-235.5	<0.001		<0.02
D-321-98 235.5-238.0	<0.001		<0.02
D-321-98 238-241	<0.001		<0.02
D-321-98 241-243	<0.001		<0.02
46595	0.508		5.16

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051562

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

NSI

CLIENT REFERENCE No: D-321-98 RECEIVED : 13 NOV 1998

No. SAMPLES : 63 REPORTED : 13 NOV 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
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051562

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-321-98 0-5	<0.001		<0.02
D-321-98 5-9	<0.001		<0.02
D-321-98 9.0-12.7	<0.001		<0.02
D-321-98 12.7-17.6	0.014		0.02
D-321-98 17.6-22.3	0.003	0.003	0.04
D-321-98 22.3-26.5	0.003		0.03
D-321-98 26.5-31.2	0.003		<0.02
D-321-98 31.2-35.9	0.004		0.02
D-321-98 35.9-40.0	0.002		<0.02
D-321-98 40-44	0.004		0.04
D-321-98 44-49	0.001		<0.02
D-321-98 49-53	0.001		<0.02
D-321-98 53-57	<0.001		<0.02
D-321-98 57-61	0.001		<0.02
D-321-98 61-65	0.003		0.02
D-321-98 65-69	0.006		0.03
D-321-98 69.0-70.8	0.002		<0.02
D-321-98 70.8-75.5	<0.001		<0.02
D-321-98 75.5-79.0	<0.001	<0.001	<0.02
D-321-98 79-84	<0.001		<0.02
D-321-98 84-89	<0.001		<0.02
D-321-98 89-94	<0.001		<0.02
D-321-98 94-99	<0.001		<0.02
D-321-98 99-104	<0.001		<0.02
D-321-98 104-109	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051562

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-321-98 109-114	0.002		0.02
D-321-98 114-119	0.004		0.03
D-321-98 119.0-121.2	0.001	<0.001	0.03
D-321-98 121.2-125.0	0.001		0.02
D-321-98 125-129	<0.001		<0.02
D-321-98 129-132	<0.001		<0.02
D-321-98 132.0-135.4	0.002		0.02
D-321-98 135.4-139.4	0.002		<0.02
D-321-98 139.4-142.0	<0.001		<0.02
D-321-98 142-146	<0.001		<0.02
D-321-98 146-151	<0.001		<0.02
D-321-98 151-155	<0.001		0.02
D-321-98 155.0-159.5	<0.001		<0.02
D-321-98 159.5-164.0	0.005		<0.02
D-321-98 164-169	<0.001	<0.001	<0.02
D-321-98 169-174	<0.001		<0.02
D-321-98 174-179	<0.001		<0.02
D-321-98 179-184	<0.001		<0.02
D-321-98 184-189	<0.001		<0.02
D-321-98 189-194	<0.001		<0.02
D-321-98 194-199	<0.001		<0.02
D-321-98 199-203	<0.001		<0.02
D-321-98 203-205	<0.001		0.03
D-321-98 205-207	<0.001		<0.02
D-321-98 207.0-209.3	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051562

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-321-98

REPORTED : 13 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-321-98 209.3-211.5	<0.001		<0.02
D-321-98 211.5-214.0	0.011		0.11
D-321-98 214.0-218.5	<0.001		<0.02
D-321-98 218.5-221.5	<0.001		<0.02
D-321-98 221.5-224.5	<0.001		<0.02
D-321-98 224.5-227.5	<0.001		<0.02
D-321-98 227.5-230.5	<0.001		<0.02
D-321-98 230.5-233.0	<0.001		<0.02
D-321-98 233.0-235.5	<0.001		<0.02
D-321-98 235.5-238.0	<0.001		<0.02
D-321-98 238-241	<0.001		<0.02
D-321-98 241-243	<0.001		<0.02
46595	0.508		5.16

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 11530
Reno, NV 89510
Telephone
(702) 356-0606
Fax
(702) 356-1413

Tucson Office
2775 E. Ganley
Tucson, AZ 85706
Telephone
(520) 294-8078
Fax
(520) 294-6352

Elko Office
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: PO BOX 2610

City WINNEMUCCA State NV Zip 89446

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

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 11/11/98 Number of Samples: 62

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [ ] Au/Ag according to Rosebud Mine Proposal

D321-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED	
0-5	65-69	129-132		194-199	238-241
5-9	69-70.8	132-135.4		199-203	241-243 TD
9-12.7	70.8-75.5	135.4-139.4		203-205	
12.7-17.6	75.5-79	139.4-142		205-207	
17.6-22.3	79-84	142-146		207-209.3	
22.3-26.5	84-89	146-151		209.3-211.5	
26.5-31.2	89-94	151-155		211.5-214	
31.2-35.9	94-99	155-159.5		214-218.5	
35.9-40	99-104	159.5-164		218.5-221.5	
40-44	104-109	164-169		221.5-224.5	
44-49	109-114	169-174		224.5-227.5	
49-53	114-119	174-179		227.5-230.5	
53-57	119-121.2	179-184		230.5-233	
57-61	121.2-125	184-189		233-235.5	
61-65	125-129	189-194		235.5-238	

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-321-98	20	30	127.2
	100	30	128.2
	200	30	129.7

D- 321-98 BOX 2
DEPTH 10 - 19

D- 321-98 BOX 1
DEPTH 0 - 10

D- 321-98 BOX 3
DEPTH 19 - 28.5

D- 321-98 BOX 5
DEPTH 37 - 46_5

D- 321-98 BOX 4
DEPTH 28_5 - 37

D- 321-98 BOX 6
DEPTH 46_5 - 55_5

D- 321-98 BOX 8
DEPTH 65 - 73_5

D- 321-98 BOX 7
DEPTH 55_5 - 65

D- 321-98 BOX 9
DEPTH 73_5 - 82

99
D- 321-98 BOX 11
DEPTH 92 - 101_5

89
D- 321-98 BOX 10
DEPTH 82 - 92

D- 321-98 BOX 12
DEPTH 101_5 - 111
109

D- 321-98
BOX 14
DEPTH 121 - 130_5
129

D- 321-98
BOX 13
DEPTH 111 - 121
119

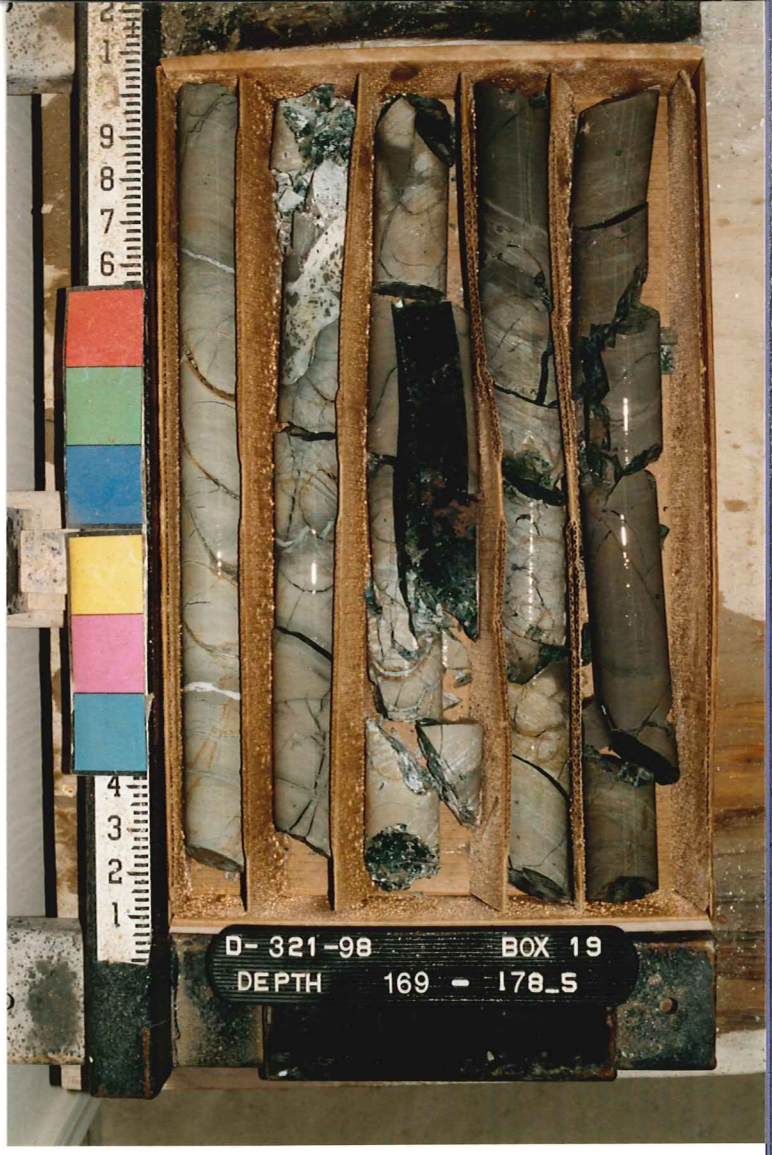
D- 321-98
BOX 15
DEPTH 130_5 - 140
132
128

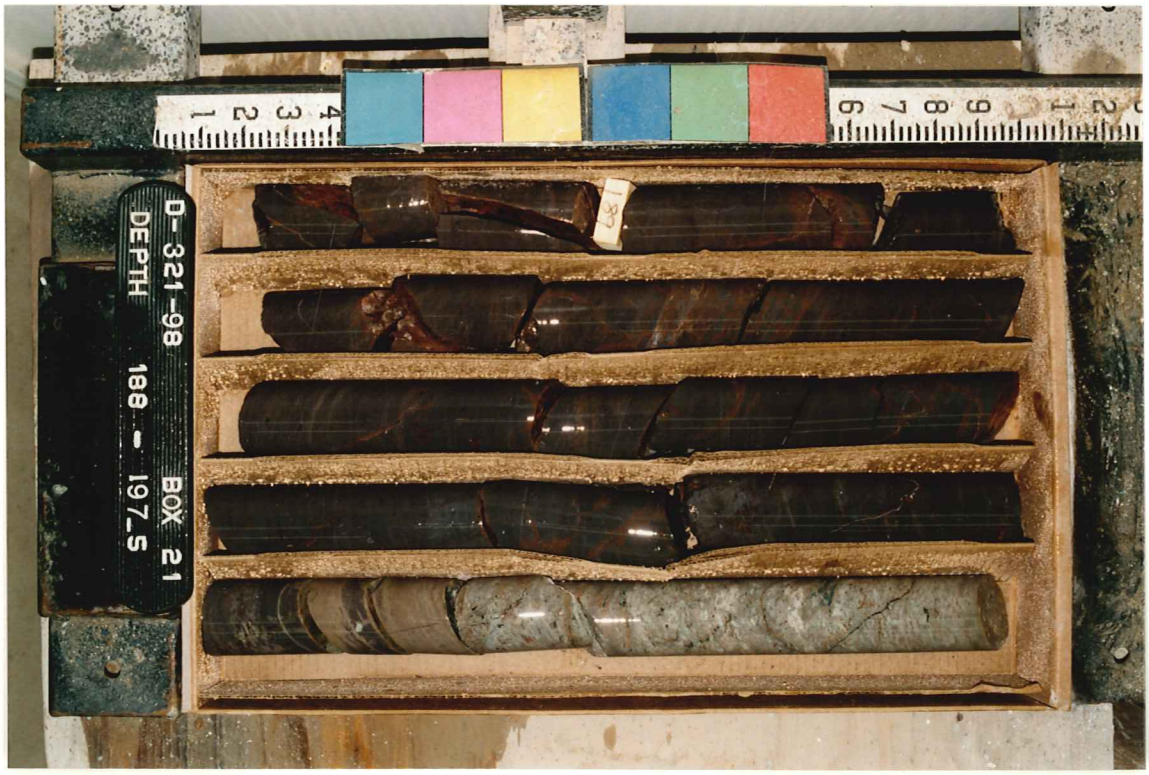
D- 321-98 BOX 17
DEPTH 147_5 - 159_5
153
159

D- 321-98 BOX 16
DEPTH 140 - 147_5
141
148

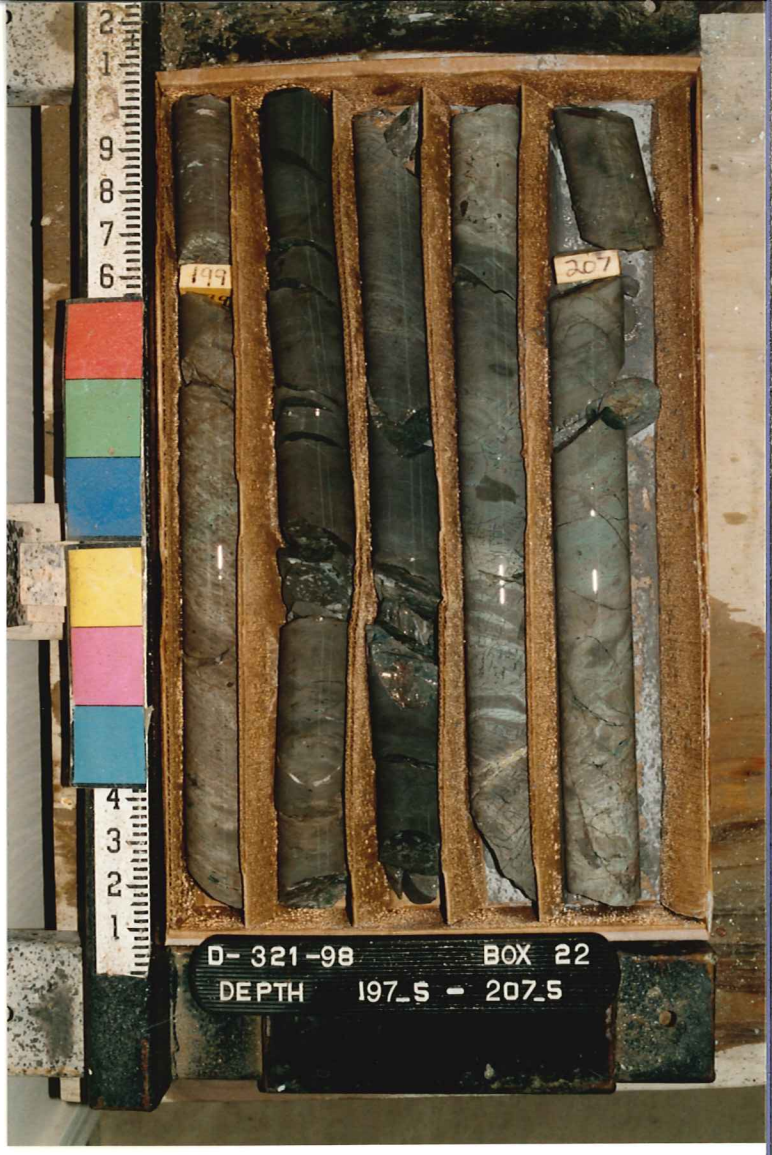
D- 321-98 BOX 18
DEPTH 159_5 - 169
169

D- 321-98 BOX 20
DEPTH 178_5 - 188


D- 321-98 BOX 19
DEPTH 169 - 178_5


D- 321-98 BOX 21
DEPTH 188 - 197_5

D- 321-98 BOX 23
DEPTH 207_5 - 217


D- 321-98 BOX 22
DEPTH 197_5 - 207_5

D- 321-98 BOX 24
DEPTH 217 - 227

243
D- 321 -98
BOX 26
DEPTH
236 - 243 TD

232
D- 321 -98
BOX 25
DEPTH
227 - 236

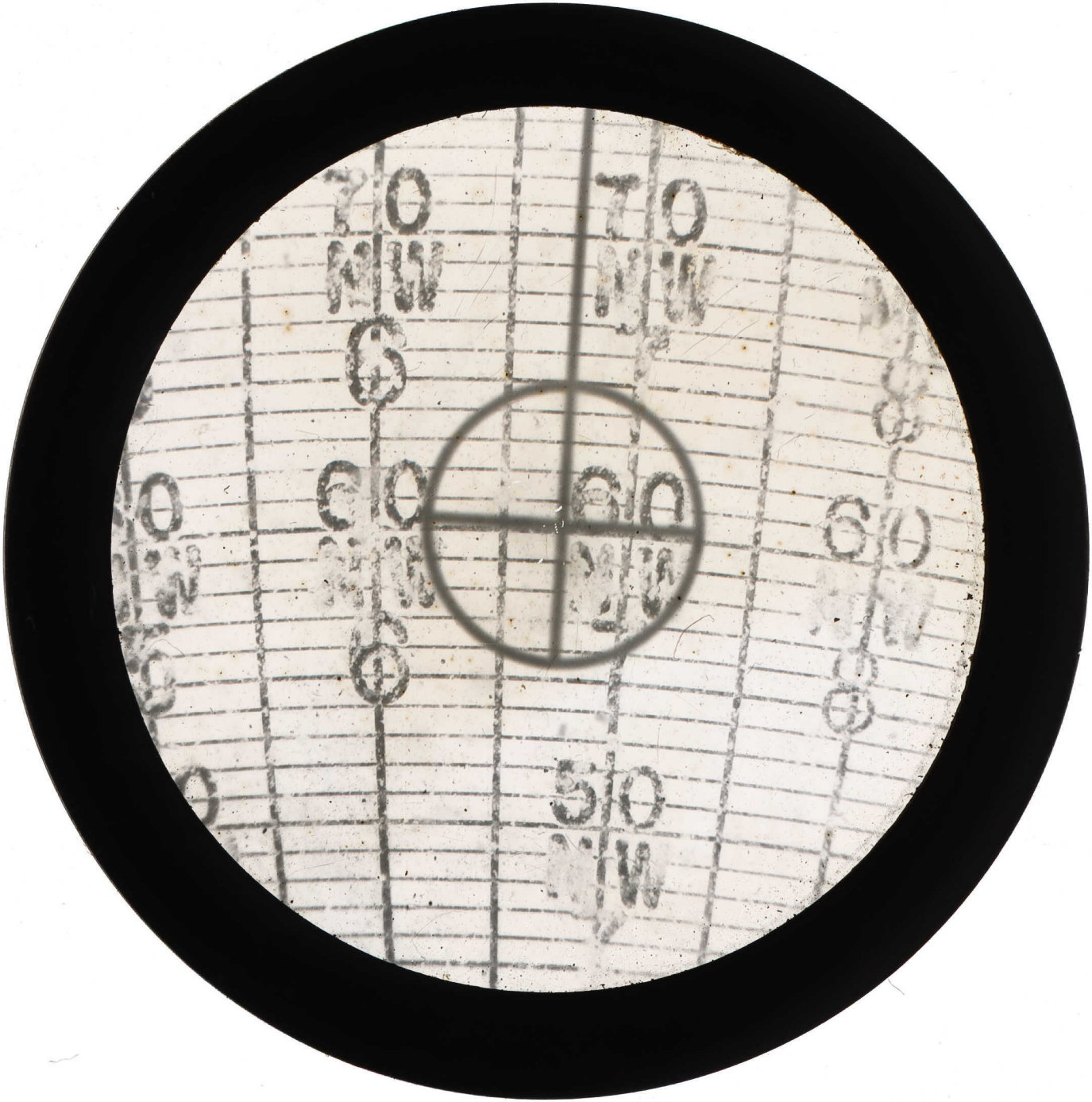
SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D32198
LEASE
TAKEN BY BAMFORD
DEPTH 20
DATE 10-4-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

70
NW
7
60
NW
6
80
NW
8
60
NW
6
80
NW
8
50
NW

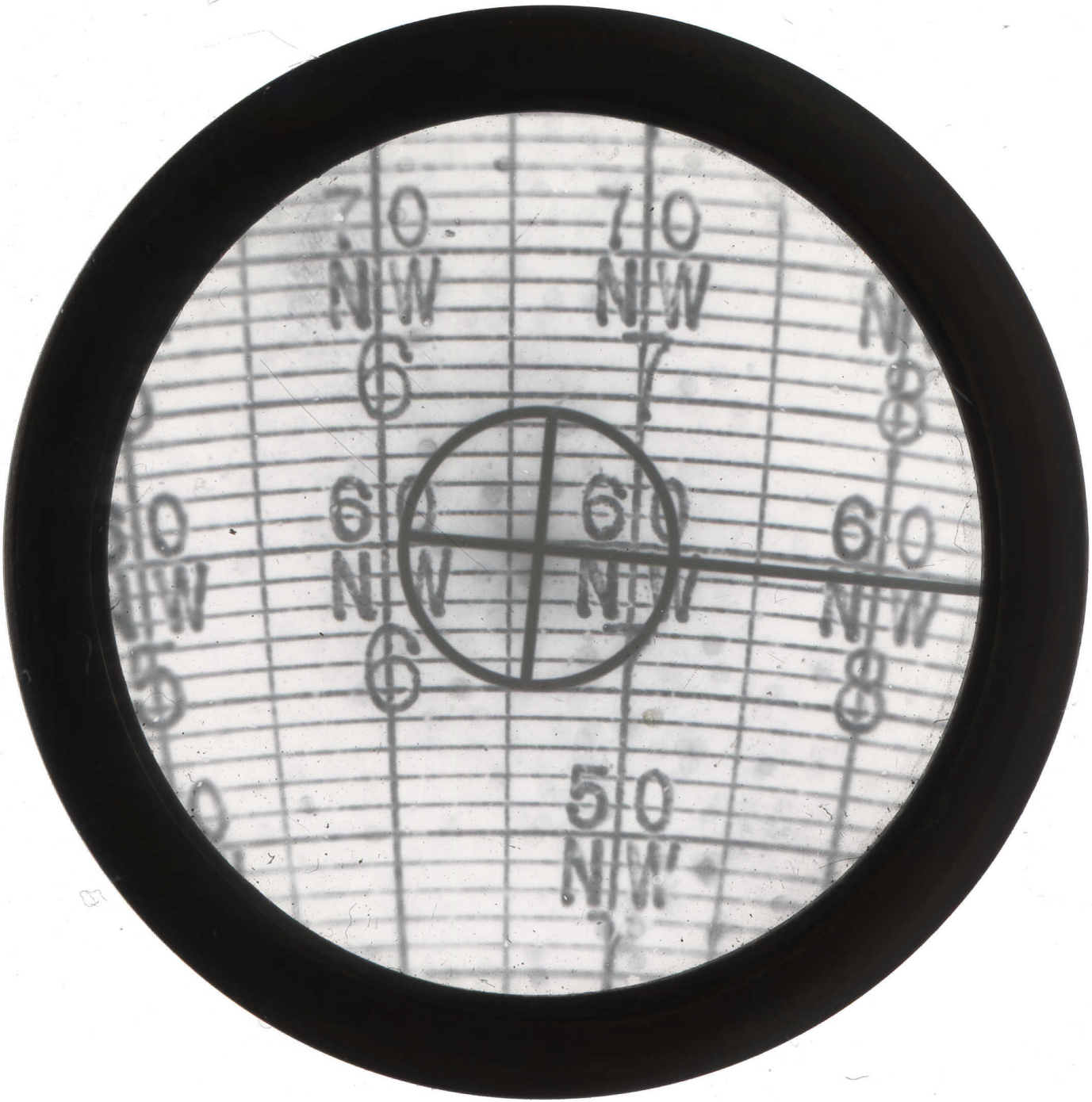
SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D32198
LEASE
TAKEN BY BAMFORD
DEPTH 100
DATE 10-4-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

COMPANY HecLA
WELL NAME D 32198
LEASE
TAKEN BY Bamford
DEPTH 200
DATE 10-4-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


70
NW
6
70
NW
7
NW
8
60
NW
6
60
NW
7
60
NW
8
50
NW