60001198

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-297-98
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 219' receipt; handwritten notes; downhole camera images 31p. 5 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:	DD	5/14/08
DB:	mah	
SCANNED:	NB	

D-297-98

60001198 4010

Hecla MINING COMPANY

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

60001198

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER D-297-98 LOCATION STOPE 50, NORTH SEC. 1550 REMARKS

PAGE 1 OF 4 NORTHING

DATE 10/12-14/98 EASTING

LOGGED BY ALLYN NILES ELEVATION

SCALE 1"=10' AZIMUTH 125°

TOTAL DEPTH 219' INCLINATION 2

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0.0 - 102.4		0.0 - 42.5			0.0-1.0 LOOSLY HEALED BXA	0.0-1.0 CEMENTED W/ QUARTZ & MOD. PYRITE.
PLANAR LAMINAR		PINKISH, VESICULAR, FINE GRAIN. FLOWS W/ PLANAR FEATURES DEFINED BY VESICLE TRAINS/ALIGNMENTS			7.0 - 37.0 MOSTLY STRONG FRACTURING, LOW RQD'S.	10.0 - 75.0 ROUND → IRREGULAR SHAPED SULFIDIC SELVAGES ASSOC. W/ SULFIDE VEINLETS & FRACTURE FILLINGS F.G. PYRITE
			10		10.0 - 18.5 STRONG VEINING, SOME VUGS & OPEN FRACTS.	10.0 - 18.5 VEINS MOSTLY HARD LT. GREEN OR WHITE CLAY W/ PYRITE, VUGS & OPEN FRACTS LINED W/ DRUZY QUARTZ, PYRITE AFTER MARC.
					15.0 - 16.2 HEALED BXA W/ SUB ANGULAR FRAGS.	
			20			
			30		30.2 - 37.5 STRONG VEINING & FRACT. FILLING.	30.2 - 37.5 VEINS & FRACTS FILLED W/ WHITE CLAY, HARD LT. GREEN CLAY, PYRITE, MOD. BLADED MARC, MINOR QUARTZ + PP.
		42.5 - 55.2 GREEN, ANGULAR → ROUND VESICULAR CLASTS IN A PINKISH VOLCANIC CLAY MATRIX. MAYBE CORRELATIVE TO PINK MATRIX BXA.			37.5 - 42.5 STRONG VUGS & OPEN FRACTS	41.5 - 42.3 STRONG SILICA FLOODING ASSOC. W/ QUARTZ VUGS. 37.5 - 42.5 VUGS/OPEN FRACTS LINED W/ DRUZY QUARTZ, PYRITE & QUARTZ AFTER MARC., MINOR MARC., MOD. WHITE CLAY
			40		42.5 - 55.2 BXA, POSSIBLE AUTO BXA OR OLDER PRE-MINERAL BXA	42.5 - 55.2 CONTACT @ 45° IS 1" Ø QUARTZ VN.
			50			

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ac
0.0	5.0					
5.0	10.0					
10.0	13.1					
13.1	15.0					
15.0	17.5					
17.5	20.0					
20.0	25.0					
25.0	30.0					
30.0	32.7					
32.7	35.0					
35.0	37.2					
37.2	40.0					
40.0	43.3					
43.3	45.0					
45.0	50.0					

HOLE NUMBER D-297-98 PAGE 2 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0.0 – 102.4		42.5 – 55.2 SEE DESCRIPTION PAGE 1 55.2 – 102.4 PINKISH, VESICULAR FINE GRAIN FLOW(S) W/ RARE PLANAR FEATURES DEFINED BY VESICLE ALIGNMENTS.	PIMA → 60, 70, 80, 90, 100, 110, PIMA, 120		48.5 – 55.2 W/ GREEN PLANAR CLASTS, ANGULAR TO ROUND IN A PINK VOLCANIC CLAY MATRIX. 58.3 – 59.0 HEALED BxA, ANGULAR FRAGS. 59.6 – 69.3 STRONG VEINING. 68.0 – 69.3(4) HEALED BXA'S W/ SUBROUND CLASTS 75.5 – 102.4 MOD. → STRONG VEINING, OPEN FRACTS / VUGS 83.6 – 83.2 HEALED BxA W/ ROUND FRAGS	PYRITE AS VEINLETS & SELVAGES, MOSTLY IN MATRIX BUT BLEEDING INTO CLASTS IN PLACES. VEINLETS ARE NEAR PARALLEL W/ CORE AXIS. 58.3 – 59.0 MATRIX/ CEMENT IS WHITE CLAY 59.6 – 69.3 VEINS FILLED W/ HARD DK. → LT. GRN CLAY, PYRITE, BLADED MARC., MINOR QUARTZ. 68.0 – 68.3 MATRIX IS HARD LT. GRN CLAY W/ SOME QUARTZ & PYRITE AFTER MARC. 75.5 – 102.4 VEINS FILLED W/ LT. GRN. CLAY, QUARTZ, PYRITE, WHITE CLAY, OPEN FRACTS/ VUGS LINED W/ QUARTZ/ DRUZY QUARTZ, BLADED MARC., WHITE CLAY, SOME BLACK CLAY (SULFIDES?) 83.0 – 83.2 CEMENTED W/ QUARTZ, WHITE CLAY, BLADED MARC., PYRITE,
PLANAR LAMINAR						
102.4 – 130.4		102.4 – 106.5			102.4 – 107.2 WEAK → MOD. FRACT. FILLING W/ MINOR VUGS. 107.2 – 130.0 FRACTURES & VUGS COMMON, LOW RQD,	102.4 – 107.2 FRACT. FILLED W/ WHITE CLAY MINOR PYRITE. VUGS LINED W/ DRUZY QUARTZ, WHITE CLAY, MINOR PYRITE. PYRITE & BLADED MARC. ARE COMMON AS VEINLETS & DISAGGREGATED VEINS ENCAPSULATED BY SILICA FLOODING. 108.8 – 111.5 STRONG ARGILLIC ALT., POSSIBLE FAULT REACTIVATION, CRUSHED QUARTZ & BARITE,
S R F		PINK, ROUND PLANAR FRAGS IN A PALE GRAYISH SILICA MATRIX, MOST FRAGS ALSO SILICA REP. STOCKWORK PATTERN. 106.5 – 124.8 HETERO LITHIC BXA W/ ROUND, SMALL PEA SIZE GREEN, PINK & GRAYISH CLASTS, USUALLY SILICA REP., IN A GRAY SILICA MATRIX. SOME ZONES TO 3' Ø OF ROUND SILICIFIED CLASTS IN A SOFT WHITE CLAY MATRIX. THIS IS EITHER A REACTIVATION OF SILIC. BXA OR SELECTIVE ARGILLIC ALT. OF MATRIX.				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
50.0	55.0				
55.0	57.8				
57.8	61.5				
61.5	65.0				
65.0	67.5				
67.5	70.0				
70.0	75.0				
75.0	80.0				
80.0	82.5				
82.5	85.0				
85.0	87.5				
87.5	90.0				
90.0	92.4				
92.4	95.0				
95.0	99.0				
99.0	102.4				
102.4	104.0				
104.0	106.5				
106.5	109.0				
109.0	111.5				
111.5	114.0				
114.0	116.0				
116.0	118.0				

HOLE NUMBER D-297-98 PAGE 3 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
102.4 – 130.4		106.5 – 124.8 SEE DESCRIPTION PAGE 2				111.5 – 130.4 STRONG BARITE VEINING USUALLY W/ WHITE CLAY, VERY STRONG SILICA REP OF CLASTS & MATRIX. SULFIDES MINOR & WEAK, MOSTLY PYRITE.
SRF		124.8 – 130.4 CLASTS ALL FROM DOZER UNIT, STRONG SILICA REP. OF MOST CLASTS & MATRIX.				
130.4 – 170.2		130.4 – 156.0 LT. GREEN GRAY DOZER CLASTS, ROUND W/ STRONG SILICA REP. IN A LT. GREEN-GRAY MATRIX ALSO OFTEN SILICA REP.			130.2 – 148.0 MOD. → STRONG FRACTURING, VARIABLE RQD'S.	130.8 – 137.0 STRONG PYRITE BLEB & SELVAGES TO 1" DIA. SOME ARE SHATTERED / DISAGGREGATED. BARITE LINING VUGS / OPEN FRACTS, WHITE CLAY FILLING SOME VUGS & CRACKS.
SRF 2nd BRANCH?		156.0 – 170.2 GRAY → GREENISH-GRAY DOZER CLASTS, ROUND, IN SAME COLOR MATRIX. MOD → STRONG SILICA FLOODING IS INDISCRIMINATE.			148.0 – 170.2 MOST FRACTURES HEALED, HIGH RQD.	137.0 – 156.0 MOD. SILICA REP. OF CLASTS & MATRIX, MOD WHITE CLAY FILLING FRACTS; COMMON BARITE LINING OPEN FRACTS & VUGS. STIBNITE IN BARITE @ 151.5, STIBNITE IN FRACTS. 147.0 – 156.0 PYRITE MINOR → MOD.
170.2 – 219.0		170.2 – 219.0			170.2 – 185.0 MOD. OPEN FRACTS. / VUGS, VEINS.	156.0 – 170.2 MOD. WHITE CLAY FILLING FRACTURES, BARITE, STIBNITE & SOME QUARTZ LINING OPEN FRACTS & VUGS. MINOR PYRITE AS DISCONTINUOUS VEINLETS & BLEBS TO 2" LONG / DIA.
DOZER		GRAY, FINE GRAIN FLOW(S) W/ WEAKLY DEFINED FABRIC ALIGNMENT FEATURES			185.0 – 193.7 HEALED BXA, PARTIALLY MINERALIZED, CLAST SUPPORTED W/ MOSTLY ROUND, SOME ANGULAR CLASTS	170.2 – 185.0 FRACTURES / VUGS LINED W/ BARITE, STIBNITE, DRUZY QUARTZ & WHITE CLAY. VEINS FILLED W/ QUARTZ, PYRITE, WHITE CLAY.
						185. – 193.7 ZONED SILICA FLOODING ASSOC. W/ STRONGER QUARTZ VEINING. STIBNITE & BLADED MARC. ASSOC. ALSO W/ STRONGER QTZ/SILICA.

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
118.0	121.8				
121.8	125.0				
125.0	127.0				
127.0	130.5				
130.5	132.7				
132.7	135.0				
135.0	137.5				
137.5	140.0				
140.0	142.2				
142.2	145.0				
145.0	147.5				
147.5	150.0				
150.0	152.4				
152.4	155.0				
155.0	157.5				
157.5	160.0				
160.0	162.5				
162.5	165.0				
165.0	167.5				
167.5	170.2				
170.2	173.0				
173.0	175.0				
175.0	180.0				
180.0	185.0				
185.0	187.2				
187.2	190.0				

HOLE NUMBER D-297-98 PAGE 4 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
170.2 - 219.0		170.2 - 219.0				185.0 - 193.7 DRUZY QTZ, BARITE & WHITE CLAY LINING / FILLING OPEN FRACTURES,
DOZER		SEE DESCRIPTION PAGE 3				193.7 - 202.2 RARE → MINOR STIBNITE IN OPEN FRACTS,
			200		200.0 - 202.2 STRONG VEINING	200.0 - 202.2 VEINS MOSTLY THIN MARC. & QUARTZ W/ MINOR PYRITE & WHITE CLAY,
					202.2 - 214.5 MOD. VEINING	202.2 - 214.5 VEINS FILLED W/ DOMITE CLAY, BLADED MARC., QUARTZ.
			210			
					215.3 - 219.0 HEALED BXA, MOD. VEINING, STRONG VUGS.	215.3 - 219.0 MOD → STRONG SILICA FLOODING. VUGS LINED W/ DRUZY QUARTZ, STIBNITE, WHITE CLAY, & VEINS
		T.D. 219.0' OR THEREABOUT.	219			FILLED W/ QUARTZ, PYRITE & MINOR WHITE CLAY.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	
190.0	193.7					
193.7	196.4					
196.4	200.0					
200.0	202.5					
202.5	204.0					
204.0	209.0					
209.0	214.0					
214.0	216.5					
216.5	219.0					

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-297-98 DATE: 10/12/98 LOGGED BY: ALLYN NILES PAGE 1 OF 4

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)
0.0	5.0	86.0	86.0	60.0										
5.0	10.0	82.0	104.0	32.0										
10.0	15.0	100.0	100.0	54.0										
15.0	20.0	100.0	100.0	36.0										
20.0	25.0	100.0	100.0	54.0										
25.0	30.0	90.0	100.0	46.0										
30.0	35.0	92.0	92.0	10.0										
35.0	40.0	96.0	100.0	60.0										
40.0	45.0	100.0	100.0	80.0										
45.0	50.0	100.0	100.0	94.0										
50.0	55.0	100.0	100.0	80.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-297-98 DATE: 10/12/98 LOGGED BY: _____ PAGE 3 OF 4

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)
55.0	60.0	100.0	100.0	68.0										
60.0	65.0	100.0	100.0	74.0										
65.0	70.0	100.0	100.0	50.0										
70.0	75.0	100.0	100.0	34.0										
75.0	80.0	100.0	100.0	70.0										
80.0	85.0	100.0	100.0	70.0										
85.0	90.0	100.0	100.0	92.0										
90.0	95.0	100.0	100.0	90.0										
95.0	99.0	95.0	100.0	60.0										
99.0	104.0	80.0	100.0	80.0										
104.0	109.0	100.0	100.0	60.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-297-98 DATE: 10/13/98 LOGGED BY: _____ PAGE 3 OF 4

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)
109.0	114.0	68.0	96.0	14.0										
114.0	118.0	125.0	125.0	28.0										
118.0	120.0	75.0	85.0	20.0										
120.0	125.0	40.0	98.0	50.0										
125.0	127.0	40.0	95.0	50.0										
127.0	130.0	120.0	120.0	50.0										
130.0	135.0	100.0	100.0	88.0										
135.0	140.0	58.0	100.0	20.0										
140.0	145.0	98.0	98.0	86.0										
145.0	150.0	100.0	100.0	84.0										
150.0	155.0	100.0	100.0	92.0										
155.0	160.0	96.0	96.0	88.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-297-98 DATE: 10/13/98 LOGGED BY: ALLYN WILES

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)
160.0	165.0	100.0	100.0	98.0										
165.0	170.0	100.0	100.0	92.0										
170.0	175.0	100.0	100.0	100.0										
175.0	180.0	100.0	100.0	100.0										
180.0	185.0	100.0	100.0	90.0										
185.0	190.0	86.0	86.0	84.0										
190.0	195.0	80.0	100.0	88.0										
195.0	200.0	84.0	100.0	66.0										
200.0	204.0	100.0	100.0	92.5										
204.0	209.0	80.0	96.0	70.0										
209.0	214.0	92.0	92.0	92.0										
214.0	219.0	88.0	92.0	80.0										

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 0051345-IN
INVOICE DATE: 11/25/98

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-297-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
74	SAMPLES RECEIVED	.00	.00
73	JAW CRUSHING CHARGE	1.30	94.90
73	COARSE MILLING CHARGE	4.50	328.50
73	SPLITTING CHARGE	2.40	175.20
73	RING MILLING CHARGE	2.00	146.00
74	AU (1 A.T. FIRE ASSAY)	8.00	592.00
16	AU ANALYSES/GRAVIMETRIC	8.75	140.00
74	HYDROCHLORIC/NITRIC DIGESTION	2.00	148.00
74	Ag ANALYSES	1.00	74.00
11	Ag (ore grade) ANALYSES	5.00	55.00

86-5110-477
AA

NET INVOICE:	1,753.60
LESS DISCOUNT:	350.72
FREIGHT:	.00
INVOICE TOTAL:	1,402.88

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

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-297-98 RECEIVED : 30 OCT 1998

No. SAMPLES : 74 REPORTED : 24 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
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 00-05	0.009			0.21
D-297-98 05-10	0.005			0.06
D-297-98 10.0-13.1	0.008			0.05
D-297-98 13.1-15.0	0.007			0.05
D-297-98 15.0-17.5	0.009			0.05
D-297-98 17.5-20.0	0.008			0.11
D-297-98 20-25	0.021			0.07
D-297-98 25-30	0.038			0.43
D-297-98 30.0-32.7	0.245		0.284	0.29
D-297-98 32.7-35.0	0.008			0.13
D-297-98 35.0-37.2	0.048			0.12
D-297-98 37.2-40.0	0.061		0.052	0.10
D-297-98 40.0-43.3	0.176		0.186	0.14
D-297-98 43.3-45.0	0.037			0.09
D-297-98 45-50	0.186		0.138	0.13
D-297-98 50-55	0.002			0.03
D-297-98 55.0-57.8	0.016			0.11
D-297-98 57.8-61.5	0.139		0.124	0.22
D-297-98 61.5-65.0	0.043			0.07
D-297-98 65.0-67.5	0.030			0.08
D-297-98 67.5-70.0	0.102		0.057	0.16
D-297-98 70-75	0.013			0.11
D-297-98 75-80	0.032			0.08
D-297-98 80.0-82.5	0.115		0.080	0.10
D-297-98 82.5-85.0	0.082		0.139	0.15

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 85.0-87.5	0.087		0.155	0.16
D-297-98 87.5-90.0	0.219		0.296	1.33
D-297-98 90.0-92.4	1.011		1.157	0.65
D-297-98 92.4-95.0	0.631		0.769	0.40
D-297-98 95-99	1.061		1.369	0.76
D-297-98 99.0-102.4	0.294		0.371	1.31
D-297-98 102.4-104.0	0.133		0.076	6.24
D-297-98 104.0-106.5	0.067		0.086	0.16
D-297-98 106.5-109.0	0.021	0.027		0.64
D-297-98 109.0-111.5	0.013			1.40
D-297-98 111.5-114.0	0.021			0.22
D-297-98 114-116	0.003			0.88
D-297-98 116-118	0.007			3.43
D-297-98 118.0-121.8	0.007			2.42
D-297-98 121.8-125.0	0.006			5.77
D-297-98 125-127	0.005			6.57
D-297-98 127.0-130.5	0.003			1.30
D-297-98 130.5-132.7	0.003			0.32
D-297-98 132.7-135.0	0.003			0.20
D-297-98 135.0-137.5	0.002			0.91
D-297-98 137.5-140.0	0.002			0.72
D-297-98 140.0-142.2	0.005			5.49
D-297-98 142.2-145.0	0.004			4.36
D-297-98 145.0-147.5	0.005			0.40
D-297-98 147.5-150.0	0.003			0.38

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 150.0-152.4	0.003			0.38
D-297-98 152.4-155.0	0.002	0.002		0.34
D-297-98 155.0-157.5	0.001			0.24
D-297-98 157.5-160.0	0.003			0.56
D-297-98 160.0-162.5	0.005			4.98
D-297-98 162.5-165.0	0.002			0.16
D-297-98 165.0-167.5	0.002			0.13
D-297-98 167.5-170.2	0.002			0.06
D-297-98 170.2-173.0	0.001			0.70
D-297-98 173-175	0.002	0.005		0.89
D-297-98 175-180	0.002			0.57
D-297-98 180-185	0.002			0.26
D-297-98 185.0-187.2	0.006			2.65
D-297-98 187.2-190.0	0.006			0.89
D-297-98 190.0-193.7	0.005			0.35
D-297-98 193.7-196.4	0.001			0.11
D-297-98 196.4-200.0	0.007			0.37
D-297-98 200.0-202.5	0.016			0.78
D-297-98 202.5-204.0	0.003			0.16
D-297-98 204-209	0.008			0.16
D-297-98 209-214	0.005			0.74
D-297-98 214.0-216.5	0.007			1.78
D-297-98 216.5-219.0	0.016			9.70
43596	0.473			5.36

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(702) 356-3606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

CLIENT REFERENCE No: D-297-98 RECEIVED : 30 OCT 1998

No. SAMPLES : 74 REPORTED : 24 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
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 00-05	0.009			0.21
D-297-98 05-10	0.005			0.06
D-297-98 10.0-13.1	0.008			0.05
D-297-98 13.1-15.0	0.007			0.05
D-297-98 15.0-17.5	0.009			0.05
D-297-98 17.5-20.0	0.008			0.11
D-297-98 20-25	0.021			0.07
D-297-98 25-30	0.038			0.43
D-297-98 30.0-32.7	0.245		0.284	0.29
D-297-98 32.7-35.0	0.008			0.13
D-297-98 35.0-37.2	0.048			0.12
D-297-98 37.2-40.0	0.061		0.052	0.10
D-297-98 40.0-43.3	0.176		0.186	0.14
D-297-98 43.3-45.0	0.037			0.09
D-297-98 45-50	0.186		0.138	0.13
D-297-98 50-55	0.002			0.03
D-297-98 55.0-57.8	0.016			0.11
D-297-98 57.8-61.5	0.139		0.124	0.22
D-297-98 61.5-65.0	0.043			0.07
D-297-98 65.0-67.5	0.030			0.08
D-297-98 67.5-70.0	0.102		0.057	0.16
D-297-98 70-75	0.013			0.11
D-297-98 75-80	0.032			0.08
D-297-98 80.0-82.5	0.115		0.080	0.10
D-297-98 82.5-85.0	0.082		0.139	0.15

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 85.0-87.5	0.087		0.155	0.16
D-297-98 87.5-90.0	0.219		0.296	1.33
D-297-98 90.0-92.4	1.011		1.157	0.65
D-297-98 92.4-95.0	0.631		0.769	0.40
D-297-98 95-99	1.061		1.369	0.76
D-297-98 99.0-102.4	0.294		0.371	1.31
D-297-98 102.4-104.0	0.133		0.076	6.24
D-297-98 104.0-106.5	0.067		0.086	0.16
D-297-98 106.5-109.0	0.021	0.027		0.64
D-297-98 109.0-111.5	0.013			1.40
D-297-98 111.5-114.0	0.021			0.22
D-297-98 114-116	0.003			0.88
D-297-98 116-118	0.007			3.43
D-297-98 118.0-121.8	0.007			2.42
D-297-98 121.8-125.0	0.006			5.77
D-297-98 125-127	0.005			6.57
D-297-98 127.0-130.5	0.003			1.30
D-297-98 130.5-132.7	0.003			0.32
D-297-98 132.7-135.0	0.003			0.20
D-297-98 135.0-137.5	0.002			0.91
D-297-98 137.5-140.0	0.002			0.72
D-297-98 140.0-142.2	0.005			5.49
D-297-98 142.2-145.0	0.004			4.36
D-297-98 145.0-147.5	0.005			0.40
D-297-98 147.5-150.0	0.003			0.38

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051345

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-297-98 150.0-152.4	0.003			0.38
D-297-98 152.4-155.0	0.002	0.002		0.34
D-297-98 155.0-157.5	0.001			0.24
D-297-98 157.5-160.0	0.003			0.56
D-297-98 160.0-162.5	0.005			4.98
D-297-98 162.5-165.0	0.002			0.16
D-297-98 165.0-167.5	0.002			0.13
D-297-98 167.5-170.2	0.002			0.06
D-297-98 170.2-173.0	0.001			0.70
D-297-98 173-175	0.002	0.005		0.89
D-297-98 175-180	0.002			0.57
D-297-98 180-185	0.002			0.26
D-297-98 185.0-187.2	0.006			2.65
D-297-98 187.2-190.0	0.006			0.89
D-297-98 190.0-193.7	0.005			0.35
D-297-98 193.7-196.4	0.001			0.11
D-297-98 196.4-200.0	0.007			0.37
D-297-98 200.0-202.5	0.016			0.78
D-297-98 202.5-204.0	0.003			0.16
D-297-98 204-209	0.008			0.16
D-297-98 209-214	0.005			0.74
D-297-98 214.0-216.5	0.007			1.78
D-297-98 216.5-219.0	0.016			9.70
43596	0.473			5.36

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051345

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-297-98 RECEIVED : 30 OCT 1998

No. SAMPLES : 74 REPORTED : 18 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
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

11/18/1998 11:19 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051345

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ.)	Au(RZ.)	AuGRAV	Ag(OZ.)
D-297-98 00-05	0.009			0.21
D-297-98 05-10	0.005			0.06
D-297-98 10.0-13.1	0.008			0.05
D-297-98 13.1-15.0	0.007			0.05
D-297-98 15.0-17.5	0.009			0.05
D-297-98 17.5-20.0	0.008			0.11
D-297-98 20-25	0.021			0.07
D-297-98 25-30	0.038			0.43
D-297-98 30.0-32.7	0.245		0.284	0.29
D-297-98 32.7-35.0	0.008			0.13
D-297-98 35.0-37.2	0.048			0.12
D-297-98 37.2-40.0	0.061		0.052	0.10
D-297-98 40.0-43.3	0.176		0.186	0.14
D-297-98 43.3-45.0	0.037			0.09
D-297-98 45-50	0.186		0.138	0.13
D-297-98 50-55	0.002			0.03
D-297-98 55.0-57.8	0.016			0.11
D-297-98 57.8-61.5	0.139		0.124	0.22
D-297-98 61.5-65.0	0.043			0.07
D-297-98 65.0-67.5	0.030			0.08
D-297-98 67.5-70.0	0.102		0.057	0.16
D-297-98 70-75	0.013			0.11
D-297-98 75-80	0.032			0.08
D-297-98 80.0-82.5	0.115		0.080	0.10
D-297-98 82.5-85.0	0.082		0.139	0.15

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051345

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-297-98 85.0-87.5	0.087		0.155	0.16
D-297-98 87.5-90.0 2.5	0.219		0.296	1.33
D-297-98 90.0-92.4 2.4	1.011		1.157	0.65
D-297-98 92.4-95.0 2.6	0.631		0.769	0.40
D-297-98 95-99 4	1.061		1.369	0.76
D-297-98 99.0-102.4 3.4	0.294		0.371	1.31
D-297-98 102.4-104.0	0.133		0.076	6.24
D-297-98 104.0-106.5	0.067		0.086	0.16
D-297-98 106.5-109.0	0.021	0.027		0.64
D-297-98 109.0-111.5	0.013			1.40
D-297-98 111.5-114.0	0.021			0.22
D-297-98 114-116	0.003			0.88
D-297-98 116-118	0.007			3.43
D-297-98 118.0-121.8	0.007			2.42
D-297-98 121.8-125.0	0.006			5.77
D-297-98 125-127	0.005			6.57
D-297-98 127.0-130.5	0.003			1.30
D-297-98 130.5-132.7	0.003			0.32
D-297-98 132.7-135.0	0.003			0.20
D-297-98 135.0-137.5	0.002			0.91
D-297-98 137.5-140.0	0.002			0.72
D-297-98 140.0-142.2	0.005			5.49
D-297-98 142.2-145.0	0.004			4.36
D-297-98 145.0-147.5	0.005			0.40
D-297-98 147.5-150.0	0.003			0.38

87.5'-102.4' = 14.9' @ 0.662 Au 0.90 Ag

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051345

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-297-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-297-98 150.0-152.4	0.003			0.38
D-297-98 152.4-155.0	0.002	0.002		0.34
D-297-98 155.0-157.5	0.001			0.24
D-297-98 157.5-160.0	0.003			0.56
D-297-98 160.0-162.5	0.005			4.98
D-297-98 162.5-165.0	0.002			0.16
D-297-98 165.0-167.5	0.002			0.13
D-297-98 167.5-170.2	0.002			0.06
D-297-98 170.2-173.0	0.001			0.70
D-297-98 173-175	0.002	0.005		0.89
D-297-98 175-180	0.002			0.57
D-297-98 180-185	0.002			0.26
D-297-98 185.0-187.2	0.006			2.65
D-297-98 187.2-190.0	0.006			0.89
D-297-98 190.0-193.7	0.005			0.35
D-297-98 193.7-196.4	0.001			0.11
D-297-98 196.4-200.0	0.007			0.37
D-297-98 200.0-202.5	0.016			0.78
D-297-98 202.5-204.0	0.003			0.16
D-297-98 204-209	0.008			0.16
D-297-98 209-214	0.005			0.74
D-297-98 214.0-216.5	0.007			1.78
D-297-98 216.5-219.0	0.016			9.70
43596	0.473			5.36

11/18/1998 11:19 7023561413 AMERICAN ASSAY LABS PAGE 04

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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1500 Glendale Ave.
Nevada 89431
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Telephone
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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: DEV. Purchase Order Number:

Date Submitted: 10/22/98 Number of Samples: 73

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

Au-Ag ACCORDING TO ROSEBUD MINE PROTOCOL

D-297-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED	
0-5	50-55	99-102.4		137.5-140	175-180
5-10	55-57.8	102.4-104		140-142.2	180-185
10-13.1	57.8-61.5	104-106.5		142.2-145	185-187.2
13.1-15	61.5-65	106.5-109		145-147.5	187.2-196
15-17.5	65-67.5	109-111.5		147.5-150	140-193.7
17.5-20	67.5-70	111.5-114		150-152.4	193.7-196.4
20-25	70-75	114-116		152.4-155	146.4-200
25-30	75-80	116-118		155-157.5	200-202.5
30-32.7	80-82.5	118-121.8		157.5-160	202.5-204
32.7-35	82.5-85	121.8-125		160-162.5	204-209
35-37.2	85-87.5	125-127		162.5-165	209-214
37.2-40	87.5-90	127-130.5		165-167.5	214-216.5
40-43.3	90-92.4	130.5-132.7		167.5-170.2	216.5-219 TD
43.3-45	92.4-95	132.7-135		170.2-173	
45-50	95-99	135-137.5		173-175	

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-297-98	35	0.5	123.2
	110	-0.25	123.7
	219	-0.5	124.7

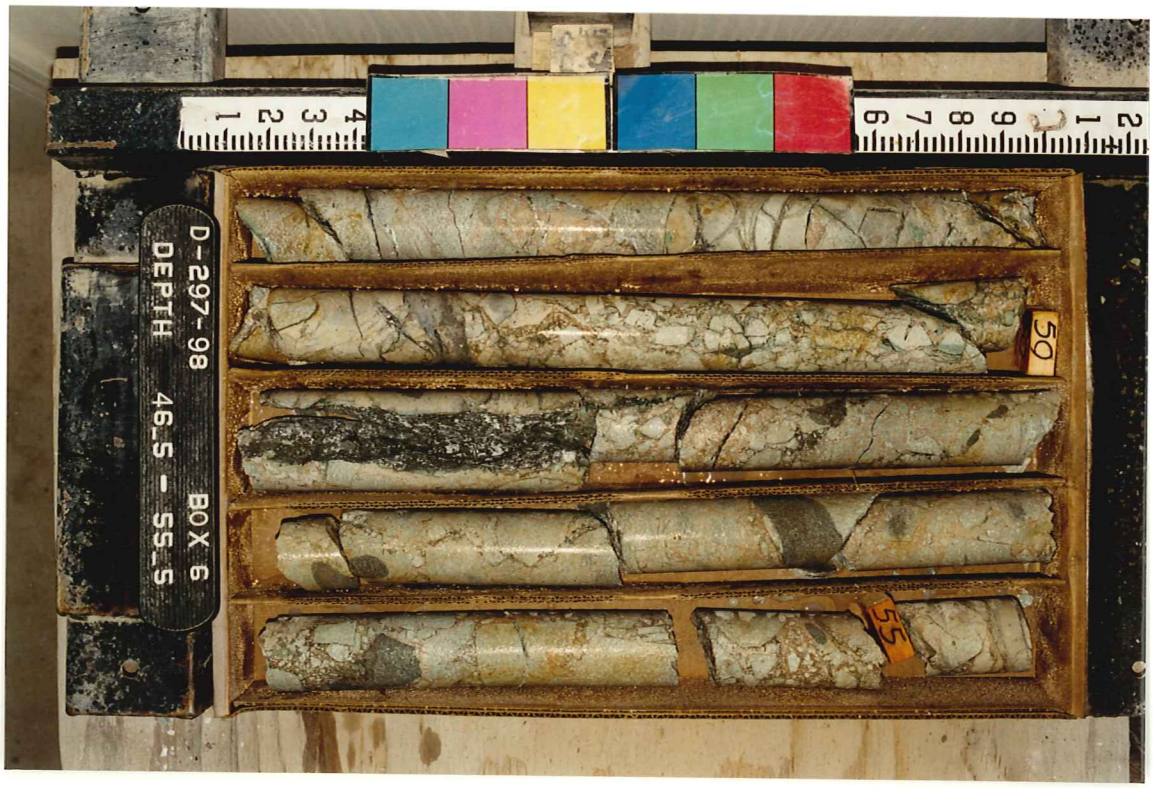
15
10
D-297-98 BOX 2
DEPTH 9_5 - 19

5
D-297-98 BOX 1
DEPTH 0 - 9_5

D-297-98 BOX 3
DEPTH 19 - 27_5

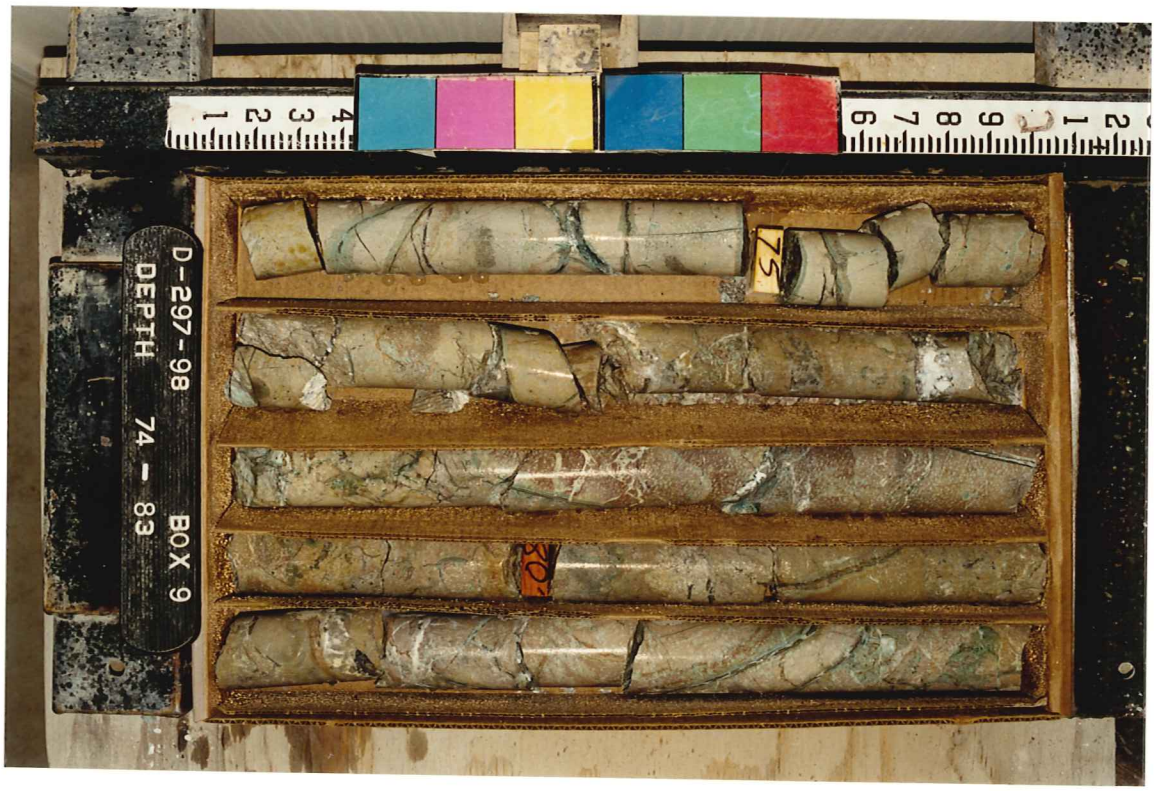
D-297-98 BOX 5
DEPTH 37 - 46_5
40
45

D-297-98 BOX 4
DEPTH 27_5 - 37
35
36


D-297-98 BOX 6
DEPTH 46_5 - 55_5
50
55

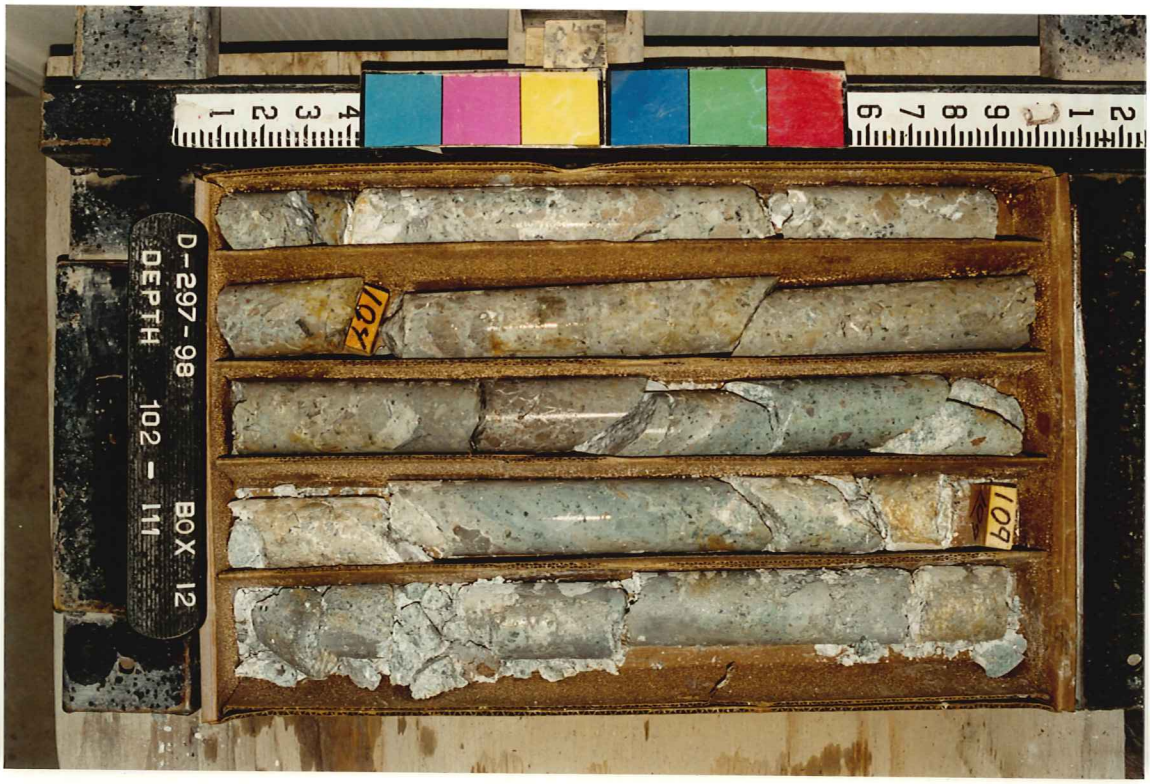
D-297-98 BOX 8
DEPTH 64_5 - 74
65'
70'

D-297-98 BOX 7
DEPTH 55_5 - 64_5
60'


D-297-98 BOX 9
DEPTH 74 - 83
75'
80'

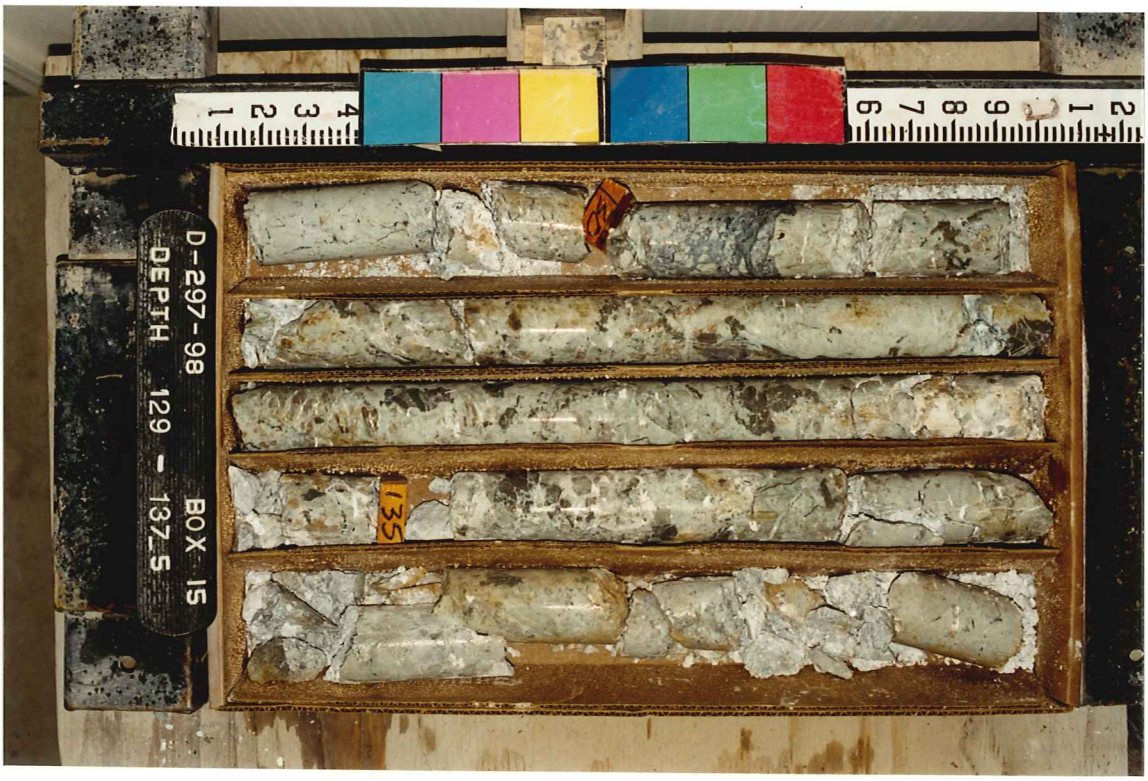
D-297-98 BOX 11
DEPTH 92_5 - 102
95
99'

D-297-98 BOX 10
DEPTH 83 - 92_5
85
90'


D-297-98 BOX 12
DEPTH 102 - 111
107
109

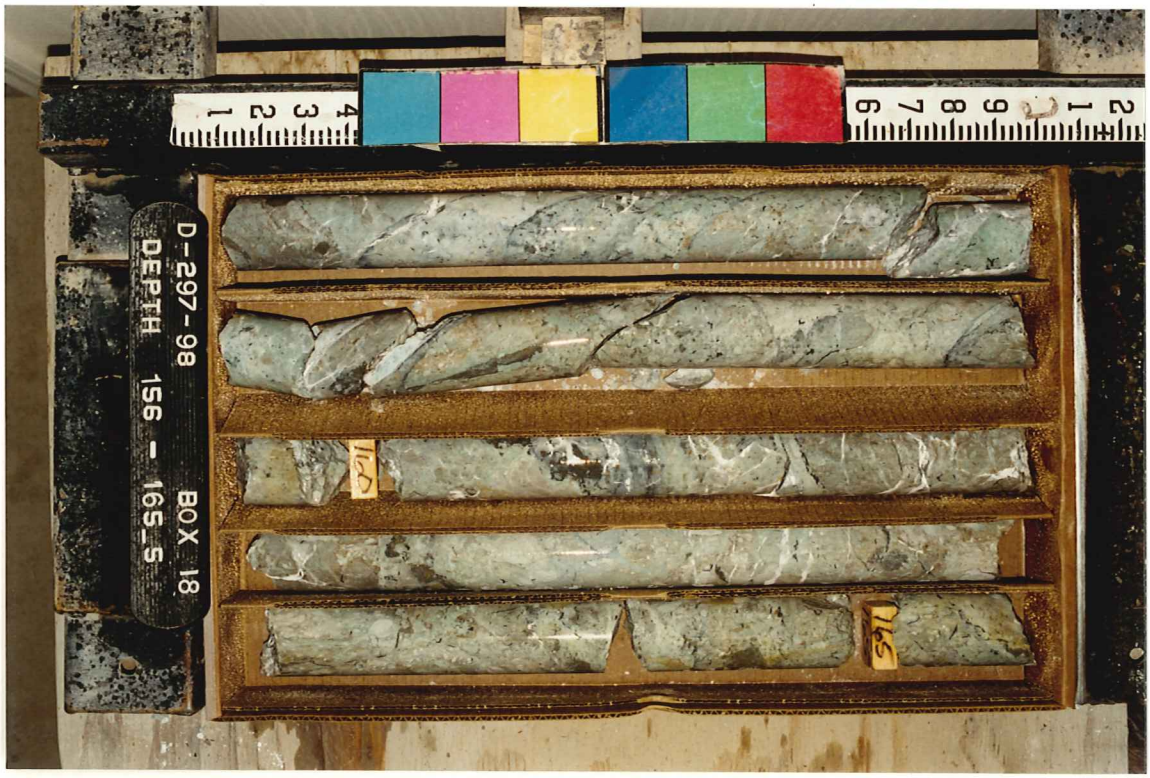
D-297-98 BOX 14
DEPTH 120 - 129
120
125
127

D-297-98 BOX 13
DEPTH 111 - 120
114
118


D-297-98 BOX 15
DEPTH 129 - 137.5
135

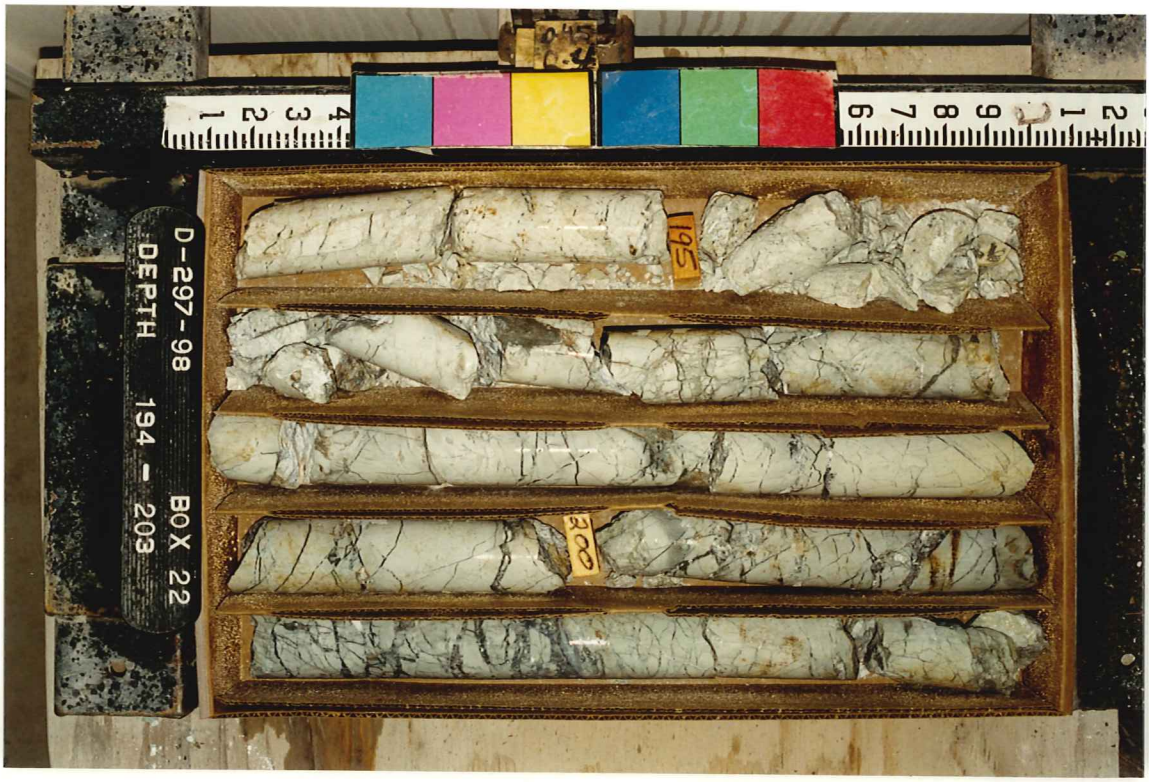
150
155
D-297-98 BOX 17
DEPTH 147 - 156

145
140
D-297-98 BOX 16
DEPTH 137.5 - 147


D-297-98 BOX 18
DEPTH 156 - 165.5

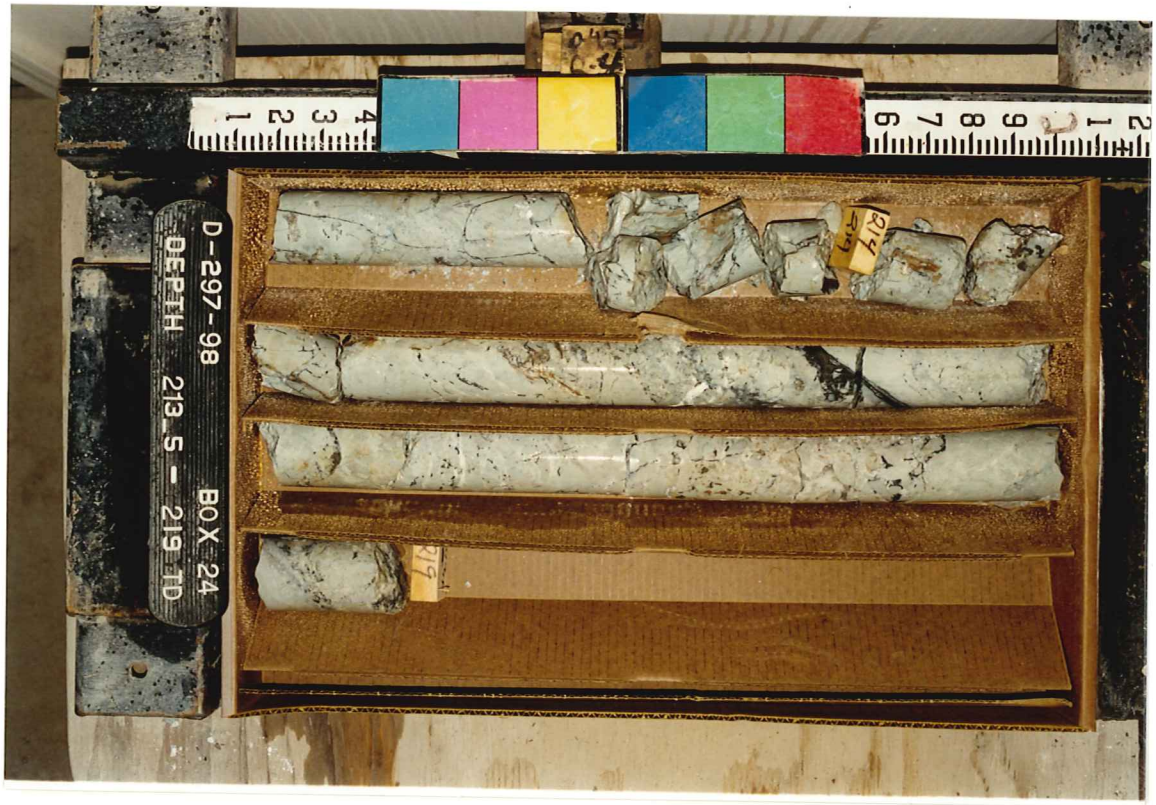
180
175
D-297-98 BOX 20
DEPTH 174_5 - 184

D-297-98 BOX 19
DEPTH 165_5 - 174_5


195
203
D-297-98 BOX 22
DEPTH 194 - 203

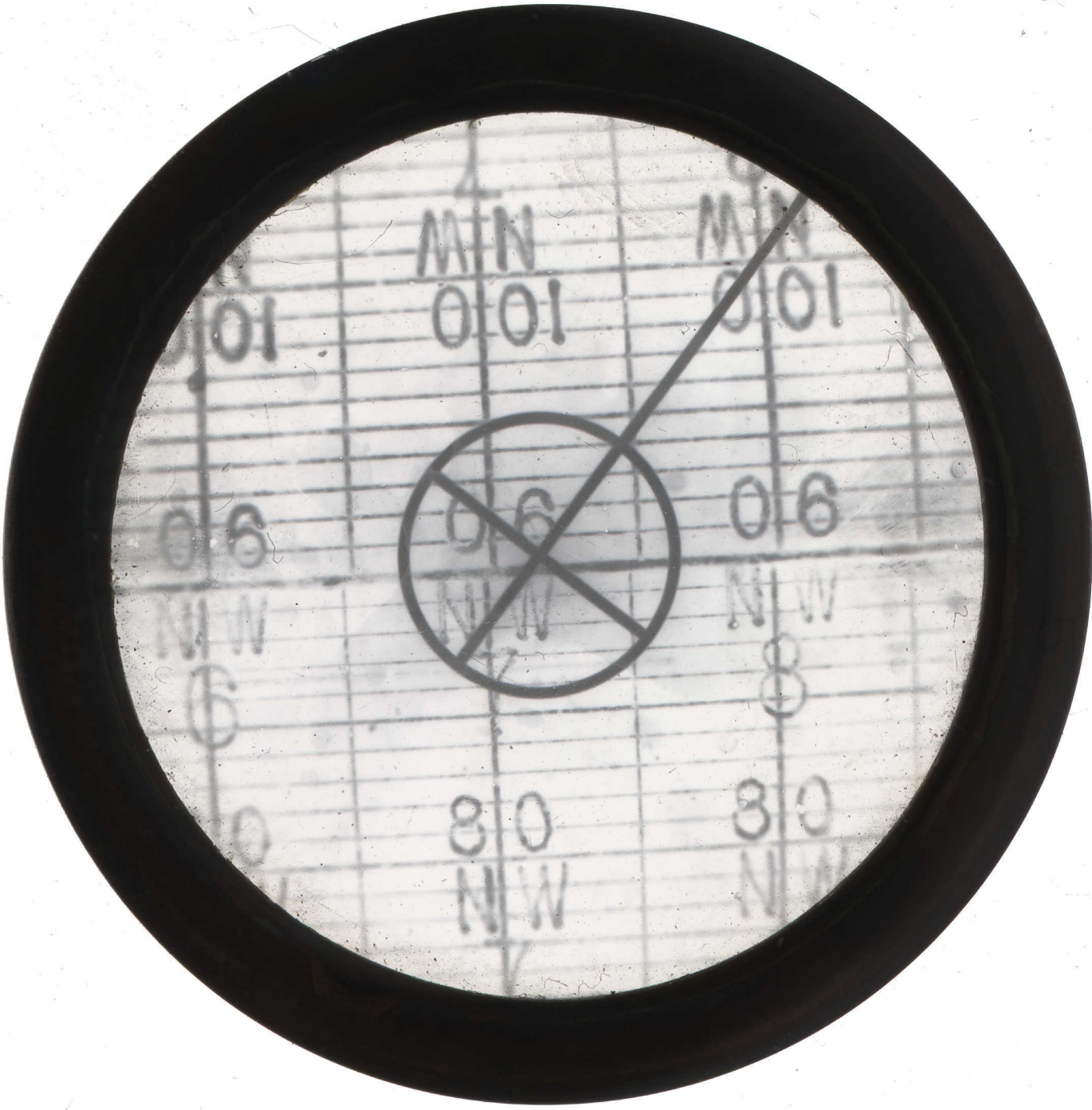
204
209
D-297-98 BOX 23
DEPTH 203 - 213.5

190
185
D-297-98 BOX 21
DEPTH 184 - 194


D-297-98 BOX 24
DEPTH 213.5 - 219 TD

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME BD-292-98
LEASE
TAKEN BY Morgan / Serum
DEPTH 110
DATE 8-24-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


MIN
001
06
NW
30

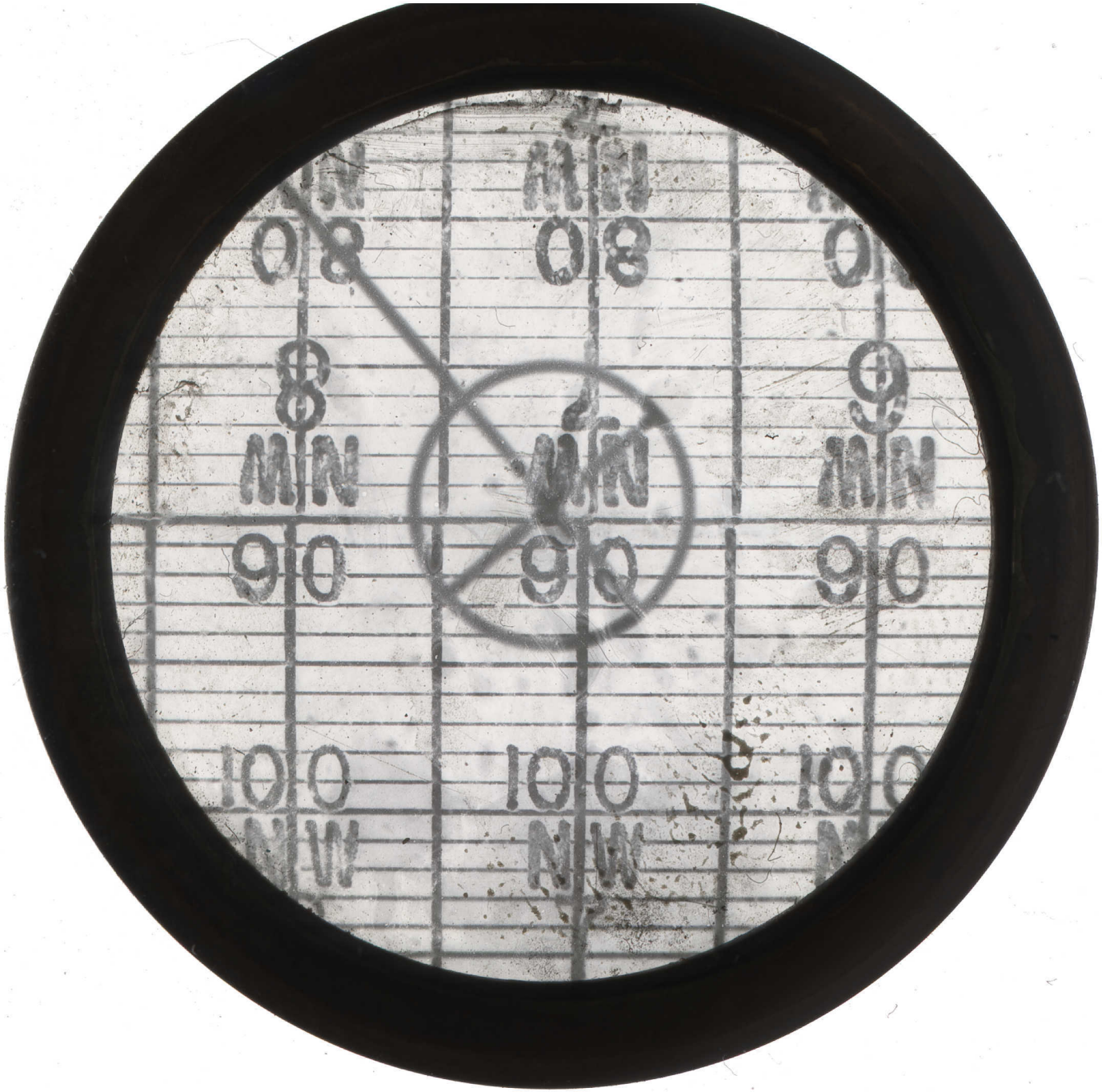
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-297-98
LEASE
TAKEN BY Magoon/Jerome
DEPTH 35'
DATE 8-24-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

NW
80
90
100
NW
80
90
100
NW
80
90
100

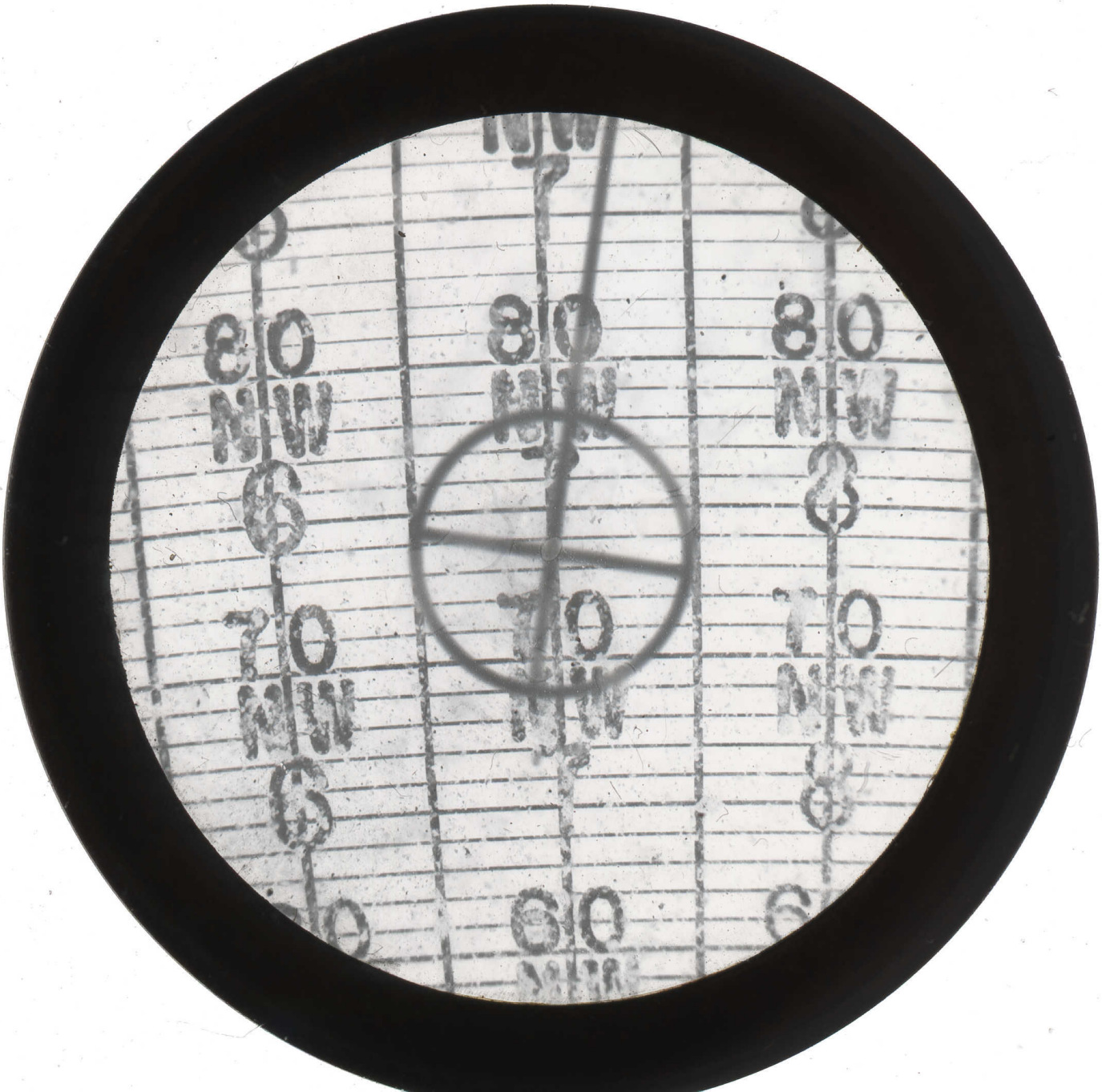
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-297-98
LEASE
TAKEN BY Magoon/Jerome
DEPTH 219
DATE 8-24-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


08
08
8
9
MN
MN
MN
90
90
90
100
100
NW
NW

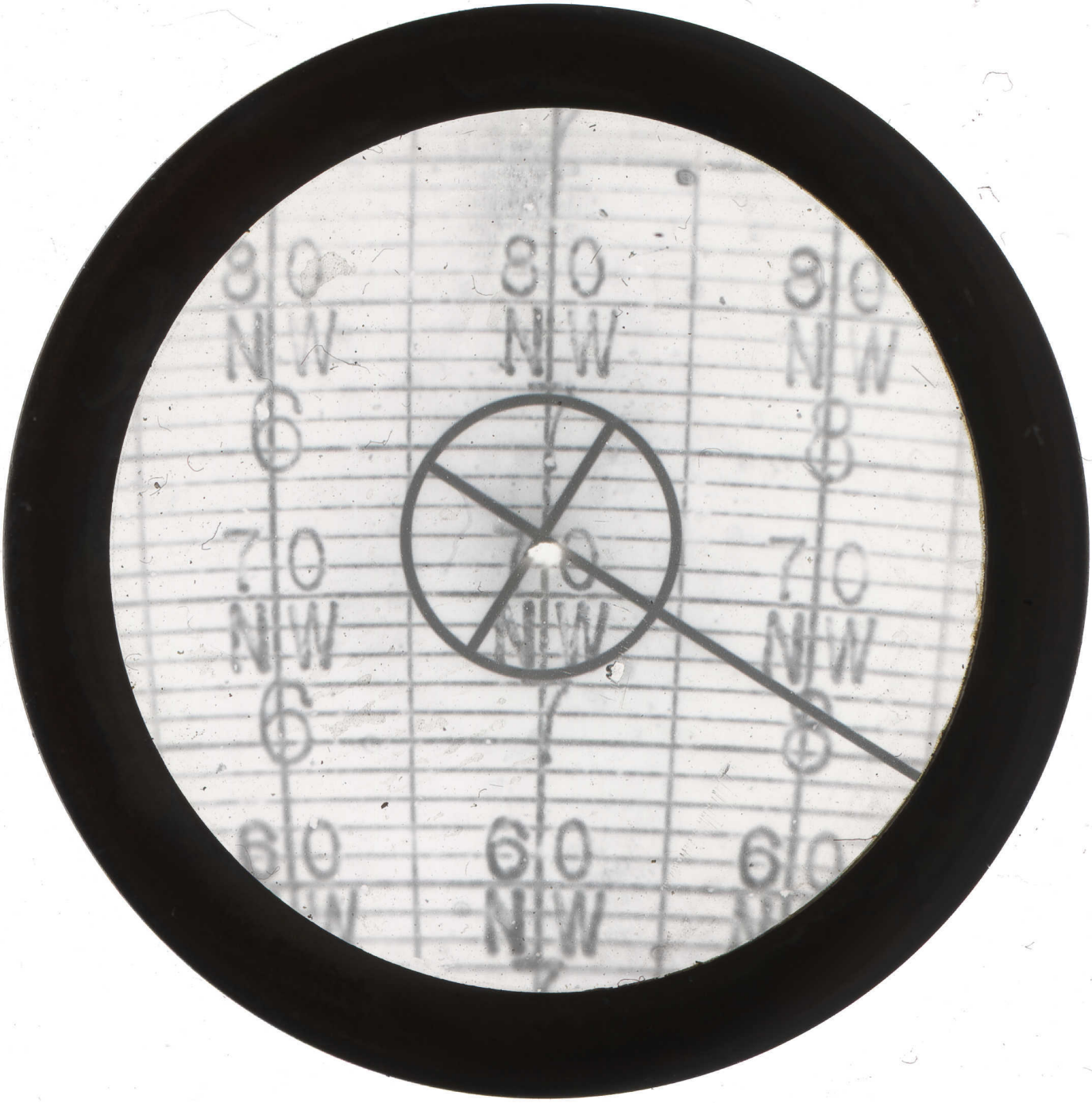
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-298-98
LEASE
TAKEN BY Magoon / Jerome
DEPTH 340'
DATE 8-26-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


NW
80
NW
70
NW
60
80
NW
70
NW
60
80
NW
70
NW
60

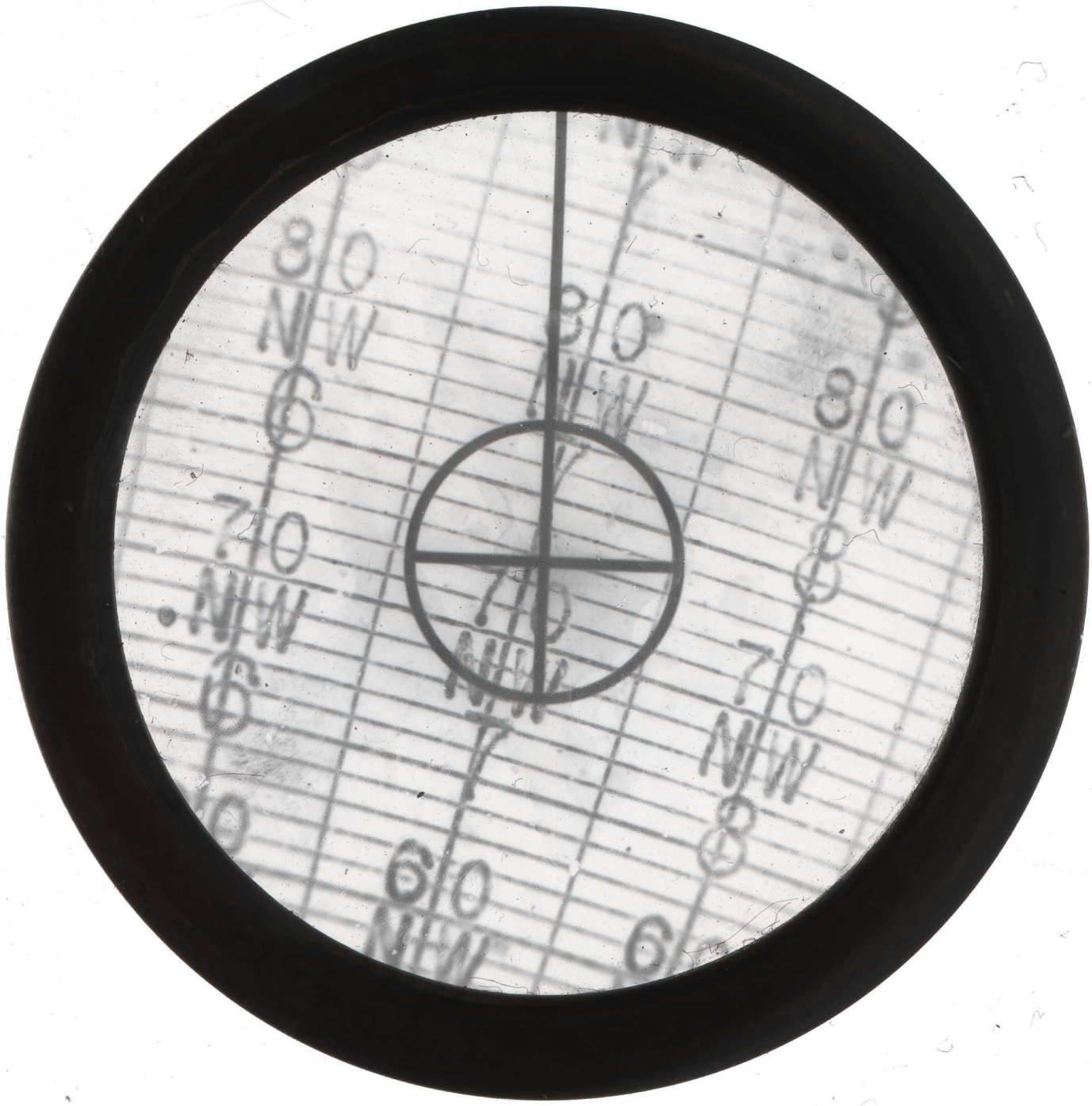
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-298-98
LEASE
TAKEN BY Magoon/Serone
DEPTH 35'
DATE 8-26-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


80
NW
70
NW
60
NW

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-298-98
LEASE
TAKEN BY Magoon/Jerome
DEPTH 170'
DATE 8-26-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


80
NW
70
NW
60
NW