60001196

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-295-98
AUTHOR	S. King; K. Allen; D. Mackerrow
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 290' receipt; handwritten notes; downhole camera images 37p. 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: mch
Initials Date
SCANNED: NB
Initials Date

Revised: 1/22/08

D-295-98

60001196 4010

60001196

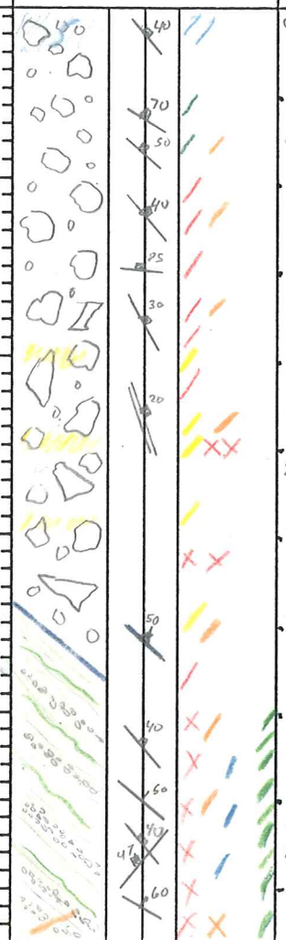
- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- BARITE
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-295-98	LOCATION	stope 50 section 1525
PAGE 1 OF 5		NORTHING	
DATE	10-10-98	EASTING	
LOGGED BY	D.G. Mackerrow	ELEVATION	
SCALE	1" = 10'	AZIMUTH	125
TOTAL DEPTH	290	INCLINATION	35

REMARKS: Drilled 8-21-98

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag
Planar Laminar 0-85'	Reduced	0-36 Planar Laminar — FAULT BXA Hole begins in autobreccia consisting of Planar laminar. Clasts are subrounded to angular. Clast size range from Pebbles to 3 inches. Matrix is fine grain pinkish brown in color. Vesiculs are present in the clast, some clast show planar foliation. core is calcareous from 0-3' matrix and clast.	10 20 30		0-25 Auto BXa monolithic, clast up to 3". Matrix contains small fragment of surrounding rock 25-36 Breccia has 25.5 - 1" wide highangle vug with drusy QTZ and more	0-3 Calcite vns and calcareous rock Py is <1%. Py veinlets are present and have multiple orientations 6-10' chloritic traces on fractures 12-37' hardened white clay on fractures up to ½" thick 19-21 silicification 25-36 spotty silicification of breccia matrix	0	5					
							5	10					
							10	15					
							15	20					
							20	25					
						31.5 is a 1" qtz and bladed marc void	25	29					
							29	32					
		36-85 Planar Laminar with fine texture with oriented small vesicle train. Chlorite on fractures give grayish white core a green tint around fracture and bleeding out from fractures up to ½".	40 50		Sharp contact between auto BXa and non BXa Planar laminar. Planar lamination show an average 1" foliation pattern	25.5' Drusy quartz flooded vug with marc. blade. Propy alteration from 36- Py veins favor 40° TCA orientation of the foliation white clay becomes soft and moist below 49'	32	36					
							36	40					
							40	45					
							45	50					
							50	55					

HOLE NUMBER D-295-98 PAGE 2 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
0-85 P.L. ↓	Redo ↓	36-85 Planar Laminar P.L. continues as from 36'. Fine grained texture with vesicle train up to 1" thick. Core has a definate foliation. Core is greenish gray in color with chloritic surface coatings on fractures. 81-85 vesicals increase in size but continue to be weakly oriented.	50 60 70 80		Foliation of vesicals and planar fabric dip between 40°-60° 57.5 - 1" silica healed breccia 60 - 1" smoky QTZ healed breccia 76' - crackle BXX zone healed by silica 78.2 Marc. and QTZ healed 2" crackle BXX	WK CLAY on fracture and in vugs continue Marc. and py continue on fractures. Disseminate py ≤ 1% Calcite veins and fracture coats continues	50 55 60 65 70 75 80	55.0 60 65 70 75 80 85				
F.G.M. ↓ 85-103		85-103 Fine Grained Massive This appears to be gradational into the vitrophyre. Ghost of vesicals in portions of the core. Texture is very fine. Chlorite on fractures along with pyrite. Rock is medium gray with leaching along fractures.	90 100		88.5 open vug with soft white cly with smoky QTZ and marc blades Disseminated py concentrations at 83'	81.5 ½" thick marc and py on clay coated fracture Py and chlorite on all fractures	85 90 95 100	90 95 100 103				
VIT. 103-143.5		103-143.5 VITROPHYRE Very fine grained flow with a shattered texture similiar to a crackle BXX. Marc. and py continue to be found in all vugs. Pale gray white color with a touch a green tint. Devitrified but not as glassy as seen in some holes	110 120		Highangle Marc. vein sampled 114.5-121	110' Argillization of core increases surfaces become leached leaving veinlets in raised relief. 1" Marcasite/PY vein 5° TCA 119.5-120.5	103 105 110 115 119.5	105 110 115 119.5 121.0				

HOLE NUMBER D-295-98 PAGE 3 OF 5

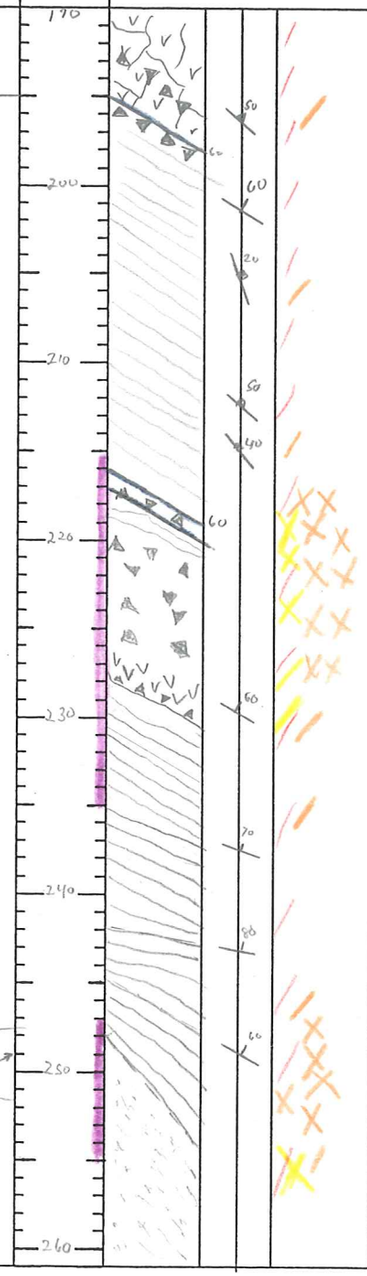
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
Vitrophyre	Red. ½	103-143.5 VITROPHYRE continues See page 4 description Pale greenish tint increases in below 115'. Lower contact with F.G.M. Gradational. Barite in fractures with qtz and marcasite.	120 130 140		Shattered texture continues. 123-124 Shattered texture decreases in size to ⅛ to ¼"	Py and Marcasite Vein to ¼" common between 129-135' Barite in vugs with surface coatings of Py at 132.3 Argillization decreases below 126' QTZ VETNG Increases Below 119.5'
Fine grained Massive 143.5-195.0		143.5-195 Fine Grained Massive Very fine grained pale green flow. Auto Bxa with rounded to sub rounded clasts. Tectonic Bxa from 178.5 to 179.7 179.7-182.3 Vitrophyre like chill margin(?) with a high angle (20°) fault Lower contact. F.G.M. continues below fault to another "vitrophyre" like chill margin from 190.5 to 195. Pink 173.5 Contact with planar laminar at 195' is brecciated for ≈ 1'	150 160 170 180 190	20	158-160 Breccia of round to sub rounded clast. Healed milled Bxa 178.6-179.7 Healed Rubble Bxa with sub rounded to rounded clast. Minor clay on hanging wall surface 182.3-183.3 20° high angle Healed rubble Bxa	Marc. and Py veins with qtz average ⅛" thick Disseminated Py between 1-2% from 143.5-149.3 148- Marc. ¼" thick Fracture filling at

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
119.5	121				
121	125				
125	128.8				
128.8	130				
130	135				
135	140				
140	143.5				
143.5	147.5				
147.5	149.3				
149.3	153.7				
153.7	157.4				
157.4	162				
162	165				
165	170				
170	175				
175	178				
178	180				
180	181.8				
181.9	183.7				
183.7	185				
185	190				

HOLE NUMBER D-295-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
	R	143.5 - 195 Fine Grained Massive				dissemintated Py <1% Py and marc. Veins follow and cross cut laminations	190	195				
Planar Laminar	195.0	- 290 Planar Laminar Thinly laminated medium to Fine textured flow. Lamination from 1/8" to 1" wide spacing. Dip ≈ 60°. Color is gray with light green gray along fractures and lamina.			.8' Breccia at contact with vit. clast size to 1" Fragments of from Planar laminar. Silicification in Bx		195	200				
						silicified BXG 216 - 217	200	205				
							205	210				
						213 - 1/2" white clay fracture Filling	210	215				
					206 - 216 Fracture Swarm with dips of 30-60°	218 - 225.5 silicified Breccia and clay Filled voids	215	220				
STOPPED TUFF		Possible spotted Tuff from 226 to 227.5. Zone is so thin it could be a variation in the planar laminar Vesicular from 226 - 227.5 Brecciated Lower contact that is 4" wide					220	225				
Planar Laminar					Healed crackle Bxu with QTZ Flooding between Clast		225	230				
					230.3 - 2" healed mosaic BXU.		230	235				
		From 248-270 texture coarsens to medium and lamination become fainter but are locally visible.				247 - 251 hardened white clay void and fractures up to 3" thick	235	240				
							240	245				
						Sporatic qtz flooding from 254'	245	247				
		Pinch 249					247	251				
		Flow margin with vitrophyre like textures from 263 - 267					251	255				
							255	260				



HOLE NUMBER D- 296-98 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	143.5-290	Planar Laminar medium textured flow with lightly laminated foliation Bleached out beds at 263-263.5, 264.5-265.5 272.0-272.5 A similar zone from 280 to 281.5 is approaching the vitro phyre like texture.	260 270 280 290		Auto bxu from 264-264.5	Barite in fractures at 262 10° high angle marcasite QTZ VEINLETS. 284.5-287.1 Elevated argillization with ½" thick marc. muss along middly shear zone from 285 to 285.6
		EOH 290'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
260	265				
265	270				
270	275				
275	280				
280	284.5				
284.5	287.1				
287.1	290				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-295-98 DATE: 10-10-98 LOGGED BY: DG, Much error. 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)
0.0	5.0	56	100	58										
5.0	10.0	100	100	46										
10.0	15.0	100	100	84										
15.0	20.0	100	100	70										
20.0	25.0	100	100	80										
25.0	30.0	78	100	68										
30.0	35.0	90	100	58										
35.0	40.0	76	100	50										
40.0	45.0	90	100	52										
45.0	50.0	100	100	66										
50.0	55.0	100	100	50										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-295-98 DATE: 10-10-98 LOGGED BY: D. G. MacHerron PAGE 2 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)
55.0	60.0	100	100	44										
60.0	65.0	86	100	72										
65.0	70.0	100	100	62										
70.0	75.0	100	100	60										
75.0	80.0	60	100	62										
80.0	85.0	84	100	74										
85.0	90.0	80	100	54										
90.0	95.0	82	100	52										
95.0	100.0	58	100	48										
100.0	105.0	100	100	80										
105.0	110.0	100	100	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-293-98 DATE: 10-10-98 LOGGED BY: D.G. MacKenzie 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)
110.0	115.0	100	100	100										
115.0	120.0	88	100	94										
120.0	125.0	100	100	80										
125.0	130.0	100	100	68										
130.0	135.0	100	100	100										
135.0	140.0	100	100	72										
140.0	145.0	100	100	70										
145.0	150.0	74	100	62										
150.0	155.0	100	100	96										
155.0	160.0	100	100	86										
160.0	165.0	90	100	72										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-295-98 DATE: 10-10-98 LOGGED BY: D. G. Muckarrow PAGE 4 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)
165.0	170.0	100	100	80										
170.0	175.0	100	100	82										
175.0	180.0	76	100	52										
180.0	185.0	100	100	100										
185.0	190	100	100	88										
190.0	195.0	100	100	90										
195.0	200.0	100	100	80										
200.0	205.0	100	100	48										
205.0	210.0	76	100	58										
210.0	215.0	52	100	22										
215.0	220.0	48	100	26										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-295-98 DATE: 10-10-98 LOGGED BY: D.G. MacKerron 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)
220.0	225.0	64	100	42										
225.0	230.0	80	100	62										
230.0	235.0	100	100	96										
235.0	240.0	66	100	52										
240.0	245.0	94	100	54										
245.0	250.0	60	100	52										
250.0	255.0	82	100	76										
255.0	260	100	100	100										
260.0	265.0	76	100	84										
265.0	270.0	84	100	72										
270.0	275.0	70	100	52										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-295-98 DATE: 10-10-98 LOGGED BY: D. Mackerrow 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)
275.0	280.0	100	100	84										
280.0	285.0	100	100	98										
285.0	290.0	100	100	100										

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 0051133-IN
INVOICE DATE: 10/27/98

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-295-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
70	SAMPLES RECEIVED	.00	.00
70	DRYING	2.00	140.00
70	JAW CRUSHING CHARGE	2.60	182.00
70	COARSE MILLING CHARGE	9.00	630.00
70	SPLITTING CHARGE	2.40	168.00
70	RING MILLING CHARGE	2.00	140.00
70	Au (1 A.T. FIRE ASSAY)	8.00	560.00
22	Au ANALYSES/GRAVIMETRIC	8.75	192.50
70	HYDROCHLORIC/NITRIC DIGESTION	2.00	140.00
70	Ag ANALYSES	1.00	70.00

86-5110-477
KJB

NET INVOICE:	2,222.50
LESS DISCOUNT:	444.50
FREIGHT:	.00
INVOICE TOTAL:	1,778.00

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051133

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-295-98 RECEIVED : 15 OCT 1998

No. SAMPLES : 70 REPORTED : 27 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 SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 00-05	<0.001			<0.02
D-295-98 05-10	0.002			0.03
D-295-98 10-15	0.003			0.05
D-295-98 15-20	0.002			0.04
D-295-98 20-25	0.003			0.03
D-295-98 25-29	0.003			0.03
D-295-98 29-32	0.009			0.02
D-295-98 32-36	0.002			<0.02
D-295-98 36-40	0.002			0.02
D-295-98 40-45	0.006			0.03
D-295-98 45-50	0.006			0.04
D-295-98 50-55	0.031			0.41
D-295-98 55-60	0.028			0.03
D-295-98 60-65	0.002			<0.02
D-295-98 65-70	0.012			<0.02
D-295-98 70-75	0.008			0.03
D-295-98 75-80	0.155		0.171	0.10
D-295-98 80-85	0.050		0.105	0.31
D-295-98 85-90	0.118		0.145	0.60
D-295-98 90-95	0.027			0.05
D-295-98 95-100	0.101		0.084	0.07
D-295-98 100-103	0.687		0.794	0.28
D-295-98 103-105	0.383		0.228	0.30
D-295-98 105-110	0.174		0.209	0.14
D-295-98 110-115	0.217		0.203	0.11

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 115.0-119.5	0.009			0.17
D-295-98 119.5-121.0	0.274		0.320	0.25
D-295-98 121-125	0.006			0.07
D-295-98 125.0-128.8	0.032			0.08
D-295-98 128.8-130.0	0.060		0.083	0.17
D-295-98 130-135	0.075		0.137	0.15
D-295-98 135-140	0.149		0.197	0.31
D-295-98 140.0-143.5	0.107		0.162	0.09
D-295-98 143.5-147.5	0.017			0.10
D-295-98 147.5-149.3	0.037			0.24
D-295-98 149.3-153.7	0.007	0.009		<0.02
D-295-98 153.7-157.4	0.006			<0.02
D-295-98 157.4-162.0	0.022			<0.02
D-295-98 162-165	0.018			0.04
D-295-98 165-170	0.033			0.05
D-295-98 170-175	0.009			0.02
D-295-98 175-178	0.006			0.02
D-295-98 178-180	0.021			0.04
D-295-98 180.0-181.8	0.004			<0.02
D-295-98 181.8-183.7	0.025			0.06
D-295-98 183.7-185.0	0.036			<0.02
D-295-98 185-190	0.160		0.159	0.12
D-295-98 190-195	0.076		0.095	0.07
D-295-98 195-200	0.048			0.05
D-295-98 200-205	0.006			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 205-210	0.049			0.05
D-295-98 210-215	0.024			0.05
D-295-98 215-220	0.158		0.237	0.15
D-295-98 220-225	0.210		0.234	0.48
D-295-98 225-230	0.382		0.388	0.40
D-295-98 230-235	0.171		0.186	0.13
D-295-98 235-240	0.019			0.06
D-295-98 240-245	<0.001			<0.02
D-295-98 245-247	0.006			0.04
D-295-98 247-251	0.591		0.465	0.26
D-295-98 251-255	0.333		0.345	0.29
D-295-98 255-260	0.076		0.132	0.13
D-295-98 260-265	0.045			0.12
D-295-98 265-270	0.049			0.17
D-295-98 270-275	0.041			0.07
D-295-98 275-280	0.002			0.02
D-295-98 280.0-284.5	0.010			0.06
D-295-98 284.5-287.1	0.004			0.02
D-295-98 287.1-290.0	0.014			0.04
43549	0.503			0.12

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ANALYSIS REPORT SP051133

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-295-98 RECEIVED : 15 OCT 1998

No. SAMPLES : 70 REPORTED : 27 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 SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 00-05	<0.001			<0.02
D-295-98 05-10	0.002			0.03
D-295-98 10-15	0.003			0.05
D-295-98 15-20	0.002			0.04
D-295-98 20-25	0.003			0.03
D-295-98 25-29	0.003			0.03
D-295-98 29-32	0.009			0.02
D-295-98 32-36	0.002			<0.02
D-295-98 36-40	0.002			0.02
D-295-98 40-45	0.006			0.03
D-295-98 45-50	0.006			0.04
D-295-98 50-55	0.031			0.41
D-295-98 55-60	0.028			0.03
D-295-98 60-65	0.002			<0.02
D-295-98 65-70	0.012			<0.02
D-295-98 70-75	0.008			0.03
D-295-98 75-80	0.155		0.171	0.10
D-295-98 80-85	0.050		0.105	0.31
D-295-98 85-90	0.118		0.145	0.60
D-295-98 90-95	0.027			0.05
D-295-98 95-100	0.101		0.084	0.07
D-295-98 100-103	0.687		0.794	0.28
D-295-98 103-105	0.383		0.228	0.30
D-295-98 105-110	0.174		0.209	0.14
D-295-98 110-115	0.217		0.203	0.11

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 115.0-119.5	0.009			0.17
D-295-98 119.5-121.0	0.274		0.320	0.25
D-295-98 121-125	0.006			0.07
D-295-98 125.0-128.8	0.032			0.08
D-295-98 128.8-130.0	0.060		0.083	0.17
D-295-98 130-135	0.075		0.137	0.15
D-295-98 135-140	0.149		0.197	0.31
D-295-98 140.0-143.5	0.107		0.162	0.09
D-295-98 143.5-147.5	0.017			0.10
D-295-98 147.5-149.3	0.037			0.24
D-295-98 149.3-153.7	0.007	0.009		<0.02
D-295-98 153.7-157.4	0.006			<0.02
D-295-98 157.4-162.0	0.022			<0.02
D-295-98 162-165	0.018			0.04
D-295-98 165-170	0.033			0.05
D-295-98 170-175	0.009			0.02
D-295-98 175-178	0.006			0.02
D-295-98 178-180	0.021			0.04
D-295-98 180.0-181.8	0.004			<0.02
D-295-98 181.8-183.7	0.025			0.06
D-295-98 183.7-185.0	0.036			<0.02
D-295-98 185-190	0.160		0.159	0.12
D-295-98 190-195	0.076		0.095	0.07
D-295-98 195-200	0.048			0.05
D-295-98 200-205	0.006			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051133

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : D-295-98

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-295-98 205-210	0.049			0.05
D-295-98 210-215	0.024			0.05
D-295-98 215-220	0.158		0.237	0.15
D-295-98 220-225	0.210		0.234	0.48
D-295-98 225-230	0.382		0.388	0.40
D-295-98 230-235	0.171		0.186	0.13
D-295-98 235-240	0.019			0.06
D-295-98 240-245	<0.001			<0.02
D-295-98 245-247	0.006			0.04
D-295-98 247-251	0.591		0.465	0.26
D-295-98 251-255	0.333		0.345	0.29
D-295-98 255-260	0.076		0.132	0.13
D-295-98 260-265	0.045			0.12
D-295-98 265-270	0.049			0.17
D-295-98 270-275	0.041			0.07
D-295-98 275-280	0.002			0.02
D-295-98 280.0-284.5	0.010			0.06
D-295-98 284.5-287.1	0.004			0.02
D-295-98 287.1-290.0	0.014			0.04
43549	0.503			0.12

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051133

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MAIN SAMPLE TYPE : DRILL CORE

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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

PROVISIONAL REPORT SP051133

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-295-98 00-05	<0.001			<0.02	
D-295-98 05-10	0.002			0.03	
D-295-98 10-15	0.003			0.05	
D-295-98 15-20	0.002			0.04	
D-295-98 20-25	0.003			0.03	
D-295-98 25-29	0.003			0.03	
D-295-98 29-32	0.009			0.02	
D-295-98 32-36	0.002			<0.02	
D-295-98 36-40	0.002			0.02	
D-295-98 40-45	0.006			0.03	
D-295-98 45-50	0.006			0.04	
D-295-98 50-55	0.031			0.41	
D-295-98 55-60	0.028			0.03	
D-295-98 60-65	0.002			<0.02	
D-295-98 65-70	0.012			<0.02	
D-295-98 70-75	0.008			0.03	
D-295-98 75-80	0.155		0.171	0.10	
D-295-98 80-85	0.050		0.105	0.31	
D-295-98 85-90	0.118		0.145	0.60	108' - 121
D-295-98 90-95	0.027			0.05	2 ft
D-295-98 95-100	0.101		0.084	0.07	
D-295-98 100-103 3	0.687		0.794	0.28	
D-295-98 103-105 2	0.383		0.228	0.30	0.249 Au
D-295-98 105-110 5	0.174		0.209	0.14	0.18 Ag
D-295-98 110-115 5	0.217		0.203	0.11	

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PROVISIONAL REPORT SP051133

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-295-98

REPORTED : 27 OCT 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-295-98 115.0-119.5 4.5	0.009			0.17
D-295-98 119.5-121.0 1.5	0.274		0.320	0.25
D-295-98 121-125	0.006			0.07
D-295-98 125.0-128.8	0.032			0.08
D-295-98 128.8-130.0	0.060		0.083	0.17
D-295-98 130-135	0.075		0.137	0.15
D-295-98 135-140	0.149		0.197	0.31
D-295-98 140.0-143.5	0.107		0.162	0.09
D-295-98 143.5-147.5	0.017			0.10
D-295-98 147.5-149.3	0.037			0.24
D-295-98 149.3-153.7	0.007	0.009		<0.02
D-295-98 153.7-157.4	0.006			<0.02
D-295-98 157.4-162.0	0.022			<0.02
D-295-98 162-165	0.018			0.04
D-295-98 165-170	0.033			0.05
D-295-98 170-175	0.009			0.02
D-295-98 175-178	0.006			0.02
D-295-98 178-180	0.021			0.04
D-295-98 180.0-181.8	0.004			<0.02
D-295-98 181.8-183.7	0.025			0.06
D-295-98 183.7-185.0	0.036			<0.02
D-295-98 185-190	0.160		0.159	0.12
D-295-98 190-195	0.076		0.095	0.07
D-295-98 195-200	0.048			0.05
D-295-98 200-205	0.006			0.03

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SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-295-98 205-210	0.049			0.05	215-235
D-295-98 210-215	0.024			0.05	20' @
D-295-98 215-220 5	0.158		0.237	0.15	
D-295-98 220-225 5	0.210		0.234	0.48	0.230 Au
D-295-98 225-230 5	0.382		0.388	0.40	0.29 Ag
D-295-98 230-235 5	0.171		0.186	0.13	
D-295-98 235-240	0.019			0.06	
D-295-98 240-245	<0.001			<0.02	
D-295-98 245-247	0.006			0.04	247-255 = 8'
D-295-98 247-251 4	0.591		0.465	0.26	
D-295-98 251-255 4	0.333		0.345	0.29	0.462 Au 0.28 Ag
D-295-98 255-260	0.076		0.132	0.13	
D-295-98 260-265	0.045			0.12	
D-295-98 265-270	0.049			0.17	
D-295-98 270-275	0.041			0.07	
D-295-98 275-280	0.002			0.02	
D-295-98 280.0-284.5	0.010			0.06	
D-295-98 284.5-287.1	0.004			0.02	
D-295-98 287.1-290.0	0.014			0.04	
43549	0.503			0.12	

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
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2320 Last Chance Rd.
Nevada 89801
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Elko, NV 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

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Telephone/Fax
011-52-69-170035

Other Offices
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Santiago, Chile
Mendoza, Argentina

Company: Rosebud Mining LLC

Address: P.O. Box 2610

City Winnemucca State NV Zip 89316

Telephone Number: (702) 623-6912 Fax Number: (702) 623-6917

Project Name: Development Purchase Order Number:

Date Submitted: 10-13-98 Number of Samples: 69

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

Au Ag according to Rosebud Mine Portal

D-295-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED	
0-5.0	70.0-75.0	130.0-135.0		183.7-185.0	251.0-255.0
5.0-10.0	75.0-80.0	135.0-140.0		185.0-190.0	255.0-260.0
10.0-15.0	80.0-85.0	140.0-143.5		190.0-195.0	260.0-265.0
15.0-20.0	85.0-90.0	143.5-147.5		195.0-200.0	265.0-270.0
20.0-25.0	90.0-95.0	147.5-149.3		200.0-205.0	270.0-275.0
25.0-29.0	95.0-100.0	149.3-153.7		205.0-210.0	275.0-250.0
29.0-32.0	100.0-103.0	153.7-157.4		210.0-215.0	250.0-254.5
32.0-36.0	103.0-105.0	157.4-162.0		215.0-220.0	254.5-257.1
36.0-40.0	105.0-110.0	162.0-165.0		220.0-225.0	257.1-270.0
40.0-45.0	110.0-115.0	165.0-170.0		225.0-230.0	
45.0-50.0	115.0-119.5	170.0-175.0		230.0-235.0	
50.0-55.0	119.5-121.0	175.0-178.0		235.0-240.0	
55.0-60.0	121.0-125.0	178.0-180.0		240.0-245.0	
60.0-65.0	125.0-128.8	180.0-181.8		245.0-247.0	
65.0-70.0	128.8-130.0	181.8-183.7		247.0-251.0	

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

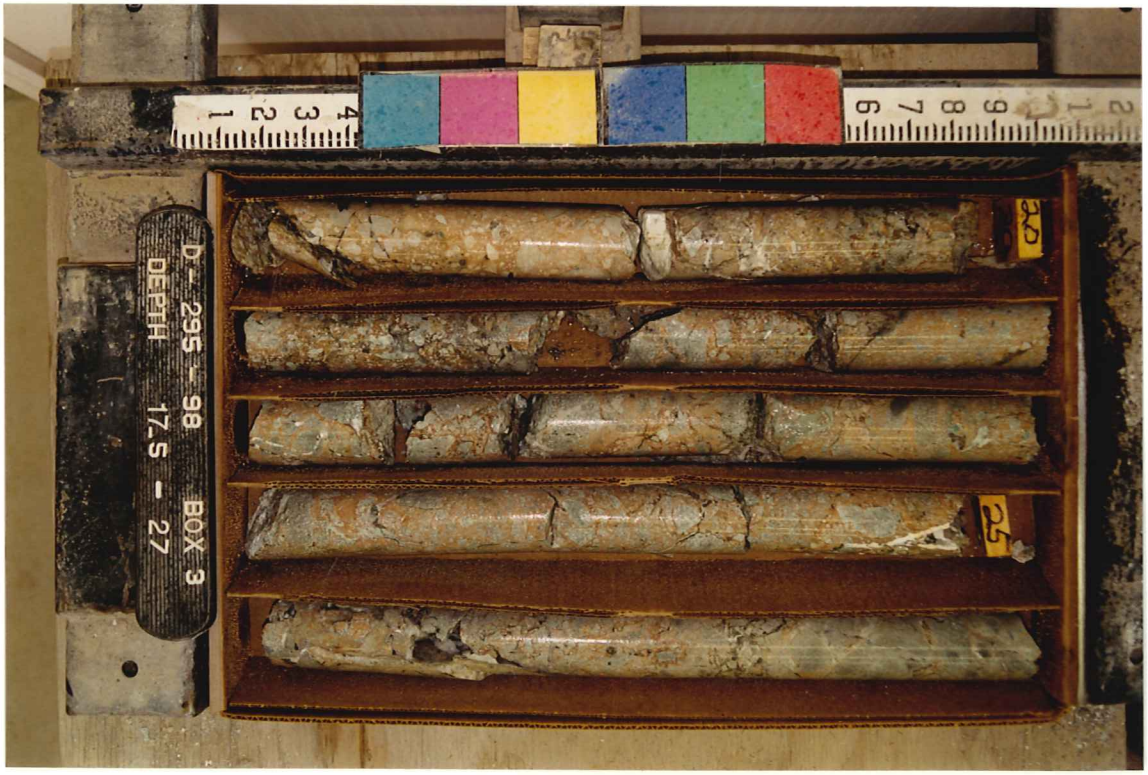
Comments:

CLIENT FILE COPY

D-295-98	40	33	126.2
	145	32.5	126.2
	290	32.5	125.7

D - 295 - 98 BOX 2
DEPTH 9_5 - 17.5
10
15

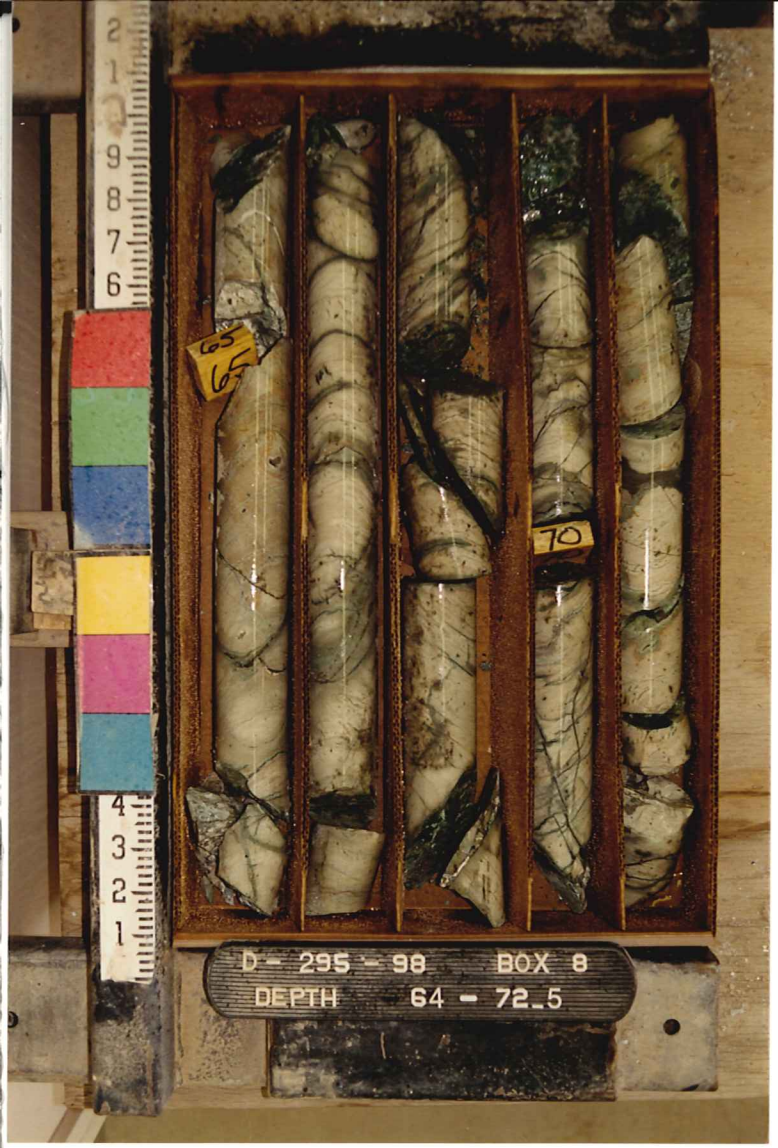
D - 295 - 98 BOX 1
DEPTH 0 - 9_5
5


D - 295 - 98 BOX 3
DEPTH 17_5 - 27
20
25

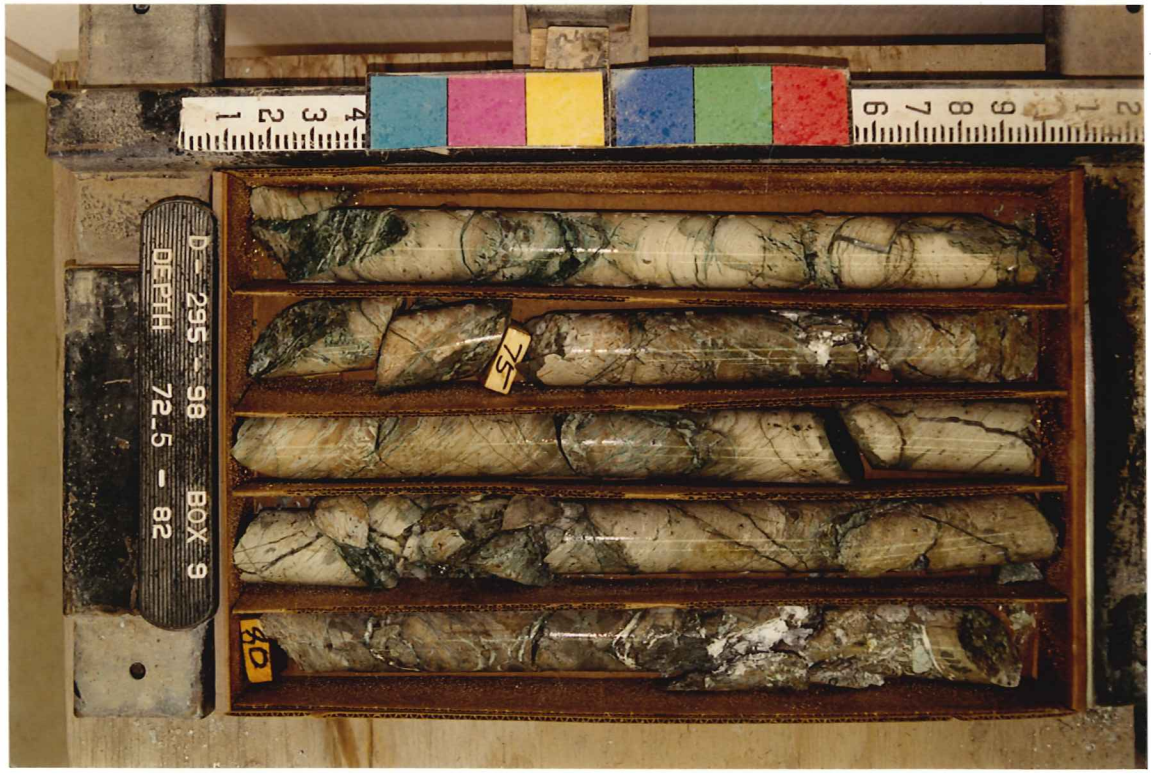
45
40
D- 295 - 98 BOX 5
DEPTH 36 - 45

30
35
D- 295 - 98 BOX 4
DEPTH 27 - 36

50
D- 295 - 98 BOX 6
DEPTH 45 - 54.5


65
70
D- 295 - 98 BOX 8
DEPTH 64 - 72.5

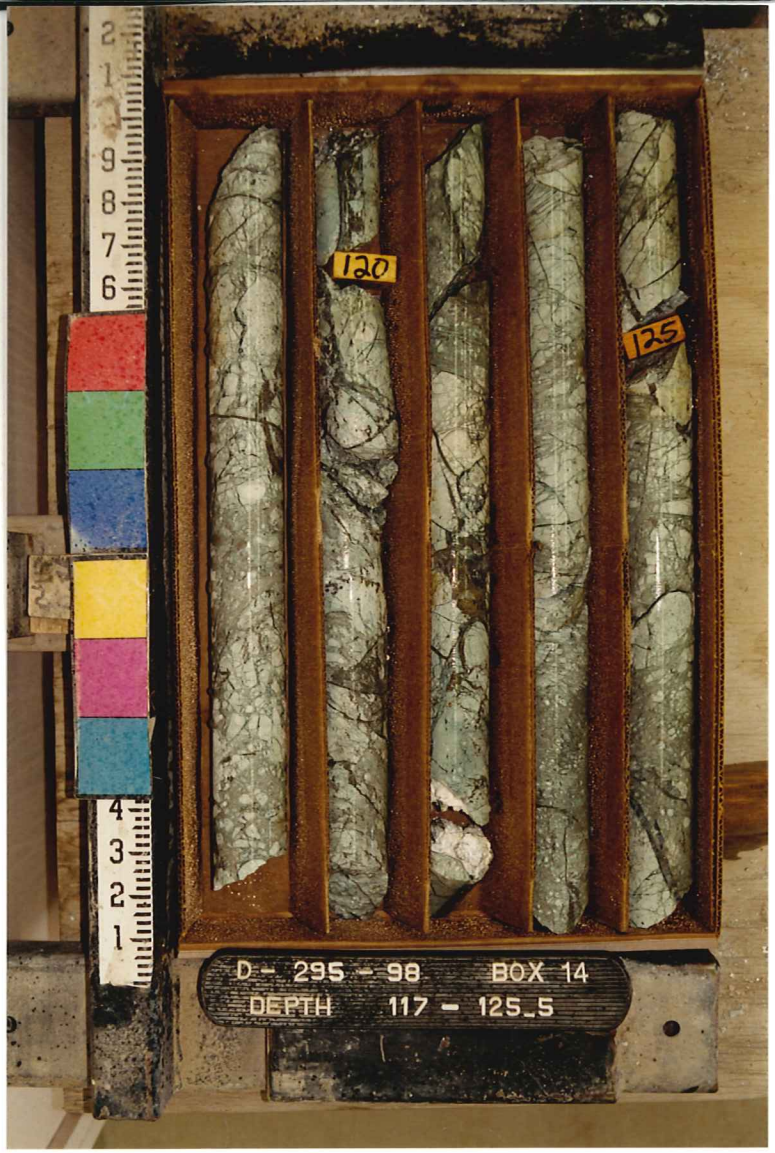
60
55
D- 295 - 98 BOX 7
DEPTH 54.5 - 64


D- 295 - 98 BOX 9
DEPTH 72.5 - 82
75
80

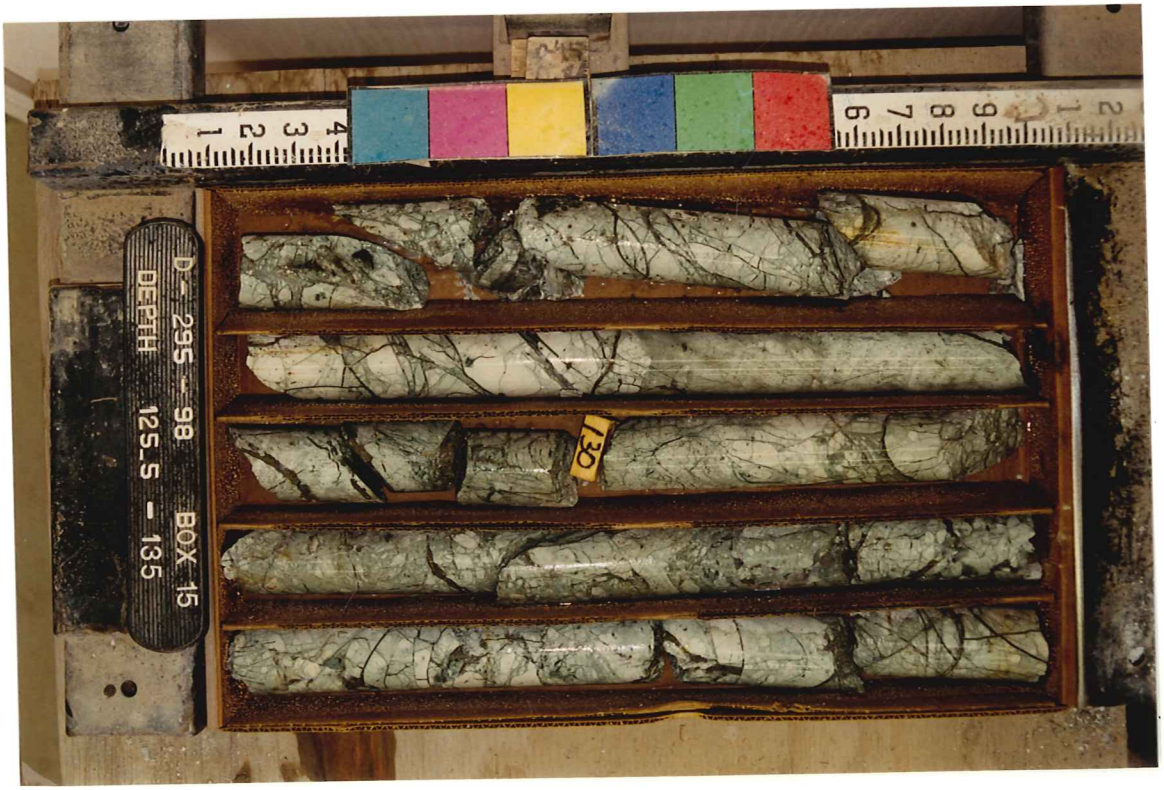
95
D - 295 - 98 BOX 11
DEPTH 90_5 - 99

85
90
D - 295 - 98 BOX 10
DEPTH 82 - 90_5

100
105
D - 295 - 98 BOX 12
DEPTH 99 - 108

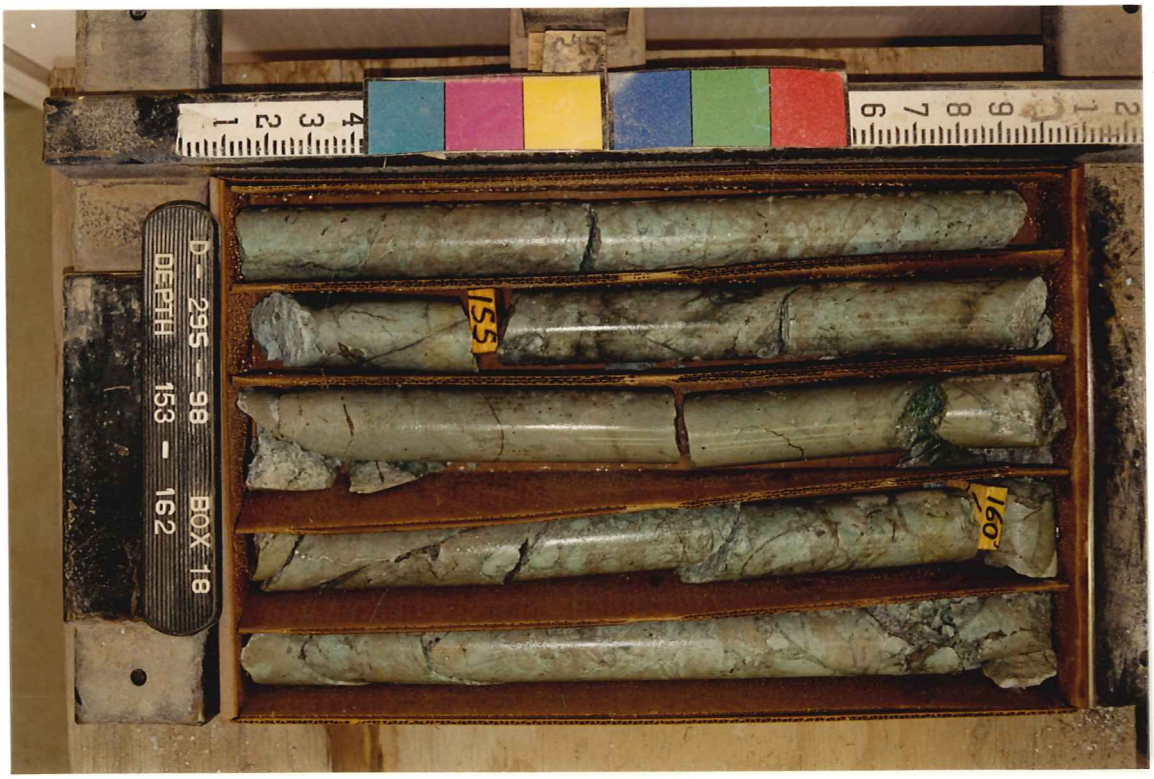

120
125
D - 295 - 98 BOX 14
DEPTH 117 - 125_5

115
110
D - 295 - 98 BOX 13
DEPTH 108 - 117


D - 295 - 98 BOX 15
DEPTH 125_5 - 135
130

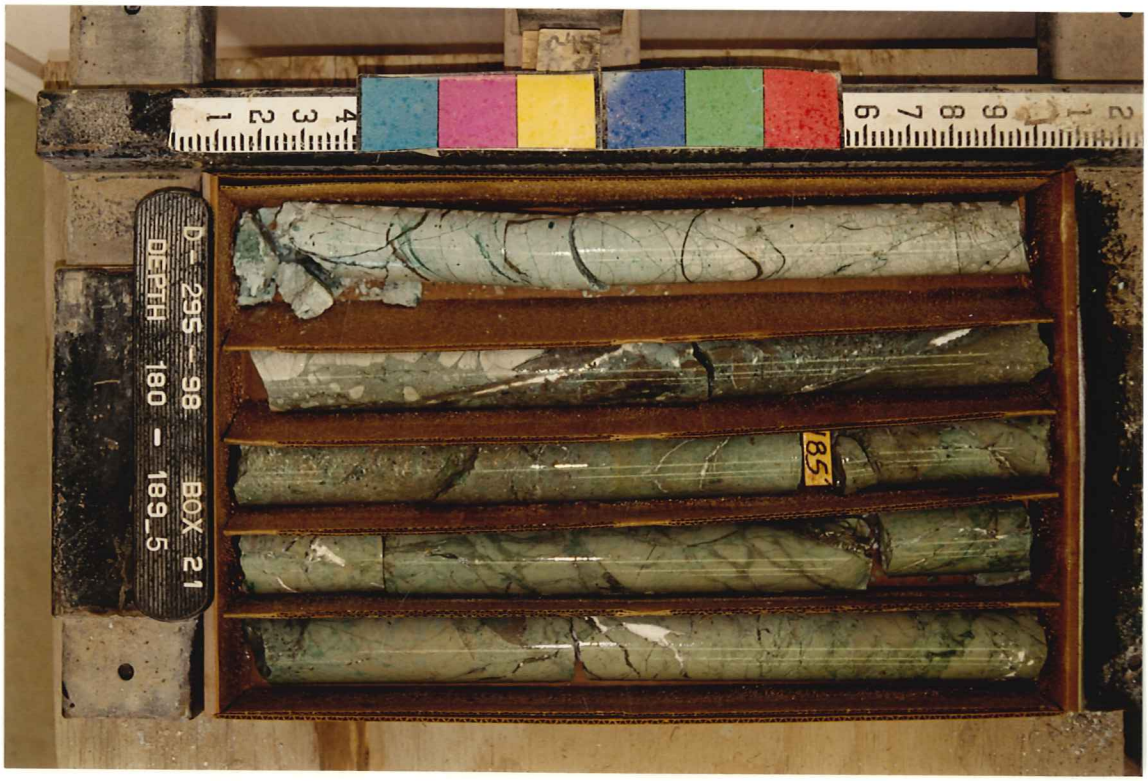
145
150
D - 295 - 98 BOX 17
DEPTH 144 - 153

140
135
D - 295 - 98 BOX 16
DEPTH 135 - 144


155
160
D - 295 - 98 BOX 18
DEPTH 153 - 162

180
175
D - 295 - 98 BOX 20
DEPTH 171 - 180

165
170
D - 295 - 98 BOX 19
DEPTH 162 - 171


185
D - 295 - 98 BOX 21
DEPTH 180 - 189.5

200
205
D - 295 - 98 BOX 23
DEPTH 199 - 208_5

190
195
D - 295 - 98 BOX 22
DEPTH 189_5 - 199

210
215
D - 295 - 98 BOX 24
DEPTH 208_5 - 219

230
235
D - 295 - 98 BOX 26
DEPTH 226_5 - 235_5

220
225
D - 295 - 98 BOX 25
DEPTH 218 - 226_5

240
D - 295 - 98 BOX 27
DEPTH 235_5 - 245

255
260
D- 295 - 98 BOX 29
DEPTH 253_5 - 263

250
245
D- 295 - 98 BOX 28
DEPTH 245 - 253_5

D- 295 - 98 BOX 30
DEPTH 263 - 272_5
265
270

280
275
D- 295 - 98 BOX 31
DEPTH 272_5 - 282

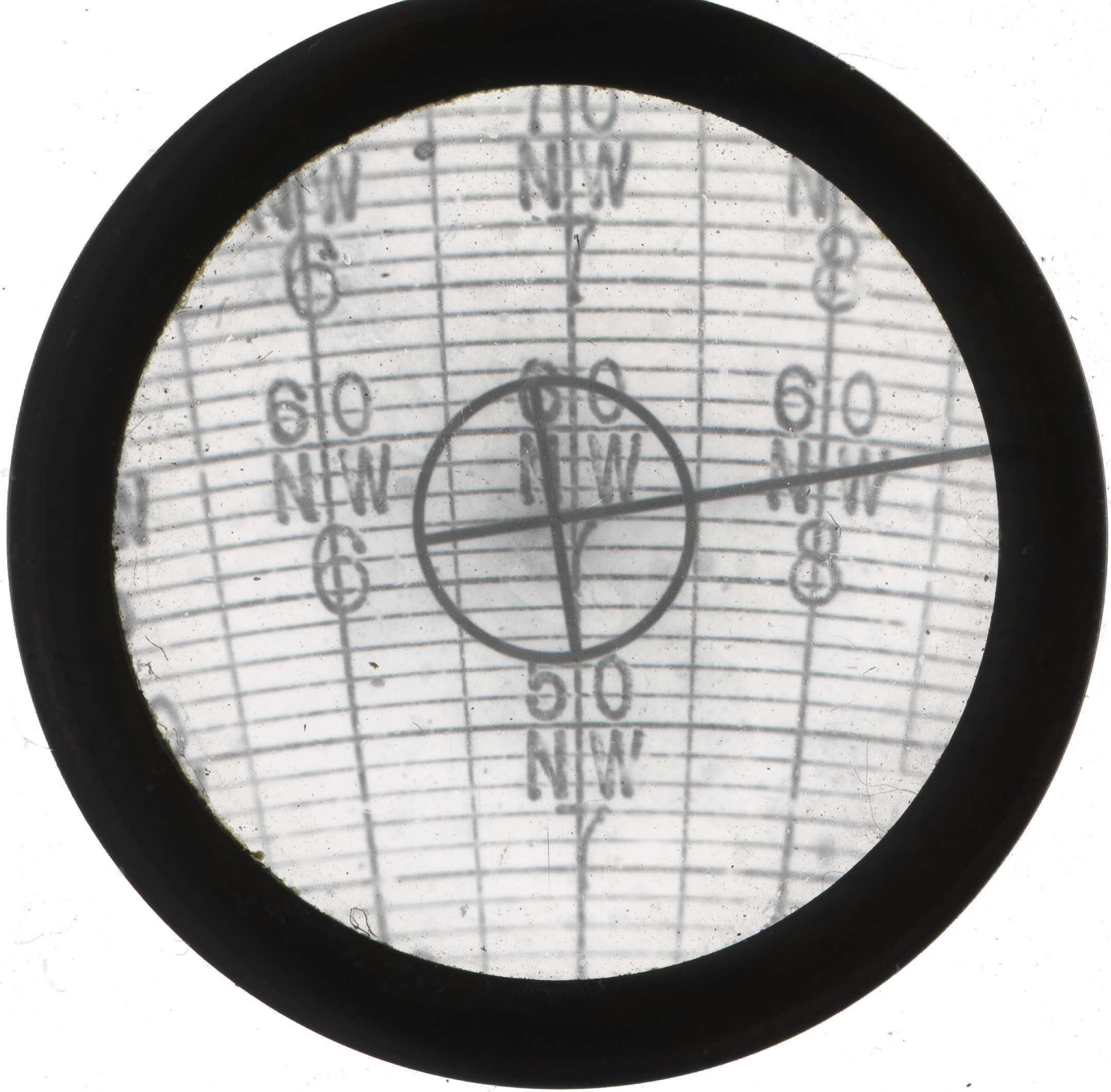
280
275
D- 295 - 98 BOX 31
DEPTH 272_5 - 282

285
TD
290
D- 295 - 98 BOX 31
DEPTH 282 - 290 TD

SINGLE SHOT
PHOTO DISC RECORD

1

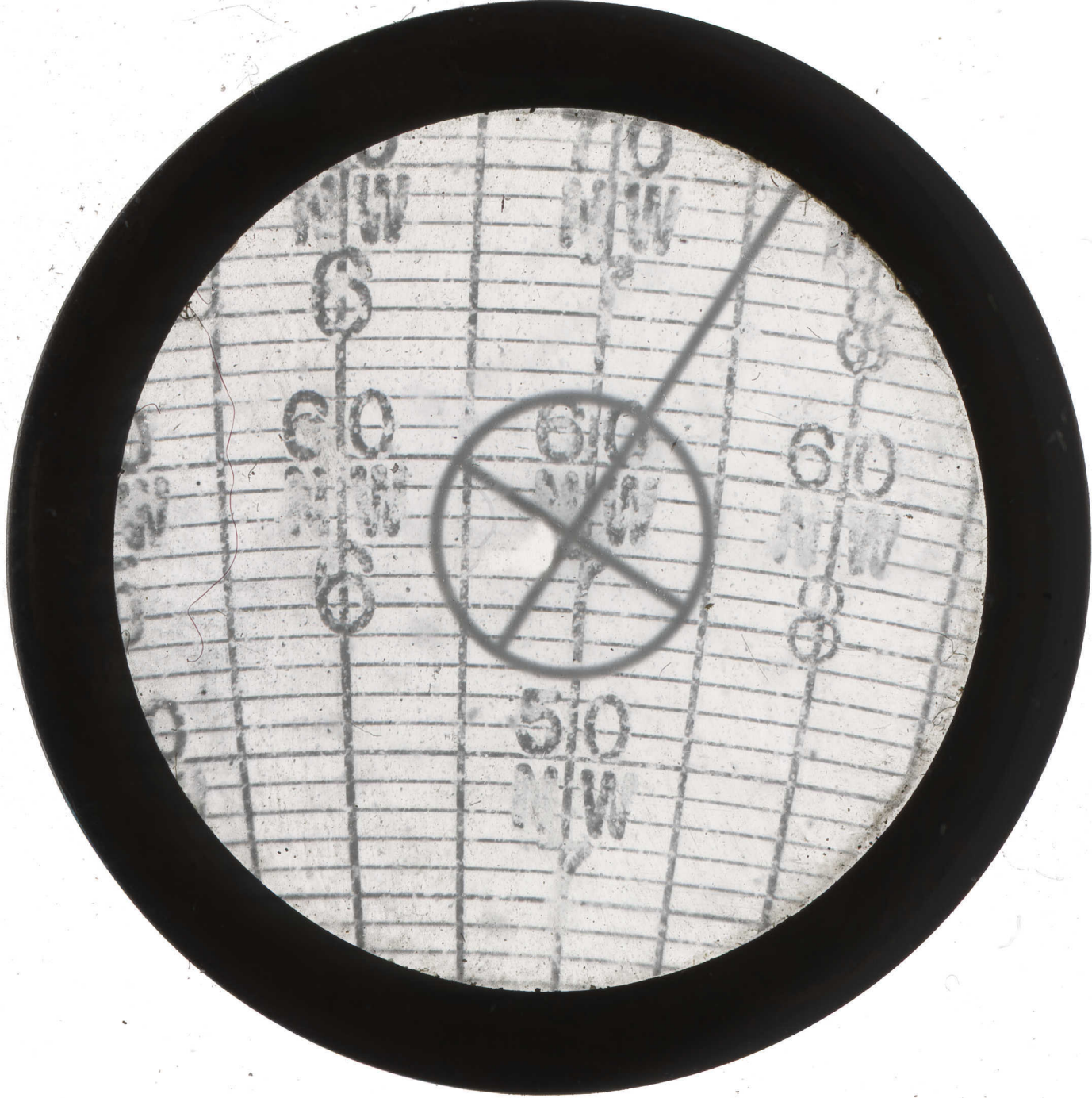
COMPANY Heck
WELL NAME P-295-98
LEASE
TAKEN BY Hughes
DEPTH 40
DATE 8/21/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


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

SINGLE SHOT
PHOTO DISC RECORD

(2)

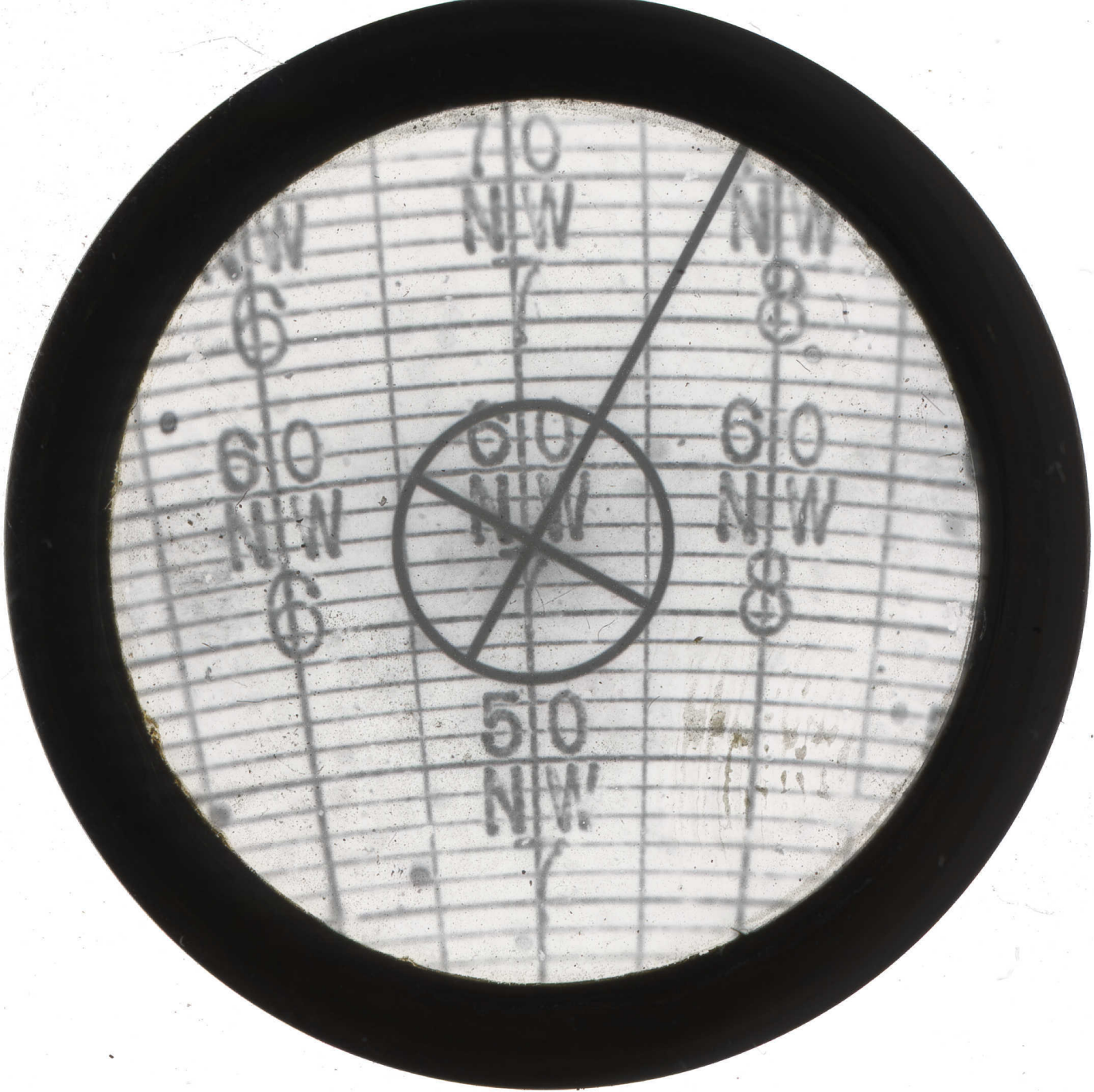
COMPANY Hecla
WELL NAME D-295-98
LEASE
TAKEN BY Hughes
DEPTH 145
DATE 8/21/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

3

COMPANY Hecla
WELL NAME D-295-98
LEASE
TAKEN BY Hughes
DEPTH 290
DATE 8/21/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


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