60001208

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-307-98
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 320' 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: DP 5/14/08
Initials Date

DB: mah
Initials Date

SCANNED: NB
Initials Date

Revised: 1/22/08

D-307-98

6000 1208 4010

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

60001208

Hecla MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-307-98	LOCATION	SDRE50 ACCESS, SEMTOU 1600
PAGE	1 OF 5	NORTHING	
DATE	10-24-98	EASTING	
LOGGED BY	Whitney	ELEVATION	
SCALE	1" = 10'	AZIMUTH	125
TOTAL DEPTH	320'	INCLINATION	37

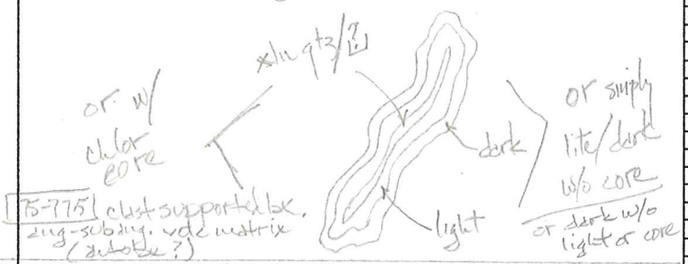
REMARKS: Hole Completed 9/9/98

FM.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0	-58.5	PLANAR LAMINAR (tr)gry to pale-brn fg flow. faint to prominent granular & vesicular texture, vesicles generally in trains along foliation (xs. size varies from <1mm to 3mm. well developed platy/crenulated flow foliation. Foliation dips gently regular. [21-25] prominent vesicle trains [28.5-38] prominent vesicle trains 33.0 PIMA [38] 6" Si-flooded bxd, angular-clast, alteration 38.5 PIMA [42-44] wormy texture [45-49] closely-spaced foliation fxs [48.5-50] wormy texture	10 20 30 40 50	70 25 55 45 25 55 25 25 20 35 20 60 45	[5] fol. 30° to CA [10-28.5] vnlts gently 25° to CA ± sprint fol. [12] fol. 55° to CA [14] fx 45° to CA against foliation [25] fol. 55° to CA [28.5-46] vns 20° ± 35° to CA, sub// uncommon [31] fx 25° to CA ± normal to foliation [33] fx 60° to CA against foliation [42] worms 10° to CA [46] fol 60° to CA [46] bx vnlt 35° to CA	[0-58.5] wk pervasive propyl. w/ mod-str chlor along foliation fxs. gently <1% pyt [10-28.5] uncommon wk-mod q-cly-musc-py vnlts to ¼". Associated wkly dk s- blowouts [28.5-33] wk-vwk arg. [28.5-46] stronger chlor, mor in vn Hs density. 1-gn cly-pyr-musc [30.5-33] common wk cly on fx/vnlts [46] vein density returns to uncommon. q-wh cly-pyr-musc xls.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	3.0					
3.0	6.0					
6.0	11.0					
11.0	16.0					
16.0	21.0					
21.0	26.0					
26.0	28.5					
28.5	30.5					
30.5	33.0					
33.0	35.5					
35.5	38.5					
38.5	41.5					
41.5	44.0					
44.0	47.0					
47.0	52.0					

HOLE NUMBER D-307-98 PAGE 2 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
0 – 58.5		PLANAR LAMINAR [48.5-56] wormy texture continued [56-58.5] faint platy & wormy texture			[52] fol 65° to CA wormy fol. 15° to CA against fol.	[47.5-58.5] continue uncommon vnlts [58.5-73] uncommon patches of vfg dk s- [60-62] mod propyl. [58.5] vnlts become rare	47.0	52.0				
							52.0	54.0				
							54.0	58.5				
58.5 – 80.5		WORMY SPLAT gry-tan fg flow. wvkly foliated, general textural features obscurred by strong "wormy" text. "worms" a to ⊻s to CA & li⊻s against fol. Nature as below:	60		[62] fol 65° to CA		58.5	62.0				
						[66-75] wk arg/wk-mod propyl.	62.0	67.0				
			70				67.0	72.0				
						[75] start wk arg.	72.0	75.5				
			80		[78] fol 55° to CA [80.5] ctc 25° to CA	[75-77.5] wk silicif.	75.5	80.5				
80.5 – 94.0		FINE-GRAINED MASSIVE gry-tan, vfg. subvitrophyric crackle ⊻s. patches of worms. unfoliated.				[80.5-84] wk perv propyl.	80.5	82.0				
							82.0	86.0				
			90			[86-92] ⅔ stockwk arr-pries crackle ⊻s. little associated s-. BUT common patch vfg dk s-	86.0	89.5				
							89.5	94.0				
94.0 – 102.4		VITROPHYRE gry-tan, dense, textureless volc. primary texture is web of crackle vnlts (chlor). Generally perlitic.			[94] ctc 25° to CA		94.0	98.0				
			100				98.0	102.4				
102.4 – 136.6		FINE-GRAINED MASSIVE gry(?) dense textureless volc. Distinguished from vitro by scarcity of crackle ⊻s & lack of perlitic texture			[102.4] ctc 70° to CA [102.4-122] vnlts 5°, 30°, 55° to CA. ⊻s vnlts	[102.4-131] wk-mod propyl/chlor [102.4-122] uncommon vnlts q-mores-pc-clr	102.4	107.0				
		[112.5-121.0] zone w/ sev'l bx's. faint. clasts appear milleK & matrix looks ground	110		[112.5] bx ctc 40° to CA		107.0	112.0				
							112.0	117.0				
			120				117.0	122.0				



HOLE NUMBER D307-98 PAGE 3 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
102.4 - 136.6		FINE-GRAINED MASSIVE [121.0 – 127.5] bx, rimed clasts to 6" in pinkish grey friable matrix.	130		[121-127] vnlts sub// to CA	[121-127] bx matrix wkly Si-ad → Si-flooded. A few 5-vnlts sub// to CA may control this. [131-136] wk arg w/ sev'l 5-dk 5- vnlts & assoc blowouts. 3-5% 5-.
136.6 - 298.6		PLANAR LAMINAR lt gry brn fg flow. faint to prominent granular texture, vesicles gently in trains along foliation (ves. size gently ≤1 mm. well-developed platy/crenulated flow foliation. foliation dips gently regular. [139-141.5] auto bx.	140		[136.6] pt to 75° to CA [142] fol 70° to CA [143.2-145.7] vn sub// to CA ves 45°, 55° against foliation [146] fol 70° to CA	[136.6] planar laminar very wkly propyl. [143.2-145.7] 1/2" g-mareas-pyr vnlt sub// to CA
			150		[155] fol 65° to CA ves 35° to CA against fol.	[149-152] sev'l 1/4" g-mareas-pyr vnlts sub// to CA. open w/ mareas plate-mass to 1/2" [152-160] wk arg w/ common patches of VFG dk 5- fed by hairline grdy-py-mareavnlts. 3-5% 5-
		[177-179] zone of clotted vesicles, size to 5mm. ovoids to irregular, cly & alunite filled.	160		[160] fol 65° to CA	[160-173.5] continue feature of 152-160 w/ wker arg & less 5-
		[181-184] vesicle zone as above.	170		[170] fol 55° to CA ves 70° to CA against fol. [173] start common accum. of 3mm, hard, waxy cly vnlts	
		[184-192] bx wkly Si-ad to lt-dk Hem Si-flooded. Clasts sub-rdy to ang, gently vesicular facies of planar laminar	180		[180] fol 45° to CA [189] bx ctc 45 to CA, with foliation	[187] vfg dark 5- & brite ppr w/ Si, 3-5%. common vugs w/ Si druse & mareas plates
			190			

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
117.0	122.0				
122.0	127.0				
127.0	132.0				
132.0	136.6				
136.6	139.7				
139.7	143.2				
143.2	145.7				
145.7	149.0				
149.0	152.5				
152.5	157.0				
157.0	162.0				
162.0	167.0				
167.0	172.0				
172.0	177.3				
177.3	181.5				
181.5	186.0				
186.0	189.8				

HOLE NUMBER D 307-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
Sbx6	198.6	PLANAR LAMINAR 192-205 continue bx, but as masses & irreg seams separated by unbxtd, vesicular plan/planar, 196.0 PIMA	200			195.5-199 set of vns 10 to subpll to CA, connecting veins in bx matrix, q-chl-sericite-py.
		208 bx continues irregularly as unsilic, unmineralized auto bx within non vesicular planar laminite 210 PIMA	210		209 fol 35 to CA 210 fol 45 to CA	205-207 unconformal veins w/ py-marcas, drize.
		215.5 auto/bx, back to flow foliated texture	220		214 fol 25° to CA 215.5-229.5 vns 15, 10, 25, 40 to CA 216 S.I. 45 to CA 223 fol 50 to CA 227 fol 70 to CA	215.5-229.5 occasional q-chl-ser-py-marcas vns w/ blebs of fg dks=
		231-271.5 auto bx/flow bx zone. clasts of plan/laminite texture in volcanic matrix. clasts possibly ≥1" in size though most are smaller.	230		231 bx cts 55° to CA, against fol. of 70° to CA	229.5-236 mod arg w/ 6" of q-chl-sericite-py bx fill at 235.5. 236 continue w/ mod-v wk arg to 271.5
		257 texture becomes mottled & indistinct. possible foliation attitudes still variable, small bx seams	240			
			250			
			260			

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
189.8	192.0				
192.0	195.5				
195.5	199.2				
199.2	202.0				
202.0	207.0				
207.0	212.0				
212.0	217.0				
217.0	222.0				
222.0	225.6				
225.6	229.5				
229.5	232.0				
232.0	236.0				
236.0	239.0				
239.0	242.0				
242.0	247.0				
247.0	252.0				
252.0	257.0				
257.0	262.0				

HOLE NUMBER D307-98 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
136.6-278.6		PLANAR LAMINAR					257.0	262.0				
		[231-271.5] auto bx zone					262.0	265.7				
		[267] 1" interdigited autobx - si/chlor/clay/s matrix				[267] 1" calcite/pyr vn 35° to CA	265.7	268.7				
						[267-284.8] stockwork of pyr-chlor-clay ± qtz matrix, vnlts to ¼" wide @ 45° 30° to CA. clay is dominantly green, hard, waxy; minor white, soft, pyr crosscuts the matrix.	268.7	272.0				
			270				272.0	274.8				
							274.8	277.7				
							277.7	282.0				
			280				282.0	287.0				
					[293] fol 30 to CA		287.0	292.0				
					[295] fol 65 to CA		292.0	294.0				
			290		[298] fol. 80 to CA		294.0	298.6				
278.6-320TD		FINE GRAINED MASSIVE			[298.6] crk 65° to CA	[298.6-304] 1' q-s matrix bx followed by weak str q dissolution to wk. Seems to overprint weak propyl	298.6	304.0				
		dk brn-grey vfg volcanic, nonfoliated, 1-3% chloritic clots ≤ mm that may be replaced lithics. Cut by weak to crackle fxs. Last 4' subparallel,	300				304.0	304.2				
		[278.6-309] crkle fxs denser.					304.2	306.7				
							306.7	309.0				
			310		[309-TD] fxs 65, 50, 15 to CA	[309-TD] weak propyl.	309.0	311.0				
							311.0	315.0				
		[319.6-320] subparallel crackle					315.0	320.0				
			320									
			TD									

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D 307-98 DATE: 10-23-98 LOGGED BY: WHITNEY PAGE 1 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY /FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
0	6	75	93	18										
6	16	93	97	38										
16	26	100	100	57										
26	33	89	100	47										
33	42	63	98	28										
42	52	93	93	28										
52	62	93	97	50										
62	72	97	97	94										
72	82	100	100	92										
82	92	100	100	96										
92	102	100	100	75										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D307-98 DATE: 10-23-98 LOGGED BY: WHITNEY PAGE 2 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
102	112	100	100	87										
112	122	100	100	87										
122	132	97	100	89										
132	142	100	100	67										
142	152	95	98	17										
152	162	90	100	60										
162	172	92	94	23										
172	182	100	100	61										
182	192	96	96	68										
192	202	87	96	45										
202	212	100	100	33										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D307-98 DATE: 10-24-98 LOGGED BY: WHITNEY PAGE 3 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
212	222	90	96	45										
222	232	100	100	43										
232	242	93	100	44										
242	252	96	96	17										
252	262	98	98	72										
262	272	97	97	52										
272	282	73	90	30										
282	292	100	100	33										
292	301	86	ground core 86	53										
301	311	96	ground core 96	46										
311	320	80	ground core 92	25										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051439

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-307-98 RECEIVED : 5 NOV 1998

No. SAMPLES : 84 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.

11/24/1998 13:28 7023561413 AMERICAN ASSAY LABS PAGE 22

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051439

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-307-98 0-3	0.008			0.15
D-307-98 3-6	0.109		0.134	0.07
D-307-98 6-11	0.003			<0.02
D-307-98 11-16	0.009			0.02
D-307-98 16-21	0.004			<0.02
D-307-98 21-26	0.001			<0.02
D-307-98 26.0-28.5	<0.001			<0.02
D-307-98 28.5-30.5	0.001			0.02
D-307-98 30.5-33.0	0.002			0.03
D-307-98 33.0-35.5	0.017			0.03
D-307-98 35.5-38.5	0.003			0.03
D-307-98 38.5-41.5	0.090		0.096	0.14
D-307-98 41.5-44.0	0.002			<0.02
D-307-98 44-47	0.007			0.07
D-307-98 47-52	0.005			<0.02
D-307-98 52-54	0.002			<0.02
D-307-98 54.0-58.5	0.004			<0.02
D-307-98 58.5-62.0	<0.001			<0.02
D-307-98 62-67	0.002			0.02
D-307-98 67-72	<0.001			<0.02
D-307-98 72.0-75.5	0.002	0.001		<0.02
D-307-98 75.5-80.5	0.025			0.03
D-307-98 80.5-82.0	0.038			<0.02
D-307-98 82-86	0.020			<0.02
D-307-98 86.0-89.5	0.005			0.03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP0514J9

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-307-98 89.5-94.0	0.011			0.09
D-307-98 94-98	0.044			0.11
D-307-98 98.0-102.4	0.001			0.07
D-307-98 102.4-107.0	0.016			0.23
D-307-98 107-112	0.008			0.03
D-307-98 112-117	0.002			<0.02
D-307-98 117-122	0.004			0.02
D-307-98 122-127	0.393		0.445	0.24
D-307-98 127-132	0.104		0.111	0.05
D-307-98 132.0-136.6	0.002			<0.02
D-307-98 136.6-139.7	0.004			0.02
D-307-98 139.7-143.2	0.004			0.02
D-307-98 143.2-145.7	0.103		0.082	0.56
D-307-98 145.7-149.0	0.003			<0.02
D-307-98 149.0-152.5	0.097		0.084	0.28
D-307-98 152.5-157.0	0.021			0.03
D-307-98 157-162	0.012			0.03
D-307-98 162-167	0.003			0.02
D-307-98 167-172	0.074		0.060	0.12
D-307-98 172.0-177.3	0.012			0.03
D-307-98 177.3-181.5	0.007	0.009		0.03
D-307-98 181.5-186.0	0.042		0.098	0.09
D-307-98 186.0-189.8	0.239		0.230	0.14
D-307-98 189.8-192.0	0.091		0.057	0.13
D-307-98 192.0-195.5	0.109		0.095	0.13

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051439

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

195.5 - 212 = 16.5' @ 0.652 Au 0.62 Ag

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-307-98 195.5-199.2 3.7	0.620		0.661	0.40
D-307-98 199.2-202.0 2.8	0.532		0.593	0.53
D-307-98 202-207 5	0.823	0.709	0.759	1.25
D-307-98 207-212 5	0.572	0.692	0.611	0.20
D-307-98 212-217	0.063		0.059	0.07
D-307-98 217-222	0.164		0.197	0.11
D-307-98 222.0-225.6	0.180		0.146	0.34
D-307-98 225.6-229.5	0.005	0.005		0.03
D-307-98 229.5-232.0	0.003			0.03
D-307-98 232-236	0.041			0.06
D-307-98 236-239	0.011			0.06
D-307-98 239-242	0.002			<0.02
D-307-98 242-247	0.008			0.03
D-307-98 247-252	0.005			0.02
D-307-98 252-257	0.004			0.02
D-307-98 257-262	0.003			0.02
D-307-98 262.0-265.7	0.015			0.05
D-307-98 265.7-268.7	0.007			0.05
D-307-98 268.7-272.0	0.029			0.04
D-307-98 272.0-274.8	0.044			0.07
D-307-98 274.8-277.7	0.078		0.098	0.07
D-307-98 277.7-282.0	0.090		0.085	0.36
D-307-98 282-287	0.030			0.04
D-307-98 287-292	0.004			0.02
D-307-98 292-294	0.035			0.07

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051439

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-307-98 294.0-298.6	0.010	0.007		0.86
D-307-98 298.6-301.0	0.078		0.054	0.09
D-307-98 301.0-304.2	0.002			<0.02
D-307-98 304.2-306.7	0.004			<0.02
D-307-98 306.7-309.0	0.002			<0.02
D-307-98 309-311	0.003			<0.02
D-307-98 311-315	0.003			<0.02
D-307-98 315-320	0.009			<0.02
46565	0.523			ISF

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 0051439-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-307-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
84	SAMPLES RECEIVED	.00	.00
83	DRYING	1.00	83.00
83	JAW CRUSHING CHARGE	1.30	107.90
83	COARSE MILLING CHARGE	4.50	373.50
83	SPLITTING CHARGE	2.40	199.20
83	RING MILLING CHARGE	2.00	166.00
84	Au (1 A.T. FIRE ASSAY)	8.00	672.00
21	Au ANALYSES/GRAVIMETRIC	8.75	183.75
83	HYDROCHLORIC/NITRIC DIGESTION	2.00	166.00
83	Ag ANALYSES	1.00	83.00

86-5110-477
DP

NET INVOICE:	2,034.35
LESS DISCOUNT:	406.87
FREIGHT:	.00
INVOICE TOTAL:	1,627.48

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051439

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-307-98 RECEIVED : 5 NOV 1998

No. SAMPLES : 84 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 SP051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 0-3	0.008			0.15
D-307-98 3-6	0.109		0.134	0.07
D-307-98 6-11	0.003			<0.02
D-307-98 11-16	0.009			0.02
D-307-98 16-21	0.004			<0.02
D-307-98 21-26	0.001			<0.02
D-307-98 26.0-28.5	<0.001			<0.02
D-307-98 28.5-30.5	0.001			0.02
D-307-98 30.5-33.0	0.002			0.03
D-307-98 33.0-35.5	0.017			0.03
D-307-98 35.5-38.5	0.003			0.03
D-307-98 38.5-41.5	0.090		0.096	0.14
D-307-98 41.5-44.0	0.002			<0.02
D-307-98 44-47	0.007			0.07
D-307-98 47-52	0.005			<0.02
D-307-98 52-54	0.002			<0.02
D-307-98 54.0-58.5	0.004			<0.02
D-307-98 58.5-62.0	<0.001			<0.02
D-307-98 62-67	0.002			0.02
D-307-98 67-72	<0.001			<0.02
D-307-98 72.0-75.5	0.002	0.001		<0.02
D-307-98 75.5-80.5	0.025			0.03
D-307-98 80.5-82.0	0.038			<0.02
D-307-98 82-86	0.020			<0.02
D-307-98 86.0-89.5	0.005			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 89.5-94.0	0.011			0.09
D-307-98 94-98	0.044			0.11
D-307-98 98.0-102.4	0.001			0.07
D-307-98 102.4-107.0	0.016			0.23
D-307-98 107-112	0.008			0.03
D-307-98 112-117	0.002			<0.02
D-307-98 117-122	0.004			0.02
D-307-98 122-127	0.393		0.445	0.24
D-307-98 127-132	0.104		0.111	0.05
D-307-98 132.0-136.6	0.002			<0.02
D-307-98 136.6-139.7	0.004			0.02
D-307-98 139.7-143.2	0.004			0.02
D-307-98 143.2-145.7	0.103		0.082	0.56
D-307-98 145.7-149.0	0.003			<0.02
D-307-98 149.0-152.5	0.097		0.084	0.28
D-307-98 152.5-157.0	0.021			0.03
D-307-98 157-162	0.012			0.03
D-307-98 162-167	0.003			0.02
D-307-98 167-172	0.074		0.060	0.12
D-307-98 172.0-177.3	0.012			0.03
D-307-98 177.3-181.5	0.007	0.009		0.03
D-307-98 181.5-186.0	0.042		0.098	0.09
D-307-98 186.0-189.8	0.239		0.230	0.14
D-307-98 189.8-192.0	0.091		0.057	0.13
D-307-98 192.0-195.5	0.109		0.095	0.13

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 195.5-199.2	0.620		0.661	0.40
D-307-98 199.2-202.0	0.532		0.593	0.53
D-307-98 202-207	0.823	0.709	0.759	1.25
D-307-98 207-212	0.572	0.692	0.611	0.20
D-307-98 212-217	0.063		0.059	0.07
D-307-98 217-222	0.164		0.197	0.11
D-307-98 222.0-225.6	0.180		0.146	0.34
D-307-98 225.6-229.5	0.005	0.005		0.03
D-307-98 229.5-232.0	0.003			0.03
D-307-98 232-236	0.041			0.06
D-307-98 236-239	0.011			0.06
D-307-98 239-242	0.002			<0.02
D-307-98 242-247	0.008			0.03
D-307-98 247-252	0.005			0.02
D-307-98 252-257	0.004			0.02
D-307-98 257-262	0.003			0.02
D-307-98 262.0-265.7	0.015			0.05
D-307-98 265.7-268.7	0.007			0.05
D-307-98 268.7-272.0	0.029			0.04
D-307-98 272.0-274.8	0.044			0.07
D-307-98 274.8-277.7	0.078		0.098	0.07
D-307-98 277.7-282.0	0.090		0.085	0.36
D-307-98 282-287	0.030			0.04
D-307-98 287-292	0.004			0.02
D-307-98 292-294	0.035			0.07

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 294.0-298.6	0.010	0.007		0.86
D-307-98 298.6-301.0	0.078		0.054	0.09
D-307-98 301.0-304.2	0.002			<0.02
D-307-98 304.2-306.7	0.004			<0.02
D-307-98 306.7-309.0	0.002			<0.02
D-307-98 309-311	0.003			<0.02
D-307-98 311-315	0.003			<0.02
D-307-98 315-320	0.009			<0.02
46565	0.523			ISF

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051439

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HECLA MINING COMPANY

COPIES TO : KURT ALLEN

CLIENT REFERENCE No: D-307-98 RECEIVED : 5 NOV 1998

No. SAMPLES : 84 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 SP051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 0-3	0.008			0.15
D-307-98 3-6	0.109		0.134	0.07
D-307-98 6-11	0.003			<0.02
D-307-98 11-16	0.009			0.02
D-307-98 16-21	0.004			<0.02
D-307-98 21-26	0.001			<0.02
D-307-98 26.0-28.5	<0.001			<0.02
D-307-98 28.5-30.5	0.001			0.02
D-307-98 30.5-33.0	0.002			0.03
D-307-98 33.0-35.5	0.017			0.03
D-307-98 35.5-38.5	0.003			0.03
D-307-98 38.5-41.5	0.090		0.096	0.14
D-307-98 41.5-44.0	0.002			<0.02
D-307-98 44-47	0.007			0.07
D-307-98 47-52	0.005			<0.02
D-307-98 52-54	0.002			<0.02
D-307-98 54.0-58.5	0.004			<0.02
D-307-98 58.5-62.0	<0.001			<0.02
D-307-98 62-67	0.002			0.02
D-307-98 67-72	<0.001			<0.02
D-307-98 72.0-75.5	0.002	0.001		<0.02
D-307-98 75.5-80.5	0.025			0.03
D-307-98 80.5-82.0	0.038			<0.02
D-307-98 82-86	0.020			<0.02
D-307-98 86.0-89.5	0.005			0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SR051439

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-307-98

REPORTED : 24 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 89.5-94.0	0.011			0.09
D-307-98 94-98	0.044			0.11
D-307-98 98.0-102.4	0.001			0.07
D-307-98 102.4-107.0	0.016			0.23
D-307-98 107-112	0.008			0.03
D-307-98 112-117	0.002			<0.02
D-307-98 117-122	0.004			0.02
D-307-98 122-127	0.393		0.445	0.24
D-307-98 127-132	0.104		0.111	0.05
D-307-98 132.0-136.6	0.002			<0.02
D-307-98 136.6-139.7	0.004			0.02
D-307-98 139.7-143.2	0.004			0.02
D-307-98 143.2-145.7	0.103		0.082	0.56
D-307-98 145.7-149.0	0.003			<0.02
D-307-98 149.0-152.5	0.097		0.084	0.28
D-307-98 152.5-157.0	0.021			0.03
D-307-98 157-162	0.012			0.03
D-307-98 162-167	0.003			0.02
D-307-98 167-172	0.074		0.060	0.12
D-307-98 172.0-177.3	0.012			0.03
D-307-98 177.3-181.5	0.007	0.009		0.03
D-307-98 181.5-186.0	0.042		0.098	0.09
D-307-98 186.0-189.8	0.239		0.230	0.14
D-307-98 189.8-192.0	0.091		0.057	0.13
D-307-98 192.0-195.5	0.109		0.095	0.13

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 195.5-199.2	0.620		0.661	0.40
D-307-98 199.2-202.0	0.532		0.593	0.53
D-307-98 202-207	0.823	0.709	0.759	1.25
D-307-98 207-212	0.572	0.692	0.611	0.20
D-307-98 212-217	0.063		0.059	0.07
D-307-98 217-222	0.164		0.197	0.11
D-307-98 222.0-225.6	0.180		0.146	0.34
D-307-98 225.6-229.5	0.005	0.005		0.03
D-307-98 229.5-232.0	0.003			0.03
D-307-98 232-236	0.041			0.06
D-307-98 236-239	0.011			0.06
D-307-98 239-242	0.002			<0.02
D-307-98 242-247	0.008			0.03
D-307-98 247-252	0.005			0.02
D-307-98 252-257	0.004			0.02
D-307-98 257-262	0.003			0.02
D-307-98 262.0-265.7	0.015			0.05
D-307-98 265.7-268.7	0.007			0.05
D-307-98 268.7-272.0	0.029			0.04
D-307-98 272.0-274.8	0.044			0.07
D-307-98 274.8-277.7	0.078		0.098	0.07
D-307-98 277.7-282.0	0.090		0.085	0.36
D-307-98 282-287	0.030			0.04
D-307-98 287-292	0.004			0.02
D-307-98 292-294	0.035			0.07

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-307-98 294.0-298.6	0.010	0.007		0.86
D-307-98 298.6-301.0	0.078		0.054	0.09
D-307-98 301.0-304.2	0.002			<0.02
D-307-98 304.2-306.7	0.004			<0.02
D-307-98 306.7-309.0	0.002			<0.02
D-307-98 309-311	0.003			<0.02
D-307-98 311-315	0.003			<0.02
D-307-98 315-320	0.009			<0.02
46565	0.523			ISF

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: P.O. Box 2610

City Winnemucca State NV Zip 89445

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

Project Name: _____ Purchase Order Number: _____

Date Submitted: 11/3/98 Number of Samples: 83

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [ ] Au Ag According To Rosebud Min Proto Col

D-307-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED		
0-3	52-54	112-117		177.3-181.5	236-239	294-298.6
3-6	54-58.5	117-122		181.5-186	239-242	298.6-301
6-11	58.5-62	122-127		186-189.8	242-247	301-304.2
11-16	62-67	127-132		189.8-192	247-252	304.2-306.7
16-21	67-72	132-136.6		192-195.5	252-257	306.7-309
21-26	72-75.5	136.6-139.7		195.5-199.2	257-262	309-311
26-28.5	75.5-80.5	139.7-143.2		199.2-202	262-265.7	311-315
28.5-30.5	80.5-82	143.2-145.7		202-207	265.7-268.7	315-320 TD
30.5-33	82-86	145.7-149		207-212	268.7-272	
33-35.5	86-89.5	149-152.5		212-217	272-274.8	
35.5-38.5	89.5-94	152.5-157		217-222	274.8-277.7	
38.5-41.5	94-98	157-162		222-225.6	277.7-282	
41.5-44	98-102.4	162-167		225.6-229.5	282-287	
44-47	102.4-107	167-172		229.5-232	287-292	
47-52	107-112	172-177.3		232-236	292-294	

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

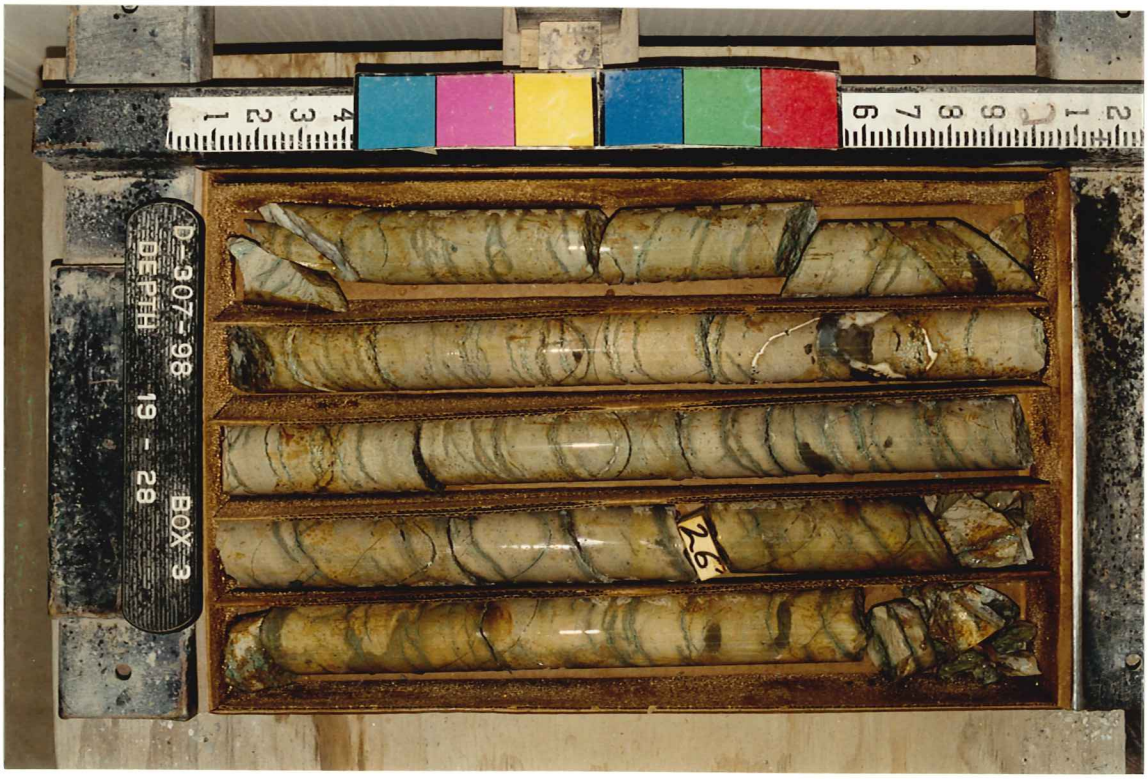
Comments:

CLIENT FILE COPY

D-307-98	40	36.5	127.2
	160	36.5	126.7
	320	36.5	127.7

16'
D-307-98 BOX 2
DEPTH 9.5 - 19

6'
D-307-98 BOX 1
DEPTH 0 - 9.5


26'
D-307-98 BOX 3
DEPTH 19 - 28

D-307-98 BOX 5
DEPTH 37.5 - 47

D-307-98 BOX 4
DEPTH 28 - 37.5

D-307-98 BOX 6
DEPTH 47 - 56.5

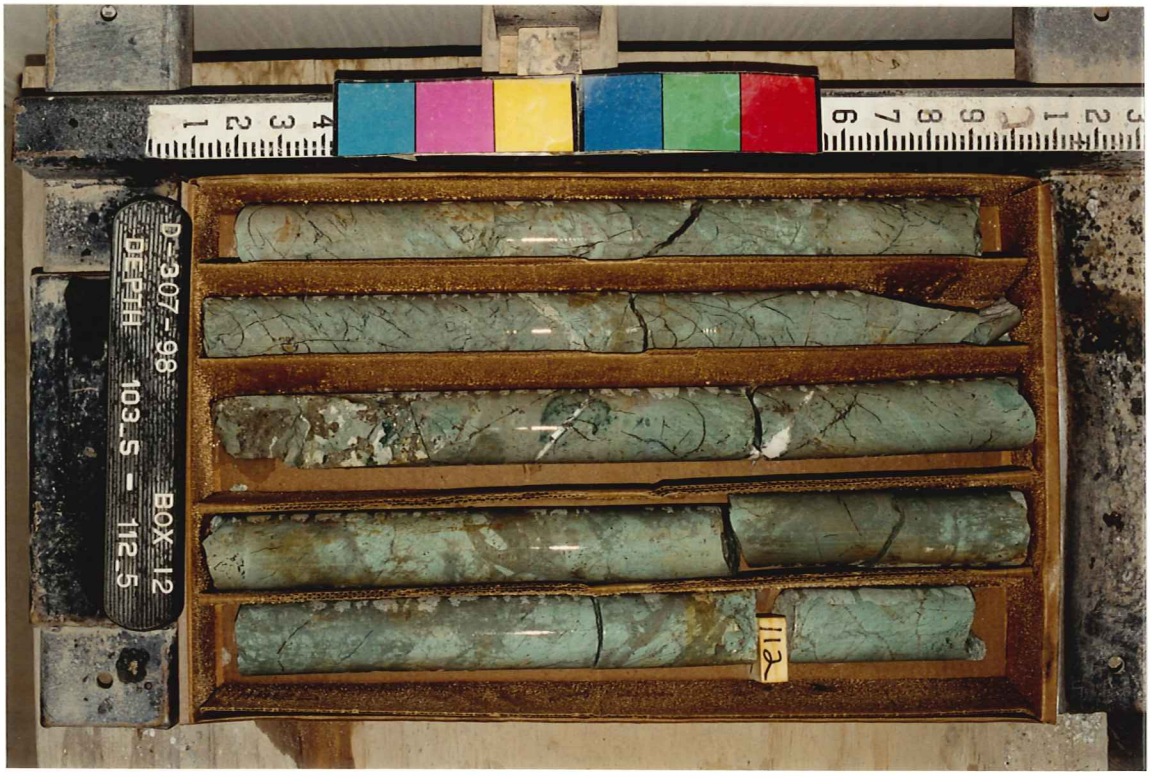
D-307-98 BOX 8
DEPTH 66 - 75
72'

D-307-98 BOX 7
DEPTH 56.5 - 66
67'

D-307-98 BOX 9
DEPTH 75 - 85
82'

D-307-98 BOX 11
DEPTH 94_5 - 103_5
102

D-307-98 BOX 10
DEPTH 85 - 94_5
92


D-307-98 BOX 12
DEPTH 103_5 - 112_5
112

132
D-307-98 BOX 14
DEPTH 122.5 - 132

22
D-307-98 BOX 13
DEPTH 112.5 - 122.5

D-307-98 DEPTH 132 - 141 BOX 15

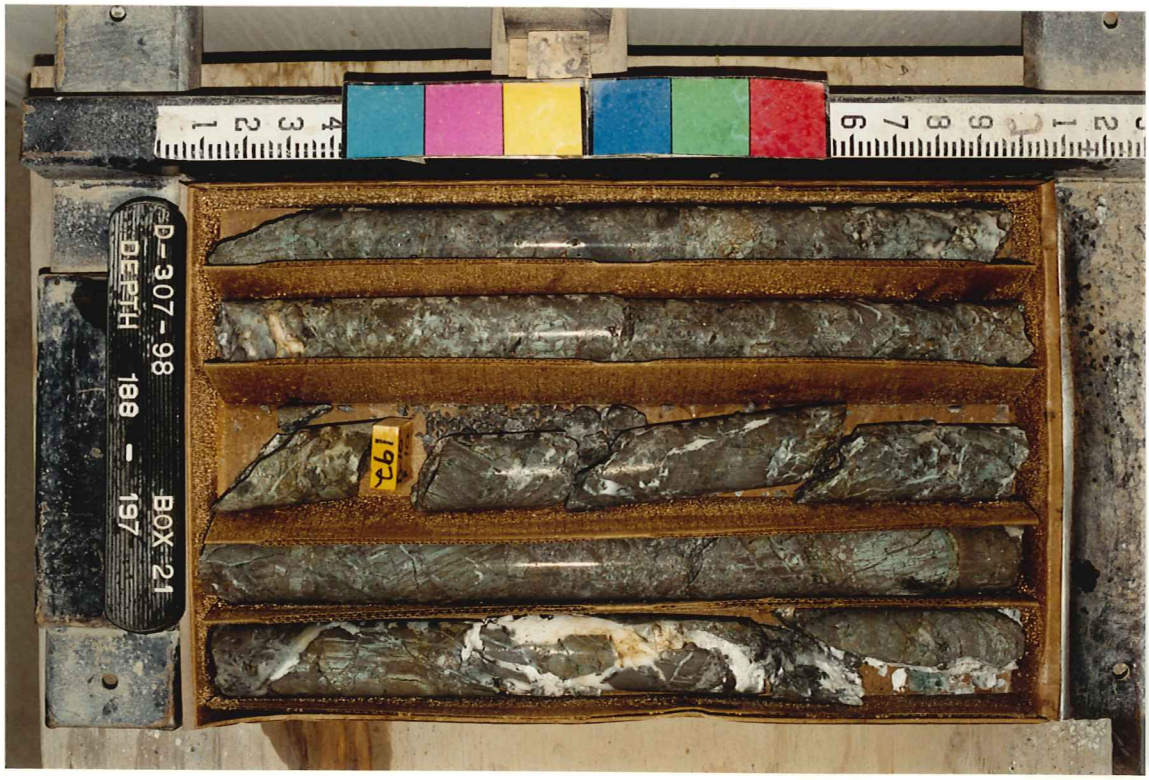
152
D-307-98 BOX 17
DEPTH 150_5 - 160

142
D-307-98 BOX 16
DEPTH 141 - 150_5

162
D-307-98 BOX 18
DEPTH 160 - 169

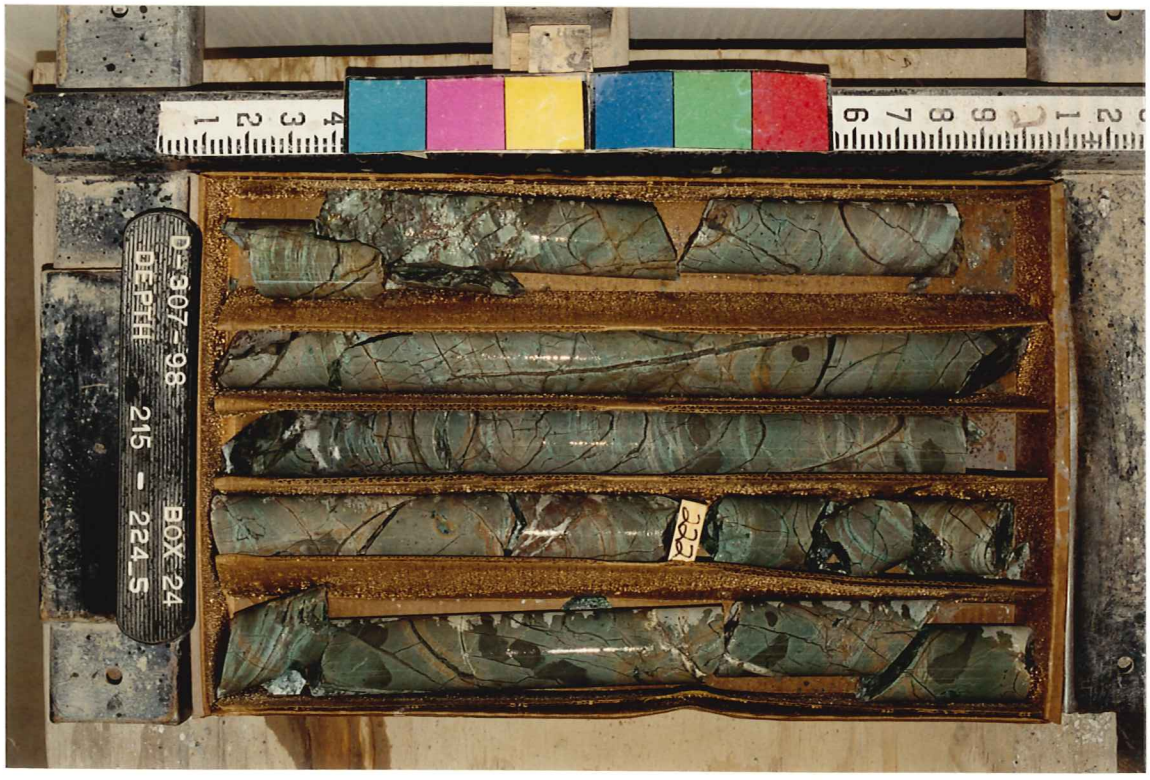
182
D-307-98 BOX 20
DEPTH 179 - 188

172
D-307-98 BOX 19
DEPTH 169 - 179


192
D-307-98 BOX 21
DEPTH 188 - 197

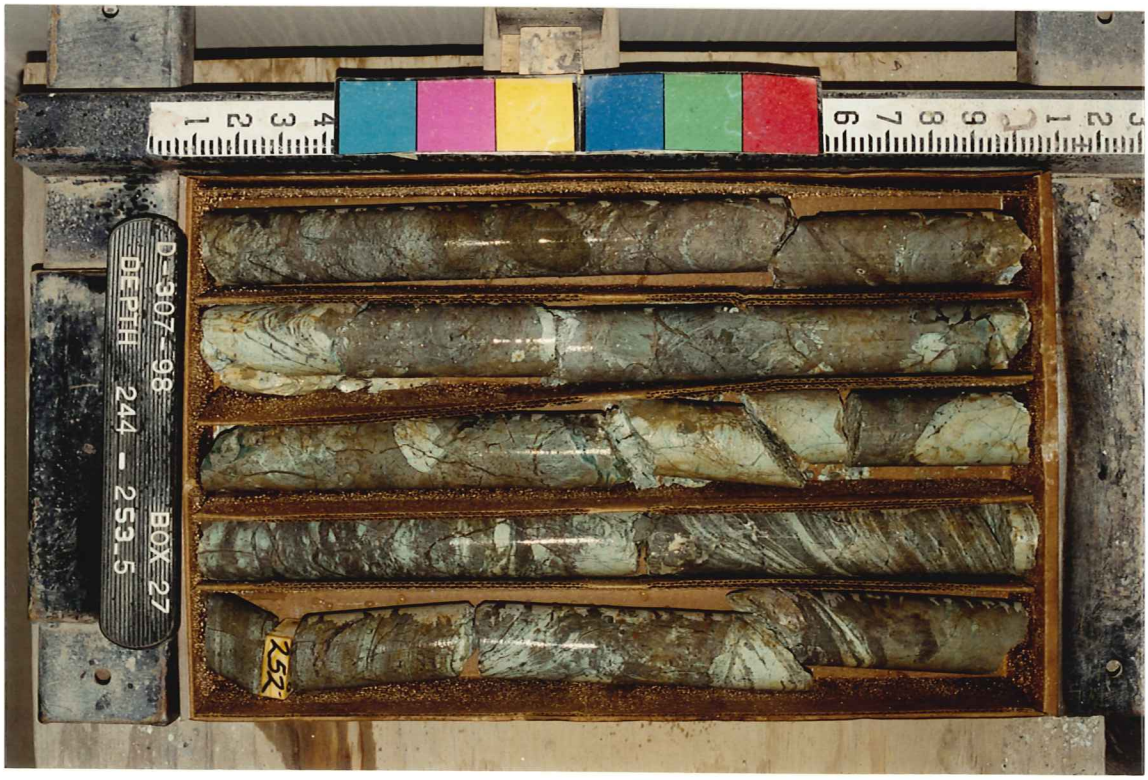
D-307-98 BOX 23
DEPTH 206_5 - 215

D-307-98 BOX 22
DEPTH 197 - 206_5


D-307-98 BOX 24
DEPTH 215 - 224_5

D-307-98 BOX 26
DEPTH 234 - 244

D-307-98 BOX 25
DEPTH 224.5 - 234


D-307-98 BOX 27
DEPTH 244 - 253.5

D-307-98 BOX 29
DEPTH 263 - 273

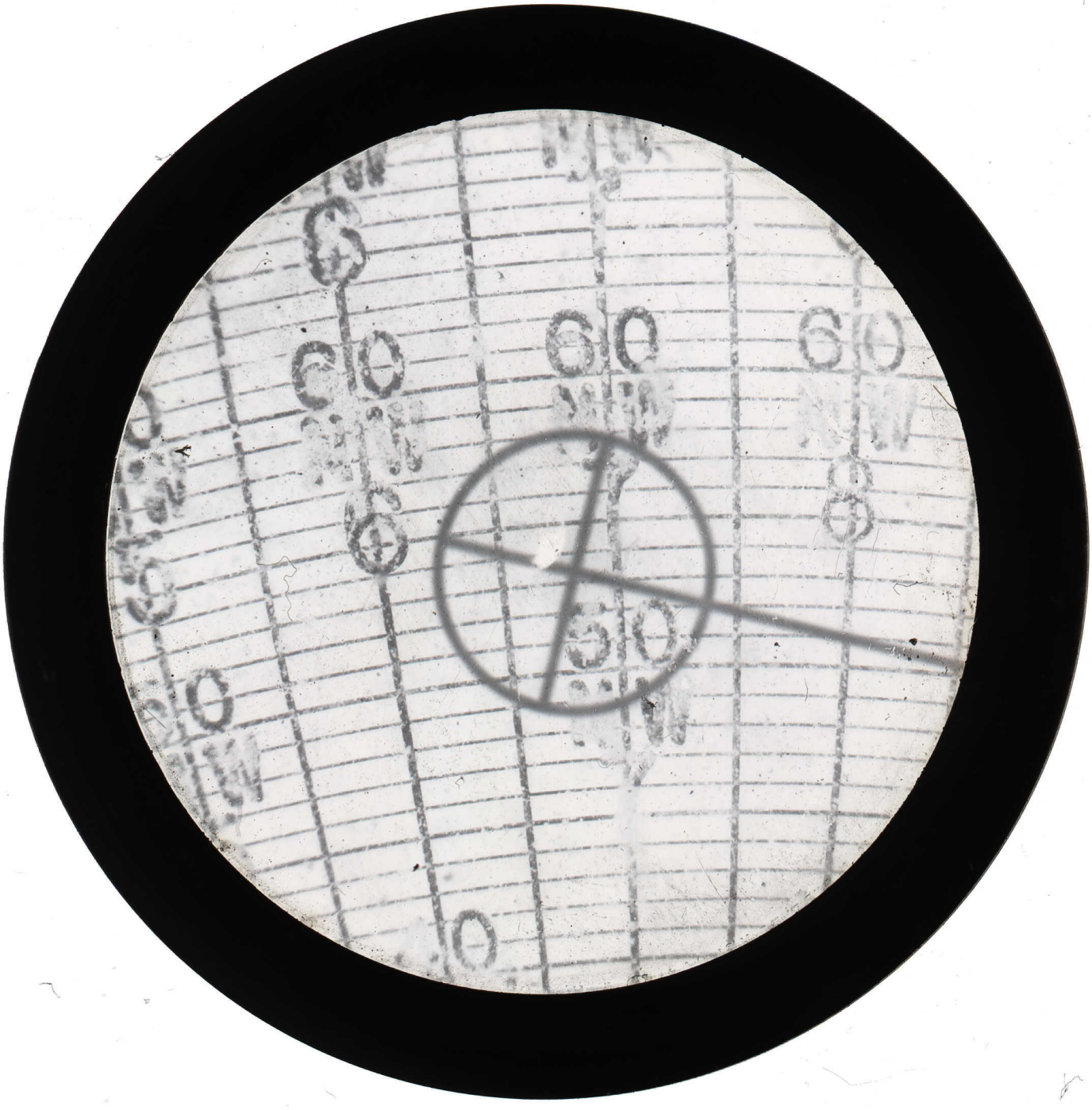
D-307-98 BOX 28
DEPTH 253.5 - 263

D-307-98 BOX 30
DEPTH 273 - 283

D-307-98 BOX 31
DEPTH 283 - 292.5

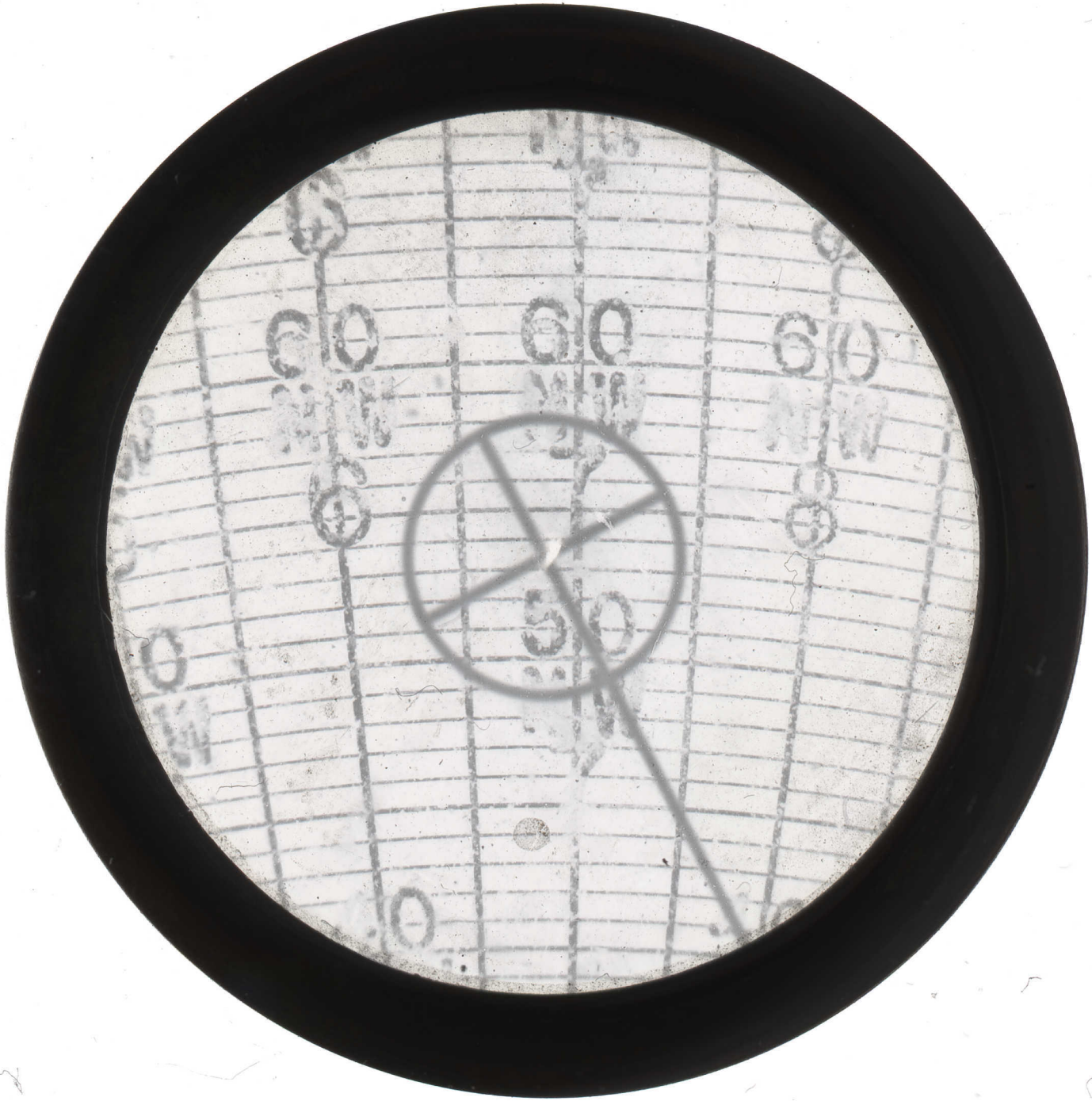
SINGLE SHOT
PHOTO DISC RECORD

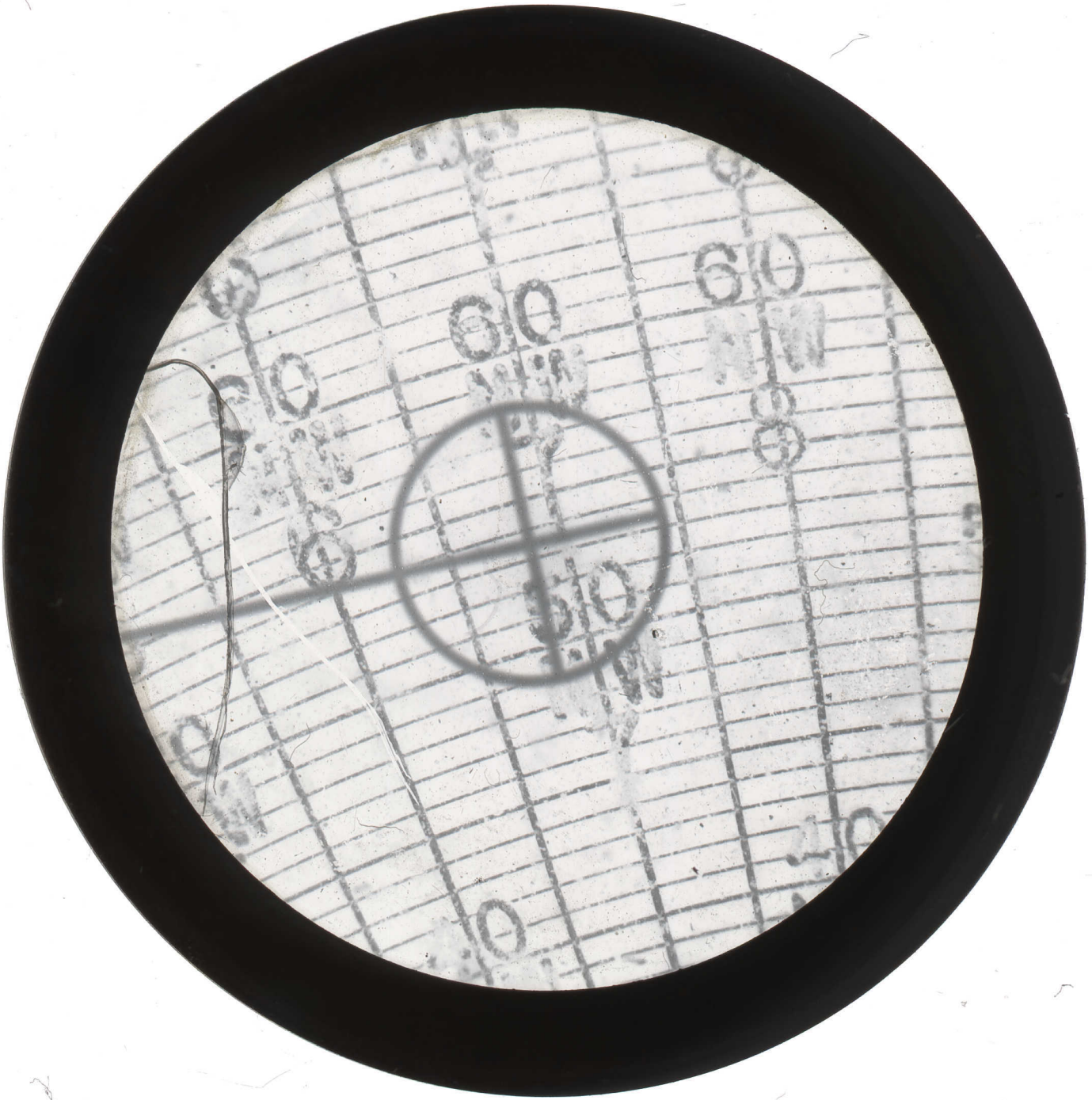
COMPANY Hecla
WELL NAME D-507-98
LEASE
TAKEN BY Hughes
DEPTH 320
DATE 9/9/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-370-98
LEASE
TAKEN BY Hughes
DEPTH 160
DATE 9/9/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-570-98
LEASE
TAKEN BY Hughes
DEPTH 90
DATE 9/9/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408