60001206

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-305-98
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 278' receipt; handwritten notes; downhole camera images 34p. 3 down hole camera images

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DD 5/14/08
Initials Date
DB: mah
Initials Date
SCANNED: NB
Initials Date

Revised: 1/22/08

D-305-98

60001206 4010

6001206

Hecla MINING COMPANY

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

BaSO4

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D305-98	LOCATION	Stope 50 access, 1600 section
PAGE 1 OF	5	NORTHING	
DATE	10-21-98	EASTING	
LOGGED BY	WHITNEY	ELEVATION	
SCALE	1" = 10'	AZIMUTH	125
TOTAL DEPTH	278	INCLINATION	10

REMARKS: hole completed 9/5/98

TH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0-129.0		PLANAR LAMINAR It brn to pnk-brn fg volc flow unit, generally featureless - no flow foliation and no vesicles 10.5-18.0 abundant vf vesicles w/o particular orientation 23.5-27 hydrothermal(?) bx vnlts: 1/3 matrix w/ rndsd, apparently transported to mosaic-style angular clasts. sub // to CA 30.8 PIMA 32-50 fint spotty texture (remnant vesicles?) 33-37 autobx(?) 45-46 autobx(?)	10 20 30 40 50		0-20 vnlts { fx 20°, 50°, 70° } sub// to CA. 20-22 crumbly core, -brkn vn fgs, seams of rndsd rk (rps - narrow shears w/ slight movement? 32 fint vesicle train 35° to CA	2-3.5 cly-q-py-vfg dark S⁻ vnlt/bx 1"; sub// to CA 0-17.5 wk drg w/ few q-S-chlor vnlts 0-22 spotty vfg diss lx S⁻ 1-3%. 17.5-22 mod drg 20-22 sev'l cly-q-mere vnlts (± pyr & chlor) 35° to CA 22-27 wk drg w/ sev'l irreg q-cly-S⁻ vnlts 10-2 35° to CA 24-26 few q-matrix bx vnlts sub// to CA. sparse disseminated/subh pyr. 26-43 wk stwk of q-vfg dark S⁻ vnlts w/ brite pyr cores. Some blowouts to q-S matrix bxs. 41.0 cly-q-rndsd bxs matrix 43-58 stwk slitly wker. 47-49 q-ba-mcrc-chlor bx vnlts 60° to CA

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	3.8					
3.8	8.0					
8.0	10.5					
10.5	14.5					
14.5	17.5					
17.5	21.5					
21.5	23.5					
23.5	27.0					
27.0	31.0					
31.0	35.0					
35.0	39.0					
39.0	42.0					
42.0	46.0					
46.0	49.0					
49.0	52.0					

HOLE NUMBER D-305-98 PAGE 2 OF 5

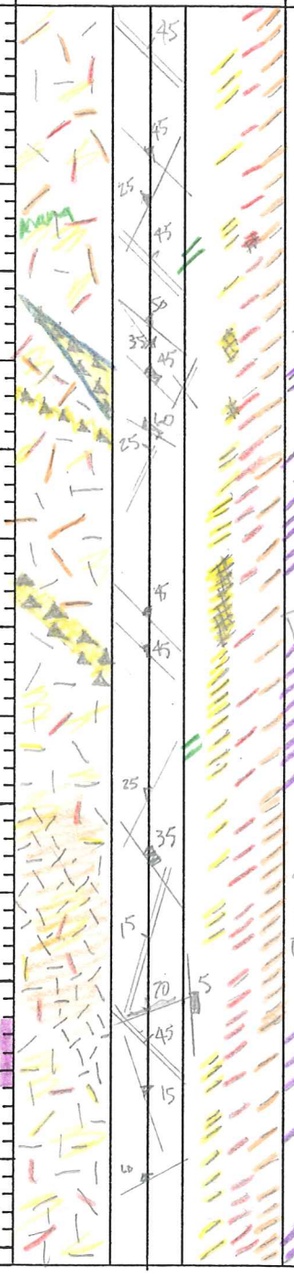
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
D-129.0		PLAGIOCLASE LAMPROPHYRE				
			60		50-69 fx sparse, 20°, 55°, & 70° to CA - gently broken along veins.	
						58.5-69 well developed stkwk of q-cly-marc-py-chlor veins, bx veins, & bx masses. 20°, 55°, 70° to CA.
		69-71 foliated, w/ abundant vf vesicles	70		69 foliation 35° to CA	
						69-79 stkwk becomes wk-vwk, q-S⁻-chlor veins to 1/8" with local S⁻ bleedout to 1". S⁻ is vfg & dark
		79 start vesicle trains. vesicles coarser - 1-2 mm continue well developed til bx @ 94.	80			
		84.0 PIMA				79-94 common cly-q-marc-chlor veins 35°, 55°, 70° to CA. some cly grn & waxy
		91.0 PIMA	90		92 vesicle trains to CA	
		94 start hydrothermal(?) bx. angular mosaic to slightly rotated clasts of vole & grn waxy cly (?) in milky ⅔ matrix. clasts unsilic to wkly silicif	100		94 bx @ 55° to CA	94- bx - ⅔ matrix, 1-3% fg subh dissem pyr. rare replacement of clasts by vfg dark S⁻, spotty white cly masses.
		103 bxx continues; intervening unbxtd frags are broken - core is rubbly. vesicles clay filled and abundant enough to give rk an argillized nature			111 gouge	
			110			111-116 bx matrix dominantly wh cly, barite xls common.
		94-129.0 sheared/bxtd/argillized/silicified zone hanging wall of South Ridge Fault			114 gouge 115 gouge	
		107 silic in matrix becomes less prominent.	120			118.5 vug of barite xls 120.0 same

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
49.0	52.0				
52.0	56.0				
56.0	59.0				
59.0	61.5				
61.5	64.5				
64.5	66.5				
66.5	69.0				
69.0	74.0				
74.0	79.0				
79.0	82.5				
82.5	86.5				
86.5	89.0				
89.0	92.5				
92.5	94.0				
94.0	99.0				
99.0	103.0				
103.0	105.0				
105.0	107.0				
107.0	109.0				
109.0	113.0				
113.0	116.5				
116.5	119.5				

HOLE NUMBER D-305-98 PAGE 3 OF 5

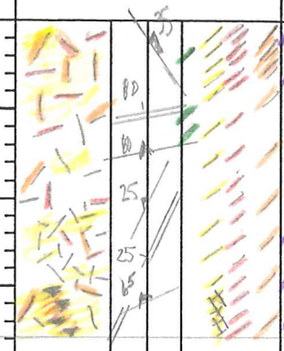
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
0–129.0		PLANAR LAMINAR 125.5-129 foliated, clay matrix fault gouge			125.5-129 gouge foliated 10° to CA		119.5 123.0 125.5	123.0 125.5 129.0				
129.0–150.0		SOUTH RIDGE FAULT Si-flooded matrix supported fine bx + silicified gouge separated by shattered but intact blocks of silicified Dozer. a few patches of poorly/unsilicified gouge + Dozer.	130 140		129 S.R.F. ctc 10° to CA 129-150 core fld along gouge veins	129-134 bx matrix mod chloritic + carries vfg dark S⁻ rept. clasts. (1-3%) 132 vug w/ stibnite + barite xls 134-150 bx matrix gry/milky qtz, up to 5% vfg dk S⁻ in clasts along fragment edges. common irreg. cly seams 144.5 vug of barite xls	129.0 134.0 144.0	134.0 139.0 144.0 149.0				
150.0–		DOZER Generally lite gry, vfg, non foliated. No particular texture except possible, faint, alt blebs (1%). Shattered but intact w/ white clay seams between fragments. uncommon flow banding. 166-170 flow banded 40° to CA 174-175 flow banded 45° to CA 176-183 silica-flooded bxs. 3' milled/gouge upper ctc. brkn/mosaic interior. 1' milled/gouge lwr ctc.	150 160 170 180 190		150 set ctc 5° to CA 150- core fld along veins, persistent cly filled set @ 10-15° to CA + 70° to CA. ↑ freq 176-183 sil'd fault bx up. ctc 45° to CA lwr. ctc 15° to CA altered cly	150-168 unsilicified 150 white cly prominent in dozer. 1-3% total (?) generally hairline seams, but a few veins to 1" 150 Dozer cut by stkwk of numerous hairline qtz + vfg dark S⁻ w/ brite pyr cores. intensity variable. 168-176 wk silicification, 1-3% dk S⁻ along frag boundaries. 176-187 si-flooded, w/ numerous bx veins, matrix gry qtz + vfg dk S⁻. gen'l <5% S⁻. cly prominent. several cly-rich-barite veins	149.0 150.7 154.0 159.0 164.0 169.0 174.0 179.0 183.0 188.0	150.7 154.0 159.0 164.0 169.0 174.0 179.0 183.0 188.0 193.0				

HOLE NUMBER D 305-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
150.0-278.0 TD		DOZER continue ltgry, vfg, nonfoliated volcanic. possible rare phenos (<1%, ≤1mm). occasional flow banding. crackle fed by qtz-cly-marcas vnlts & qtz-marcas-pyr vnlts [208-209] sid flt bx [211] flow banding [212.5] 6" sid flt bx [214] flow banding 214.8 PIMA [236.5-247] flow banded; variable orientations pitted trains of clay clots after? 258.0 PIMA	200 210 220 230 240 250 260		[208-209] sid flt bx 1st cte 50° to CA 2nd cte 35° to CA [211] flow band; 45° [214] flow band 60° [224.2-226.6] sil-fluidal bxa cts 45 to CA [233] good fx 25 to CA continue basic fx orientations & also that fx (also) veinlts. [235] fl. bnd 35 to CA [247] flow band; 5° to CA	[203] irreg clr vnlts [204] increase general amt. of dark vfg 5⁻ in crackle fks to 3-5% 80°, 60°, 45°, 25° to CA [209-TD] spotty occurrence of cly-q-bd-pyrite-chalco-stib. vnlts the sulfide occur as crusts on clear barite druse along vnlts (in vugs, white clay fills centers) 2nd set of veins are q-marcas-pyr-±cly that continue as before this interval. [220-232] decr. in crackle vnlts w/marcas to <1% 5⁻ [232-250.7] incr. 5⁻ in vnlts to 1-3% [233.5-247] wk arg. [254.5-263.7] common vnlts to ¼" q-dk5⁻ vfg

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
188.0	193.0				
193.0	198.0				
198.0	203.0				
203.0	208.0				
208.0	210.0				
210.0	213.0				
213.0	217.0				
217.0	220.6				
220.6	223.5				
223.5	226.8				
226.8	231.2				
231.2	235.7				
235.7	238.0				
238.0	241.0				
241.0	244.4				
244.4	247.0				
247.0	250.7				
250.7	254.5				
254.5	257.4				
257.4	260.3				

HOLE NUMBER D 305-98 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
150.0-278TD		DOZER continue lt gry, vfg, generally nonfoliated volc. as above [268] general increase in amount of increas.	270		[261] 1. bnd 35 to CA [272] contortion in flo bnding	[263] cly-q-ba-S⁻ vnlts become rare. [268-70] weak + silicif. w/ ~5% splotchy vfg dk S⁻ ½ py [275] start q-py-more stwk (vnlts) ½-bx vnlts	260.3 263.7 268.0 272.4 275.0	263.7 268.0 272.4 275.0 278.0				
		278TD	280									

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-305-98 DATE: 10-21-98 LOGGED BY: WHITNEY PAGE 1 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY /FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	9	88	91	4										
9	19	92	100	12										
19	21	0	100	0										
21	29	72	93	9										
29	39	85	92	48										
39	49	100	100	47										
49	59	98	98	45										
59	69	89	100	41										
69	79	98	98	12										
79	89	98	98	17										
89	99	97	97	23										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D 305-98 DATE: 10-21-98 LOGGED BY: WHITNEY PAGE 2 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
99	109	71	95	16										
109	116.5	56	93	0										
116.5	124	85	91	56										
124	130	70	81	22										
130	139	94	97	52										
139	149	94	96	54										
149	159	100	100	46										
159	169	97	100	30										
169	179	100	100	62										
179	188	92	96	66										
188	198	95	97	56										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D305-98 DATE: 10-21-98 LOGGED BY: WHITNEY PAGE 3 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY /FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
198	208	100	100	26										
208	218	95	97	48										
218	228	100	100	61										
228	238	100	100	45										
238	248	100	100	65										
248	258	100	100	57										
258	268	85	100	37										
268	278	100	100	51										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051369

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-305-98 RECEIVED : 2 NOV 1998

No. SAMPLES : 78 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.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051369

CLIENT : BECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-305-98 0.0-3.8	0.249		0.193	0.81
D-305-98 3.8-8.0	0.020			0.04
D-305-98 8.0-10.5	0.011			0.12
D-305-98 10.5-14.5	0.001			0.03
D-305-98 14.5-17.5	0.125		0.130	0.13
D-305-98 17.5-21.5	0.081		0.090	4.85
D-305-98 21.5-23.5	0.051		0.163	1.15
D-305-98 23.5-27.0	0.032			0.10
D-305-98 27-31	0.116		0.131	0.10
D-305-98 31-35	0.060		0.104	0.08
D-305-98 35-39	0.025			0.09
D-305-98 39-42	0.099		0.064	0.17
D-305-98 42-46	0.017			0.11
D-305-98 46-49	0.029			0.11
D-305-98 49-52	0.118		0.096	0.18
D-305-98 52-56	0.080		0.077	0.06
D-305-98 56-59	0.091		0.078	0.08
D-305-98 59.0-61.5	0.015			0.06
D-305-98 61.5-64.5	0.071		0.055	0.16
D-305-98 64.5-66.5	0.179		0.212	0.24
D-305-98 66.5-69.0	0.045			0.20
D-305-98 69-74	0.009			0.06
D-305-98 74-79	0.183		0.169	0.17
D-305-98 79.0-82.5	0.087		0.087	0.18
D-305-98 82.5-86.5	0.046			0.15

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051369

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

86.5-94' = 7.5' @

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-305-98 86.5-89.0 2.5	0.378		0.325	0.28
D-305-98 89.0-92.5 3.5	0.060		0.061	0.12
D-305-98 92.5-94.0 1.5	0.234		0.131	0.22
D-305-98 94-99	0.087		0.089	0.37
D-305-98 99-103	0.019			4.62
D-305-98 103-105	0.009			0.58
D-305-98 105-107	0.120		0.096	0.42
D-305-98 107-109	0.005			0.25
D-305-98 109-113	0.091		0.146	0.21
D-305-98 113.0-116.5	0.023			0.13
D-305-98 116.5-119.5	0.025			0.60
D-305-98 119.5-123.0	0.005			0.05
D-305-98 123.0-125.5	0.009			0.04
D-305-98 125.5-129.0	0.002			0.03
D-305-98 129-134	0.004			0.16
D-305-98 134-139	0.004			0.80
D-305-98 139-144	0.003			1.87
D-305-98 144-149	0.003			1.97
D-305-98 149.0-150.7	0.002			2.24
D-305-98 150.7-154.0	0.003			1.80
D-305-98 154-159	0.003			3.11
D-305-98 159-164	0.003			0.83
D-305-98 164-169	0.001			0.85
D-305-98 169-174	0.004			1.25
D-305-98 174-179	0.002			0.25

0.201 Au
0.19 Ag

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051369

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-305-98 179-183	0.006			1.14
D-305-98 183-188	0.006			9.88
D-305-98 188-193	0.005			10.46
D-305-98 193-198	0.004			2.12
D-305-98 198-203	0.002			1.04
D-305-98 203-208	0.015			1.41
D-305-98 208-210	0.019			10.16
D-305-98 210-213	0.018			5.87
D-305-98 213-217	0.018			14.50
D-305-98 217.0-220.6	0.076		0.076	43.93
D-305-98 220.6-223.5	0.010			1.34
D-305-98 223.5-226.8	0.022			4.22
D-305-98 226.8-231.2	0.015			15.81
D-305-98 231.2-235.7	0.016			6.71
D-305-98 235.7-238.0	0.031			6.04
D-305-98 238-241	0.040			3.65
D-305-98 241.0-244.4	0.002			0.93
D-305-98 244.4-247.0	0.005			0.34
D-305-98 247.0-250.7	0.238		0.299	25.81
D-305-98 250.7-254.5	0.031			2.40
D-305-98 254.5-257.4	0.008			0.65
D-305-98 357.4-260.3	0.010			11.06
D-305-98 260.3-263.7	0.012			8.44
D-305-98 263.7-268.0	0.001			0.54
D-305-98 268.0-272.4	0.001			0.29

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051369

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-305-98 272.4-275.0	0.001			0.05
D-305-98 275-278	0.018			38.50
46553	0.113			2.92

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 0051369-IN
INVOICE DATE: 11/18/98

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-305-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
78	SAMPLES RECEIVED	.00	.00
77	DRYING	1.00	77.00
77	JAW CRUSHING CHARGE	1.30	100.10
77	COARSE MILLING CHARGE	4.50	346.50
77	SPLITTING CHARGE	2.40	184.80
77	RING MILLING CHARGE	2.00	154.00
78	Au (1 A.T. FIRE ASSAY)	8.00	624.00
22	Au ANALYSES/GRAVIMETRIC	8.75	192.50
78	HYDROCHLORIC/NITRIC DIGESTION	2.00	156.00
78	Ag ANALYSES	1.00	78.00
24	Ag (ore grade) ANALYSES	5.00	120.00

86-5110-477
EDA

NET INVOICE:	2,032.90
LESS DISCOUNT:	406.58
FREIGHT:	.00
INVOICE TOTAL:	1,626.32

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

American Assay Laboratories

PO BOX 11530
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HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-305-98 RECEIVED : 2 NOV 1998

No. SAMPLES : 78 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.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 0.0-3.8	0.249		0.193	0.81
D-305-98 3.8-8.0	0.020			0.04
D-305-98 8.0-10.5	0.011			0.12
D-305-98 10.5-14.5	0.001			0.03
D-305-98 14.5-17.5	0.125		0.130	0.13
D-305-98 17.5-21.5	0.081		0.090	4.85
D-305-98 21.5-23.5	0.051		0.163	1.15
D-305-98 23.5-27.0	0.032			0.10
D-305-98 27-31	0.116		0.131	0.10
D-305-98 31-35	0.060		0.104	0.08
D-305-98 35-39	0.025			0.09
D-305-98 39-42	0.099		0.064	0.17
D-305-98 42-46	0.017			0.11
D-305-98 46-49	0.029			0.11
D-305-98 49-52	0.118		0.096	0.18
D-305-98 52-56	0.080		0.077	0.06
D-305-98 56-59	0.091		0.078	0.08
D-305-98 59.0-61.5	0.015			0.06
D-305-98 61.5-64.5	0.071		0.055	0.16
D-305-98 64.5-66.5	0.179		0.212	0.24
D-305-98 66.5-69.0	0.045			0.20
D-305-98 69-74	0.009			0.06
D-305-98 74-79	0.183		0.169	0.17
D-305-98 79.0-82.5	0.087		0.087	0.18
D-305-98 82.5-86.5	0.046			0.15

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 86.5-89.0	0.378		0.325	0.28
D-305-98 89.0-92.5	0.060		0.061	0.12
D-305-98 92.5-94.0	0.234		0.131	0.22
D-305-98 94-99	0.087		0.089	0.37
D-305-98 99-103	0.019			4.62
D-305-98 103-105	0.009			0.58
D-305-98 105-107	0.120		0.096	0.42
D-305-98 107-109	0.005			0.25
D-305-98 109-113	0.091		0.146	0.21
D-305-98 113.0-116.5	0.023			0.13
D-305-98 116.5-119.5	0.025			0.60
D-305-98 119.5-123.0	0.005			0.05
D-305-98 123.0-125.5	0.009			0.04
D-305-98 125.5-129.0	0.002			0.03
D-305-98 129-134	0.004			0.16
D-305-98 134-139	0.004			0.80
D-305-98 139-144	0.003			1.87
D-305-98 144-149	0.003			1.97
D-305-98 149.0-150.7	0.002			2.24
D-305-98 150.7-154.0	0.003			1.80
D-305-98 154-159	0.003			3.11
D-305-98 159-164	0.003			0.83
D-305-98 164-169	0.001			0.85
D-305-98 169-174	0.004			1.25
D-305-98 174-179	0.002			0.25

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 179-183	0.006			1.14
D-305-98 183-188	0.006			9.88
D-305-98 188-193	0.005			10.46
D-305-98 193-198	0.004			2.12
D-305-98 198-203	0.002			1.04
D-305-98 203-208	0.015			1.41
D-305-98 208-210	0.019			10.16
D-305-98 210-213	0.018			5.87
D-305-98 213-217	0.018			14.50
D-305-98 217.0-220.6	0.076		0.076	43.93
D-305-98 220.6-223.5	0.010			1.34
D-305-98 223.5-226.8	0.022			4.22
D-305-98 226.8-231.2	0.015			15.81
D-305-98 231.2-235.7	0.016			6.71
D-305-98 235.7-238.0	0.031			6.04
D-305-98 238-241	0.040			3.65
D-305-98 241.0-244.4	0.002			0.93
D-305-98 244.4-247.0	0.005			0.34
D-305-98 247.0-250.7	0.238		0.299	25.81
D-305-98 250.7-254.5	0.031			2.40
D-305-98 254.5-257.4	0.008			0.65
D-305-98 257.4-260.3	0.010			11.06
D-305-98 260.3-263.7	0.012			8.44
D-305-98 263.7-268.0	0.001			0.54
D-305-98 268.0-272.4	0.001			0.29

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 272.4-275.0	0.001			0.05
D-305-98 275-278	0.018			38.50
46553	0.113			2.92

xAMERICAN ASSAY LABORATORIES
ANALYSIS REPORT SP051369

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-305-98 RECEIVED : 2 NOV 1998

No. SAMPLES : 78 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.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

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CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-305-98

REPORTED : 18 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 0.0-3.8	0.249		0.193	0.81
D-305-98 3.8-8.0	0.020			0.04
D-305-98 8.0-10.5	0.011			0.12
D-305-98 10.5-14.5	0.001			0.03
D-305-98 14.5-17.5	0.125		0.130	0.13
D-305-98 17.5-21.5	0.081		0.090	4.85
D-305-98 21.5-23.5	0.051		0.163	1.15
D-305-98 23.5-27.0	0.032			0.10
D-305-98 27-31	0.116		0.131	0.10
D-305-98 31-35	0.060		0.104	0.08
D-305-98 35-39	0.025			0.09
D-305-98 39-42	0.099		0.064	0.17
D-305-98 42-46	0.017			0.11
D-305-98 46-49	0.029			0.11
D-305-98 49-52	0.118		0.096	0.18
D-305-98 52-56	0.080		0.077	0.06
D-305-98 56-59	0.091		0.078	0.08
D-305-98 59.0-61.5	0.015			0.06
D-305-98 61.5-64.5	0.071		0.055	0.16
D-305-98 64.5-66.5	0.179		0.212	0.24
D-305-98 66.5-69.0	0.045			0.20
D-305-98 69-74	0.009			0.06
D-305-98 74-79	0.183		0.169	0.17
D-305-98 79.0-82.5	0.087		0.087	0.18
D-305-98 82.5-86.5	0.046			0.15

AMERICAN ASSAY LABORATORIES

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D-305-98 89.0-92.5	0.060		0.061	0.12
D-305-98 92.5-94.0	0.234		0.131	0.22
D-305-98 94-99	0.087		0.089	0.37
D-305-98 99-103	0.019			4.62
D-305-98 103-105	0.009			0.58
D-305-98 105-107	0.120		0.096	0.42
D-305-98 107-109	0.005			0.25
D-305-98 109-113	0.091		0.146	0.21
D-305-98 113.0-116.5	0.023			0.13
D-305-98 116.5-119.5	0.025			0.60
D-305-98 119.5-123.0	0.005			0.05
D-305-98 123.0-125.5	0.009			0.04
D-305-98 125.5-129.0	0.002			0.03
D-305-98 129-134	0.004			0.16
D-305-98 134-139	0.004			0.80
D-305-98 139-144	0.003			1.87
D-305-98 144-149	0.003			1.97
D-305-98 149.0-150.7	0.002			2.24
D-305-98 150.7-154.0	0.003			1.80
D-305-98 154-159	0.003			3.11
D-305-98 159-164	0.003			0.83
D-305-98 164-169	0.001			0.85
D-305-98 169-174	0.004			1.25
D-305-98 174-179	0.002			0.25

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

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D-305-98 183-188	0.006			9.88
D-305-98 188-193	0.005			10.46
D-305-98 193-198	0.004			2.12
D-305-98 198-203	0.002			1.04
D-305-98 203-208	0.015			1.41
D-305-98 208-210	0.019			10.16
D-305-98 210-213	0.018			5.87
D-305-98 213-217	0.018			14.50
D-305-98 217.0-220.6	0.076		0.076	43.93
D-305-98 220.6-223.5	0.010			1.34
D-305-98 223.5-226.8	0.022			4.22
D-305-98 226.8-231.2	0.015			15.81
D-305-98 231.2-235.7	0.016			6.71
D-305-98 235.7-238.0	0.031			6.04
D-305-98 238-241	0.040			3.65
D-305-98 241.0-244.4	0.002			0.93
D-305-98 244.4-247.0	0.005			0.34
D-305-98 247.0-250.7	0.238		0.299	25.81
D-305-98 250.7-254.5	0.031			2.40
D-305-98 254.5-257.4	0.008			0.65
D-305-98 257.4-260.3	0.010			11.06
D-305-98 260.3-263.7	0.012			8.44
D-305-98 263.7-268.0	0.001			0.54
D-305-98 268.0-272.4	0.001			0.29

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051369

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-305-98 272.4-275.0	0.001			0.05
D-305-98 275-278	0.018			38.50
46553	0.113			2.92

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: DEVELOPMENT Purchase Order Number:

Date Submitted: 10/28/98 Number of Samples: 77

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

Au Ag according to Rosebud Mine protocol

D-305-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED		
0-3.8	52-56	103-105		154-159	220.6-223.5	272.4-275
3.8-8	56-59	105-107		159-164	223.5-226.8	275-278 TD
8-10.5	59-61.5	107-109		164-169	226.8-231.2	
10.5-14.5	61.5-64.5	109-113		169-174	231.2-235.7	
14.5-17.5	64.5-66.5	113-116.5		174-179	235.7-238	
17.5-21.5	66.5-69	116.5-119.5		179-183	238-241	
21.5-23.5	69-74	119.5-123		183-188	241-244.4	
23.5-27	74-79	123-125.5		188-193	244.4-247	
27-31	79-82.5	125.5-129		193-198	247-250.7	
31-35	82.5-86.5	129-134		198-203	250.7-254.5	
35-39	86.5-89	134-139		203-208	254.5-257.4	
39-42	89-92.5	139-144		208-210	257.4-260.3	
42-46	92.5-94	144-149		210-213	260.3-263.7	
46-49	94-99	149-150.7		213-217	263.7-268	
49-52	99-103	150.7-154		217-220.6	268-272.4	

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

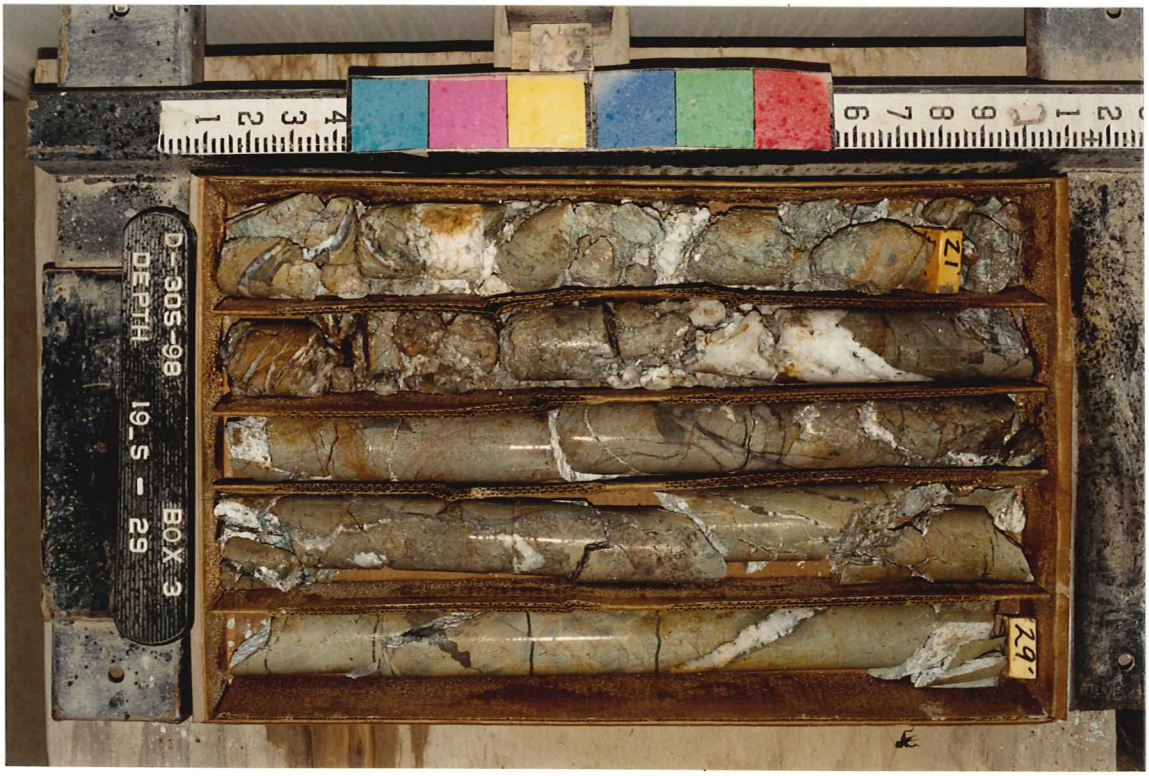
Comments:

CLIENT FILE COPY

D-305-98	50	10	127.2
	120	10	127.7
	275	10.5	127.7

D-305-98 BOX 2
DEPTH 10 - 19_5
19'

D-305-98 BOX 1
DEPTH 0 - 10
9'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DEPTH 19_5 - 29
21'
29'

D-305-98 BOX 5
DEPTH 39 - 48_5

39
D-305-98 BOX 4
DEPTH 29 - 39

D-305-98 BOX 6
DEPTH 48_5 - 58

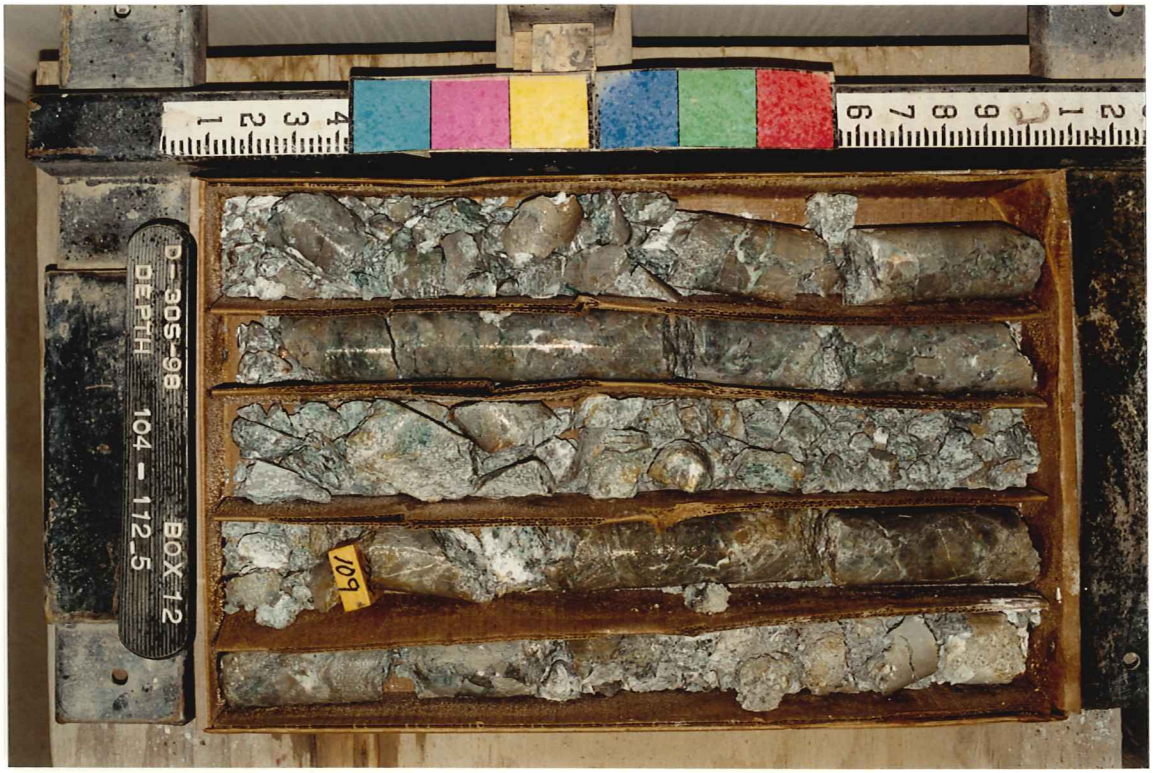
69
D-305-98 BOX 8
DEPTH 67 - 77

D-305-98 BOX 7
DEPTH 58 - 67

79
D-305-98 BOX 9
DEPTH 77 - 86

D-305-98
BOX 11
DEPTH 95 - 104
99

D-305-98
BOX 10
DEPTH 86 - 95
89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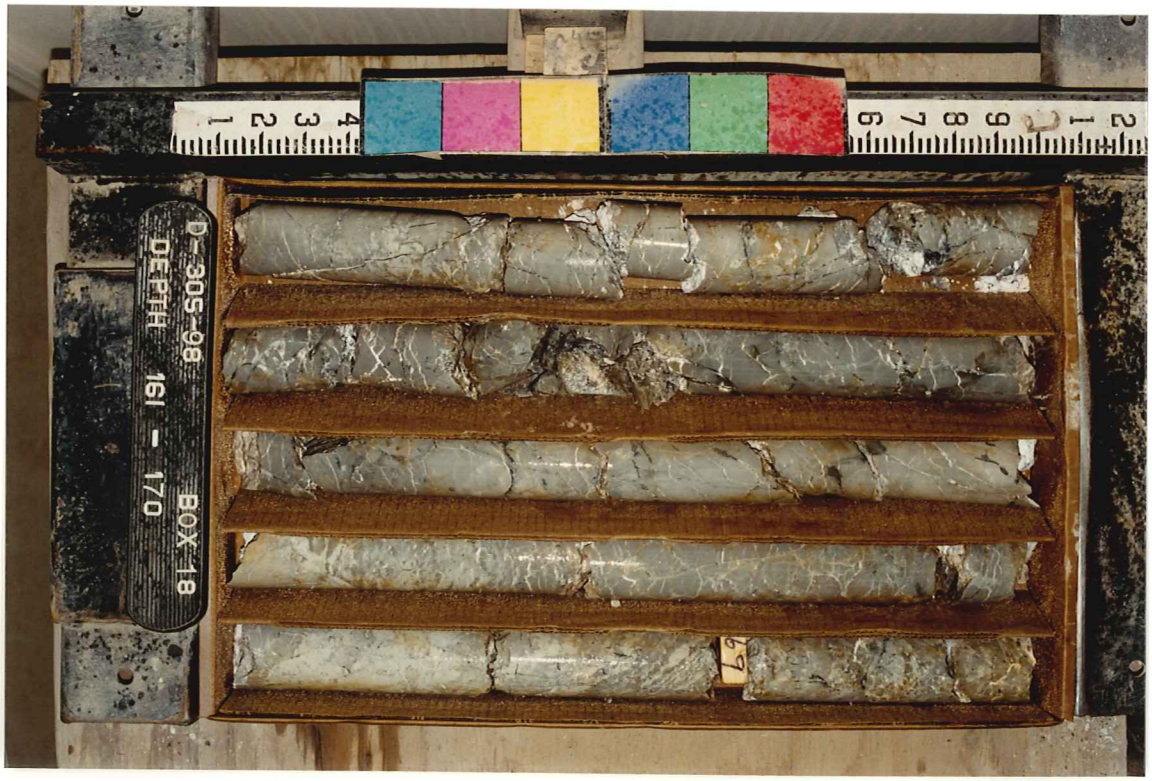
D-305-98
BOX 14
DEPTH 122 - 132_5
124
130

D-305-98
BOX 13
DEPTH 112_5 - 122
116.5

D-305-98
BOX 15
DEPTH 132_5 - 142

D-305-98
BOX 17
DEPTH 151.5 - 161
159

D-305-98
BOX 16
DEPTH 142 - 151.5
149


D-305-98
BOX 18
DEPTH 161 - 170
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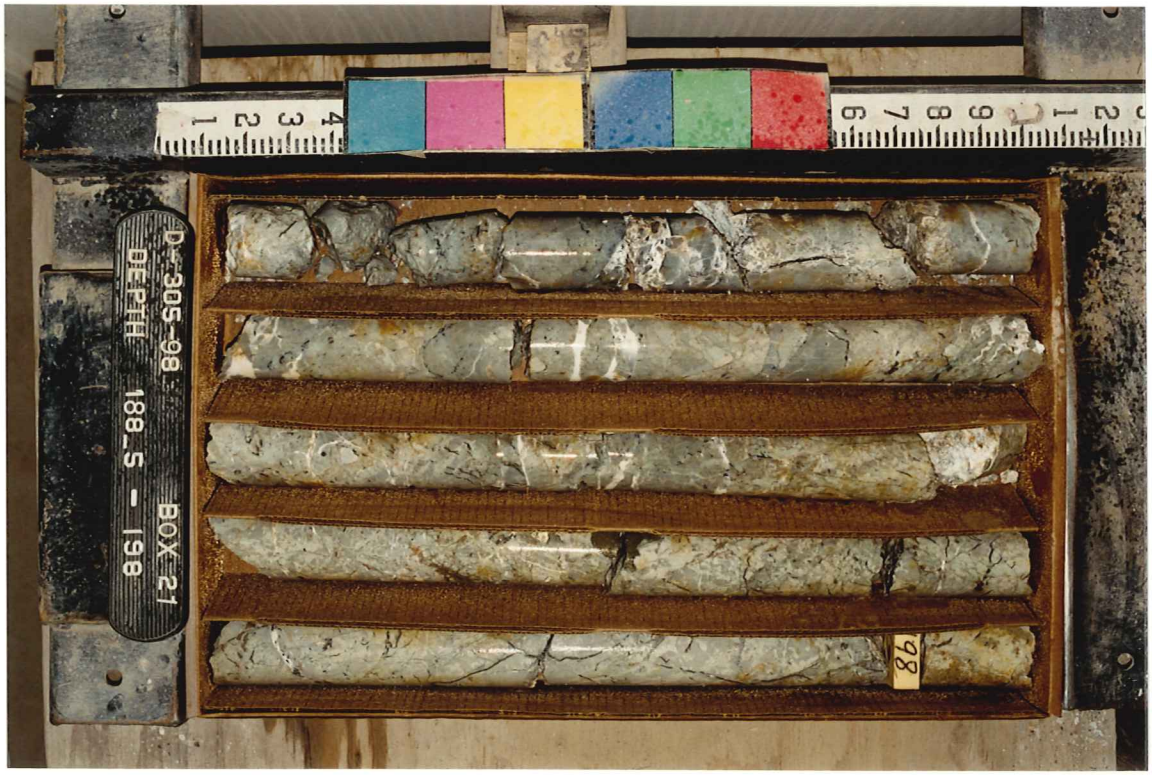
188
D-305-98
BOX 20
DEPTH 179 - 188_5

179
D-305-98
BOX 19
DEPTH 170 - 179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DEPTH 188_5 - 198
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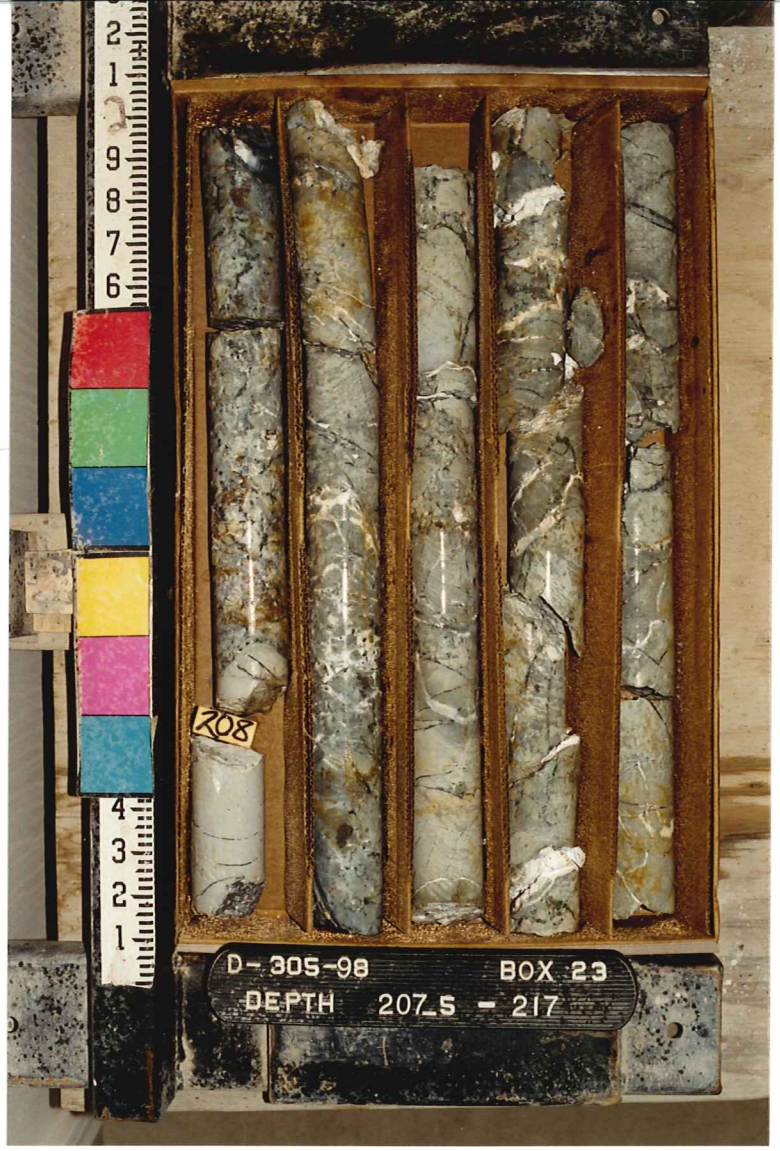
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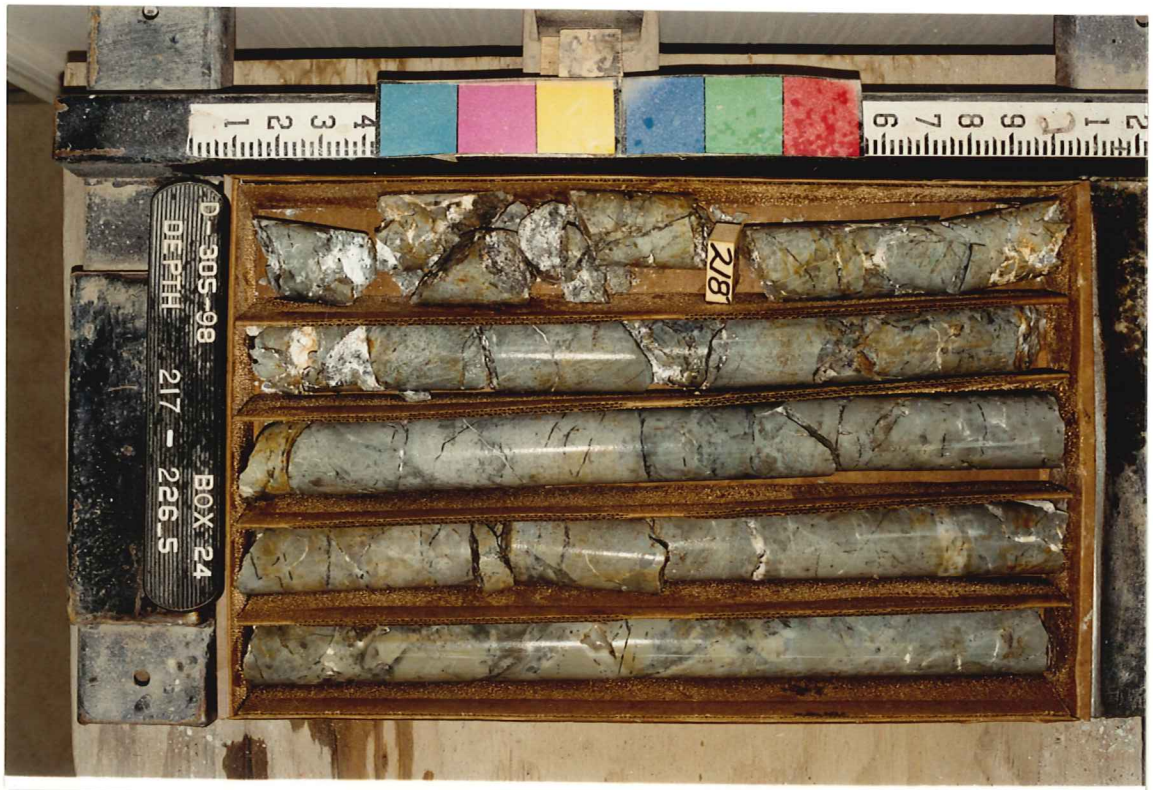
DEPTH 207_5 - 217

D-305-98 BOX 22
DEPTH 198 - 207_5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D-305-98 BOX 26
DEPTH 235_5 - 245

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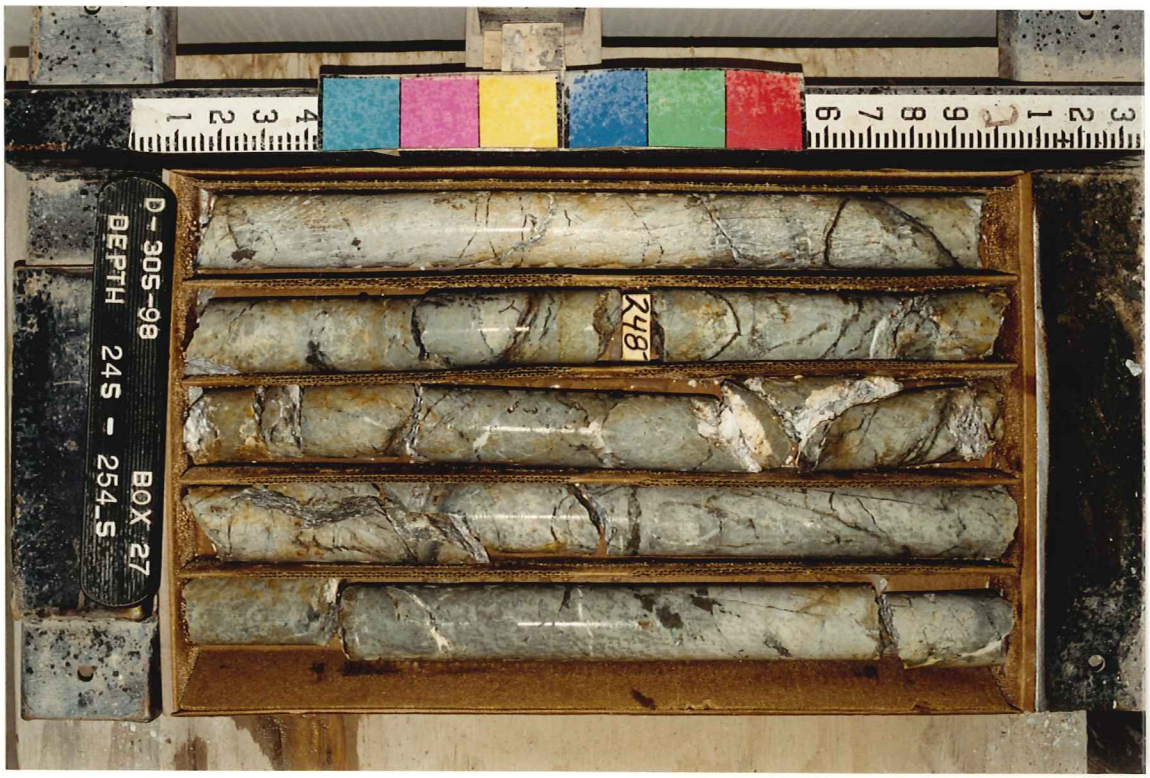
DEPTH 226_5 - 235_5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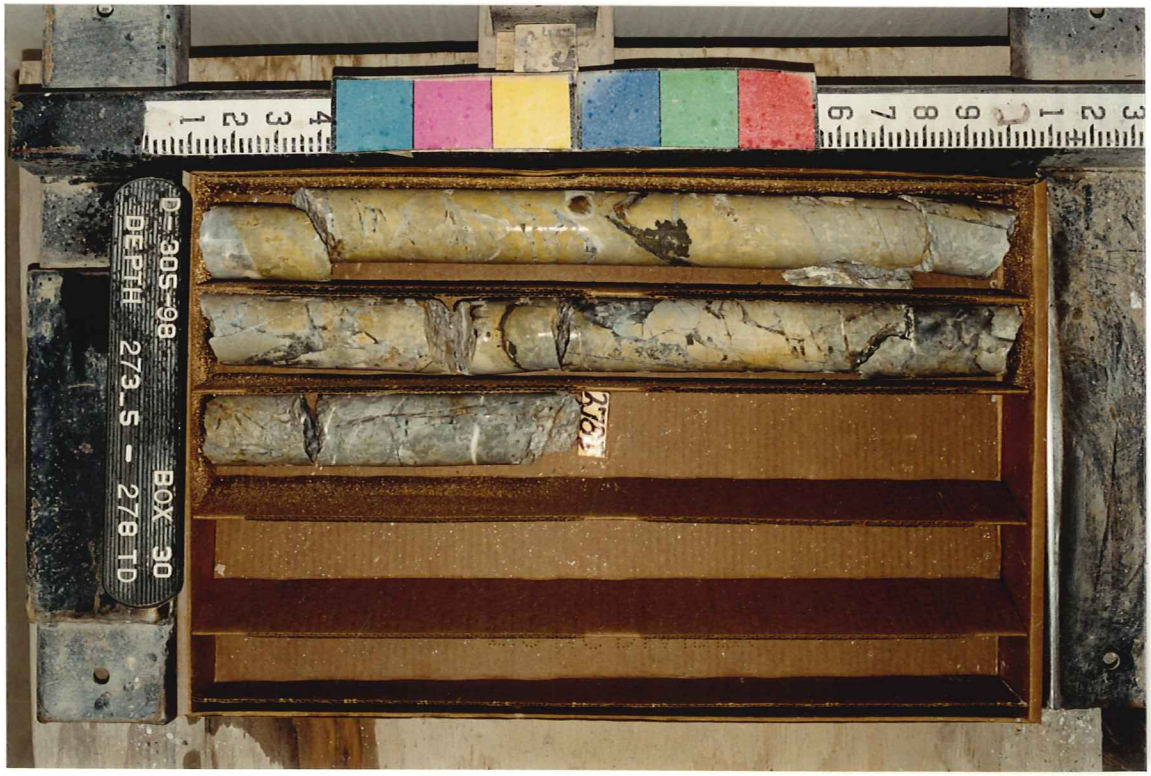
D-305-98 BOX 27
DEPTH 245 - 254_5

D-305-98
BOX 29
DEPTH 264 - 273_5
268

D-305-98
BOX 28
DEPTH 254_5 - 264
258


D-305-98
BOX 30
DEPTH 273_5 - 278_10
276

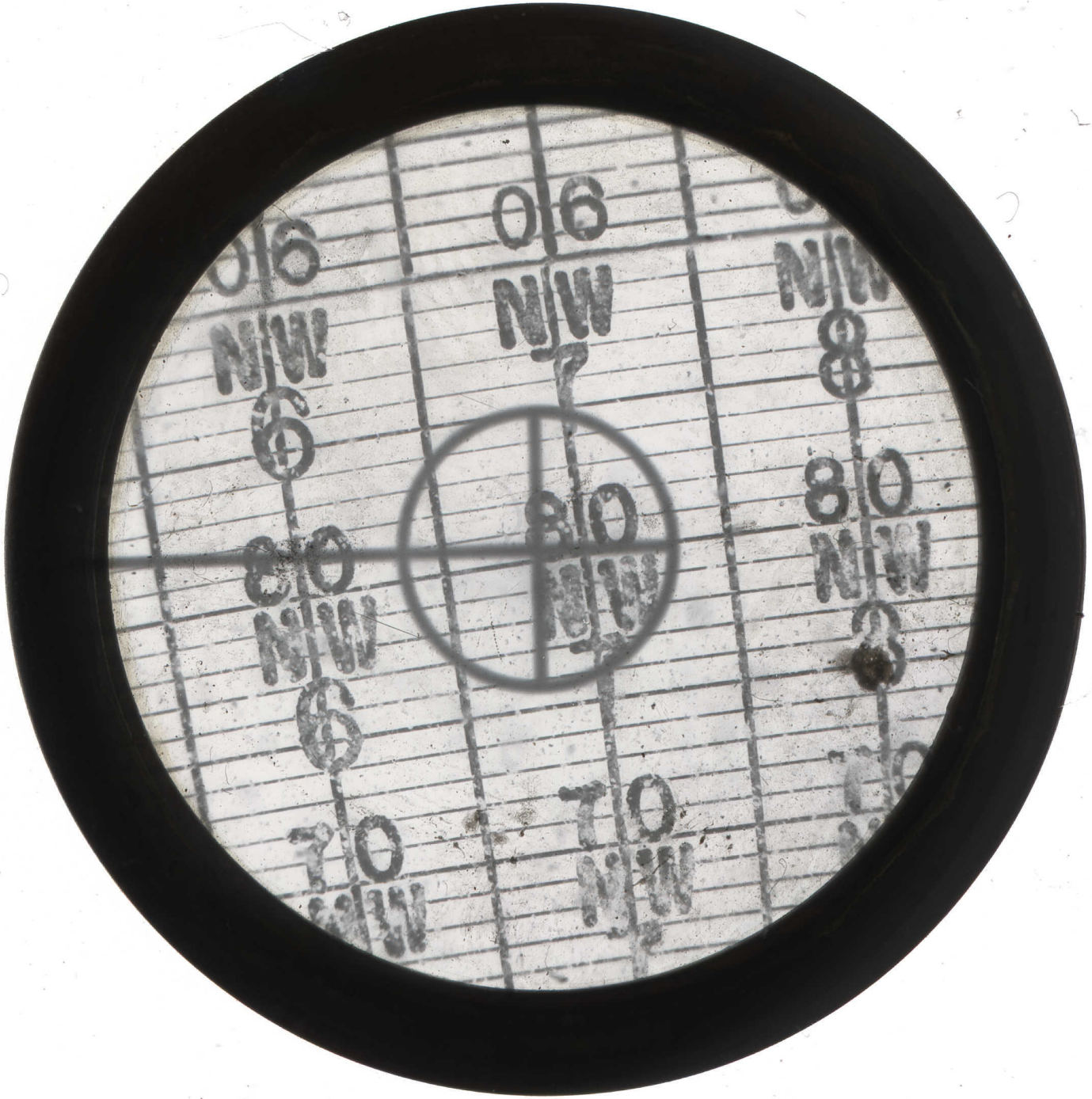
SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D30598
LEASE
TAKEN BY BAMFORD
DEPTH 275
DATE 9-5-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

06
NW
6
80
NW
6
70
NW
06
NW
7
80
NW
7
70
NW
NW
8
80
NW
8
70

SINGLE SHOT
PHOTO DISC RECORD

COMPANY HECLA
WELL NAME D30598
LEASE
TAKEN BY BAMFORD
DEPTH 120
DATE
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY HecLA
WELL NAME D30598
LEASE
TAKEN BY BAmfORD
DEPTH 50
DATE 9-5-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408