60000667

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-182-98
AUTHOR	K. Allen; S King
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, Hecla Mining Co, Rosebud Project Rosebud Mining Co., LLC
COMMODITY If not obvious	gold; silver
NOTES	drill logs; assay; geology; photographs; receipts; total depth 170'; handwritten notes down hole camera images 25 p. 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 4/28/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

D-182-98

6000 0667
4010

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-182-98 | LOCATION EAST ACCESS 43 | REMARKS
PAGE 1 OF 3 | NORTHING
DATE 02/22/98 | EASTING
LOGGED BY HSM | ELEVATION
SCALE 1"=10' | AZIMUTH N54°W
TOTAL DEPTH 170' | INCLINATION +5°

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0-1.0	0-170		0			
1.0-2.0	DIKE	1.0-2.0': LT. GRN, STRONGLY CLAY-ALTERED PORPHYRITIC DIKE. WHT GLOMERD PORPHYRITIC PLAG PHENOCRYSTS. UPPER MARGIN LOST LOWER MARGIN = WAVY, SHEARED, MYLONITIC BXA ~ 1" THICK.			1.0-2.0': STRONGLY CLAY ALTERED DIKE.	1.0-2.0 = STR. PERVASIVE ARGILLIZATION.
	REDUCED	20'-4.5': DOZER MOSAIC BRECCIA. HEALED WITH SILICA CEMENT.			2.0-4.6': HYDROTHERMAL SILICA-CEMENTED BRECCIA	2.0-4.6': STR. SILICA VN STKWK. WK MARCASITE.
2.0-52.8'		0-~27.5': BUFF-GRY DOZER AUTOBRECCIA. WELL-DEVELOPED AUTOBRECCIA TEXTURE IS HIGHLIGHTED BY FAINT, RUDDY-BRN HmOx STAINING IN FRAGMENTS.	10		8.5': 1-2" LT. GRN GOUGE ZONE.	4.6'-27.7': WK SILICA + MARCASITE VNLTS. WK WALLROCK ARGILLIZATION, PRIMARILY IN AUTOBRECCIA MATRIX. MOD. PYRITIC BLEBS IN WALLROCK. LOCAL STR. CLAY IN SHEARS
DOZER			20		16.0': THIN LT. GRN GOUGE	
		~27.5'-~38': MASSIVE UNBRECCIATED DOZER,	30			27.8'-28.3': SILICA VN STKWK
		~38'-52.3': AUTOBRECCIATED DOZER.	40			28.3-52.3': WK/MOD. SILICA + MARCASITE VNLTS AT HIGH ∠S TO C/A. FINELY DRUSY QUARTZ LINES FRAX WITH MARCASITE BLADES GROWING INTO OPEN SPACE. MINOR L. BRASSY PY. MOD/WK WALLROCK BLEBBING. TR. WALLROCK ARGILLIZATION INCREASING TO MOD/WK NEAR SHEARS.
		52.3-97.7': GREY PORPHYRY DIKE. BUD MARKER BED TYPE.	50		46': 3" WK GOUGE OR INCREASED CLAY ALTERATION	

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ac
0	1.0					
1.0	2.0					
2.0	4.6					
4.6	10.0					
10.0	15.0					
15.0	20.0					
20.0	24.0					
24.0	27.7					
27.7	29.5					
29.5	34.5					
34.5	39.5					
39.5	44.0					
44.0	49.0					

HOLE NUMBER D-182-98 PAGE 2 OF 3

ITH.	OX/RED.	LITHOLOGY
2.0-52.8' DOZER	0-170 REDUCED	
52.8-97.7' DIKE		52.3-52.8': SHEARED, GRY-BLK, SOOTY (SULFIDIC?) DIKE MARGINAL MYLONITIC BRAIDED SHEAR FABRIC. MOD'LY PUNKY. 52.8'-55.0': PALE SULFIDE-POOR MYLONITE CONTINUES FROM 52.8'-53.2', & GRADES DOWN INTO DECREASINGLY BRECCIATED TO SILICA VEIN STOCKWORKED PORPHYRITIC DIKE. 55.0'-97.7': PALE GREY PORPHYRY DIKE. APHANITIC, MASSIVE LT. GREY GROUNDMASS. GLOMEROPORPHYRITIC PLAG PHENOCRYSTS MOD SHOT TO WHT CLAY.
97.7-105.6 DOZER?		97.7'-105.6': LOSE ALL SIGN OF PLAG PHENOCRYSTS. BUFF-GRY APHANITIC MASSIVE ROCK NOW THOROUGHLY STOCKWORKED AND BRECCIATED. RUBBLY CATACLASTIC TEXTURE IS OVERPRINTED BY BLK SILICA-SULFIDE MICROVNLT (WRITR) AND COPIOUS LATE GRY SILICA STKWKING.
105.6'-143.7' SOUTH RIDGE FAULT ZONE		105.4-105.8': BLACK SILICA-SULFIDE MICROBRECCIA AT CONTACT WITH >90°. REPLACEMENT SILICA FAULT ZONE. 105.8-108.8': TOTAL REPLACEMENT SILICA. MOTTLED MEDIUM GREY SILICA + (LATER?) MILKY WHT SILICA OVERPRINTS & REPLACES ROCK FLOUR 108.8'-112.8': WKLY HETEROLITHIC MOSAIC BRECCIA. SUBANGULAR BROWN AND BUFF FRAGMENTS IN GRY TO WHT MILKY SILICA. MATRIX-SUPPORTED. BRN PORPHYRITIC FRAGMTS ~85-90%. PROBABLY SAME AS OVERLYING DIKE.

FT

GRAPHIC LOG

STRUCTURE	ALTERATION AND MINERALIZATION
FROM ~55': MOD. QZ+- PY COATED JNTS AVERAGING 55° TO C/A.	52.8-55.0': STR. GRY SILICA VNLT STOCKWORK; TR. WALLROCK ARGILLIZATN.
62': ~1" WK SHEAR, GRY GOUGE. PERVASIVE ARGILLIZATION ENHANCED TO MOD. TO 62.6'.	55.0-~61': MOD/STR GRY SILICA-/ SILICA-SULFIDE VNLTS. MOD. DISS'D PY BLEBBING & PY IN PHENOCRYST SITES. HI ∠'S TO C/A. TR. WALLROCK ARGILLIZATION.
	~61-~78': MOD. SILICA + PY VNLTS. AT HI ∠'S TO C/A. TR. WALLROCK ARGILLIZATION.
	~78'-97.7': STRONG VUGGY QUARTZ+MARCASITE +/- WHT CLAY VNS & VN BRECCIA TR. WALLROCK ARGILLIZATN.
	FROM ~83.5': TR. SILICA SOAKING INTO WALLROCK NEAR SILICA VN STKWKS.
97.7-105.6': HEALED SLIGHTLY RUBBLIZED DOZER FLT BRECCIA.	97.7-105.6': WK SILICIFICATN OF WALLROCK & STRONG/ INTENSE SILICA VNING + WK/ MOD. PYRITE VNING & CEMENT.
FROM 98.5': TR/WK BARITE IN VUGS.	100': BLK SILICA-SULFIDE µBRECCIA VNLT X-CUT BY GRY SILICA.
105.6'-108.5': SILICIFIED ROCK FLOUR (SAND)	105.4'-105.8': BLK SILICA-SULFIDE MICROBXA AT CONTACT.
108': LT. GRN CLAY GOUGE ON 30° TO C/A FRAX. X-CUTS 25 SILICIFIED ROCK SAND VN.	105.8'-108.8': GRY TO WHT TOTAL REPLACEMENT SILICA. VFG DISS'D GRY SULFIDES TO 108'.
	108.8-112.8': STR. SILICA CEMENT. MOD/STR. LATE WHT CLAY + SOOTY TO ACICULAR STIBNITE IN VUGS.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
49.0	52.3				
52.3	55.0				
55.0	59.8				
59.8	65.0				
65.0	69.9				
69.9	75.0				
75.0	77.8				
77.8	83.4				
83.4	87.6				
87.6	92.4				
92.4	97.7				
97.7	101.1				
101.1	105.6				
105.6	108.5				
108.5	112.8				
112.8	117.1				
117.1	120.4				

HOLE NUMBER D-182-98 PAGE 3 OF 3

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
105.6-143.7' SOUTH RIDGE FAULT ZONE		112.8-124.0': HETERO LITHIC FAULT BRECCIA. VARIABLY MATRIX TO CLAST-SUPPORTED. ROCK FLOUR, SILICA-CEMENTED MATRIX. FRAGMENTS = BROWN PORPHYRITIC FRAGMENTS ≥ 90%. BLEACHED, SHATTERED JUVENILE LT. GRN FRAGMTS ~10%. 124-141.6': TIGHTLY-PACKED, MONOLITHIC, CRACKLE BRECCIA TO STOCKWORK. SILICA +/- MARCASITE VNS/CEMENT. RK = LT. BRN TO TAN PLAG-BEARING, APHANITIC PORPHYRY. SAME AS OVERLYING MAT'L WITH FLT ZONE. 141.0'-141.6': CRACKLE TO MOSAIC BXA OF DULL TAN-BRN PORPHYRY. SEMI-HEALED.	120 130 140 150 160 170		112.8-124.0': MOD LY/STR MOSAIC BXA. 124.0-141.5': WKER CRACKLE TO MOSAIC BXA. 141.5'-142.4': STR FAULT BRECCIA TO GOUGE. 142.4'-143.7': # UNHEALED FAULT GOUGE. 142.4-143.7': FINE GRIT + LT. GRN TO SOOTY GRY CLAY GOUGE. 30 160.0-160.3': WHT CLAY + WALLROCK GRIT SHEAR ZONE.	124.0'-141.6': STR./MOD. GRY SILICA +/- MARCASITE VNING. +/- PY AFTER MARC. PHENOCRYSTS ARE PYRITIZED & CLAY ALTERED. TR. ARGILLIC IN FRAGMT GROUNDMASS. SLIGHT INCREASE IN SILICIFIED MATRIX BELOW 130'. 141.6'-142.4': MOD. GRN CLAY ALTERATION, MOD. DISS'D MARCASITE. 142.4-143.5': MOD/STR SOOTY VFG SULFIDE. STR. GRN CLAY. 143.5'-147.8': MOD TO STR SILICIFICATION OVERPRINTING STR. GRN CLAY ALTERATION. MOD. DISS'D MARCASITE. 147.8-~150: SILICIFICATION OVERPRINT FADES DOWN-HOLE. CONT'D MOD/STR. GRN CLAY ALTERATION, & MOD. DISS'D MARCASITE. ~150-170': MOD. DISS'D MARCASITE MOD/STR. PERVASIVE GRN CLAY ALTN, WK/MOD SILICA + MARCASITE VNLTS.
143.7'-170' UBUD		141.6-142.4': HETEROLITHIC, MATRIX-SUPPORTED FAULT BXA. GRNISH MATRIX ROCK FLOUR. TAN & GRN ± PEBBLE-SIZED ANGULAR FRAGMTS. 142.4'-143.7': GRITTY LT. GRN TO DK SOOTY GRY FAULT GOUGE. ENDS AT SHARP 30° TO C/A. 143.7'-~150': STILL SILICIFIED, LOCALLY, BUT DECREASINGLY TECTONICALLY DISRUPTED UBUD. ~150'-170': FUZZY UBUD. GRN CLAY ALTERATION.				
		TD 170'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
120.4	124.0				
124.0	128.1				
128.1	132.0				
132.0	136.4				
136.4	141.5				
141.5	142.4				
142.4	143.5				
143.5	147.8				
147.8	150.6				
150.6	155.0				
155.0	160.0				
160.0	165.0				
165.0	170.0				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-182-98 DATE: 02/22/98 LOGGED BY: KBM PAGE 1 OF 2

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	10.0	102.0	102.0	59.0										
10.0	20.0	97.0	97.0	76.0										
20.0	29.5	94.7	100.0	77.9										
29.5	39.5	104.0	104.0	98.0										
39.5	49.0	106.3	106.3	73.0										
49.0	55.0	90.0	90.0	50.0										
55.0	65.0	95.0	95.0	62.0										
65.0	75.0	101.0	101.0	76.0										
75.0	85.0	101.0	101.0	78.0										
85.0	95.0	100.0	100.0	82.0										
95.0	105.0	99.0	99.0	90.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-182-98 DATE 02/22/98 LOGGED BY: HSM PAGE 2 OF 2

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)
105.0	115.0	103.0	103.0	81.0										
115.0	125.0	106.0	106.0	77.0										
125.0	135.0	105.0	105.0	90.0										
135.0	145.0	95.0	95.0	52.0										
145.0	155.0	100.0	100.0	71.0										
155.0	165.0	100.0	100.0	79.0										
165.0	170.0	104.0	104.0	104.0										
	TD													

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # _____ DATE: _____ LOGGED BY: _____ PAGE _____ OF _____

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)

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 Co LLT

Address: P.O. BOX 2610

City WINNEMUCCA State NV Zip 89446

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

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 02/24/98 Number of Samples: 43

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

D-182-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED
0-1.0	55.0-59.8		CORE	Au-Ag ACCORDING TO
1.0-2.0	59.8-65.0	120.4-124.0		ROSEBUD MINING
2.0-4.6	65.0-69.9	124.0-128.1		PROTOCOL
4.6-10.0	69.9-75.0	128.1-132.0		
10.0-15.0	75.0-77.8	132.0-136.4		
15.0-20.0	77.8-83.4	136.4-141.5		
20.0-24.0	83.4-87.6	141.5-142.4		
24.0-27.7	87.6-92.4	142.4-143.5		
27.7-29.5	92.4-97.7	143.5-147.8		
29.5-34.5	97.7-101.1	147.8-150.6		
34.5-39.5	101.1-105.6	150.6-155.0		
39.5-44.0	105.6-108.5	155.0-160.0		
44.0-49.0	108.5-112.8	160.0-165.0		
49.0-52.3	112.8-117.1	165.0-170.0		
52.3-55.0	117.1-120.4			

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

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

(702) 356-0606

INVOICE NO: SP 0048196-IN
INVOICE DATE: 03/09/98

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-182-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
44	SAMPLES RECEIVED	.00	.00
43	DRYING	1.00	43.00
43	JAW CRUSHING CHARGE	1.30	55.90
43	COARSE MILLING CHARGE	4.50	193.50
43	SPLITTING CHARGE	2.40	103.20
43	RING MILLING CHARGE	2.00	86.00
44	Au (1 A.T. FIRE ASSAY)	8.00	352.00
4	Au ANALYSES/GRAVIMETRIC	8.75	35.00
44	HYDROCHLORIC/NITRIC DIGESTION	2.00	88.00
44	Ag ANALYSES	1.00	44.00

86-5710-477
KDA

NET INVOICE:	1,000.60
LESS DISCOUNT:	200.12
FREIGHT:	.00
INVOICE TOTAL:	800.48

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048196

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-182-98

No. SAMPLES : 44

MAIN SAMPLE TYPE : DRILL CORE

RECEIVED : 25 FEB 1998

REPORTED : 5 MAR 1998

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 SP048196

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-182-98 0-1	0.003			0.04
D-182-98 1-2	0.007			0.08
D-182-98 2.0-4.6	0.017			0.06
D-182-98 4.6-10.0	0.013			0.04
D-182-98 10-15	0.008			0.02
D-182-98 15-20	0.009	0.009		0.05
D-182-98 20-24	0.031			0.10
D-182-98 24.0-27.7	0.007			0.02
D-182-98 27.7-29.5	0.010	0.010		0.04
D-182-98 29.5-34.5	0.003			0.03
D-182-98 34.5-39.5	0.037			0.05
D-182-98 39.5-44.0	0.036			0.05
D-182-98 44-49	0.032			0.07
D-182-98 49.0-52.3	0.021			0.12
D-182-98 52.3-55.0	0.020			0.23
D-182-98 55.0-59.8	0.013	0.016		0.07
D-182-98 59.8-65.0	0.022			0.07
D-182-98 65.0-69.9	0.179		0.228	0.07
D-182-98 69.9-75.0	0.185		0.188	0.16
D-182-98 75.0-77.8	0.125		0.088	0.14
D-182-98 77.8-83.4	0.399		0.440	0.32
D-182-98 83.4-87.6	0.044	0.034		0.11
D-182-98 87.6-92.4	0.024			0.10
D-182-98 92.4-97.7	0.014			0.09
D-182-98 97.7-101.1	0.014			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048196

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-182-98 101.1-105.6	0.024			0.06
D-182-98 105.6-108.5	0.026	0.023		0.06
D-182-98 108.5-112.8	0.003			1.07
D-182-98 112.8-117.1	0.002			0.41
D-182-98 117.1-120.4	0.003			0.55
D-182-98 120.4-124.0	0.004			0.25
D-182-98 124.0-128.1	0.003			0.19
D-182-98 128.1-132.0	0.004			0.31
D-182-98 132.0-136.4	0.003			0.27
D-182-98 136.4-141.5	0.005	0.003		0.24
D-182-98 141.5-142.4	0.010			0.21
D-182-98 142.4-143.5	0.017			0.22
D-182-98 143.5-147.8	0.001			0.04
D-182-98 147.8-150.6	0.001			0.05
D-182-98 150.6-155.0	0.003			0.05
D-182-98 155-160	0.002			0.06
D-182-98 160-165	0.002			0.06
D-182-98 165-170	0.002			0.06
26975	0.529			2.58

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP0048196

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-182-98 RECEIVED : 25 FEB 1998

No. SAMPLES : 44 REPORTED : 5 MAR 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 SP048196

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-182-98 0-1	0.003			0.04
D-182-98 1-2	0.007			0.08
D-182-98 2.0-4.6	0.017			0.06
D-182-98 4.6-10.0	0.013			0.04
D-182-98 10-15	0.008			0.02
D-182-98 15-20	0.009	0.009		0.05
D-182-98 20-24	0.031			0.10
D-182-98 24.0-27.7	0.007			0.02
D-182-98 27.7-29.5	0.010	0.010		0.04
D-182-98 29.5-34.5	0.003			0.03
D-182-98 34.5-39.5	0.037			0.05
D-182-98 39.5-44.0	0.036			0.05
D-182-98 44-49	0.032			0.07
D-182-98 49.0-52.3	0.021			0.12
D-182-98 52.3-55.0	0.020			0.23
D-182-98 55.0-59.8	0.013	0.016		0.07
D-182-98 59.8-65.0	0.022			0.07
D-182-98 65.0-69.9	0.179		0.228	0.07
D-182-98 69.9-75.0	0.185		0.188	0.16
D-182-98 75.0-77.8	0.125		0.088	0.14
D-182-98 77.8-83.4	0.399		0.440	0.32
D-182-98 83.4-87.6	0.044	0.034		0.11
D-182-98 87.6-92.4	0.024			0.10
D-182-98 92.4-97.7	0.014			0.09
D-182-98 97.7-101.1	0.014			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP0048196

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-182-98 101.1-105.6	0.024			0.06
D-182-98 105.6-108.5	0.026	0.023		0.06
D-182-98 108.5-112.8	0.003			1.07
D-182-98 112.8-117.1	0.002			0.41
D-182-98 117.1-120.4	0.003			0.55
D-182-98 120.4-124.0	0.004			0.25
D-182-98 124.0-128.1	0.003			0.19
D-182-98 128.1-132.0	0.004			0.31
D-182-98 132.0-136.4	0.003			0.27
D-182-98 136.4-141.5	0.005	0.003		0.24
D-182-98 141.5-142.4	0.010			0.21
D-182-98 142.4-143.5	0.017			0.22
D-182-98 143.5-147.8	0.001			0.04
D-182-98 147.8-150.6	0.001			0.05
D-182-98 150.6-155.0	0.003			0.05
D-182-98 155-160	0.002			0.06
D-182-98 160-165	0.002			0.06
D-182-98 165-170	0.002			0.06
26975	0.529			2.58

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP04B196

PO BOX 11538
RENO NV.USA
Ph.(702) 356-0606, fax.(702) 355-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-182-98 RECEIVED : 26 FEB 1998

No. SAMPLES : 44 REPORTED : 5 MAR 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.

03/05/1998 13:53 7023561413 AMERICAN ASSAY LABS PAGE 04

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP0481196

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-182-98 0-1		0.003			0.04	
D-182-98 1-2		0.007			0.08	
D-182-98 2.0-4.6		0.017			0.06	
D-182-98 4.6-10.0		0.013			0.04	
D-182-98 10-15		0.008			0.02	
D-182-98 15-20		0.009	0.009		0.05	
D-182-98 20-24		0.031			0.10	
D-182-98 24.0-27.7		0.007			0.02	
D-182-98 27.7-29.5		0.010	0.010		0.04	
D-182-98 29.5-34.5		0.003			0.03	
D-182-98 34.5-39.5		0.037			0.05	
D-182-98 39.5-44.0		0.036			0.05	
D-182-98 44-49		0.032			0.07	
D-182-98 49.0-52.3		0.021			0.12	
D-182-98 52.3-55.0		0.020			0.23	
D-182-98 55.0-59.8		0.013	0.016		0.07	65'-83.4' =
D-182-98 59.8-65.0		0.022			0.07	18.4' @
D-192-98 65.0-69.9	4.9	0.129		0.228	0.07	
D-182-98 69.9-75.0	5.1	0.185		0.188	0.16	0.239 Au
D-182-98 75.0-77.8	2.8	0.125		0.088	0.14	0.18 Au
D-182-98 77.8-83.4	5.6	0.399		0.440	0.32	
D-182-98 83.4-87.6		0.044	0.034		0.11	
D-182-98 87.6-92.4		0.024			0.10	
D-182-98 92.4-97.7		0.014			0.09	
D-182-98 97.7-101.1		0.014			0.04	

03/05/1998 13:53 7023561413 AMERICAN ASSAY LABS PAGE 05

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP04BT96

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-182-98

REPORTED : 5 MAR 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-182-98 101.1-105.6	0.024			0.06
D-182-98 105.6-108.5	0.026	0.023		0.06
D-182-98 108.5-112.8	0.003			1.97
D-182-98 112.8-117.1	0.002			0.41
D-182-98 117.1-120.4	0.003			0.55
D-182-98 120.4-124.0	0.004			0.25
D-182-98 124.0-128.1	0.003			0.19
D-182-98 128.1-132.0	0.004			0.31
D-182-98 132.0-136.4	0.003			0.27
D-182-98 136.4-141.5	0.005	0.003		0.24
D-182-98 141.5-142.4	0.010			0.21
D-182-98 142.4-143.5	0.017			0.22
D-182-98 143.6-147.8	0.001			0.04
D-182-98 147.8-150.6	0.001			0.05
D-182-98 150.6-155.0	0.003			0.05
D-182-98 155-160	0.002			0.06
D-182-98 160-165	0.002			0.06
D-182-98 165-170	0.002			0.06
26975	0.529			2.58

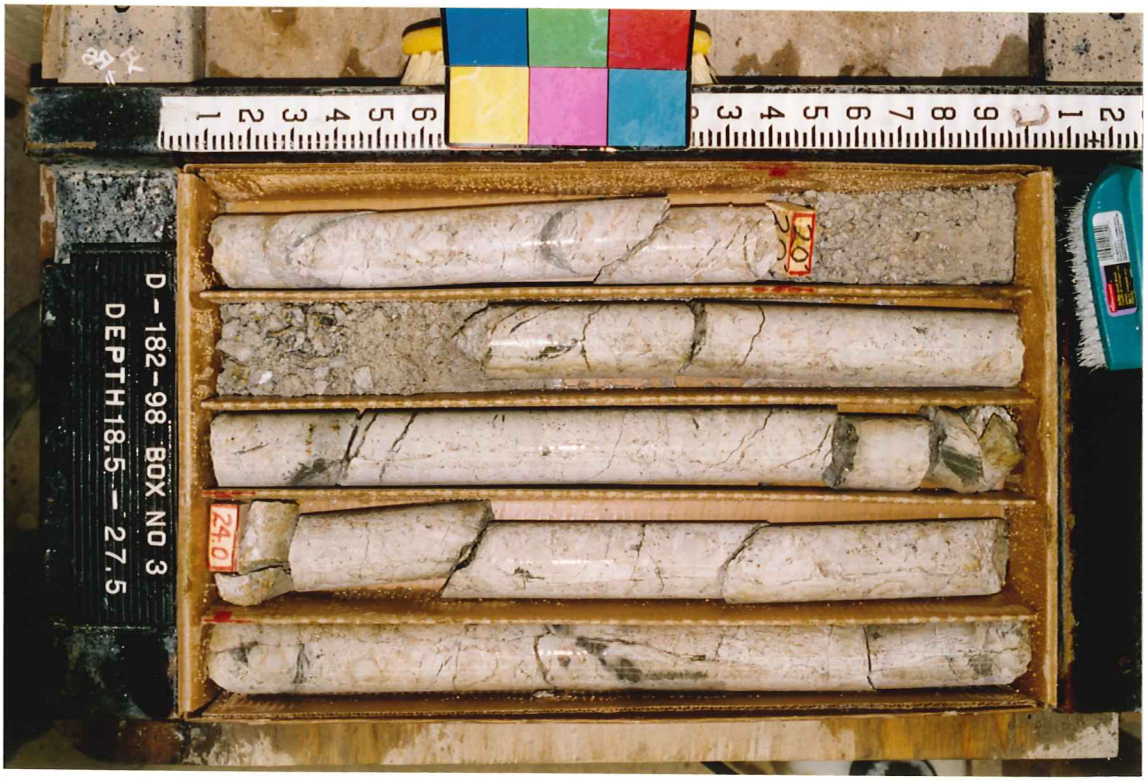
03/05/1998 13:53 7023561413 AMERICAN ASSAY LABS PAGE 06

DOWNHOLE SURVEY MAGNETIC DECLINATION: 15.7°

DRILLHOLE #	FILM FOOTAGE	BEARING	DIP	TRUE BEARING	TRUE DIP
D-182-98	COLLAR	S72.5°E	95.5°	N56.8°W	+4.5°
	85'	S71.5°E	85.5°	N55.8°W	+4.5°
	170'	S72.0E	85.0°	N56.3°W	+5.0°

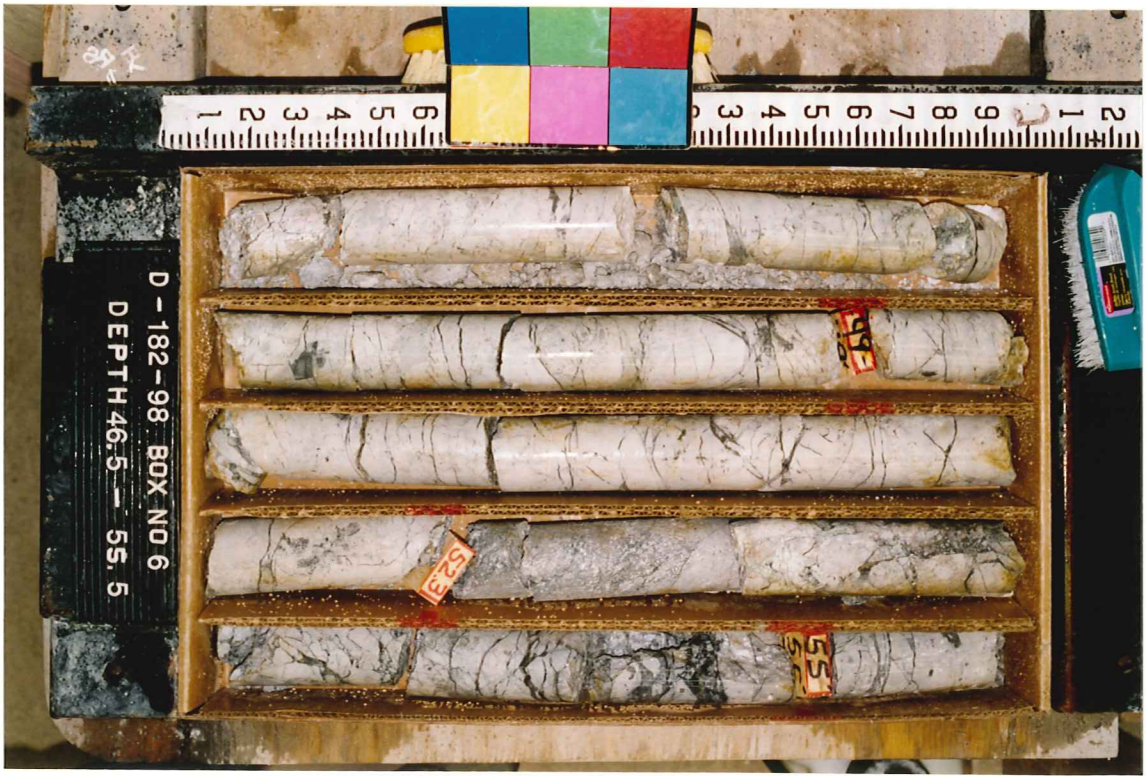
D-182-98 BOX NO 2
DEPTH 9. - 18.5

D-182-98 BOX NO 1
DEPTH 0.0 - 9.


D-182-98 BOX NO 3
DEPTH 18.5 - 27.5

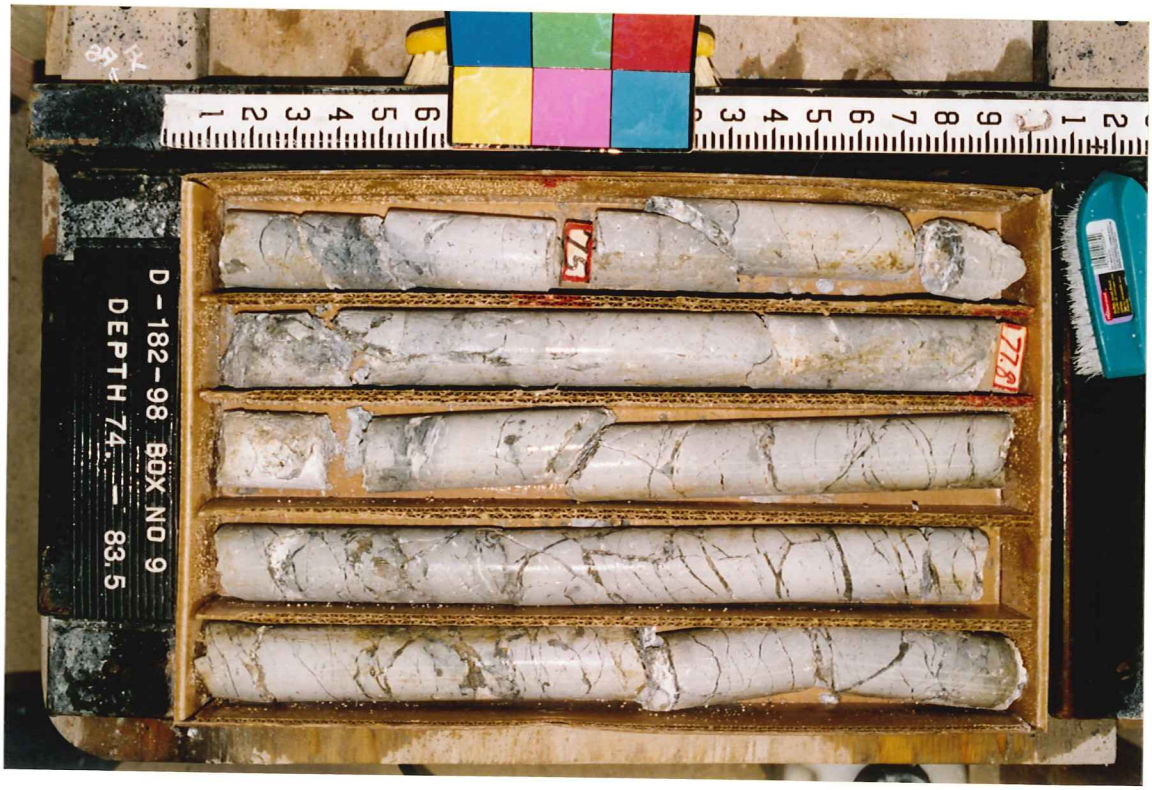
D-182-98 BOX NO 5
DEPTH 37. - 46.5

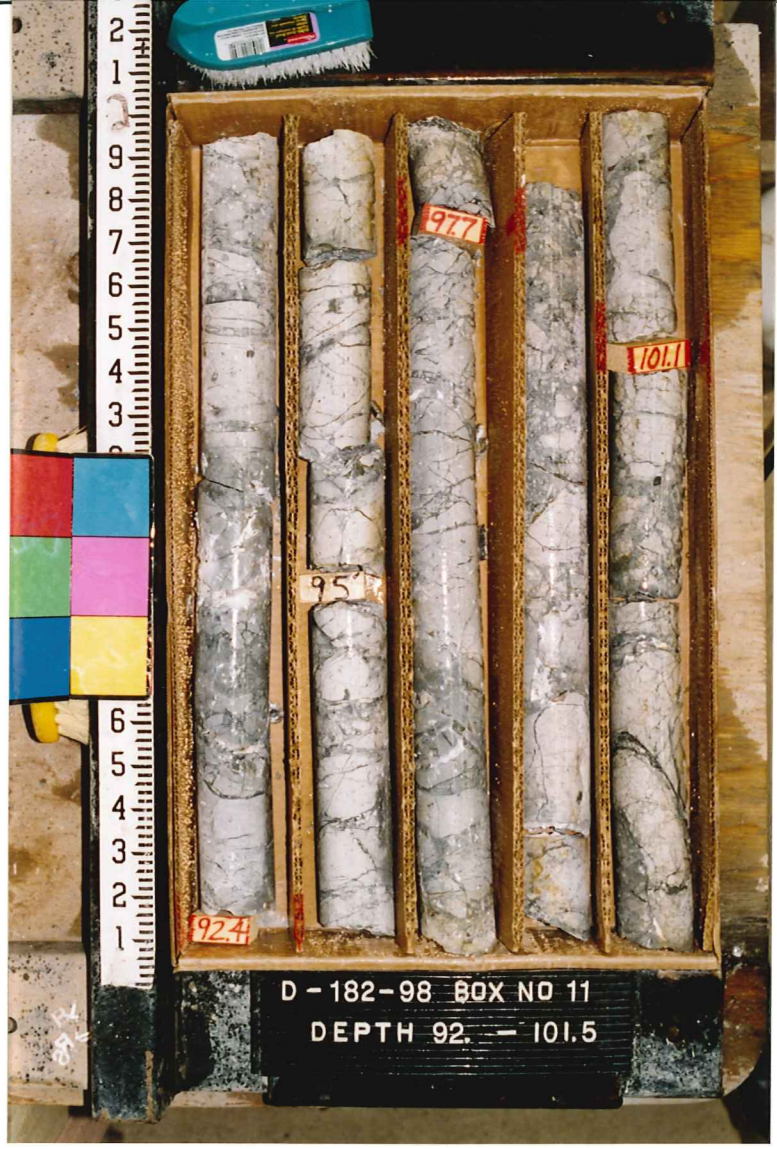
D-182-98 BOX NO 4
DEPTH 27.5 - 37.


D-182-98 BOX NO 6
DEPTH 46.5 - 55.5

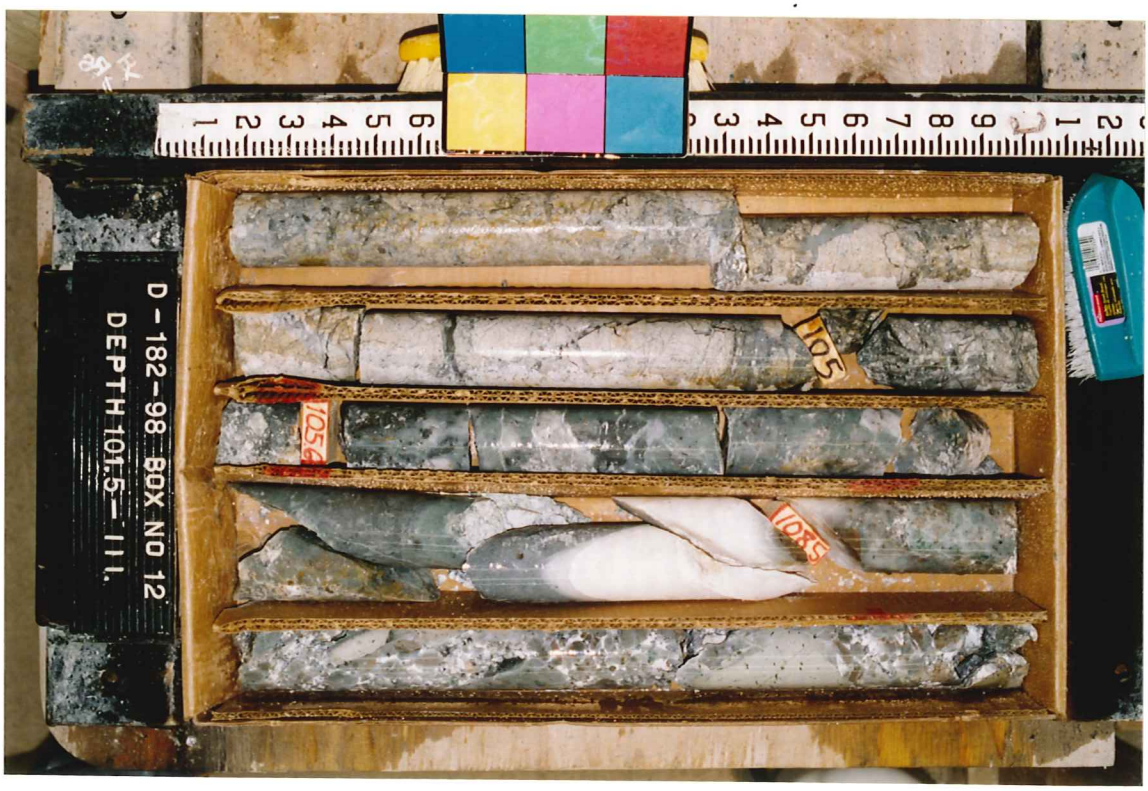
69.9
D - 182-98 BOX NO 8
DEPTH 65. - 74.

65
59.8
D - 182-98 BOX NO 7
DEPTH 55.5 - 65.

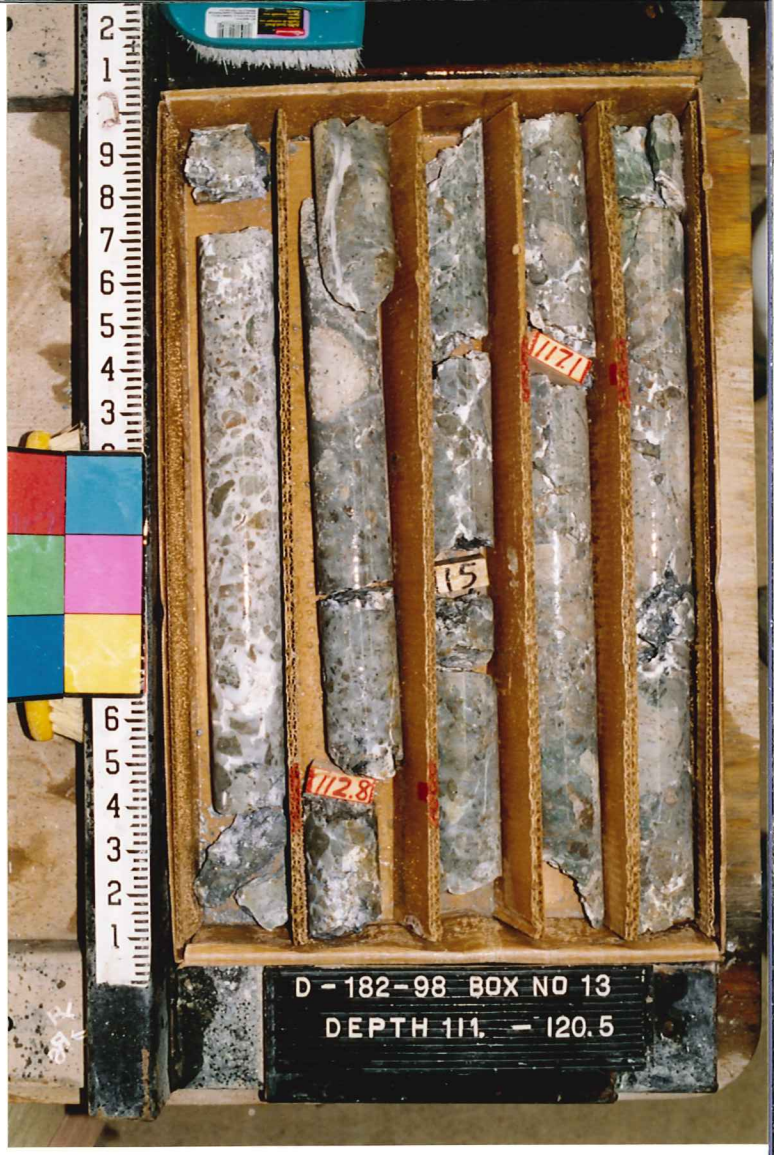

77.5
77.8
D - 182-98 BOX NO 9
DEPTH 74. - 83.5

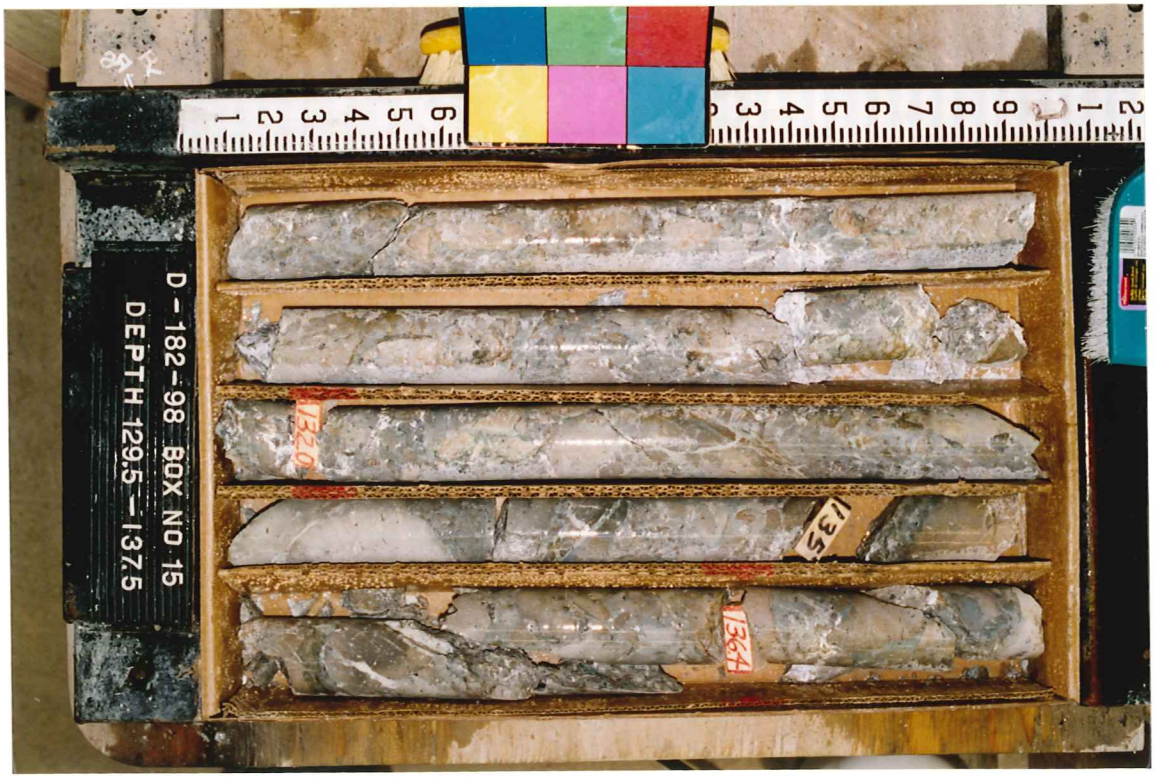

97.7
101.1
95
92.4
D-182-98 BOX NO 11
DEPTH 92. - 101.5

85
87.6
83.4
D-182-98 BOX NO 10
DEPTH 83.5 - 92.


105
105.4
108.5
D-182-98 BOX NO 12
DEPTH 101.5 - 111.

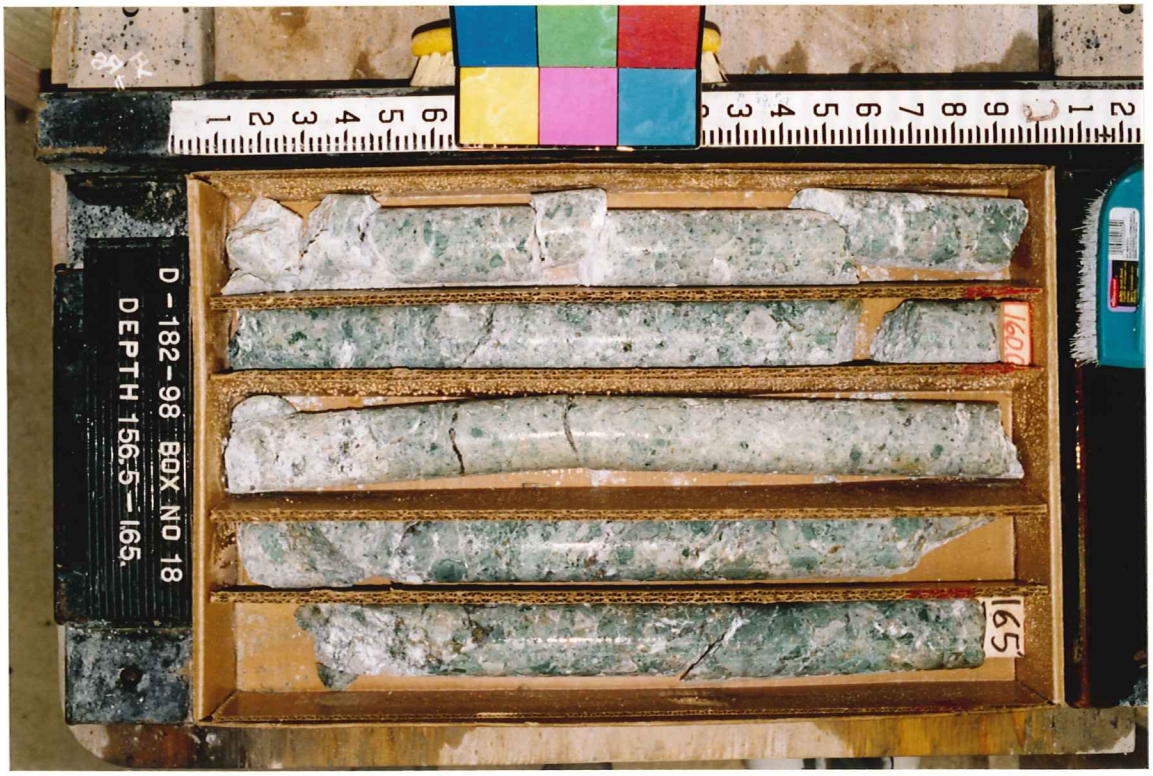
D-182-98 BOX NO 14
DEPTH 120.5 — 129.5

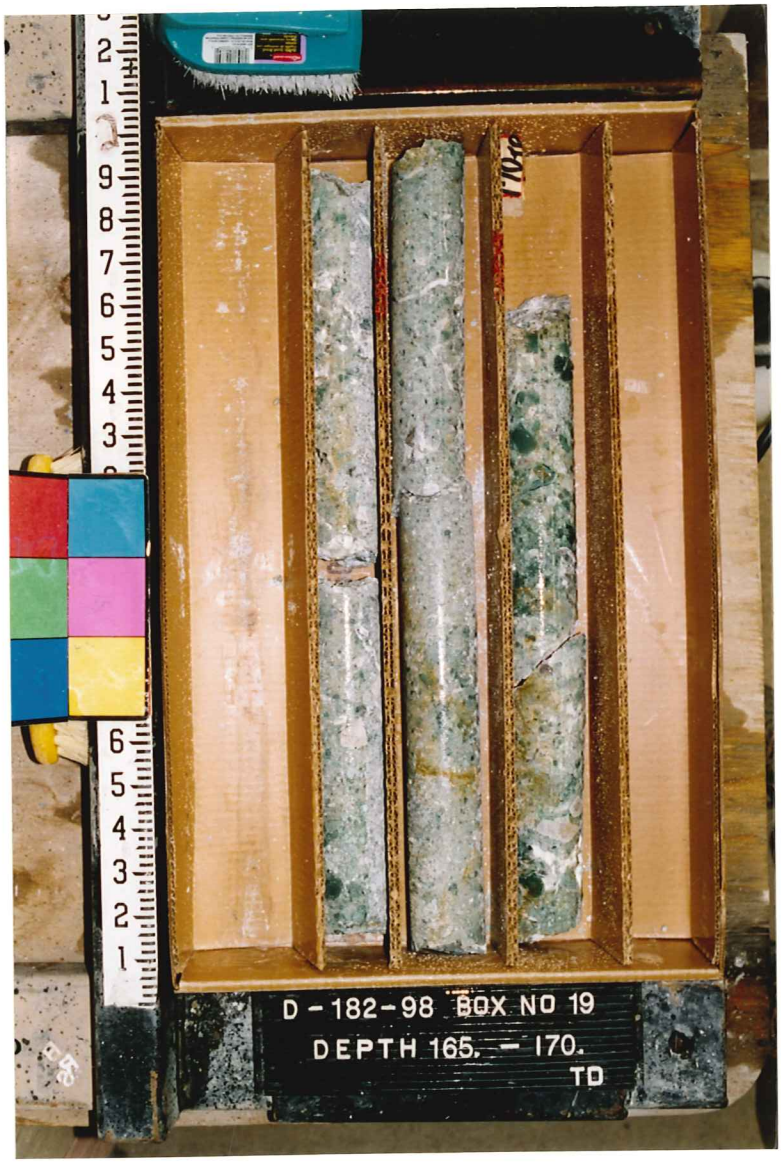

D-182-98 BOX NO 13
DEPTH 111. — 120.5

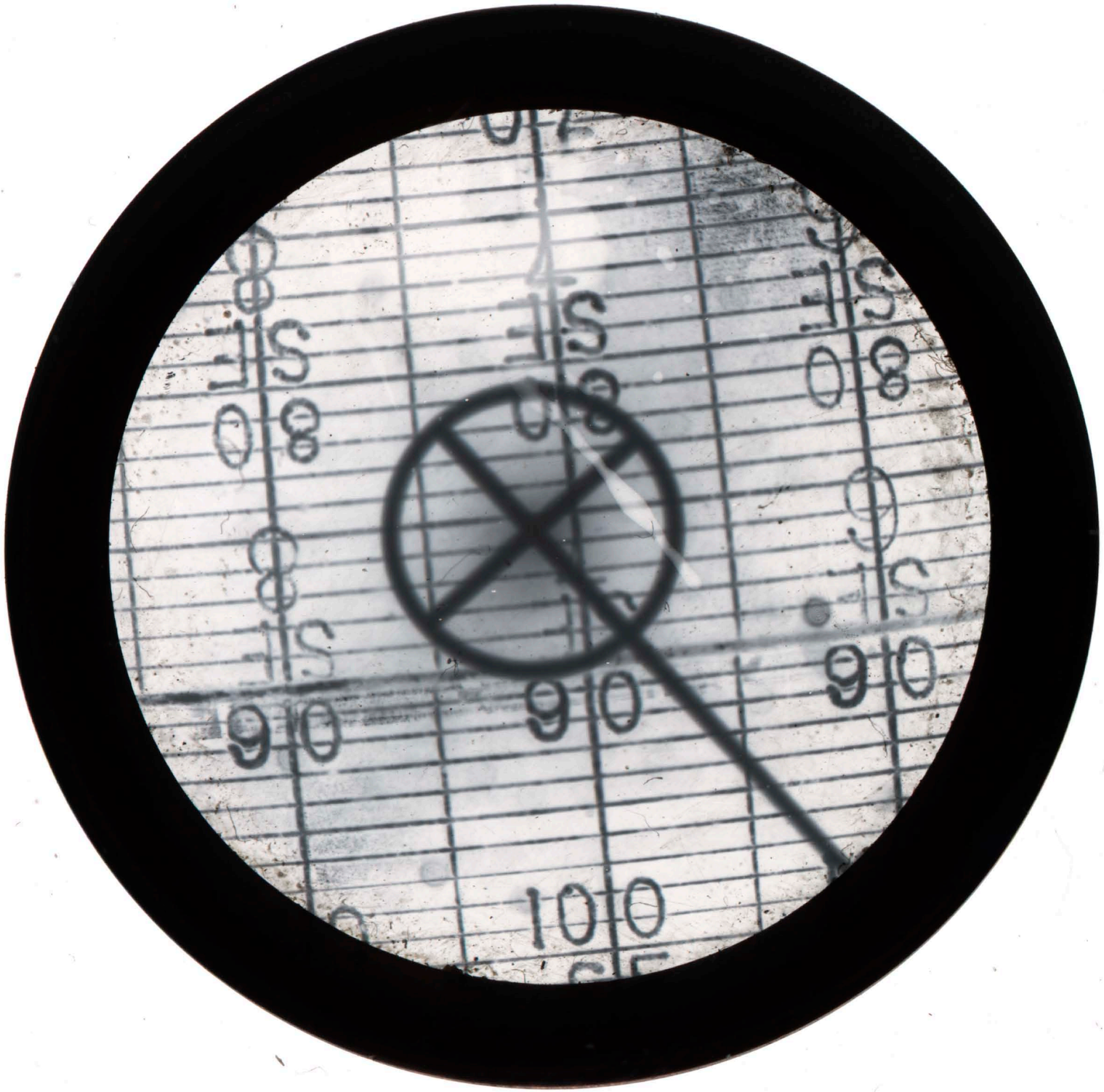

D-182-98 BOX NO 15
DEPTH 129.5 — 137.5

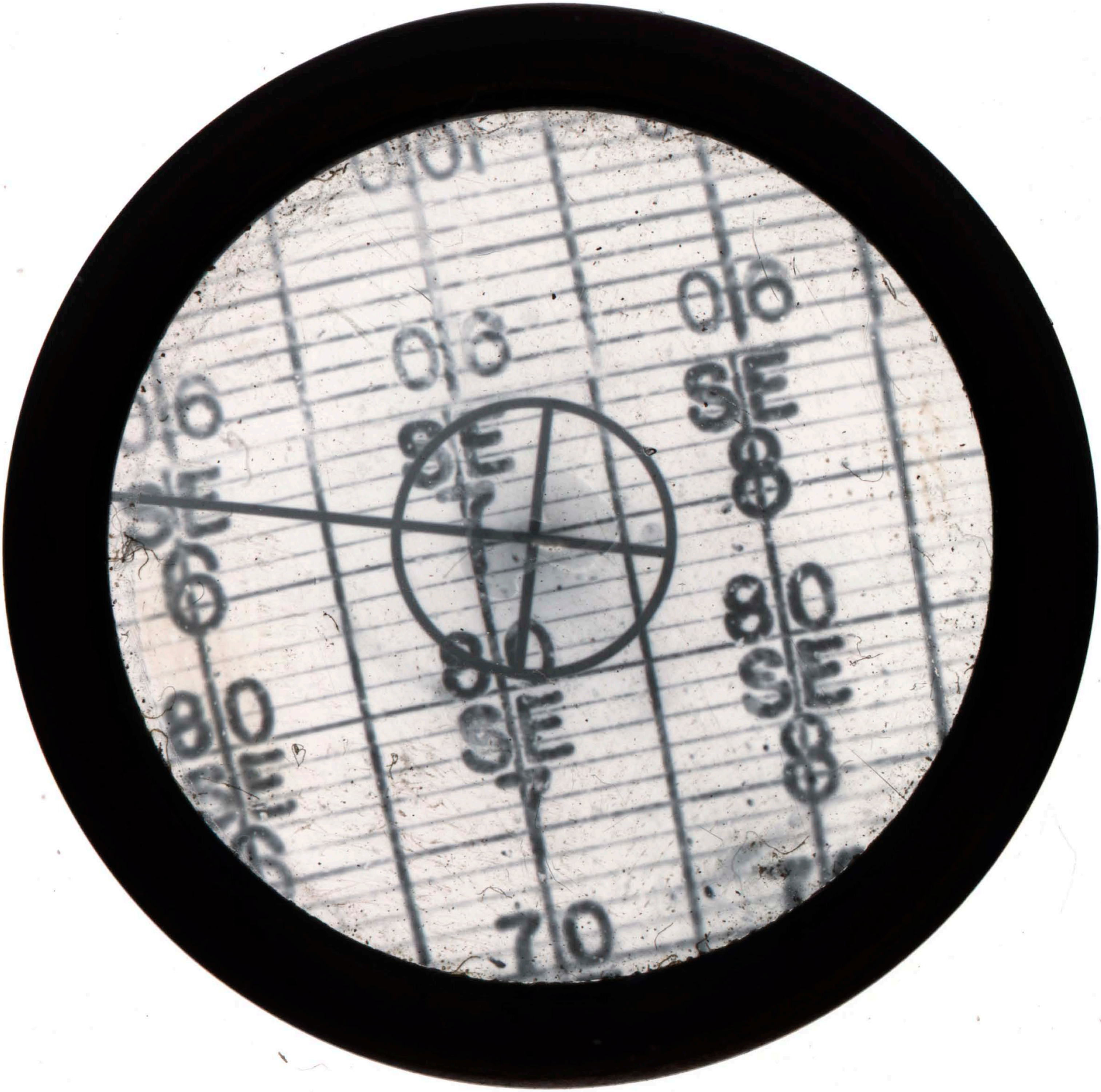
D - 182 - 98 BOX NO 17
DEPTH 147. - 156.5
147.8
150.6
155

D - 182 - 98 BOX NO 16
DEPTH 137.5 - 147.
142.4
145.5
145

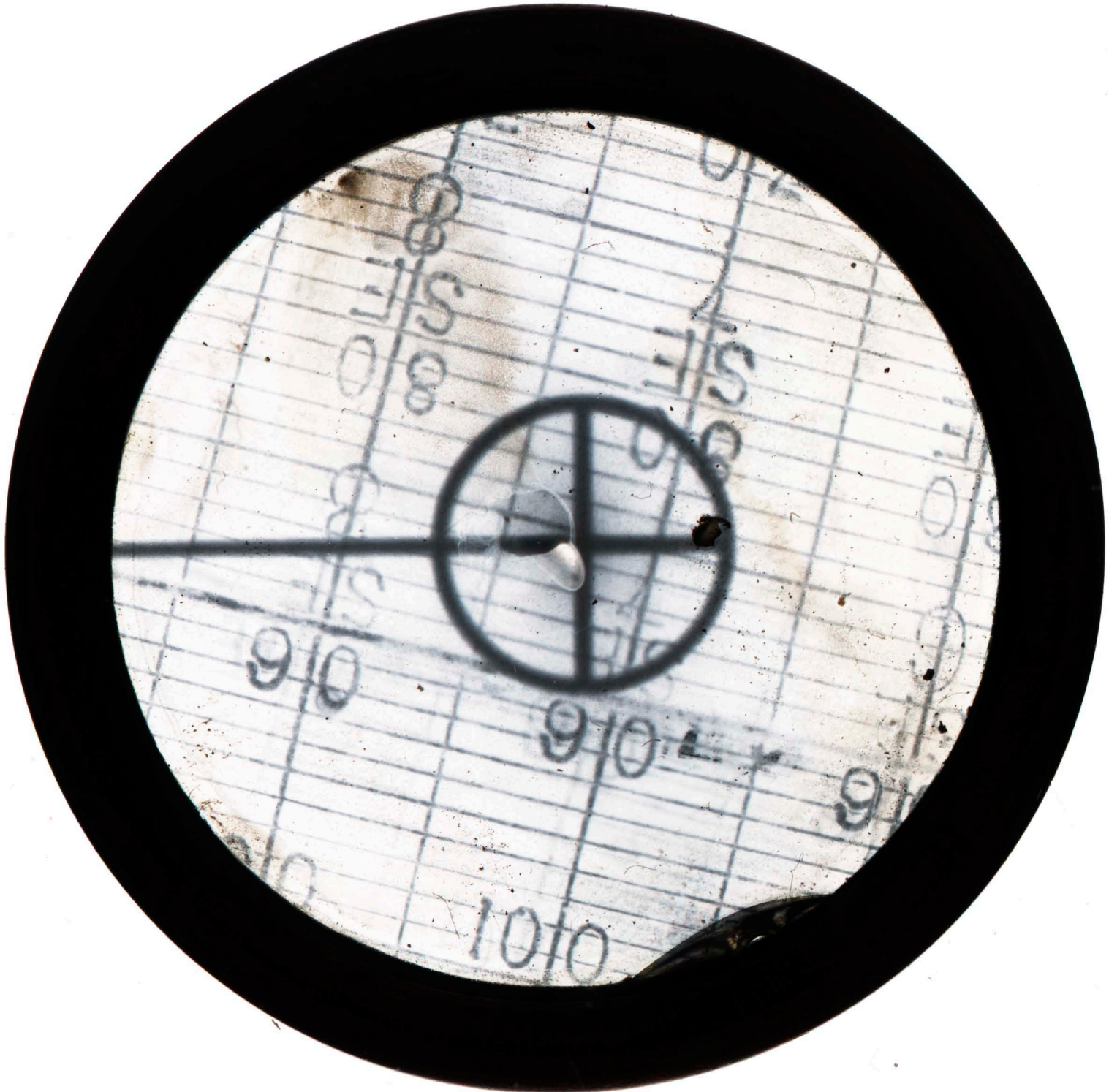

D - 182 - 98 BOX NO 18
DEPTH 156.5 - 165.
160
165


D-182-98 BOX NO 19
DEPTH 165. - 170.
TD


90
90
90
100



80
SE
70


90
90
100