6000 0699

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 SL-D403-00
AUTHOR	K. Allen; D. Mackerrow; L. Mackedon; B. Morris
DATE OF DOC(S)	2000
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 577'; handwritten notes down hole camera images 51p 4 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 4/29/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

SL-D403-00

6000 0699

4010

6000 0699

Hecla MINING COMPANY

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

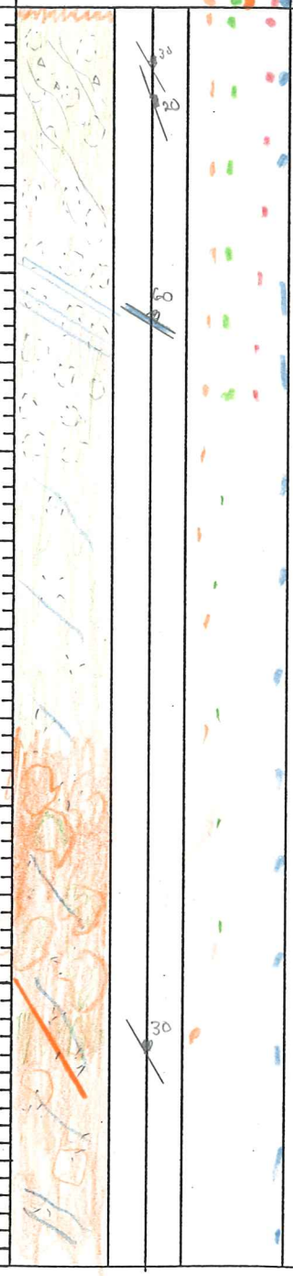
ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	SL-D403-00	LOCATION	St. Louis 4346
PAGE 1 OF 9		NORTHING	
DATE	4-27-00	EASTING	
LOGGED BY	D.G. Mackerrow	ELEVATION	
SCALE	1"=10'	AZIMUTH	S41E
TOTAL DEPTH	577	INCLINATION	-51

REMARKS

ITH	OX/RE	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ac
		0-477 DOZER Fine grain weakly flow banded or autobrecciated rhyolite. Hematite as specularite has stained core pinkish gray fracture may be stained brick red	10 20 30 40 50		2-6 Autobrecci 51-72 Fracture Zone	Calcite veins and hematite are the only alterations to 47 47 Argillization bleaches core 51 Traces of propylitic/chloritic alteration around the fracture zone							

HOLE NUMBER SC-D403-00 PAGE 2 OF 9

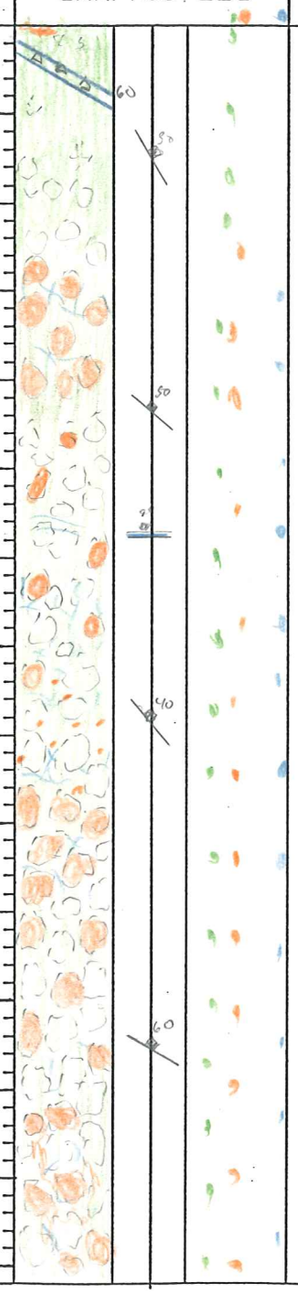
	Ox/Red.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0 ~ 477 DOZER Rhyolite flow continue 92 Hematite stains for liesegang banding and mottle core appearance	50 60 70 80 90 100 110 120		51-72 Fracture zone, fractures intensity approaches crackle bxx 68 Calcite vein with micro bxx 70° tca 73 Auto breccia with 50° tca orientation	Trace levels of pyrite to 92							

OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
	0 - 177 DOZER Hematitic rhyolite flow continue, flow is generally massive with only narrow autobreccia intervals 157 - 162.5 very weak crackle breccia formation. No rotation or expansion just micro fx intensity increase	120 130 140 150 160 170 180 190	60 65 45 40	162 - 163 Fracture zone with surrounding alteration	Sulfide content below detection 144 propylitic/chloritic green clay alteration partially over printe propylitic 152 Hanging wall argillization before fracture zone 162 - 177 liesegang banded flow							

HOLE NUMBER SL-D403-00 PAGE 4 OF 9

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0-477 DOZER Rhyolite flow continues Pyopylitic/chloritic/green clay alteration is dominant. Hematite staining mottles general green gray core 218 Increase hematite mottles core surface to 330 where hematite begins to decrease Core has a bluish gray color with dark red brown hematite mottling	190 200 210 220 230 240 250 260	40 50	203 - 207 autobreccia 20	sulfide content below detection 218 Hematite becomes dominant with decrease green clay alteration Calcite fracture filling and veins increase with the hematite							

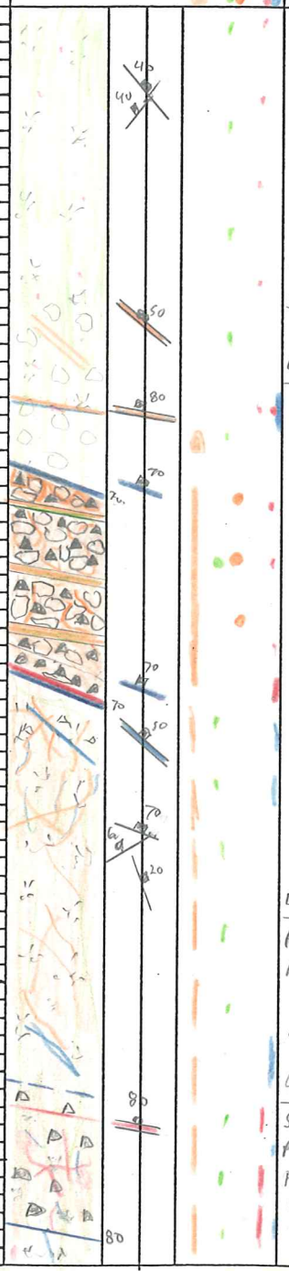
HOLE NUMBER SL-D403-00 PAGE 5 OF 9

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0-477 DOZER Rhyolite flow continues 260-273.5 Decreased hematite and increases propy/chl/gn clay alteration. Fracture zone has local accumulations of dark green staining 262.5-263.5 60° tex breccia zone moderate crackle bxx 267 Auto breccia begins with liesegang banded clast from 273	260 270 280 290 300 310 320 330			Calcite continues on micro fr surfaces 296-302 Hematite fills vesicles give core spots							

HOLE NUMBER SL-D403-00 PAGE 6 OF 9

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0-477 DOZER Rhyolite flow continues as above, Hematite begins decreasing from 332 and has reached trace amounts by 368	330 340 350 360 370		346-374.5 Crush bxx texture								
		377 begining of logging Fine grained to aphanitic rhyolite flow. Weak flow banding or auto breccia texture. Hematite weakly stained flow lamination	380 390 400		380-383 auto bxx 399-402 Crackle breccia with traces of calcite	377 Very faint argillization and propyllitic, pyrite content of <1%							

HOLE NUMBER SL-D403-00 PAGE 7 OF 9

	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0 - 477 DOZER Fine grained rhyolite flow continues. Auto breccia texture or flow banded interior textures 426.7 - 427.4 silica and clay matrix upper surface breccia 428.2 - 429.9 Brecciated Dozer 6' green clay intervals with white clay stringers. This intervals are between hematite stained breccia. Second green clay seam from 429.6 - 429.9 Clays have a silky feel. 429.9 - 432.5 Brownish matrix dozer breccia 3 narrow clay seams with the thicker .4' wide. 432.5 - 434.9 MOSAIC Breccia with redish brown matrix. Minor pyrite in matrix 434.9 - 435.7 Yellow green clay seam. Bladded marcasite in clay forms small clusters 435.7 - 437 Hydrothermally altered clay matrix Rubble breccia 437 - 438.5 Milled breccia clay matrix highly expanded on footwall 438.5 - 438.6 ALS Phillitic shale 438.7 - 477 Argillized Dozer continues Pale greenish white to white in color 460.8 - 469.2 Lower intensity fault compared to upper zone	400 410 420 430 440 450 460 470		415.5 - 426.5 Autobreccia texture 422.8 80° tcu 426.7 - 438.7 UPPER SOUTH RIDGE fault zone 438.6 - 438.7 Dark sulfide footwall Vein 70° tcu oblique slips with the ALS 80° tcu 438.7 - 447 Footwall crackle Bxx to grading to footwall white clay and calcite stockwork 460.8 - 469.2 Fractured/Shear zone with poorly developed Bxx Fractures at 50° tcu and pyrite veins at 80° tcu	419 50° tcu hydrothermally altered clay veinlet 422.8 ½" white clay and calcite vein 80° tcu 422 General argillization increases 426.7 - 428.2 Highly argillized rhyolite Breccia matrix is hematitic hydrothermally altered clay with silica low sulfide content. 428.2 - 429.9 Low sulfide clay have the yellow green color. 438.5 - 438.7 429.9 - 432.5 Argillized breccia clast and clay seams 432.5 - 437 Argillized clast and clay seams matrix increased with depth 437 - 438.5 Highly milled breccia with clay matrix 460.8 - 469.2 Pyrite as veins and Agglomeration 465 vesicular texture with chlorite filling to 466	422 426.7 428.2 429.9 432.5 434.9 435.7 437 438.7 442 447 452 457 460.8 465 469.2 472	426.7 428.2 429.9 432.5 434.9 435.7 437 438.5 442 447 452 457 460.8 465 469.2 472					

HOLE NUMBER SL-D403-00 PAGE 8 OF 9

	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
Td		0 - 477 DOZER Fine grained pale green white rhyolite. moderate argillization	470				469.2	472					
ALS		477 - 500.8 A.L.S. Phillitic shale and siltstone Black with syngenetic pyrite calcite veinlet approaching stockwork intensity. Fine grained intrusive Form narrow boudens	480 490		477 contact is very sharp with some movement some fault disruption to 483 484 Bedding below regular at 60°		472	477					
							477	482					
							482	487					
							NO	SAMPLE					
			500		500.8-502.7 Fault block of Dozer	500.8-502.7 Pyrite agglomeration up to 3" in diameter	497	500.8					
Td		500.8 502.7 DOZER					500.8	502.7					
		502.7 - 577 A.L.S. Phillitic shale and siltstone continues as above with minimal bedding disruption	510 520 530 540			502.7-577 syngenetic pyrite 532 6" calcite vein	502.7	507					

HOLE NUMBER SL-D403-00 PAGE 9 OF 9

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
A.LS.		502.7-577 A.L.S. Phillitic shale and siltstone continues as before	540 550 560 570 580 590 600 610	40 40	Minimal bedding disruption								

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 4-29-00 LOGGED BY: D.G. MacKerron PAGE 1 OF 11

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	7	31	58	38										
7	12	100	102	100										
12	17	100	100	90										
17	22	98	102	84										
22	27	100	100	90										
27	32	100	104	100										
32	37	100	100	72										
37	42	100	96	88										
42	47	100	100	98										
47	52	86	98	84										
52	57	64	106	40										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-0403-00 DATE: 4-30-00 LOGGED BY: D.G. Mackerrow PAGE 2 OF 11

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)
57	62	74	100	56										
62	67	62	100	39										
67	72	100	100	68										
72	77	100	104	92										
77	82	96	98	76										
82	87	100	100	82										
87	92	100	94	100										
92	97	100	100	96										
97	102	100	108	100										
102	107	100	106	96										
107	112	100	98											

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 4-30-00 LOGGED BY: D.G. MacKenzie PAGE 3 OF 11

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)
112	117	100	102	92										
117	122	94	100	74										
122	127	100	100	100										
127	132	100	96	94										
132	137	100	104	100										
137	142	100	104	98										
142	147	100	104	100										
147	152	100	98	74										
152	157	100	100	100										
157	162	100	100	72										
167	167	82	96	68										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 5-14-00 LOGGED BY: D.G. Macharoni PAGE 4 OF 11

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)
167	172	100	104	100										
172	177	100	100	100										
177	182	100	100	100										
182	187	100	100	92										
187	192	100	100	90										
192	197	100	100	100										
197	202	100	100	100										
202	207	100	100	100										
207	212	100	100	100										
212	217	100	100	100										
217	222	100	100	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 8-14-00 LOGGED BY: D.G. Muchorow PAGE 5 OF 11

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)
222	227	100	100	100										
227	232	100	100	92										
232	237	100	102	78										
237	242	100	100	88										
242	247	100	100	100										
247	252	100	100	100										
252	257	100	98	100										
257	262	100	100	74										
262	267	72	94	50										
267	272	98	104	94										
272	277	100	102	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # S1-D403-00 DATE: 5-14-00 LOGGED BY: D.G. Mickelson PAGE 6 OF 11

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)
277	282	100	94	70										
282	287	100	100	100										
287	292	80	106	96										
292	297	100	102	100										
297	302	100	100	100										
302	307	100	102	90										
307	312	100	98	82										
312	317	100	100	90										
317	322	100	100	100										
322	327	100	100	86										
327	332	100	102	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 5-14-00 LOGGED BY: D.G. Muckerron PAGE 7 OF 11

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)
332	337	100	100	86										
337	342	100	100	100										
342	347	100	100	100										
347	352	100	100	100										
352	357	100	100	92										
357	362	100	88	86										
362	367	100	96	100										
367	372	100	104	100										
372	377	100	106	100										
377	382	100	100	90										
382	387	100	100	80										
387	392	100	100	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-0403-00 DATE: 4-25-00 LOGGED BY: D.G. Mackenzie PAGE 8 OF 11

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)
392	397	100	102	100										
397	402	100	100	106										
402	407	100	100	100										
407	412	100	100	100										
412	417	100	100	100										
417	422	100	100	100										
422	427	100	100	72										
427	432	34	102	16										
432	437	70	100	26										
437	442	96	100	60										
442	447	74	100	0										
447	452	94	98	20										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 4-27-00 LOGGED BY: D.G. MacKeirow PAGE 9 OF 11

DRILL RUN		SOLID CORE	TOTAL CORE	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO	RECOVERY (%)	RECOVERY (%)		DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
452	457	96	100	98										
457	462	76	92	64										
462	467	100	102	34										
467	472	98	104	60										
472	477	99	98	70										
477	482	76	100	42										
482	487	54	100	0										
487	492	82	104	0										
492	497	94	100	0										
497	502	30	102	10										
502	507	78	98	10										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 4-27-00 LOGGED BY: D.G. MacKerlow PAGE 10 OF 16

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)
507	512	100	104	40										
512	517	100	98	60										
517	522	100	100	64										
522	527	100	100	82										
527	532	100	100	64										
532	537	100	106	14										
537	542	100	96	26										
542	547	58	100	0										
547	552	92	98	56										
552	557	100	100	22										
557	562	100	96	40										

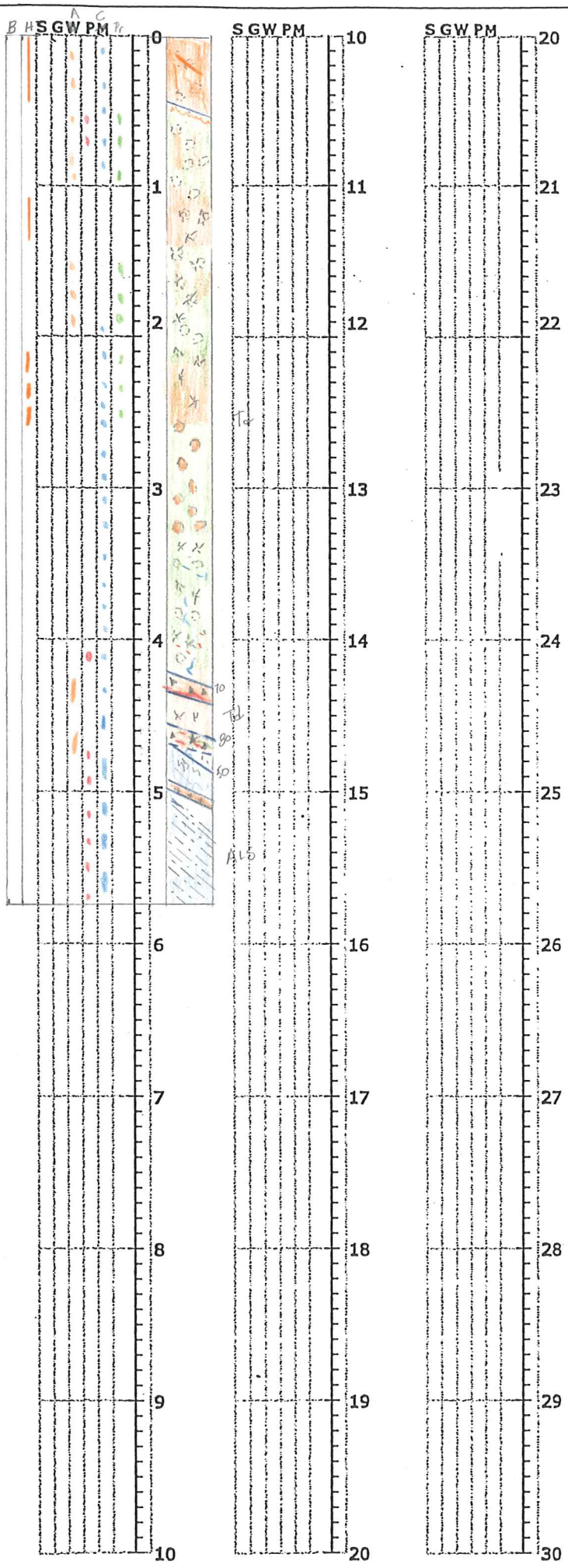
HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # SL-D403-00 DATE: 4-28-00 LOGGED BY: DG. Mackerow PAGE 11 OF 11

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)
562	567	100	98	54										
567	572	100	98	36										
572	577	100	106	44										

ROSEBUD MINING COMPANY, LLC.

START HOLE		FINISH HOLE	HOLE # SL-D403-00
HOLE TYPE Core		LOGGED BY Don Mackerrow	T.D 577
BEARING 141		ANGLE -50	SURVEYED TO 577
PAGE 1 OF 1			
COLLAR COORDINATES			
NORTH			
EAST			
ELEV			
DRILLER			
DRILLING CO. Action Drilling			



ALTERATION INTENSITY

1 WEAK	2 MODERATE	3 STRONG

VERITHIN COLOR

737	SILICIFICATION
751	GREEN CLAY
747½	WHITE CLAY
755	PYRITE
757	MARCASITE

GRAPHIC LOG

VERITHIN COLOR	
	BRECCIA
741	FAULT 741
	CONTACT
737	QUARTZ VEIN
741½	CALCITE VEIN
747½	CLAY VEIN
755	PYRITE VEIN

Barite
Hematite
Silicification
Green
Argillization
Px/Marc
Calcite/Calcareous
Propylatized

Td
Bmp
ALS

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

Elko Office
2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV. 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Company: Rosebud Mining L.L.C.

Address: P.O. Box 2610 Winnemucca NV 89446

Telephone Number: (775) 623-6912 Fax Number: (775) 623-6967

Project Name: _____ Purchase Order Number: _____

Transport Company: _____ Waybill Number: _____

Date Shipped: _____ Number of Packages: _____ [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED

SAMPLE	TYPE	ELEMENTS REQUIRED
SL-D403-00	Core	Au Ag: Use Rosebud Mine development Protocol
See attached sheet for sample intervals		
1 Rosebud Production Standard at end of run	Pulp	

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[X] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[X] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Kurt Allen
(see Above)

(2) _____

(3) _____

Comments:

CLIENT FILE COPY

SL-D403-00

Depth From	To	Interval	Au	Ag	Sample Number
422	426.7	4.7	x	x	1
426.7	428.2	1.5	x	x	2
428.2	429.9	1.7	x	x	3
429.9	432.5	2.6	x	x	4
432.5	434.9	2.4	x	x	5
434.9	435.7	0.8	x	x	6
435.7	437	1.3	x	x	7
437	438.5	1.5	x	x	8
438.5	438.7	0.2	x	x	9
438.7	442	3.3	x	x	10
442	447	5	x	x	11
447	452	5	x	x	12
452	457	5	x	x	13
457	460.8	3.8	x	x	14
460.8	465	4.2	x	x	15
465	469.2	4.2	x	x	16
469.2	472	2.8	x	x	17
472	477	5	x	x	18
477	482	5	x	x	19
482	487	5	x	x	20
Intentional gap					
497	500.8	3.8	x	x	21
500.8	502.7	1.9	x	x	22
502.7	507	4.3	x	x	23

Drill hole # SL-D403-00

Down hole depth	Quadrant:	Measured Bearing	Corrected Azimuth	Measured Inclination	Corrected Dip
52	SE	54	141.62	40	-50
252	SE	54.5	141.12	39.25	-50.75
452	SE	54.5	141.12	38.5	-51.5
577	SE	54	141.62	38.75	-51.25

TD Depth 577

2000 Declination 15.62

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

(775) 356-0606

INVOICE NO: SP 0057431-IN
INVOICE DATE: 05/29/00

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
SL-D403-00	KURT ALLEN	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
24	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
23	DRY/JAW CRUSH ENTIRE SAMPLE	2.60	59.80
23	COARSE MILLING CHARGE	6.00	138.00
23	"JONES" RIFFLE SPLIT	2.40	55.20
23	FINE MILLING CHARGE	2.00	46.00
24	Au (1 A.T. FIRE ASSAY)	8.00	192.00
3	Au ANALYSES/GRAVIMETRIC	8.75	26.25
24	HYDROCHLORIC/NITRIC DIGESTION	2.00	48.00
24	Ag ANALYSES	1.00	24.00

86-3010-477
KDA

NET INVOICE:	589.25
LESS DISCOUNT:	176.78
FREIGHT:	.00
INVOICE TOTAL:	412.47

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057431

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: SL-D403-00 RECEIVED : 15 MAY 2000

No. SAMPLES : 24 REPORTED : 26 MAY 2000

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057431

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : SL-D403-00

REPORTED : 26 MAY 2000

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
SL-D403-00 422.0-426.7	0.002			0.02
SL-D403-00 426.7-428.2	0.139		0.120	0.11
SL-D403-00 428.2-429.9	0.103		0.110	0.14
SL-D403-00 429.9-432.5	0.056		0.061	0.30
SL-D403-00 432.5-434.9	0.025			0.03
SL-D403-00 434.9-435.7	0.016			0.07
SL-D403-00 435.7-437.0	0.014			0.02
SL-D403-00 437.0-438.5	<0.001			<0.02
SL-D403-00 438.5-438.7	0.003			0.11
SL-D403-00 438.7-442.0	0.001			<0.02
SL-D403-00 442-447	0.001			<0.02
SL-D403-00 447-452	0.001			0.05
SL-D403-00 452-457	<0.001			<0.02
SL-D403-00 457.0-460.8	0.002			0.04
SL-D403-00 460.8-465.0	0.002			0.02
SL-D403-00 465.0-469.2	0.001			0.02
SL-D403-00 469.2-472.0	<0.001			<0.02
SL-D403-00 472-477	<0.001			<0.02
SL-D403-00 477-482	<0.001			0.09
SL-D403-00 482-487	<0.001			0.05
SL-D403-00 497.0-500.8	<0.001			0.05
SL-D403-00 500.8-502.7	0.001			0.05
SL-D403-00 502.7-507.0	0.001			0.06
34764	0.058			0.96

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057431

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: SL-D403-00 RECEIVED : 15 MAY 2000

No. SAMPLES : 24 REPORTED : 26 MAY 2000

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057431

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : SL-D403-00

REPORTED : 26 MAY 2000

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
SL-D403-00 422.0-426.7	0.002			0.02
SL-D403-00 426.7-428.2	0.139		0.120	0.11
SL-D403-00 428.2-429.9	0.103		0.110	0.14
SL-D403-00 429.9-432.5	0.056		0.061	0.30
SL-D403-00 432.5-434.9	0.025			0.03
SL-D403-00 434.9-435.7	0.016			0.07
SL-D403-00 435.7-437.0	0.014			0.02
SL-D403-00 437.0-438.5	<0.001			<0.02
SL-D403-00 438.5-438.7	0.003			0.11
SL-D403-00 438.7-442.0	0.001			<0.02
SL-D403-00 442-447	0.001			<0.02
SL-D403-00 447-452	0.001			0.05
SL-D403-00 452-457	<0.001			<0.02
SL-D403-00 457.0-460.8	0.002			0.04
SL-D403-00 460.8-465.0	0.002			0.02
SL-D403-00 465.0-469.2	0.001			0.02
SL-D403-00 469.2-472.0	<0.001			<0.02
SL-D403-00 472-477	<0.001			<0.02
SL-D403-00 477-482	<0.001			0.09
SL-D403-00 482-487	<0.001			0.05
SL-D403-00 497.0-500.8	<0.001			0.05
SL-D403-00 500.8-502.7	0.001			0.05
SL-D403-00 502.7-507.0	0.001			0.06
34764	0.058			0.96

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057431

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: SL-D403-00 RECEIVED : 15 MAY 2000

No. SAMPLES : 24 REPORTED : 26 MAY 2000

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 : Leonard E. Mackedon B.S.

05/26/2000 16:03 7753561413 AMERICAN ASSAY LABS PAGE 01
7753561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057431

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : SL-D403-00

REPORTED : 26 MAY 2000

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
SL-D403-00 422.0-426.7	0.002			0.02
SL-D403-00 426.7-428.2	0.139		0.120	0.11
SL-D403-00 428.2-429.9	0.103		0.110	0.14
SL-D403-00 429.9-432.5	0.056		0.061	0.30
SL-D403-00 432.5-434.9	0.025			0.03
SL-D403-00 434.9-435.7	0.016			0.07
SL-D403-00 435.7-437.0	0.014			0.02
SL-D403-00 437.0-438.5	<0.001			<0.02
SL-D403-00 438.5-438.7	0.003			0.11
SL-D403-00 438.7-442.0	0.001			<0.02
SL-D403-00 442-447	0.001			<0.02
SL-D403-00 447-452	0.001			0.05
SL-D403-00 452-457	<0.001			<0.02
SL-D403-00 457.0-460.8	0.002			0.04
SL-D403-00 460.8-465.0	0.002			0.02
SL-D403-00 465.0-469.2	0.001			0.02
SL-D403-00 469.2-472.0	<0.001			<0.02
SL-D403-00 472-477	<0.001			<0.02
SL-D403-00 477-482	<0.001			0.09
SL-D403-00 482-487	<0.001			0.05
SL-D403-00 497.0-500.8	<0.001			0.05
SL-D403-00 500.8-502.7	0.001			0.05
SL-D403-00 502.7-507.0	0.001			0.06
34764	0.058			0.96

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057431

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

: KURT ALLEN

:

:

CLIENT REFERENCE No: SL-D403-00 RECEIVED : 15 MAY 2000

No. SAMPLES : 24 REPORTED : 24 MAY 2000

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057431

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : SL-D403-00

REPORTED : 24 MAY 2000

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
SL-D403-00 422.0-426.7	0.002			
SL-D403-00 426.7-428.2	0.139		0.120	
SL-D403-00 428.2-429.9	0.103		0.110	
SL-D403-00 429.9-432.5	0.056		0.061	
SL-D403-00 432.5-434.9	0.025			
SL-D403-00 434.9-435.7	0.016			
SL-D403-00 435.7-437.0	0.014			
SL-D403-00 437.0-438.5	<0.001			
SL-D403-00 438.5-438.7	0.003			
SL-D403-00 438.7-442.0	0.001			
SL-D403-00 442-447	0.001			
SL-D403-00 447-452	0.001			
SL-D403-00 452-457	<0.001			
SL-D403-00 457.0-460.8	0.002			
SL-D403-00 460.8-465.0	0.002			
SL-D403-00 465.0-469.2	0.001			
SL-D403-00 469.2-472.0	<0.001			
SL-D403-00 472-477	<0.001			
SL-D403-00 477-482	<0.001			
SL-D403-00 482-487	<0.001			
SL-D403-00 497.0-500.8	<0.001			
SL-D403-00 500.8-502.7	0.001			
SL-D403-00 502.7-507.0	0.001			
34764	0.058			

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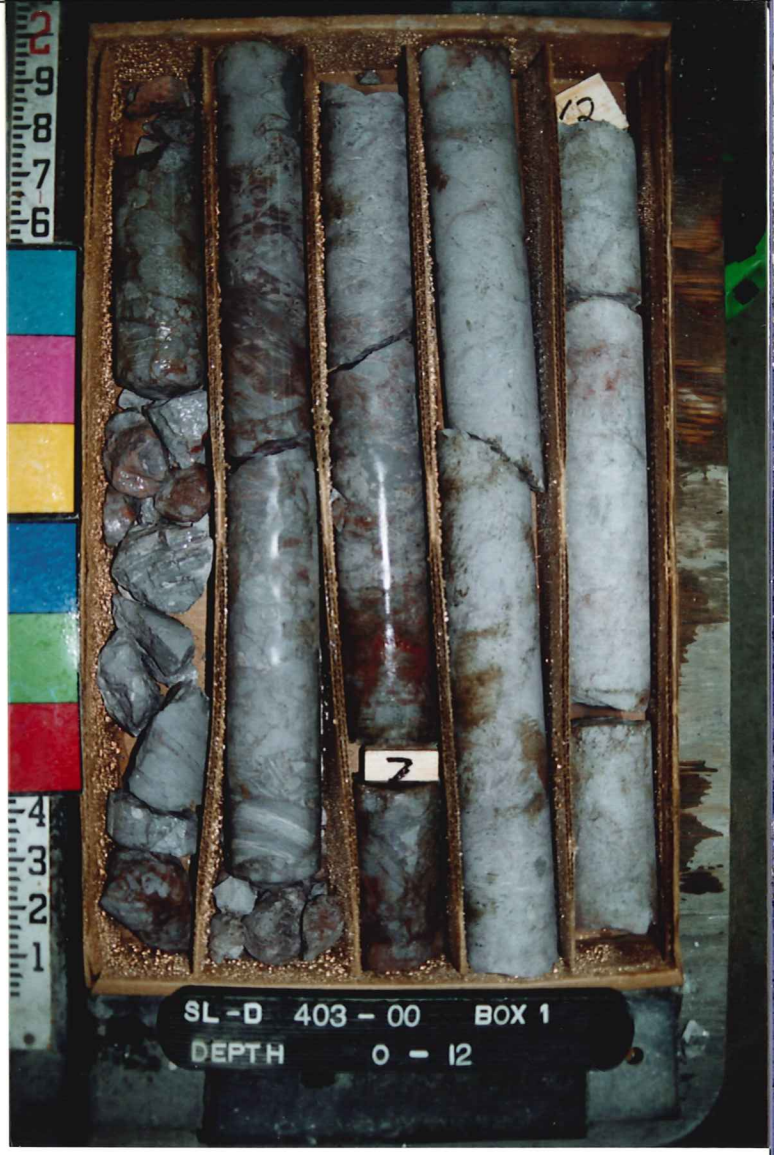
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DEPTH 0 - 12

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DEPTH 153.5 - 162.5

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DEPTH 172 - 181.5

SL-D 403 - 00 BOX 18
DEPTH 162.5 - 172

SL-D 403 - 00 BOX 20
DEPTH 181.5 - 191

207
202
SL-D 403 - 00 BOX 22
DEPTH 200 - 209.5

192
197
SL-D 403 - 00 BOX 21
DEPTH 191 - 200

SL-D 403 - 00 BOX 23
DEPTH 209.5 - 218
212
217

237
232
SL-D 403 - 00 BOX 25
DEPTH 227.5 - 237

227
SL-D 403 - 00 BOX 24
DEPTH 218 - 227.5

237
242
SL-D 403 - 00 BOX 26
DEPTH 237 - 246.5

SL-D 403 - 00 BOX 28
DEPTH 256 - 265

SL-D 403 - 00 BOX 27
DEPTH 246.5 - 256

SL-D 403 - 00 BOX 29
DEPTH 265 - 273.5

SL-D 403 - 00 BOX 31
DEPTH 283 - 292

SL-D 403 - 00 BOX 30
DEPTH 273.5 - 283

SL-D 403 - 00 BOX 32
DEPTH 292 - 301.5

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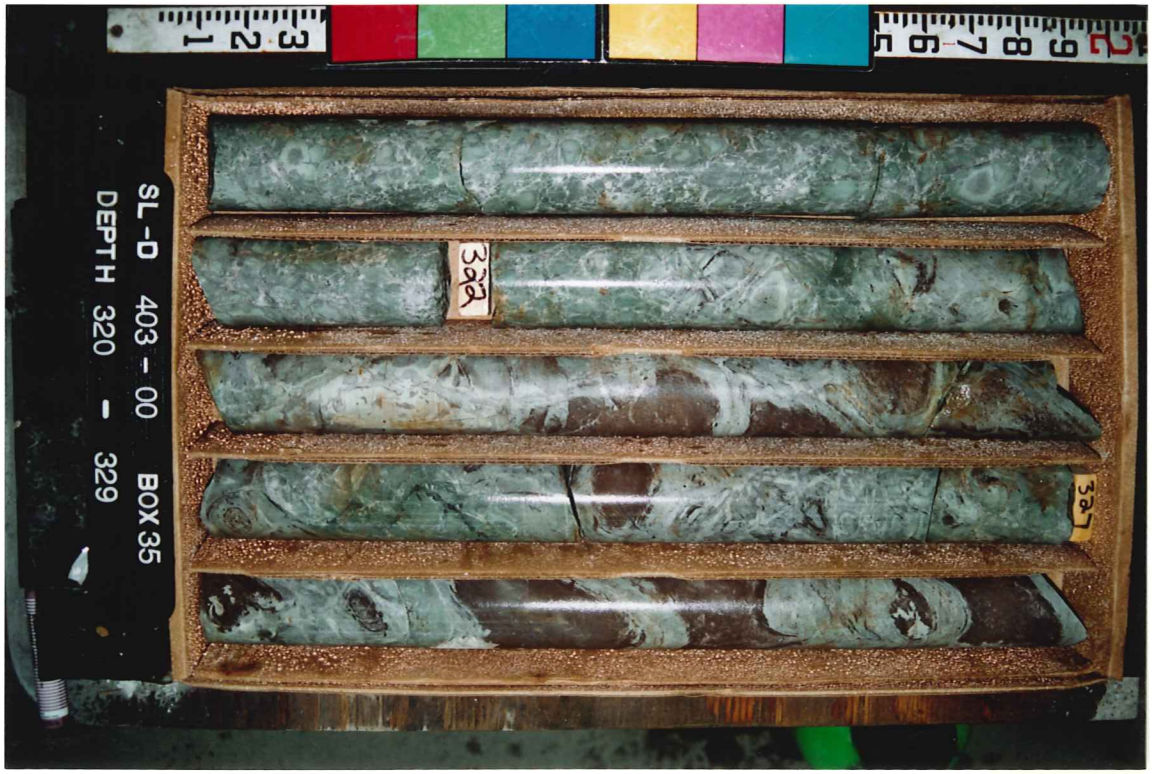
SL-D 403-00 BOX 34
DEPTH 310.5 - 320

302
307
SL-D 403-00 BOX 33
DEPTH 301.5 - 310.5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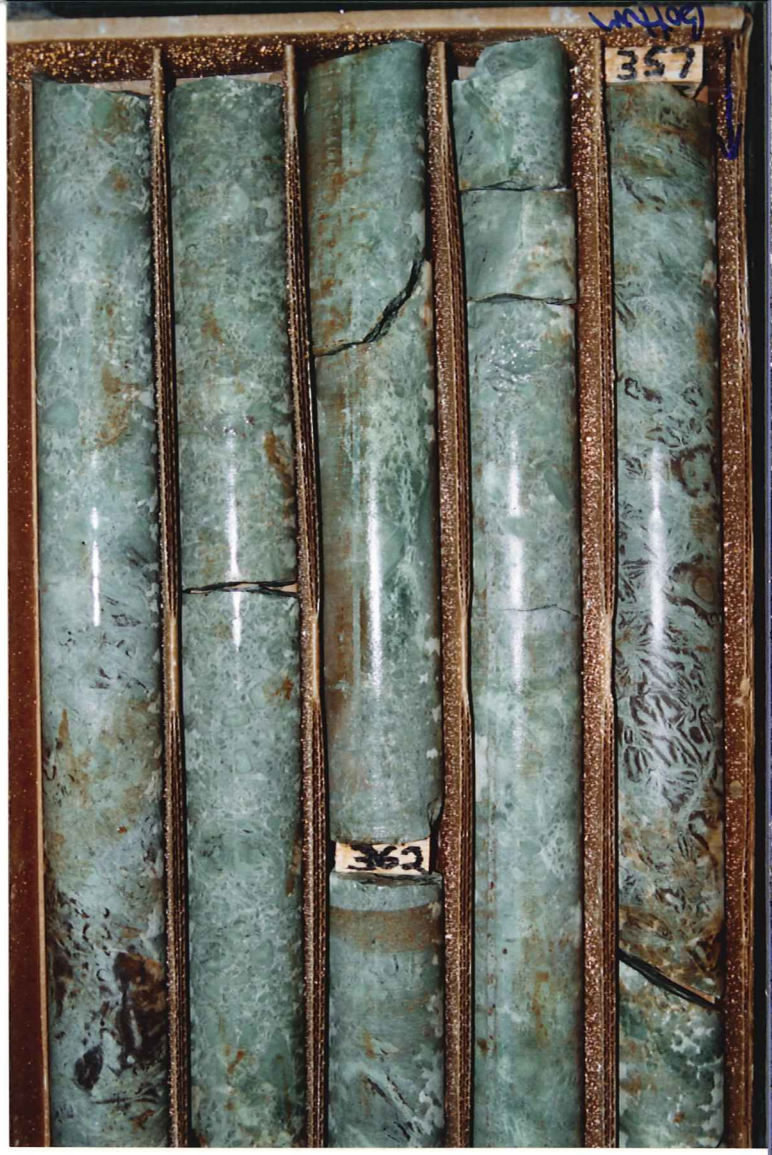
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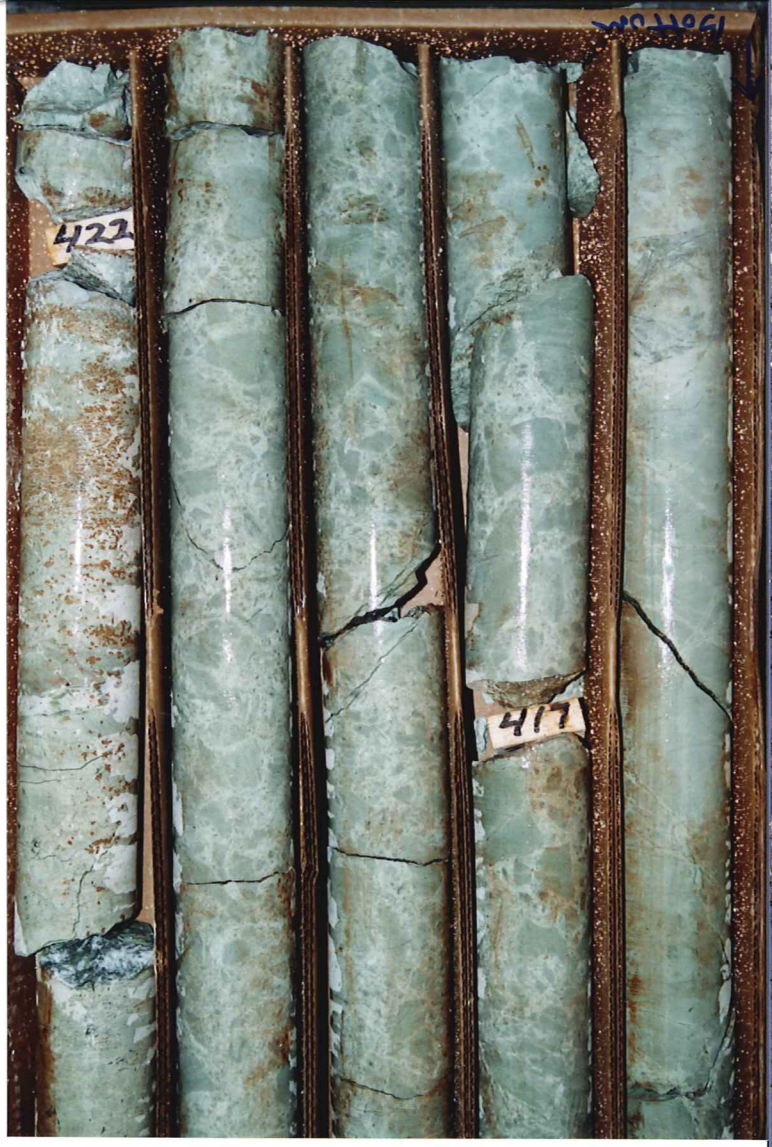
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447

SL-D 403 - 00 BOX 50
DEPTH 461 - 470
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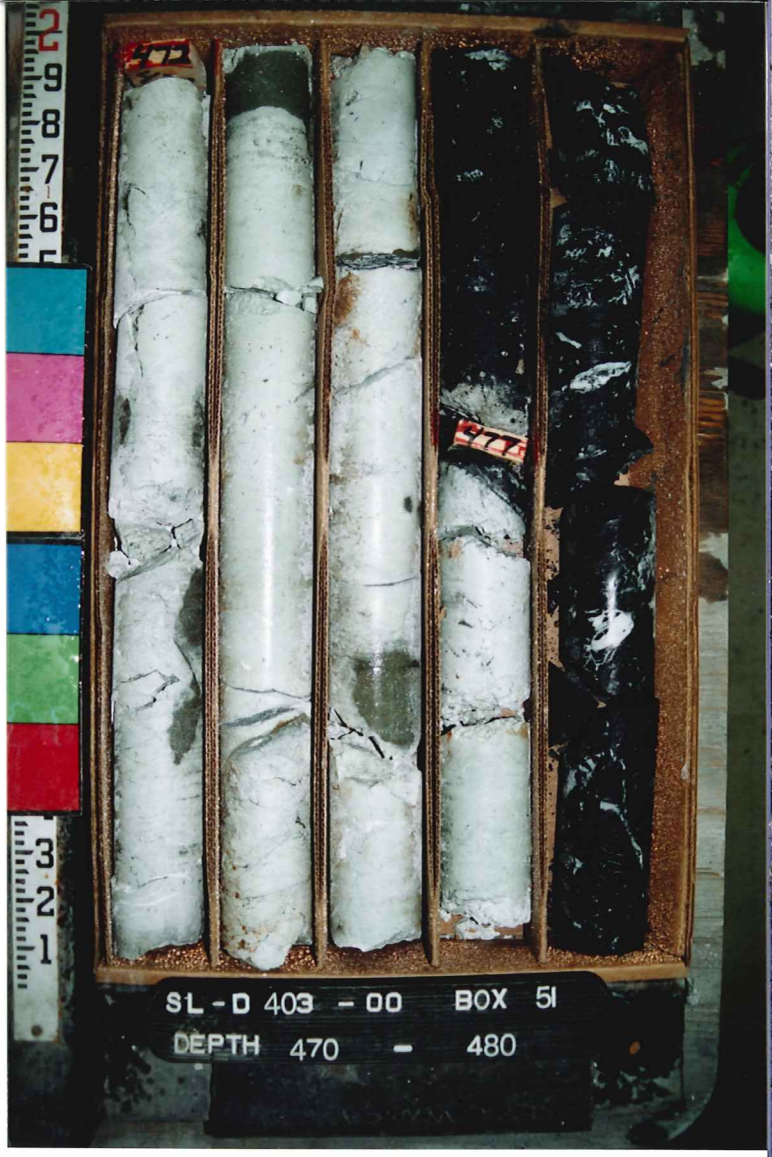
465
467
469

SL-D 403 - 00 BOX 52
DEPTH 480 - 489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SL-D 403 - 00 BOX 53
DEPTH 489 - 498

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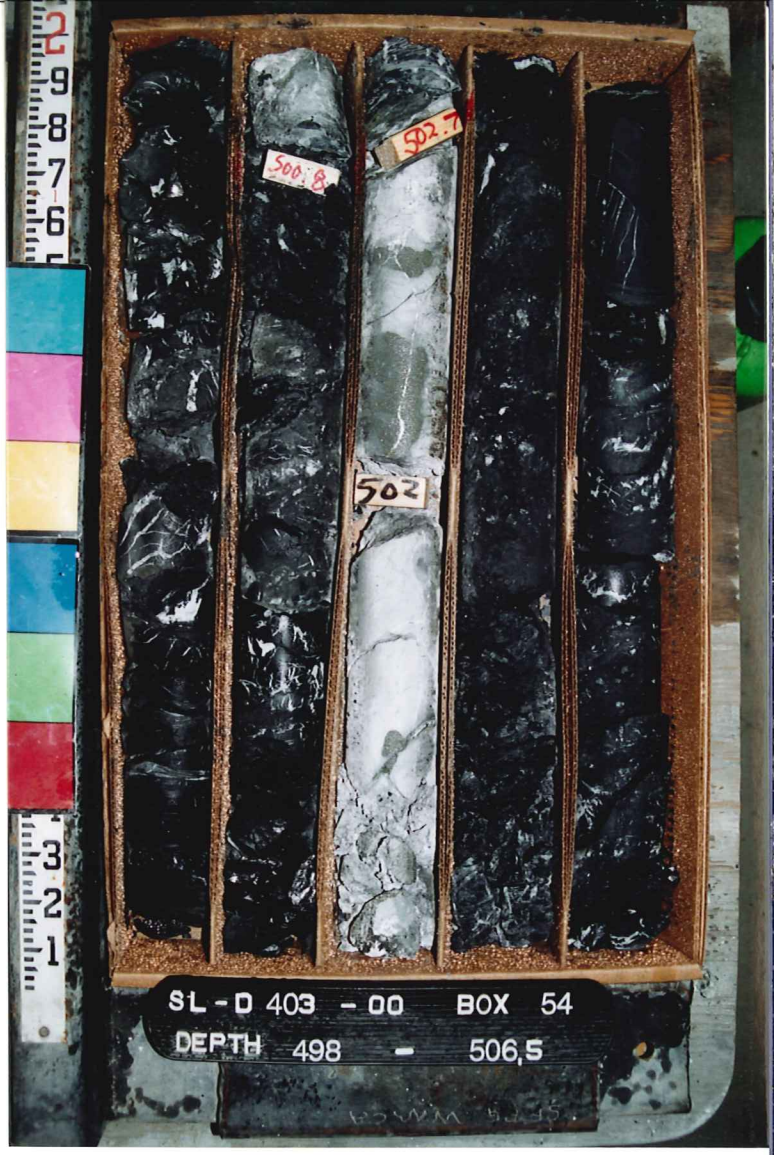
DEPTH 506,5 - 515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SL-D403-00 BOX 59
DEPTH 540.5 -549.5

562
SL-D403-00 BOX 61
DEPTH 558 - 567

552
557
SL-D403-00 BOX 60
DEPTH 549.5 - 558

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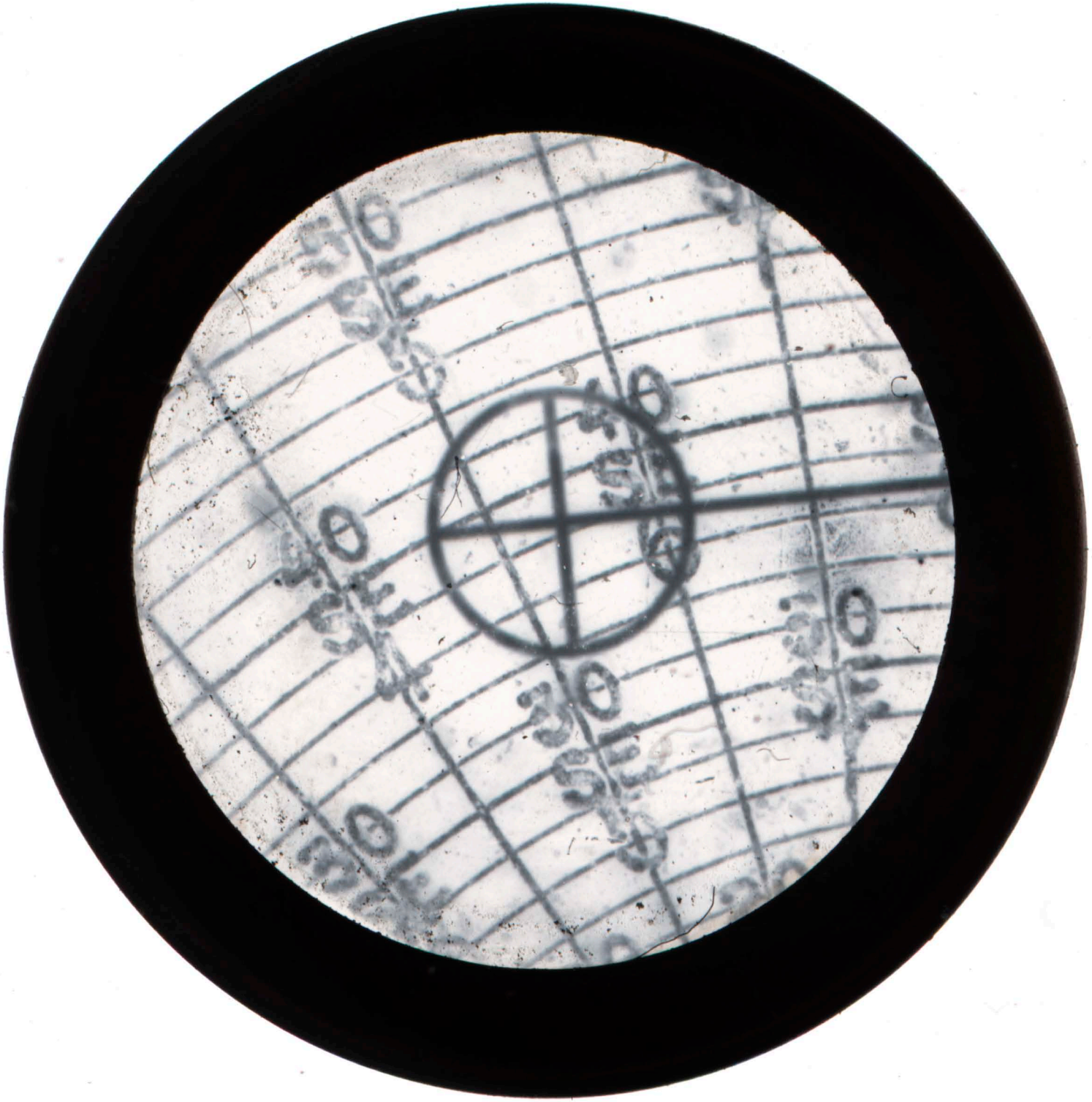
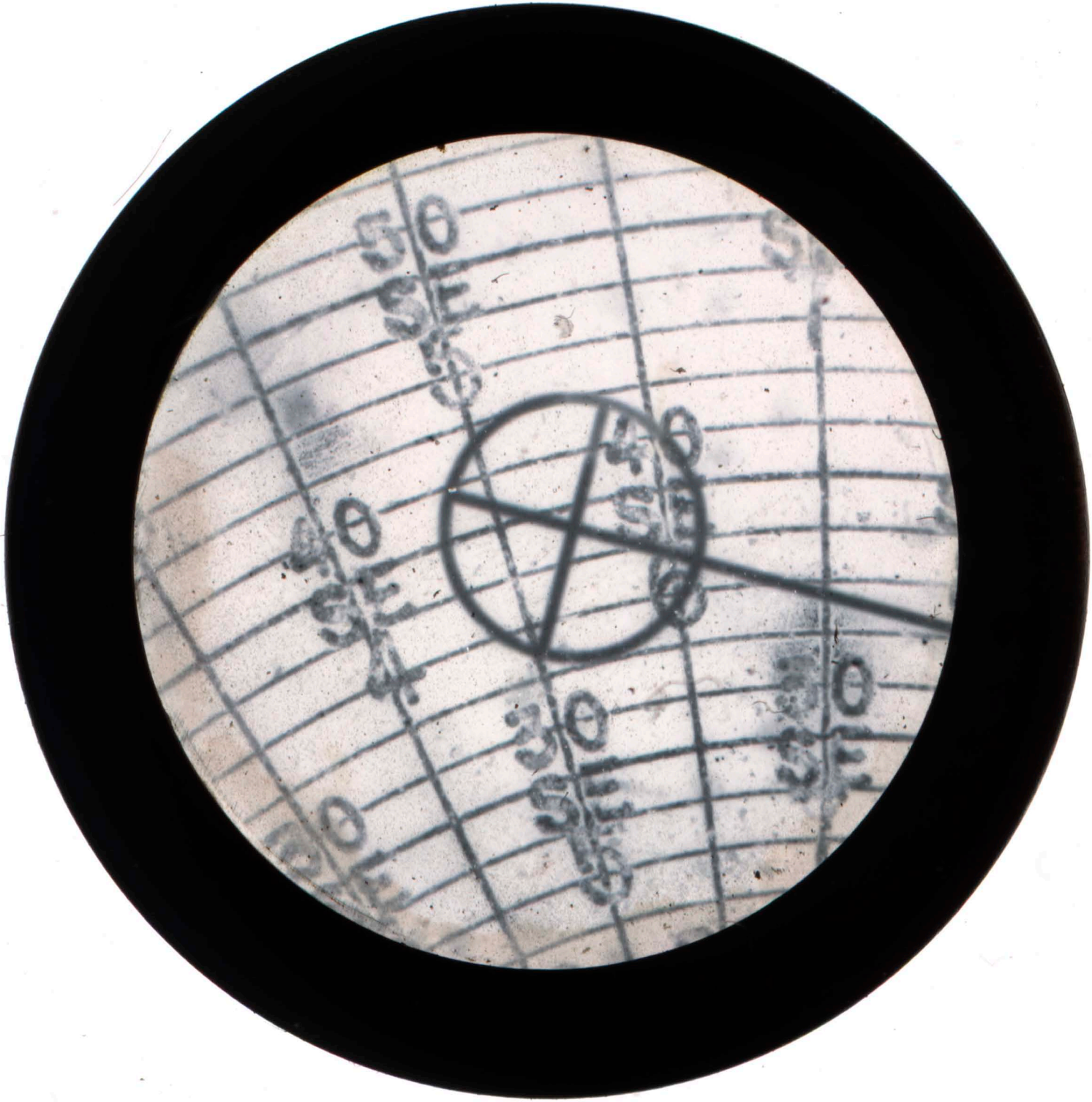
DEPTH 567 - 576

SL-D403-00 BOX 63
DEPTH 576 -577

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