60001136

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-339-99
AUTHOR	B Morris; K Allen; L. Mackedon
DATE OF DOC(S)	1999
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 485' receipt; handwritten notes; downhole camera images 56 pg 5 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 5/13/08
Initials Date
DB: mah
Initials Date
SCANNED: NB
Initials Date

Revised: 1/22/08

D-339-97

6000 1136 4010

60001136

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

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-339-99	LOCATION	Stope 25
PAGE 1 OF 8		NORTHING	
DATE	4/20/99	EASTING	
LOGGED BY	Brian Morris	ELEVATION	4484
SCALE	1"=20'	AZIMUTH	S42W
TOTAL DEPTH	485'	INCLINATION	-12°

REMARKS

LITH	OX/RE	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	A
		0-50' LST Olive gr - Olive br fg equigranular w/ faint Lt gr - wh spotted text.	10 20 30 40 50	10 25° 20°	24-28' Tect. Bxa Rubble Bxa: DK Gry SiO_2+ Rx Flour healed w/ round-subround Lst clasts, Mtx is locally vuggie w/ Marc.	0-50' Prop. Alt w/ wk-Mod blch+argil overprint. WK chlorite sulf vnlets 15'-20' Crackle bxa: 90% clasts w/ SiO_2 + W.C.± $CaCO_3$ replaced Mtx + Marc + Chlor in Mtx. 30-50' Wh-Lt gry clay Vug Fillings + SiO_2 Vnlet replacement. locally 1cm wide Vuggie SiO_2 Vns w/ Clay + Marc Vug fillings.	0 10 20 30 40	10 20 30 40 50					

HOLE NUMBER D-339-99 PAGE 2 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		LST 50.- 127' Br - olive gr fg w/ wh speckled text	60, 70, 80, 90.0, 100.0, 110.0, 120.0	48 Flt; 60°; 10 Flt	Flt 2' wide Rubble bxa w/ leaching of Mtx, Vugs are lined w/ druzy qt & Marc ± W.C.	50-120' Wk blch & argil; 50-80' Mod W.C. + marc + py stringers & vns.	50.0	60.0				
							60.0	70.0				
							70.0	80.0				
						80.-100 Wk-Mod gr clay Veiets	80.0	90.0				
							90.0	100.0				
							100.0	110.0				
						118-121 crackle bxa w/ SiO_2 Mtx, mod leaching of Mtx, druzy Qt lined Vugs & marc ± W.C.	110.0	120.0				

HOLE NUMBER D-339-99 PAGE 3 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		Fine Grain Massive Flt Contact Ltgr - olive gr fg equigranular Massive. 180-195 Flow banding text.	130.0 140.0 150.0 160.0 170.0 180.0 190.0		122-125 Mosaic bxa! clast supported SiO_2 healed w/ str leaching of mtx & mod w.c. replacement, str bladed marc in mtx & vugs, Vugs are lined by drusy qt & marc. 170.5-181.0' Fault Large 4-6cm dia fg massive clasts healed by SiO_2 rubble bxa mtx. str leaching of SiO_2 w/ drusy qt ± w.c. lined vugs.	120-190 Wk - locally Mod Marc + py ± w.c. ± Chlor Vulets. 140.0-170 wk $CaCO_3$ + w.c. vulets 180-195 blch & argil favor bedding ?

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
120.0	130.0				
130.0	133.5				
133.5	140.0				
140.0	150.0				
150.0	160.0	~~0.100~~	0.100	0.10	
160.0	170.0				
170.0	180.0				
180.0	185.0		0.192	0.69	
185.0	195.0				

HOLE NUMBER D-339-99 PAGE 4 OF 8

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		Fine grain Massive	200.0 210.0 220.0 230.0 240.0 250.0 260.0	20 25 75 5° 10°		205-227' Wk-Mod hair line - .5cm wide Sulf ± w.c. Vnlets, Wk blch. 227-234 Mod. blch, wk Sulf Vnlets + w.c. 234-248 Str pink alteration color, Mod blch + argil, wk fg diss sulf.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
185.0	195.0				
195.0	205.0				
205.0	215.0				
215.0	225.0				
225.0	235.0				
235.0	245.0				
245.0	250.0				
250.0	260.0				

HOLE NUMBER D-339-99 PAGE 5 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		260' FGM/PMBX Contact. Gradational contact: Grading from fine grain massive to wavy laminated to volcaniclastic flow bxa of 5'. PMBX: light gr clasts of fgm & flow banding w/ pinkish-orangish fg mtx. 269.3 PMBX/TOS depositional Contact TOS: Clast-Mtx supported flow breccia w/ gr-lt br. fg equigranular vol. clasts w/ minor gry gr phyllite clasts, Mtx is clay rich mostly olive gr in color.	270 280 290 300 310 320 330	15° 40° 15° 30°	289-290 wk-Mod mylonitic shr text	262-269' Minor .5-1cm wide W.c. + fg sooty sulf + Marc Vnlets. 269.3-290 Str blch grading to mod & wk lmc sulf Vnlets. 310-330' Zones of str argil w/ wk wh clay coating & diss Py, Mod 1-2" wide $CaCO_3$ Vn.

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
260.0	269.3				
269.3	280.0				
280.0	290.0	~~0.155~~	0.155	3.70	
290.0	300.0				
300.0	310.0				
310.0	320.0				
320.0	330.0				

HOLE NUMBER D-339-99 PAGE 6 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		352.5' Dozer Fault Contact Dozer Rhyolite; lt gry-wh' f.g equigranular.	340 350 360 370 380 390 400	20° SRF Flt 30°	352.5' SRF 2" wide blk sulfidicly healed milled bxa 353 - 365: Wk Crackle BXA ≈ 10% SiO_2 healed Mtx ± w.c., ± marc. 367-380 Gry SiO_2 healed expansion Fx, wk sulfs ± w.c.	330-352.5' Str 1-2" wide $CaCO_3$ vns ± sulf w/ well formed euhedral $CaCO_3$ xls in vugs. $CaCO_3$ is term by SRF 377-385' Mod silic w/ hair line dk gry SiO_2 + sulf dendritic veinlets. ± w.c.	330.0 340.0 350.0 360.0 370.0 380.0 390.0	340.0 350.0 360.0 370.0 380.0 390.0 400.0					

HOLE NUMBER D-339-99 PAGE 7 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		Dozer Rhyolite	410, 420, 430, 440, 450, 460, 470	Fit	425-426' Gr SiO_2 healed Rubble bxa ± $CaCO_3$ ± Marc. 430-435' Bxa Zone, Gr Rx flour + SiO_2 ± gr clay healed Crackle - rubble bxa.	377-485' Mod silic & proplytized, wk $CaCO_3$ Vn & Vnlets, wk hair line sulf Vnlets, wk 1-4cm clin sulf soaked spots, Minor bleaching bleeding out from Fx, ± W.L.	400.0	410.0				
							410.0	420.0				
							420.0	430.0				
							430.0	440.0				
							440.0	450.0				
							450.0	460.0				
							460.0	470.0				

HOLE NUMBER D-339-99 PAGE 8 OF 8

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		Dozer Rhyolite					470	480				
			480	40°								
		T.D. 485'	485'				480	485				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-20-99 LOGGED BY: Brian Morris PAGE 1 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	5.0	100.0	82.0	58.0										
5.0	10.0	100.0	92.0	88.0										
10.0	15.0	100.0	100.0	94.0										
15.0	20.0	100.0	100.0	94.0										
20.0	30.0	100.0	90.0	80.0										
30.0	40.0	100.0	100.0	97.0										
40.0	50.0	100.0	100.0	87.0										
50.0	60.0	100.0	99.0	59.0										
60.0	70.0	100.0	97.0	84.0										
70.0	80.0	100.0	94.0	54.0										
80.0	90.0	100.0	97.0	76.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-23-99 LOGGED BY: BWM PAGE 2 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
90.0	100.0	100.0	98.0	82.0										
100.0	110.0	100.0	96.0	63.0										
110.0	120.0	100.0	95.0	86.0										
120.0	130.0	100.0	96.0	72.0										
130.0	133.5	100.0	2.6	23.0										
133.5	140.0	100.0	97.0	63.0										
140.0	150.0	100.0	95.0	47.0										
150.0	160.0	100.0	95.0	55.0										
160.0	170.0	100.0	97.0	55.0										
170.0	180.0	100.0	92.0	57.0										
180.0	185.0	100.0	94.0	86.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-23-99 LOGGED BY: BWM PAGE 3 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
185.0	195.0	100.0	100.0	72.0										
195.0	205.0	100.0	94.0	39.0										
205.0	211.0	100.0	88.3	38.3										
211.0	218.0	100.0	90.0	41.4										
218.0	224.0	100.0	86.7	30.0										
224	230.0	100.0	100.0	68.3										
230.0	240.0	100.0	99.0	75.0										
240.0	250.0	100.0	100.0	91.0										
250.0	260.0	100.0	90.0	75.0										
260.0	270.0	100.0	99.0	90.0										
270.0	280.0	100.0	98.0	98.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-27-99 LOGGED BY: RWM PAGE 4 OF 6

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)
280	296	100.0	100.0	98.0										
290	300	100.0	99.0	95.0										
300	310	100.0	96.0	90.0										
310	318	100.0	87.5	45.0										
318	323.5	100.0	90.9	21.8										
323.5	330	100.0	96.9	44.6										
330	340	100.0	95.0	75.0										
340	350	100.0	99.0	70.0										
350	355.5	100.0	89.1	52.7										
355.5	365	100.0	95.8	82.1										
365	375	100.0	95.0	82.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-27-99 LOGGED BY: BWM PAGE 5 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY /FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
375	385	100.0	96.0	69.0										
385	395	100.0	95.0	68.0										
395	405	100.0	100.0	83.0										
405	415	100.0	97.0	80.0										
415	425	100.0	94.0	64.0										
425	430	100.0	90.0	80.0										
430	440	100.0	98.0	77.0										
440	450	100.0	99.0	41.0										
450	455	100.0	88.0	46.0										
455	457	100.0	75.0	50.0										
457	465	100.0	87.5	62.5										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-339-99 DATE: 4-28-99 LOGGED BY: BWM PAGE 6 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
465	475	100.0	97.0	92.0										
475	485	100.0	120	81.0										

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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(702) 738-2594

Mazatlan Office
Telephone/Fax
011-52-69-170035

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: Rosebud LLC

Address: WINNEMUCCA

City _____ State NV Zip 89445

Telephone Number: (775) 625-6912 Fax Number: ( ) _____

Project Name: DEVELOPMENT Purchase Order Number: _____

Date Submitted: 4/29/99 Number of Samples: 50

Hole # ~~[illegible]~~ 339

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

SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED
0-10	150-160	290-300		AU-AG AS PER HECLA PROTOCOL
10-20	160-170	300-310		
20-30	170-180	310-320		440-450
30-40	180-185	320-330		450-460
40-50	185-195	330-340		460-470
50-60	195-205	340-350		470-480
60-70	205-215	350-360		480-485 TD
80-90	215-225	360-370		
90-100	225-235	370-380		
100-110	235-245	380-390		
110-120	245-250	390-400		
120-130	250-260	400-410		
130-133.5	260-269.3	410-420		
133.5-140	269.3-280	420-430		
140-150	280-290	430-440		

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:

BRIAN MORRIS

Results to:

BRIAN MORRIS

Comments:

CLIENT FILE COPY

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN
: Brian Morris
:
:

CLIENT REFERENCE No: D-339-99 RECEIVED : 30 APR 1999

No. SAMPLES : 52 REPORTED : 14 MAY 1999

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.

05/14/1999 13:55 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 000-010	0.005			0.08
D-339-99 010-020	0.009	0.009		0.09
D-339-99 020-030	0.006			0.07
D-339-99 030-040	0.005			0.06
D-339-99 040-050	0.005			0.08
D-339-99 050-060	0.016			0.10
D-339-99 060-070	0.005			0.08
D-339-99 070-080	0.006			0.07
D-339-99 080-090	0.009			0.04
D-339-99 090-100	0.008			0.06
D-339-99 100-110	0.004			0.05
D-339-99 110-120	0.020			0.07
D-339-99 120-130	0.045			0.14
D-339-99 130.0-133.5	0.037			0.08
D-339-99 133.5 140.0	0.027			0.08
D-339-99 140-150	0.021			0.11
D-339-99 150-160	0.085		0.100	0.10
D-339-99 160-170	0.010			0.09
D-339-99 170-180	0.030			0.09
D-339-99 180-185	0.211		0.192	0.69
D-339-99 185-195	0.063			0.25
D-339-99 195-205	0.016			0.09
D-339-99 205-215	0.004			0.07
D-339-99 215-225	0.044			0.22
D-339-99 225-235	0.015			0.23

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 480-485	0.002			<0.02
59812	0.586			3.41

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 235-245	0.009			0.12
D-339-99 245-250	0.007			0.13
D-339-99 250-260	0.008			0.13
D-339-99 260.0-269.3	0.011			0.23
D-339-99 269.3-280.0	0.003			0.09
D-339-99 280-290	0.169		0.155	3.70
D-339-99 290-300	0.051		0.063	0.17
D-339-99 300-310	0.010			0.05
D-339-99 310-320	0.004			0.04
D-339-99 320-330	0.001			0.02
D-339-99 330-340	0.003			0.02
D-339-99 340-350	0.002			<0.02
D-339-99 350-360	0.002			0.04
D-339-99 360-370	0.002			0.07
D-339-99 370-380	0.002			0.06
D-339-99 380-390	0.026			0.62
D-339-99 390-400	0.011			0.07
D-339-99 400-410	0.008			0.04
D-339-99 410-420	0.001			0.03
D-339-99 420-430	0.002			0.02
D-339-99 430-440	0.002			0.03
D-339-99 440-450	0.001			<0.02
D-339-99 450-460	0.001			<0.02
D-339-99 460-470	0.001			<0.02
D-339-99 470-480	<0.001			<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

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

HECLA MINING COMPANY

COPIES TO :

: Brian Morris

:

:

CLIENT REFERENCE No: D-339-99 RECEIVED : 30 APR 1999

No. SAMPLES : 52 REPORTED : 11 MAY 1999

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
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SIGNATORY : Leonard E. Mackedon B.S.

05/11/1999 15:42 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 11 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 000-010	0.005			
D-339-99 010-020	0.009	0.009		
D-339-99 020-030	0.006			
D-339-99 030-040	0.005			
D-339-99 040-050	0.005			
D-339-99 050-060	0.016			
D-339-99 060-070	0.005			
D-339-99 070-080	0.006			
D-339-99 080-090	0.009			
D-339-99 090-100	0.008			
D-339-99 100-110	0.004			
D-339-99 110-120	0.020			
D-339-99 120-130	0.045			
D-339-99 130.0-133.5	0.037			
D-339-99 133.5-140.0	0.027			
D-339-99 140-150	0.021			
D-339-99 150-160	0.085		0.100	
D-339-99 160-170	0.010			
D-339-99 170-180	0.030			
D-339-99 180-185	0.211		0.192	
D-339-99 185-195	0.063			
D-339-99 195-205	0.016			
D-339-99 205-215	0.004			
D-339-99 215-225	0.044			
D-339-99 225-235	0.015			

05/11/1999 15:42 7023561413 AMERICAN ASSAY LABS PAGE 02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 11 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 235-245	0.009			
D-339-99 245-250	0.007			
D-339-99 250-260	0.008			
D-339-99 260.0-269.3	0.011			
D-339-99 269.3-280.0	0.003			
D-339-99 280-290	0.169		0.155	
D-339-99 290-300	DTF			
D-339-99 300-310	0.010			
D-339-99 310-320	0.004			
D-339-99 320-330	0.001			
D-339-99 330-340	0.003			
D-339-99 340-350	0.002			
D-339-99 350-360	0.002			
D-339-99 360-370	0.002			
D-339-99 370-380	0.002			
D-339-99 380-390	0.026			
D-339-99 390-400	0.011			
D-339-99 400-410	0.008			
D-339-99 410-420	0.001			
D-339-99 420-430	0.002			
D-339-99 430-440	0.002			
D-339-99 440-450	0.001			
D-339-99 450-460	0.001			
D-339-99 460-470	0.001			
D-339-99 470-480	<0.001			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 11 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 480-485	0.002			
59812	0.586			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-339-99 RECEIVED : 30 APR 1999

No. SAMPLES : 52 REPORTED : 12 MAY 1999

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 SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 000-010	0.005			
D-339-99 010-020	0.009	0.009		
D-339-99 020-030	0.006			
D-339-99 030-040	0.005			
D-339-99 040-050	0.005			
D-339-99 050-060	0.016			
D-339-99 060-070	0.005			
D-339-99 070-080	0.006			
D-339-99 080-090	0.009			
D-339-99 090-100	0.008			
D-339-99 100-110	0.004			
D-339-99 110-120	0.020			
D-339-99 120-130	0.045			
D-339-99 130.0-133.5	0.037			
D-339-99 133.5-140.0	0.027			
D-339-99 140-150	0.021			
D-339-99 150-160	0.085		0.100	
D-339-99 160-170	0.010			
D-339-99 170-180	0.030			
D-339-99 180-185	0.211		0.192	
D-339-99 185-195	0.063			
D-339-99 195-205	0.016			
D-339-99 205-215	0.004			
D-339-99 215-225	0.044			
D-339-99 225-235	0.015			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 235-245	0.009			
D-339-99 245-250	0.007			
D-339-99 250-260	0.008			
D-339-99 260.0-269.3	0.011			
D-339-99 269.3-280.0	0.003			
D-339-99 280-290	0.169		0.155	
D-339-99 290-300	0.051		0.063	
D-339-99 300-310	0.010			
D-339-99 310-320	0.004			
D-339-99 320-330	0.001			
D-339-99 330-340	0.003			
D-339-99 340-350	0.002			
D-339-99 350-360	0.002			
D-339-99 360-370	0.002			
D-339-99 370-380	0.002			
D-339-99 380-390	0.026			
D-339-99 390-400	0.011			
D-339-99 400-410	0.008			
D-339-99 410-420	0.001			
D-339-99 420-430	0.002			
D-339-99 430-440	0.002			
D-339-99 440-450	0.001			
D-339-99 450-460	0.001			
D-339-99 460-470	0.001			
D-339-99 470-480	<0.001			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053289

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-339-99 480-485	0.002			
59812	0.586			

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 0053289-IN
INVOICE DATE: 05/14/99

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-339-99	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
52	SAMPLES RECEIVED	.00	.00
51	DRYING	3.00	153.00
51	JAW CRUSHING CHARGE	3.90	198.90
51	COARSE MILLING CHARGE	13.50	688.50
51	SPLITTING CHARGE	2.40	122.40
51	RING MILLING CHARGE	2.00	102.00
52	Au (1 A.T. FIRE ASSAY)	8.00	416.00
4	Au ANALYSES/GRAVIMETRIC	8.75	35.00
52	HYDROCHLORIC/NITRIC DIGESTION	2.00	104.00
52	Ag ANALYSES	1.00	52.00
1	Ag (ore grade) ANALYSES	5.00	5.00

96-5030-477
BWM

NET INVOICE:	1,876.80
LESS DISCOUNT	375.36
FREIGHT	.00
INVOICE TOTAL:	1,501.44

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ANALYSIS REPORT SP053289

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

:

:

:

CLIENT REFERENCE No: D-339-99 RECEIVED : 30 APR 1999

No. SAMPLES : 52 REPORTED : 14 MAY 1999

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 SP053289

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-339-99 000-010	0.005			0.08
D-339-99 010-020	0.009	0.009		0.09
D-339-99 020-030	0.006			0.07
D-339-99 030-040	0.005			0.06
D-339-99 040-050	0.005			0.08
D-339-99 050-060	0.016			0.10
D-339-99 060-070	0.005			0.08
D-339-99 070-080	0.006			0.07
D-339-99 080-090	0.009			0.04
D-339-99 090-100	0.008			0.06
D-339-99 100-110	0.004			0.05
D-339-99 110-120	0.020			0.07
D-339-99 120-130	0.045			0.14
D-339-99 130.0-133.5	0.037			0.08
D-339-99 133.5-140.0	0.027			0.08
D-339-99 140-150	0.021			0.11
D-339-99 150-160	0.085		0.100	0.10
D-339-99 160-170	0.010			0.09
D-339-99 170-180	0.030			0.09
D-339-99 180-185	0.211		0.192	0.69
D-339-99 185-195	0.063			0.25
D-339-99 195-205	0.016			0.09
D-339-99 205-215	0.004			0.07
D-339-99 215-225	0.044			0.22
D-339-99 225-235	0.015			0.23

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ANALYSIS REPORT SP053289

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-339-99 235-245	0.009			0.12
D-339-99 245-250	0.007			0.13
D-339-99 250-260	0.008			0.13
D-339-99 260.0-269.3	0.011			0.23
D-339-99 269.3-280.0	0.003			0.09
D-339-99 280-290	0.169		0.155	3.70
D-339-99 290-300	0.051		0.063	0.17
D-339-99 300-310	0.010			0.05
D-339-99 310-320	0.004			0.04
D-339-99 320-330	0.001			0.02
D-339-99 330-340	0.003			0.02
D-339-99 340-350	0.002			<0.02
D-339-99 350-360	0.002			0.04
D-339-99 360-370	0.002			0.07
D-339-99 370-380	0.002			0.06
D-339-99 380-390	0.026			0.62
D-339-99 390-400	0.011			0.07
D-339-99 400-410	0.008			0.04
D-339-99 410-420	0.001			0.03
D-339-99 420-430	0.002			0.02
D-339-99 430-440	0.002			0.03
D-339-99 440-450	0.001			<0.02
D-339-99 450-460	0.001			<0.02
D-339-99 460-470	0.001			<0.02
D-339-99 470-480	<0.001			<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053289

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-339-99 480-485	0.002			<0.02
59812	0.586			3.41

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ANALYSIS REPORT SP053289

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

:

:

:

CLIENT REFERENCE No: D-339-99 RECEIVED : 30 APR 1999

No. SAMPLES : 52 REPORTED : 14 MAY 1999

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

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053289

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-339-99 235-245	0.009			0.12
D-339-99 245-250	0.007			0.13
D-339-99 250-260	0.008			0.13
D-339-99 260.0-269.3	0.011			0.23
D-339-99 269.3-280.0	0.003			0.09
D-339-99 280-290	0.169		0.155	3.70
D-339-99 290-300	0.051		0.063	0.17
D-339-99 300-310	0.010			0.05
D-339-99 310-320	0.004			0.04
D-339-99 320-330	0.001			0.02
D-339-99 330-340	0.003			0.02
D-339-99 340-350	0.002			<0.02
D-339-99 350-360	0.002			0.04
D-339-99 360-370	0.002			0.07
D-339-99 370-380	0.002			0.06
D-339-99 380-390	0.026			0.62
D-339-99 390-400	0.011			0.07
D-339-99 400-410	0.008			0.04
D-339-99 410-420	0.001			0.03
D-339-99 420-430	0.002			0.02
D-339-99 430-440	0.002			0.03
D-339-99 440-450	0.001			<0.02
D-339-99 450-460	0.001			<0.02
D-339-99 460-470	0.001			<0.02
D-339-99 470-480	<0.001			<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053289

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-339-99

REPORTED : 14 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-339-99 480-485	0.002			<0.02
59812	0.586			3.41

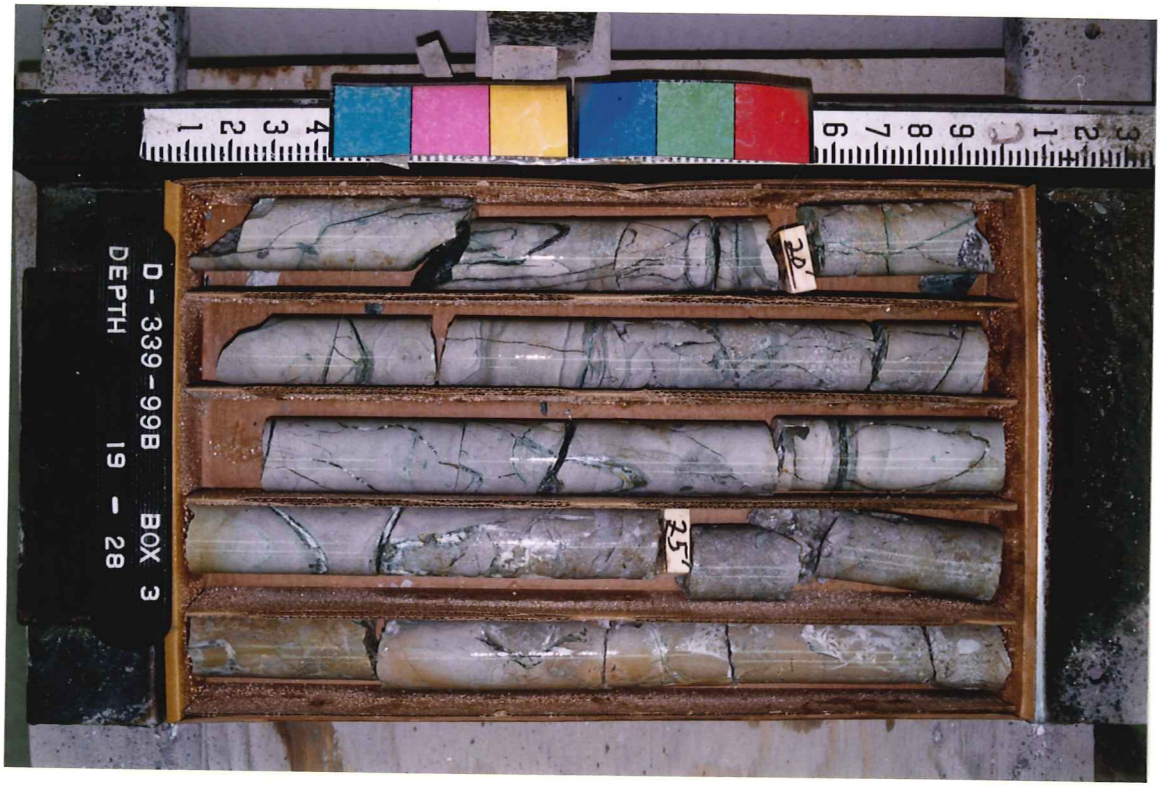
D-339-99

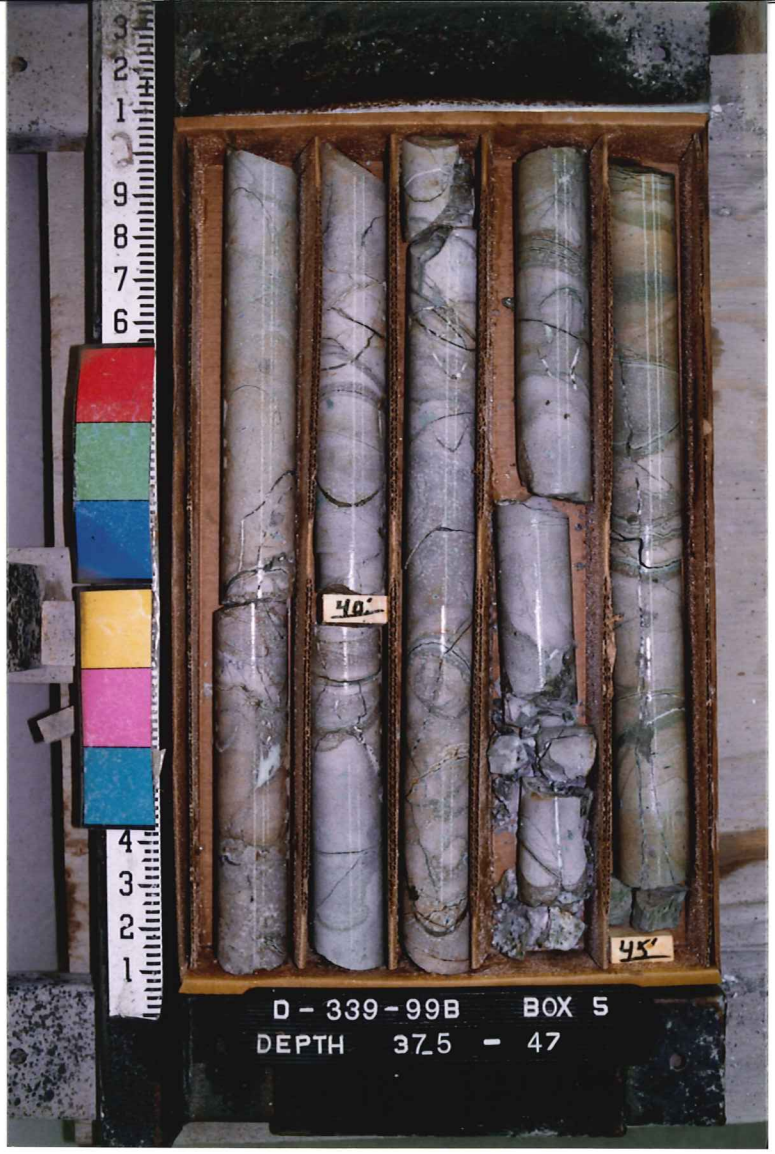
30	S38.7°W	-6.5
100	S38.7°W	-6.75
220	S37.7°W	-7.5
350	S39.2°W	-8.2°
470	S38.7°W	-8.5°

30	S23W 15.7 S38.7°W	-6.5
100	S23W 15.7 S38.7W	- 6.75
220	S22°W 15.7 S37.7W	- 7.5
350	S23.5W 15.7 S39.2W	-8.2
470	S23W +15.7 S38.7°W	-8.5°

15'
10'
D - 339 - 99B BOX 2
DEPTH 9_5 - 19

5'
D - 339 - 99B BOX 1
DEPTH 0 - 9_5


20'
25'
D - 339 - 99B BOX 3
DEPTH 19 - 28

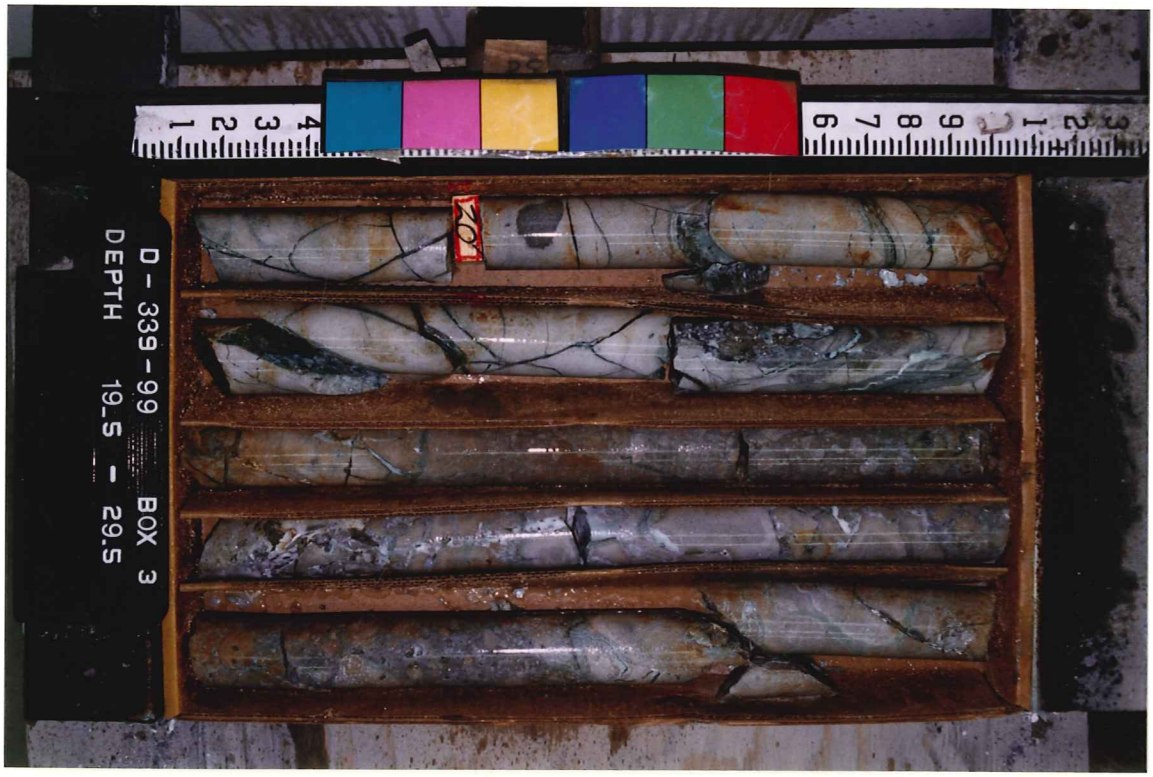

40'
45'
D - 339 - 99B BOX 5
DEPTH 37_5 - 47

35'
30'
D - 339 - 99B BOX 4
DEPTH 28 - 37_5

50'
55'
D - 339 - 99B BOX 6
DEPTH 47 - 56

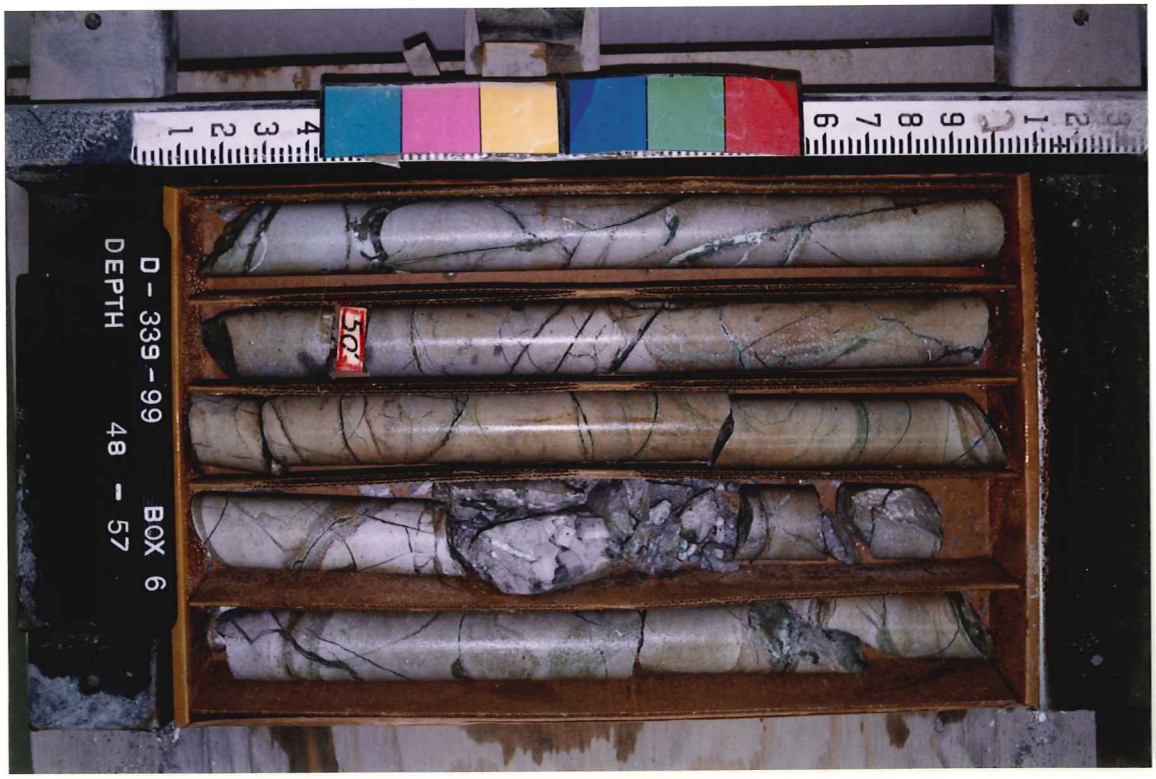
15'
D - 339 - 99 BOX 2
DEPTH 10_5 - 19.5

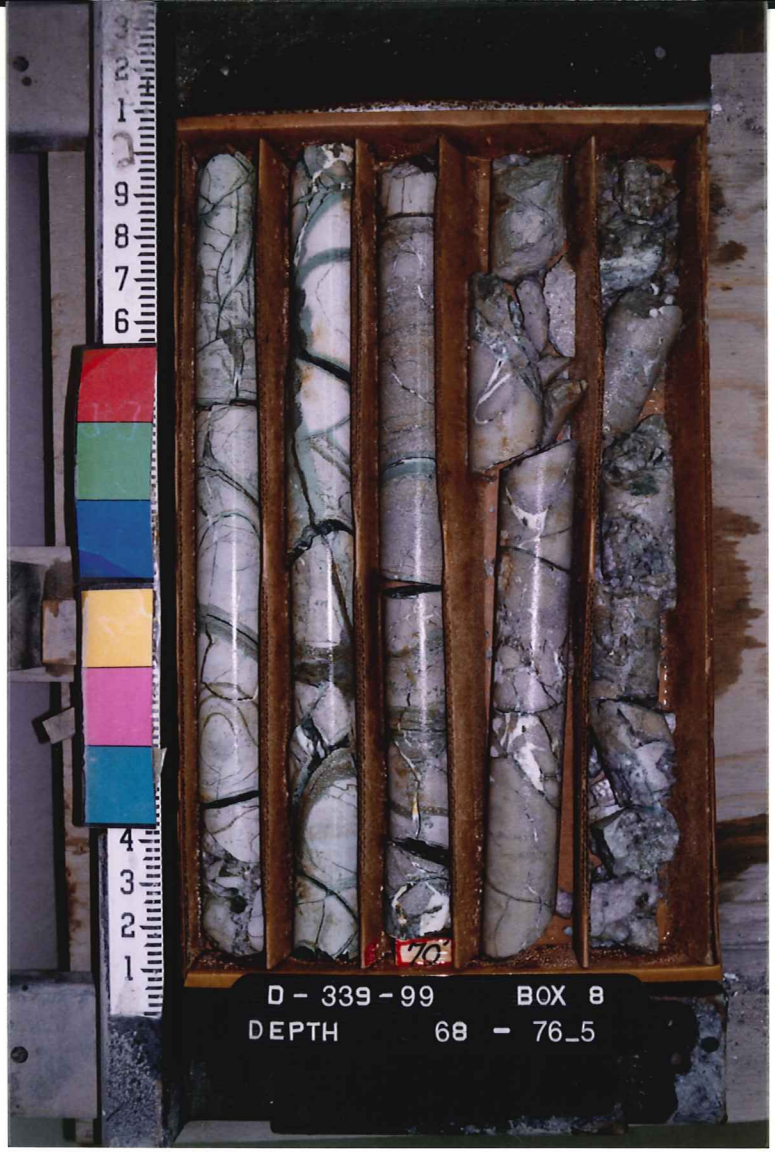
10'
5'
D - 339 - 99 BOX 1
DEPTH 0 - 10_5

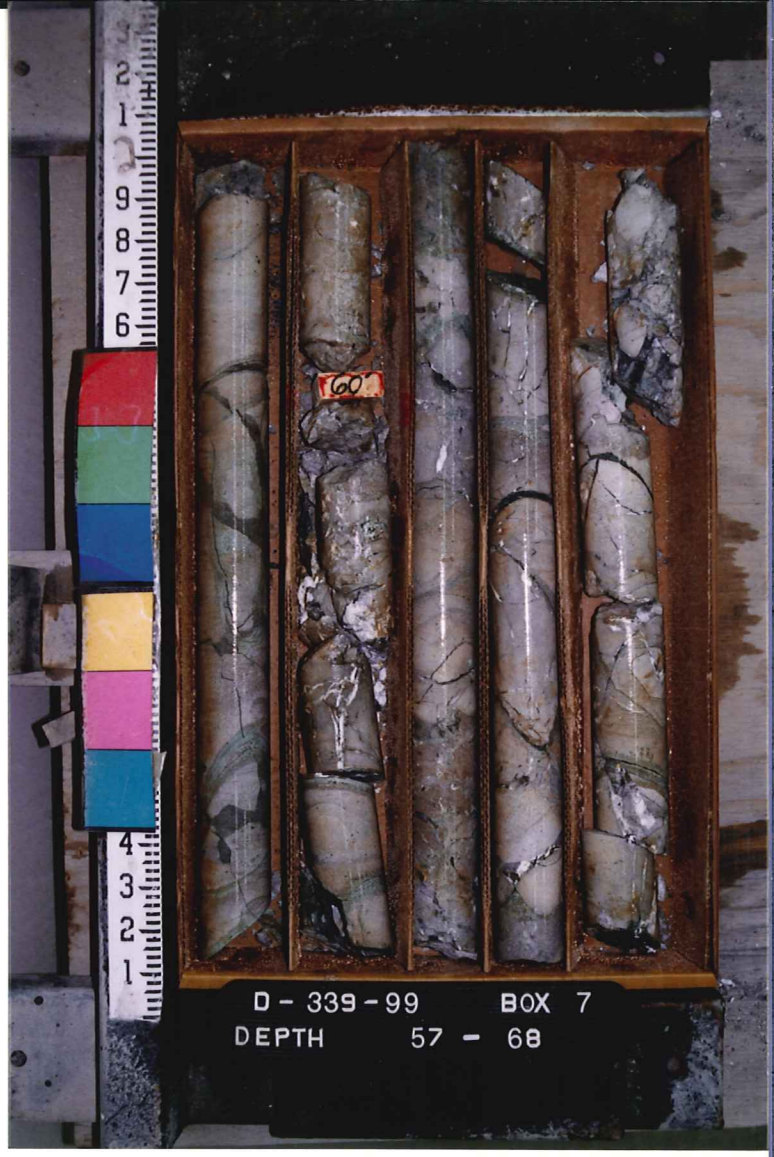

20'
D - 339 - 99 BOX 3
DEPTH 19_5 - 29.5

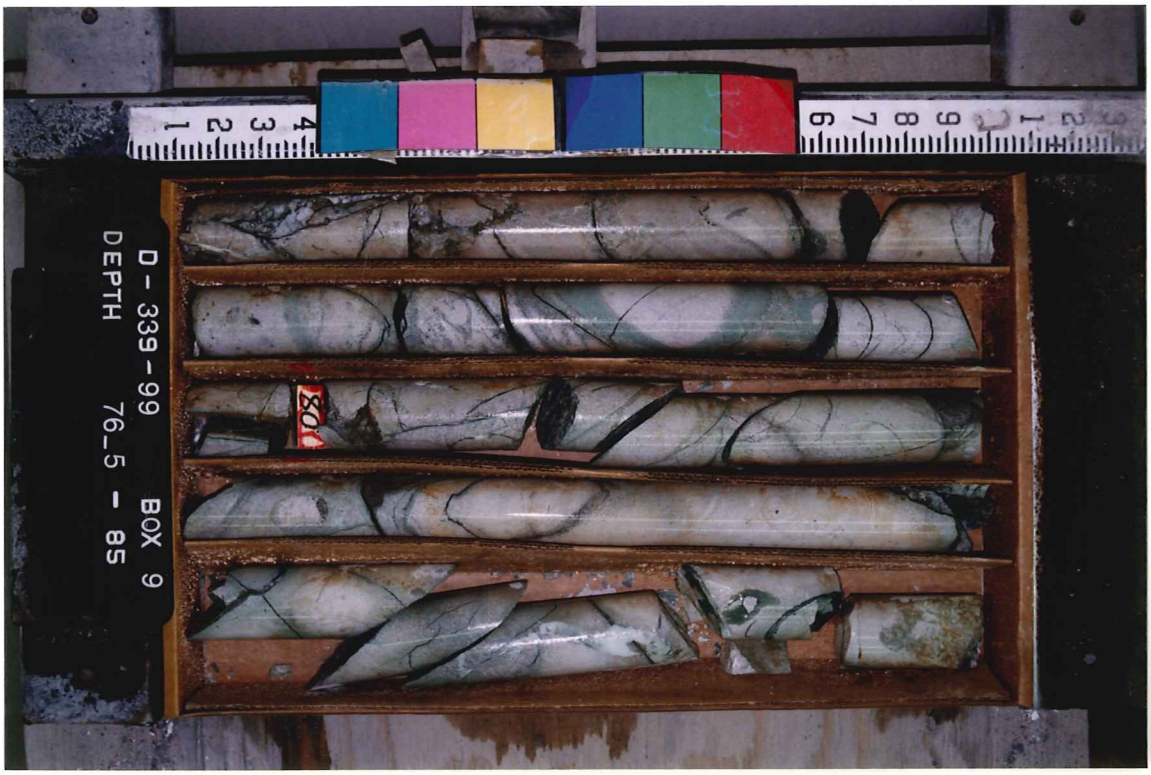
D - 339 - 99 BOX 5
DEPTH 39 - 48

30
D - 339 - 99 BOX 4
DEPTH 29_5 - 39


50
D - 339 - 99 BOX 6
DEPTH 48 - 57


70'
D - 339 - 99 BOX 8
DEPTH 68 - 76_5


60'
D - 339 - 99 BOX 7
DEPTH 57 - 68

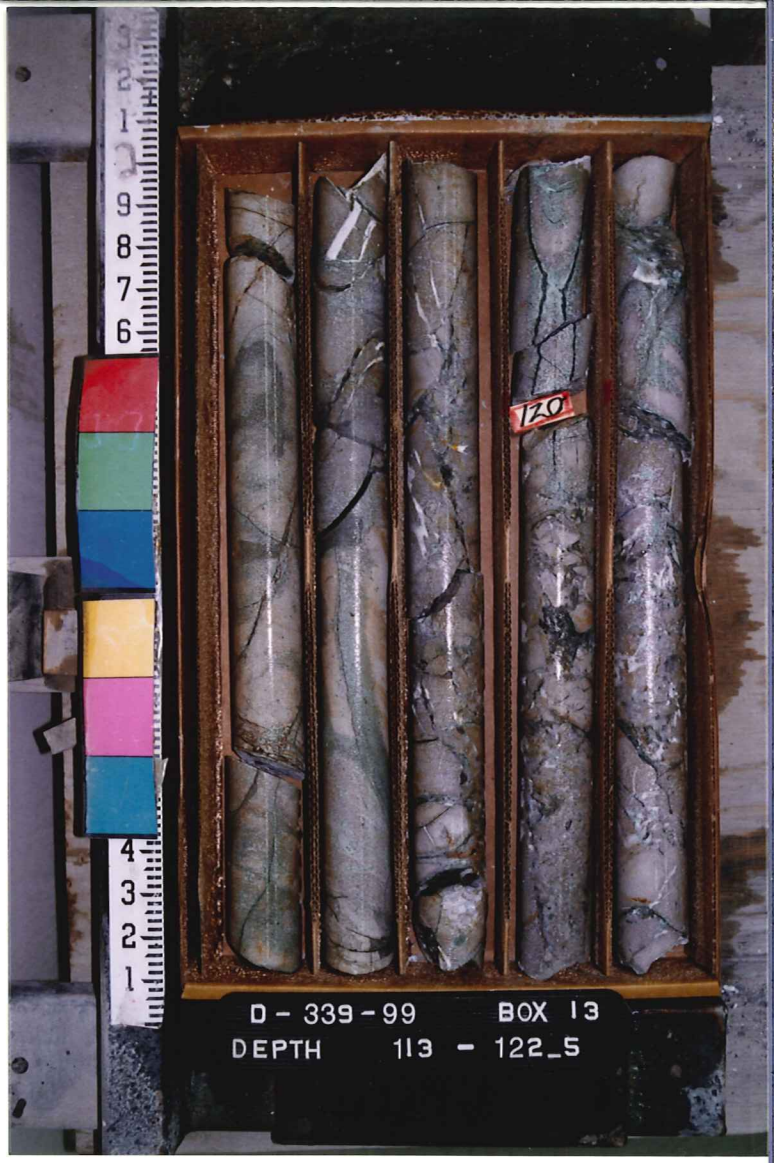

80'
D - 339 - 99 BOX 9
DEPTH 76_5 - 85

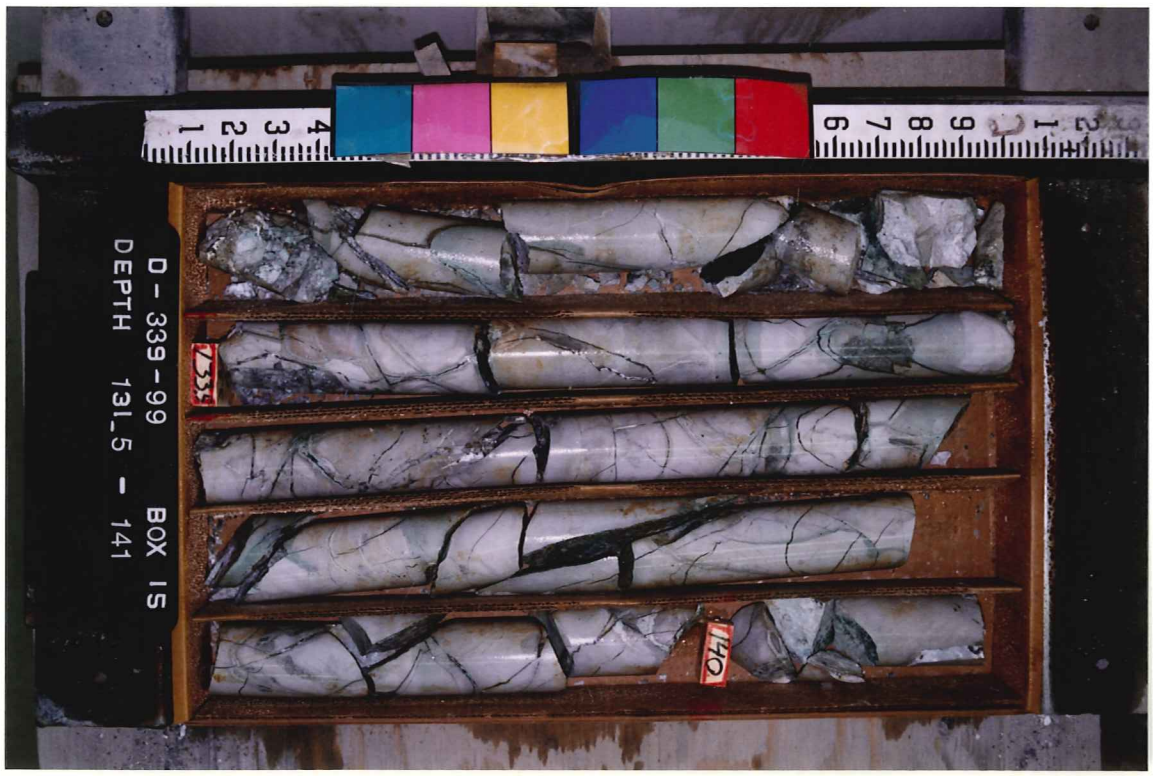
D - 339 - 99 BOX 11
DEPTH 95 - 104_5

D - 339 - 99 BOX 10
DEPTH 85 - 95

D - 339 - 99 BOX 12
DEPTH 104_5 - 113

130
D - 339 - 99 BOX 14
DEPTH 122_5 - 131_5


120
D - 339 - 99 BOX 13
DEPTH 113 - 122_5


135
140
D - 339 - 99 BOX 15
DEPTH 131_5 - 141

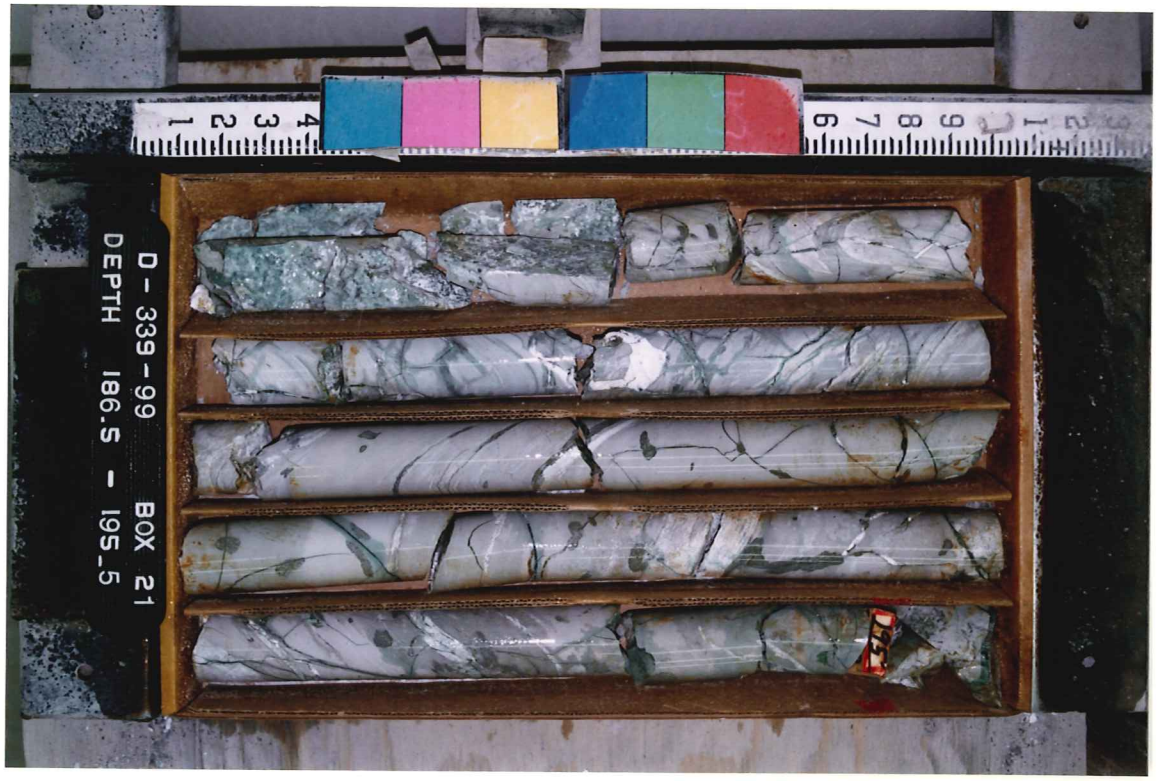
150
D - 339 - 99 BOX 17
DEPTH 150 - 159

D - 339 - 99 BOX 16
DEPTH 141 - 150

D - 339 - 99 BOX 18
DEPTH 159 - 168

180
185
D - 339 - 99 BOX 20
DEPTH 177 - 186.5

170
D - 339 - 99 BOX 19
DEPTH 168 - 177


D - 339 - 99 BOX 21
DEPTH 186.5 - 195.5

D - 339 - 99 BOX 23
DEPTH 205 - 215

D - 339 - 99 BOX 22
DEPTH 195_5 - 205

D - 339 - 99 BOX 24
DEPTH 215 - 225

235
240
D - 339 - 99 BOX 26
DEPTH 234 - 243

234
D - 339 - 99 BOX 25
DEPTH 225 - 234

245
250
D - 339 - 99 BOX 27
DEPTH 243 - 252_5

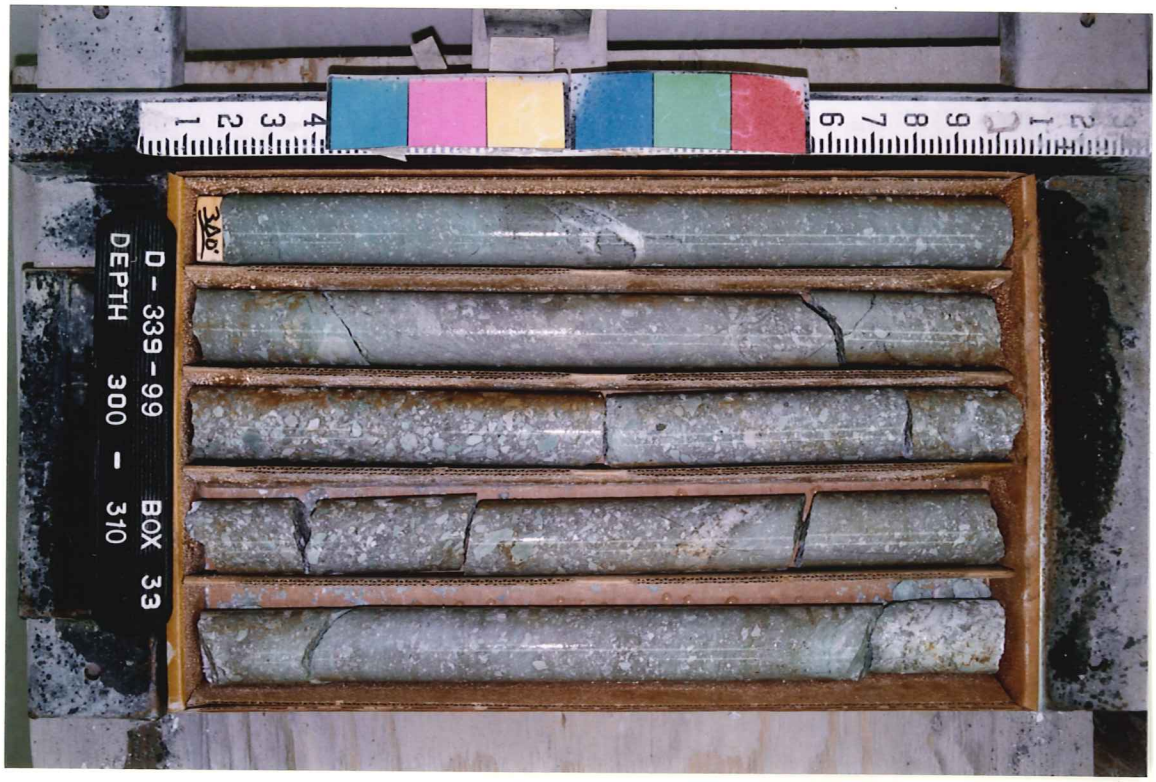
D - 339 - 99 BOX 29
DEPTH 262 - 271_5

D - 339 - 99 BOX 28
DEPTH 252_5 - 262

D - 339 - 99 BOX 30
DEPTH 271_5 - 281

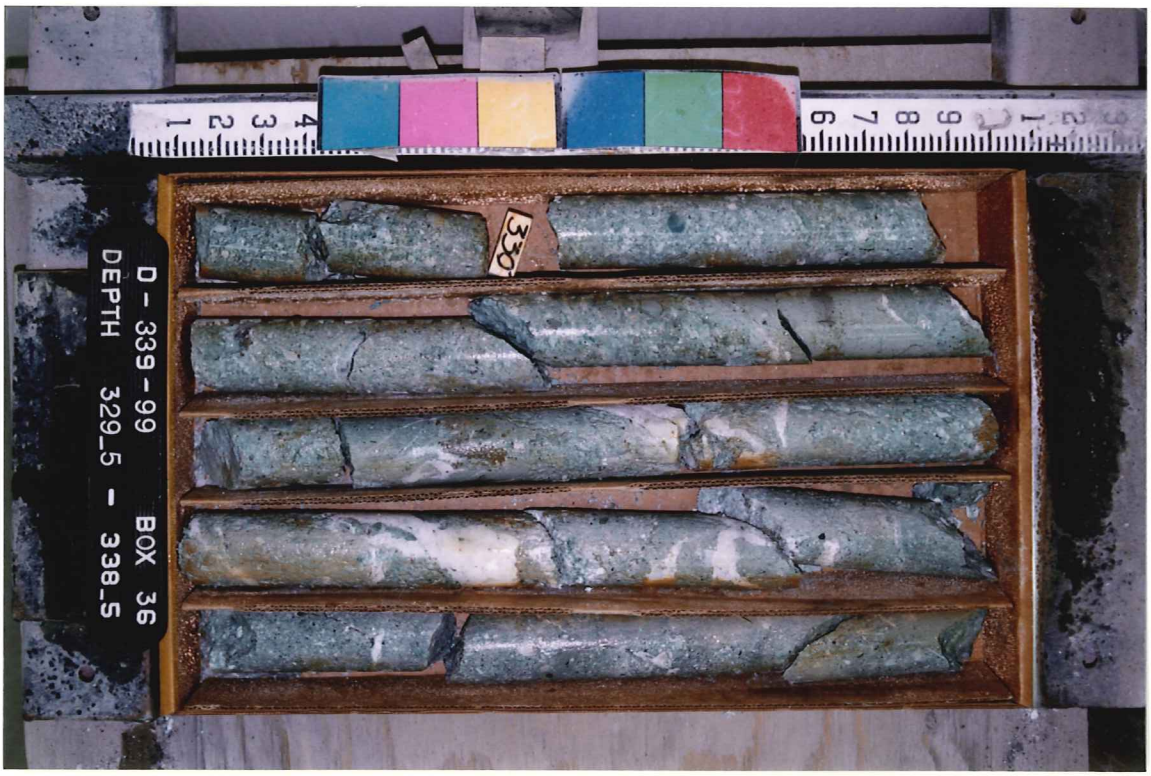
D - 339 - 99 BOX 32
DEPTH 290_5 - 300

290'
D - 339 - 99 BOX 31
DEPTH 281 - 290_5


300'
D - 339 - 99 BOX 33
DEPTH 300 - 310

323.5
D - 339 - 99 BOX 35
DEPTH 320 - 329_5

310
318
D - 339 - 99 BOX 34
DEPTH 310 - 320


330
D - 339 - 99 BOX 36
DEPTH 329_5 - 338_5

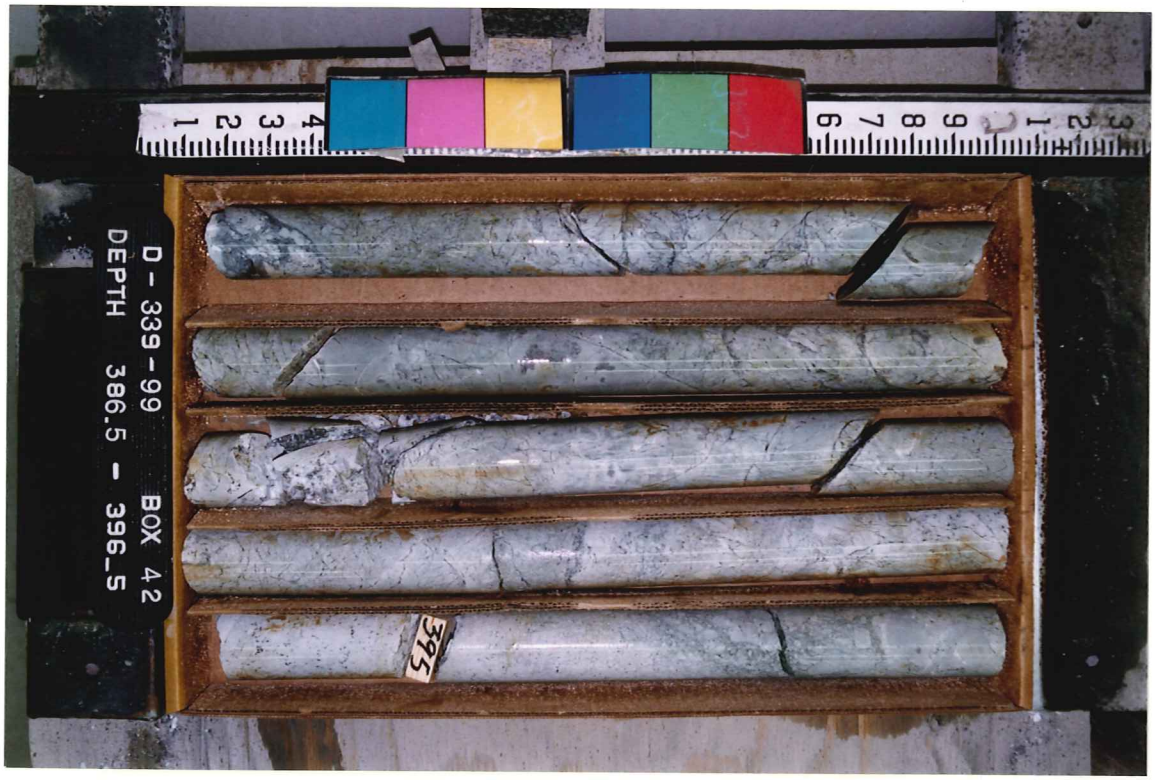
355.5
350
D - 339 - 99 BOX 38
DEPTH 347.5 - 357

340
D - 339 - 99 BOX 37
DEPTH 338.5 - 347.5

D - 339 - 99 BOX 39
DEPTH 357 - 366.5
365

385
D - 339 - 99 BOX 41
DEPTH 377 - 386.5

375
D - 339 - 99 BOX 40
DEPTH 366.5 - 377


395
D - 339 - 99 BOX 42
DEPTH 386.5 - 396.5

415'
D - 339 - 99 BOX 44
DEPTH 405.5 - 415

405
D - 339 - 99 BOX 43
DEPTH 396_5 - 405.5

425
D - 339 - 99 BOX 45
DEPTH 415 - 425

440'
D - 339 - 99 BOX 47
DEPTH 435 - 444_5

430'
D - 339 - 99 BOX 46
DEPTH 425 - 435

D - 339 - 99 BOX 48
DEPTH 444_5 - 454

465
D - 339 - 99 BOX 50
DEPTH 464 - 474

455
452
D - 339 - 99 BOX 49
DEPTH 454 - 464

475
D - 339 - 99 BOX 51
DEPTH 474 - 483_5

485'
D - 339 - 99 BOX 52
DEPTH 483_5 - 485 TD

WELL D339-99

DEPTH [redacted]

PICTURE NO. [redacted]

INCLINATION -5

OBS. DIR.

COR. DIR.

TOOL FACE

RUN BY

DATE 2-15-99

CHECKED BY

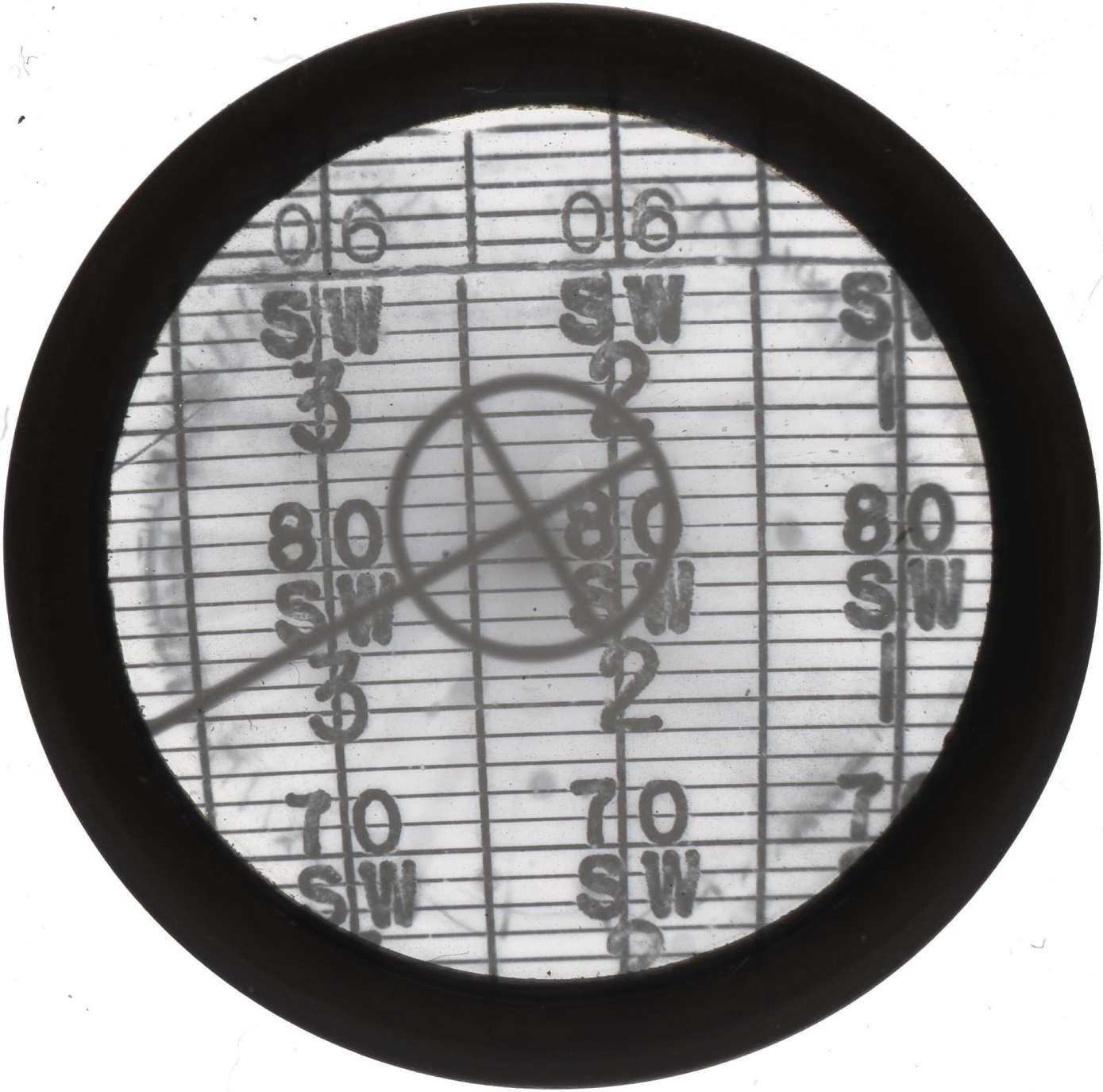
sperry-sun

DRILLING SERVICES

06
SW
3
80
SW
3
70
06
SW
2
80
SW
2
70
SW
SW
1
80
SW
1
7

WELL D339-99
DEPTH 470
PICTURE NO.
INCLINATION -5
OBS. DIR.
COR. DIR.
TOOL. FACE
RUN BY
DATE 2-15-99
CHECKED BY

sperry-sun
DRILLING SERVICES


06
SW
3
80
SW
3
70
SW
06
SW
2
80
SW
2
70
SW
SW
1
80
SW
1

WELL D339-99

DEPTH

PICTURE NO. [redacted]

INCLINATION

OBS. DIR. -5 N

COR. DIR.

TOOL FACE

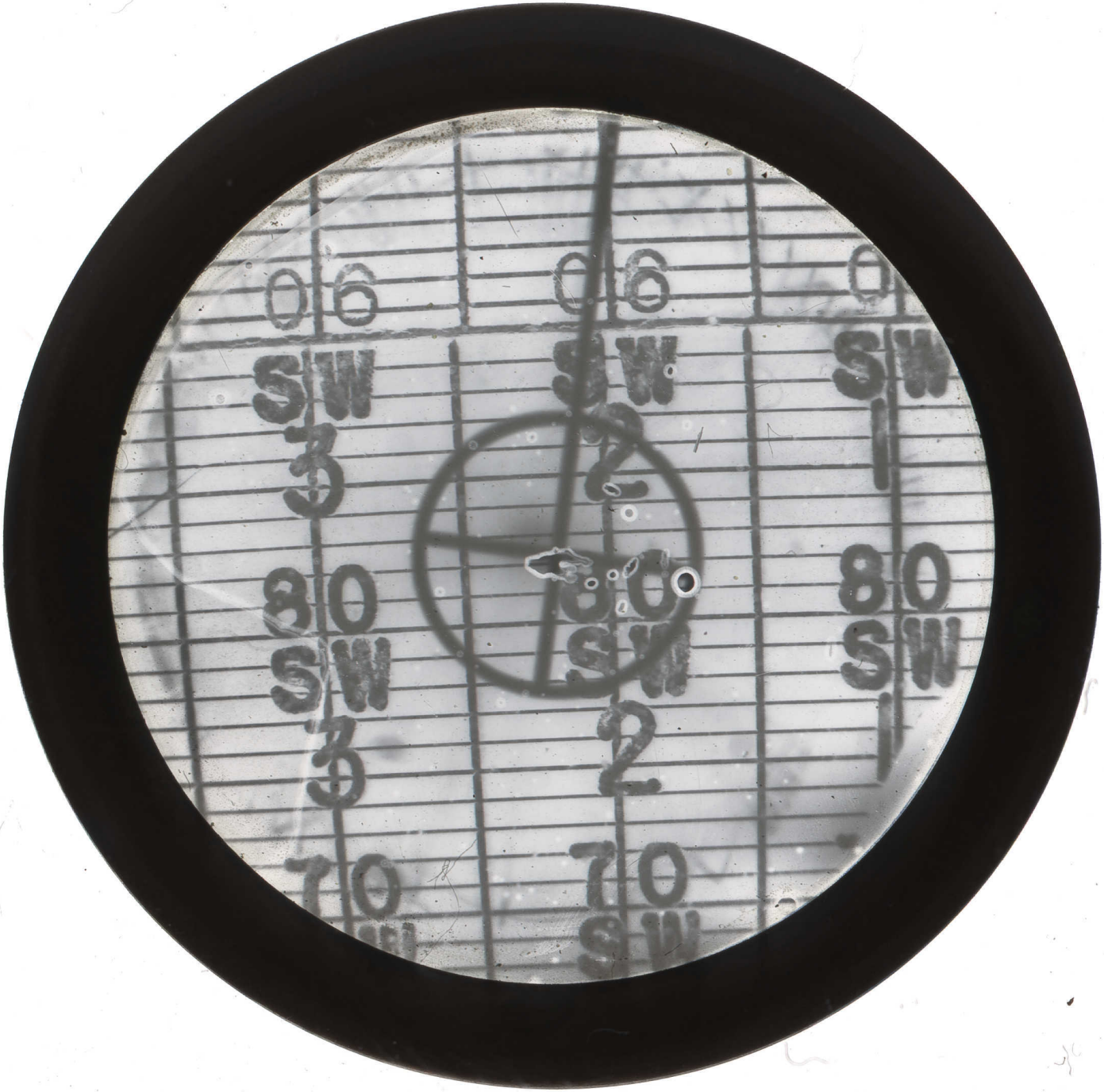
RUN BY

DATE 2-15-99

CHECKED BY

sperry-sun

DRILLING SERVICES


06
06
SW
SW
SW
3
2
1
80
80
80
SW
SW
SW
3
2
1
70
70

WELL 339-99
DEPTH
PICTURE NO. 100
INCLINATION -5
OBS. DIR.
COR. DIR.
TOOL FACE
RUN BY
DATE 2-15-99
CHECKED BY

sperry-sun
DRILLING SERVICES

06
06
SW
SW
3
2
80
80
SW
SW
2
70
70

WELL 339-99

DEPTH [redacted]

PICTURE NO. 9

INCLINATION -5

OBS. DIR.

COR. DIR.

TOOL FACE

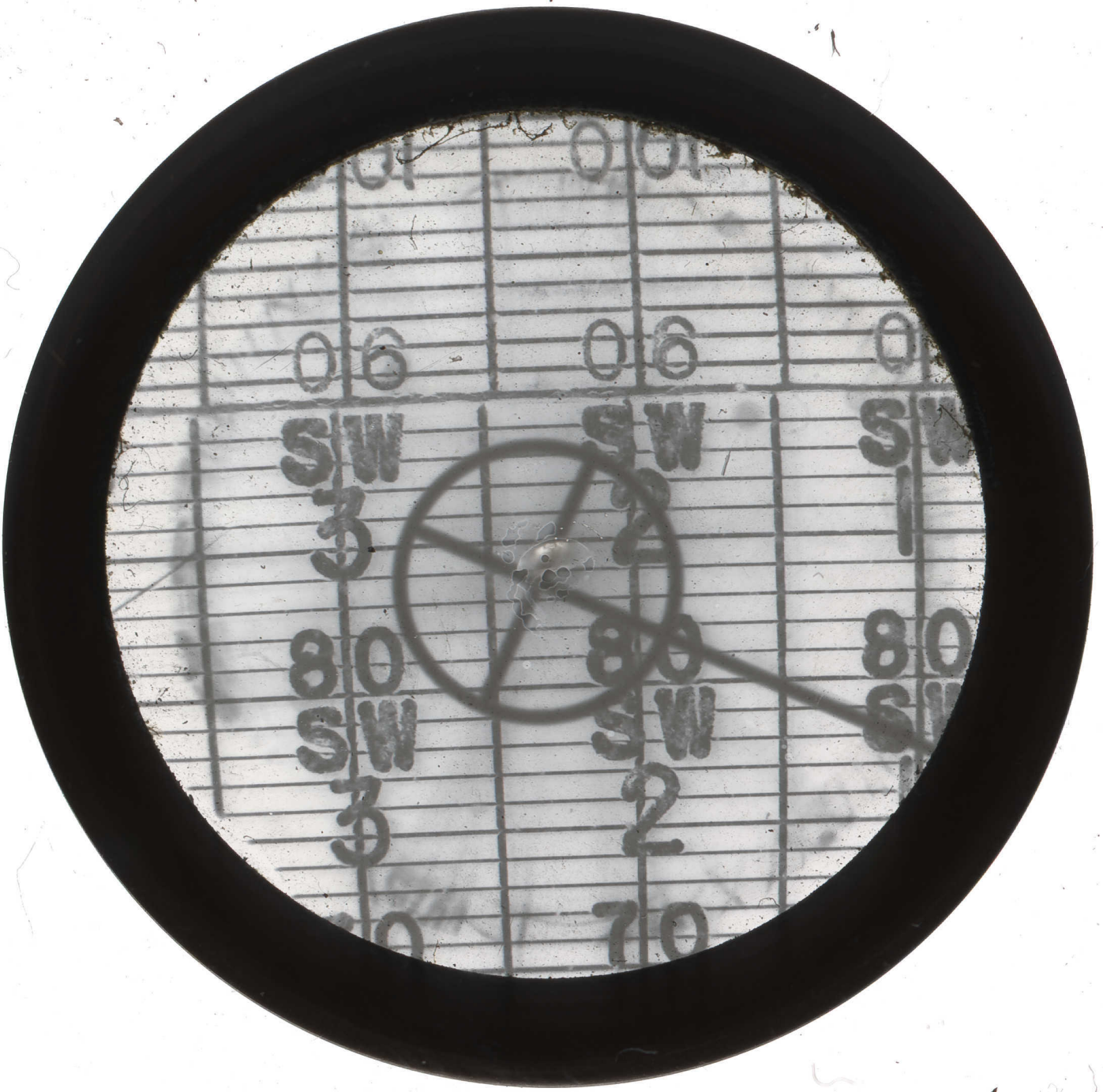
RUN BY

DATE 2-15-96

CHECKED BY

sperry-sun

DRILLING SERVICES


06
06
SW
SW
3
2
80
80
SW
SW
3
2
70