60001239

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-338-99
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 309' receipt; handwritten notes; downhole camera images 32p. 3 down hole camera images

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

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

Revised: 1/22/08

D-338-99

60001239 4010

60001239

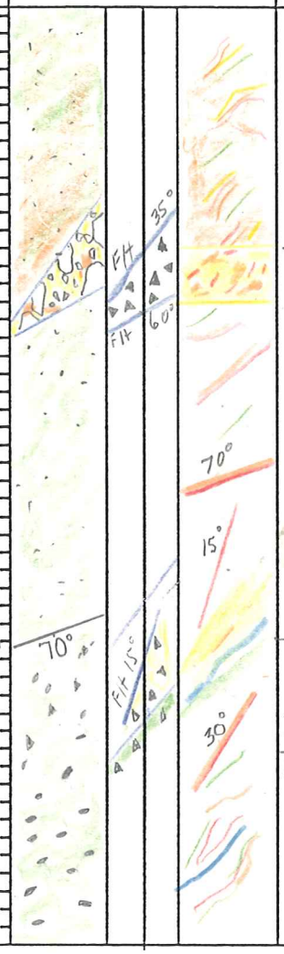
- ☐ quartz, chalcedony, silicification
- ☐ faults, fractures
- ☐ FeOx
- ☐ sulfide
- ☐ calcite, carbonate
- ☐ argillization, white clays
- ☐ propylitization
- ☐ potassic alteration
- ☐ chlorite, chloritic clays

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-338-99	LOCATION	
PAGE 1 OF 5		NORTHING	
DATE	4-28-99	EASTING	
LOGGED BY	Brian W. Morris	ELEVATION	
SCALE	1" = 20'	AZIMUTH	S 41E
TOTAL DEPTH	309'	INCLINATION	10°

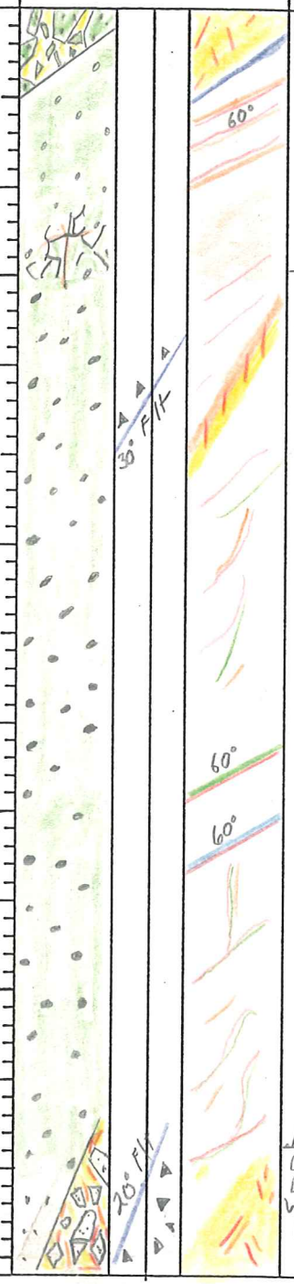
REMARKS

LITH	OX/RE	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	A
		0-35.5 Fine Grain Massive	10, 20, 30, 40, 50		14.5-17.5' Rubble BXA: Mostly Clast Supported Rubble BXA w/ Gry SiO_2 Mtx, Mtx is Vuggy w/ druzy Qt + bladed Marc ± W.C. Vug fillings.	0-14.5' Wk-Mod blch & argil, Wk-locally mod Marc ± W.C. ± Gr Clay ± SiO_2 Veinlets & stringers.	0	10					
						17.5-35.5' Wk-Mod W.C. + Marc ± Gr Clay Vn.	10	20					
							20	30					
		35.5' LST Olive br-gr fg. equigranular w/ Ltgr-Wh spotted text.	contact		38-40.5' Rubble bxa & bxa Vns, gray SiO_2 healed w/ Mod Vugs, Marc filled Vugs ± W.C. 40.5-42.5' Mosaic gr. clay healed bxa.	35.5-38.0' druzy Qt + marc lined vugs, locally W.C. + $CaCO_3$ filled Vugs.	30	40					
							40	50					

HOLE NUMBER P-338-99 PAGE 2 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		LST Olive br – gr fg equigranular w/ lt gr-wh spotted text	60 70 80 90 100 110 120	45° B 90° $CaCO_3$ Vn Flt. 75° 50° 55° 45°		50-80 Wk Py Vnlets, locally Mod Sulf soaked patches, Wk py + chlor Vn, Minor ½" wide $CaCO_3$ Vn. 80-116' Mod blch & cok argil, Minor ¼-½" wide W.C. + Marc + $CaCO_3$ Vn, Wk-locally Mod Sulf Stringers, locally mod Sulf Soaked patches. Wk Marc + $CaCO_3$ Vnlets.	50.0	60.0				
							60.0	70.0				
							70.0	80.0				
							80.0	90.0				
							90.0	100.0				
							100.0	110.0				
							110.0	120.0				

HOLE NUMBER D-338-99 PAGE 3 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		LST	130, 140, 150, 160, 170, 180, 190		119-123' Flt: Blast supported Rubble bxa, 1-3cm angular clasts healed by gry SiO_2; Mtx mod leached w/ drusy qt lined vugs, Mod Marc in Mtx, wk Wh Clay. 130-135' Str Fxing, str Clayey Fx. wk w.c. coating on Fx. 186-190 Flt. Gry SiO_2 healed Mosaic ~~bxa~~, str leaching of Mtx w/ some w.c. replacement, bladed marc in vugs.	123-130' str Parallel w.c. + Marc ± SiO_2 1/8"-1/4" wide Vns. Marc → py. 145-185.0 wk sulf + chlor ± gr clay Vnlets & Vns, locally mod sulf soaked patches, Occasional 1/4-1/2" wide $CaCO_3$ + Marc Vns

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
120.0	130.0				
130.0	140.0				
140.0	150.0				
150.0	160.0				
160.0	170.0				
170.0	180.0				
180.0	190.0				

HOLE NUMBER D-338-99 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		LST	200, 210, 220, 230, 240, 250, 260	60° B; 45°; 60° Alt	223.0 – Str Fx, Zones of SiO_2 healed, Bxcw/W.C. replacement of Mtx.	190–221: WK Alt., Fine sulf inlets along bedding; 223.0 – Mod–Str blch & argil, locally mod W.C, Marc → py.	190.0	200.0				
							200.0	210.0				
							210.0	220.0				
							220.0	230.0	0.091			
							230.0	240.0	0.109			
							240.0	250.0	0.103			
							250.0	260.0				

HOLE NUMBER D-338-99 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
		262' Fine Grain Massive olive br fg equigranular massive	270 280 290 300		281.5' Clast supported & healed by w.c., v. str argil overprint.	260-275' Clayey Fx & w.c. healed crackle brx. 275' Str argil alt overprint of propilitized rx, wk mdrc/py, str blch. 297' Strongly argil & blch.	260.0	270.0				
							270.0	280.0				
							280.0	290.0				
		297' Dozer Rhyolite			297' 1" wide sulfidic clay flt plane.		290.0	300.0				
		T.D. 309'					300.0	309.0				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-338-99 DATE: 4-28-99 LOGGED BY: Brian W. Morris PAGE 1 OF 5

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	100.0	90.0	54.0										
5	10	100.0	100.0	82.0										
10	15	100.0	98.0	66.0										
15	20	100.0	92.0	58.0										
20	25	100.0	100.0	72.0										
25	30	100.0	92.0	76.0										
30	35	100.0	96.0	78.0										
35	40	100.0	100.0	86.0										
40	45	100.0	96.0	70.0										
45	50	100.0	94.0	84.0										
50	55	100.0	100.0	98.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-338-99 DATE: 4-28-99 LOGGED BY: BWM PAGE 2 OF 5

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)
55.0	60.0	100.0	94.0	82.0										
60.0	65.0	100.0	94.0	94.0										
65.0	70.0	100.0	100.0	88.0										
70.0	75.0	100.0	96.0	86.0										
75.0	80.0	100.0	90.0	76.0										
80.0	85.0	100.0	84.0	54.0										
85.0	90.0	100.0	98.0	68.0										
90.0	95.0	100.0	98.0	66.0										
95.0	100.0	100.0	96.0	88.0										
100.0	105.0	100.0	98.0	72.0										
105.0	110.0	100.0	96.0	84.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-338-99 DATE: 4-28-99 LOGGED BY: BWM PAGE 3 OF 5

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)
110.0	115.0	100.0	98.0	68.0										
115.0	120.0	100.0	94.0	64.0										
120.0	125.0	100.0	94.0	66.0										
125.0	130	100.0	100.0	70.0										
130	135	100.0	84.0	22.0										
135	140	100.0	88.0	38.0										
140	145	100.0	94.0	62.0										
145	150	100.0	88.0	60.0										
150	155	100.0	90.0	32.0										
155	160	100.0	100.0	42.0										
160	165	100.0	94.0	56.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-338-99 DATE: 4-29-99 LOGGED BY: BWM PAGE 4 OF 5

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)
165.0	170.0	100.0	98.0	82.0										
170.0	175.0	100.0	96.0	96.0										
175.0	180.0	100.0	96.0	76.0										
180.0	185.0	100.0	88.0	38.0										
185.0	190.0	100.0	94.0	64.0										
190.0	195.0	100.0	98.0	60.0										
195.0	200.0	100.0	96.0	64.0										
200.0	205.0	100.0	94.0	48.0										
205.0	210.0	100.0	94.0	44.0										
210.0	215.0	100.0	96.0	44.0										
215.0	220.0	100.0	100.0	66.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-338-99 DATE: 4-29-99 LOGGED BY: BWM PAGE 5 OF 5

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)
220.0	225.0	100.0	94.0	42.0										
225.0	230.0	100.0	100.0	52.0										
230.0	235.0	100.0	86.0	62.0										
235.0	240.0	100.0	94.0	66.0										
240.0	245.0	100.0	100.0	80.0										
245.0	250.0	100.0	94.0	46.0										
250.0	255.0	100.0	94.0	54.0										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053307

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0686, Fax.(775) 356-4413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

:

:

:

CLIENT REFERENCE No: D-338-99 RECEIVED : 3 MAY 1999

No. SAMPLES : 32 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 SP053307

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD PRODUCTION
REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-338-99 000-010	0.019			0.10
D-338-99 010-020	0.019			0.08
D-338-99 020-030	0.047			0.08
D-338-99 030-040	0.010			0.07
D-338-99 040-050	0.008			0.07
D-338-99 050-060	0.008			0.06
D-338-99 060-070	0.008			0.09
D-338-99 070-080	0.006			0.03
D-338-99 080-090	0.013			0.10
D-338-99 090-100	0.009			0.06
D-338-99 100-110	0.040			0.10
D-338-99 110-120	0.042			0.06
D-338-99 120-130	0.012			0.07
D-338-99 130-140	0.015	0.022		0.08
D-338-99 140-150	0.015			0.10
D-338-99 150-160	0.026			0.16
D-338-99 160-170	0.031			0.10
D-338-99 170-180	0.038			0.12
D-338-99 180-190	0.018			0.10
D-338-99 190-200	0.026			0.09
D-338-99 200-210	0.018			0.11
D-338-99 210-220	0.014			0.11
D-338-99 220-230	0.093		0.091	0.08
D-338-99 230-240	0.113		0.109	0.78
D-338-99 240-250	0.089		0.103	0.09

0.78
.09
.87 403
2|87
8/07

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP053307

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD PRODUCTION
REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-338-99 250-260	0.036			0.06
D-338-99 260-270	0.023			0.05
D-338-99 270-280	0.013			0.09
D-338-99 280-290	0.057		0.064	0.09
D-338-99 290-300	0.076		0.081	0.09
D-338-99 300-309	0.003			<0.02
59818	0.616			3.58

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 LLC

Address: Winnemucca

City _____ State NV Zip 89445

Telephone Number: ( ) _____ Fax Number: ( ) _____

Project Name: _____ Purchase Order Number: _____

Date Submitted: 04/30/99 Number of Samples: 31

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [ ] D-338-99

SAMPLE IDENTIFICATION	TYPE	ELEMENTS REQUIRED
0-10 150-160 300-309 TO		Au - Ag As BCR
10-20 160-170		Hecla Protocol
20-30 170-180		
30-40 180-190		
40-50 190-200		
50-60 200-210		
60-70 210-220		
70-80 220-230		
80-90 230-240		
90-100 240-250		
100-110 250-260		
110-120 260-270		
120-130 270-280		
130-140 280-290		
140-150 290-300		

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

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 0053307-IN
INVOICE DATE: 05/12/99

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-338-99	BRIAN MORRIS	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
32	SAMPLES RECEIVED	.00	.00
31	DRYING	3.00	93.00
31	JAW CRUSHING CHARGE	3.90	120.90
31	COARSE MILLING CHARGE	14.50	449.50
31	SPLITTING CHARGE	2.40	74.40
31	RING MILLING CHARGE	2.00	62.00
32	Au (1 A.T. FIRE ASSAY)	8.00	256.00
5	Au ANALYSES/GRAVIMETRIC	8.75	43.75
32	HYDROCHLORIC/NITRIC DIGESTION	2.00	64.00
32	Ag ANALYSES	1.00	32.00

86-5030-477
HWM

NET INVOICE:	1,195.55
LESS DISCOUNT:	239.11
FREIGHT:	.00
INVOICE TOTAL:	956.44

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053307

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

:

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:

CLIENT REFERENCE No: D-338-99 RECEIVED : 3 MAY 1999

No. SAMPLES : 32 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

ANALYSIS REPORT SP053307

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD PRODUCTION
REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-338-99 000-010	0.019			0.10
D-338-99 010-020	0.019			0.08
D-338-99 020-030	0.047			0.08
D-338-99 030-040	0.010			0.07
D-338-99 040-050	0.008			0.07
D-338-99 050-060	0.008			0.06
D-338-99 060-070	0.008			0.09
D-338-99 070-080	0.006			0.03
D-338-99 080-090	0.013			0.10
D-338-99 090-100	0.009			0.06
D-338-99 100-110	0.040			0.10
D-338-99 110-120	0.042			0.06
D-338-99 120-130	0.012			0.07
D-338-99 130-140	0.015	0.022		0.08
D-338-99 140-150	0.015			0.10
D-338-99 150-160	0.026			0.16
D-338-99 160-170	0.031			0.10
D-338-99 170-180	0.038			0.12
D-338-99 180-190	0.018			0.10
D-338-99 190-200	0.026			0.09
D-338-99 200-210	0.018			0.11
D-338-99 210-220	0.014			0.11
D-338-99 220-230	0.093		0.091	0.08
D-338-99 230-240	0.113		0.109	0.78
D-338-99 240-250	0.089		0.103	0.09

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053307

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD PRODUCTION
REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-338-99 250-260	0.036			0.06
D-338-99 260-270	0.023			0.05
D-338-99 270-280	0.013			0.09
D-338-99 280-290	0.057		0.064	0.09
D-338-99 290-300	0.076		0.081	0.09
D-338-99 300-309	0.003			<0.02
59818	0.616			3.58

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053307

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PO BOX 11530
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HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

:

:

:

CLIENT REFERENCE No: D-338-99 RECEIVED : 3 MAY 1999

No. SAMPLES : 32 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

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053307

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD PRODUCTION
REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-338-99 000-010	0.019			0.10
D-338-99 010-020	0.019			0.08
D-338-99 020-030	0.047			0.08
D-338-99 030-040	0.010			0.07
D-338-99 040-050	0.008			0.07
D-338-99 050-060	0.008			0.06
D-338-99 060-070	0.008			0.09
D-338-99 070-080	0.006			0.03
D-338-99 080-090	0.013			0.10
D-338-99 090-100	0.009			0.06
D-338-99 100-110	0.040			0.10
D-338-99 110-120	0.042			0.06
D-338-99 120-130	0.012			0.07
D-338-99 130-140	0.015	0.022		0.08
D-338-99 140-150	0.015			0.10
D-338-99 150-160	0.026			0.16
D-338-99 160-170	0.031			0.10
D-338-99 170-180	0.038			0.12
D-338-99 180-190	0.018			0.10
D-338-99 190-200	0.026			0.09
D-338-99 200-210	0.018			0.11
D-338-99 210-220	0.014			0.11
D-338-99 220-230	0.093		0.091	0.08
D-338-99 230-240	0.113		0.109	0.78
D-338-99 240-250	0.089		0.103	0.09

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP053307

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REFERENCE : D-338-99

REPORTED : 12 MAY 1999

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-338-99 250-260	0.036			0.06
D-338-99 260-270	0.023			0.05
D-338-99 270-280	0.013			0.09
D-338-99 280-290	0.057		0.064	0.09
D-338-99 290-300	0.076		0.081	0.09
D-338-99 300-309	0.003			<0.02
59818	0.616			3.58

D-338-99

40' S38.8E; +10°
150' S39.3°E; +10°
300' S40.3°E; +9°

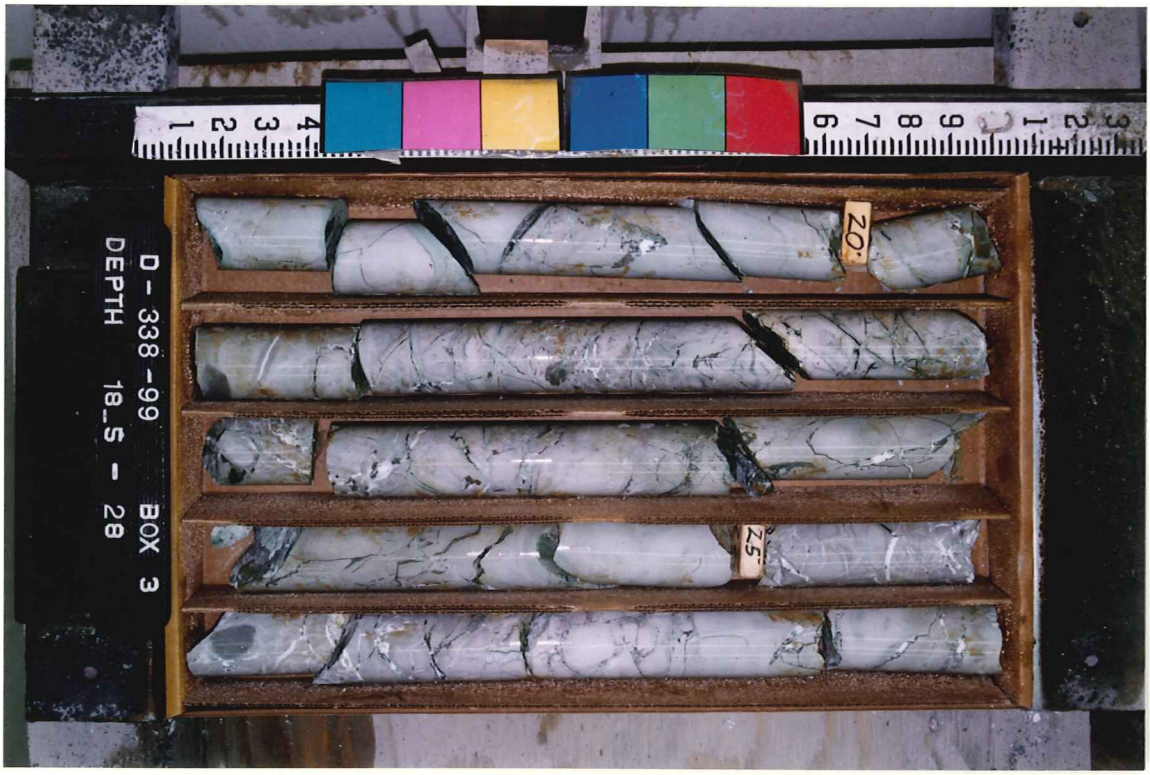
S 54.5 E
- 15.7 +10
= S 38.8 E

S 55 E
- 15.7 +10
S 39.3°E

S 56 E +9°
- 15.7
S 40.3°E

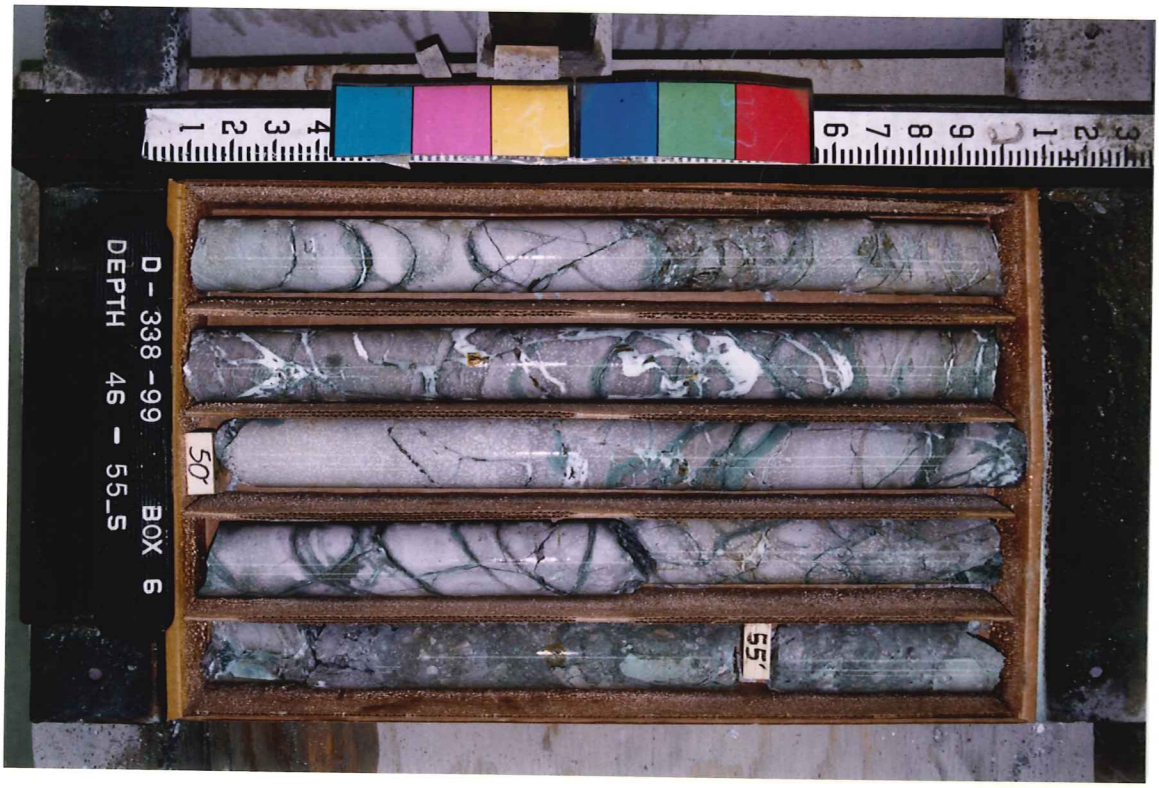
10'
15'
D - 338 -99 BOX 2
DEPTH 9.5 - 18_5

5'
D - 338 -99 BOX 1
DEPTH 0 - 9_5


20'
25'
D - 338 -99 BOX 3
DEPTH 18_5 - 28

40'
45'
D - 338 -99 BOX 5
DEPTH 37 - 46

30'
35'
D - 338 -99 BOX 4
DEPTH 28 - 37


50'
55'
D - 338 -99 BOX 6
DEPTH 46 - 55_5

65'
70'
D - 338 -99 BOX 8
DEPTH 65 - 74

60'
D - 338 -99 BOX 7
DEPTH 55_5 - 65

75
80'
D - 338 -99 BOX 9
DEPTH 74 - 84

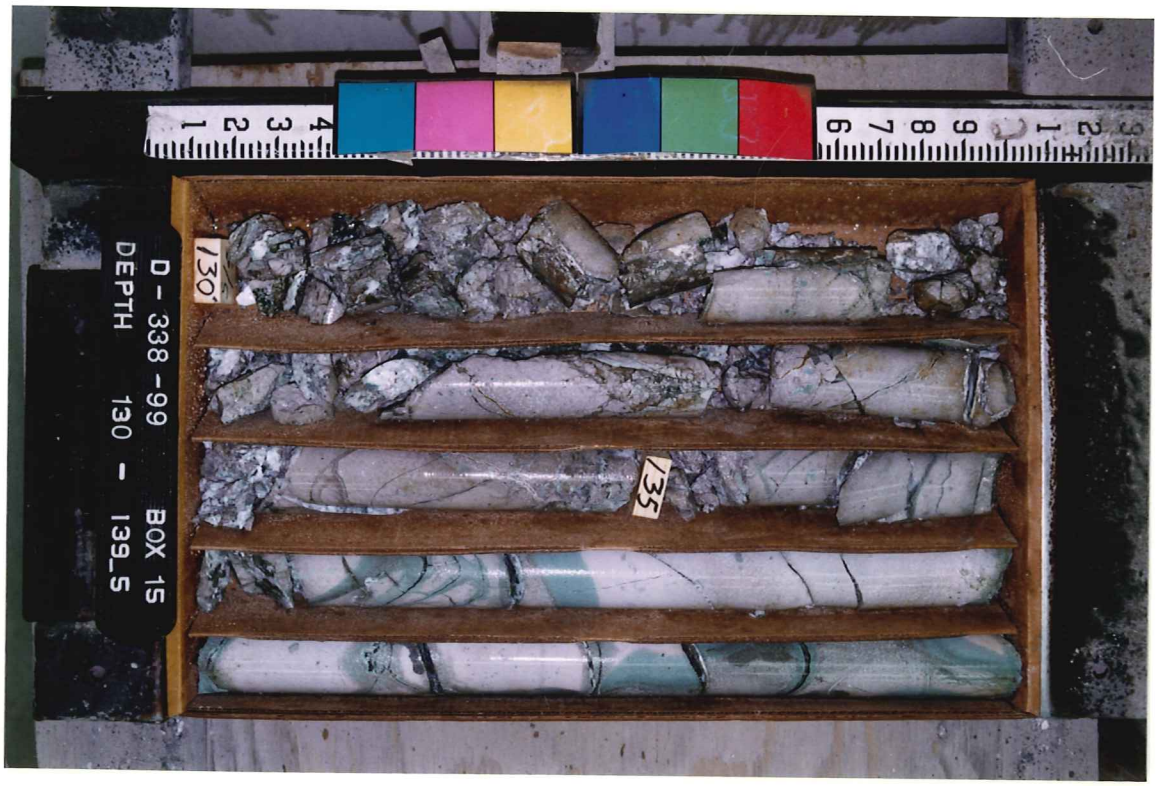
100'
95
D - 338 -99 BOX 11
DEPTH 93 - 102

85'
90'
D - 338 -99 BOX 10
DEPTH 84 - 93

105
110
D - 338 -99 BOX 12
DEPTH 102 - 111

125
D - 338 -99 BOX 14
DEPTH 120_5 - 130

120
120
115
D - 338 -99 BOX 13
DEPTH 111 - 120_5


130
135
D - 338 -99 BOX 15
DEPTH 130 - 139_5

150'
155'
D - 338 -99 BOX 17
DEPTH 149 - 159

145'
140
D - 338 -99 BOX 16
DEPTH 139_5 - 149

160'
165'
D - 338 -99 BOX 18
DEPTH 159 - 168

180'
185
D - 338 -99 BOX 20
DEPTH 177 - 186_5

175'
170
D - 338 -99 BOX 19
DEPTH 168 - 177

190'
195'
D - 338 -99 BOX 21
DEPTH 186_5 - 195_5

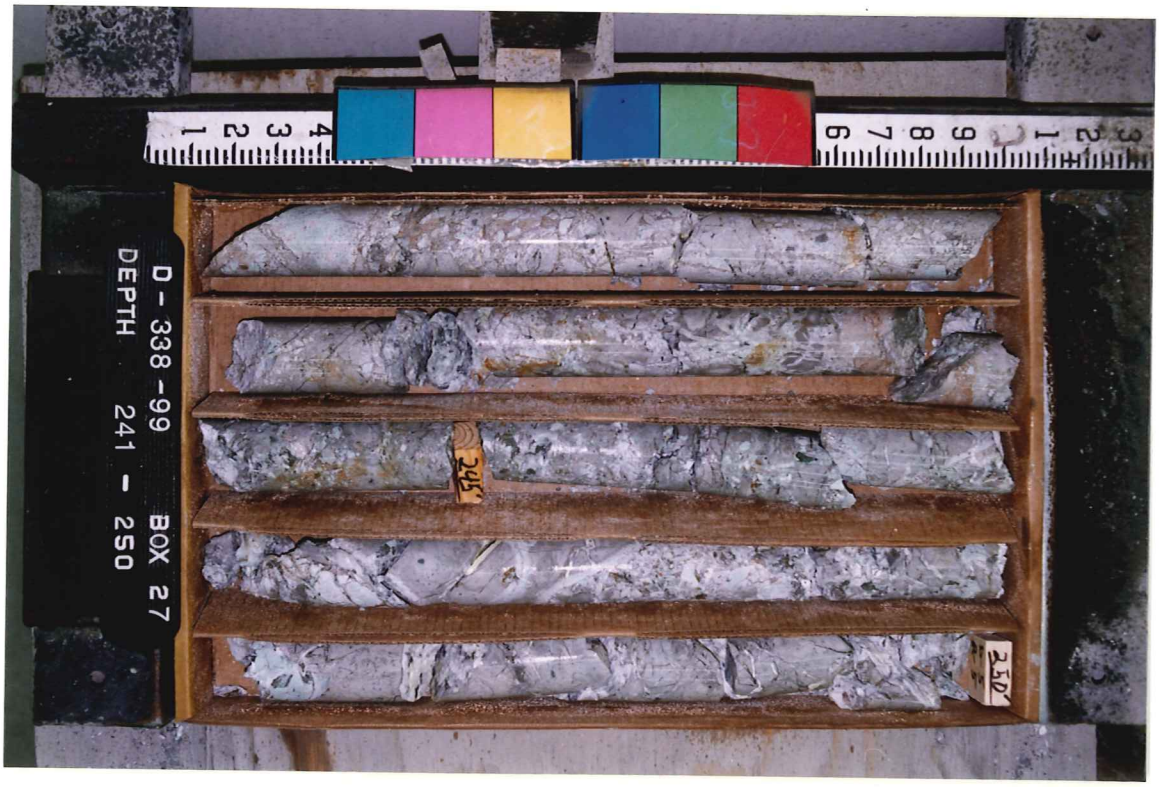
D - 338 -99 BOX 23
DEPTH 205 - 214
205
210

D - 338 -99 BOX 22
DEPTH 195_5 - 205
200

D - 338 -99 BOX 24
DEPTH 214 - 223
215
220

235
240
D - 338 -99 BOX 26
DEPTH 232 - 241

225
230
D - 338 -99 BOX 25
DEPTH 223 - 232


245
250
D - 338 -99 BOX 27
DEPTH 241 - 250

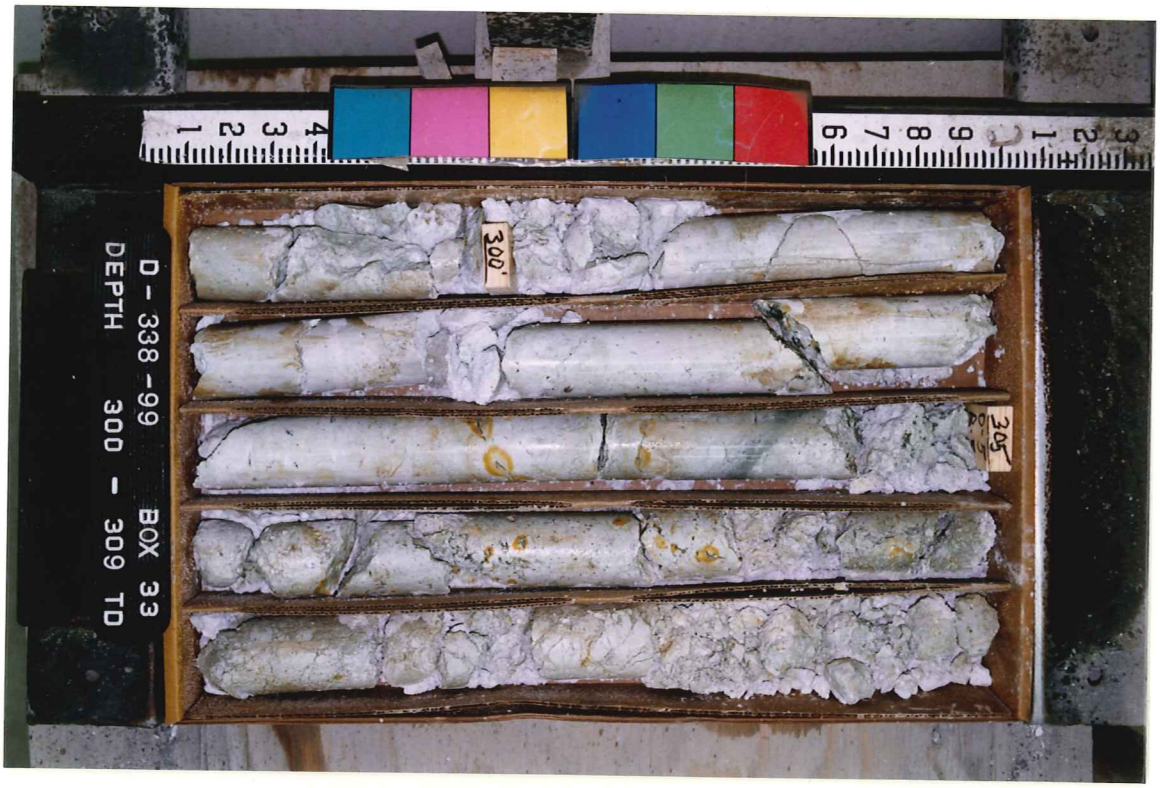
265'
270'
260'
D - 338 -99 BOX 29
DEPTH 259_5 - 272

255'
D - 338 -99 BOX 28
DEPTH 250 - 259_5

275'
280'
D - 338 -99 BOX 30
DEPTH 272 - 281

295'
D - 338 -99 BOX 32
DEPTH 291 - 300

290'
285'
D - 338 -99 BOX 31
DEPTH 281 - 291


300'
305'
D - 338 -99 BOX 33
DEPTH 300 - 309 TD

WELL D 338-99

DEPTH

PICTURE NO. 40

INCLINATION

OBS. DIR. +10

COR. DIR.

TOOL FACE

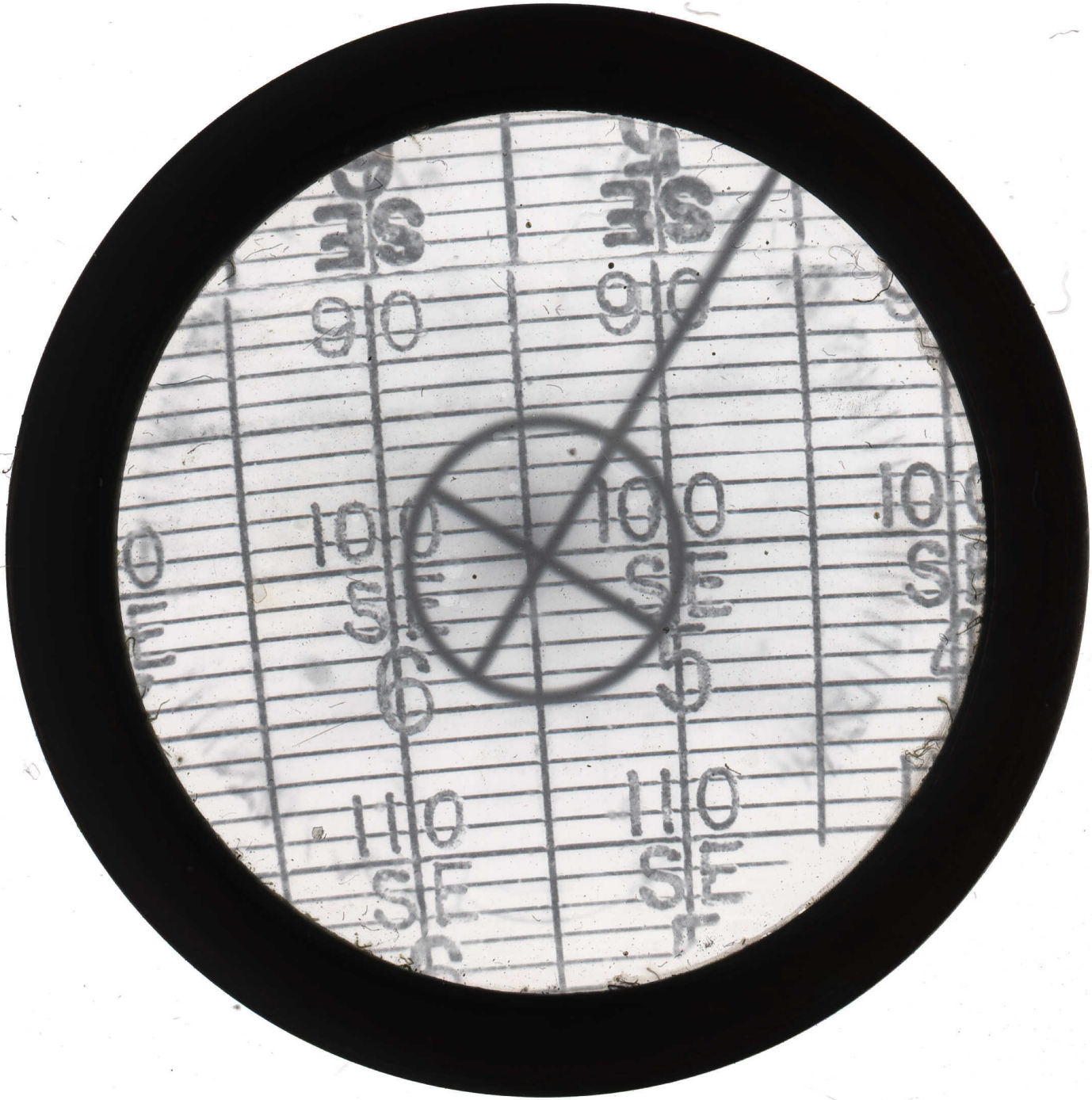
RUN BY

DATE 2-1-99

CHECKED BY

sperry-sun

DRILLING SERVICES


90
SE
100
SE
110
SE

WELL D338-99

DEPTH 150

PICTURE NO.

INCLINATION +10

OBS. DIR.

COR. DIR.

TOOL FACE

RUN BY

DATE 2-11-99

CHECKED BY

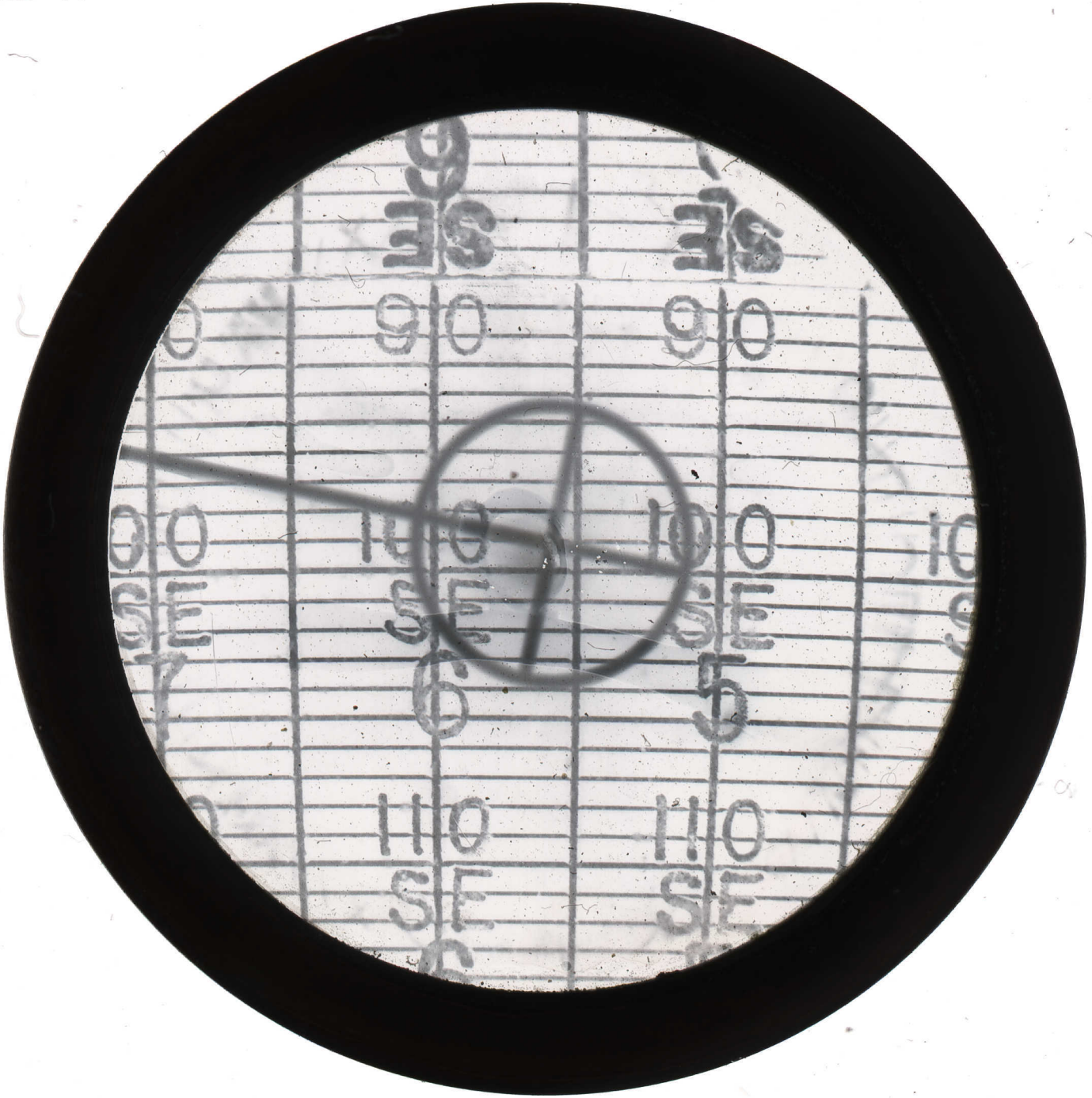
sperry-sun

DRILLING SERVICES

SE
5
90
100
110
SE
6
90
100
110

WELL D338-99
DEPTH 300
PICTURE NO.
INCLINATION +10
OBS. DIR.
COR. DIR.
TOOL FACE
RUN BY
DATE 2-11-99
CHECKED BY

sperry-sun
DRILLING SERVICES


90
SE
90
SE
100
SE
100
SE
110
SE
110
SE