60001226

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-326-98
AUTHOR	S. King; K. Allen; D. Mackerrow
DATE OF DOC(S)	1998
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Rosebud Mining Co. LLC Hecla Mining Co.
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; photographs; total depth 199' receipt; handwritten notes; downhole camera images 28 p. 3 down hole camera images

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

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

Revised: 1/22/08

D-326-98

60001226 4010

6000 1226

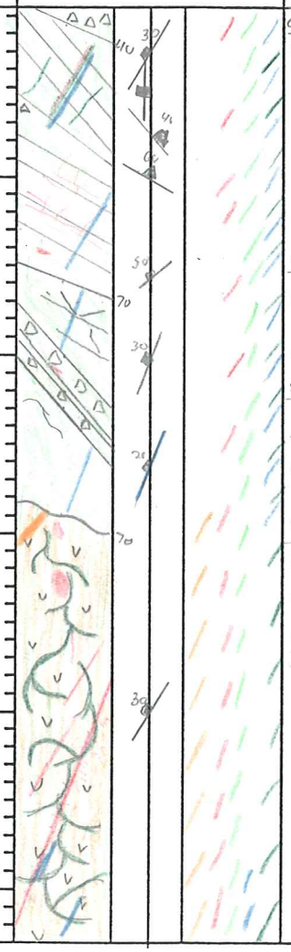
Hecla MINING COMPANY

- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays
- $BaSO_4$

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-326	LOCATION	Stope 50 Sec, 172S
PAGE 1 OF 4		NORTHING	
DATE		EASTING	
LOGGED BY	D. Macherrow	ELEVATION	
SCALE	1" = 10'	AZIMUTH	144
TOTAL DEPTH	199	INCLINATION	51

REMARKS: Drilled 10/6/98

LITH	OX/RE	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
SPLAT ↓	Ren ↓	0–16.2 SLIGHTLY PLANAR LAMINATE Fine grained weakly foliated flow. Pale green gray color	0, 10		0–1.5 Auto Bxo of Subrounded clast SPLAT Low expansion and rotation 16.2–28.5 MULTIPLE ORIENTATION healed fractures that expand to Auto breccias 20-21 – 22-23 Auto bxo subangular to subrounded clast mosaic Bxo	0–16.2 very small Pyrite veinlets Calcite veins. Rocks are weakly calcareous Background Propylitic alteration
FG, m ↓		16.2–28.5 FINE GRAINED MASSIVE Very fine grained massive flow. Blotchy texture of dark gray green dense rock with light green weakly argillized rock around fractures	20			16.2–28.5 Propylitic altered FGM calcite veins and locally calcareous weak argillization spot leach interval Pyrite is disseminated at <1%
VIT ↓		28.5–53.3 VITROPHYRE Extremely fine grained highly welded volcanic. Pale green color with chlorite stained fractures	30, 40, 50		28.5–53.3 Distinctive concoidal fracture pattern AT 38' and 41' there are fracture showing oblique slip motion 40° TCA	28.5–53.3 Pyrite veinlets with occasional trace white clay. 32–33 Pyrite accumulation 43–44 Pyrite vein with halo of disseminated Pyrite around it. 49–53.3 Calcite veinlets and pyrite

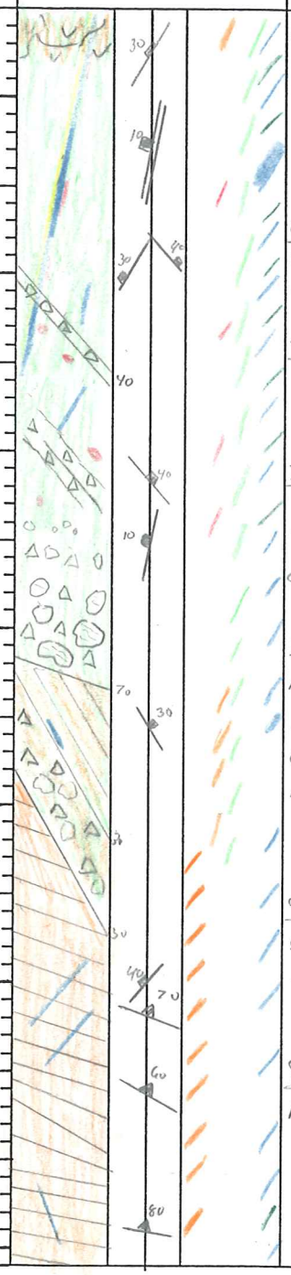
ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ac
0	5					
5	9					
9	14					
14	16.2					
16.2	19					
19	24					
24	28.5					
28.5	31					
31	34					
34	39					
39	44					
44	49					
49	53.3					

HOLE NUMBER D-326-98 PAGE 2 OF 4

LITH.	OX/RED.	LITHOLOGY	STRUCTURE	ALTERATION AND MINERALIZATION
VFT	Red ↓	28.5-53.3 VITROPHYRE	Contact (53.3) with Vitrophyre is gradational and based on texture and alteration	
FGM ↓		53.3-80.1 FINE GRAINED MASSIVE Fine grained flow without foliation. Pale green in color. Ghost like autobreccia with minimal disturbance. Pino 61 79-80.1 Possible chloritized vesicles Contact with SPLAT is a autobxa. Contact grades into breccia	67-68 Autobxa Crackle bxa expansion little to no rotation 72-72.5 Small Bxa that is not tectonic 74-79 minor healed fracture swarm. From 74-77 swarm approaches Crackle Bxa intensity	58.2-59.9 White QTZ and Calcite Vein ≈ 2" thick, 10° TCA Pyrite and marcasite on edge of vein. 59.9-81.1 Very low Sulfide content <0.5% most py is concentrated in agglomerations
SPLAT ↓		80.1-199 SLIGHTLY PLANAR LAMINAR Fine to medium grained Volcanic Heterolithic Autobxa at the contact. Clast consist of Vitrophyre, finely vesicular splat clast 87.4-91.6 Vitrophyre like alteration and fracturing weak foliation visible	80.1-87.4 Autobxa with Subangular clast chloritic clay matrix heal rubble Bxa 91.6-98.1 Autobxa Subangular clast with moderate expansion and rotation 99.2-101.9 Auto Bxa	98.1 calcite veinlets and weak fizz to Rock Powdered Rock reacts to acid. Sulfides <1% chlorite traces on some fracture STRONGER OXIDATION takes place along fractures
SPLAT	98.1 OX	98.1-199 PURPLE BROWN Fine to medium grained flow Oxidized with occasional remenant partially oxidized sulfides		

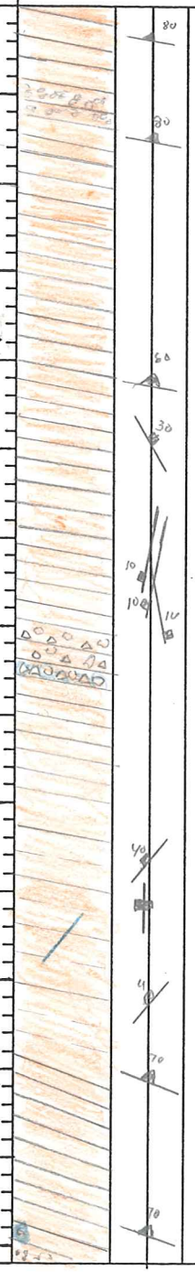
GRAPHIC LOG



ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	A
49	53.3					
53.3	58.2					
58.2	59.9					
59.9	64					
64	69					
69	74					
74	79					
79	80.1					
80.1	84					
84	87.4					
87.4	91.6					
91.6	94					
94	98.1					
98.1	101.9					
101.9	104					
104.0	106.0	REMOVED FOR THIN SEC STUDY				
106.0	109.0					
109	114					
114	119					

HOLE NUMBER D-326-98 PAGE 3 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
PLAT. ↓	OX	80.1-199 PLANAR LAMINAR Fine grained laminated Flow, Core is parting along the laminations. Foliation is very close to perpendicular to drilling 134-139 vesicular Flow. spotted tuff/speckled tuff? 154 - 180 Foliation is not as distinctive	120 130 140 150 160 170 180 190		152-154 High angle fracture swarm in two orientations of 10° TCA 149-173 Generally increased fracturing 156-158 Autobxu subround clast 160-160.2 fractures with a small amount of open space, 1/16 to 1/8" calcite crystals have grown	80.1-199 Calcareous Flow with calcite veins Fractures have halos of increased oxidation 171-175 Rock is less calcareous but veinlets and fracture coatings of $CaCO_3$ persist

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	A
119	124					
124	129					
129	134					
134	139					
139	144					
144	149					
149	154					
154	159					
159	164					
164	168					
168	173					
173	178					
178	183					
183	188					
188	191					

HOLE NUMBER D-326-98 PAGE 4 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	A
SPLAT ⇓	OX	80.1-199 SLIGHTLY PLANAR LAMINAR UNALTED PURPLE BROWN Fine to medium grain flow. Foliation present. Weak to moderately calcareous with calcite veins, Sporatic patches of vesiculs. Purple color believed to be oxidation T.D. 199	190 200 210	EOH	Fractures predominantly with Foliation at 60° TCA		188 191 194	191 194 199					

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-326-98 DATE: 11-8-98 LOGGED BY: D.G. MacKerron PAGE 1 OF 4

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	70	100	34										
5	9	40	100	48										
9	14	66	100	52										
14	19	100	100	90										
19	24	100	100	66										
24	29	100	100	70										
29	34	100	100	68										
34	39	98	100	90										
39	44	100	100	76										
44	49	100	100	84										
49	54	100	100	98										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-326-98 DATE: 11-8-98 LOGGED BY: D.G. Mocherron PAGE 2 OF 4

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)
54	59	100	100	80										
59	64	78	100	26										
64	69	94	100	84										
69	74	100	100	88										
74	79	100	100	92										
79	84	100	100	96										
84	89	100	100	92										
89	94	100	100	100										
94	99	100	100	60										
99	104	100	100	72										
104	109	100	100	82										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-326-98 DATE: 11-8-98 LOGGED BY: D.G. Mackerrow PAGE 3 OF 4

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)
109	114	100	100	90										
114	119	100	100	84										
119	124	100	100	56										
124	129	100	100	54										
129	134	100	100	25										
134	139	100	100	90										
139	144	100	100	70										
144	149	100	100	48										
149	159	98	100	74										
159	164	81	100	66										
164	168	25	100	20										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-326-98 DATE: 11-9-98 LOGGED BY: D.G. Macherron PAGE 4 OF 4

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)
168	173	40	100	80										
173	178	100	100	100										
178	183	96	100	58										
183	188	100	100	68										
188	189	100	100	50										
189	194	100	100	50										
194	199	100	100	50										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051626

PO BOX 11530
RENO NV.USA
Ph.(702) 356-0606. Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

NSI

CLIENT REFERENCE No: D-326-98 RECEIVED : 18 NOV 1998

No. SAMPLES : 48 REPORTED : 4 DEC 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051626

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-326-98 0-5	<0.001		<0.02
D-326-98 5-9	<0.001		<0.02
D-326-98 9-14	<0.001		<0.02
D-326-98 14.0-16.2	<0.001		<0.02
D-326-98 16.2-19.0	<0.001		0.02
D-326-98 19-24	<0.001		<0.02
D-326-98 24.0-28.5	<0.001		<0.02
D-326-98 28.5-31.0	<0.001		<0.02
D-326-98 31-34	<0.001		0.03
D-326-98 34-39	<0.001		0.02
D-326-98 39-44	<0.001		<0.02
D-326-98 44-49	0.005		<0.02
D-326-98 49.0-53.3	0.016	0.010	0.02
D-326-98 53.3-58.2	<0.001		0.04
D-326-98 58.2-59.9	0.003		0.03
D-326-98 59.9-64.0	<0.001		<0.02
D-326-98 64-69	<0.001		<0.02
D-326-98 69-74	<0.001		<0.02
D-326-98 74-79	<0.001		<0.02
D-326-98 79.0-80.1	<0.001		<0.02
D-326-98 80.1-84.0	<0.001		<0.02
D-326-98 84.0-87.4	<0.001		<0.02
D-326-98 87.4-91.6	<0.001		0.02
D-326-98 91.6-94.0	<0.001		<0.02
D-326-98 94.0-98.1	<0.001		<0.02

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PROVISIONAL REPORT SP051626

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-326-98 98.1-101.9	<0.001		<0.02
D-326-98 101.9-104.0	<0.001		<0.02
D-326-98 104-106		SAMPLE NOT RECEIVED	
D-326-98 106-109	<0.001		<0.02
D-326-98 109-114	<0.001		<0.02
D-326-98 114-119	<0.001		<0.02
D-326-98 119-124	<0.001		<0.02
D-326-98 124-129	<0.001		<0.02
D-326-98 129-134	<0.001		<0.02
D-326-98 134-139	<0.001		<0.02
D-326-98 139-144	<0.001		<0.02
D-326-98 144-149	<0.001		<0.02
D-326-98 149-154	<0.001		<0.02
D-326-98 154-159	<0.001		<0.02
D-326-98 159-164	<0.001		<0.02
D-326-98 164-168	<0.001		<0.02
D-326-98 168-173	<0.001		<0.02
D-326-98 173-178	<0.001		<0.02
D-326-98 178-183	<0.001		<0.02
D-326-98 183-188	<0.001		<0.02
D-326-98 188-191	<0.001		<0.02
D-326-98 191-194	<0.001		<0.02
D-326-98 194-199	<0.001		<0.02
46614	0.544		4.73

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 0051626-IN
INVOICE DATE: 12/04/98

INVOICE TO:
THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

CUSTOMER P.O.	PROJECT	TERMS
D-326-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
48	SAMPLES RECEIVED	.00	.00
47	DRYING	1.00	47.00
47	JAW CRUSHING CHARGE	1.30	61.10
47	COARSE MILLING CHARGE	4.50	211.50
47	SPLITTING CHARGE	2.40	112.80
47	RING MILLING CHARGE	2.00	94.00
48	Au (1 A.T. FIRE ASSAY)	8.00	384.00
48	HYDROCHLORIC/NITRIC DIGESTION	2.00	96.00
48	Ag ANALYSES	1.00	48.00

86 - 5110-477
EAA

NET INVOICE:	1,054.40
LESS DISCOUNT:	210.88
FREIGHT:	.00
INVOICE TOTAL:	843.52

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ANALYSIS REPORT SP051626

American Assay Laboratories

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RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-326-98 RECEIVED : 18 NOV 1998

No. SAMPLES : 48 REPORTED : 4 DEC 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
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ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051626

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-326-98 0-5	<0.001		<0.02
D-326-98 5-9	<0.001		<0.02
D-326-98 9-14	<0.001		<0.02
D-326-98 14.0-16.2	<0.001		<0.02
D-326-98 16.2-19.0	<0.001		0.02
D-326-98 19-24	<0.001		<0.02
D-326-98 24.0-28.5	<0.001		<0.02
D-326-98 28.5-31.0	<0.001		<0.02
D-326-98 31-34	<0.001		0.03
D-326-98 34-39	<0.001		0.02
D-326-98 39-44	<0.001		<0.02
D-326-98 44-49	0.005		<0.02
D-326-98 49.0-53.3	0.016	0.010	0.02
D-326-98 53.3-58.2	<0.001		0.04
D-326-98 58.2-59.9	0.003		0.03
D-326-98 59.9-64.0	<0.001		<0.02
D-326-98 64-69	<0.001		<0.02
D-326-98 69-74	<0.001		<0.02
D-326-98 74-79	<0.001		<0.02
D-326-98 79.0-80.1	<0.001		<0.02
D-326-98 80.1-84.0	<0.001		<0.02
D-326-98 84.0-87.4	<0.001		<0.02
D-326-98 87.4-91.6	<0.001		0.02
D-326-98 91.6-94.0	<0.001		<0.02
D-326-98 94.0-98.1	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051626

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-326-98 98.1-101.9	<0.001		<0.02
D-326-98 101.9-104.0	<0.001		<0.02
D-326-98 104-106		SAMPLE NOT RECEIVED	
D-326-98 106-109	<0.001		<0.02
D-326-98 109-114	<0.001		<0.02
D-326-98 114-119	<0.001		<0.02
D-326-98 119-124	<0.001		<0.02
D-326-98 124-129	<0.001		<0.02
D-326-98 129-134	<0.001		<0.02
D-326-98 134-139	<0.001		<0.02
D-326-98 139-144	<0.001		<0.02
D-326-98 144-149	<0.001		<0.02
D-326-98 149-154	<0.001		<0.02
D-326-98 154-159	<0.001		<0.02
D-326-98 159-164	<0.001		<0.02
D-326-98 164-168	<0.001		<0.02
D-326-98 168-173	<0.001		<0.02
D-326-98 173-178	<0.001		<0.02
D-326-98 178-183	<0.001		<0.02
D-326-98 183-188	<0.001		<0.02
D-326-98 188-191	<0.001		<0.02
D-326-98 191-194	<0.001		<0.02
D-326-98 194-199	<0.001		<0.02
46614	0.544		4.73

xAMERICAN ASSAY LABORATORIES
ANALYSIS REPORT SP051626

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HECLA MINING COMPANY

COPIES TO : KURT ALLEN
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CLIENT REFERENCE No: D-326-98 RECEIVED : 18 NOV 1998

No. SAMPLES : 48 REPORTED : 4 DEC 1998

MAIN SAMPLE TYPE : DRILL CORE

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ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051626

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-326-98 0-5	<0.001		<0.02
D-326-98 5-9	<0.001		<0.02
D-326-98 9-14	<0.001		<0.02
D-326-98 14.0-16.2	<0.001		<0.02
D-326-98 16.2-19.0	<0.001		0.02
D-326-98 19-24	<0.001		<0.02
D-326-98 24.0-28.5	<0.001		<0.02
D-326-98 28.5-31.0	<0.001		<0.02
D-326-98 31-34	<0.001		0.03
D-326-98 34-39	<0.001		0.02
D-326-98 39-44	<0.001		<0.02
D-326-98 44-49	0.005		<0.02
D-326-98 49.0-53.3	0.016	0.010	0.02
D-326-98 53.3-58.2	<0.001		0.04
D-326-98 58.2-59.9	0.003		0.03
D-326-98 59.9-64.0	<0.001		<0.02
D-326-98 64-69	<0.001		<0.02
D-326-98 69-74	<0.001		<0.02
D-326-98 74-79	<0.001		<0.02
D-326-98 79.0-80.1	<0.001		<0.02
D-326-98 80.1-84.0	<0.001		<0.02
D-326-98 84.0-87.4	<0.001		<0.02
D-326-98 87.4-91.6	<0.001		0.02
D-326-98 91.6-94.0	<0.001		<0.02
D-326-98 94.0-98.1	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051626

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-326-98

REPORTED : 4 DEC 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-326-98 98.1-101.9	<0.001		<0.02
D-326-98 101.9-104.0	<0.001		<0.02
D-326-98 104-106		SAMPLE NOT RECEIVED	
D-326-98 106-109	<0.001		<0.02
D-326-98 109-114	<0.001		<0.02
D-326-98 114-119	<0.001		<0.02
D-326-98 119-124	<0.001		<0.02
D-326-98 124-129	<0.001		<0.02
D-326-98 129-134	<0.001		<0.02
D-326-98 134-139	<0.001		<0.02
D-326-98 139-144	<0.001		<0.02
D-326-98 144-149	<0.001		<0.02
D-326-98 149-154	<0.001		<0.02
D-326-98 154-159	<0.001		<0.02
D-326-98 159-164	<0.001		<0.02
D-326-98 164-168	<0.001		<0.02
D-326-98 168-173	<0.001		<0.02
D-326-98 173-178	<0.001		<0.02
D-326-98 178-183	<0.001		<0.02
D-326-98 183-188	<0.001		<0.02
D-326-98 188-191	<0.001		<0.02
D-326-98 191-194	<0.001		<0.02
D-326-98 194-199	<0.001		<0.02
46614	0.544		4.73

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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(702) 738-2594

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Santiago, Chile
Mendoza, Argentina

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Address: P.O. Box 2610

City Winnemucca State NV Zip 89445

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

Project Name: Development Purchase Order Number:

Date Submitted: 11/16/98 Number of Samples: 48

Au Ag according to Rosebud Mine Protocols

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

D-326-98 SAMPLE IDENTIFICATION		TYPE	ELEMENTS REQUIRED	
0-5	59.9-64		114-119	188-191
5-9	64-69		119-124	191-194
9-14	69-74		124-129	194-199 TD
14-16.2	74-79		129-134	
16.2-19	79-80.1		134-139	
19-24	80.1-84		139-144	
24-28.5	84-87.4		144-149	
28.5-31	87.4-91.6		149-154	
31-34	91.6-94		154-154	
34-39	94-98.1		159-164	
39-44	98.1-101.9		164-168	
44-49	101.9-104		168-173	
49-53.3	104-106 (no sample)		173-178	
53.3-58.2	106-109		178-183	
58.2-59.9	109-114		183-188	

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month

[ ] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

Kurt Allen

Results to:

Kurt Allen

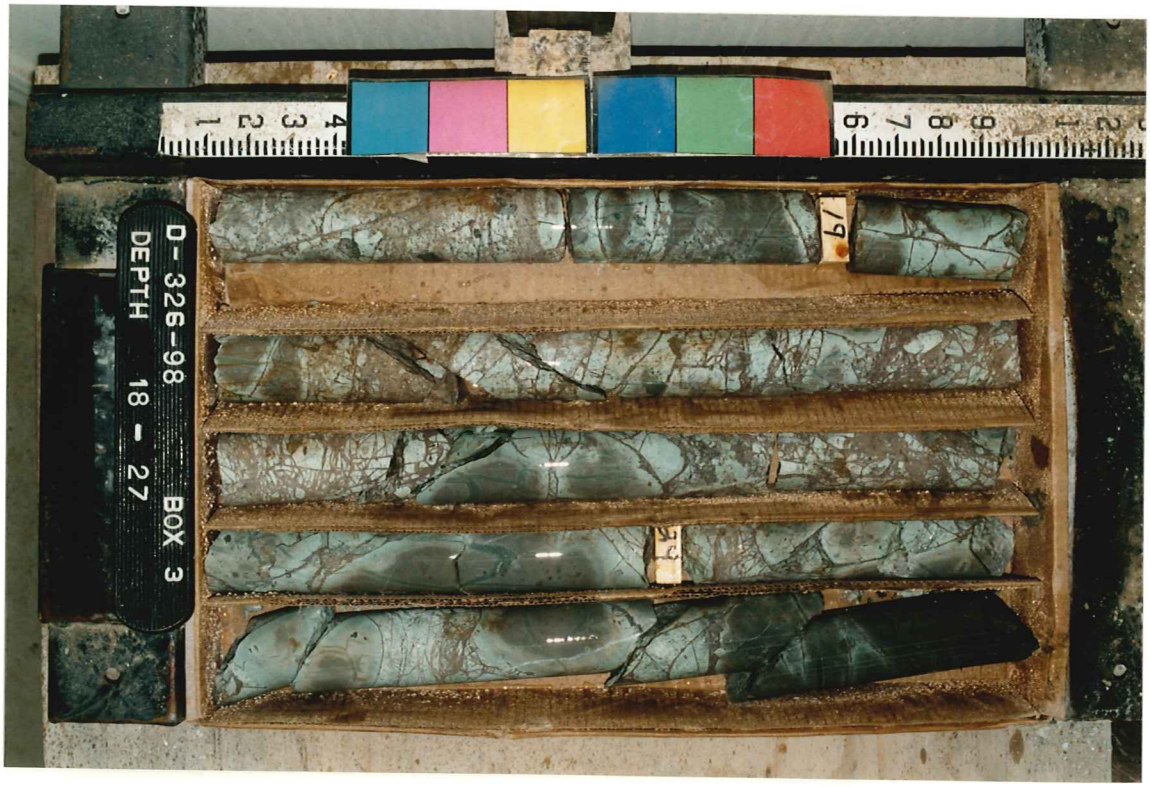
Comments:

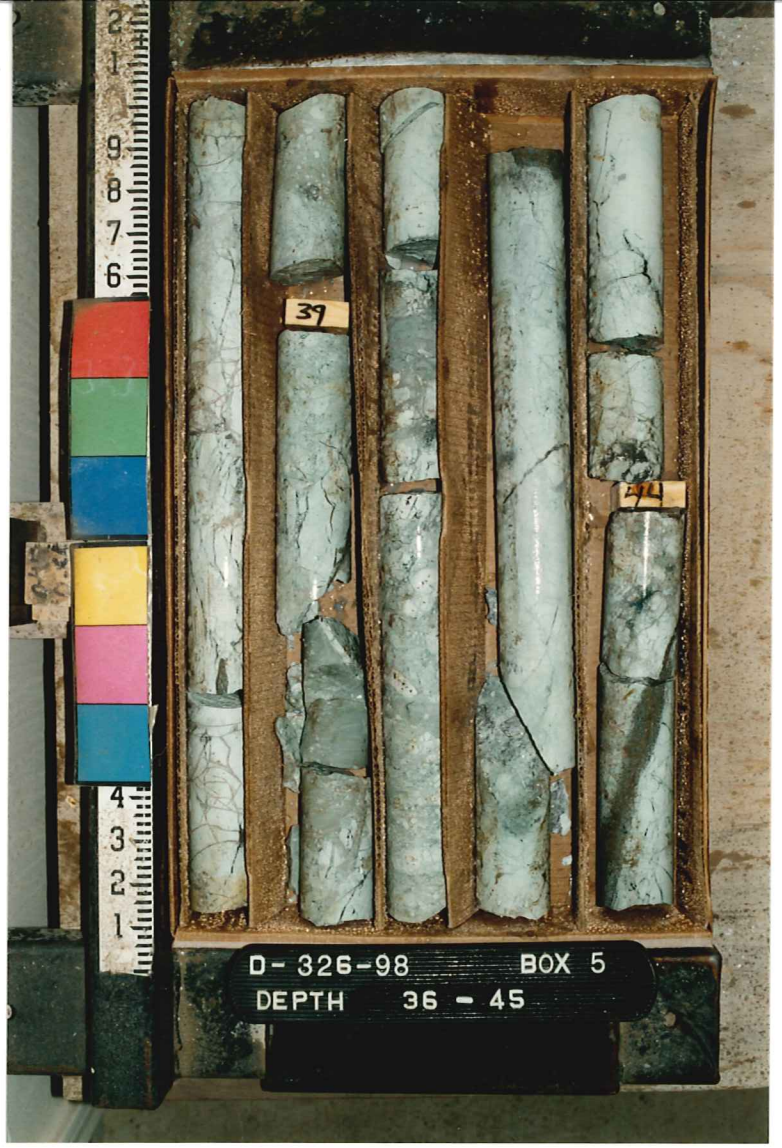
CLIENT FILE COPY

D-326-98	20	48.5	110.2
	100	49	108.7
	199	48	110.7

14
9
D- 326-98 BOX 2
DEPTH 9 - 18

5
D- 326-98 BOX 1
DEPTH 0 - 9


19
D- 326-98 BOX 3
DEPTH 18 - 27


39
44
D- 326-98 BOX 5
DEPTH 36 - 45

34
29
D- 326-98 BOX 4
DEPTH 27 - 36

D- 326-98 BOX 6
DEPTH 45 - 54_5
49
54

69
64
D- 326-98 BOX 8
DEPTH 63_5 - 72_5

59
D- 326-98 BOX 7
DEPTH 54_5 - 63_5

74
74
D- 326-98 BOX 9
DEPTH 72_5 - 82

94
99
D- 326-98 BOX 11
DEPTH 91 - 100

84
89
D- 326-98 BOX 10
DEPTH 82 - 91

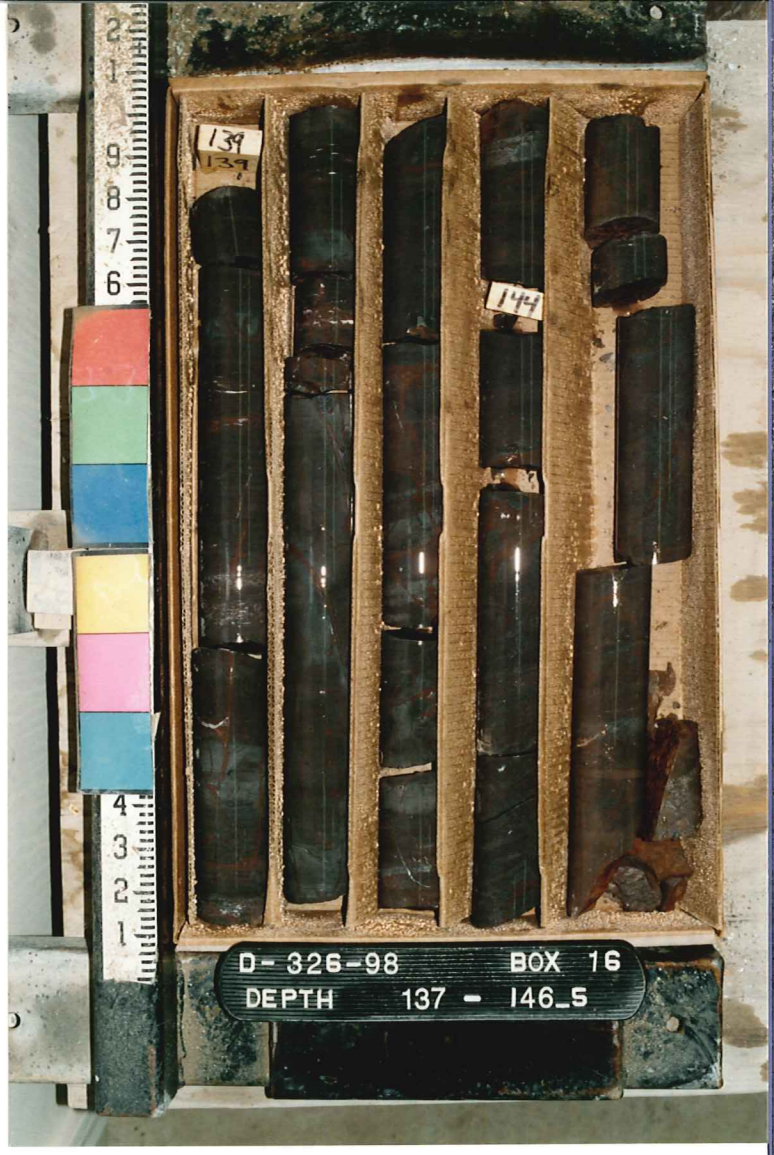
104
109
D- 326-98 BOX 12
DEPTH 100 - 109.5

D-326-98 BOX 14
DEPTH 118_5 - 128
124
119

D-326-98 BOX 13
DEPTH 109_5 - 118_5
114

D-326-98 BOX 15
DEPTH 128 - 137
129
134

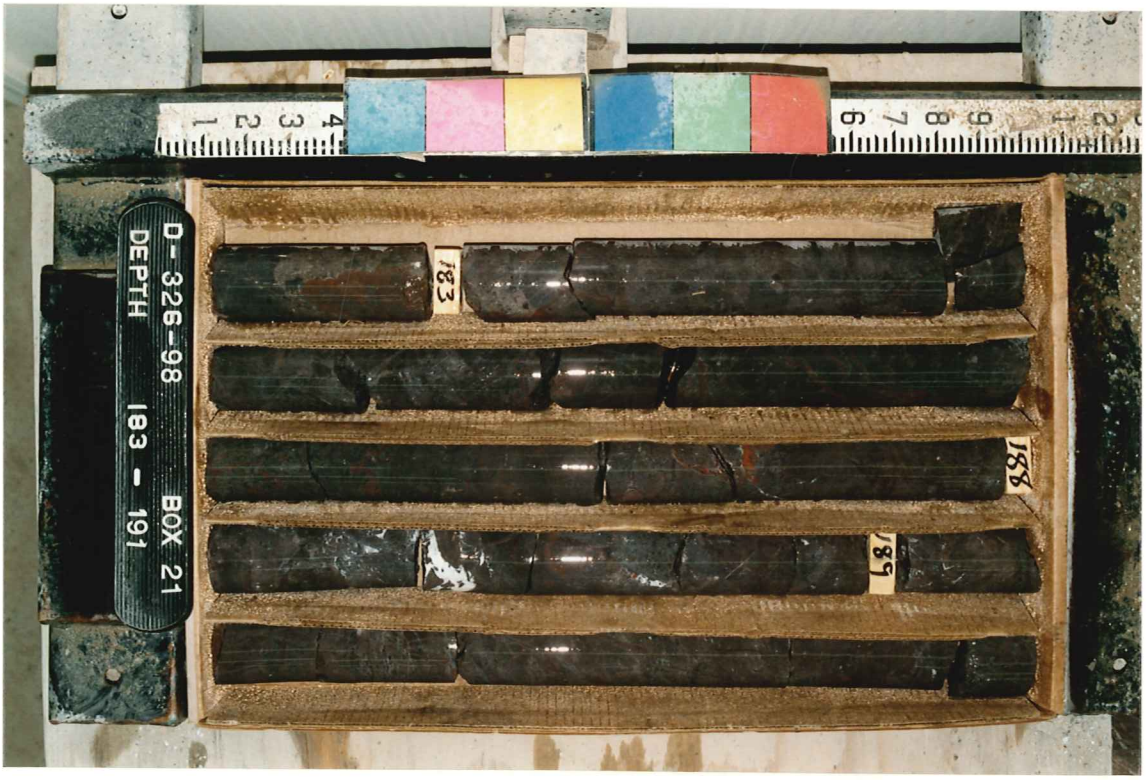
D-326-98 BOX 17
DEPTH 146_5 - 155_5
149
154


D-326-98 BOX 16
DEPTH 137 - 146_5
139
139
144

D-326-98 BOX 18
DEPTH 155_5 - 164
159
164

D- 326-98 BOX 20
DEPTH 173_5 - 183

163
173
D- 326-98 BOX 19
DEPTH 164 - 173_5


183
188
189
D- 326-98 BOX 21
DEPTH 183 - 191

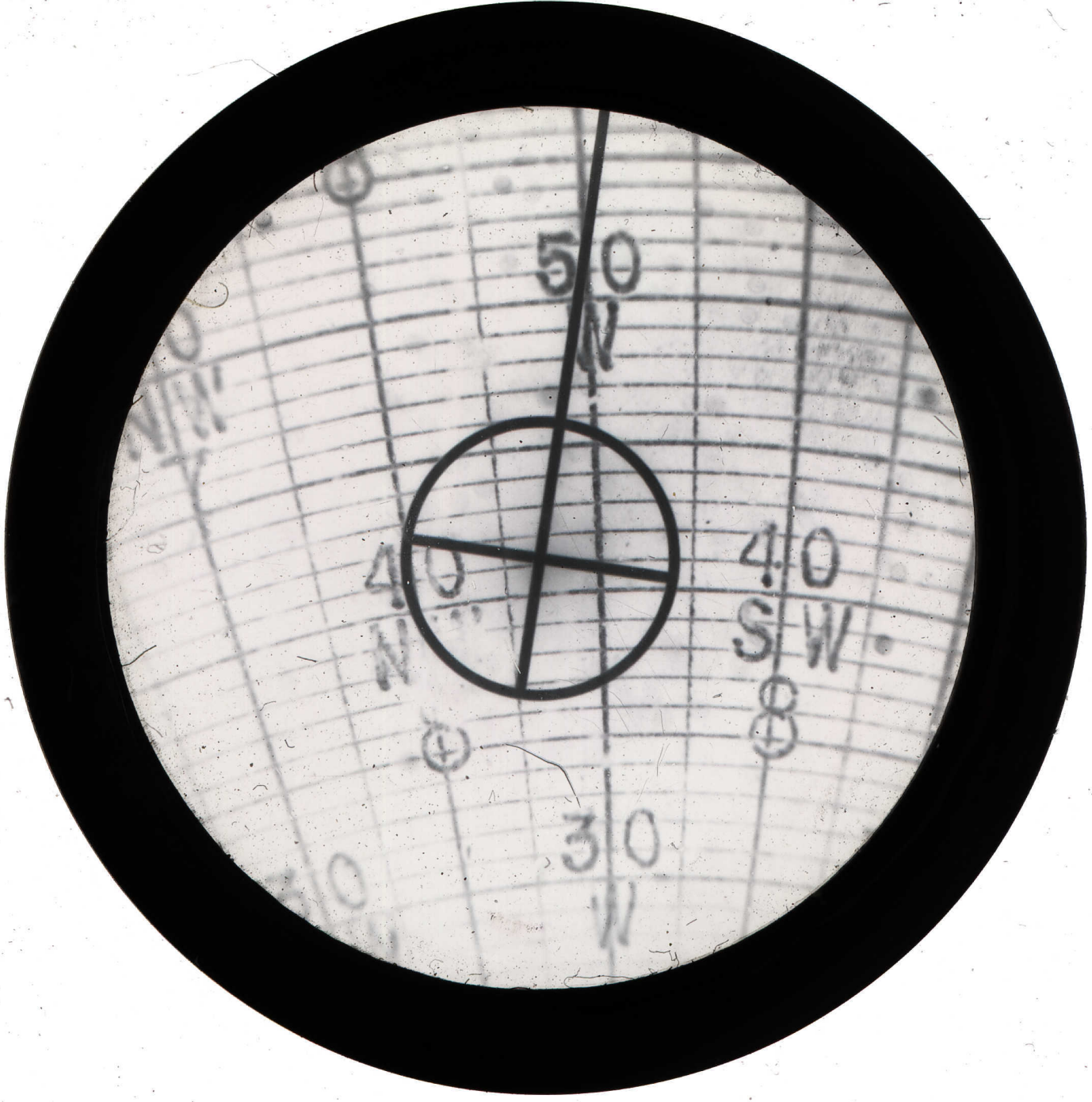
D-326-98 BOX 22
DEPTH 191 - 199 TD
194
TD
199

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-32L-98
LEASE
TAKEN BY Dingman / Jerome
DEPTH 20
DATE 10-6-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-326-98
LEASE
TAKEN BY Magoon/Jerome
DEPTH 100
DATE 10-6-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408


50
N
40
N
40
SW
30
W

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-3216-98
LEASE
TAKEN BY Megaw / Jerome
DEPTH 199
DATE 10-6-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408