60000682

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-197-98
AUTHOR	K. Allen; B. Morris; S King
DATE OF DOC(S)	1998
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine, Hecla Mining Co; Rosebud Project Rosebud Mining Co., LLC
COMMODITY If not obvious	gold; silver
NOTES	drill logs; assay; geology; photographs; receipts; total depth 130' handwritten notes down hole camera images 20p. 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 1/28/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

D-197-98

6000 0682

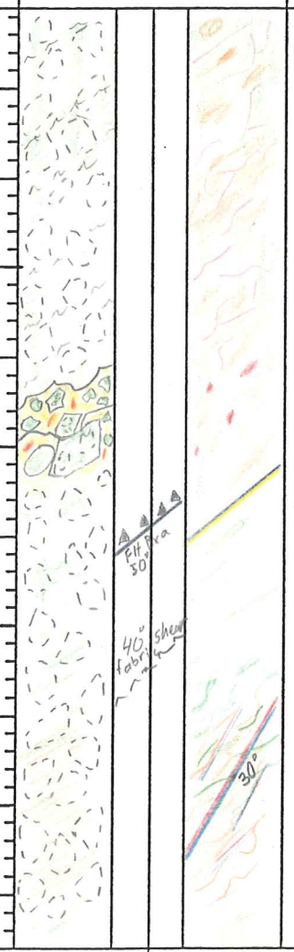
6600 0682

Hecla MINING COMPANY

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

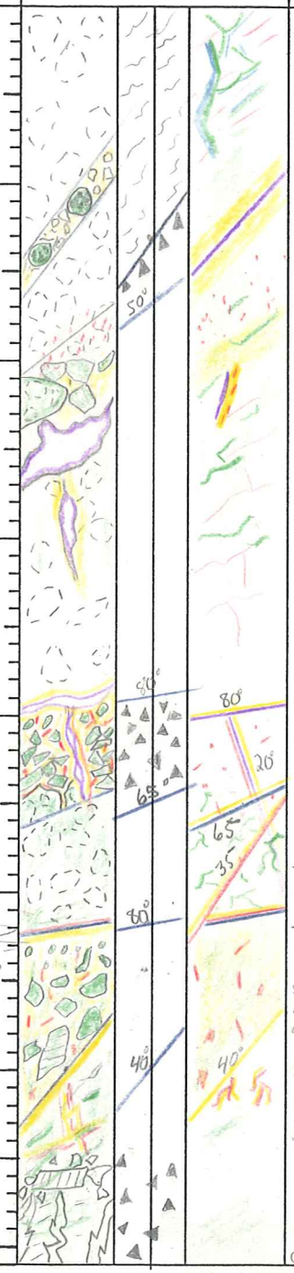
ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-197-98	LOCATION	East zone Stope 42 E.O.A.	REMARKS	
PAGE 1 OF	3	NORTHING		Bearing should have been	
DATE	3/17/98	EASTING		N26W. Will redrill D-197A-98	
LOGGED BY	Brian W. Morris	ELEVATION			
SCALE	1" = 10'	AZIMUTH	N38W		
TOTAL DEPTH	130'	INCLINATION	+62		

TH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	0 - 50 Lt gry gr Vfg massive - Autobrecated w/ br FeOx st. of Mtx of Autobxa.	5, 10, 15, 20, 25, 30, 35, 40, 45, 50		0 - 50 Wk perv. shear fabris 15 - 29' localized Secondary bxa healed by Lt. gry SiO_2 ± bladed Marc. clots + Vn, wk leaching of SiO_2 Mtx	0 - 33' Wk - Mod Fine Vnlets & hairline stkwk of sulf + gry SiO_2, wk perv. gr clay alt, wk diss sulf 30 - 50' Wk - Mod argil 40 - 50' Shear fabric highlighted by mod or br FeOx st. 41 - 50 Wk - locally Mod gr Clay + Calcite + Marc Vnlets & Wk - Mod gray clay + calcite hairline vnlets

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag
0	5					
5	10					
10	15					
15	20					
20	25					
25	30					
30	35					
35	41					
41	45					
45	50					

HOLE NUMBER D-197-98 PAGE 2 OF 3

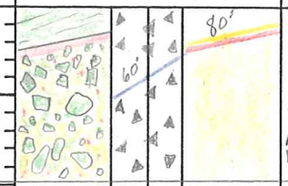
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
	Reduced	50 - 110.4' Lt gry - Lt gry gr v.fg Autobxa Dozer, faint clasts are visible in primary Rx text.	55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120		50-64' Wk - Mod Mylonitic text, 62.3-64.5 Milled Mtx supported Bxa: Br - gr - Wh Wellrounded-subrounded Dozer Clasts & Clast supported rubble bxa clasts. Clasts are supported by gry SiO_2 Mtx. 66.5-70.0 Clast supported Rubble BXA Vns ≤.5' Wide. Clasts are Composed of subrounded to Subangular Dozer healed by gry-wh SiO_2 Mtx. 89-94.5' Fault Bxa 89-90' Mtx Supported Milled-rubble bxa: Wellrounded-angular monolithic autobxa-Dozer clasts healed by SiO_2, Mod diss sulf + bladed Marc. 98-102 Str Fracturing 102-110.4' Milled Mtx Supported BXA: Small Well rounded Dozer Clasts .1-.5cm supported by gr silic Mtx. 103' clast are angular-Sub angular .1 110.4' Sharp Fault Contact Contact is seperated by .3" wide Qt Vn. 114.3-123.0' Crackle-Rubble BXA: Clast supporte Dozer & LBT Angular-Subangular Clasts, healed by gr gry-gry SiO_2 Mtx, Clasts are str argil, Mod chlor.	50-64 Mod fine Sub parrallel Vnlets, Valets are incorp into Mylonitic Text, Mod argil 55-57.3 Mod - Str gr clay + Calcite ± Marc Vn, Mod argil, Wk diss brassy py xls. 62.3-64.5 Bxa Clasts are silic & Chlor. Bxa is x-cut by a 40° wh Qt + barite vuggie Vn. 66.5-70.0' Str leaching of SiO_2 Bxa Mtx & SiO_2 Vns, Vns & Mtx have mod-str bladed Marc xls, Vugs are filled w/ euhedral well developed barite xls, Str chlor alt along Fx & vns, Wk diss sulfs. 90-94.5 Clast supported rubble BXA healed by Translucent SiO_2 Mtx Str leached w/ pyrite replacement, Mod diss sulf. 95-102 Str Chlor alt along Fx. 102-110.4' Mod-Str argil of clasts, Mtx Wk-Mod silic Rx flour, Wk-Mod perv. chlor alt. 110.4' - Str blch & argil along lam., fine sulf coating of lam. 110.4-114.4' Str. .25-.5" wide 5-10° & 75° Wh SiO_2 + bladed Marc. Vn sets 116.8 Str wh clay Vn + Mtx replacement.	50	55				
							55	60				
							60	62.3				
							62.3	64.5				
							64.5	66.5				
							66.5	70.0				
							70.0	75.0				
							75.0	80.0				
							80.0	85.0				
							85.0	89.0				
							89.0	90.0				
							90.0	95.0				
							95.0	100.0				
							100.0	102.0				
							102.0	105.0				
							105.0	110.4				
							110.4	115.0				
							115.0	116.8				
							116.8	120.0				

SEF ?

110.4' Contact LBT Planner Laminated
Olive gr - gr v.fg fine laminations .5-1' apart

Pima

HOLE NUMBER D-197-98 PAGE 3 OF 3

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	120 - 130' Rubble - Milled LBT clast Bxa: Clasts are gr - olive gr v.fg finely laminated. T.D. 130'	125 130		122.8 - 124.0' Milled Mtx Supported, Subangular LBT clasts healed by gry sulfidic SiO_2 Mtx, Grading @ 123.3' to Mtx Supported LBT Clast Bxa healed by wh SiO_2 @ 123.0' grading to Rx flour + SiO_2 healed rubble Bxa. 124.0 - 125' Mtx supported subrounded LBT clasts healed by gry bluish SiO_2. 125 - 126.2' Mtx grades to Rx flour + gry SiO_2.	122.5 - 124' Clasts are Mod - Str argil, wk - Mod diss sulf. 124.5 - 125' Mtx grades to wh partally leache & Vuggie SiO_2 MTX. 126.2 - 130.0' Milled Mtx supported BXA; BXA is SiO_2 flooded gry & gr mottled in color, wk diss sulf, locally Str Chlor alt.

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
120	122.8				
122.8	124.0				
124.0	125.0				
125.0	126.2				
126.2	130.0				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-197-98 DATE: 03/14/98 LOGGED BY: Chris Kasper PAGE 1 OF 2

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)
0	5.0	74.0	82.0	48.0										
5.0	10.0	96.0	96.0	34.0										
10.0	15.0	98.0	98.0	98.0										
15.0	20.0	90.0	100.0	80.0										
20.0	25.0	98.0	98.0	92.0										
25.0	30.0	96.0	100.0	96.0										
30	35	98.0	100.0	78.0										
35	40	90.0	96.0	66.0										
40	45	96.0	96.0	68.0										
45	50	96.0	98.0	70.0										
50	55	94.0	96.0	86.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-197-98 DATE: 3/14/98 LOGGED BY: [illegible] PAGE 2 OF 3

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	88.0	92.0	42.0										
60.0	65.0	84.0	90.0	62.0										
65.0	70.0	96.0	100.0	68.0										
70.0	75.0	92.0	96.0	84.0										
75.0	80.0	72.0	78.0	38.0										
80.0	85.0	90.0	96.0	46.0										
85.0	90.0	82.0	84.0	58.0										
90.0	95.0	88.0	92.0	80.0										
95.0	100.0	88.0	92.0	44.0										
100.0	105.0	86.0	94.0	68.0										
105.0	110.0	98.0	98.0	76.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-197-98 DATE: 3/18/98 LOGGED BY: BWM PAGE 3 OF 3

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	94	94	41										
115.0	120.0	88	88	52										
120.0	125.0	94	94	72										
125.0	130	82	82	32										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048351

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-197-98 RECEIVED : 23 MAR 1998

No. SAMPLES : 35 REPORTED : 7 APR 1998

MAIN SAMPLE TYPE : DRILL CORE

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

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

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048351

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-197-98

REPORTED : 7 APR 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-197-98 00-05	0.017			0.06
D-197-98 05-10	0.009			0.05
D-197-98 10-15	0.014			0.06
D-197-98 15-20	0.130		0.085	0.07
D-197-98 20-25	0.029			0.06
D-197-98 25-30	0.023			0.04
D-197-98 30-35	0.002			0.03
D-197-98 35-41	0.009			0.03
D-197-98 41-45	0.011			0.03
D-197-98 45-50	<0.001			0.02
D-197-98 50-55	0.003			0.02
D-197-98 55-60	0.001			0.03
D-197-98 60.0-62.3	0.007			0.03
D-197-98 62.3-64.5	0.025			0.07
D-197-98 64.5-66.5	0.023	0.024		0.07
D-197-98 66.5-70.0	0.141		0.123	0.17
D-197-98 70-75	0.029			0.06
D-197-98 75-80	0.074		0.061	0.12
D-197-98 80-85	0.011			0.05
D-197-98 85-89	0.013			0.07
D-197-98 89-90	0.046			0.13
D-197-98 90-95	0.025	0.023		0.12
D-197-98 95-100	0.021			0.22
D-197-98 100-102	0.041			0.34
D-197-98 102-105	0.022			1.52

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048351

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-197-98

REPORTED : 7 APR 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-197-98 105.0-110.4	0.009			0.74
D-197-98 110.4-115.0	0.025			0.93
D-197-98 115.0-116.8	0.020			6.04
D-197-98 116.8-120.0	0.018			0.87
D-197-98 120.0-122.8	0.037			0.32
D-197-98 122.8-124.0	0.048			0.14
D-197-98 124-125	0.146		0.152	13.43
D-197-98 125.0-126.2	0.041	0.047		0.06
D-197-98 126.2-130.0	0.019			0.10
27802	0.516			2.78

04/07/1998 10:31 7023561413 AMERICAN ASSAY LABS PAGE 03

American Assay Laboratories

INVOICE

Remit To: P.O. Box11530
Reno, Nevada 89510
Phone NO.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0048351-IN
INVOICE DATE: 04/07/98

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-197-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
35	SAMPLES RECEIVED	.00	.00
34	DRYING	1.00	34.00
34	JAW CRUSHING CHARGE	1.30	44.20
34	COARSE MILLING CHARGE	4.50	153.00
34	SPLITTING CHARGE	2.40	81.60
34	RING MILLING CHARGE	2.00	68.00
35	Au (1 A.T. FIRE ASSAY)	8.00	280.00
4	Au ANALYSES/GRAVIMETRIC	8.75	35.00
35	HYDROCHLORIC/NITRIC DIGESTION	2.00	70.00
35	Ag ANALYSES	1.00	35.00
3	Ag (ore grade) ANALYSES	5.00	15.00

86-5110-477
RNA

NET INVOICE:	815.80
LESS DISCOUNT:	163.16
FREIGHT:	.00
INVOICE TOTAL:	652.64

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048351

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

CLIENT REFERENCE No: D-197-98 RECEIVED : 23 MAR 1998

No. SAMPLES : 35 REPORTED : 7 APR 1998

MAIN SAMPLE TYPE : DRILL CORE

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

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

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048351

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-197-98

REPORTED : 7 APR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-197-98 00-05	0.017			0.06
D-197-98 05-10	0.009			0.05
D-197-98 10-15	0.014			0.06
D-197-98 15-20	0.130		0.085	0.07
D-197-98 20-25	0.029			0.06
D-197-98 25-30	0.023			0.04
D-197-98 30-35	0.002			0.03
D-197-98 35-41	0.009			0.03
D-197-98 41-45	0.011			0.03
D-197-98 45-50	<0.001			0.02
D-197-98 50-55	0.003			0.02
D-197-98 55-60	0.001			0.03
D-197-98 60.0-62.3	0.007			0.03
D-197-98 62.3-64.5	0.025			0.07
D-197-98 64.5-66.5	0.023	0.024		0.07
D-197-98 66.5-70.0	0.141		0.123	0.17
D-197-98 70-75	0.029			0.06
D-197-98 75-80	0.074		0.061	0.12
D-197-98 80-85	0.011			0.05
D-197-98 85-89	0.013			0.07
D-197-98 89-90	0.046			0.13
D-197-98 90-95	0.025	0.023		0.12
D-197-98 95-100	0.021			0.22
D-197-98 100-102	0.041			0.24
D-197-98 102-105	0.022			1.52

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048351

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-197-98

REPORTED : 7 APR 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-197-98 105.0-110.4	0.009			0.74
D-197-98 110.4-115.0	0.025			0.93
D-197-98 115.0-116.8	0.020			6.04
D-197-98 116.8-120.0	0.018			0.87
D-197-98 120.0-122.8	0.037			0.32
D-197-98 122.8-124.0	0.048			0.14
D-197-98 124-125	0.146		0.152	13.43
D-197-98 125.0-126.2	0.041	0.047		0.06
D-197-98 126.2-130.0	0.019			0.10
27802	0.516			2.78

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 11530
Reno, NV 89510
Telephone
(702) 356-0606
Fax
(702) 356-1413

Tucson Office
2775 E. Ganley
Tucson, AZ 85706
Telephone
(520) 294-8078
Fax
(520) 294-6352

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

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

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: ROSEBUD MINING CO. LLT

Address: P.O. BOX 2610

City WINNEMUCCA State NV Zip 89446

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

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 03/20/98 Number of Samples: 33

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

D-197-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED
	64.5-66.5	122.8-124.0	CORE	AU-AA ACCORDING TO
0-5	66.5-70.0	124-125		ROSEBUD MINE
5-10	70-80	125.0-126.2		PROTOCOL
10-15	80-85	126.2-130.0		
15-20	85-89			
20-25	89-90			
25-30	90-95			
30-35	95-100			
35-41	100-102			
41-45	102-105			
45-50	105.0-110.4			
50-55	110.4-115.0			
55-60	115.0-116.8			
60-62.3	116.8-120.0			
62.3-64.5	120.0-122.8			

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-197-98	0	62.5	321.7
	65	62.5	322.2
	130	62.5	321.7

D 197-98
DEPTH
BOX 02
10.0 - 19.5

D 197-98
DEPTH
BOX 01
0.0 - 10.0

D 197-98
DEPTH
BOX 03
19.5 - 29.0

D 197-98
DEPTH
BOX 05
38.0- 47.5
40
41
45

D 197-98
DEPTH
BOX 04
29.0- 38.0
30
35

D 197-98
DEPTH
BOX 06
47.5- 57.0
50
55

70
75
D 197-98
DEPTH
BOX 08
66.5 - 75.5

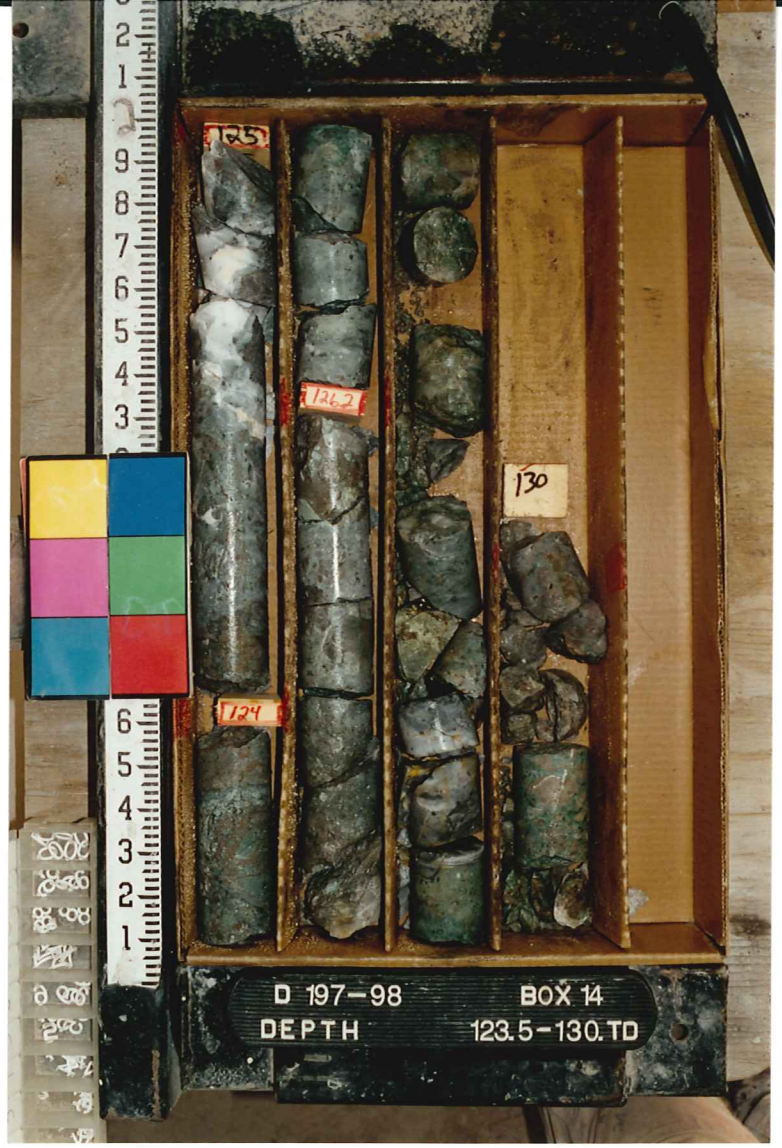
60
65
D 197-98
DEPTH
BOX 07
57.0 - 66.5

D 197-98
DEPTH
BOX 09
75.5 - 85.0

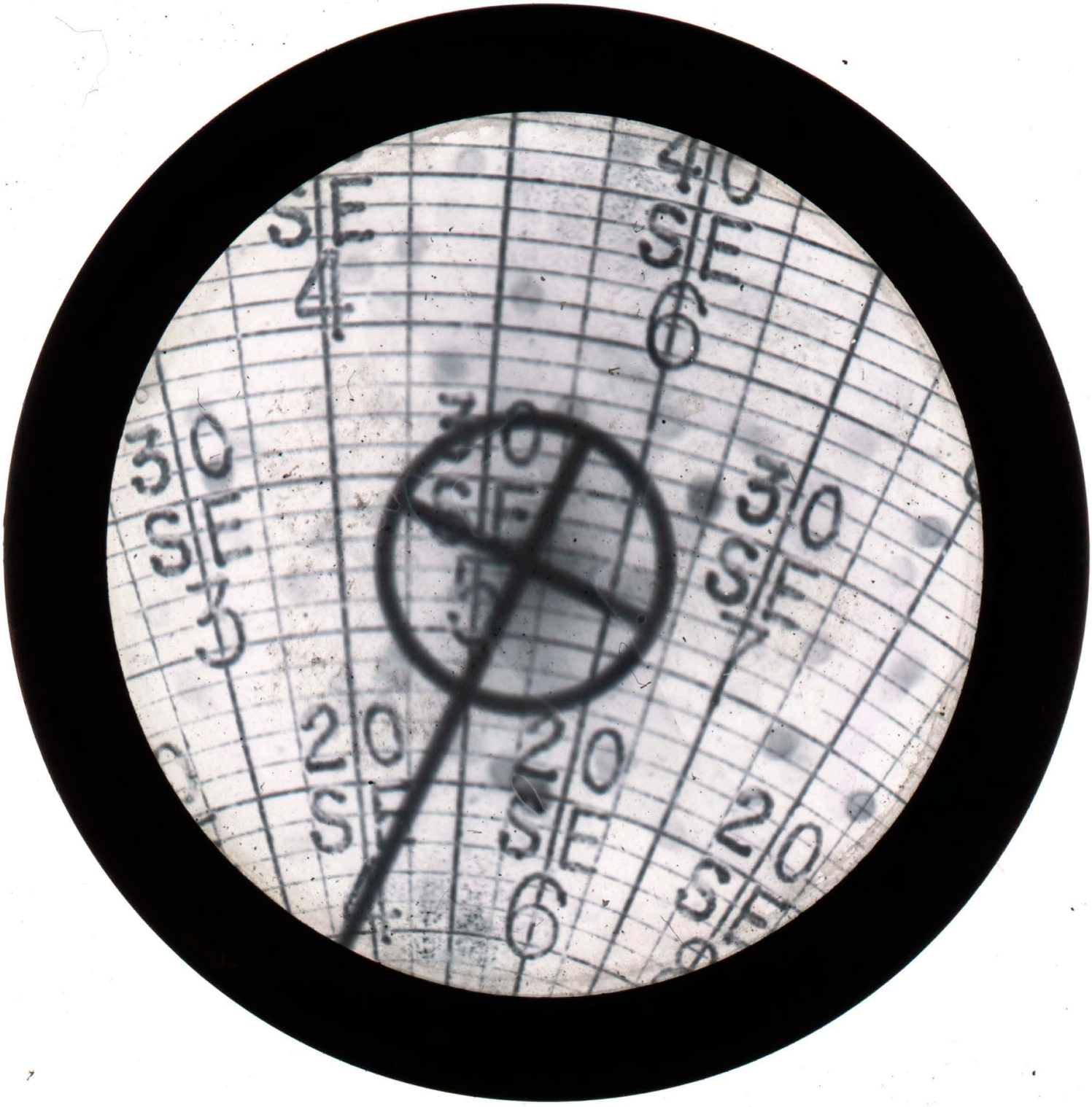
100
D 197-98
DEPTH
BOX 11
95.0 - 104.5

85
90
95
D 197-98
DEPTH
BOX 10
85.0 - 95.0

105
110
115
D 197-98
DEPTH
BOX 12
104.5 - 114.0


125
124.2
130
124
D 197-98
BOX 14
DEPTH
123.5-130.TD

116.8
115
122.4
120
D 197-98
BOX 13
DEPTH
114.0 - 123.5


40
SE
4
40
SE
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SE
3
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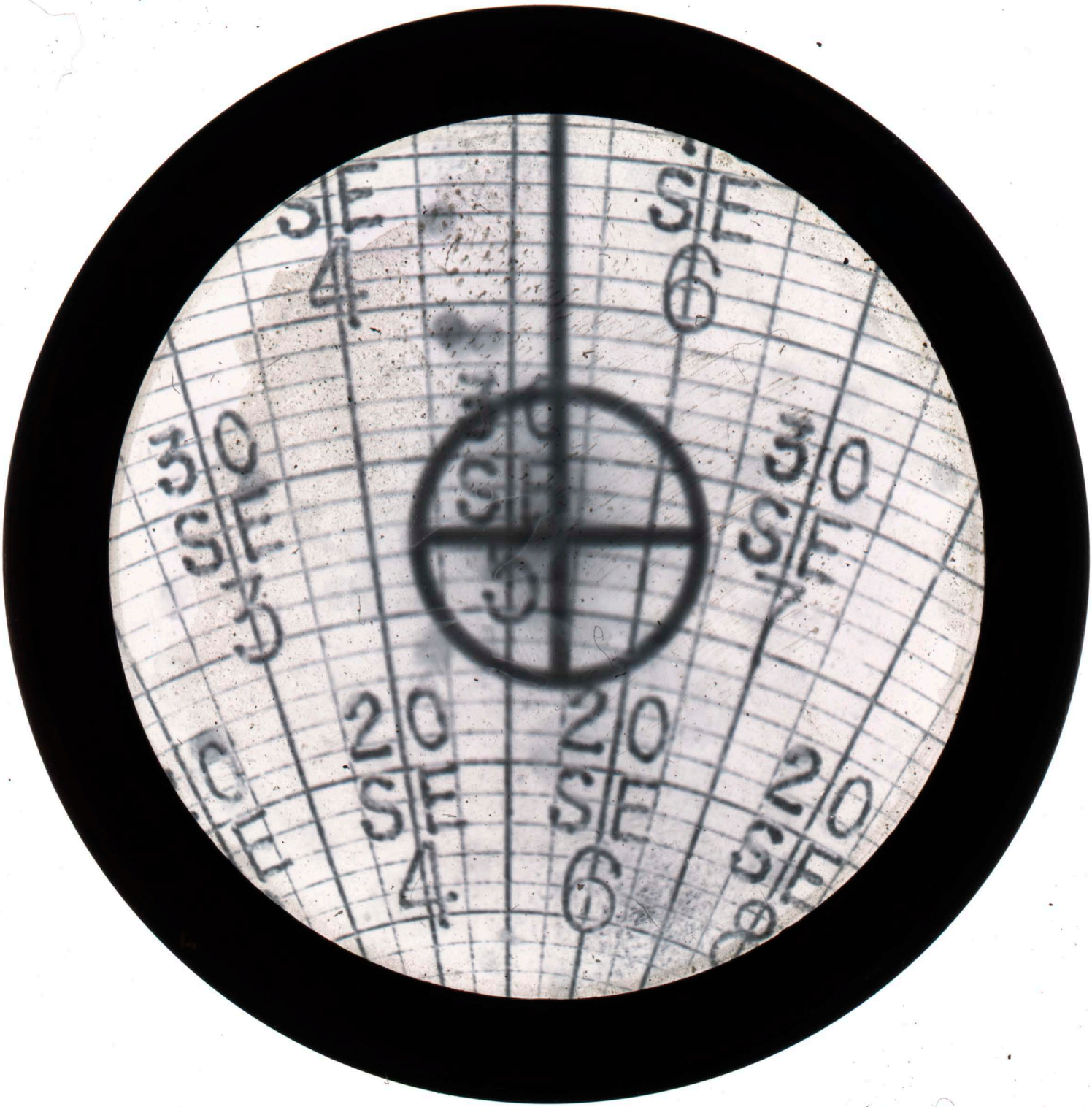
SE
5
30
SE
7
20
SE
20
SE
6
20
SE
8


SE
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SE
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SE
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SE
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SE
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SE
8