60001219

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-319-98
AUTHOR	S. King; K. Allen; Whitney
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 250' 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: NB
Initials Date

Revised: 1/22/08

D-319-98

60001219 4010

6600 1219

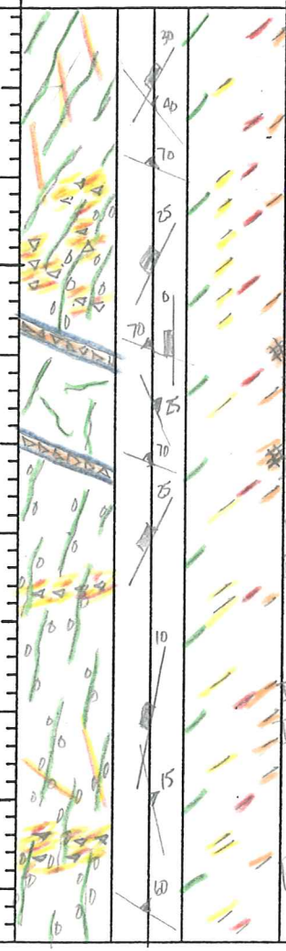
- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- barite
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-319-98	LOCATION	Stope 50 Access, Sec. 1700
PAGE 1 OF 4		NORTHING	
DATE	11-04-98	EASTING	
LOGGED BY	Whitney	ELEVATION	
SCALE	1" = 10'	AZIMUTH	125
TOTAL DEPTH	250	INCLINATION	15

REMARKS: completed 9/24/98

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0-	71A	PLANAR/LAMINAR mod gry-tan fg volcanic, foliated. Prominent trains of vesicles (≤3mm). Prominent crenulated to planar partings that mark flow foliation. 10-61 dense - transitional to FGM. 10 PIMA 10-14 poss. healed fault w/ the bx vnlts 14-19 vesicle trains prominent 19-26 gouge @ 19 & 26 CORE LOSS ZONE 52% RECOVERY 19-26 26 continue vesicle trains 35-39 bx, clast to matrix support, angular. auto bx ? 45-47 bx, mosaic, w/minor ~~to~~ clast rotation.	10 20 30 40 50		10-21 strongly brecc. fx 25,40,70 to CA 21-19 fx uncommon 5 fol. 30° to CA 15 fol. 25° to CA 18 fol. 0° to CA 19 flt 70° to CA 19-33 fxs common 25,40,70 26 flt 70° to CA 30 fol. 25° to CA 33-42 fx uncommon. 40 fol 10° to CA 42-47 fx 15° to CA 48.3-60 mod. broken 5,20,60,75	5-10 common q-marcas-py vnlts, <30° to CA. <½" 10-17.5 zone of bx vnlts. mod. to li ⅋s to CA. q-bx-cly-marcas. 19-33 uncommon marc-py-chlor vnlts 25,40,70 to CA. common hard, green, waxy cly vnlts. 33-34 q-marcas matrix bx open, crse, blebal marc. 3-5% 5- 38-43.3 wk arg. 43.3-47 q-cly-marc-py-chlor vnlts. 15,40 to CA. 47-48.3 q-cly-marc bx vnlts. open texture. 48.3-60 common gray cly vnlts.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
0	4					
4	8					
8	10					
10	14		1.250		1.314	
14	17.5					
17.5	19					
19	26					
26	29.5					
29.5	33					
33	34.5					
34.5	39.5					
39.5	43.5					
43.5	47					
47	48.3		1.375		1.447	
48.3	52					

HOLE NUMBER D 319-98 PAGE 2 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0 – 71.4		PLANAR/LAMINAR continue as gen'ly described previous 52 PIMA 52-60 worny zone. weak. 67-71.4 sheared, but intact. No bx.	60 70		52 fol 0° to CA 52-60 worm fol. ~50° to CA 60-66 brkn 70,50,25° to CA 64 fol 20° to CA 71.4 cte 35° to CA	61-66 patchy vfg-fg S⁻ 67-71.4 mod-str arg.
71.4-84.1		FAULT clay matrix gouge. sand-pebble sized clasts of plan/lam. 75-85 CORE LOSS ZONE 37% RECOVERY	80		71.4-84.1 str. arg. Evidence of sheared quartz vnlts & brecciated q-cly-marc vns.	
84.1-96		WORNY SPLAT advanced worm development. mod arg. cut by web work of q-vnlts. little to no S⁻. 89.5 PIMA	90		84.1 cte ground away 96 cte ~55° ? 96-113 shattered 25,70,40	85-91.5 q-cly-marc matrix bx. open. crse bleded marc. 1-3% S⁻ total. 91.5-96 q web work, wk-mod arg 96-70 barite common in vugs 99? 3" q-marc bx. ~5% S.
96-		SOUTH RIDGE FAULT 96-107 Proximal Hanging wall, incompletely Si flooded. remainder str arg. clasts all worny SPLAT. angular. 107-122 Heterolithic bx, complete Si flooding. clasts subrnd. matrix > or >> clasts. barite continues to be abundant. S⁻ is rare. 119-122 Matrix >>> clasts – conduit?	100 110 120		113-1 fx uncommon – breaks are irregular across vugs & around clasts	

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
48.3	52				
52	56				
56	60				
60	65				
65	70				
70	75				
75	85		0.033		0.026
85	89		0.176		0.188
89	91.5		0.219		0.208
91.5	96		0.006		
96	100		0.117		0.110
100	105		0.108		0.092
105	110		0.094		0.062
110	113		0.100		0.105
113	118		0.307		0.358
118	122		0.259		0.249

HOLE NUMBER D 319-98 PAGE 3 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
96-		SOUTH RIDGE FAULT				
		[122-161] Heterolithic bx. Dominated by ALS clasts. w complete silicification _ Si & clay as matrix to clasts. clasts Si'd → vuggy → wkard. barite continues; little S⁻ to 153, then pick up continuing zone.	130	30		continue barite in vugs v. little S⁻
		[139-142] total Si flooding. matrix >>> clasts - conduit? 140 PIMA	140	60		
			150			
			160	30		[153] start Sb zone. uncommon small radiating clusters of fine xls in vugs & in vuggy w/ white clay. [153-182] zone of antimony-bearing barite xls.
		[161-181] Heterolithic bx - fault core? Dominantly Si-flooded rock flour & pebble-size clasts. matrix is white, opaque. matrix > clasts. Clasts appear to dominantly be Dozer. [161-164] matrix eroded. vuggy w/ barite-clay fill. [164-170] total Si-flood. matrix >>> clast. conduit?	170	40	[170] - banding in Si 10° to CA	
		[181-226] Monolithic bx., Dozer clasts, strong Si flooding	180	5	[177] - banding in Si 20° to CA [181] - banding in Si 15° to CA	[182] Sb continues rarely. on fx.
			190		1-3% S⁻	[186-TD] start marcasite. in vuggy w/ g-clay, as irreg clots of bladed brown clasts; as fine agglomerates - disseminated

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
118	122		0.123		0.128
122	125				
125	130				
130	135				
135	140				
140	145				
145	150				
150	155				
155	160				
160	165				
165	170				
170	175				
175	180				
180	185				
185	190				

HOLE NUMBER D-319-98 PAGE 4 OF 4

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
96-226		SOUTH RIDGE FAULT continue monolithic bx - Dacer clasts. 196.5 PIMA [212-215.5] wk-mod silicif. clast wk-mod arg. [216-224] prominent clay-fill fx orientation 40° to CA. 217.5 PIMA	200 210	15 30 15 40	[195] streaming in Si 15° to CA.	continue marcasite. 1-3% S continue rare Sb continue barite [202] sparse pyrite on a single clay coated fx. 65 to CA
226-250TD		TCS interbedded f-g tuffaceous seds & laminated mudstone. strong brecciation from influence of SRF. wkly to moderately chloritic near flt ctz. wk silicif.	220 230 240 250	25 40 45 25 60 15	[225] shear texture in gouge 15° to CA [226] fault contact(?) w/ seds. 40° to CA. [226-TD] uncommon fxs 40 65 to CA. [227] bdg 25-35 to CA [240] bdg 25° [245] bdg 15°	[217-233] pyrargyrite zone. Rare agglomerates of pyrite & chalcopyrite in veins w/ white soft clay. Agglom. ≤ 1mm. veins 65, 30, 10 to CA. Sb common thru here. [233-TD] continue barite. Sb rare.
		TD 250'	260			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
190	195				
195	200				
200	205				
205	210				
210	215				
215	220				
220	225				
225	230				
230	235				
235	240				
240	245				
245	250 TD				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-319-98 DATE: 11-04-98 LOGGED BY: WHITNEY 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	1.5	0	100 ?	0										
1.5	4	68	ground core 96	30										
4	9	96	96	30										
9	14	86	washed clay 98	14										
14	19	96	104	46										
19	26	33	ground core 52 washed clays	0										
26	29.5	34	106	0										
29.5	39.5	94	97	7										
39.5	49.5	85	96	25										
49.5	52	68	lost clays 88	0										
52	60	68	91	21										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-319-98 DATE: 11-04-98 LOGGED BY: WHITNEY PAGE 2 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)
60	65	98	104	24										
65	75	98	98	5										
75	85	0	driller claimed 37 50	0										
85	89	88	88	15										
89	91	60	70	0										
91	95	108	108	38										
95	99	63	95	0										
99	105	53	88	20										
105	107	50	80	0										
107	110	33	57	0										
110	mismatch 112	40	50	0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-319-98 DATE: 11-05-98 LOGGED BY: WHITNEY 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)
112	113	0	100	0										
113	118	92	92	46										
118	120	90	90	70										
120	125	106	106	21										
125	130	92	100	46										
130	135	104	104	44										
135	140	98	98	56										
140	145	106	106	72										
145	150	100	100	66										
150	155	100	100	76										
155	160	106	106	60										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D319-98 DATE: 11-06-98 LOGGED BY: WHITNEY PAGE 4 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)
160	165	88	88	51										
165	170	108	108	41										
170	175	94	96	40										
175	180	80	86	50										
180	185	100	100	0										
185	190	102	102	54										
190	195	102	102	60										
195	200	90	100	56										
200	205	100	100	48										
205	210	100	100	50										
210	215	100	100	27										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-319-98 DATE: 11-06-98 LOGGED BY: WHITNEY 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)
215	220	82	100	10										
220	225	94	98	24										
225	230	104	104	24										
230	235	90	90	48										
235	240	102	102	30										
240	245	86	98	36										
245	250 TD	96	96	48										

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 0051541-IN
INVOICE DATE: 11/25/98

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-319-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
57	SAMPLES RECEIVED	.00	.00
56	DRYING	1.00	56.00
56	JAW CRUSHING CHARGE	1.30	72.80
56	COARSE MILLING CHARGE	4.50	252.00
56	SPLITTING CHARGE	2.40	134.40
56	RING MILLING CHARGE	2.00	112.00
57	Au (1 A.T. FIRE ASSAY)	8.00	456.00
14	Au ANALYSES/GRAVIMETRIC	8.75	122.50
57	HYDROCHLORIC/NITRIC DIGESTION	2.00	114.00
57	Ag ANALYSES	1.00	57.00
14	Ag (ore grade) ANALYSES	5.00	70.00

86-5010-477
CAH

NET INVOICE:	1,446.70
LESS DISCOUNT:	289.34
FREIGHT:	.00
INVOICE TOTAL:	1,157.36

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ANALYSIS REPORT SP051541

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-319-98 RECEIVED : 12 NOV 1998

No. SAMPLES : 57 REPORTED : 25 NOV 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 SP051541

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 0-4	<0.001			<0.02
D-319-98 4-8	0.012			0.06
D-319-98 8-10	0.004			0.08
D-319-98 10-14	1.250		1.314	1.00
D-319-98 14.0-17.5	0.006	0.004		0.08
D-319-98 17.5-19.0	0.006			0.02
D-319-98 19-26	0.004			0.17
D-319-98 26.0-29.5	0.003			0.09
D-319-98 29.5-33.0	0.001			0.04
D-319-98 33.0-34.5	0.006			0.17
D-319-98 34.5-39.5	0.004			<0.02
D-319-98 39.5-43.5	<0.001			0.02
D-319-98 43.5-47.0	0.002			0.13
D-319-98 47.0-48.3	1.375		1.447	1.65
D-319-98 48.3-52.0	0.006	0.003		0.11
D-319-98 52-56	0.002			0.03
D-319-98 56-60	0.001			0.03
D-319-98 60-65	0.001			0.03
D-319-98 65-70	0.003			0.04
D-319-98 70-75	0.003			0.07
D-319-98 75-85	0.033	0.026		0.13
D-319-98 85-89	0.176		0.188	0.41
D-319-98 89.0-91.5	0.219		0.208	0.14
D-319-98 91.5-96.0	0.006			0.05
D-319-98 96-100	0.117		0.110	2.12

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051541

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 100-105	0.108		0.092	1.28
D-319-98 105-110	0.094		0.062	0.26
D-319-98 110-113	0.100		0.105	1.17
D-319-98 113-118	0.307		0.358	0.97
D-319-98 118-122	0.259		0.249	0.58
D-319-98 122-125	0.123		0.128	3.06
D-319-98 125-130	0.035			0.51
D-319-98 130-135	0.018			0.54
D-319-98 135-140	0.019			1.65
D-319-98 140-145	0.011			3.05
D-319-98 145-150	0.062		0.058	1.29
D-319-98 150-155	0.050		0.060	0.86
D-319-98 155-160	0.075		0.054	2.91
D-319-98 160-165	0.031			1.56
D-319-98 165-170	0.018			0.32
D-319-98 170-175	0.004			2.24
D-319-98 175-180	0.005			0.88
D-319-98 180-185	0.002			0.89
D-319-98 185-190	0.004			0.48
D-319-98 190-195	0.003			1.30
D-319-98 195-200	0.009			4.58
D-319-98 200-205	0.004	0.009		2.72
D-319-98 205-210	0.017			0.48
D-319-98 210-215	0.033			0.11
D-319-98 215-220	0.032			13.10

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051541

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 220-225	0.022			3.87
D-319-98 225-230	0.008			3.85
D-319-98 230-235	0.009			4.78
D-319-98 235-240	0.001			0.12
D-319-98 240-245	0.004			0.26
D-319-98 245-250	0.003			0.21
46589	0.542			5.06

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ANALYSIS REPORT SP051541

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-319-98 RECEIVED : 12 NOV 1998

No. SAMPLES : 57 REPORTED : 25 NOV 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
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051541

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 0-4	<0.001			<0.02
D-319-98 4-8	0.012			0.06
D-319-98 8-10	0.004			0.08
D-319-98 10-14	1.250		1.314	1.00
D-319-98 14.0-17.5	0.006	0.004		0.08
D-319-98 17.5-19.0	0.006			0.02
D-319-98 19-26	0.004			0.17
D-319-98 26.0-29.5	0.003			0.09
D-319-98 29.5-33.0	0.001			0.04
D-319-98 33.0-34.5	0.006			0.17
D-319-98 34.5-39.5	0.004			<0.02
D-319-98 39.5-43.5	<0.001			0.02
D-319-98 43.5-47.0	0.002			0.13
D-319-98 47.0-48.3	1.375		1.447	1.65
D-319-98 48.3-52.0	0.006	0.003		0.11
D-319-98 52-56	0.002			0.03
D-319-98 56-60	0.001			0.03
D-319-98 60-65	0.001			0.03
D-319-98 65-70	0.003			0.04
D-319-98 70-75	0.003			0.07
D-319-98 75-85	0.033	0.026		0.13
D-319-98 85-89	0.176		0.188	0.41
D-319-98 89.0-91.5	0.219		0.208	0.14
D-319-98 91.5-96.0	0.006			0.05
D-319-98 96-100	0.117		0.110	2.12

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051541

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 100-105	0.108		0.092	1.28
D-319-98 105-110	0.094		0.062	0.26
D-319-98 110-113	0.100		0.105	1.17
D-319-98 113-118	0.307		0.358	0.97
D-319-98 118-122	0.259		0.249	0.58
D-319-98 122-125	0.123		0.128	3.06
D-319-98 125-130	0.035			0.51
D-319-98 130-135	0.018			0.54
D-319-98 135-140	0.019			1.65
D-319-98 140-145	0.011			3.05
D-319-98 145-150	0.062		0.058	1.29
D-319-98 150-155	0.050		0.060	0.86
D-319-98 155-160	0.075		0.054	2.91
D-319-98 160-165	0.031			1.56
D-319-98 165-170	0.018			0.32
D-319-98 170-175	0.004			2.24
D-319-98 175-180	0.005			0.88
D-319-98 180-185	0.002			0.89
D-319-98 185-190	0.004			0.48
D-319-98 190-195	0.003			1.30
D-319-98 195-200	0.009			4.58
D-319-98 200-205	0.004	0.009		2.72
D-319-98 205-210	0.017			0.48
D-319-98 210-215	0.033			0.11
D-319-98 215-220	0.032			13.10

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP051541

American Assay Laboratories

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PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-319-98 220-225	0.022			3.87
D-319-98 225-230	0.008			3.85
D-319-98 230-235	0.009			4.78
D-319-98 235-240	0.001			0.12
D-319-98 240-245	0.004			0.26
D-319-98 245-250	0.003			0.21
46589	0.542			5.06

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

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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 LLC

Address: PO 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: 11/10/98 Number of Samples: 56

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [ ] Au/Ag according to Rosebud Mine protocol

D319-98	SAMPLE IDENTIFICATION		TYPE	ELEMENTS REQUIRED
0-4	52-56	122-125		195-200
4-8	56-60	125-130		200-205
8-10	60-65	130-135		205-210
10-14	65-70	135-140		210-215
14-17.5	70-75	140-145		215-220
17.5-19	75-85	145-150		220-225
19-26	85-89	150-155		225-230
26-29.5	89-91.5	155-160		230-235
29.5-33	91.5-96	160-165		235-240
33-34.5	96-100	165-170		240-245
34.5-39.5	100-105	170-175		245-250 TD
39.5-43.5	105-110	175-180		
43.5-47	110-113	180-185		
47-48.3	113-118	185-190		
48.3-52	118-122	190-195		

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

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051541

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-319-98 RECEIVED : 12 NOV 1998

No. SAMPLES : 57 REPORTED : 25 NOV 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 SP051541

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-319-98 0-4	<0.001			<0.02	
D-319-98 4-8	0.012			0.06	
D-319-98 8-10	0.004			0.08	
D-319-98 10-14	1.250		1.314	1.00	
D-319-98 14.0-17.5	0.006	0.004		0.08	
D-319-98 17.5-19.0	0.006			0.02	
D-319-98 19-26	0.004			0.17	
D-319-98 26.0-29.5	0.003			0.09	
D-319-98 29.5-33.0	0.001			0.04	
D-319-98 33.0-34.5	0.006			0.17	
D-319-98 34.5-39.5	0.004			<0.02	
D-319-98 39.5-43.5	<0.001			0.02	
D-319-98 43.5-47.0	0.002			0.13	
D-319-98 47.0-48.3	1.375		1.447	1.65	
D-319-98 48.3-52.0	0.006	0.003		0.11	
D-319-98 52-56	0.002			0.03	
D-319-98 56-60	0.001			0.03	
D-319-98 60-65	0.001			0.03	
D-319-98 65-70	0.003			0.04	
D-319-98 70-75	0.003			0.07	85-91.5' =
D-319-98 75-85	0.033	0.026		0.13	6.5' @
D-319-98 85-89 4	0.176		0.188	0.41	0.193 Au
D-319-98 89.0-91.5 2.5	0.219		0.208	0.14	0.31 Ag
D-319-98 91.5-96.0	0.006			0.05	
D-319-98 96-100	0.117		0.110	2.12	

AMERICAN ASSAY LABORATORIES

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REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-319-98 100-105	0.108		0.092	1.28	
D-319-98 105-110	0.094		0.062	0.26	113-122 =
D-319-98 110-113	0.100		0.105	1.17	9' @
D-319-98 113-118 4	0.307		0.358	0.97	0.286 Au
D-319-98 118-122 4	0.259		0.249	0.58	0.80 Ag
D-319-98 122-125	0.123		0.128	3.06	
D-319-98 125-130	0.035			0.51	
D-319-98 130-135	0.018			0.54	
D-319-98 135-140	0.019			1.65	
D-319-98 140-145	0.011			3.05	
D-319-98 145-150	0.062		0.058	1.29	
D-319-98 150-155	0.050		0.060	0.86	
D-319-98 155-160	0.075		0.054	2.91	
D-319-98 160-165	0.031			1.56	
D-319-98 165-170	0.018			0.32	
D-319-98 170-175	0.004			2.24	
D-319-98 175-180	0.005			0.38	
D-319-98 180-185	0.002			0.89	
D-319-98 185-190	0.004			0.48	
D-319-98 190-195	0.003			1.30	
D-319-98 195-200	0.009			4.58	
D-319-98 200-205	0.004	0.009		2.72	
D-319-98 205-210	0.017			0.48	
D-319-98 210-215	0.033			0.11	
D-319-98 215-220	0.032			13.10	

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP051541

CLIENT : HECLA MINING COMPANY
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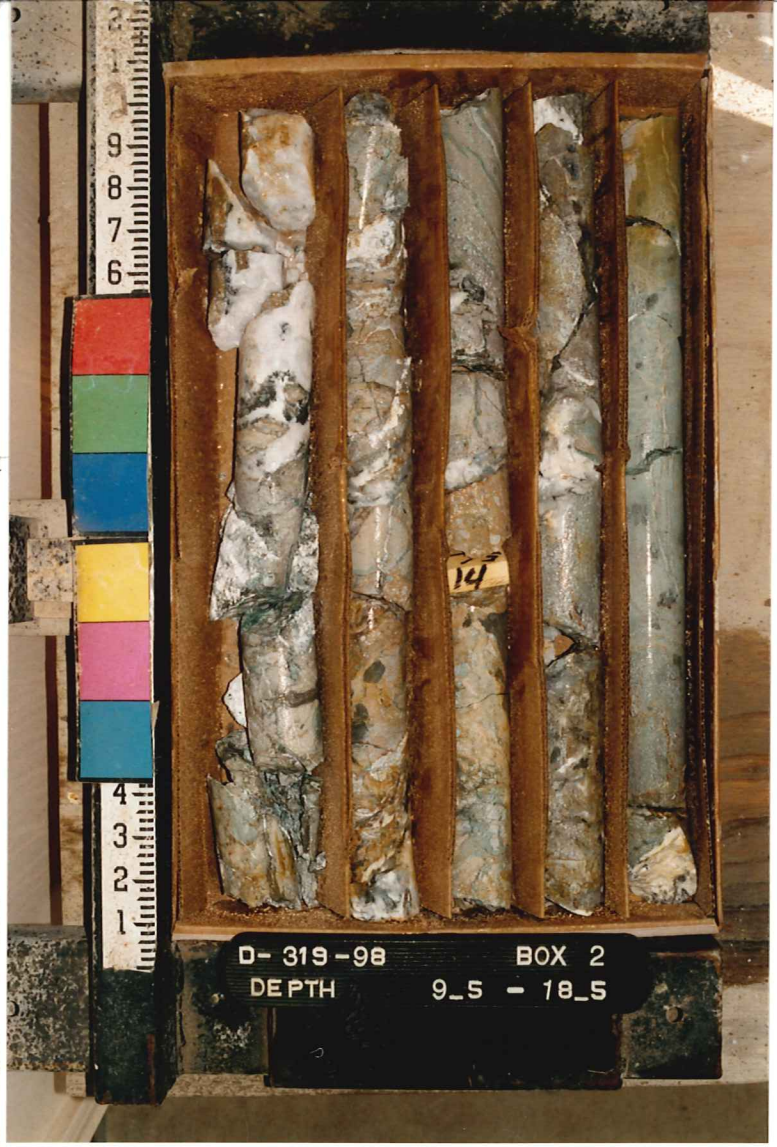
REFERENCE : D-319-98

REPORTED : 25 NOV 1998

SAMPLES	Au(OZ.)	Au(RZ.)	AuGRAV	Ag(OZ.)
D-319-98 220-225	0.022			3.87
D-319-98 225-230	0.008			3.85
D-319-98 230-235	0.009			4.78
D-319-98 235-240	0.001			0.12
D-319-98 240-245	0.004			0.26
D-319-98 245-250	0.003			0.21
46589	0.542			5.06

D-319-98	35	15	125.7
	125	15	126.7
	250	15	127.7


D- 319 -98
BOX 2
DEPTH
9_5 - 18_5
14

D- 319 -98
BOX 1
DEPTH
0 - 9_5
1.5
9
4

D- 319 -98
BOX 3
DEPTH
18_5 - 30_5
19
36
29.5

D- 319-98 BOX 5
DEPTH 39_5 - 49

39.5
D- 319-98 BOX 4
DEPTH 30_5 - 39_5

D- 319-98 BOX 6
DEPTH 49 - 58_5

75'
D- 319-98 BOX 8
DEPTH 68 - 77_5

60
65
D- 319-98 BOX 7
DEPTH 58_5 - 68

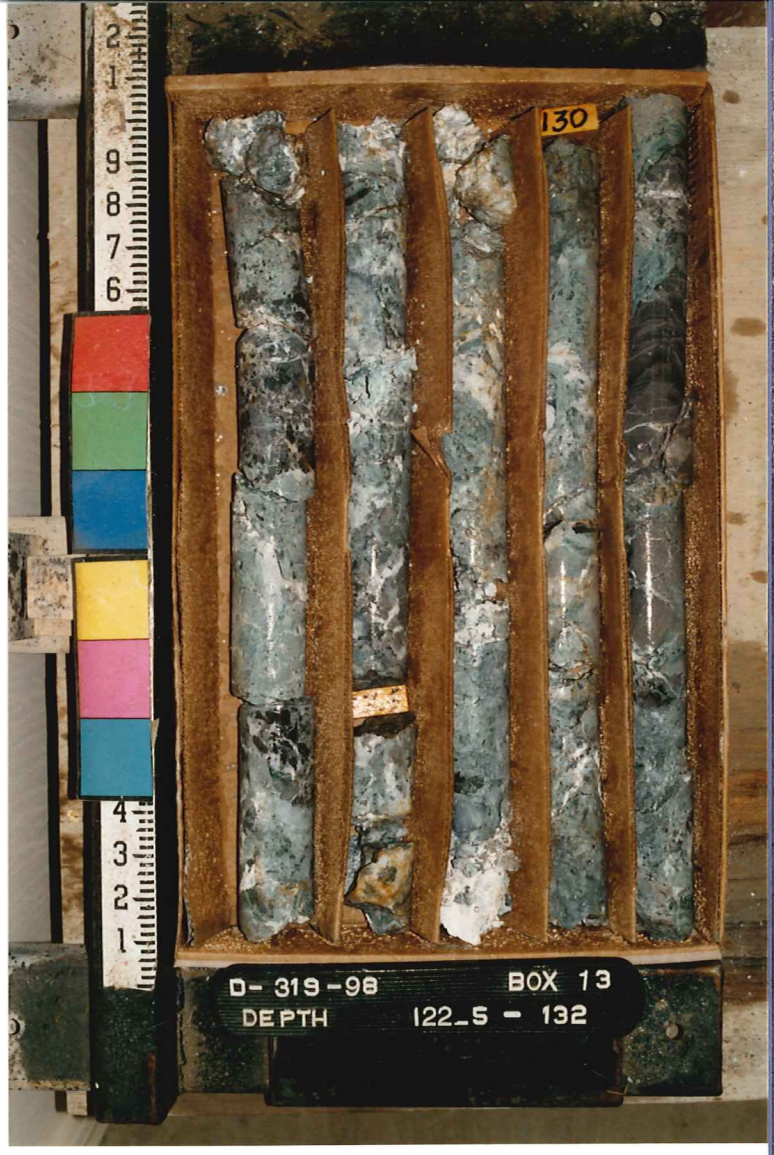
D- 319-98 BOX 9
DEPTH 77_5 - 92_5
85'
89'
91'

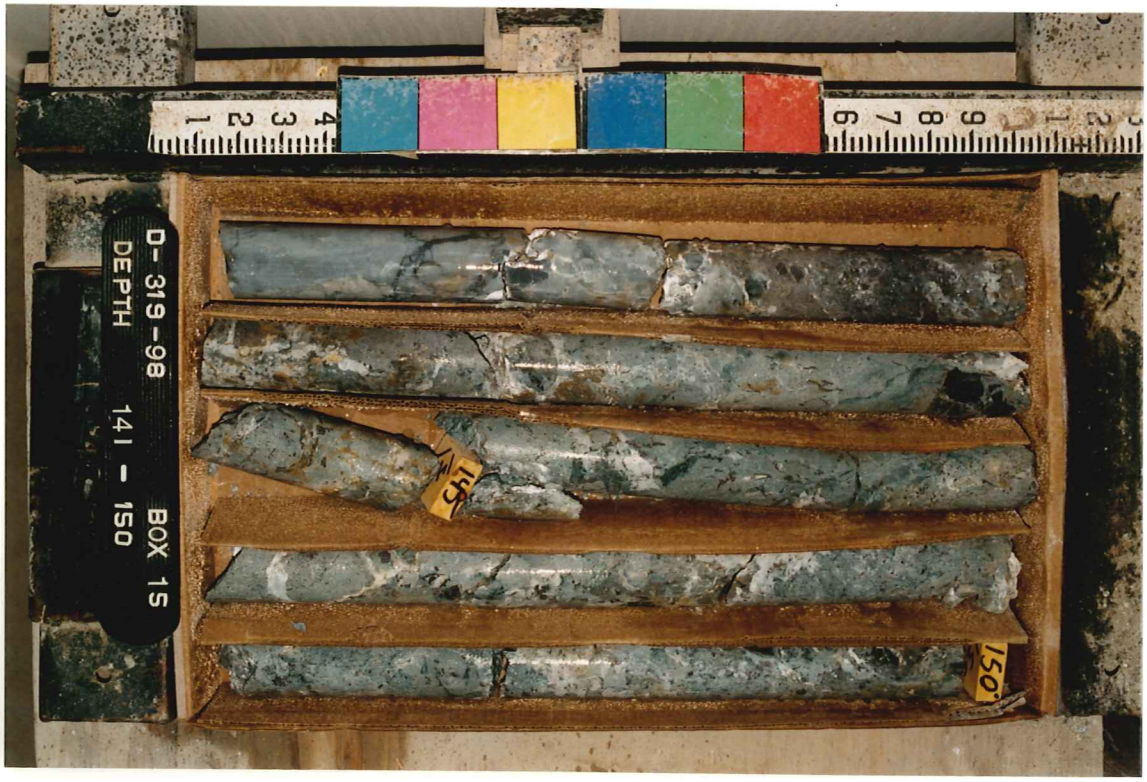
D- 319-98 BOX 11
DEPTH 102 - 113
113
105
107
110
112

D- 319-98 BOX 10
DEPTH 92_5 - 102
99
95

D- 319-98 BOX 12
DEPTH 113 - 122_5
118
120

135
140'
D- 319 -98
BOX 14
DEPTH 132 - 141


130
D- 319 -98
BOX 13
DEPTH 122_5 - 132


D- 319 -98
BOX 15
DEPTH 141 - 150
145
150'

D- 319-98
BOX 17
DEPTH 159_5 - 169
65
160

D- 319-98
BOX 16
DEPTH 150 - 159_5
155

D- 319-98
BOX 18
DEPTH 169 - 178_5
170
175

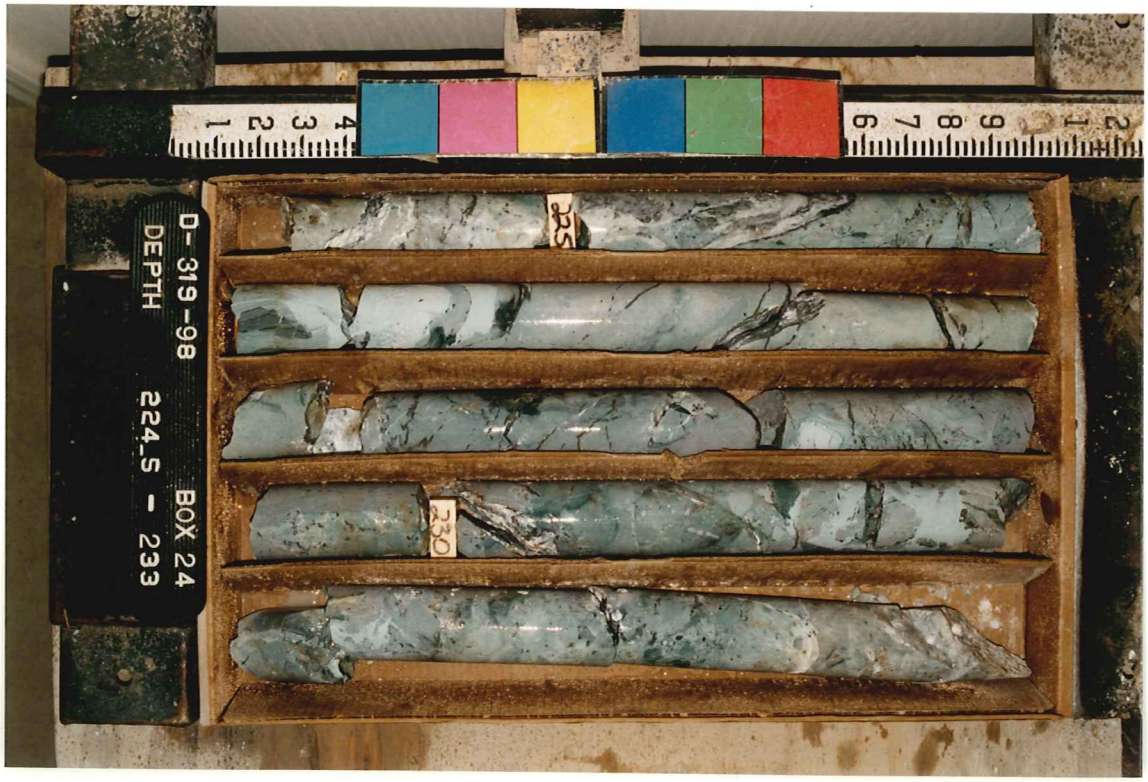
190
195
D- 319-98
BOX 20
DEPTH
188_5 - 198

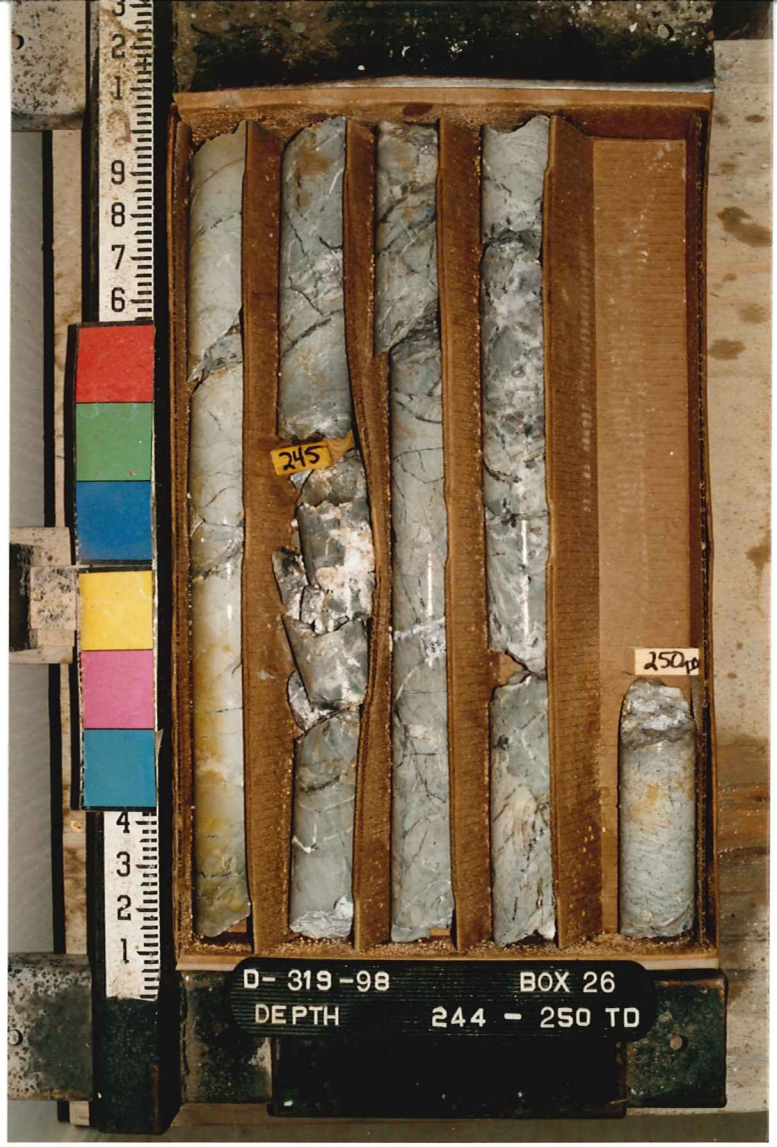
180
D- 319-98
BOX 19
DEPTH
178_5 - 188_5

200
205
D- 319-98
BOX 21
DEPTH
198 - 207

220
D- 319 -98
BOX 23
DEPTH
215_5 - 224_5

210
215
D- 319 -98
BOX 22
DEPTH
207 - 215_5


225
230
D- 319 -98
BOX 24
DEPTH
224_5 - 233


245
250 TD
D- 319 -98
BOX 26
DEPTH
244 - 250 TD

235
240
D- 319 -98
BOX 25
DEPTH
233 - 244

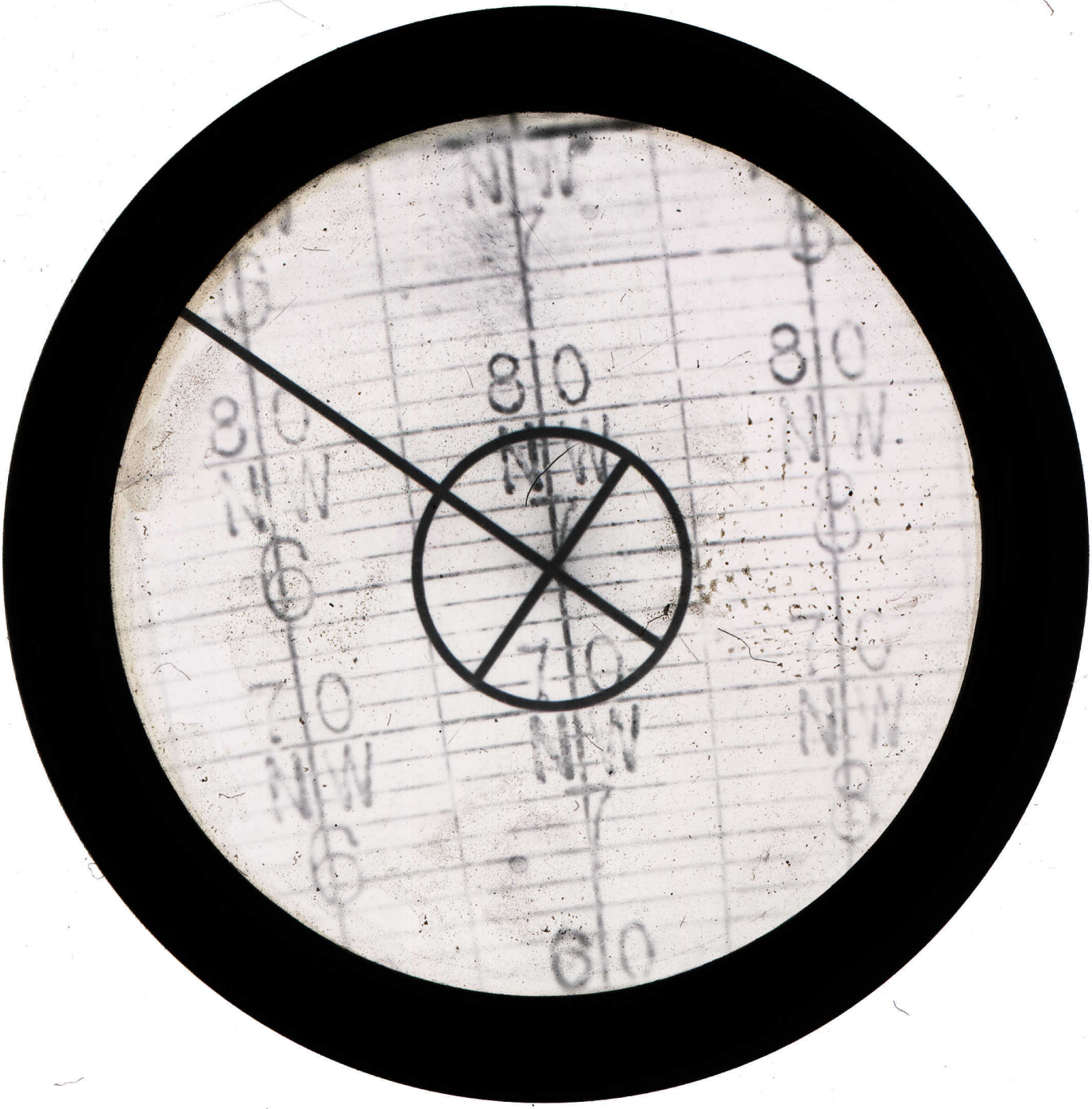
SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-319-98
LEASE
TAKEN BY Hughes
DEPTH 250
DATE 9/28/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

NW
80
NW
70
NW
60

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-319-98
LEASE
TAKEN BY Hughes
DEPTH 125
DATE 9/28/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-319-98
LEASE
TAKEN BY Hughes
DEPTH 35
DATE 9/28/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408