60001087

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-206-98
AUTHOR	D Morris; K. Allen; 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; Rosebud Project; Rosebud Mining Co. LLC Hecla Mining Co.; East Zone
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; [redacted]; total depth 300' receipt; handwritten notes; downhole camera images photographs 49p 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: DP 5/12/08
Initials Date
DB: mah
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

D-206-98

6000 1087 4010

6000 1087

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

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-206-98	LOCATION	East Zone Stope 42 Sec. 1525
PAGE 1 OF 5		NORTHING	
DATE	5/1/98	EASTING	
LOGGED BY	Brian W. Morris	ELEVATION	
SCALE	1" = 10'	AZIMUTH	N54W
TOTAL DEPTH	300'	INCLINATION	6°

REMARKS

TH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	0-50 Autobrecciated Dozer Lt gry v.fg rounded-subangular monolith clast ghosts. supported by Lt gry - Lt br v.fg MTx.	5, 10, 15, 20, 25, 30, 35, 40, 45, 50		24.6-30.4 Fault+BXA 2-3cm wide Milled bxa healed By SiO_2+dk gry fg Sulf, Mostly Clast supported Monolithic rubble Bxa, clasts are subangular Pozer healed by gry SiO_2+ gr clay	0-15.0' Wk sulf ± SiO_2 vnlets. 15.0'-17.0 Str subpar. gr clay vn ± wk clay ± SiO_2 24.6-30.4 Wk-Mod sulf blebs, wk diss fg sulf, wk pervs gr clay alt. 30.4-35.0 Mod-str sulf + gr clay vnlets + hairline stkwk, Minor .5-1cm wide dk gry SiO_2 vn, wk blch + argil, wk diss marc. 35.0-50.0 Wk blch + Argil, wk sulf + SiO_2 vn.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag
0	5.0					
5.0	10.0					
10.0	15.0					
15.0	17.0					
17.0	20.0					
20.0	24.6					
24.6	25.0					
25.0	30.4					
30.4	35.0					
35.0	40.0					
40.0	45.0					
45.0	50.0					

HOLE NUMBER D-206-98 PAGE 2 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	50-120' Autobrecciated Dozer Lt gry monolithic subangular fg clast ghosts supported by fg equigranular mtx.	55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	45°, 50°, Fx 31', Fit 55°, 45°, 42°	95.5 Fault 1-2' wide milled monolith Dozer clasts healed by gry SiO_2, along Lower Rx & Bx a contact thin Wh Clay Vn.	50-120' Wk Sulf Vnlets Minor barite Vn, Minor str sulf patches 75.0-83.8' Wk blch & argil 83.8-93.0 Wk gr Clay alt. 92.0-93.0 Mod str sulf seaked patches + Vn. 95-100' Wk wh Clay + Sulf Vnlets 95-120' Wk gr clay alt along Vnlets, V. wk diss sulf.

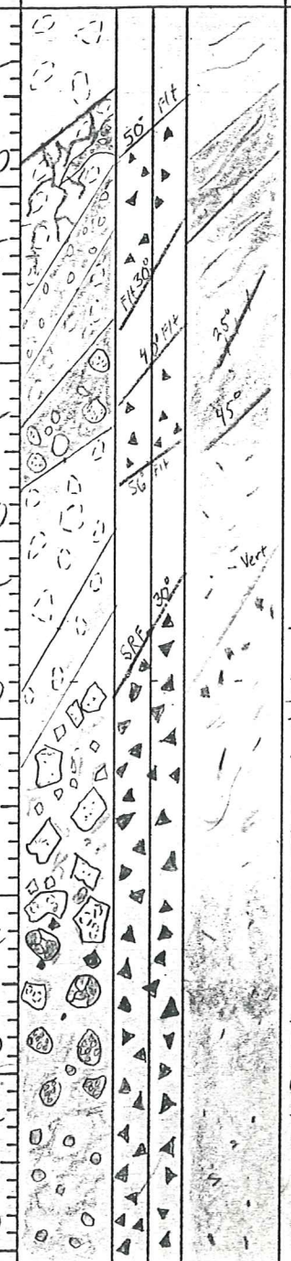
ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
50.0	55.0				
55.0	60.0				
60.0	65.0				
65.0	70.0				
70.0	75.0				
75.0	80.0				
80.0	85.0				
85.0	90.0				
90.0	93.0				
93.0	95.0				
95.0	100.0				
100.0	105.0				
105.0	110.0				
110.0	115.0				
115.0	120.0				

HOLE NUMBER D-206-98 PAGE 3 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
	Reduced	120'-190' Autobrecciate Dozer Lt gry fg Subrounded - Subangular Clast ghosts supported by fg equigranular Mtx.	125 130 135 140 145 150 155 160 165 170 175 180 185 190	50° 83° 50° Flt 50° 5° 40° 45° Flt 45° 35° 45° 15°	Fault 169.2-172.7 Rubble BXA: Mtx-clast supported Monolithic, Clasts are subrounded Subangular Dozer Clasts, healed by gry SiO_2. 180' 2cm Wide Barite & Wh Clay Vn	120-130.0' Minor 1-2cm wide Vuggie barite + SiO_2 ± Bladed Marc. 120-150.8 Wk gry clay alt of Autobxa Mtx, wk-Mod bleh & argil of ghosts. 130-150.8 Wk Sulf ± SiO_2 Vnlets, v. wk diss sulf 150.8-154.7 Str Gry SiO_2 ± Bladed Marc ± wh Clay Vuggie Vn + stk wk, wk silic 154.7-159.5' Mod Gry SiO_2 + bright brassy Bladed Marc stk wk. wk patchy silic 159.5-169.2 Wk Sulf + SiO_2 ± wh Clay, Minor wk diss sulf patches, wk perv gry Clay alts, R-wk gr Clay on Fx. 169.2-172.7 Minor wk diss sulf patches, moderate Vuggie barite + Bladed Marc Vn, Minor Bladed Marc + wh Clay + SiO_2 Vn, wk diss sulf blebs, clasts are wk argil. 172.7-175' Mod .5cm wide Bladed Marc + SiO_2 Vuggie Vn. 175-197 Wk Minor 1cm Wide Bladed Marc & SiO_2 + wk wh Clay Vn, wk Sulf ± SiO_2 vnlets, v. faint gr clay alt along Fx.	120.0 125.0 130.0 134.0 139.0 144.0 149.0 150.8 154.7 159.5 164.5 169.2 172.7 175.0 180.0 185.0	125.0 130.0 134.0 139.0 144.0 149.0 150.8 154.7 159.5 164.5 169.2 172.7 175.0 180.0 185.0 190				

HOLE NUMBER D-206-98 PAGE 4 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	190 – 228 Autobrecciated Dozer Lt gry fg Subrounded clast ghosts supported by fg Lt gry fg equigranular Mtx	195 200 205 210 215 220		197-203.2 Crackle Bxa w/ Minor milled Bxa Vn healed by SiO_2 + Gr Clay 203.2- 206.0' Milled BXA: .1-.5 dia rounded-Subrounded Dozer Clasts healed by SiO_2 + gr clay 210.6 – 215.5' Milled BXA Mostly Clast Supported, Clasts are rounded Auto Bxa Dozer W/ Str pr br St. Auto Bxa Mtx, healed by SiO_2 w/ str brownish- br gr clay overprint.	197-203.2 Str gr clay alt of Auto Bxa Mtx, Minor wh Clay blebs, Mod Bladed Marc + SiO_2 ± wh clay Vn 203.2-206.0 Wk Marc + wh clay + SiO_2 Vnt Vnlets, Wk Wh Clay filled Vugs. 206.0 - 210.6' Auto BXA Mtx wk-Mod gr clay alt, Mod gr Clay + SiO_2 hebled Milled BXA Vn, Minor 2-4 cm wide wh SiO_2 + wh Clay ± Bladed Marc + Barite. 210.6 - 215.5 Minor wh Clay + wh SiO_2 + Bladed Marc Vn 215.5 - 225.0 Auto BXA Mtx is Mod Orangish- lt br stained Mod patchy gr clay alt, Wk Sulf 'scalled patches'.
		228 – 240 Massive pink fg equigranular w/ blk fg biotite? grains Dozer?!??	225 230 235		225' SRF Lower Phase 2.4' zone of dk gry sulf soaked SiO_2 w/ parallel .2' wide wh Clay vn ± barite grading to Silica Flooded Milled bxa. 228- 240 Rubble BXA: Mostly Mtx+ supported, Clast are composed of Subangular Dozer?? healed by Semitranslucent gry-br SiO_2 @ 236.6 Mtx becomes gry gr in color	220 - 223 Str dk gry SiO_2 Vn w/ mod Bladed Marc ± wh Clay, Mod diss bladed Marc. 225 - 228' Completly SiO_2 flooded w/ v. faint rounded Clast ghosts, Minor Marc + calpy blebs 228 - 236.6 Wk-mod leaching of Mtx w/ wh Clay + Bladed Marc replacement 236.6 - 240.0' Mod-Str leaching of Mtx w/ wh Clay + barite filling Vugs.
		240 – 248 Heterlithic Rubble ± Milled BXA, Mostly Mtx supported, clasts are composed of angular - subangular fg br Autobrecciated Dozer?? & gr, Lt br Cg - Conglomeratic w/ Minor blk phyllite epiclastic Clasts - Tos	240 245			
		248 – 262 Bud Cg gr epiclastic rounded Clasts healed by gr SiO_2 Mtx.	250 255 260		248-252' Milled BXA: Gr rounded Bud Clasts Healed by gr SiO_2, Bud Clasts are Mod argil 252-262 Bud? Clasts becoming more rounded & smaller in dia - Hard to determine lith.	252-262 Str argilic over printing, Clasts Str argil, wk diss sulf

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
190.0	195.0				
195.0	197.0				
197.0	200.0				
200.0	203.2				
203.2	206.0				
206.0	210.6				
210.6	215.6				
215.6	220.0				
220.0	225.0				
225.0	228.0				
228.0	232.0				
232.0	236.6				
236.6	240.0				
240.0	245.0				
245.0	248.0				
248.0	252.0				
252.0	257.0				
257.0	262.0				

HOLE NUMBER D-206-98 PAGE 5 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	262 - 285 TOS Cg gr epiclastic Tuffaceous & minor blk phyllite clasts	265		260-267 Milled BXA: rounded epiclastic clasts healed by gr SiO_2 Mtx, Mod-wk argillic overprint	267-276 Gr-Wh SiO_2 Flooded, str perv. Fract wk leaching w/ Wh clay replacement, locally wk blk Sooty Coating on Fx.
		LOSS			LOSS	
	Oxidized		270		267-276 wh Qt clast ghosts	269.5-270 Intense Fx & shattering Sandy appearance, Strong earthy or-or br FeOx
	Reduced	LOSS			LOSS	
		LOSS	275		LOSS	
		LOSS	280		LOSS	
		285-301 LBT? Fine Grain Porphyry Dk olive gry v.fg equigranular groundmass supporting 1mm-.5mm wh Feld laths	285 290 295 300		280-285 Rubble BXA is healed by SiO_2 + barite. 292.5-301 Clast Supported Crackle-Mosaic BXA healed by Barite + wh clay + Stibnite	280-285 WK-Mod Vugs, wk wh Clay. 285-292.5 str wh clay + Euhedral Stibnite + barite filled Fx & Voids. 292.5-301 leaching of SiO_2 Mtx w/ v. str wh clay + stibnite replacement.
		T.D. 301'				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
257	262				
262.0	265				
265.0	265.5				
265.5	267		LOSS		
267	268.5				
268.5	270				
270	271				
271	272		LOSS		
272	274				
274	276		LOSS		
276	278				
278	280		LOSS		
280	285				
285	289				
289	292.5				
289	294				
294	299				
299	301				

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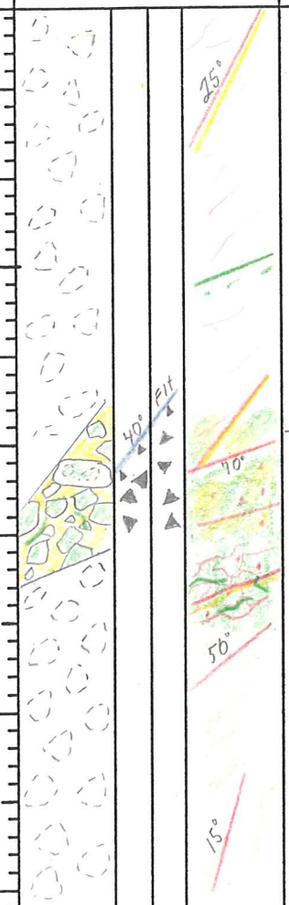
- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- sulfide
- Barite
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- chlorite, chloritic clays

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-206-98	LOCATION	East Zone Stope 42 Sec. 1525	REMARKS	
PAGE 1 OF 5		NORTHING			
DATE	5/1/98	EASTING			
LOGGED BY	Brian W. Morris	ELEVATION			
SCALE	1" = 10'	AZIMUTH	N54W		
TOTAL DEPTH	300'	INCLINATION	6°		

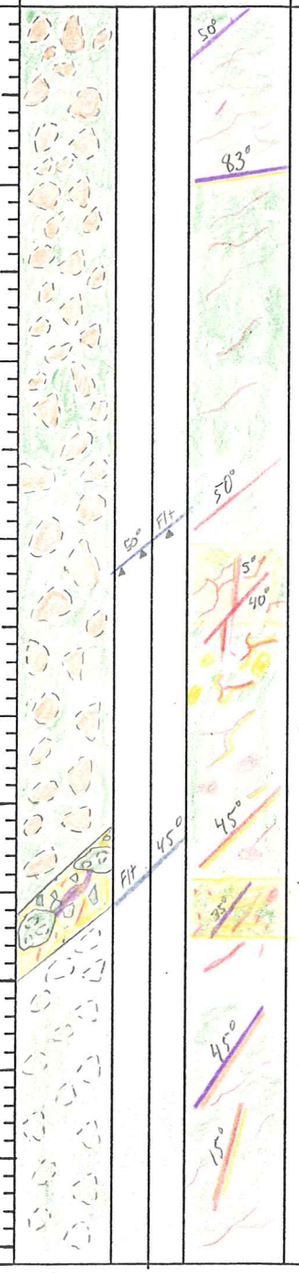
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	0-50 Autobrecciated Dozer Lt gry v.fg rounded-subangular monolith clast ghosts. Supported by Lt gry - Lt br v.fg MTx.	5, 10, 15, 20, 25, 30, 35, 40, 45, 50		24.6-30.4 Fault+BXA 2-3cm Wide Milled bxa healed By SiO_2 + dk gry fg Sulf, Mostly Clast supported Monolith rubble BXA, Clasts are subangular Pozer healed by gry SiO_2 F gr clay	0-15.0' wk sulf ± SiO_2 Inlets. 15.0'-17.0 Str subpar. gr clay Vn ± wk clay ± SiO_2 24.6-30.4 wk-Mod sulf blebs, wk diss fg sulf, wk pervs gr clay alt. 30.4-35.0 Mod-str sulf + gr clay Vnlets + hairline stkwk, Minor .5-1cm wide dk gry SiO_2 Vn, wk blch + argil, wk diss marc. 35.0-50.0 Wk blch + Argil, wk Sulf + SiO_2 Vn.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag
0	5.0					
5.0	10.0					
10.0	15.0					
15.0	17.0					
17.0	20.0					
20.0	24.6					
24.6	25.0					
25.0	30.4					
30.4	35.0					
35.0	40.0					
40.0	45.0					
45.0	50.0					

HOLE NUMBER D-206-98 PAGE 2 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
	Reduced	50-120' Autobrecciated Dozer Lt gry monolithic subangular fg clast ghosts supported by fg equigranular mtx.	55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120	45°; 50°; Bx 21'; Ftr 55°; 45°; 42°	95.5 Fault 1-2' wide milled monolith Dozer clasts healed by gry SiO_2 along Lower RX & BX contact thin Wh Clay Vn.	50-120' Wk Sulf Vnlets Minor barite Vn, Minor str sulf patches 75.0-83.8' Wk blch & argil 83.8-93.0 Wk gr Clay alt. 92.0-93.0 Mod str sulf soaked patches + Vn. 95-100' Wk wh clay + Sulf Vnlets 95-120' Wk gr clay alt along Vnlets, V. wk diss sulf.	50.0	55.0				
							55.0	60.0				
							60.0	65.0				
							65.0	70.0				
							70.0	75.0				
							75.0	80.0				
							80.0	85.0				
							85.0	90.0				
							90.0	93.0				
							93.0	95.0				
							95.0	100.0				
							100.0	105.0				
							105.0	110.0				
							110.0	115.0				
							115.0	120.0				

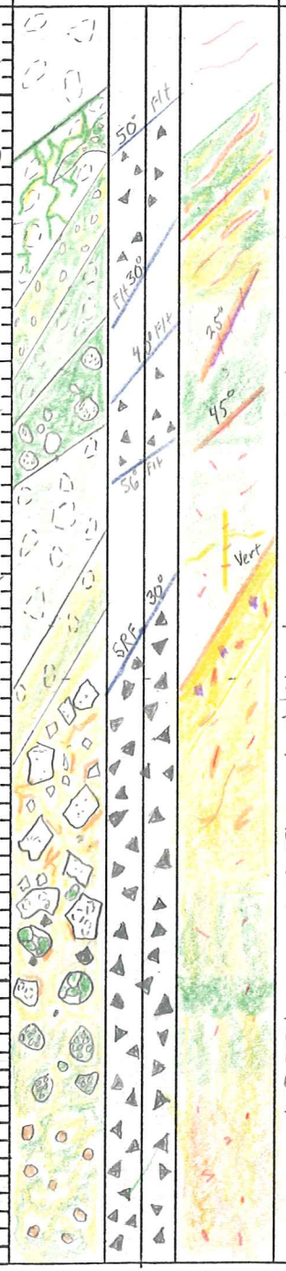
HOLE NUMBER D-206-98 PAGE 3 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	120'-190' Autobrecciate Dozer Lt gry fg subrounded - subangular Clast ghosts supported by fg equigranular Mtx.	125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190		Fault 169.2-172.7 Rubble BXA: Mtx-clast supported Monolithy, Clasts are subrounded subangular Dozer Clasts, healed by gry SiO_2. 180' 2cm Wide Barite & Wh Clay Vn	120-130.0' Minor 1-2cm wide Vuggie barite + SiO_2 ± Bladed Marc. 120-150.8 Wk gry clay alt of Autobxa Mtx, wk-Mod blch & argil of ghosts. 130-150.8 Wk Sulf ± SiO_2 Vnlets, v. wk diss sulf 150.8-154.7 Str Gry SiO_2 ± Bladed Marc ± Wh Clay Vuggie Vn + stk wk, wk silic 154.7-159.5' Mod Gry SiO_2 + bright brassy Bladed Marc str wk. wk patchy silic 159.5-169.2 Wk Sulf + SiO_2 ± Wh Clay, Minor wk diss sulf patches, wk pstv gry Clay alt, k-wk gr clay on Fx. 169.2-172.7 Minor wk diss sulf patches, moderate Vuggie barite + Bladed Marc Vn, Minor Bladed Marc + Wh Clay + SiO_2 Vn, wk diss sulf blebs, clasts are wk argil. 172.7-175' Mod .5cm wide Bladed Marc + SiO_2 Vuggie Vn. 175-197' Wk Minor 1cm wide Bladed Marc & SiO_2 + wk Wh Clay Vn, wk sulf ± SiO_2 vnlets, v. faint gr clay alt along Fx.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
120.0	125.0				
125.0	130.0				
130.0	134.0				
134.0	139.0				
139.0	144.0				
144.0	149.0				
149.0	150.8				
150.8	154.7				
154.7	159.5				
159.8	164.5				
164.5	169.2				
169.2	172.7				
172.7	175.0				
175.0	180.0				
180.0	185.0				
185.0	190				

HOLE NUMBER D-206-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	190 - 228 Autobrecciated Dozer Lt gry fg Subrounded clast ghosts supported by fg Lt gry fg equigranular Mtx	195 200 205 210 215 220 225		197-203.2 Crackle Bxa w/ Minor Milled Bxa Vn healed by SiO_2 + Gr Clay 203.2- 206.0' Milled BXA: .1-.5 dia rounded-Subrounded Dozer Clasts healed by SiO_2 + gr clay 210.6 - 215.5' Milled BXA Mostly Clast Supported, Clasts are rounded Auto Bxa Dozer W/ Str pr br St. Auto BXA Mtx, healed by SiO_2 w/ str brownish - br gr clay overprint. 225' SRF Lower Phase 2.4' zone of dk gry sulf soaked SiO_2 w/ parallel .2' wide wh Clay vn ± barite grading to Silicd Flooded Milled bxa.	197-203.2 Str gr clay alt of Auto Bxa Mtx, Minor wh Clay blebs, Mod Bladed Marc + SiO_2 ± wh clay Vn 203.2-206.0 Wk Marc + wh clay + SiO_2 Vnt Vnlets, Wk Wh Clay filled Vugs. 206.0 - 210.6' Auto BXA Mtx Wk-Mod gr clay alt, Mod gr clay + SiO_2 healed Milled BXA Vn, Minor 2-4 cm wide wh SiO_2 + wh Clay ± Bladed Marc ± Barite. 210.6 - 215.5 Minor wh Clay + wh SiO_2 + Bladed Marc Vn 215.5 - 225.0 Auto BXA Mtx is Mod Orangish-Lt br Stained Mod patchy gr clay alt, Wk Sulf soaked patches. 220 - 223 Str dk gry SiO_2 Vn w/ mod Bladed Marc ± wh Clay, Mod diss bladed Marc. 225 - 228' Completly SiO_2 flooded W/ V. faint rounded Clast ghosts, Minor Marc + calcy blebs
		228 - 240 Massive pink fg equigranular w/ blk fg biotite? grains Dozer?!?	230 235		228 - 240 Rubble BXA: Mostly Mtx+ supported, Clast are composed of Subangular Dozer?? healed by Semitranslucent gry-br SiO_2 @ 236.6' Mtx becomes gry gr in color	228 - 236.6 Wk-Mod leaching of Mtx w/ wh Clay + Bladed Marc replacement 236.6 - 240.0' Mod-Str leaching of Mtx w/ wh Clay + barite filling Vugs.
		240 - 248 Heterolithic Rubble - Milled BXA, Mostly Mtx supported, clasts are composed of angular - Subangular fg br Autobrecciated Dozer? & gr, Lt br Cg - Conglomeratic w/ Minor blk phyllite epiclastic Clasts - Tos 248 - 262 Bud Cg gr epiclastic rounded Clasts healed by gr SiO_2 Mtx.	240 245 250 255 260		248-252' Milled BXA: Gr rounded Bud Clasts Healed by gr SiO_2, Bud Clasts are Mod argil 252-262 Bud? Clasts becoming more rounded & smaller in dia - Hard to determine lith.	252-262 Str argilic over printing, Clasts Str argil, wk diss sulf

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
190.0	195.0				
195.0	197.0				
197.0	200.0				
200.0	203.2				
203.2	206.0				
206.0	210.6				
210.6	215.6				
215.6	220.0				
220.0	225.0				
225.0	228.0				
228.0	232.0				
232.0	236.6				
236.6	240.0				
240.0	245.0				
245.0	248.0				
248.0	252.0				
252.0	257.0				
257.0	262.0				

HOLE NUMBER D-206-98 PAGE 5 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	Reduced	262 - 285' TOS Cg gr epiclastic Tuffaceous & minor blk phyllite clasts	265		260-267 Milled BXA; rounded epiclastic clasts healed by gr SiO_2 Mtx, Mod-wk argillic overprint	267 - 276 Gr-Wh SiO_2 flooded, str peryl. Fract wk leaching w/ Wh clay replacement, locally wk blk sooty coating on Fx.
		LOSS			LOSS	
	Oxidized		270		267-276 Wh Qt Clast ghosts	269.5 - 270 Intense Fx & shattering Sandy appearance, Strong earthy or-or br FeOx.
	Reduced	LOSS			LOSS	
			275			
		LOSS			LOS S	
		LOSS	280		LO SS	
		285 - 301' LBT? Fine Grain Porphyry Dk olive gry V.fg equigranular groundmass supporting 1mm-.5mm wh Feld laths	285		280-285: Rubble BXA is healed w/ SiO_2 + barite.	280-285 WK-Mod Vugs, WK wh Clay. 285-292.5 str wh clay + Euhedral Stibnite + barite filled Fx & Voids.
			290			
			295		292.5 - 301' Clast Supported Cruckle - Mosaic BxA healed by Barite + wh Clay + Stibnite	292.5-301' leaching of SiO_2 Mtx w/ V. str wh Clay + stibnite replacement.
		T.D. 301'	300			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
257	262				
262.0	265				
265.0	265.5				
265.5	267		LOSS		
267	268.5				
268.5	270				
270	271				
271	272		LOSS		
272	274				
274	276		LOSS		
276	278				
278	280		LOSS		
280	285				
285	289				
289	292.5				
289	294				
294	299				
299	301				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-206-98 DATE: 5/1/98 LOGGED BY: Brian W. Morris PAGE 1 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	5	94	94	66										
5	10	98	98	100										
10	15	100	100	90										
15	20	100	100	84										
20	25	94	94	89										
25	30	94	94	89										
30	35	96	96	79										
35	40	96	96	90										
40	45	98	98	79										
45	50	90	90	71										
50	55	96	96	85										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-206-98 DATE 5-1-98 LOGGED BY: BWM PAGE 2 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
55	60	96	96	96										
60	65	94	94	57										
65	70	90	90	80										
70	75	90	90	78										
75	80	90	90	82										
80	85	96	96	92										
85	90	94	94	89										
90	95	96	96	90										
95	100	98	98	55										
100	105	98	98	100										
105	110	92	92	89										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-206-98 DATE: 5-1-98 LOGGED BY: BWM PAGE 3 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
120	125	96	96	79										
125	130	96	96	85										
130	134	98	98	90										
134	139	100	100	100										
139	144	98	98	92										
144	149	98	98	86										
149	154	96	96	73										
154	159.2	94	94	80										
159.2	164.2	91	91	86										
164.2	169.8	91	91	92										
169.8	175	90	90	74										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-205-98 DATE: 5/1/98 LOGGED BY: RWM PAGE 4 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
175	180	94	94	94										
180	185	96	96	100										
185	190	86	86	77										
190	195	96	96	85										
195	200	98	98	84										
200	205	92	92	100										
205	210	96	96	92										
210	215	86	86	84										
215	220	100	100	94										
220	225	90	90	79										
225	230	94	94	79										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-206-98 DATE: 5/2/98 LOGGED BY: BWM PAGE 5 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
235	240	96	96	92										
240	245	98	98	92										
245	250	94	94	91										
250	255	94	94	70										
255	260	98	98	84										
260	265	92	92	66										
265	267	25	60	0										
267	268.5	60	60	0										
268.5	270.0	100	100	0										
270	272	50	80	0										
272	276	50	75	0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-206-98 DATE: 5/2/98 LOGGED BY: BWM PAGE 6 OF 6

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
276	280	50	75	26										
280	285	100	100	48										
285	289	90	90	75										
289	294	94	94	64										
294	299	94	94	77										
299	301	85	85	53										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048942

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

: METALIC SCREENS

:

:

CLIENT REFERENCE No: D-206-98 RECEIVED : 21 MAY 1998

No. SAMPLES : 17 REPORTED : 29 MAY 1998

MAIN SAMPLE TYPE : SAMPLES ANALYSED AS RECEIVED

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
WT+65#	FA-MS	5%	GRAMS	1.0
WT-65#	FA-MS	5%	GRAMS	1.0
Au+65#	FA-MS	15%	OPT	0.001
Au-65#	FA-MS	15%	OPT	0.001
Au-65#R	FA-MS	15%	OPT	0.001
AuCALC	FA-MS	15%	OPT	0.001
Ag+65#	FA-MS	15%	OPT	0.02
Ag-65#	FA-MS	15%	OPT	0.02

SIGNATORY : Susan King M.S.

05/29/1998 15:43 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048942

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	WT+65#	WT-65#	Au+65#	Au-65#	Au-65#R	AuCALC
D-206-98 24.6-25.0	55.4	550.0	0.189	0.110	0.076	0.101
D-206-98 150.8-154.7	59.7	583.0	0.276	0.155	0.116	0.149
D-206-98 159.5-164.5	25.4	580.0	0.096	0.085	0.086	0.086
D-206-98 164.5-169.2	34.0	580.0	0.541	0.207	0.154	0.200
D-206-98 169.2-172.7	10.0	585.0	0.478	0.098	0.107	0.109
D-206-98 185-190	19.1	600.0	0.127	0.096	0.068	0.083
D-206-98 190-195	56.6	574.0	0.196	0.228	0.184	0.206
D-206-98 197-200	33.6	582.0	0.116	0.081	0.115	0.099
D-206-98 200.0-203.2	27.9	590.0	0.268	0.074	0.086	0.088
D-206-98 210.6-215.6	35.3	597.0	0.195	0.032	0.067	0.058
D-206-98 215.6-220.0	41.8	575.0	0.004	0.005	0.013	0.009
D-206-98 220-225	40.8	565.0	7.850	1.149	1.409	1.722
D-206-98 225-228	36.3	570.0	3.765	1.249	1.208	1.380
D-206-98 228-232	29.4	585.0	5.235	0.836	0.771	1.015
D-206-98 232.0-236.6	21.7	602.0	10.583	0.473	0.594	0.883
D-206-98 236.6-240.0	22.8	579.0	2.639	0.244	0.255	0.340
D-206-98 240-245	45.6	563.0	0.810	0.038	0.034	0.094

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048942

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	Ag+65#	Ag-65#
D-206-98 24.6-25.0	0.31	0.08
D-206-98 150.8-154.7	0.56	0.12
D-206-98 159.5-164.5	0.09	0.05
D-206-98 164.5-169.2	0.55	0.19
D-206-98 169.2-172.7	0.09	0.09
D-206-98 185-190	<0.02	0.06
D-206-98 190-195	0.19	0.06
D-206-98 197-200	0.13	<0.02
D-206-98 200.0-203.2	0.25	0.09
D-206-98 210.6-215.6	<0.02	0.08
D-206-98 215.6-220.0	<0.02	<0.02
D-206-98 220-225	5.18	1.44
D-206-98 225-228	2.24	1.50
D-206-98 228-232	2.41	1.03
D-206-98 232.0-236.6	13.49	0.77
D-206-98 236.6-240.0	4.18	0.24
D-206-98 240-245	1.68	0.06

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 0048942-IN
INVOICE DATE: 05/31/98

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-206-98	PRODUCTION	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
17	SAMPLES RECEIVED	.00	.00
17	SPLITTING CHARGE	.60	10.20
17	Screen fire assay for Au 65m	35.00	595.00
17	Screen fire assay+65 MESH Ag	5.00	85.00
17	Screen fire assay-65 MESH Ag	5.00	85.00

86-5035-477
RA

NET INVOICE:	775.20
LESS DISCOUNT:	155.04
FREIGHT:	.00
INVOICE TOTAL:	620.16

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ANALYSIS REPORT SP048942

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-206-98 RECEIVED : 21 MAY 1998

No. SAMPLES : 17 REPORTED : 29 MAY 1998

MAIN SAMPLE TYPE : SAMPLES ANALYSED AS RECEIVED

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
WT+65#	FA-MS	5%	GRAMS	1.0
WT-65#	FA-MS	5%	GRAMS	1.0
Au+65#	FA-MS	15%	OPT	0.001
Au-65#	FA-MS	15%	OPT	0.001
Au-65#R	FA-MS	15%	OPT	0.001
~~AuCALC~~	~~FA-MS~~	~~15%~~	~~OPT~~	~~0.001~~
Ag+65#	FA-MS	15%	OPT	0.02
Ag-65#	FA-MS	15%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048942

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	WT+65# FA-MS GRAMS	WT-65# FA-MS GRAMS	Au+65# FA-MS OPT	Au-65# FA-MS OPT	Au-65#R FA-MS OPT	AuCALC FA-MS OPT
D-206-98 24.6-25.0	55.4	550.0	0.189	0.110	0.076	0.101
D-206-98 150.8-154.7	59.7	583.0	0.276	0.155	0.116	0.149
D-206-98 159.5-164.5	25.4	580.0	0.096	0.085	0.086	0.086
D-206-98 164.5-169.2	34.0	580.0	0.541	0.207	0.154	0.200
D-206-98 169.2-172.7	10.0	585.0	0.478	0.098	0.107	0.109
D-206-98 185-190	19.1	600.0	0.127	0.096	0.068	0.083
D-206-98 190-195	56.6	574.0	0.196	0.228	0.184	0.206
D-206-98 197-200	33.6	582.0	0.116	0.081	0.115	0.099
D-206-98 200.0-203.2	27.9	590.0	0.268	0.074	0.086	0.088
D-206-98 210.6-215.6	35.3	597.0	0.195	0.032	0.067	0.058
D-206-98 215.6-220.0	41.8	575.0	0.004	0.005	0.013	0.009
D-206-98 220-225	40.8	565.0	7.850	1.149	1.409	1.722
D-206-98 225-228	36.3	570.0	3.765	1.249	1.208	1.380
D-206-98 228-232	29.4	585.0	5.235	0.836	0.771	1.015
D-206-98 232.0-236.6	21.7	602.0	10.583	0.473	0.594	0.883
D-206-98 236.6-240.0	22.8	579.0	2.639	0.244	0.255	0.340
D-206-98 240-245	45.6	563.0	0.810	0.038	0.034	0.094

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048942

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	Ag+65# FA-MS OPT	Ag-65# FA-MS OPT
D-206-98 24.6-25.0	0.31	0.08
D-206-98 150.8-154.7	0.56	0.12
D-206-98 159.5-164.5	0.09	0.05
D-206-98 164.5-169.2	0.55	0.19
D-206-98 169.2-172.7	0.09	0.09
D-206-98 185-190	<0.02	0.06
D-206-98 190-195	0.19	0.06
D-206-98 197-200	0.13	<0.02
D-206-98 200.0-203.2	0.25	0.09
D-206-98 210.6-215.6	<0.02	0.08
D-206-98 215.6-220.0	<0.02	<0.02
D-206-98 220-225	5.18	1.44
D-206-98 225-228	2.24	1.50
D-206-98 228-232	2.41	1.03
D-206-98 232.0-236.6	13.49	0.77
D-206-98 236.6-240.0	4.18	0.24
D-206-98 240-245	1.68	0.06

xAMERICAN ASSAY LABORATORIES
ANALYSIS REPORT SP048942

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-206-98 RECEIVED : 21 MAY 1998

No. SAMPLES : 17 REPORTED : 29 MAY 1998

MAIN SAMPLE TYPE : SAMPLES ANALYSED AS RECEIVED

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
WT+65#	FA-MS	5%	GRAMS	1.0
WT-65#	FA-MS	5%	GRAMS	1.0
Au+65#	FA-MS	15%	OPT	0.001
Au-65#	FA-MS	15%	OPT	0.001
Au-65#R	FA-MS	15%	OPT	0.001
AuCALC	FA-MS	15%	OPT	0.001
Ag+65#	FA-MS	15%	OPT	0.02
Ag-65#	FA-MS	15%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048942

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	WT+65# FA-MS GRAMS	WT-65# FA-MS GRAMS	Au+65# FA-MS OPT	Au-65# FA-MS OPT	Au-65#R FA-MS OPT	AuCALC FA-MS OPT
D-206-98 24.6-25.0	55.4	550.0	0.189	0.110	0.076	0.101
D-206-98 150.8-154.7	59.7	583.0	0.276	0.155	0.116	0.149
D-206-98 159.5-164.5	25.4	580.0	0.096	0.085	0.086	0.086
D-206-98 164.5-169.2	34.0	580.0	0.541	0.207	0.154	0.200
D-206-98 169.2-172.7	10.0	585.0	0.478	0.098	0.107	0.109
D-206-98 185-190	19.1	600.0	0.127	0.096	0.068	0.083
D-206-98 190-195	56.6	574.0	0.196	0.228	0.184	0.206
D-206-98 197-200	33.6	582.0	0.116	0.081	0.115	0.099
D-206-98 200.0-203.2	27.9	590.0	0.268	0.074	0.086	0.088
D-206-98 210.6-215.6	35.3	597.0	0.195	0.032	0.067	0.058
D-206-98 215.6-220.0	41.8	575.0	0.004	0.005	0.013	0.009
D-206-98 220-225	40.8	565.0	7.850	1.149	1.409	1.722
D-206-98 225-228	36.3	570.0	3.765	1.249	1.208	1.380
D-206-98 228-232	29.4	585.0	5.235	0.836	0.771	1.015
D-206-98 232.0-236.6	21.7	602.0	10.583	0.473	0.594	0.883
D-206-98 236.6-240.0	22.8	579.0	2.639	0.244	0.255	0.340
D-206-98 240-245	45.6	563.0	0.810	0.038	0.034	0.094

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048942

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 29 MAY 1998

SAMPLES	Ag+65# FA-MS OPT	Ag-65# FA-MS OPT
D-206-98 24.6-25.0	0.31	0.08
D-206-98 150.8-154.7	0.56	0.12
D-206-98 159.5-164.5	0.09	0.05
D-206-98 164.5-169.2	0.55	0.19
D-206-98 169.2-172.7	0.09	0.09
D-206-98 185-190	<0.02	0.06
D-206-98 190-195	0.19	0.06
D-206-98 197-200	0.13	<0.02
D-206-98 200.0-203.2	0.25	0.09
D-206-98 210.6-215.6	<0.02	0.08
D-206-98 215.6-220.0	<0.02	<0.02
D-206-98 220-225	5.18	1.44
D-206-98 225-228	2.24	1.50
D-206-98 228-232	2.41	1.03
D-206-98 232.0-236.6	13.49	0.77
D-206-98 236.6-240.0	4.18	0.24
D-206-98 240-245	1.68	0.06

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 0048769-IN
INVOICE DATE: 05/18/98

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-206-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
75	SAMPLES RECEIVED	.00	.00
74	JAW CRUSHING CHARGE	1.30	96.20
74	COARSE MILLING CHARGE	4.50	333.00
74	SPLITTING CHARGE	2.40	177.60
74	RING MILLING CHARGE	2.00	148.00
75	Au (1 A.T. FIRE ASSAY)	8.00	600.00
18	Au ANALYSES/GRAVIMETRIC	8.75	157.50
75	HYDROCHLORIC/NITRIC DIGESTION	2.00	150.00
75	Ag ANALYSES	1.00	75.00

86-5110-477
CDA

NET INVOICE:	1,737.30
LESS DISCOUNT:	347.46
FREIGHT:	.00
INVOICE TOTAL:	1,389.84

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

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-206-98 RECEIVED : 5 MAY 1998

No. SAMPLES : 75 REPORTED : 18 MAY 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 SP048769

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 00-05	0.024			0.02
D-206-98 05-10	0.009			0.02
D-206-98 10-15	<0.001			0.02
D-206-98 15-17	0.003			0.03
D-206-98 17-20	0.003			0.02
D-206-98 20.0-24.6	0.003			0.03
D-206-98 24.6-25.0	0.089		0.084	0.09
D-206-98 25.0-30.4	0.030			0.05
D-206-98 30.4-35.0	0.014			0.07
D-206-98 35-40	0.004			0.05
D-206-98 40-45	0.018			0.04
D-206-98 45-50	0.044			0.07
D-206-98 50-55	0.006			0.03
D-206-98 55-60	0.001			0.03
D-206-98 60-65	0.038			0.04
D-206-98 65-70	0.025	0.023		0.06
D-206-98 70-75	0.010			0.03
D-206-98 75-80	0.001			<0.02
D-206-98 80-85	0.003			<0.02
D-206-98 85-90	<0.001			<0.02
D-206-98 90-93	0.008			0.06
D-206-98 93-95	0.020			0.03
D-206-98 95-100	0.016			0.04
D-206-98 100-105	0.014			<0.02
D-206-98 105-110	0.111		0.131	1.69

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 110-115	0.008			0.05
D-206-98 115-120	0.046			0.06
D-206-98 120-125	0.020			0.04
D-206-98 125-130	0.009			0.05
D-206-98 130-134	0.002			0.03
D-206-98 134-139	0.001			0.04
D-206-98 139-144	0.034			0.06
D-206-98 144-149	0.015			0.03
D-206-98 149.0-150.8	0.006	0.005		0.02
D-206-98 150.8-154.7	0.156	0.233	0.092	0.08
D-206-98 154.7-159.5	0.026			0.09
D-206-98 159.5-164.5	0.059		0.057	0.04
D-206-98 164.5-169.2	0.110		0.075	0.05
D-206-98 169.2-172.7	0.143		0.122	0.11
D-206-98 172.7-175.0	0.020			0.08
D-206-98 175-180	0.014			0.04
D-206-98 180-185	0.033			0.06
D-206-98 185-190	0.061		0.054	0.09
D-206-98 190-195	0.176		0.114	0.11
D-206-98 195-197	0.015			0.02
D-206-98 197-200	0.061	0.058	0.058	0.36
D-206-98 200.0-203.2	0.074		0.132	0.22
D-206-98 203.2-206.0	0.009			0.05
D-206-98 206.0-210.6	0.042			0.12
D-206-98 210.6-215.6	0.078		0.063	0.43

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 215.6-220.0	0.054		0.040	0.04
D-206-98 220-225	1.225		1.452	0.69
D-206-98 225-228	1.218		1.412	0.89
D-206-98 228-232	0.793		0.899	0.65
D-206-98 232.0-236.6	0.855		0.827	0.62
D-206-98 236.6-240.0	0.153		0.214	0.14
D-206-98 240-245	0.141		0.152	0.07
D-206-98 245-248	0.013			0.04
D-206-98 248-252	0.041			0.02
D-206-98 252-257	0.001			0.02
D-206-98 257-262	0.001			0.03
D-206-98 262-265	0.005			1.39
D-206-98 265.0-265.5	0.007			1.91
D-206-98 267.0-268.5	0.007			2.30
D-206-98 268.5-270.0	0.005			1.88
D-206-98 270-271	0.008			3.03
D-206-98 272-274	0.010			3.41
D-206-98 276-278	0.003			1.19
D-206-98 280-285	0.004			0.24
D-206-98 285-289	0.004			0.32
D-206-98 289.0-292.5	0.004			0.34
D-206-98 292.5-294.0	0.003			0.80
D-206-98 294-299	0.004			1.23
D-206-98 299-301	0.003			0.60
31057	0.498			4.72

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

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-206-98 RECEIVED : 5 MAY 1998

No. SAMPLES : 75 REPORTED : 18 MAY 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 SP048769

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 00-05	0.024			0.02
D-206-98 05-10	0.009			0.02
D-206-98 10-15	<0.001			0.02
D-206-98 15-17	0.003			0.03
D-206-98 17-20	0.003			0.02
D-206-98 20.0-24.6	0.003			0.03
D-206-98 24.6-25.0	0.089		0.084	0.09
D-206-98 25.0-30.4	0.030			0.05
D-206-98 30.4-35.0	0.014			0.07
D-206-98 35-40	0.004			0.05
D-206-98 40-45	0.018			0.04
D-206-98 45-50	0.044			0.07
D-206-98 50-55	0.006			0.03
D-206-98 55-60	0.001			0.03
D-206-98 60-65	0.038			0.04
D-206-98 65-70	0.025	0.023		0.06
D-206-98 70-75	0.010			0.03
D-206-98 75-80	0.001			<0.02
D-206-98 80-85	0.003			<0.02
D-206-98 85-90	<0.001			<0.02
D-206-98 90-93	0.008			0.06
D-206-98 93-95	0.020			0.03
D-206-98 95-100	0.016			0.04
D-206-98 100-105	0.014			<0.02
D-206-98 105-110	0.111		0.131	1.69

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 110-115	0.008			0.05
D-206-98 115-120	0.046			0.06
D-206-98 120-125	0.020			0.04
D-206-98 125-130	0.009			0.05
D-206-98 130-134	0.002			0.03
D-206-98 134-139	0.001			0.04
D-206-98 139-144	0.034			0.06
D-206-98 144-149	0.015			0.03
D-206-98 149.0-150.8	0.006	0.005		0.02
D-206-98 150.8-154.7	0.156	0.233	0.092	0.08
D-206-98 154.7-159.5	0.026			0.09
D-206-98 159.5-164.5	0.059		0.057	0.04
D-206-98 164.5-169.2	0.110		0.075	0.05
D-206-98 169.2-172.7	0.143		0.122	0.11
D-206-98 172.7-175.0	0.020			0.08
D-206-98 175-180	0.014			0.04
D-206-98 180-185	0.033			0.06
D-206-98 185-190	0.061		0.054	0.09
D-206-98 190-195	0.176		0.114	0.11
D-206-98 195-197	0.015			0.02
D-206-98 197-200	0.061	0.058	0.058	0.36
D-206-98 200.0-203.2	0.074		0.132	0.22
D-206-98 203.2-206.0	0.009			0.05
D-206-98 206.0-210.6	0.042			0.12
D-206-98 210.6-215.6	0.078		0.063	0.43

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048769

American Assay Laboratories

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REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-206-98 215.6-220.0	0.054		0.040	0.04
D-206-98 220-225	1.225		1.452	0.69
D-206-98 225-228	1.218		1.412	0.89
D-206-98 228-232	0.793		0.899	0.65
D-206-98 232.0-236.6	0.855		0.827	0.62
D-206-98 236.6-240.0	0.153		0.214	0.14
D-206-98 240-245	0.141		0.152	0.07
D-206-98 245-248	0.013			0.04
D-206-98 248-252	0.041			0.02
D-206-98 252-257	0.001			0.02
D-206-98 257-262	0.001			0.03
D-206-98 262-265	0.005			1.39
D-206-98 265.0-265.5	0.007			1.91
D-206-98 267.0-268.5	0.007			2.30
D-206-98 268.5-270.0	0.005			1.88
D-206-98 270-271	0.008			3.03
D-206-98 272-274	0.010			3.41
D-206-98 276-278	0.003			1.19
D-206-98 280-285	0.004			0.24
D-206-98 285-289	0.004			0.32
D-206-98 289.0-292.5	0.004			0.34
D-206-98 292.5-294.0	0.003			0.80
D-206-98 294-299	0.004			1.23
D-206-98 299-301	0.003			0.60
31057	0.498			4.72

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 11530
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Telephone
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(520) 294-6352

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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: HECLA MINING CMP. - ROSEBUD PROJECT

Address: P.O. BOX 2610

City WINNEMUCCA State NV. Zip 89446

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

Project Name: ROSEBUD DEVELOPMENT Purchase Order Number:

Date Submitted: 5-4-98 Number of Samples: 72

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

D-206-98 SAMPLE IDENTIFICATION				TYPE	ELEMENTS REQUIRED
0.0-5.0	65.0-70.0	134.0-139.0	197.0-200.0		262.0-265.0
5.0-10.0	70.0-75.0	139.0-144.0	200.0-203.2		265.0-265.5 Au, Ag ACCORDING TO
10.0-15.0	75.0-80.0	144.0-149.0	203.2-206.0		267.0-268.5 ROSEBUD PROTOCOL
15.0-17.0	80.0-85.0	149.0-150.8	206.0-215.6	ROCK	268.5-270.0
17.0-20.0	85.0-90.0	150.8-154.7	215.6-220.0	CHIP	270.0-271.0
20.0-24.6	90.0-93.0	154.7-159.5	220.0-225.0		272.0-274.0
24.6-25.0	93.0-95.0	159.5-164.5	225.0-228.0		276.0-278.0
25.0-30.4	95.0-100.0	164.5-169.2	228.0-232.0		280.0-285.0
30.4-35.0	100.0-105.0	169.2-172.7	232.0-236.6		285.0-289.0
35.0-40.0	105.0-110.0	172.7-175.0	236.6-240.0		289.0-294.0
40.0-45.0	110.0-115.0	175.0-180.0	240.0-245.0		294.0-299.0
45.0-50.0	115.0-120.0	180.0-185.0	245.0-248.0		299.0-301.0
50.0-55.0	120.0-125.0	185.0-190.0	248.0-252.0		
55.0-60.0	125.0-130.0	190.0-195.0	252.0-257.0		
60.0-65.0	130.0-134.0	195.0-197.0	257.0-262.0		

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
S.A.A.

Results to:

KURT ALLEN
S.A.A.

Comments:

CLIENT FILE COPY

PROVISIONAL REPORT SUMMARY

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-206-98 RECEIVED : 5 MAY 1998

No. SAMPLES : 75 REPORTED : 18 MAY 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 SP048769

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-206-98 00-05	0.024			0.02
D-206-98 05-10	0.009			0.02
D-206-98 10-15	<0.001			0.02
D-206-98 15-17	0.003			0.03
D-206-98 17-20	0.003			0.02
D-206-98 20.0-24.6	0.003			0.03
D-206-98 24.6-25.0	0.089		0.084	0.09
D-206-98 25.0-30.4	0.030			0.05
D-206-98 30.4-35.0	0.014			0.07
D-206-98 35-40	0.004			0.05
D-206-98 40-45	0.018			0.04
D-206-98 45-50	0.044			0.07
D-206-98 50-55	0.006			0.03
D-206-98 55-60	0.001			0.03
D-206-98 60-65	0.038			0.04
D-206-98 65-70	0.025	0.023		0.06
D-206-98 70-75	0.010			0.03
D-206-98 75-80	0.001			<0.02
D-206-98 80-85	0.003			<0.02
D-206-98 85-90	<0.001			<0.02
D-206-98 90-93	0.008			0.06
D-206-98 93-95	0.020			0.03
D-206-98 95-100	0.016			0.04
D-206-98 100-105	0.014			<0.02
D-206-98 105-110	0.111		0.131	1.69

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048769

CLIENT : HECLA MINING COMPANY
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SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-206-98 110-115	0.008			0.05
D-206-98 115-120	0.046			0.06
D-206-98 120-125	0.020			0.04
D-206-98 125-130	0.009			0.05
D-206-98 130-134	0.002			0.03
D-206-98 134-139	0.001			0.04
D-206-98 139-144	0.034			0.06
D-206-98 144-149	0.015			0.03
D-206-98 149.0-150.8	0.006	0.005		0.02
D-206-98 150.8-154.7	0.156	0.233	0.092	0.08
D-206-98 154.7-159.5	0.026			0.09
D-206-98 159.5-164.5	0.059		0.057	0.04
D-206-98 164.5-169.2	0.110		0.075	0.05
D-206-98 169.2-172.7	0.143		0.122	0.11
D-206-98 172.7-175.0	0.020			0.08
D-206-98 175-180	0.014			0.04
D-206-98 180-185	0.033			0.06
D-206-98 185-190	0.061		0.054	0.09
D-206-98 190-195	0.176		0.114	0.11
D-206-98 195-197	0.015			0.02
D-206-98 197-200	0.061	0.058	0.058	0.36
D-206-98 200.0-203.2	0.074		0.132	0.22
D-206-98 203.2-206.0	0.009			0.05
D-206-98 206.0-210.6	0.042			0.12
D-206-98 210.6-215.6	0.078		0.063	0.43

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048769

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-206-98

REPORTED : 18 MAY 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-206-98 215.6-220.0		0.054		0.040	0.04	220-245 = 25
D-206-98 220-225	5	1.225		1.452	0.69	
D-206-98 225-228	3	1.218		1.412	0.89	0.724 Au
D-206-98 228-232	4	0.793		0.899	0.65	0.50 Ag
D-206-98 232.0-236.6	4.6	0.855		0.827	0.62	
D-206-98 236.6-240.0	3.4	0.153		0.214	0.14	
D-206-98 240-245	5	0.141		0.152	0.07	
D-206-98 245-248		0.013			0.04	
D-206-98 248-252		0.041			0.02	
D-206-98 252-257		0.001			0.02	
D-206-98 257-262		0.001			0.03	
D-206-98 262-265		0.005			1.39	
D-206-98 265.0-265.5		0.007			1.91	
D-206-98 267.0-268.5		0.007			2.30	
D-206-98 268.5-270.0		0.005			1.88	
D-206-98 270-271		0.008			3.03	
D-206-98 272-274		0.010			3.41	
D-206-98 276-278		0.003			1.19	
D-206-98 280-285		0.004			0.24	
D-206-98 285-289		0.004			0.32	
D-206-98 289.0-292.5		0.004			0.34	
D-206-98 292.5-294.0		0.003			0.80	
D-206-98 294-299		0.004			1.23	
D-206-98 299-301		0.003			0.60	
31057		0.498			4.72	

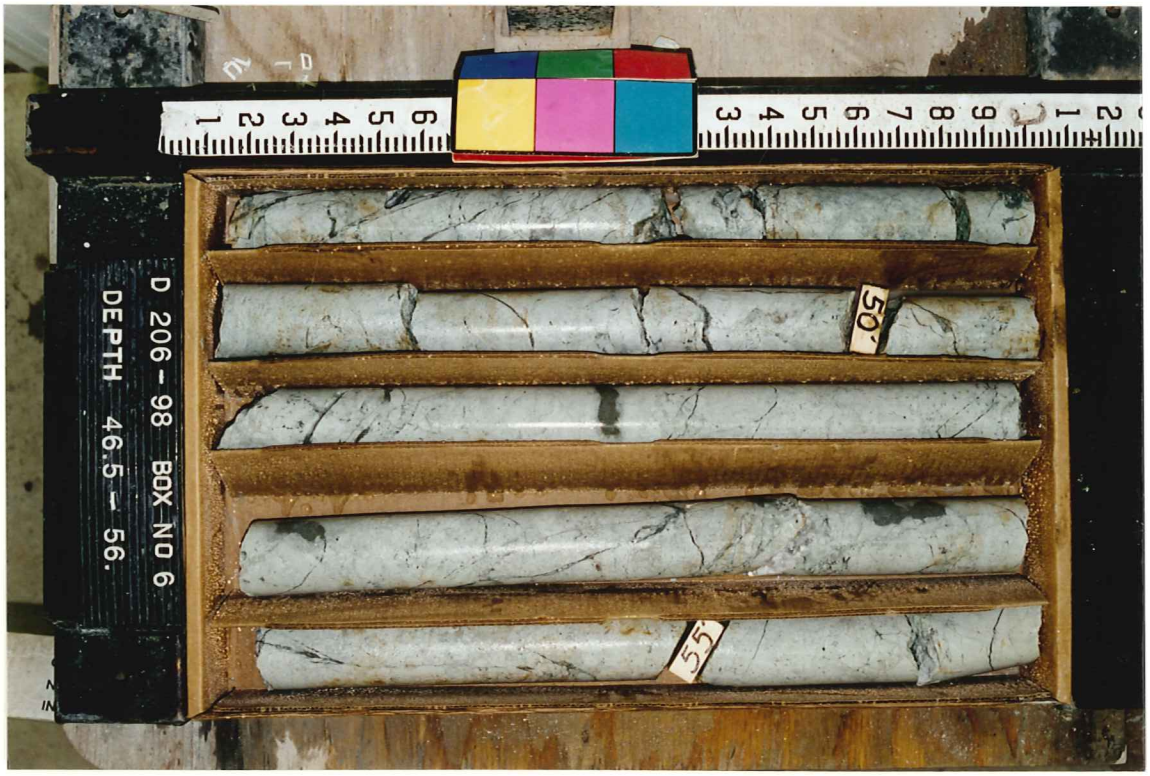
15'
10
D 206-98 BOX NO 2
DEPTH 9.5 - 19.

D 206-98 BOX NO 1
DEPTH 0. - 9.5

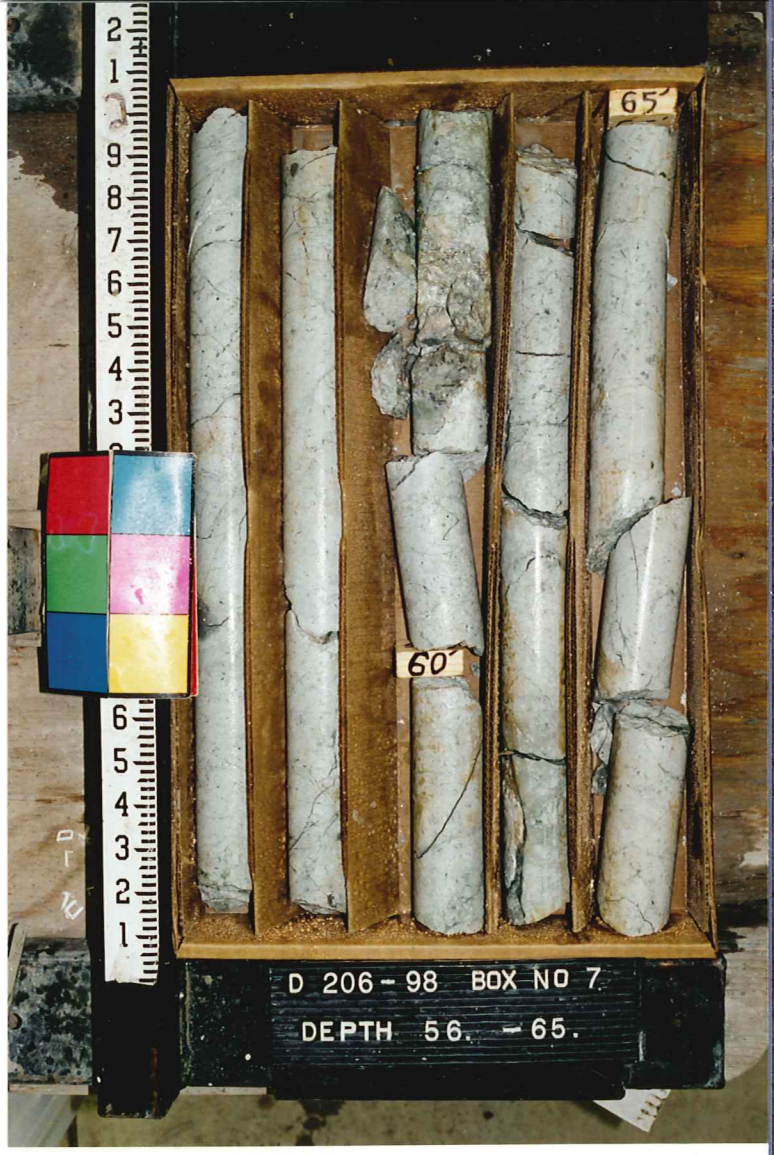
20'
25'
D 206-98 BOX NO 3
DEPTH 19. -28.

40'
45'
D 206-98 BOX NO 5
DEPTH 37. - 46.5

35'
30'
D 206-98 BOX NO 4
DEPTH 28. - 37.

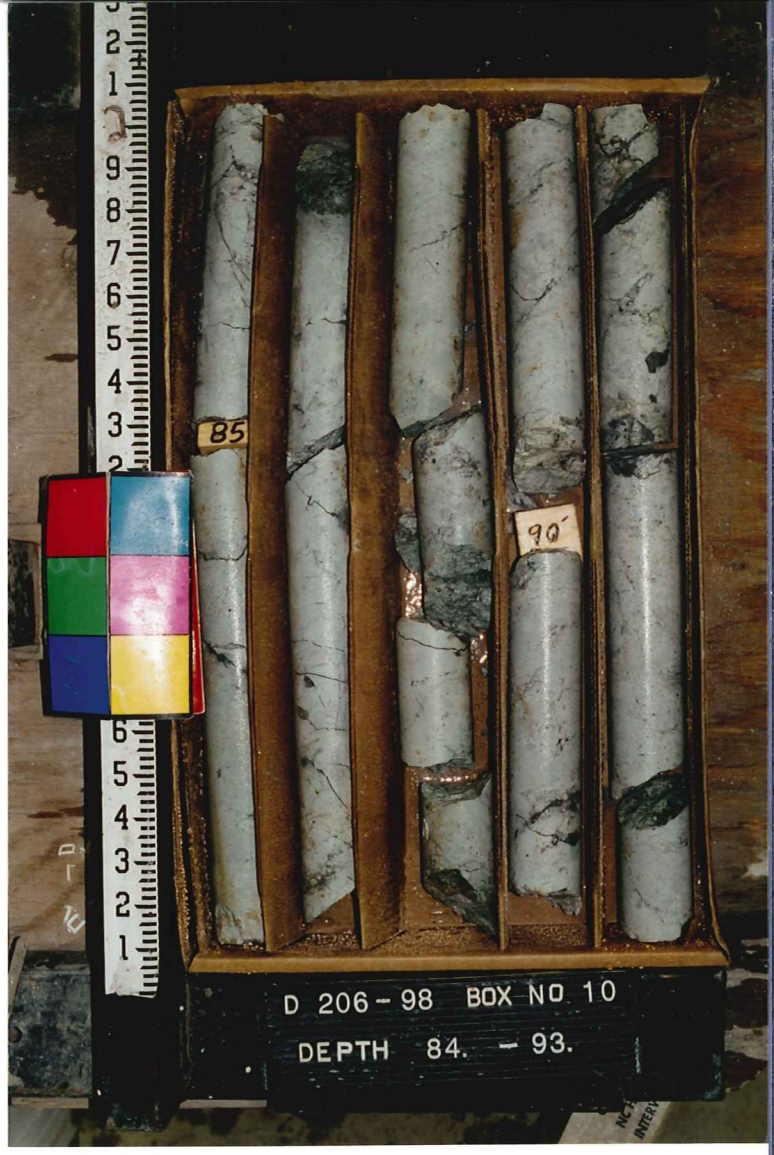

50'
55'
D 206-98 BOX NO 6
DEPTH 46.5 - 56.

70'
D 206-98 BOX NO 8
DEPTH 65. - 74.5


65'
60'
D 206-98 BOX NO 7
DEPTH 56. - 65.

75
80'
D 206-98 BOX NO 9
DEPTH 74.5 - 84.

100
95
D 206 - 98 BOX NO 11
DEPTH 93. - 102.


85
90
D 206 - 98 BOX NO 10
DEPTH 84. - 93.

105
D 206 - 98 BOX NO 12
DEPTH 102. - 112.

D 206-98 BOX NO 14
DEPTH 121. - 130.5

D 206-98 BOX NO 13
DEPTH 112. - 121.

D 206-98 BOX NO 15
DEPTH 130. - 139.5

154
D 206 - 98 BOX NO 17
DEPTH 148.5 - 158.

144
D 206 - 98 BOX NO 16
DEPTH 139.5 - 148.5

D 206 - 98 BOX NO 18
DEPTH 158. - 167.5

D 206-98 BOX NO 20
DEPTH 176.8- 185.5

D 206-98 BOX NO 19
DEPTH 167.5- 176.8

D 206-98 BOX NO 21
DEPTH 185.5- 195.5

D 206 - 98 BOX NO 23
DEPTH 204.5 - 214.

D 206 - 98 BOX NO 22
DEPTH 195.5 - 204.5

D 206 - 98 BOX NO 24
DEPTH 214. - 223.

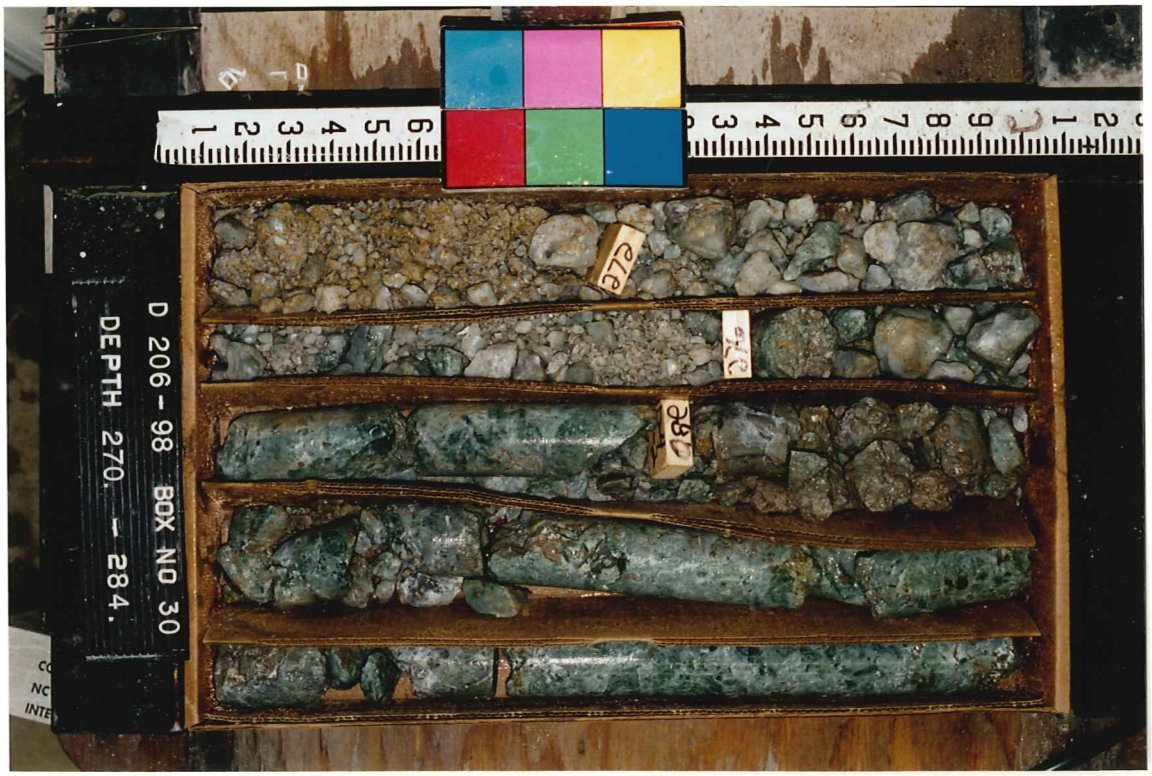
235
240
D 206-98 BOX NO 26
DEPTH 232. - 241.

230
225
D 206-98 BOX NO 25
DEPTH 223. - 232.

245
D 206-98 BOX NO 27
DEPTH 241. - 250.5

D 206 - 98 BOX NO 29
DEPTH 260. - 270.

D 206 - 98 BOX NO 28
DEPTH 250.5 - 260.

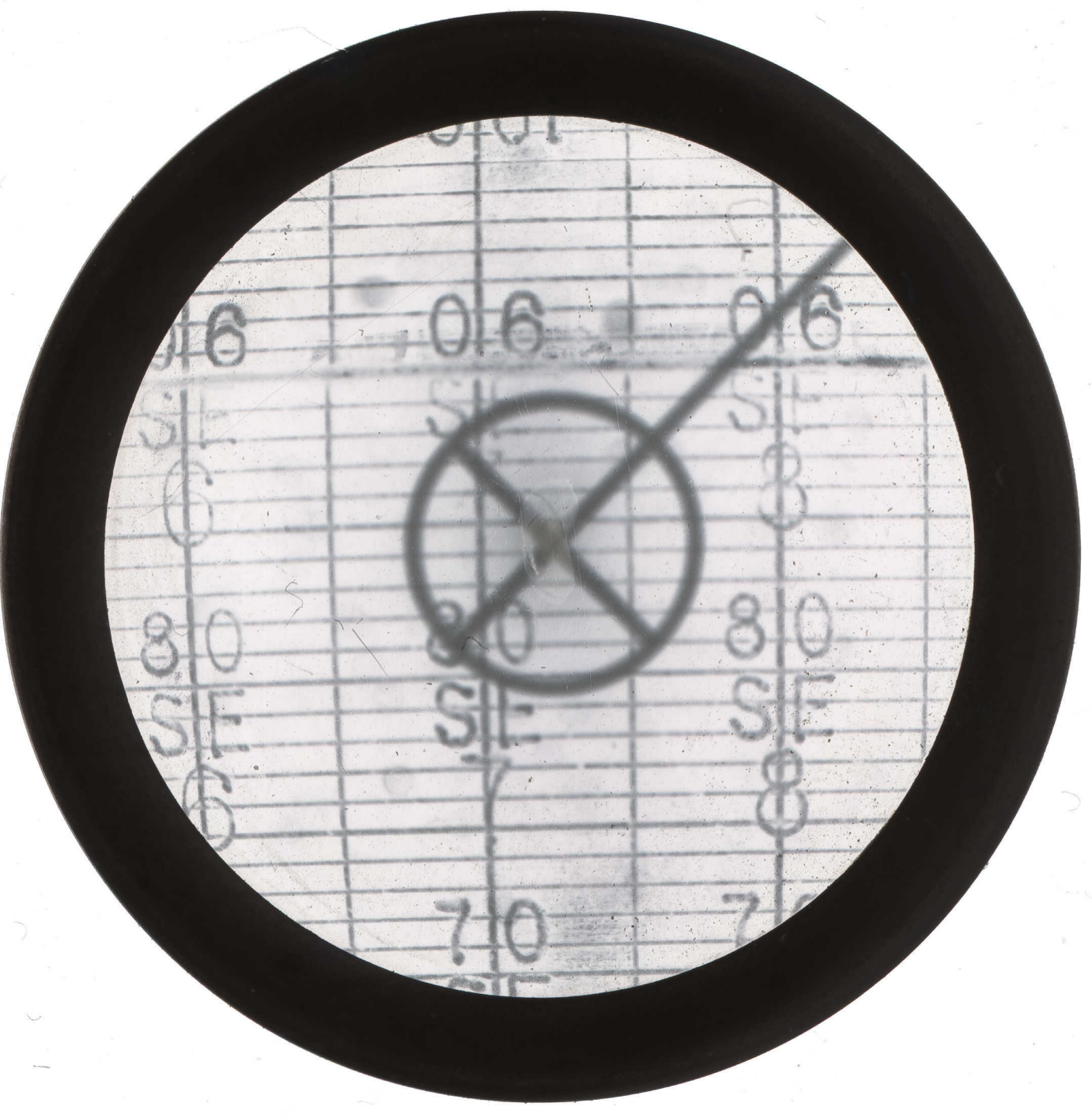

D 206 - 98 BOX NO 30
DEPTH 270. - 284.

294
299
D 206 - 98 BOX NO 32
DEPTH 293. - 301. TD

285
D 206 - 98 BOX NO 31
DEPTH 284. - 293.

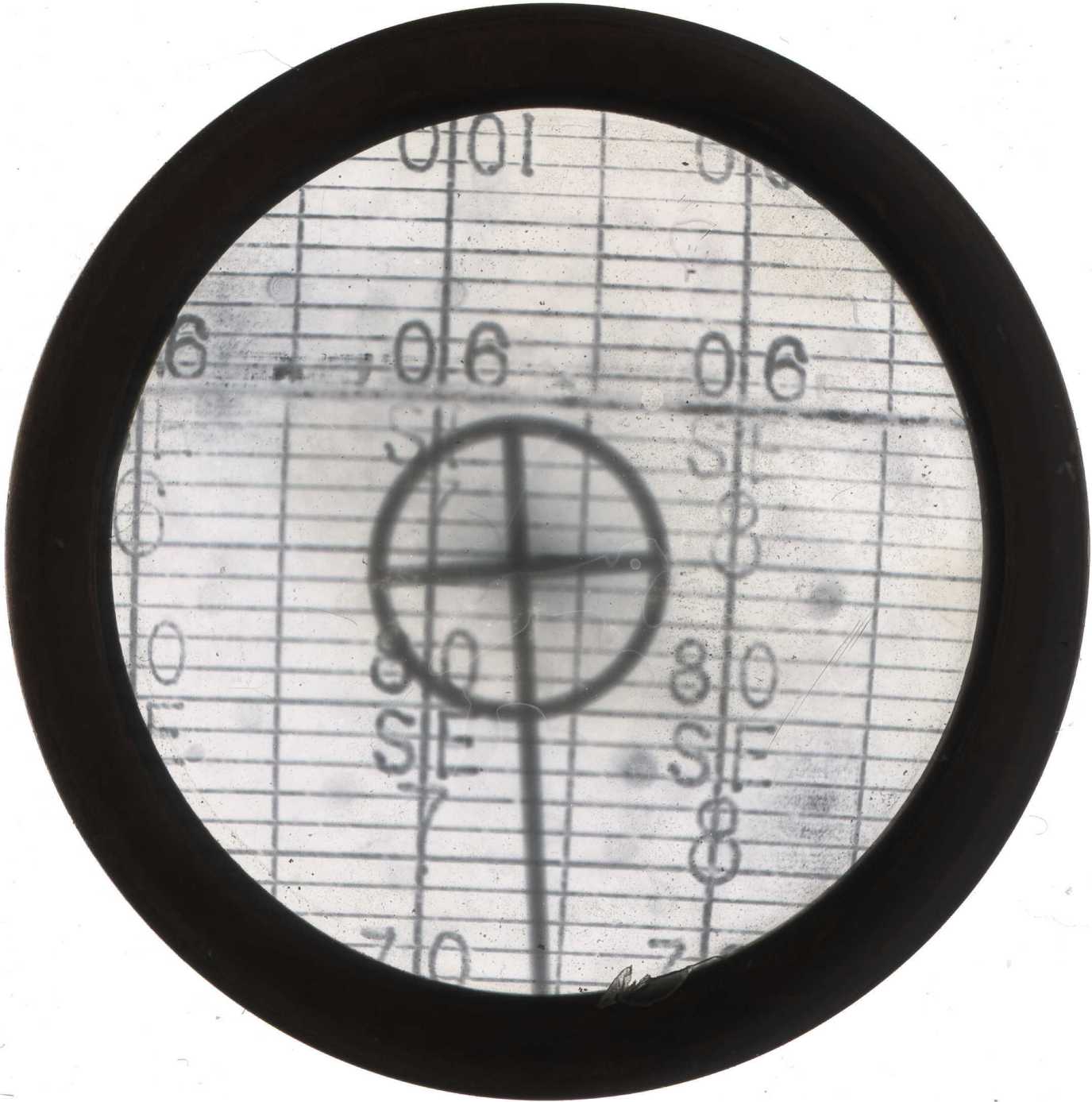
SINGLE SHOT
PHOTO DISC RECORD

COMPANY
WELL NAME D-206-98
LEASE
TAKEN BY
DEPTH
DATE 3-21-96
DRIFT ANGLE +6°
DIRECTION
TYPE Collar
JOB NO.
HI-1408



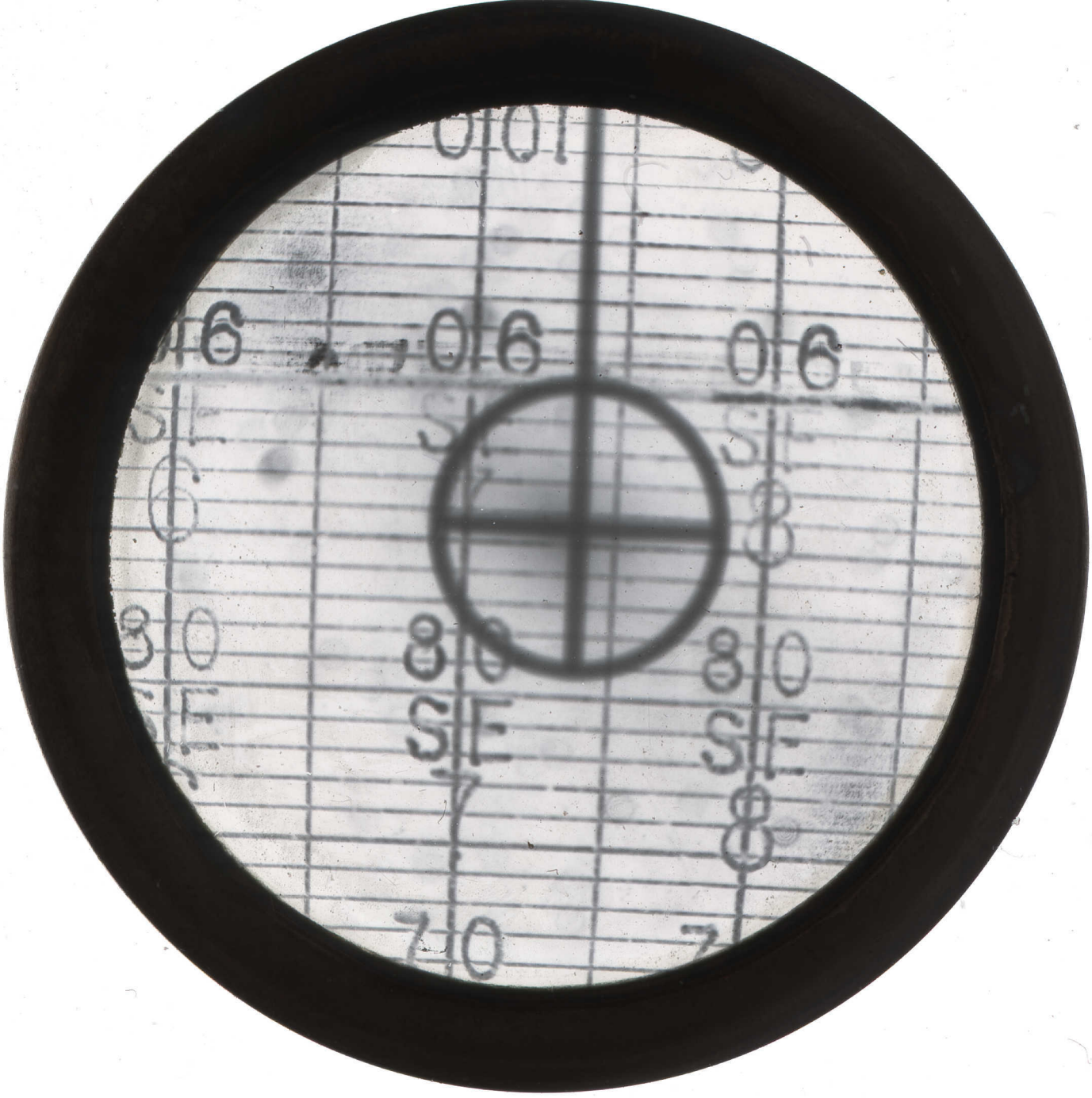
SINGLE SHOT
PHOTO DISC RECORD

COMPANY
WELL NAME D-206-98
LEASE
TAKEN BY
DEPTH
DATE 3-21-98
DRIFT ANGLE +6°
DIRECTION
TYPE 150'
JOB NO.
HI-1408



SINGLE SHOT
PHOTO DISC RECORD

COMPANY
WELL NAME P-206-98
LEASE
TAKEN BY
DEPTH
DATE 3-21-98
DRIFT ANGLE +6°
DIRECTION
TYPE 300'
JOB NO.
HI-1408


06
06
06
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80
SE
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SE