60001176

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-275-98
AUTHOR	S. King; K. Allen; R. Stoebel
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 329' receipt; handwritten notes; downhole camera images 40p 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 5/14/08
Initials Date

DB: mch
Initials Date

SCANNED: NB
Initials Date

Revised: 1/22/08

D-274-98

60001176 4010

6000 1176

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

Hecla
MINING COMPANY

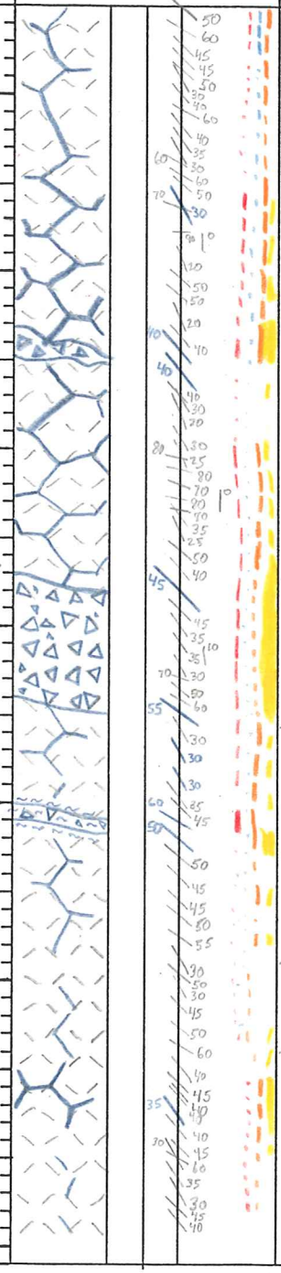
ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-275-98	LOCATION	North 1400	REMARKS	0-21.5' TOS
PAGE	1 OF 5	NORTHING			21.5-43' F.G. Massive
DATE	8/30/98	EASTING			43-329 Slight Planar Laminar
LOGGED BY	R.K. Stoeberl	ELEVATION			
SCALE	1" = 10'	AZIMUTH	S55°E		
TOTAL DEPTH	329	INCLINATION	15		

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-21.5' TOS "Bud Look Alike" Green, lt Gray, wht, polylithic clast supported tuff.	0		0-5 - minor Frax Frax ~ 1/ft	0-5' minor Frax filled w/ druzy Qtz: Not much sulfides ± minor calcite
		21.5 - 43 FG Massive Tan, Pale Green, lt Gray, Lav Buff, Fine Grain Massive	10			
			20			minor Calc veins @ 23' and 24-28' 24-26 Lel sorg calc veins w/ slight incr in sulf. mc Py
			30		28'-43' Crackle Zone wk to Lel/Mod	28-43' Crackle Zone, wk, w/ chlorite ± calc ± sulf ± clay
		43 - Slight Planar Laminar Lt. Gry, pale green ; Buff, Fine Grain Slight Planar Lam tuff	40		43'-61' Crackle to Mod Frax.	43'-61' Frax : mod w/ wht clay, calc, & sulf filled cracks. sulf = mc Py ± trace green chlorite
			50			

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag
0	5					
5	9					
9	14					
14	19					
19	24					
24	26					
26	29					
29	34					
34	39					
39	44					
44	49					

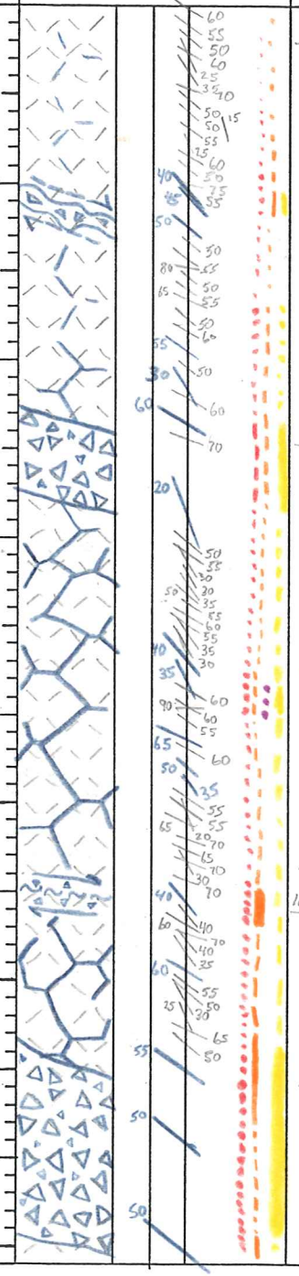
HOLE NUMBER D-275-98 PAGE 2 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		43-329' Slight Planar Laminar SAA Pima Samples @ 1) 61.5' 2) 74' 3) 91	50 60 70 80 90 100 110 120		43-61' SAA 61-68' Fracx, strg 68-70' Brecciated/Fault? 70-82' Fracx Strg to Lcl Intense. 82-89'- Brecciated, Strg to Intense. Fault Zone? 89-92' Fracx Intense w/ Lcl Brx 95-96' Intense Fracx w/ open space Fault? Sheared Rck. 96-104 Fracx wk crackle mod overall 104'-114 wk crackle zone 110-114 Slight incr Fracx	43-61' SAA 61-82' Cracks filled w/ clay I calc Eub Py : Mc, Lcl silica cement @ 68-70' Brecciated : Fault Brx? Cemented w/ silica 77-82' Increase vugs w/ silica Incr in sulfides 82-89' Silica, Clay, + Calc, Eub Mc Py Cemented Brx. Sulfides wk to mod overall open space common No Barite observed but may be present. 89-92 Clay > silica cement in Fracx seams 92-95' Minor Fracx w/ pale Green clay on seams 95-96 Shear Zone Strg sulfides in open space Eub. Py and Mc. 96-104' Fracx ± 2ry w/ clay on fracx. 104-114 wk Fracx Fracx filled w/ clay, + chlorite, ± silica : sulf. @ 110-114' Incr silica : fracx

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	A
49	54					
54	59					
59	61					
61	64					
64	69					
69	74					
74	79					
79	84					
84	89					
89	92					
92	95					
95	96					
96	99					
99	104					
104	109					
109	114					
114	119					

HOLE NUMBER D-275-98 PAGE 3 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	A
		43 - 329 Slight Planar Laminar SAA *Pima Samples @ 1) 141' 2) 170' 3) 193'	120 130 140 150 160 170 180 190		114 - 143' wk to very wk crackle zone not much going on except at 130-132 which is a small strg Frax zone 130-132' Frax strg may be fault? 143-148' Brecciated Fault zone? 149 - 170.5 Shear zone: Fault w/ minor Fault Brx.: Strg clay gouge; ground up Rck looks Post Mineral? Or Pre Min and Post Min. 178.5 - 189.5' Brecciated Fault zone. Recemented w/ silica / clay.	127-130 Slight incr in Frax w/ clay on seams 130-132 Strg Frax : Brx w/ wht Clay and Druzy Qtz filled Vugs 132-137 minor Frax w/ clay 137-139 Frax Slight incr. Frax w/ ± silica Zero clay 139-143 clay filled cracks w/ minor more. 143 - 148 Clay and silica cement Brx. Vugs filled w/ Euh Mc : Py. not much clay. Cement is 90% silica. 148-169 Frax strong to Xtl Intense: Frax filled with clay, ± silica ± more : Py minor Barite @ 155-160' 169 - 174 Fault Zone/Shear Zone Clay gouge minor Brx clay : silica cement mod suit. 174-179 Strg to Intense Frax w/ silica and clay filled cracks ± More : Py 179 - 189.5' Breccia Cemented w/ wht to Pale green clay and silica. Moderate lite to mod overall. Local mod to Strg suif.	119	124					
							124	127					
							127	130					
							130	132					
							132	137					
							137	139					
							139	143					
							143	148					
							148	149					
							149	154					
							154	159					
							159	164					
							164	169					
							169	174					
							174	179					
							179	184					
							184	189					

HOLE NUMBER D-275-98 PAGE 4 OF 5

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		43-329 Slight Planar hammer	190			
		201.5-205.5 — Read description 199-201.5' Same description except this is more of an intense Frax zone w/ silica cement. The black/Blue mineral is decreasing in total %.	200		193-194 Fault Breccia? Brecciated 194'-198' Frax Strg 198-201.5' Brecciated > silica than Frags.	189-198 Frax → Intense w/ silica & clay filled fract seams minor * 199-201.5 Silica cemented Breccia w/ Euh Marcasite in vugs minor wht to yllw clay strg Blck Ag sulfides? in Lcl areas near marcasite. Wk to mod Blck sulf overall Sulf mod overall. Under the scope the Blck min. is Blck to Blue Black and looks like MnO but is not It is dendritic or in small masses near mc may also be a trace of Chalco with the rest of the sulfides, Black mineral is very soft. Breccia Frags are near complete slfd. Argillic alt. of small x-tals or sporey throughout wallrock. Silica is druzy in vugs.
		205.5-208 — Frax Zone - Strg but not intense clay is the dominant cement in Frax Seams.	210		201.5-203' Frax → Strg 203-204' minor Breccia Zone 204'-209 Frax → Strg 209-210' 2ft Breccia Zone	
		208-210 — Breccia Zone - again silica cemented but wk sulfides overall. Trace Black Ag? minerals	220		210-218' Frax → Strg to Intense Vein Brx @ 212 218'-224.5' Brecciated Fault Zone.	
		210-218 — Frax w/ clay dominant cement in Frax seams. Sulfides are increasing w/ Euh more and Py in voids. Clay is Pale Green, wht & Yllw	230		224.5-244' Frax wk to Lcl mod	
		218-224.5' — Brecciated silica and clay cement. Slight incr sulfides: Sulfides = dom. mc, Py trace Blck mineral. Blck Rims the mc. *	240		244-245' Brecciated Fault?	244-249 Lcl slfd Brx as 244-245 & vugs filled w/ Druzy Qtz & marc, and Barite.
		224.5-244 — Frax wk to Lcl mod overall. Cracks filled w/ clay, marcasite ± chlorite, minor open space vugs at 234-236' and 239-244. @ 239-244 vugs have minor Euh. mc and Barite!	250		245-254 Frax Strong to Lcl intense 254-260 Frax wk to very wk	249-254 - Frax, seams filled w/ clay, & silica & barite and marc 254-260 wk to very wk Frax & still clay, mc ± silica ± Barite
			260			

Pima Sample @ 1) 193' 2) 245'

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	A
189	194					
194	199					
199	201.5					
201.5	205.5					
205.5	208					
208	210					
210	214					
214	216					
216	221					
221	224.5					
224.5	226.5					
226.5	232					
232	234					
234	239					
239	244					
244	249					
249	254					
254	259					

HOLE NUMBER D-275-98 PAGE 5 OF 5

ITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		43-329' to. Slight Planar Laminar	260		259-264' Stg Frac : Lcl Intense	259-264' Stg to Lcl Intense Frac : vein Breccia cemented w/ silica and sulfides. Wallrock has stg disem mc : Py + looks like little phenos but is not.
					264-270' Intense Frac	264-281' SAA stg to Intense Frac w/ Stibnite in vugs. Trace Barite at 268.5'. Trace Blck sulf.
			270		270'-278' Mod Frac	@ 266' Stg stibnite
					278'-279' minor Fault (?) mc Brecciated : re-cemented	278-279' Small Sifol Brx
			280		279-281' Frac - Mod overall	@ 281' Stg Stibnite in Cracks and also a Blk Crussy mineral may be Stephanite?
					281-286' Brecciated re-cemented fault zone ?	281-286' - Breccia Cemented w/ silica, clay : Lcl mc. vugs are filled with mc, clay ± Stibnite ±Stephanite ? : Py.
					286'-~~287.5~~ 288 Frac Intense	286-288' Stg Frac w/ stg silica cement.
			290		~~287.5~~ 288 - 294' Brecciated Intense Brecciation : re-cemented	288-294' Brecciated cemented w/ 70% silica 30% clay. sulfides seem to be depleted in this zone wk overall.
					294-299' Frac Intense almost to the point of rotation : Brecciation Cracks re-cemented	294-299 Intense Frac w/ silica/clay cement Sulfides are on the incr wk-mod Lcl
			300		299-+329' Brecciated Fault Zone	299-329' Breccia to the end of hole. Breccia is well cemented w/ either silica or clay and/or both This section is extremely vuggy
			310			
			320			
			330	T.D.		@ 329' trace Barite

Note: From 304' down the core is Gray and and pale green. I thought, at first, that it may be the Vitrophyre unit but it is not. It may have some glassy patches in the breccia but only as frags which make up only part of this unit. This looks like one heck of a fault system.

Pima Sample @ 328'

Note: Hole Should Have Gone Deeper

FROM	TO	W	Au	Ag	Au2
259	264				
264	269				
269	274				
274	279				
279	284				
284	289				
289	294				
294	299				
299	304				
304	309				
309	314				
314	319				
319	324				
324	329				
	TD				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 8/28/98 LOGGED BY: RK Stoeberl 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	90	94	82										
5	9	98	102	100										
9	14	98	96	69										
14	19	100	102	100										
19	24	100	100	100										
24	29	100	100	74										
29	34	100	98	86										
34	39	100	98	100										
39	44	100	98	84										
44	49	100	100	96										
49	54	100	101	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 8/30/98 LOGGED BY: RJS 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)
54	59	100	100	100										
59	64	100	102	84										
64	69	100	101	90										
69	74	100	94	100										
74	79	100	100	100										
79	84	100	96	96										
84	89	100	99	100										
89	94	100	95	52										
94	99	100	100	84										
99	104	100	100	76										
104	109	100	98	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 8/31/98 LOGGED BY: RKS PAGE 3 OF 6

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)
109	114	100	102	100										
114	119	100	100	98										
119	124	100	96	74										
124	129	100	98	42										
129	134	100	98	94										
134	139	100	100	94										
139	144	100	96	80										
144	149	100	90	70										
149	154	100	100	90										
154	159	100	100	92										
159	164	100	98	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 8/31/98 LOGGED BY: RKS PAGE 4 OF

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)
164	169	100	101	90										
169	174	100	98	96										
174	179	100	101	92										
179	184	100	94	82										
184	189	100	100	100										
189	194	100	104	100										
194	199	100	103	100										
199	204	100	92	82										
204	209	96	93	82										
209	211	96	80	50										
211	216	100	99	94										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 8/31/98 LOGGED BY: RKS

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)
216	221	100	100	90										
221	226.5	100	100	96										
226.5	232	100	102	100										
232	234	94	95	94										
234	239	96	particles 56	50										
239	244	100	92	100										
244	249	100	104	100										
249	254	100	102	80										
254	259	90	100	84										
259	264	100	102	100										
264	269	100	98	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-275-98 DATE: 9/2/98 LOGGED BY: RKS 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)
269	274	100	104	96										
274	279	106	99	100										
279	284	100	96	100										
284	289	100	100	100										
289	294	100	100	88										
294	299	100	92	94										
299	304	100	101	100										
304	309	100	102	100										
309	314	100	98	100										
314	319	100	100	98										
319	324	100	96	96										
324	329	100	98	92										

TD

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050565

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-275-98 RECEIVED : 11 SEP 1998

No. SAMPLES : 78 REPORTED : 23 SEP 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 SP050565

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-275-98 0-5	0.051		0.103	0.04
D-275-98 5-9	0.002			0.02
D-275-98 9-14	<0.001			0.07
D-275-98 14-19	0.001			<0.02
D-275-98 19-24	0.002			0.02
D-275-98 24-26	0.003			0.05
D-275-98 26-29	<0.001			0.02
D-275-98 29-34	0.002			0.05
D-275-98 34-39	0.002			0.07
D-275-98 39-44	0.002			0.05
D-275-98 44-49	0.002			0.03
D-275-98 49-54	0.005			0.07
D-275-98 54-59	0.010			0.06
D-275-98 59-61	0.031			0.06
D-275-98 61-64	0.073		0.060	0.19
D-275-98 64-69	0.079		0.091	0.10
D-275-98 69-74	0.050	0.035		0.08
D-275-98 74-79	0.045			0.12
D-275-98 79-84	0.020			0.11
D-275-98 84-89	0.016			0.05
D-275-98 89-92	0.005			0.05
D-275-98 92-95	0.024			0.08
D-275-98 95-96	0.046			0.18
D-275-98 96-99	0.004			0.10
D-275-98 99-104	0.013			0.09

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050565

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-275-98 104-109	0.007			0.11
D-275-98 109-114	0.020			0.10
D-275-98 114-119	0.004			0.07
D-275-98 119-124	0.005			0.07
D-275-98 124-127	0.004			0.08
D-275-98 127-130	0.005			0.09
D-275-98 130-132	0.005			0.08
D-275-98 132-137	0.009			0.07
D-275-98 137-139	0.002			0.05
D-275-98 139-143	0.005			0.07
D-275-98 143-148	0.006			0.08
D-275-98 148-149	0.002			0.02
D-275-98 149-154	0.003			0.03
D-275-98 154-159	0.005			0.05
D-275-98 159-164	0.003			0.04
D-275-98 164-169	0.003			0.05
D-275-98 169-174	0.004			0.04
D-275-98 174-179	0.004			0.06
D-275-98 179-184	0.010			0.08
D-275-98 184-189	0.002			0.03
D-275-98 189-194	0.004			0.06
D-275-98 194-199	0.003			0.03
D-275-98 199.0-201.5	0.008			0.11
D-275-98 201.5-205.5	0.011			0.06
D-275-98 205.5-208.0	0.003			0.04

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050565

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-275-98 208-210	0.006			0.07
D-275-98 210-214	0.005			0.09
D-275-98 214-216	0.011			0.07
D-275-98 216-221	0.006			0.05
D-275-98 221.0-224.5	0.007			0.09
D-275-98 224.5-226.5	0.005			0.07
D-275-98 226.5-232.0	0.008			0.07
D-275-98 232-234	0.006			0.07
D-275-98 234-239	0.145		0.092	0.05
D-275-98 239-244	0.006			0.05
D-275-98 244-249	0.006			0.05
D-275-98 249-254	0.009			0.06
D-275-98 254-259	0.012			0.09
D-275-98 259-264	0.010			0.08
D-275-98 264-269	0.008			0.07
D-275-98 269-274	0.006			0.06
D-275-98 274-279	0.006			0.05
D-275-98 279-284	0.006			0.06
D-275-98 284-289	0.008			0.04
D-275-98 289-294	0.006			0.02
D-275-98 294-299	0.006			0.03
D-275-98 299-304	0.011			0.08
D-275-98 304-309	0.018			0.16
D-275-98 309-314	0.012			0.14
D-275-98 314-319	0.006			0.05

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050565

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-275-98 319-324	0.006			0.17
D-275-98 324-329	0.004			0.06
40508	0.511	0.538		4.60

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

INVOICE NO: SP 0050565-IN
INVOICE DATE: 09/24/98

(702) 356-0606

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
0-275-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
78	SAMPLES RECEIVED	.00	.00
77	DRYING	1.00	77.00
77	JAW CRUSHING CHARGE	1.30	100.10
77	COARSE MILLING CHARGE	4.50	346.50
77	SPLITTING CHARGE	2.40	184.80
77	RING MILLING CHARGE	2.00	154.00
78	Au (1 A.T. FIRE ASSAY)	8.00	624.00
4	Au ANALYSES/GRAVIMETRIC	8.75	35.00
78	HYDROCHLORIC/NITRIC DIGESTION	2.00	156.00
78	Ag ANALYSES	1.00	78.00

86-5110-477
KAA

NET INVOICE:	1,755.40
LESS DISCOUNT:	351.08
FREIGHT:	.00
INVOICE TOTAL:	1,404.32

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

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-275-98 RECEIVED : 11 SEP 1998

No. SAMPLES : 78 REPORTED : 23 SEP 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 SP050565

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 0-5	0.051		0.103	0.04
D-275-98 5-9	0.002			0.02
D-275-98 9-14	<0.001			0.07
D-275-98 14-19	0.001			<0.02
D-275-98 19-24	0.002			0.02
D-275-98 24-26	0.003			0.05
D-275-98 26-29	<0.001			0.02
D-275-98 29-34	0.002			0.05
D-275-98 34-39	0.002			0.07
D-275-98 39-44	0.002			0.05
D-275-98 44-49	0.002			0.03
D-275-98 49-54	0.005			0.07
D-275-98 54-59	0.010			0.06
D-275-98 59-61	0.031			0.06
D-275-98 61-64	0.073		0.060	0.19
D-275-98 64-69	0.079		0.091	0.10
D-275-98 69-74	0.050	0.035		0.08
D-275-98 74-79	0.045			0.12
D-275-98 79-84	0.020			0.11
D-275-98 84-89	0.016			0.05
D-275-98 89-92	0.005			0.05
D-275-98 92-95	0.024			0.08
D-275-98 95-96	0.046			0.18
D-275-98 96-99	0.004			0.10
D-275-98 99-104	0.013			0.09

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 104-109	0.007			0.11
D-275-98 109-114	0.020			0.10
D-275-98 114-119	0.004			0.07
D-275-98 119-124	0.005			0.07
D-275-98 124-127	0.004			0.08
D-275-98 127-130	0.005			0.09
D-275-98 130-132	0.005			0.08
D-275-98 132-137	0.009			0.07
D-275-98 137-139	0.002			0.05
D-275-98 139-143	0.005			0.07
D-275-98 143-148	0.006			0.08
D-275-98 148-149	0.002			0.02
D-275-98 149-154	0.003			0.03
D-275-98 154-159	0.005			0.05
D-275-98 159-164	0.003			0.04
D-275-98 164-169	0.003			0.05
D-275-98 169-174	0.004			0.04
D-275-98 174-179	0.004			0.06
D-275-98 179-184	0.010			0.08
D-275-98 184-189	0.002			0.03
D-275-98 189-194	0.004			0.06
D-275-98 194-199	0.003			0.03
D-275-98 199.0-201.5	0.008			0.11
D-275-98 201.5-205.5	0.011			0.06
D-275-98 205.5-208.0	0.003			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 208-210	0.006			0.07
D-275-98 210-214	0.005			0.09
D-275-98 214-216	0.011			0.07
D-275-98 216-221	0.006			0.05
D-275-98 221.0-224.5	0.007			0.09
D-275-98 224.5-226.5	0.005			0.07
D-275-98 226.5-232.0	0.008			0.07
D-275-98 232-234	0.006			0.07
D-275-98 234-239	0.145		0.092	0.05
D-275-98 239-244	0.006			0.05
D-275-98 244-249	0.006			0.05
D-275-98 249-254	0.009			0.06
D-275-98 254-259	0.012			0.09
D-275-98 259-264	0.010			0.08
D-275-98 264-269	0.008			0.07
D-275-98 269-274	0.006			0.06
D-275-98 274-279	0.006			0.05
D-275-98 279-284	0.006			0.06
D-275-98 284-289	0.008			0.04
D-275-98 289-294	0.006			0.02
D-275-98 294-299	0.006			0.03
D-275-98 299-304	0.011			0.08
D-275-98 304-309	0.018			0.16
D-275-98 309-314	0.012			0.14
D-275-98 314-319	0.006			0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

American Assay Laboratories

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PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 319-324	0.006			0.17
D-275-98 324-329	0.004			0.06
40508	0.511	0.538		4.60

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

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-275-98 RECEIVED : 11 SEP 1998

No. SAMPLES : 78 REPORTED : 23 SEP 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 SP050565

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 0-5	0.051		0.103	0.04
D-275-98 5-9	0.002			0.02
D-275-98 9-14	<0.001			0.07
D-275-98 14-19	0.001			<0.02
D-275-98 19-24	0.002			0.02
D-275-98 24-26	0.003			0.05
D-275-98 26-29	<0.001			0.02
D-275-98 29-34	0.002			0.05
D-275-98 34-39	0.002			0.07
D-275-98 39-44	0.002			0.05
D-275-98 44-49	0.002			0.03
D-275-98 49-54	0.005			0.07
D-275-98 54-59	0.010			0.06
D-275-98 59-61	0.031			0.06
D-275-98 61-64	0.073		0.060	0.19
D-275-98 64-69	0.079		0.091	0.10
D-275-98 69-74	0.050	0.035		0.08
D-275-98 74-79	0.045			0.12
D-275-98 79-84	0.020			0.11
D-275-98 84-89	0.016			0.05
D-275-98 89-92	0.005			0.05
D-275-98 92-95	0.024			0.08
D-275-98 95-96	0.046			0.18
D-275-98 96-99	0.004			0.10
D-275-98 99-104	0.013			0.09

AMERICAN ASSAY LABORATORIES

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D-275-98 104-109	0.007			0.11
D-275-98 109-114	0.020			0.10
D-275-98 114-119	0.004			0.07
D-275-98 119-124	0.005			0.07
D-275-98 124-127	0.004			0.08
D-275-98 127-130	0.005			0.09
D-275-98 130-132	0.005			0.08
D-275-98 132-137	0.009			0.07
D-275-98 137-139	0.002			0.05
D-275-98 139-143	0.005			0.07
D-275-98 143-148	0.006			0.08
D-275-98 148-149	0.002			0.02
D-275-98 149-154	0.003			0.03
D-275-98 154-159	0.005			0.05
D-275-98 159-164	0.003			0.04
D-275-98 164-169	0.003			0.05
D-275-98 169-174	0.004			0.04
D-275-98 174-179	0.004			0.06
D-275-98 179-184	0.010			0.08
D-275-98 184-189	0.002			0.03
D-275-98 189-194	0.004			0.06
D-275-98 194-199	0.003			0.03
D-275-98 199.0-201.5	0.008			0.11
D-275-98 201.5-205.5	0.011			0.06
D-275-98 205.5-208.0	0.003			0.04

AMERICAN ASSAY LABORATORIES

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D-275-98 208-210	0.006			0.07
D-275-98 210-214	0.005			0.09
D-275-98 214-216	0.011			0.07
D-275-98 216-221	0.006			0.05
D-275-98 221.0-224.5	0.007			0.09
D-275-98 224.5-226.5	0.005			0.07
D-275-98 226.5-232.0	0.008			0.07
D-275-98 232-234	0.006			0.07
D-275-98 234-239	0.145		0.092	0.05
D-275-98 239-244	0.006			0.05
D-275-98 244-249	0.006			0.05
D-275-98 249-254	0.009			0.06
D-275-98 254-259	0.012			0.09
D-275-98 259-264	0.010			0.08
D-275-98 264-269	0.008			0.07
D-275-98 269-274	0.006			0.06
D-275-98 274-279	0.006			0.05
D-275-98 279-284	0.006			0.06
D-275-98 284-289	0.008			0.04
D-275-98 289-294	0.006			0.02
D-275-98 294-299	0.006			0.03
D-275-98 299-304	0.011			0.08
D-275-98 304-309	0.018			0.16
D-275-98 309-314	0.012			0.14
D-275-98 314-319	0.006			0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050565

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-275-98

REPORTED : 23 SEP 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-275-98 319-324	0.006			0.17
D-275-98 324-329	0.004			0.06
40508	0.511	0.538		4.60

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: Hecla Rosebud

Address: PO Box 2610

City Winnemucca State NV Zip 8

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

Project Name: Rosebud Development Purchase Order Number:

Date Submitted: 9/9 Number of Samples: 77

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

SAMPLE IDENTIFICATION				TYPE	ELEMENTS REQUIRED	
D-275-98				Core	Au/Ag Rosebud Specs	
0-5	61-64	119-124	174-179			
5-9	64-69	124-127	179-184		226.5-232	289-294
9-14	69-74	127-130	184-189		232-234	294-299
14-19	74-79	130-132	189-194		234-239	299-304
19-24	79-84	132-137	194-199		239-244	304-309
24-26	84-89	137-139	199-201.5		244-249	309-314
26-29	89-92	139-143	201.5-205.5		249-254	314-319
29-34	92-95	143-148	205.5-208		254-259	319-324
34-39	95-96	148-149	208-210		259-264	324-329 TD
39-44	96-99	149-154	210-214		264-269	
44-49	99-104	154-159	214-216		269-274	
49-54	104-109	159-164	216-221		274-279	
54-59	109-114	164-169	221-224.5		279-284	
59-61	114-119	169-174	224.5-226.5		284-289	

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

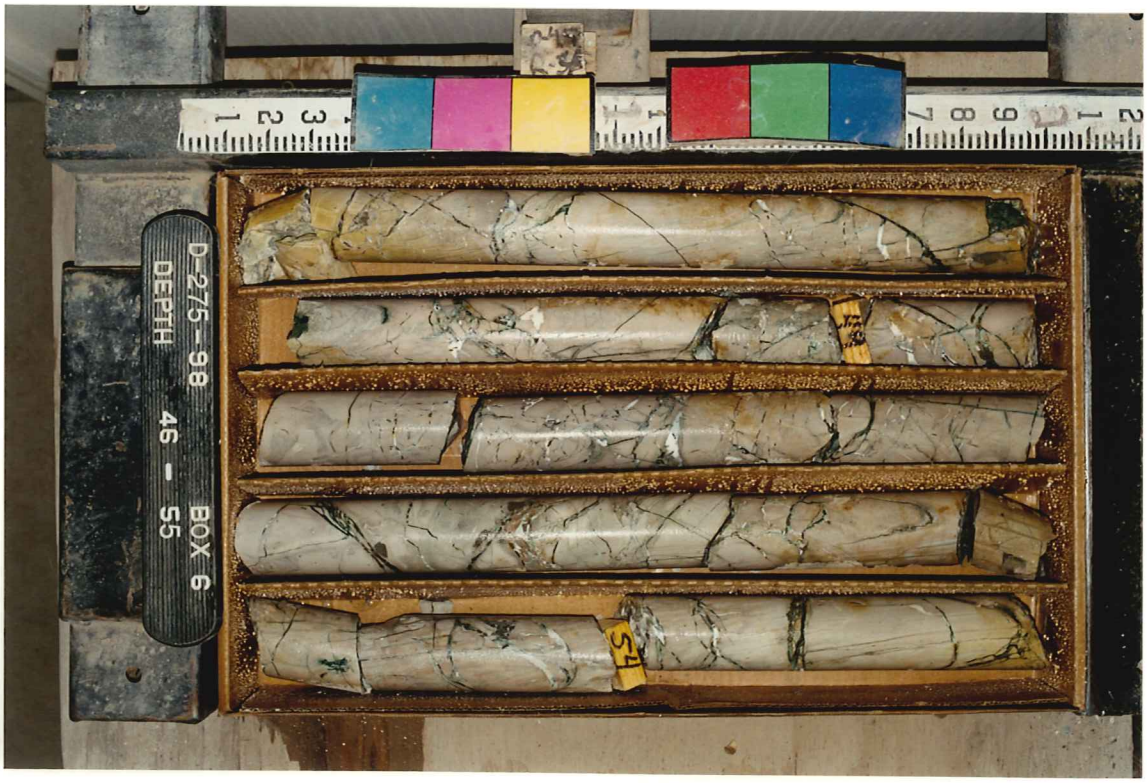
D-275-98 BOX 2
DEPTH 9 - 18

D-275-98 BOX 1
DEPTH 0 - 9

D-275-98 BOX 3
DEPTH 18 - 27.5

D-275-98
BOX 5
DEPTH 36 - 46

D-275-98
BOX 4
DEPTH 27.5 - 36


D-275-98
BOX 6
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69
D-275-98 BOX 8
DEPTH 64 - 73.5

64
59
D-275-98 BOX 7
DEPTH 55 - 64

74
79
D-275-98 BOX 9
DEPTH 73.5 - 83

D-275-98 BOX 11
DEPTH 92_5 - 101_5

D-275-98 BOX 10
DEPTH 83 - 92_5

D-275-98 BOX 12
DEPTH 101_5 - 110_5

124
D-275-98
BOX 14
DEPTH
119_5 - 129_5

119
114
D-275-98
BOX 13
DEPTH
110_5 - 119_5

D-275-98
BOX 15
DEPTH
129_5 - 137_5
124
134

154
149
D-275 - 98
BOX 17
DEPTH
146_5 - 156_5

139
144
D-275 - 98
BOX 16
DEPTH
137_5 - 146_5

D-275 - 98
BOX 18
DEPTH
156_5 - 165_5
159
164

174
184
D-275 - 98
BOX 20
DEPTH 174 - 184

174
D-275 - 98
BOX 19
DEPTH 165_5 - 174

D-275 - 98
BOX 21
DEPTH 184 - 193_5

204
209
MIXLAKH
211
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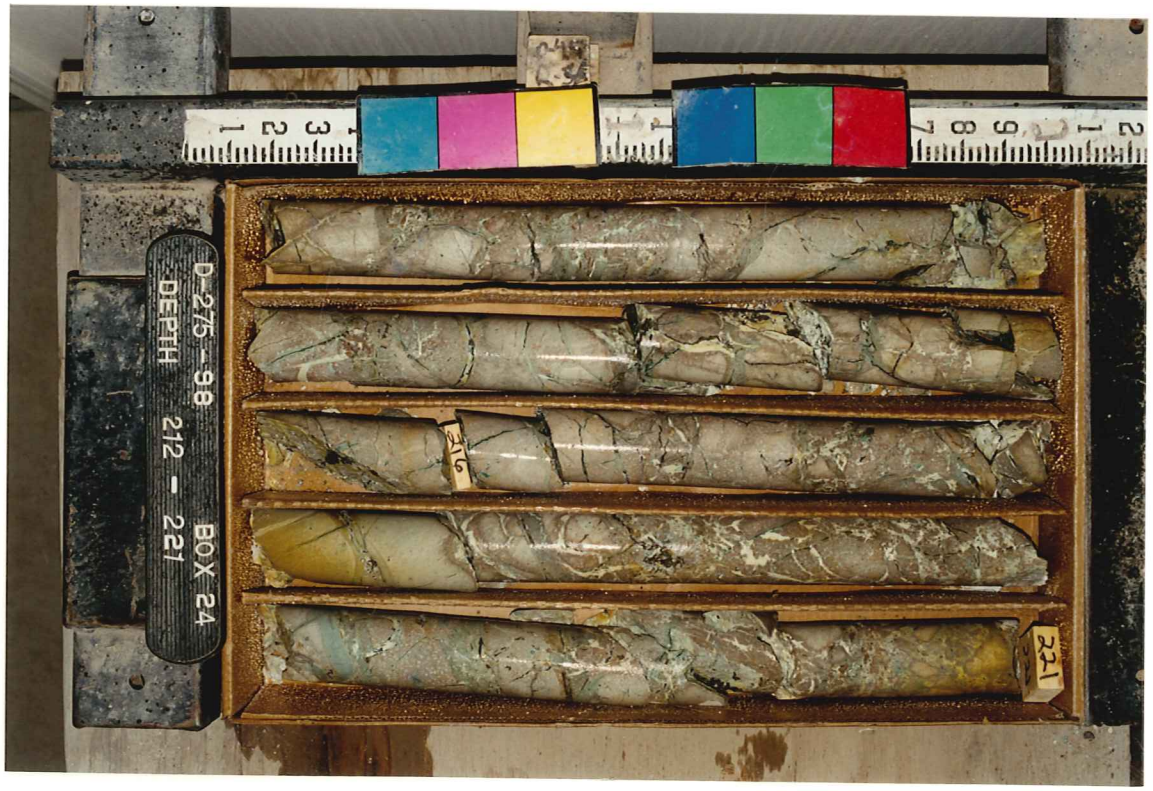
203 - 212

194
199
D-275-98
BOX 22
DEPTH
193_5 - 203


216
221
D-275-98
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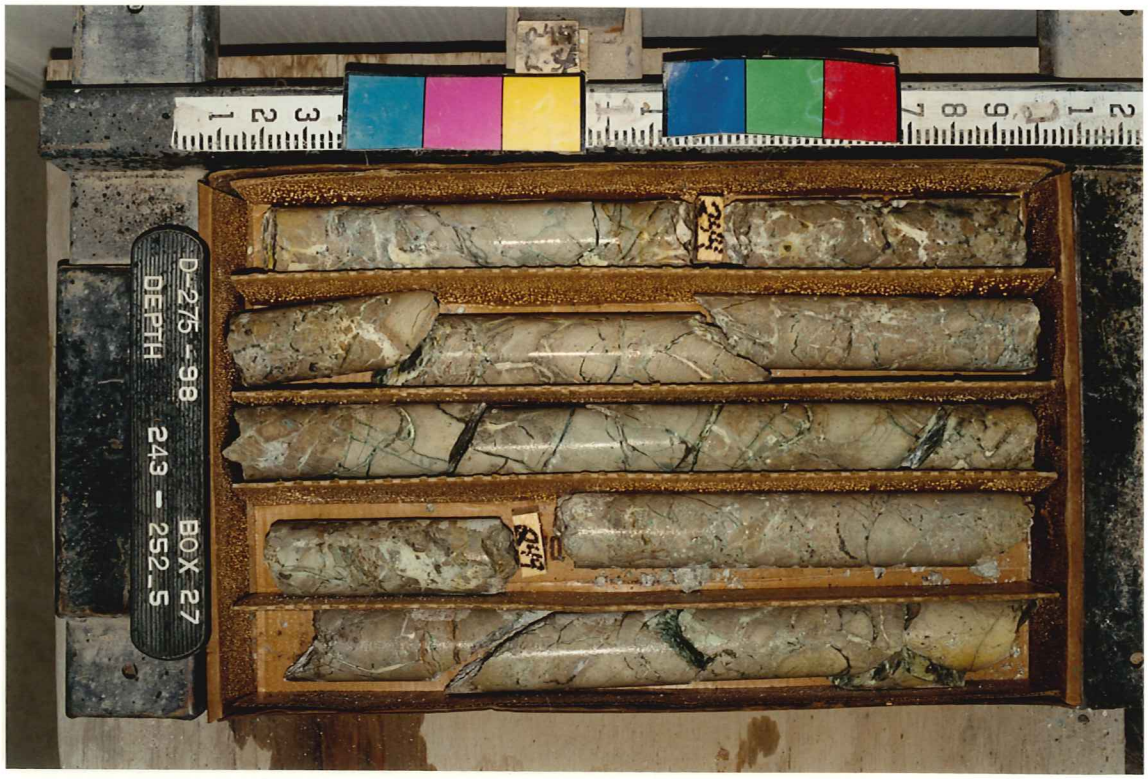
DEPTH
212 - 221

D-275-98
BOX 26
DEPTH 231 - 243
232
234

D-275-98
BOX 25
DEPTH 221 - 231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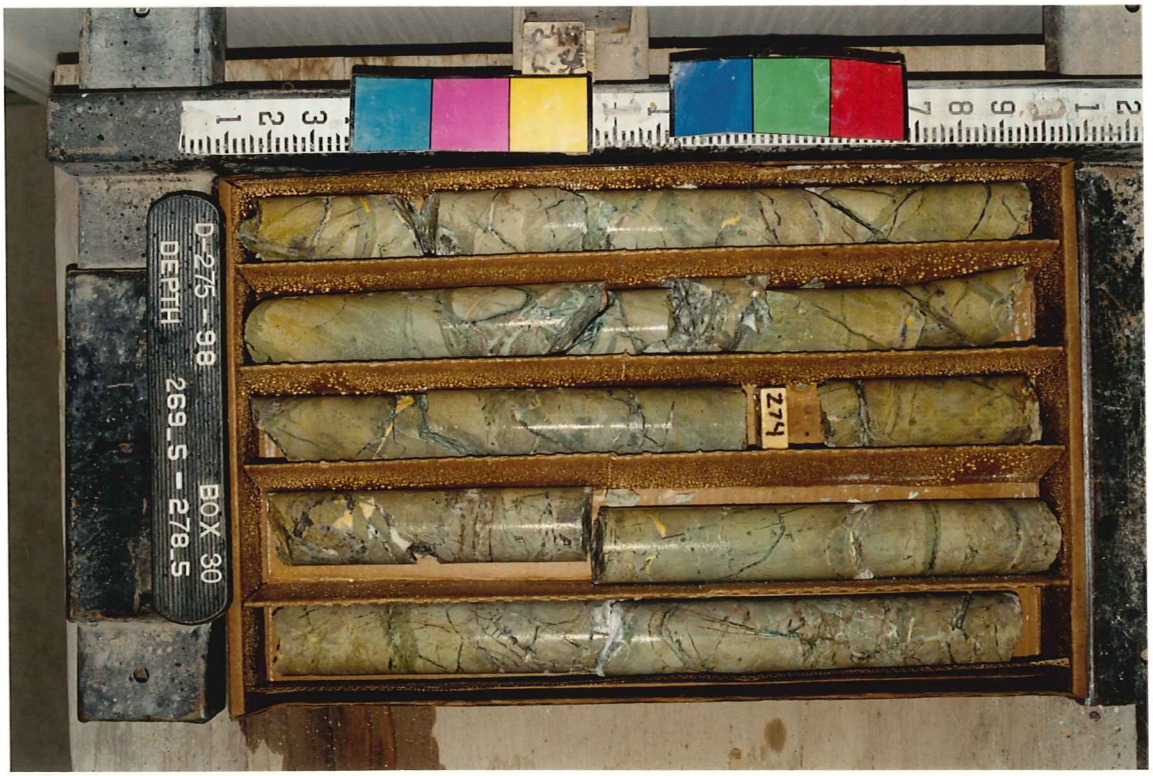
BOX 29
DEPTH 261 - 269_5

D-275 - 98
BOX 28
DEPTH 252_5 - 261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DEPTH 269_5 - 278_5

289
294
D-275-98
BOX 32
DEPTH 288 - 297

279
284
D-275-98
BOX 31
DEPTH 278.5 - 288

294
304
D-275-98
BOX 33
DEPTH 297 - 306.5

319
324
D-275 - 98
BOX 35
DEPTH 315.5 - 325

309
314
D-275 - 98
BOX 34
DEPTH 306.5 - 315.5

D-275 - 98
BOX 36
DEPTH 325 - 329 TD
329

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-275-98
LEASE
TAKEN BY Dan Hubbard
DEPTH Collar
DATE 6-27-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-275-98
LEASE
TAKEN BY Dan Hughes
DEPTH 330
DATE 6-27-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-275-98
LEASE
TAKEN BY Dom Hughes
DEPTH 160
DATE 6-27-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

NW
80
NW
80
NW
80
NW
70
NW
70
NW
70
NW