60001529

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-81-94
AUTHOR	C. Winchester; C. Muerhoff; S. Fairchild
DATE OF DOC(S)	1994
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Hecla Mining Co., South Zone
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 300' handwritten notes 14p.

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 5/29/08
Initials Date

DB: mcl
Initials Date

SCANNED: NV Blue
Initials Date

Revised: 1/22/08

D-81-94

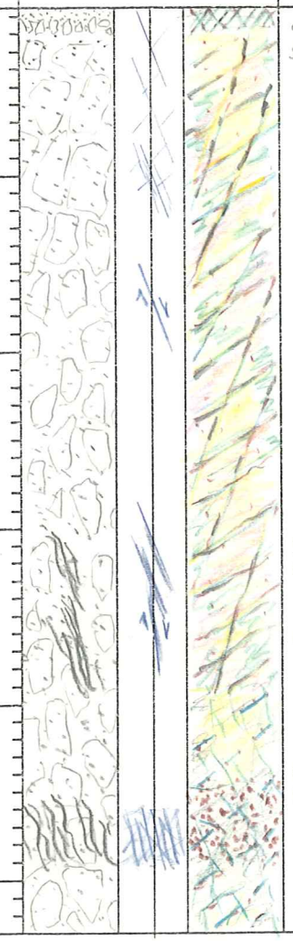
66001529 4010

66601529

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-81-94	LOCATION	South Zone	REMARKS	ORIENTATIONS STATED
PAGE 1 OF	5	NORTHING	2203996.9		AS ∡ TO CORE AXIS; CORE PHOTO'D;
DATE	9-22-94	EASTING	481820.7		WHOLE CORE ASSAY SAMPLES; COLLAR
LOGGED BY	CB WINETEER	ELEVATION	4649.4		LOC. DDS #19; SECTION 1000N; NQ
SCALE	1" = 10'	AZIMUTH	121.0°		CORE
TOTAL DEPTH	300'	INCLINATION	-31.0°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0 1.5	1.5' 73'	Very pale green, very fine-grained, well-sorted, nonporphyritic, massive-bedded airfall? tephra/tuff. vitroclastic g/m. Fine-grained, well-sorted, slightly porphyritic massive-bedded sugary texture; clast-supported crackle breccia w/ little apparent clast-rotation. Possible massive/waterlain tephra (?)	10 20 30 40 50		0-11' pale grn to yellowish-grn clay slicks @ 20°; 40° 1-2/ft. 31-33' healed fault bx's @20° w/ $CaCO_3$ + ser. matrix 36-37.5 pale grn ser. slick @ 5° 46-49.1' ser. clay-rich fault bx w/ variable attit. slicks	0-1.5' wk. silic.; intense arg-T ND. alun.; chl + $CaCO_3$ micro hairline stkwk; wk py-T. (Tr) min'l frac's >10/ft stkwk chl. $CaCO_3$ + py ± spl. ± ill Eg/m oxid. 1.5-39' wk silic; wk arg-T; wk discont. patchy g/m chl-T; wk py-T (Tr-1%). wk alun w/ crackle to tectonic bx in clasts w/ chl-ser. matrix; min'l frac's 7-14/ft @ 60°; 25° w/ $CaCO_3$ + marc + ill ± open-sp f.s. Q ± Tr spl. py ft marc. loc. 39-56.5' decr. silic + w/ incr. arg-T w/ surf. oxid. strongest 55-56.5'; py-T 1-4% loc.; wk chl-T on frac's; Tr alun.; $CaCO_3$ patches - wedge-sp str stkwk.; discont. fragmented min'l frac's 5-10/ft. @ gener. 60°; 30° w/ $CaCO_3$ + marc. + ill + f.g. open sp. Q; dimorph; py-ohedrons 45-49' up to 15-20%.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
0	1.5	1.5	<.001	.02	<.001	
1.5	8.0	6.5'	.003	.04		
8	14	6.0'	.001	.03		
14	20	6.0'	.007	.05	.005	
20	25	5.0'	.040	.07		
25	30	5.0'	.084	.16	.092 (?)	
30	35	5.0'	.006	.05		
35	39	4.0'	.002	.04		
39	45	6.0'	.002	.05		
45	49.1	4.1'	.003	.04		
49.1	56.5	7.4'	.003	.05		

HOLE NUMBER D-81-94 PAGE 2 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		55.5-57' Clasts comprised of very fine-grained vitroclastic airfall tephra, very pale green moderate hardness, chloritic micro hairline stockwork.	60			56.5-73' mod. silic w/ SiO_2 micro hairline stkwk mod. arg-T; wk to mod. chl-I on 60' controlling stx's; py-T Tr-2%; $CaCO_3$ micro vnlt stkwk w/ ferrugenous light brn stn — discont. patchy ± Tr alun.; minr. frac's wavy 8-15/ft gen. @ 50° ± 20° 0.05" of Q + marc + py ft marc + ill + $CaCO_3$ — w/ open-space f.g. high Z py	56.5	62	5.5'	.011	.06		
							62	68	6.0'	.003	.05		
73	82.5'	Clast-supported, homo-lithic breccia w/in very fine-grained clay-altered, massive-bedded, slightly-porphyritic w/ diss chl. sp. xxs. airfall tephra/tuff. Vitropheric; moderately soft to moderate; pale green.	70			73-83' wk silic.; mod to mod intense arg-T; mod. chl-T ± micro stkwk; wk py-T (Tr-1%) ND. alun.; oxid. arg-T on surf.'s minr. frac's 30', 20', 50', 70' @ 5-8/ft. 0.05-0.1" of. open-sp. Q + marc + py ft marc (loc. open-space high Z py ± ill ± $CaCO_3$	68	73	5.0'	.008	.08		
							73	78	5.0'	.004	.08		
82.5	96'	Matrix-supported lithic tuff breccia w/a pinkish grey fine-grained siliceous sugary texture ground-mass and angular, poorly-sorted lithic fragments of vitropheric tephra above & pale green sugary fine-grained tephra. Massive-bedded, moderately hard w/ moderate clasts.	80				78	83	5.0'	.005	.05		
						83-96' wk to mod. silic + wk alun. in g/m; wk arg-T of g/m w/ clasts of mod. intense arg-T + chl-T as above; wk chl-T of g/m.; wk py-T (Tr-1%); minr frac's 2-10/ft @ 65-75° X-cutting earlier 30° of Q + marc + py ft marc + ill ± Tr sph-cpy intergrowths	83	87	4.0'	.010	.11		
			90				87	91	4.0'	.072	.14	.081 (g)	
96	99'	Massive-bedded Very fine-grained vitropheric airfall tephra/tuff. Offwhite to pale green color, very well-sorted, moderately soft, cross-cutting chloritic micro hairline stockwork. Upper contact @ 55° & lower contact @ 45°			30° slicks @ 96.5' & 98'		91	96	5.0'	.015	.10	.017	
						96-99' v wk silic; mod intense arg-T; stkwk chl-T; wk py-T; ND alun.; minr. frac's 5/ft. discont. gen. @ 60' w/ f.g. Q ± opl SiO_2 + py ft marc. ± ill diss. v.v. f.g. py.	96	99	3.0'	.003	.06		
			100				99	102.5	3.5'	.047	.08		
99	102.5'	Silicified-brecciated contact between overlaying massive vitropheric airfall and silicified flow-laminated, suggary texture airfall (?) tephra/tuff. Flow-lamination's faint, but indicate clast-rotation.			102.5' silic. bx contact @ 50°	99-102.5' silic. bx w/ stkwk open-space Q ± ill ± minor py	102.5	107	4.5'	.043	.06		
			110			102.5-111' banded silic + alun./chl-T/arg-T; ferrugenous SiO_2 micro hairline stkwk; wk py-T (1%) minr. frac- 10-17/ft. of ill-chl-marc X-cut by open-sp. Q + ill ± py.	107	111	4.0'	.086	.14	.088 (g)	
102.5	111'	Flow-laminated, fine-grained, well-sorted, pale pink, light grey, and pale green airfall (?) tephra/tuff. Moderately-soft, moderate & mod. hd. Flow-laminations parallel to core axis.					111	116	5.0'	.046	.19		
			120		116' - open-space f.g. Q lined tube extend thru core w/ marc + ill vug filling	111-123 Silic. bx w/in same as above w/ matrix of clear op. sp. Q + ill + py	116	120	4.0'	.014	.06		

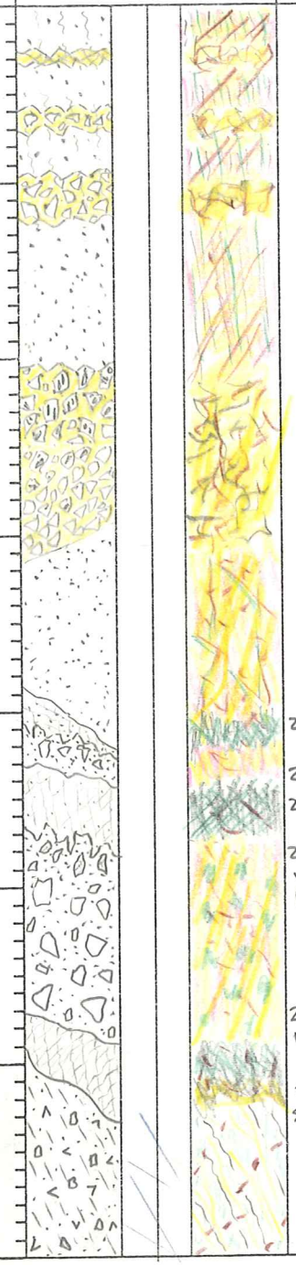
HOLE NUMBER D-81-94 PAGE 3 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
111	123'	Angular clast-supported fragments in silica matrix - Silicified fault breccia w/ clast-rotation w/in planar-laminated fine-grained tephra Vuggy open-space fine-grained Q.				123-155 s.a. 102.5-111' w/ banded Silic + alun/chl-T/arg-T @ 10°; loc. thicker ferrug. SiO_2 + py vnlt stkwk; silic. crackle bx as described at left. w/ clear f. tom g. open-space Q + ill ± py ± Tr Spl.
123	233'	AFT - CB Airfall tephra(?) fine-grained, well-sorted, crude flow-lamination at 10° local thin intervals of silicified tectonic breccia w/ minor clast-rotation. (139-143'; 149-151.2; 152-152.5; 166-179' - silic crackle bx; 187.5-190'; 192.7-193'; 196-197'; 199.7-202'; 210.5-21	130			
			140			
			150			
		155-166' Leopard skin tuff crude parallel lamination of silic-alun./ferrugenous silica w/in intensely arg-T g/m.				155-166 intense arg-T + wk chl-T + wk py-T of g/m. w/ crudely lam/banded spherical clotts of chalcedonic clay all? silica w/ hem. FeO_x halo's, min7 frac's @ 40°; 60° 10-15/ft. Q + ill + py / chl + $CaCO_3$ + marc. Tr ss in Q. [sulfs in Q matrix are fragments from earlier vnlts.] 166-183 silic. crackle bx w/ open-space f. g. Q matrix. incr. silic. + into silic bx mod. silic + mod. arg-T stkwk of f. g. open-space Q + ill ± marc ± py frmage.. 183-187.5' mod intense chl-T + arg-T of g/m w/ matrix-supported clotts w/ smec/ill cores & silic alun. rims (pink to cream) or chl-ic cores & SiO_2-alun. rims.
			160		160-160.5' rubbly fault gouge	
			170			
		183-187.5' Leopard skin textue tuff w/ SiO_2-alun-sulf or chl-sulf. spheroidal clotts - crudely banded in a chloritic groundmass	180		184-184.5' Rubbly fault gouge	
			190			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	~~Ag2~~ Au(AL)
120	123	3.0'	.016	.06		
123	130	7.0'	.007	.06		
130	135	5.0'	.009	.06		
135	139	4.0'	.007	.06		
139	144	5.0'	.010	.04		
144	149	5.0'	.011	.10		
149	154.5	5.5'	.013	.06		
154.5	160	5.5'	.022	.09		
160	166	6.0'	.034	.07		
166	170	4.0'	.030	.26	.035	
170	175	5.0'	.019	.10		
175	180	5.0'	.007	.05		
180	183	3.0'	.013	.07		
183	187.5	4.5'	.010	.06		
187.5	190	2.5'	.011	.07		

HOLE NUMBER D-81-94 PAGE 4 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		210.5-221' silicified stockwork w/in crackle breccia - wall rock comprised of leopard skin texture tuff.	200, 210, 220, 230, 240, 250, 260			187.5-190' silic. crackle to fault bx - vuggy open-space matrix loc. w/f.g. Q ± ill ± marc. ± Tr SS. 190-196' silic + wk alun. + wk arg-T, w/ chl + py ± ill stv. @ 0-5°, 30, 60°; wk py-T. 196-197' silic. bx. 197-199.7 s.a. 190-196 199.7-202' silic. crackle bx or silic. vn bx 202-210.5 s.a. 190-196 210.5-221 SiO_2 stkwk w/ arg-T + chl-T f.g. leopard skin texture tuff.
221	230'	Fine-grained, massive-bedded, wellsorted, siliceous tuff. - sugary texture pink to tan				221-230' silic + alun + wk arg-T, wk py-T; chl-T on frac's (encased by later SiO_2); x-cutting SiO_2 @ 5-20°
230	231.5'	Very fine-grained clayey-vitroclastic argillic? chloritically altered.				230-231.5 arg-T + chl-T v. wk silic / py-T / alun.
231.5	233.5'	Fine-grained, siliceous, massive-bedded, well-sorted, pink to tan a.a. 221-230' w/ occ. frags of green very fine-grained arg + chl. tuff.			230' sharp wavy contact at 50° silic. hanging 231.5' fragmented contact.	231.5-233.5 mixed silic + alun ? chl + arg, wk py-T ill micro vnlts @ 20°-tan sash.
233.5	237.5'	V.f.g. green chloritic ? argillic altered tuff.			233.5 sharp weakly silic wavy contact @ 85°	233.5-237.5 intense arg + chl; v. wk silic + py-T.
237.5	248'	Lithic tuff breccia w/ green chl + arg. altered frags in a pink sugary texture siliceous fine-grained tuff matrix.			237.5' fragmented contact w/ green frags of above in pink matrix of below	237.5-248' late-stage chal. silic x-cutting ? fragmenting arg + cht (clasts) ? silic + alun. (matrix).
248	251.2'	Chloritic ? argillic altered very fine-grained vitroclastic tuff.			248' argillic alt. sharp wavy contact @ 70°	248-251' Intense arg-T + chl-T; v. wk silic, py-T, ? alun.
251.2	298'	BUD OR TOS Flow-laminated, latitic, lapilli, lithic, porphyritic welded ash flow tuff and reworked epiclastic tuff. Elongated (0.5-2.5 cm) pale to med. dk green pumice lapilli w/ flattening ratios of 8:1 to 12:1 flow-aligned at 30°; 5-8% med. g. subhed. feldspar phenos alt. to white clay + v.f.g. cubic py;			251-270' occ. ser-smec slicks @ 30° ? 60° 1-2/ft.	251-285' gen. wk silic w/ loc. microhairline flooded bx zones; v. wk py-T w/ sulf occuring as vnlt frags of marc (py ? marc); wk to mod chl-T of g/m ? lapilli; wk arg-T w/ v. thin ill-smec vnlts @ 20-30°

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Au(AA3) ~~Ag2~~
190	196	6.0'	.038	.09	.023	.067
196	202	6.0'	.021	.09		
202	210	8.0'	.012	.10		
210	215	5.0'	.027	.13		
215	221	6.0'	.025	.12	.022	
221	226	5.0'	.010	.06		
226	230	4.0'	.020	.13		
230	233.5	3.5'	.004	.06		
233.5	237.5	4.0'	.003	.07		
237.5	242	4.5'	.003	.04		
242	246	4.0'	.035	.09	.030	
246	251.2	5.2'	<.001	.02		
251.2	255	3.8'	.003	.02		
255	260	5.0'	.009	.06	.034	.019

HOLE NUMBER D-81-94 PAGE 5 OF 5

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		3-5% angular to sub ang. buff sugary f.g. siliceous tuff (waterlain LBT); 10-15% angular to subrounded pale green to cream-off-white argillized vitroclastic tuff (airfall LBT) both lithic frag. type 0.25 to 1.0cm.	270		272 - 277' Rubbly w/disc. 30° & 60° slicks grading into silic. wkly bx	284-285' light grey chalc. SiO_2 @ 20° - barren & x-cutting earlier clott of f.g. cubic-striated py up to 50%
			280		280-281' wk silic. wkly bx'iated	
285	300'	Fault breccia: offwhite fine-grained chalcedonic silica flooding; pale green moderate to moderately hard; clast-supported angular to rounded prop. or silic. fragments in a silicified sericitic clay groundmass. 292.5 - 298' Mixed lithology fault bx w/ ~50% f.g. siliceous, laminated pale green to tan tuff (Dozer). 298 - 300' fault bx w/in Dozer Tuff.	290		285' Irreg. fault contact (silic.) at 50°	285-300' silic. fault bx w/ incr. repl. of matrix & frags to 299.8'; 1-2% sulf as fragments; 298-298.4' massive f.g. py matrix w/ silic. rounded frags. of f.g. tuff.
					298' sharp irreg. slick @ 47° 4" hanging wall bx w/ f.g. massive py matrix & ang. torn'd matrix-supp. frags. SiO_2 flooded fault	
		END OF HOLE @ 300'	300		bx in footwall + 299.8'	

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
260	265	5.0'	.004	.07		
265	270	5.0'	.011	.07		
270	275	5.0'	.005	.06		
275	280	5.0'	.003	.03		
280	285	5.0'	.003	.04		
285	289	4.0'	.006	.04		
289	293	4.0'	.006	.05		
293	298	5.0'	.004	.04		
298	300'	2.0'	.003	.05		

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-81-94 DATE: 9-22-94 LOGGED BY: CBW PAGE 1 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
0	10	54	68	.45	5	R3	3.2	70°	R	ser-py-chl.	5	416	175	2.38
10	20	88	96	.60	15	R3	1.7	50°	R	ser-py-chl.	15	354	145	2.44
20	30	93	96	.93	25	R3	0.3	70°	R	$CaCO_3$	25	413	170	2.43
30	39	90	100	.87	34	R2	0.6	5°	R	ser-chl-$CaCO_3$	34	376.5	160	2.35
39	49	70	100	.55	44	R2	1.4	5/60°	R/R	ser-chl-Ca 46-49' bx	44	269.5	115	2.34
49	59	89	100	.78	54	R2	0.3	85°	R	None	54	393	165	2.38
59	67	85	87	.76	63	R2	0.3	65°	R	None	63	398	165	2.41
67	77	95	98	.84	72	R2	0.8	65°	R	None	72	419	170	2.46
77	87	90	93	.90	82	R2	0.6	70°	R	py-SiO_2	82	335.5	140	2.39
87	97	82	91	.68	92	R2	1.0	80°	R	py-SiO_2	92	380	160	2.38
97	107	75	87	.65	102	S5	2.0	70°	R	Ca-py-chl-SiO_2	102	324	135	2.4

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-81-94 DATE: 9-22-94 LOGGED BY: CBW

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)
107	117	68	85	.53	112	55	1.7	70°	R	Q→ill→marc	112	345.5	140	2.47
117	127	85	90	.73	122	R1	1.4	75°	R	marc-py-ill-Q	122	255.5	105	2.43
127	135	88	91	.45	131	R1	1.3	75°	R	chl-ill-py-Q	131	350.5	145	2.42
135	145	68	88	.30	140	R2	2.2	70°	R	Q-ill-chl-py	140	255.5	105	2.43
145	155	72	87	.50	150	R2	1.5	10°/60°	S/R	None/Q-ill-py-marc,	150	297	122	2.43
CORE BLOCK MISSED 155	175	27	78	.07	165	55	5.0	60°	S	chl-py-ill	165	260.5	110	2.37
175	185	60	83	.40	180	R1	2.8	75°	R	Q-ill-py	180	248.5	120	2.07
185	194	53	89	.27	190	R1	1.9	45°/60°	S	chl-ill-py± Q	190	361.5	155	2.33
194	200	50	92	.32	197	R1	2.4	70°	S	chl-ill-py± Q	197	280	120	2.33
200	210	29	78	.14	205	R1	3.2	0°/60°	S	chl-ill-py	205	345	145	2.38
210	220	61	84	.47	215	R2	2.0	40°	S	ill-py	215	301	125	2.41

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-81-94 DATE: 9-24-94 LOGGED BY: CBW / RK PAGE 3 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
220	230	43	65	.25	225	R2	2.2	65°	S	ill-SiO2-py	225	302	125	2.42
230	240	45	74	.31	235	R3	1.2	60°	R	ill-py-SiO2	235	330	140	2.36
240	250	34	74	.12	245	R1	5.7	15°/70	R	ill-ill-ill	245	309	130	2.38
250	260	83	85	.50	255	S5	0.7	60°	R	ill	255	241	110	2.19
260	265	75	80	.43	262	S5	1.1	40°	R	minor ill	262	297.5	135	2.20
265	274	54	83	.41	269	S5	0.8	35°	R	minor ill	269	233	105	2.22
274	280	96	96	.86	277	S5	0.3	55°	R	SiO2+mar	277	280	125	2.24
280	290	82	99	.78	285	S5	0.9	50°	R	py	285	348.5	150	2.32
290	300						2.3	50°	S-K	py-clay				

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: D-81-94
LABORATORY JOB No. : SP031046
SAMPLE TYPE :

RECEIVED : 27 SEP 1994
REPORTED : 7 OCT 1994
No. SAMPLES : 26

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : D-81-94
JOB NUMBER : SP031046
REPORTED : 7 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-81-94 000-1.5	<0.001	<0.001		0.02
D-81-94 1.8-8	0.003			0.04
D-81-94 8-14	0.001			0.03
D-81-94 14-20	0.007	0.005		0.05
D-81-94 20-25	0.040			0.07
D-81-94 25-30	0.084		0.092	0.16
D-81-94 30-35	0.006			0.05
D-81-94 35-39	0.002			0.04
D-81-94 39-45	0.002			0.05
D-81-94 45-49.1	0.003			0.04
D-81-94 49.1-56.5	0.003			0.05
D-81-94 56.5-62	0.011			0.06
D-81-94 62-68	0.003			0.05
D-81-94 68-73	0.008			0.08
D-81-94 73-78	0.004			0.08
D-81-94 78-83	0.005			0.05
D-81-94 83-87	0.010			0.11
D-81-94 87-91	0.072		0.081	0.14
D-81-94 91-96	0.015	0.017		0.10
D-81-94 96-99	0.003			0.06
D-81-94 99-102.5	0.047			0.08
D-81-94 102.5-107	0.043			0.06
D-81-94 107-111	0.086		0.088	0.14
D-81-94 111-116	0.046			0.19
D-81-94 116-120	0.014			0.06

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-81-94 120-123	0.016			0.06

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: D-81-94
LABORATORY JOB No. : SP031151
SAMPLE TYPE :

RECEIVED : 4 OCT 1994
REPORTED : 13 OCT 1994
No. SAMPLES : 38

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
Au RZ2	FA60	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

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JOB NUMBER : SP031151
REPORTED : 13 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	Ag(OZ) D210 OPT
D-81-94 65-70	0.021			0.14
D-81-94 123-130	0.007			0.06
D-81-94 130-135	0.009			0.06
D-81-94 135-139	0.007			0.06
D-81-94 139-144	0.010			0.04
D-81-94 144-149	0.011			0.10
D-81-94 149-154.5	0.013			0.06
D-81-94 154.5-160	0.022			0.09
D-81-94 160-166	0.034			0.07
D-81-94 166-170	0.030	0.035		0.26
D-81-94 170-175	0.019			0.10
D-81-94 175-180	0.007			0.05
D-81-94 180-183	0.013			0.07
D-81-94 183-187.5	0.010			0.06
D-81-94 187.5-190	0.011			0.07
D-81-94 190-196	0.038	0.023	0.067	0.09
D-81-94 196-202	0.021			0.09
D-81-94 202-210	0.012			0.10
D-81-94 210-215	0.027			0.13
D-81-94 215-221	0.025	0.022		0.12
D-81-94 221-226	0.010			0.06
D-81-94 226-230	0.020			0.13
D-81-94 230-233.5	0.004			0.06
D-81-94 233.5-237.5	0.003			0.07
D-81-94 237.5-242	0.003			0.04

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	Ag(OZ) D210 OPT
D-81-94 242-246	0.035	0.030		0.09
D-81-94 246-251.2	<0.001			0.02
D-81-94 251.2-255	0.003			0.02
D-81-94 255-260	0.009	0.034	0.019	0.06
D-81-94 260-265	0.004			0.07
D-81-94 265-270	0.011			0.07
D-81-94 270-275	0.005			0.06
D-81-94 275-280	0.003			0.03
D-81-94 280-285	0.003			0.04
D-81-94 285-289	0.006			0.04
D-81-94 289-293	0.006			0.05
D-81-94 293-298	0.004			0.04
D-81-94 298-300	0.003			0.05