60000722

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. 95-346
AUTHOR	L. Senter; C. Muerhoff; S. King
DATE OF DOC(S)	1995
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Hecla Mining Co.; Rosebud Project; Rosebud Deposit - Far East Zone
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 1055' directional survey; receipts, handwritten notes 45p 1 oversized sheet

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 4/30/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

95-346

6000 0722
4010

6600 0722

Hecla MINING COMPANY

ROSEBUD PROJECT DIAMOND DRILL LOG

HOLE NUMBER	95-346	LOCATION	Rosebud Deposit-Far East Zone
PAGE 1 OF 16		NORTHING	
DATE	9/9/95	EASTING	
LOGGED BY	Lance Senter	ELEVATION	
SCALE	1" = 10'	AZIMUTH	331° (N 29° W)
TOTAL DEPTH	1055	INCLINATION	-88.5°

REMARKS: HQ Core, Longyear 44, PC Exploration

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		0'-29' drilled with tri-cone; no recovery Colluvium	0 10 20										
		29'-50.5' Mod-mod hard med-dk grey aphanitic to fine-grained porphyritic andesitic? to latitic? volcanic flow? or ash flow tuff?, glassy to sugary text. groundmass w/10%-15% phenocrysts of plagioclase or sanadine subhedral to euhedral in shape & 1mm-8mm in size replaced by clay, hematite, pyrite & calcite; unit also contains ≈5% subhedral to euhedral phenocrysts of hornblende & biotite .5mm-3mm in size replaced by black hematite or goethite & chlorite; the replaced mafic phenocrysts by hematite may once have been pyrite; rock unit is monolithic in nature but has textures of being massive, "crackle" bx or autobrecciat'n, volcanic bx & flow laminated; unit is altered by propylitic "banding" or "flooding"; fxs & "crackle" bx heal'd by hematite @29'-31' "crakle" bx text heal'd by surface weather'g hematite	30 40 50	60° 70° 60° 30° 60°	@30'-31' broken rubble zn @35.5'-36.5' str fx'g w/60°∠ to C.A. lined w/ limonite & hem @36'-36.5' shear zn w/clay heal'g rubble, no contact ∠s @36.5'-50.5' rx mod fx'd w/ 1.7 fxs/ft w/60% 30°∠-40°∠ to C.A. & 40% 60°∠-70°∠ to C.A. w/fxs lined w/ hematite oxidation @48.5'-49' broken rubble zn	@29'-50.5' is propylitic "band'g" or flood'g throughout rx	29 30 35 40 45	30 35 40 45 50.5					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		50.5'-93.5' Mod soft to mod to mod hard same rock unit as described @ 29'-50.5' but white to orange (due to FeOx along fxs & w/in rx) & perv argilliz'd & heavily limonitic to hematitic iron-stained due to surface oxidation @ 50.5'-71.5' rx texture is massive @71.5'-72' volcanic bx text heal'd w/matrix of clay w/wk limonitic Fe-stain'g @85'-86.5' flow laminated w/ 40°∠ to C.A. @88'-93.5' "crackle" bx texture heal'd w/hematite stockwork	50 60 70 80 90		@ 50.5' fx w/40°∠ to C.A. & contact between argilliz'd & non-argilliz'd rx unit @ 52.2'-52.4' broken rubble zn @ 52.7'-53' broken rubble zn @ 53'-62' rx str fx'd w/3.2 fxs/ft w/70% 70°∠-80° to C.A., 20% 50°∠ to C.A. & 10% 30°∠ to C.A. @ 62'-62.5' broken rubble zn @ 63.5'-65' fault bx w/30°∠ to C.A. heal'd w/ limonitic clay gouge, hang'g wall contact w/30°∠ to C.A., ftwall ∠ unknown @ 66.5'-69.5' flt bx w/15°∠ to C.A. hang'g wall contact & ftwall unk, heal'd w/ limonitic clay gouge @ 72'-76' rx str fx'd w/3 fx/ft w/ 60% 70°∠-80° to C.A. & 40% 40°∠ to C.A. @ 76'-77' broken rubble zn @80'-81.5' flt bx w/30°∠ to C.A. ftwall contact & hang'g wall unknown, heal'd w/ limonitic clay gouge @ 81.5'-83' broken rubble zn @ 83'-88' mod fx'd w/2 fxs/ft w/ 70% 70°∠-80° to C.A., 15% 60°∠ to C.A. & 15% 30°∠ to C.A.	@ 50.5'-93.5' unit is perv argilliz'd	45 50.5 55 60 65 70 75 80 85 90	50.5 55 60 65 70 75 80 85 90 93.5					
		93.5'-117.2' Mod to mod hard same rock unit as described @ 29'-50.5'; med grey-dk grey-med grn, altered by propylitic "banding" or "flooding" as seen @ 29'-50.5' @93.5'-97' "crackle" bx texture heal'd w/ hematite stockwork @97'-99' massive porphyritic flow? or ash flow tuff? has "Liesegang banding" composed of hematite & seems to cut the fx controlled limonite Fe-oxide surface weather'g!! @104.2'-104.8' volcanic bx text heal'd w/matrix of hematite @113.2'-114' volcanic bx text heal'd w/matrix of hematite @116'-117.2' volcanic bx text heal'd w/matrix of hematite @ 117.2'-119.5' volcanic bx text heal'd w/lim. matrix	100 110 120		@93.5' fx w/30°∠ to C.A. & contact between argilliz'd & non-argilliz'd rx unit @98'-110' rx is "vuggy" along fxs & mod fx'd w/1.7 fxs/ft w/ 70% 70°∠-80° to C.A, 20% 40°∠-50°∠ to C.A. & 10% 30°∠ to C.A @106'-106.5' broken rubble zn @ 107.5'-108' broken rubble zn	@ 93.5'-117.2' unit alter'd by propylitic "band'g" &/or "flood'g"	93.5 95 100 105 110 115 117.2	95 100 105 110 115 117.2 119.5					
		117.2'-119.5' Mod soft to mod hard same rx unit as describ'd @29'-50.5', white to orange (due to limonite weather'g), perv argillic alter'n NOTE: @ 119.5' is the oxidation/reduced zone 119.5'-147' (continued)			@117.2' fx w/50°∠ to C.A. & contact between argilliz'd & non-argilliz'd rx unit & also @ 119.5' w/same ∠	@117.2'-119.5' unit is perv argilliz'd @ 119.5'-147' unit is perv propylized	117.2 119.5	119.5 125 ↓					

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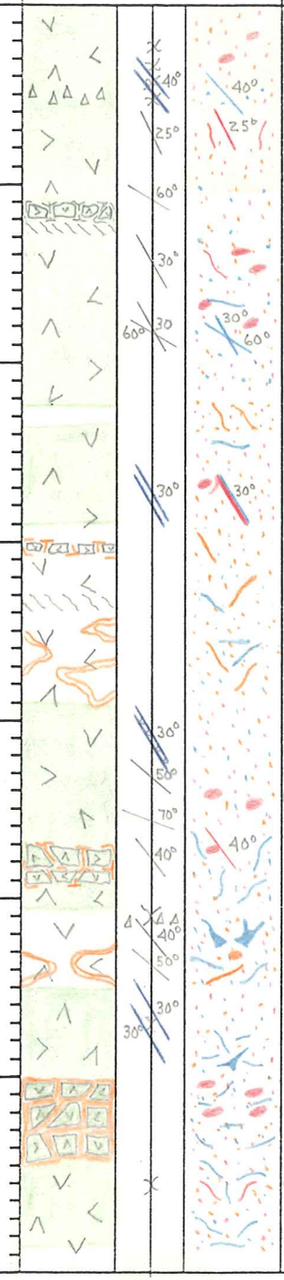
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		119.5'-147' Mod to mod hard same rx unit as described @29'-50.5', lt green due to perv propylitic alter'n @119.5'-122.5' volcanic bx text healed w/clay & wk hematite matrix	120			@119.5'-147' perv propylitic alter'n w/finely diss & "blebs" of py throughout rx; minor diss hematite also throughout rx unit	119.5	125					
			130	60°	@129.5' fx w/60°∠ to C.A.	@121' ½" wide diss py "blebs" @124.6' ¾" wide diss py "bleb" @126' ¾" wide diss py "bleb" @127.5' 1" wide diss py "bleb @132.5' ½" wide diss py "bleb"	125	130					
		@133'-145' mislatch by drillers & resulted in very poor recovery (25%) & broken rx rubble					130	135					
			140				135	140					
		@145'-147' volcanic bx text healed w/clay & wk hematite matrix @147' contact is due to alteration change, not a rx change or fx'g					140	145					
							145	147					
		147'-156.2' Soft in hardness & same rx unit as described @29'-50.5', white w/wk lt yellow due to wk limonite perv Fe-stain'g locally & perv argilliz'd, entire unit is w/in a major flt or shear zn but entire unit consists of broken fragments of volcanic bx text. heal'd w/clay matrix & wk limonite Fe-st'g w/in matrix @147'-149'	150	70° 50° 40° 40°	@148' fx w/70°∠ to C.A. w/yellow-grn clay surface & slicks, possibly a shear zn @149' fx w/50°∠ to C.A. w/lime grn clay surface & slicks @150'-156.2' w/in major flt or shear zn w/broken rubble zn w/mod clay gouge	@147'-156.2' rx is perv argilliz'd w/in major flt zn, ≈½% diss & stringers & blebs along broken fx surfaces & w/in rx fragments of py, wk diss hematite also, cannot determine flt contact ∠s	147	150					
							150	155					
		156.2'-181' Mod to mod hard to hard & same rx unit as described @29'-50.5', med to lt grn in color due to perv propylitization, phenos of plagioclase or sanadine replaced by calcite & calcite stringers & blebs are recognized @156'-163.5' volcanic bx text healed w/clay & hematite matrix					155	156.2					
			160			@156.2'-181' rx is perv propylitiz'd w/alter'n; diss, stringers & blebs of py & diss & stringers of hematite @156.7' 1" wide bleb of py w/in clast @159' several ½"-1" py blebs @159.5'-159.7' 1½" wide calcite bleb or fill'g between bx clasts	156.2	160					
							160	165					
		@167'-170' volcanic bx text healed w/clay, hematite, & py matrix				@160' to 177' plagioclase phenos replac'd by calcite @160'-170' numerous ¼"-1" wide diss py blebs & stringer ≈ 1%	165	170					
			170	30° 20°		@170.5 fx w/30°∠ to C.A w/hem along fx & vert. (0°∠ to C.A.) stringers of hem @170.5'-173.5'	170	175					
				60° 50°	@177.5'-178' 3 fxs/ft w/50°∠-60°∠ to C.A. @179'-181' broken rubble zn	@177.5'-181' diss, blebs & stringers of py & hematite w/in fx'd & broken rx	175	180					
		181'-200' Mod to mod soft & same rx unit as described @29'-50.5', med to lt grn to white locally in color due to perv propylitizat'n & slight overprint'g of argillization, plagioclase or sanadine phenos replac'd by grn clay or chlorite, rx fx'd & broken	180	50° 50° 70° 10°	@181.3' fx w/50°∠ to C.A. w/wk clay fill'g @182'-186' 1.5 fxs/ft w/60°-50°∠-60°∠ to C.A., 20% 10°∠ to C.A. & 20% 70°∠ to C.A. @186'-186.5' broken rubble zn		180	181					
						@181'-200' rx is perv propylitically alter'd w/overprint'g of argillic alter'n w/ ½"-1" oval blebs of finely diss py & diss py, wk diss hematite	181	185					
			190	60° 30°	@187'-188.1' broken rubble zn w/wk-mod clay gouge @188.1'-192' 2.5/fxs/ft w/75% 50°∠ to 60°∠ to C.A. & 25% 30°∠-40°∠ to C.A.		185	190					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		200'-212.2' Mod hard to hard & same rx unit as described @ 29'-50.5', med grn-lt grn in color & perv propylitization, phenos of plagioclase or sanadine replac'd by calcite + grn clay or chlorite ± diss py @201'-201.5' "crackle" bx text. heal'd w/lt grn clay stkwk @201.5'-202' flow laminated w/40°∠ to C.A.	190 200		@192'-194.5' broken rubble zn @194.5'-195.5' shear zn w/40°∠ to C.A.? w/calcite ± siderite ($FeCaCO_3$) vns & clay gouge heal'g shear zn, bx'd @197' fx w/25°∠ to C.A. lined w/py & chlorite & slicks @200'-212.2' 0.33 fx/ft w/75% 60°∠ to 70°∠ to C.A. & 25% 30°∠ to C.A. @208' fx w/30°∠ to C.A. & fx w/60°∠ to C.A. @217.5'-218' shear zn w/30°∠ to C.A. w/broken rubble zn & py stringers w/black carbonaceous coat'gs along fxs & argilliz'd, + $CaCO_3$ @231'-231.5' shear or flt zn w/30°∠ to C.A. w/flt bx & heal'd w/clay gouge @231.5'-239' rx fx'd w/1.8 fxs/ft w/50% 50°∠-60°∠ to C.A., 25% 70°∠ to C.A. & 25% 40°∠ to C.A. @237' fx w/40°∠ to C.A. lined w/diss py & carbonaceous slicks @240.5'-241.2' rx str broken, rx mod fx'd w/1.5 fxs/ft w/50% 40°∠ to C.A. & 50% 50°∠-60°∠ to C.A. @246'-248' flt or shear zn w/30°∠ to C.A. heal'd w/clay gouge & wk calcite @256'-257' broken rubble zn	@197' thin py stringers cutt'g rx @200'-212.2' rx is perv propylitically alter'd w/diss, vns, & stringers of calcite; diss, blebs, & stringers of py @208' ore & calcite vns heal'g fxs, 1" wide $CaCO_3$ vn w/30°∠ to C.A. & ¼" wide $CaCO_3$ vn w/60°∠ to C.A. @212.2'-213.5' abdt diss & stringers of hematite, wk diss py @213.5'-219' perv propylitic alter'n w/finely diss & "blebs" of py; wk diss hematite also throughout rx unit; calcite vnlts also @219'-229 rx fairly unalter'd w/ mod hematite vns & "Liesegang band'g" locally, vnlts of $CaCO_3$ & plag phenos replac'd by $CaCO_3$ @229'-240.5' rx is perv propylitically alter'd w/calcite vnlts & replac'g plag phenos; diss & vnlts of hematite; diss py & finely diss py "blebs" @240.5'-243' rx bx'd & heal'd w/ coarse calcite vns & bx filling — coarse $CaCO_3$ @240.5'-245' hematite heal'g fxs & has "Liesegang" band'g & hem blebs" @245'-259.5' rx is perv propylitically alter'd w/calcite vns, vnlts & replac'g plag phenos; diss hematite & matrix heal'g bx; diss & finely diss py "blebs" & stringers	190 195 200 205 210 212.2 213.5 219 220 225 229 230 235 240.5 245 250 255 259.5	195 200 205 210 212.2 213.5 219 220 225 229 230 235 240.5 245 250 255 259.5 264					
		212.2'-213.5' Hard & same rx unit as describ'd @ 29'-50.5', dk grey in color & plag phenos replac'd by calcate, rx "unalter'd"											
		213.5'-219' Mod soft to hard & same rx unit as describ'd @ 29'-50.5', med grn-lt grn in color & perv propylitization, phenos of plagioclase or sanadine replac'd by calcite + grn clay or chlorite ± diss py											
		219'-229' Hard & same rx unit describ'd @ 29'-50.5', dk grey in color (same as unit @ 212.2'-213.5'), rx fairly "unalter'd" @223'-224' flow laminated w/50°∠ to C.A. @220'-220.2' "crackle" bx text. heal'd w/hematite stockwork											
		229'-240.5' Mod to mod hard & same rx unit as describ'd @ 29'-50.5', med grn-lt grn in color & perv propylitiz'd; same as unit described @ 213.5'-219'											
		@237'-239' "crackle" bx text. heal'd w/hematite & grn clay or chlorite stockwork											
		240.5'-245' Mod to mod hard & same rx unit as describ'd @ 29'-50.5', dk grey in color & same unit @ 212.2'-213.5', fairly "unalter'd"											
		245'-259.5' Mod to mod hard & same rx unit as describ'd @ 29'-50.5', med grn-lt grn in color & perv propylitiz'd; same as unit describ'd @ 213.5'-219'											
		@250.5'-255' volcanic bx text. heal'd w/wk hematite & grn clay or chlorite											
		259.5'-266' Mod hard & same rx unit as described @ 29'-50.5',	260			@259.5'-266' rx fairly unater'd	259.5	264					

(continued) (continued)

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		(continued) dk grey in color & same unit @ 212.2'-213.5', fairly "unalter'd" @262'-263' volcanic bx text. heal'd w/hematite matrix	260		@261' fx w/35°∠ to C.A. lined w/ hematite	(continued) w/mod hematite vns & "Liesegang" banding locally, vnlts of $CaCO_3$ & plag phenos replac'd by $CaCO_3$	259.5	264					
		266'-274' Mod to mod hard & same rx unit as describ'd @29'-50.5', perv propylitiz'd, same as unit describ'd @ 213.5'-219' @267.5'-268.5 volcanic bx text heal'd w/hem. & grn clay or chlorite matrix	270		@271'-272' broken rubble zn	@266'-274' perv propylitic alter'n w/diss py & hematite	264 266	266 270					
		274'-275.5' Mod soft to soft & same rx unit as describ'd @29'-50.5', perv argilliz'd & bleached 275.5'-284.5 Mod to mod hard & same rx unit as describ'd @29'-50.5', perv propylitiz'd, same as unit describ'd @ 213.5'-219' @275.5'-276.5' is "crackle" bx text heal'd w/hematite @278'-280' is volcanic bx text. heal'd w/ hematite & grn clay or chlorite matrix	280		@275'-275' flt or shear zn w/50° to C.A. consist'g of clay gouge & py @283' fx w/50°∠ to C.A. @283'-284.5' rx is mod broken @284.5'-285.5' broken rubble zn	@274'-275.5' perv argilliz'd, diss & stringers of py @275.5'-284.5' rx is perv propylitiz'd w/diss & "blebs" of py	270 274 275.5	274 275.5 280					
		284.5'-289' Soft to mod soft to mod & same rx unit as describ'd @29'-50.5', perv argilliz'd & bleach'd 289'-320' Mod to mod hard & same rx unit as described @29'-50.5', perv propylitiz'd, same as unit describ'd @213.5'-219' w/ plagioclase or sanadine phenos replac'd by grn clay or chlorite @289'-291.5' is volcanic bx text heal'd w/hematite & grn clay or chlorite matrix @296.5'-297.5' is volcanic bx text heal'd w/hematite & grn clay or chlorite matrix @300'-302.5' is volcanic bx text heal'd w/hematite & grn clay or chlorite matrix	290		@286.5' fx w/45°∠ to C.A. w/clay @288'-289' flt or shear zn of clay gouge & diss py, no flt contacts recogniz'd @291'-292' broken rubble zn @293'-294.5' flt or shear zn of broken rx rubble w/abdt clay gouge & black carbonaceous clay gouge @296' is fx w/30°∠ to C.A. @299.5' fx w/60°∠ to C.A. @301' fx w/50°∠ to C.A.	@284.5'-289' perv argilliz'd, diss, stringers & "blebs" of py @289'-320' perv propylitiz'd w/ diss & "blebs" of py @293' is 1" wide calcite vn w/30° to C.A. w/in flt or shear zn - possibly flt contact indicator being contacts not recogniz'd @301'-306' wk calcite vnlts	280 284.5 289 293	284.5 289 293 294.5					
		@307.8'-311' is "crackle" bx text heal'd w/hematite stockwork @313'-315' is volcanic bx text heal'd w/brn-white clay ± hematite ± calcite matrix	300 310		@306' fx w/40°∠ to C.A. @306'-308.5' rx mod broken @314'-315.3' rx mod broken	@308'-311' py stringers ± $CaCO_3$ w/in stkwk of "crackle" bx @313'-315' wk diss & stringers of py w/in matrix of volcanic bx	294.5 300 305 310	300 305 310 315					
		320'-323.5' Soft to mod soft to mod & same rx unit as described @29'-50.5', perv argilliz'd & bleach'd @322.5'-323' is volcanic bx text heal'd w/ white qtz, clay & $CaCO_3$ matrix 323'-330' Mod to mod hard & same rx unit as describ'd @29'-50.5', perv propylitiz'd, same unit describ'd @213.5'-219' w/ plag. phenos replac'd by grn clay or chlorite @329'-329.2' is "crackle" bx text heal'd w/ hematite & lt brn clay stkwk	320 330		@315.5' & 317' fxs w/40°∠ to C.A. w/grn clay, calcite & ± chl along fxs @319.7' fxs 20° to C.A. ± diss py & white clay along fxs @320'-323' fxd w/2.3 fxs/ft. w/75% 50°∠-60°∠ to C.A. & 25% 20°∠ to C.A. @323'-323.5' broken rubble zn @323.5'-325' str fx'd w/4.7 fxs/ft w/40% 60°∠-70°∠ to C.A. w/20% 40°∠ to C.A. & 40% 20°∠-30°∠ to C.A. @325.5' fx w/40°∠ filled w/thin vnlt of py	@320'-323.5' abdt. diss & blebs of py, vnlts & vns of calcite & clay &/or chlorite ± py stringers ± hematite (@322.5'-323' volc. bx heal'd w/qtz, clay & $CaCO_3$-silicif'd) @323'-330' perv propylitiz'd w/ diss & blebs & stringers of py	320 323.5 325	323.5 325 330					

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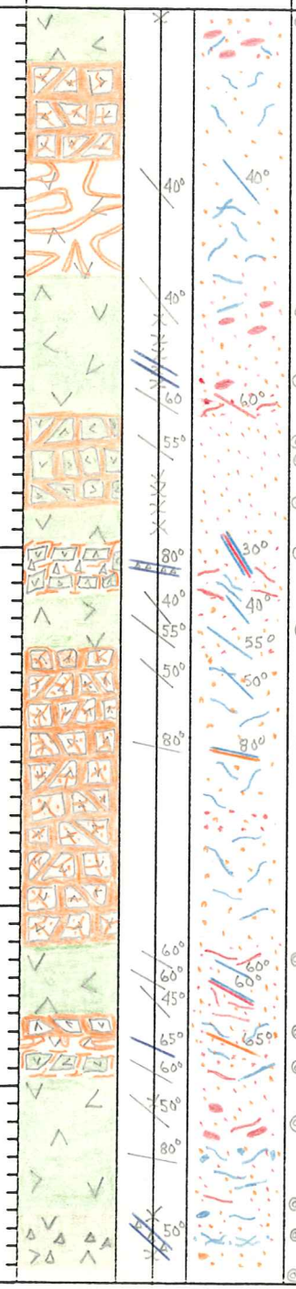
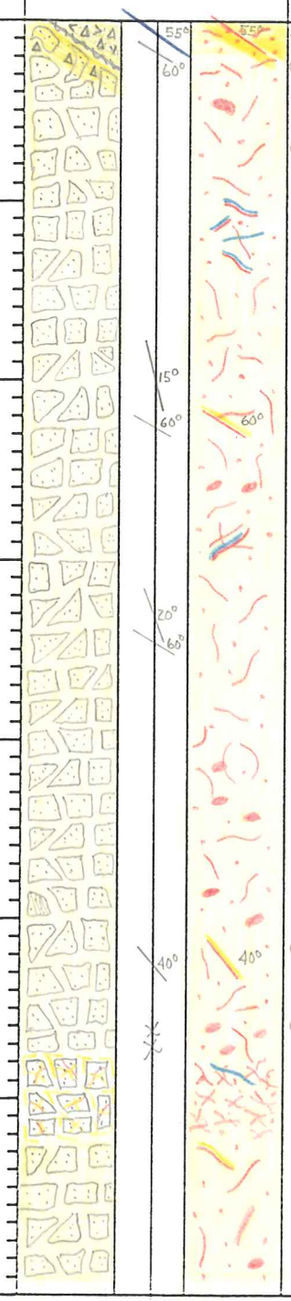
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		330'-352' Soft to mod soft to mod & same rx unit as described @29'-50.5' perv argilliz'd & bleach'd @340'-340.5' is volcanic bx text heal'd w/ lt brn clay ± hematite matrix @344.2'-347.5' is volcanic bx text heal'd w/ lt grey matrix 352'-362' Mod to mod hard lt to med grn & same rx unit as describ'd @ 29'-50.5' perv. propylitiz'd, same unit described @ 213.5'-219' @359.9'-361' is volcanic bx text heal'd w/ lt grn clay or chlorite or hematite matrix 362'-365.5' Mod hard to hard dk brn to dk grey & same rx unit as describ'd @29'-50.5', perv hematitically alter'd & abdt "Liesegang band'g"; @364'-365.5' is volcanic bx text heal'd w/ hem. matrix 365.5'-375' Mod to mod hard lt grn-med grn & same rx unit as describ'd @ 29'-50.5' perv. propylitiz'd, same unit describ'd @ 213.5'-219' @369'-370.2' is "crackle" bx text heal'd w/ hematite & lt brn clay stkwk 375'-382.5' Hard dk brn to dk grey & same rx unit as describ'd @ 29'-50.5', same as unit @ 362'-365.5', perv hematitically alter'd & abdt "Liesegang band'g" @380.5'-380.8' is "crackle" bx text heal'd w/ hematite stkwk 382.5'-386' Mod hard-hard lt grn & same unit as describ'd @29'-50.5', perv propylitiz'd, same unit describ'd @213.5'-219' 386'-391.7' Hard dk brn to dk grey & same unit as describ'd @ 29'-50.5', same unit @ 362'-365.5', perv hematitically alter'd & abdt. "Liesegang band'g" 391.7'-403' Mod to mod hard lt grn & same unit as describ'd @ 29'-50.5', perv propylitiz'd, same unit describ'd @ 213.5'-219' @399'-399.5' is volcanic bx text heal'd w/ dk grey clay & calcite matrix	330 340 350 360 370 380 390 400		@331' fx w/ 40° to C.A. w/ chl. fill'g @332.3'-333.3' broken rubble zn w/ clay gouge @334'-334.5' flt or shear zn, w/ 30° to C.A. w/ clay gouge & bx'd @336'-337.5' flt or tectonic bx clast to matrix support'd heal'd w/ blk carbonaceous &/or graphitic clay @337.5'-338' broken rubble zn, w/ clay & chl along fxs & @338.5'-339.5' @344'-344.2' flt or tectonic bx w/ 60° to C.A. w/ blk carbonaceous &/or graphitic clay matrix @356'-357' broken rubble zn @358'-359.8' broken rubble zn @362.4' is fx w/ 50° to C.A. lined w/ hematite & calcite @372'-373' broken rubble zn @378' is fx w/ 50° to C.A. lined w/ hematite & calcite @385' is fx w/ 30° to C.A. lined w/ $CaCO_3$ @389.5' is fx w/ 30° to C.A. lined w/ hem. & $CaCO_3$ @392.2'-392.5' shear or flt zn heal'd w/ clay gouge & diss py w/ 80° to C.A. @391.7'-400' rx str broken w/ fxs @ 2.7 fxs/ft w/ 60% 75°-80° to C.A, 30% 60°-70° to C.A. & 10% 30° to C.A. w/ lt-dk grn clay lin'g fxs & slicks locally	@330'-352' perv argilliz'd; diss, stringers & blebs of py @333.3'-336' abdt stringers, diss & blebs of py ≈ 2%-3% @338'-344' abdt stringers &/or stkwk & blebs & diss of py @342' ½" wide calcite vn cutting rx @349'-350' abdt. 1"-3" wide finely diss py blebs ≈ 5% of rx unit @352'-362' perv propylitiz'd w/ diss, stringers & blebs of py @355'-361' abdt 1"-2" wide finely diss py blebs ≈ 2%-3% of unit w/ stringers of py @361'-362' wk calcite vns & vnlts @362'-365.5' perv hematitic alter'n w/ "Liesegang band'g" & plag phenos replac'd by $CaCO_3$ & wk $CaCO_3$ vnlts, tr diss py @365.5'-375 perv propylitiz'd w/ diss py locally @365.5'-366.5' wk calcite vnlts & vns cutt'g rx @374' is ½" wide clay-py vn fill'g fx w/ 55° to C.A. @375'-382.5' perv hematitic alter'n w/ "Liesegang band'g", plag phenos replac'd by $CaCO_3$ & wk $CaCO_3$ vnlts locally @382.5'-386' perv propylitiz'd w/ diss & blebs of py 1"-2" wide @386'-391.7' perv. hematitic alter'n, plag phenos replac'd by $CaCO_3$ @391.7'-403' perv propylitiz'd w/ diss & ½"-2" wide blebs of py @391.7'-397.5' finely diss py blebs @392'-403' wk calcite vnlts & vns cutting rx @396.5' broken fx w/ py stringer lining fx

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
330	335					
335	336					
336	337.5					
337.5	340					
340	345					
345	350					
350	352					
352	355					
355	360					
360	362					
362	365.5					
365.5	370					
370	375					
375	380					
380	382.5					
382.5	386					
386	390					
390	391.7					
391.7	395					
395	400					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		403'-415' Mod hard to hard dk brn-dk grey & same unit as describ'd @ 29'-50.5', same unit @ 362-365.5', perv hematitically alter'd & obdt "Liesegang band'g" locally @ 403'-408.5' clast supported volcanic bx text. heal'd w/ hematite matrix 415'-435.5' Mod to mod hard lt grn & same unit as describ'd @ 29'-50.5', perv propylitiz'd, same unit describ'd @ 213.5'-219' @ 422.5'-427.5' is volcanic bx text. heal'd w/ lt grn-lt brn clay or chlorite or hematite clast supported matrix @ 430'-432.5' is "crackle" bx text. heal'd w/ hematite & lt brn clay stkwk 435.5'-452' Mod to mod hard dk brn-dk grey & same unit as describ'd @ 29'-50.5', same unit @ 362'-365.5', perv hematitically alter'd w/ clast support'd lapalli-block size clasts w/in a hematite matrix w/ hematite stkwk cutting clasts of this volcanic bx text. 452'-456' Mod to mod hard lt grn & same unit as describ'd @ 29'-50.5', perv propylitiz'd, same unit describ'd @ 213.5'-219' 456'-458' Mod to mod hard dk brn-dk grey & same unit as describ'd @ 29'-50.5'; same unit @ 435.5'-452', volcanic bx text. 458'-467' Soft to mod soft to mod lt grn & same unit as describ'd @ 29'-50.5'; perv propylitiz'd, same unit describ'd @ 213.5'-219' @ 458'-459' is "crackle" bx text heal'd w/ hematite & lt brn clay stkwk 467'-470' Soft to mod soft grn-grey & same unit as describ'd @ 29'-50.5'; perv propylitiz'd & w/in hanging wall of the South Ridge Flt, rx broken & flt bx heal'd w/ grn clay gouge matrix	400 410 420 430 440 450 460 470		@ 400'-401' broken rubble zn @ 417'-419.5' rx str broken & broken rubble zn @ 419.5'-420.5' shear or flt zn str broken & w/ clay gouge, no contacts recognizd @ 420.5'-421' broken rubble zn @ 421.8' fx w/ 60° ∠ to C.A. lined w/ clay & py stringer @ 426.4'-429.5' broken rubble zn @ 430.8'-431.3' flt or shear zn w/ 80° ∠ to C.A. heal'd w/ tectonic bx & clay gouge + diss py @ 435' is fx w/ 55° ∠ to C.A. w/ calcite filling @ 437' is fx w/ 50° ∠ to C.A. w/ ¼" wide calcite vn heal'g fx @ 441' is 1½" wide fx w/ 80° ∠ to C.A. heal'd w/ calcite-hem. vn @ 453' fx w/ 60° ∠ to C.A. heal'd w/ ¼" wide calcite vn @ 457.8'-458 shear or flt zn w/ 65° ∠ to C.A. heal'd w/ hematite @ 458'-467' fx'd w/ 1.0 fxs/ft w/ 50% 60° ∠ - 70° ∠ to C.A, 30% 50° ∠ to C.A. & 20% 80° ∠ to C.A. @ 461'-461.3' broken rubble zn @ 467'-468' broken rubble zn @ 468'-469' flt bx w/ 50° ∠ ? to C.A heal'd w/ clay gouge & calcite (hang'g wall of South Ridge Flt) @ 469'-470' broken rubble zn	@ 403'-415' perv hematitically alter'd, plag phenos replac'd by $CaCO_3$, calcite vnlts locally @ 415'-435.5' perv propylitiz'd w/ diss, stringers & blebs of py, wk calcite vns & vnlts locally @ 430.2' is ½"-1" wide calcite-py vn cutting rx @ 30° ∠ to C.A. @ 434' is ½" wide calcite vn cutting rx w/ 40° ∠ to C.A @ 435.5'-452' perv hematically alter'd volcanic bx w/ hematite matrix, & hematite stkwk w/in clasts, wk-mod calcite vnlts & vns, diss py locally @ 452'-456' perv propylitiz'd w/ diss & stringers of py, wk calcite vnlts @ 454' fx w/ 60° ∠ to C.A. heal'd w/ stringers of py & calcite along fx @ 456'-458' perv hematitically alter'd volcanic bx locally w/ hem matrix & "Liesegang" bands, py @ 458'-467' perv propylitiz'd w/ diss & stringers & blebs of py, wk calcite vnlts from 458'-467' @ 467'-470' perv propylitiz'd due to being w/in hang'g wall of the South Ridge Flt, hematite & calcite fill'gs

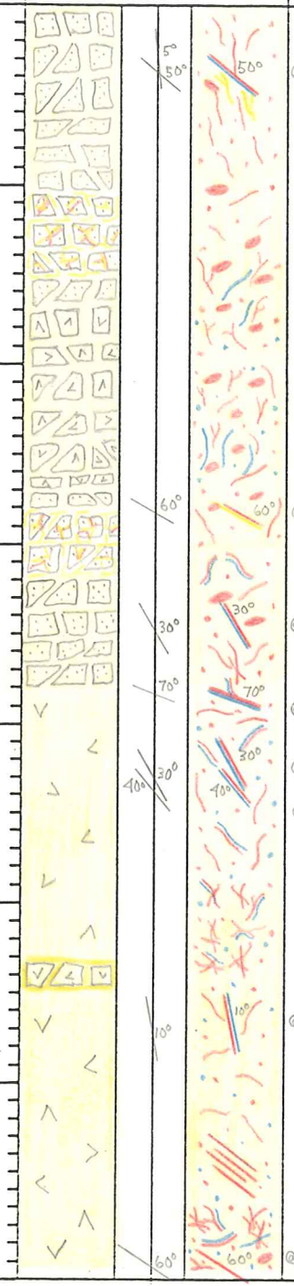
ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
400	403					
403	405					
405	410					
410	415					
415	420					
420	425					
425	430					
430	435.5					
435.5	440					
440	445					
445	450					
450	452					
452	456					
456	458					
458	460					
460	465					
465	467					
467	470					

%REC	RQD	LITHOLOGY	STRUCTURE	ALTERATION AND MINERALIZATION
		470'-471' Hard, same unit as describ'd @ 29'-50.5'; flt bx & perv silicif'd 471'-556.5' Mod hard to hard, white to buff aphanitic to fine-grained monolithic (non-porphyritic) andesitic? to latitic? volcanic flow? or ash flow tuff?, sugary texture w/microxtalline diss of py throughout; majority of text. is a volcanic bx w/ monolithic bx clasts rang'g in size from 95% lapalli & 5% blocks w/minor portion of clasts show'g flow laminations, matrix to clast supported autobreciation w/clasts sub-round'd to sub-angular to angular, matrix is composed of silica & minor lt grey clay (silicification has overprinted all other types of alter'n); local zns show a "crackle" bx type of text w/a thin hairline stockwork of clay & silica; all textures show "ghosting" because of perv silicification alter'n; possibly Dozer Tuff? @ 471'-471.5' is perv silicified flt or tectonic bx zn of the footwall of the South Ridge Fault, the silica alter'n has silicif'd all bx clasts & dk grey clay gouge matrix @511'-513' "ghosting" of hematitically alter'd volcanic bx clasts by relic "Liesegang rings"; now perv silicif'd alter'n has almost erased the "Liesegang rings" @528'-532' is "crackle" bx text heal'd w/silica-clay-py stkwk	flt bx @470'-471', hang'g wall of South Ridge Fault @471' South Ridge Fault w/55°∠ to C.A. w/lateral to oblique slicks to C.A. & lined w/finely diss py & chlorite "flt contact between units" @471.5'-473' fx'd w/2 fxs/ft w/60°∠ to C.A. @492.5' is fx w/60°∠ to C.A. lined w/xtaline qtz & py @502'-507' fx'd w/1 fx/ft w/80% w/10°∠-20°∠ to C.A. & 20% w/ 60°∠ to C.A. @522' fx w/40°∠ to C.A. lined w/ xtalline qtz & py @526'-528' wk-mod broken rx rubble zn	@470'-471' perv silicif'd flt bx including dk grey clay gouge matrix of flt bx w/diss py & bladed marcasite or py after marcasite (tectonic bx) @471'-471.5' perv silicif'd flt bx includ'g dk grey clay gouge matrix of footwall flt bx w/diss py & marcasite? @471.5'-556.5' rx unit is perv silicified & is overprinting of all original textures & earlier alterations, ≈½%-1% diss, stringers & blebs of py, some late calcite ± py stringers & diss cutting rx locally



ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
470	471					
471	471.5					
471.5	475					
475	480					
480	485					
485	490					
490	495					
495	500					
500	505					
505	510					
510	515					
515	520					
520	525					
525	530					
530	535					
535	540					

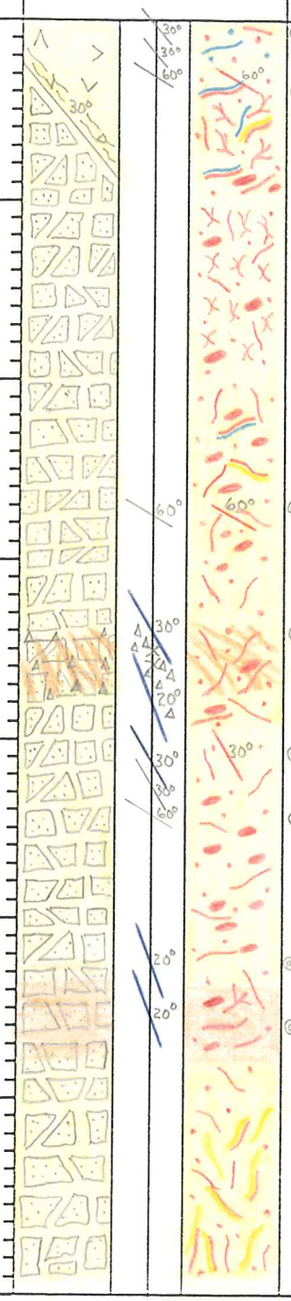
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		same as above @550.5'-550' is "crackle" bx text. heal'd w/clay-silica ± py stkwk 556.5'-567.5' Mod hard to hard, white to lt grn to lt grey, mod to intensely silicif'd, fine-grained to aphanitic slightly porphyritic rhyolitic volcanic bx text., rx contains ≈1% anhedral qtz phenos & 10% subhedral to euhedral plagioclase or sanadine phenos replac'd by calcite ± diss py, possibly latitic in composition-difficult to tell, matrix to clast supported volcanic bx &/or auto-brecciation, slight "ghosting" to texture, no definite contacts observed 567.5'-578' same rx unit as describ'd @ 471'-556.5' @568.5'-571.5' is "crackle" bx text. heal'd w/ silica-clay-py stkwk 578'-613.2' Mod hard to hard, white to lt grn to lt grey, mod to intensely silicified, fine-grained to aphanitic slightly porphyritic rhyolitic? or latitic? volcanic flow? or ash flow tuff?, glassy to sugary text. groundmass w/10%-15% subhedral to euhedral 1mm-6mm phenocrysts of plagioclase or sanadine replaced by white clay or calcite or calcite ± diss py, 3%-5% subhedral to euhedral mafic phenocrysts (biotite? or hornblende?) up to 1mm replaced by py, & up to 1% anhedral 1mm qtz phenocrysts, slight to mod "ghosting" of original text. but rx unit is monolithic, no definite contact observed @593.5'-594.5' is volcanic bx text. heal'd w/ lt brn silica-clay matrix	540 550 560 570 580 590 600 610		@543.5' fx w/50°∠ to C.A. lined w/calcite & py @568' ½" wide vuggy xtalline qtz vn lined w/py @575.2' ¼" wide vn lined w/ calcite & py stringer w/30°∠ to C.A. @578.5' is ½" wide calcite vn w/70°∠ to C.A. lined w/py stringers & diss chalcopyrite @583' is 30°∠ to C.A. fx filled w/½" wide calcite-py vn @584' is 40°∠ to C.A. fx filled w/½" wide chlorite-calcite-py vn @597.5' is 10°∠ to C.A. fx filled w/½" wide calcite-clay-py vn @610' is fx w/60°∠ to C.A. w/ poly-metallic fx filling	rx unit perv silicified w/ diss, stringers & blebs of py @556.5'-567.5' rx unit perv silicif'd @556.5'-565' py is finely diss & takes a "dendritic" pattern along w/stringers @567.5'-578' rx unit is perv silicif'd, same alteration & mineralization as describ'd @ 471.5'-556.5 @578'-613.2' rx unit is perv silicified, plagioclase or sanadine x'tals replac'd by clay ± calcit ± py, py occurs as stringers, fx fillings & diss @588.5'-594.5' is zn of py-clay stockwork ± calcite vns & vnlts w/in py stkwork @604.2'-605.7' are parallel fx fillings of py + clay w/60°∠ to C.A. @607.7'-613.2' is zn of py-clay stkwk ± calcite vns & vnlts w/in py stkwk @610' is fx w/60°∠ to C.A. lined w/ chalcopyrite-py-chlorite

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
540	545					
545	550					
550	555					
555	556.5					
556.5	560					
560	565					
565	567.5					
567.5	570					
570	575					
575	578					
578	580					
580	585					
585	590					
590	595					
595	600					
600	605					
605	610					

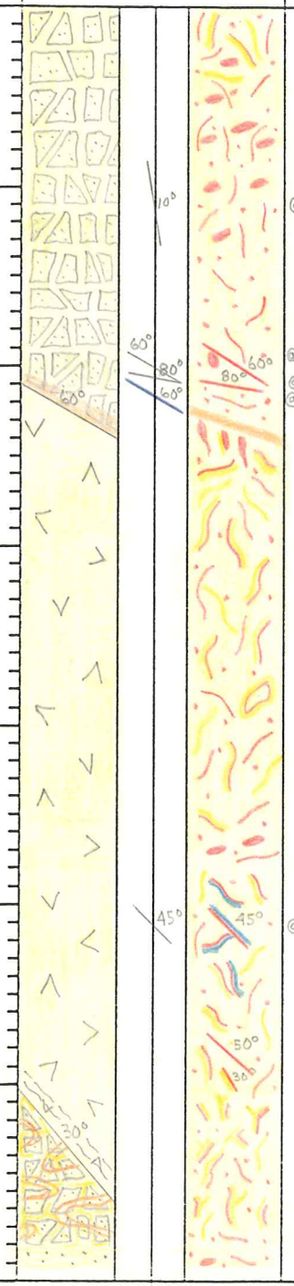
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@613.2' lower contact of rx unit is 30°∠ to C.A. 613.2'-652' Same rx unit as described @ 471'-556.5', w/30°∠ to C.A. contact w/rx unit above; mod hard to hard, white to buff, aphanitic to f.g. monolithic, (non-porphyritic) andesitic? to latitic? volcanic flow? or ash flow tuff?, majority of text is a volcanic bx w/monolithic bx clasts as describ'd @ 471'-556.5', rx perv silicif'd & "ghost'g" of text. @630'-633.7' is relic flow lamination? text. w/20°∠ to C.A. @652' is 60°∠ to C.A. contact between rx units	610 620 630 640 650	30° 30° 20° 60° 60°	@612.9' is fx w/30°∠ to C.A. fill'd w/½" wide qtz-py vn @652' possible shear or flt, contact between units w/ 60°∠ to C.A. & argilliz'd by clay gouge	@612.9' is fx filling ½" wide qtz-py vn w/30°∠ to C.A. @613.2'-652' rx unit is perv silicified & is overprint'g of all original textures & earlier alterations, @613.2'-652' is zn of py-clay stkwk ± calcite ± silica vns & vnlts w/in py stkwk @633.7'-634.1' is drusy qtz heal'g between bx clasts w/ open vugs w/xtalline qtz & minor py & chalcopyrite @634.1'-652' thin qtz vnlts ± py & thin calcite vnlts ± py creat'g py stkwk occurences w/in unit; py vnlts creat'g stkwk also in this interval @351' is drusy qtz-py vn 1" wide w/60°∠ to C.A. cutt'g rx @648'-652' is "beige" color'd alter'n flood'g matrix & clasts, very hard & perv; could this possibly be potassic alter'n?? over silicificat'n
		652'-671.2' Same rx unit as describ'd @ 578'-613.2', mod hard to hard, white to lt grn to cream color'd, intensely silicif'd, fine-grain'd to aphanitic, monolithic, slightly porphyritic rhyolitic?, latitic? or andesitic? volcanic flow? or ash flow tuff? @653.3'-654 is "crackle" bx text. heal'd w/silica-clay ± py stkwk @671.2' is 30°∠ to C.A. contact between rx units	660 670	60° 30° 30°	@652' possible shear or flt, contact between units w/ 60°∠ to C.A. & argilliz'd by clay gouge @665' & 667' fxs w/30°∠ to C.A.	@652'-671.2' rx unit is perv silicif'd & is overprint'g of all original alter'ns (probably once was propylitic?), @652'-652.3' unit is argilliz'd @ shear or flt contact w/unit below py vnlts, stringers & diss throughout unit ± calcite ± silica @662.5'-664.5' series of parallel py ± calcite vnlts & vns w/50°∠ to C.A.
		671.2'-676.7' Same rx unit as describ'd @ 471'-556.5', w/30°∠ to C.A. contact w/rx unit above, rx unit has volcanic bx text & perv silicif'd, monolithic, f.g. (non-porphyritic) latitic? to andesitic? volcanic flow? or ash flow tuff? @676.7' is 60°∠ to C.A. contact between rx units 676.7'-682.3 Same rx unit as describ'd @ 578'-613.2', mod to mod hard to hard, white to lt grn to cream, str silicif'd, f.g. to aphanitic, monolithic, slightly porphyritic rhyolitic?, latitic? or andesitic? volcanic flow? or ash flow tuff?	680	30° 30° 60° 60° 70° 70°	@671.2' possible shear or flt contact between units w/30°∠ to C.A. w/slicks along contact & heal'd w/calcite-py vn @676' 30°∠ to C.A. fx lined w/py & clay @676.7' possible shear or flt contact between units w/60°∠ to C.A. w/wk clay gouge along contact	@671.2'-676.7' rx unit is perv silicif'd & is overprint'g of all original alterat'ns; diss, stringers, & vnlts ± calcite throughout unit @676.7'-682.3 rx unit str-perv silicif'd & overprint'g original alterat'ns; wk diss & stringers of py

ANALYTICAL DATA

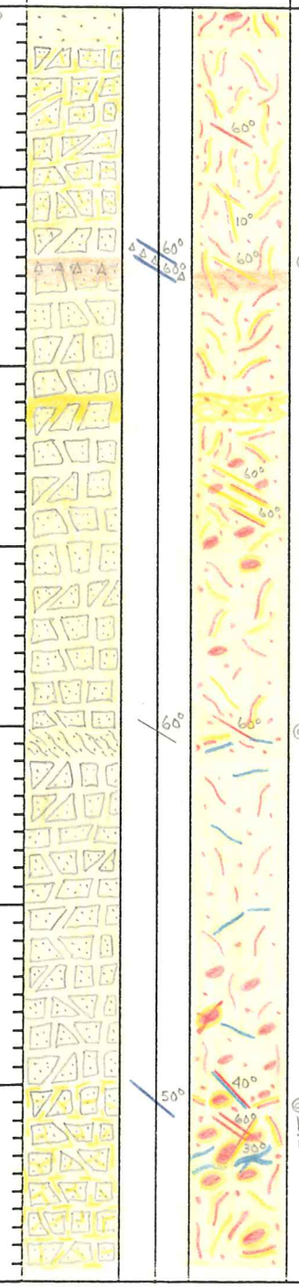
FROM	TO	W	Au	Ag	Au2	Ag2
610	613.2					
613.2	615					
615	620					
620	625					
625	630					
630	635					
635	640					
640	645					
645	650					
650	652					
652	655					
655	660					
660	665					
665	670					
670	671.2					
671.2	675					
675	676.7					
676.7	680					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@681.8'-682.3' is flow lamination text. w/30°∠ to C.A. @682.3' is 30°∠ to C.A. contact between rx units 682.3'-771' Same rx unit as described @ 471'-556.5', w/ 30°∠ to C.A. contact w/ rx unit above; mod hard to hard, white to buff, aphanitic to f.g., monolithic, (non-porphyritic) andesitic? to latitic? volcanic flow? or ash flow tuff?, volcanic bx text w/ monolithic bx clasts, rx perv silicified @714'-718' flt or broken shear zn w/ white clay gouge heal'g perv silicified flt bx fragments same as rx describ'd above; frags did not argillize, only clay gouge matrix was argilliz'd	680 690 700 710 720 730 740 750		@680' & 681' fx's w/30°∠ to C.A. @682.3' sharp contact between units w/30°∠ to C.A., clean contact @683' fx w/60°∠ to C.A. w/clay+ py along fx surface @707' is fx w/60°∠ to C.A. lined w/clay-py-black graphite? surface w/slicks @714'-718' is flt or shear zn w/30°∠ to C.A. hang'g wall & 20°∠ to C.A. ftwall w/broken rx & rubble w/in flt heal'd along tectonic bx frags by white clay gouge @721.5' is 1" wide shear zn w/ 30°∠ to C.A. heal'd w/ clay gouge & diss py @721.5'-726' fx'd w/1.0fx/ft w/ 80% 30°∠ to C.A. & 20% 60°∠ to C.A @733.5' is clay-chlorite filled fx w/20°∠ to C.A., possible flt or shear zn @736' is clay filled fx w/20°∠ to C.A., possible flt or shear zn	@682.3'-771' rx unit is perv silicif'd & is overprint'g of all original alterat'ns, @682.3'-700' is unit of py-clay stkwk ± calcite ± silica vns & vnlts w/in py stkwk & w/in bx matrix & bx clasts; diss, blebs & stringers of py throughout unit; $CaCO_3$ ± py vns & vnlts throughout unit @682.3'-688' py is finely diss & takes a "dendritic" pattern along stringers @714'-718' w/in flt or shear zn the rx has been bx'd & heal'd by argilliz'd clay gouge & bx frags still perv silicif'd; wk diss py w/in clay gouge @733.5'-738' rx unit is mod argilliz'd being between the shears @733.5' & 736' @741'-754' are abdt. vuggy drusy qtz vns & vnlts from ⅛"-1½" wide w/xtalline qtz lining vugs, but only wk diss py along vns & minor py stringers along vns

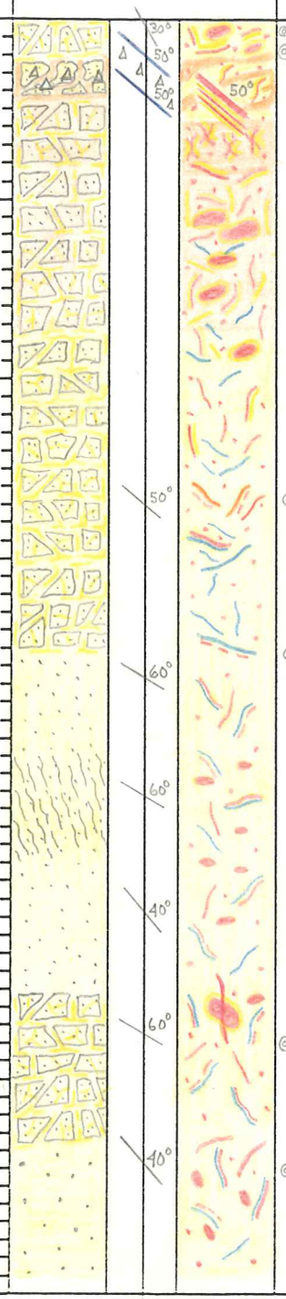
ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
680	682.3					
682.3	685					
685	690					
690	695					
695	700					
700	705					
705	710					
710	715					
715	720					
720	725					
725	730					
730	735					
735	740					
745	750					
750	755					

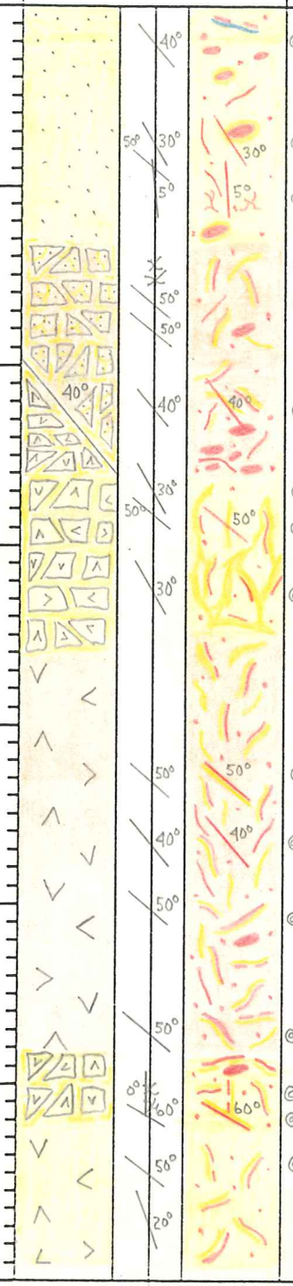
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@771' is 60°∠ to C.A. contact between rx units 771'-810.2' Same rx unit as described @ 578'-613.2', mod hard to hard, cream to lt grn in color, intensely silicified, fine-grained to aphanitic, monolithic, slightly porphyritic rhyolitic? to latitic? to andesitic? volcanic flow? or ash flow tuff?, contact is 60°∠ to C.A. w/unit above @ 771'; difference in this unit is that the plagioclase or sanadine phenos are replaced w/ clay alter'n only - no calcite replacement & clay replacements are white dickite? @809.7'-810.2' flow laminated w/40°∠ to C.A. @810.2' is 30°∠ to C.A. contact between rx units 810.2'-979.7' Same rx unit as described @ 471'-556.5' w/a 30°∠ to C.A. contact w/rx unit above; mod hard to hard, white to buff to lt grey, aphanitic to f.g., monolithic, (non-porphyritic) andesitic? to latitic? volcanic flow? or ash flow tuff?, unit shows "crackle" bx, volcanic bx & massive "flow" texture in sometimes long intervals, rx perv silicified majority of time. @810.2'-819' "crackle" bx text heal'd w/silica ± py ± clay stkwk @819'-822' massive volcanic "flow" text	750 760 770 780 790 800 810 820		@761' is fx filled w/clay along fx w/10°∠ to C.A. @770' fx lined w/py w/60°∠ to C.A. @770.5' fx fill'd w/py vn w/80°∠ to C.A. @771' sharp flt or shear contact between rx units w/60°∠ to C.A. hang'g wall rx unit perv. argilliz'd w/dk grn clay & py & chl., contact very similar to South Ridge Fault contact but w/ few to little slicks @801' fx w/45°∠ to C.A. lined w/ calcite-py vnlt	@741'-754' (continuation of abdt. vuggy drusy qtz vns & vnlts w/ wk py mineralizat'n w/in vns) @770.5'-771' is argilliz'd zn of dk grn clay gouge & rx clasts w/ vns & str diss py near contact indicates movement along contact py ≈ 3% of zn @771'-810.2' rx unit is perv silicified & is overprint'g of original propylitized alter'n?; abdt py ± silica vns & vnlts ≈ 1%-2%; locally, diss py throughout; silica vns & vnlts show vuggy drusy xtalline qtz w/ py stringers & vns w/in the qtz vns wall rx — qtz vn selvage — py vn @798'-810.2' occassional calcite-py vns & vnlts cutting rx along w/abdt. py ± silica vns & vnlts already describ'd but decreas'd number of py ± silica vns & vnlts @808.5' is vuggy drusy qtz vn ¼" wide w/50°∠ to C.A. w/ py, marcasite w/in silica vn & @810' silica vnlt w/py-marcasite w/30°∠ C.A. @810.2'-979.7' rx unit is perv silicified & is overprint'g of all original alterat'ns; abdt silica vnlts, vns & stkwk ± py throughout; vuggy, drusy qtz vns & flood'g locally; py occurs as diss blebs, stringers, vnlts ± silica throughout @810.2'-819' perv silica alter'n overprint'g original hematitic alter'n? & lt brn in color

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
750	755					
755	760					
760	765					
765	770.5					
770.5	771					
771	775					
775	780					
780	785					
785	790					
790	795					
795	800					
800	805					
805	810.2					
810.2	815					
815	820					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@822'-832' is "crackle" bx text. heal'd w/silica ± py ± clay stkwk @832'-860' is volcanic bx text. heal'd w/silica-clay-py matrix @860'-861.5' flow laminated w/fiamme text? locally w/50°∠ to C.A. @861.5'-880' is volcanic bx text. heal'd w/silica ± clay ± py ± calcite matrix @880'-892' is "crackle" bx text heal'd w/silica ± py ± calcite ± marcasite ± clay stkwk	820 830 840 850 860 870 880 890		@834'-835' is shear or wk flt zn w/60°∠ to C.A. perv argilliz'd & clay gouge heal'g "crackle" or tectonic bx @860' fx w/60°∠ to C.A. @ top of flow laminat'd text unit w/ wk py along fx @881' is shear zn w/50°∠ to C.A. lined w/calcite-py vnlt & chlorite-clay gouge	@825'-833' is zn of vuggy drusy qtz vns & vnlts w/wk py stringers & diss w/in qtz vns @827' vnlt of py w/wk chalcopyrite w/60°∠ to C.A. @832'-833' qtz-py-marcasite? vn w/10°∠ to C.A. @834' is 1" wide vuggy drusy qtz vn w/60°∠ to C.A. w/wk diss py @835'-846' is zn of vuggy drusy qtz vns & vnlts w/wk py stringers & diss w/in qtz vns & @841.8'-843' is zn that is volcanic bx text w/matrix vuggy drusy qtz around clasts & makes up ≈ 50% of rx w/wk diss py @846'-848' series of parallel qtz ± py vns & vnlts w/60°∠ to C.A. @860'-861.5' wk calcite vnlts @861.5'-880' is zn that was once a hematitic alterat'n zn because of lt to dk brn color matrix but now perv silicified alter'n overprint'g, wk calcite vns & vnlt'g @886' str qtz-diss py bleb w/py stringers around it ≈ 2½" wide @880' calcite-py vn at bottom of volcanic bx text w/40°∠ to C.A. @880'-892' abdt silica-diss py blebs ≈ 1"-4" wide throughout this zn @881'-882' series of parallel qtz-py vnlts w/60°∠ to C.A. @883'-884' abdt calcite vns & "clots" filling bx matrix

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
820	825					
825	830					
830	835					
835	840					
840	841.8					
841.8	843					
843	845					
845	850					
850	855					
855	860					
860	865					
865	870					
870	875					
875	880					
880	885					
885	890					

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		@892'-894' is str sulfidiz'd fault zone; see description @894'-925' is "crackle" bx text heal'd w/silica ± py ± marcasite? ± calcite ± clay stkwk; & wk-mod perv argilliz'd from 894'-907.5; then mod-str perv silicification throughout zn	890 900 910 920 930 940 950 960		@890.2' fx 30°∠ to C.A. w/ py along fx @892'-894' flt or major shear, zn w/50°∠ to C.A. hang'g wall & ftwall w/tectonic bx, heal'd w/silicificat'n of bx frags, silica vns & clay gouge, broken rubble mixed w/clay gouge, slicks oblique to C.A. along one silicif'd fx surface w/in flt zn @917' fx w/50°∠ to C.A. lined w/ calcite-chlorite vnlt @925'-943.9' wkly fx'd w/0.75 fxs/ft w/90% 50°∠-60°∠ to C.A. & 10% 35°∠-40°∠ to C.A. @947' fx w/60°∠ to C.A lined w/ chlorite + diss py + diss chalcopyrite @954' fx w/40°∠ to C.A. w/ chlorite & py "smear" along fx	@890.3' silica vnlts w/vuggy drusy qtz w/stringers of py w/in qtz vnlts @892'-894' major flt zn w/ tectonic bx heal'd w/silicification & clay gouge argilliz'd'n; w/in flt zn are several brassy-grey py-qtz vns ½"-1" wide w/50°∠ to C.A. & these vns are almost massive diss py w/in a silica matrix (≈75%-85% of vns), diss py w/in flt gouge & bx frags also & minor qtz-py stkwk vnlts w/in larger bx frags @894'-907.5' rx unit is wk-mod perv argilliz'd in alter'n @895'-896.5' str qtz-py stkwk zn heal'g "crackle" bx text. @897'-898' silica vnlts & vns w/ vuggy drusy xtalline qtz w/ stringers of py & bladed py after marcasite? w/in qtz vnlts @901'-909' are large 3"-5" "patches" of perv silica w/in diss py, py ≈ 75% of these patches w/tr diss chalcopyrite @903'-920' wk calcite vnlts cutting rx @907.5'-925' rx unit is mod-str perv silicif'd in alter'n @915.5'-916.5' hematite stringers & vnlts w/diss py @925'-943.9' is wk calcite ± py vnlts & rx unit is mod-str perv silicif'd in alter'n; wk py "blebs" locally @943.9'-952.5' rx unit perv silicif'd @944.5'-945.1' is 6" wide large "patch" of perv silica w/in diss py, py ≈ 75% of "patch" w/ tr diss chalcopyrite; ¼" wide py vn or stringer cutting through "patch"; wk calcite-py vnlts cutting rx @952.5'-973.5' rx unit is perv silicif'd w/ wk calcite ± chlorite ± silica ± py vnlts; wk-mod py "blebs" locally	890 892 894 895 900 905 907.5 910 915 920 925 930 935 940 945 950 955	892 894 895 900 905 907.5 910 915 920 925 930 935 940 945 950 955 960					
		@925'-943.9' is massive volcanic flow? or ash flow tuff? unit w/ "ghost'g" of flow lamination text w/20°∠ to C.A. @ 931'-936.5'											
		@943.9'-952.5' is "crackle" bx text heal'd w/clay-chlorite ± silica ± calcite ± py											
		@952.5'-973.5' is massive volcanic flow? or ash flow tuff? unit											

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@973.5'-979.7' is "crackle" bx text heal'd w/clay-chlorite-silica ± py stringer & vnlts @979.7' is 40°∠ to C.A. contact between rx units. 979.7'-1055' Mod hard to hard, white to lt grey to dk grey, mod to intensely silicified & mod argilliz'd, fine-grained to aphanitic slightly to mod porphyritic monolithic latitic? or andesitic? volcanic flow? or ash flow tuff?, glassy to sugary text groundmass w/10%-15% anhedral to subhedral 1mm-4mm phenocrysts of plagioclase or sanadine replaced by white to grey clay or chloritic clay ± wk py, 1%-3% subhedral to euhedral mafic phenocrysts (biotite? or hornblende?) up to 1mm replaced by clay or chloritic clay ± wk py, slight "ghosting" of original text; flow, volcanic bx & "crackle" bx observed, @979.7' a 40°∠ to C.A. contact w/rx unit above @979.7'-986' is "crackle" bx text heal'd @986'-996' is volcanic bx text heal'd w/dk grey vuggy drusy qtz & lt brn clay @996'-1018' is massive volcanic flow? or ash flow tuff? unit @1018'-1022' is "crackle" bx text healed w/ silica-clay(dickite?)-lt brn clay-chloritic clay ± py @1022'-1039' is massive volcanic flow? or ash flow tuff? unit, same as @996'-1018'	960 970 980 990 1000 1010 1020 1030		@962'-971' wkly fx'd w/0.75 fxs/ft w/50% 40°∠ to C.A., 25% 50°∠ to C.A. & 25% 30°∠ to C.A. @967.5' fx w/30°∠ to C.A. lined w/white clay (dickite?)-chlorite w/py stringer @969'-971' fx w/5°∠ to C.A. lined w/white clay (dickite?)-chlorite w/py stringer @974'-975.3' mod broken rx rubble zn @976.5' & 978' fxs w/50°∠ to C.A. w/ chlorite-py lining fxs @982' is fx w/40°∠ to C.A. lined w/py stringer w/gray clay & lt brn clay @987.5' fx w/30°∠ to C.A. lined w/ lt brn clay ± wk diss py @988.2' fx w/50°∠ to C.A. lined w/vuggy drusy qtz w/py & a soft steely-grey mineral (graphite) @993' fx w/30°∠ to C.A. lined w/ wk clay & very minor diss py @1003' is fx w/½" wide qtz-py-barite vn filling fx w/50°∠ to C.A. @1007.5' is fx w/40°∠ to C.A. lined w/qtz-py-clay-graphite? @1010' fx w/50°∠ to C.A. lined w/ clay & chloritic clay @1017' fx w/50°∠ to C.A. lined w/ wk chloritic clay @1020'-1021.5' fx ≈ 0°∠ to C.A. & broken lined w/silica ± py @1022' fx w/60°∠ to C.A. lined w/1" wide qtz-py vn @1022'-1039' wkly fx'd w/0.47 fxs/ft w/60% 50°∠-60°∠ to C.A. & 30% 40°∠ to C.A. & 10% 20°∠ to C.A.	@971'-971.5' stkwk of finely diss py vnlts & stringers cutting rx @973.5'-979.7' is mod argilliz'd w/wk silicificat'n alter'n w/wk-mod silica ± diss & stringers of py vnlts heal'g "crackle" bx text (between clasts) @979.7'-1055' rx unit mod to intensely silicif'd w/zns of mod argillizat'n; silificat'n is overprint'g of all original alterat'ns, abdt. silica vnlts, vns & stkwk ± py throughout; vuggy drusy qtz vns & flood'g locally, py occurs as diss, blebs, stringers, vnlts ± silica throughout @979.7'-986' rx unit mod argilliz'd w/wk silificat'n alter'n w/wk-mod silica vnlts & vns, str py blebs & stringers w/wk ± white clay (dickite?) ± silica w/lt brn clay along py stringers @988.2' fx w/50°∠ to C.A. lined w/vuggy drusy qtz w/py & a soft steely-grey mineral (graphite) @988.2'-996' volcanic bx clasts heal'd & surround'd w/ abdt dk grey vuggy drusy qtz w/wk py & black soft mineral (graphite?) & wk marcasite?, minor vns & xtals of barite filling qtz vugs @993.5' @996'-1018' rx unit is mod argilliz'd w/wk-mod vuggy drusy xtalline qtz vns & vnlts ± stringers & diss py ± barite ± diss chalcopyrite w/in qtz vns; diss cpy w/in drusy qtz vn @1000.5', ½" wide qtz-barite-py vns @1001' & 1003' @1018'-1022' rx unit str-intensely silicified w/wk silica-py vnlts & vns @1022'-1039' rx unit str-perv silicified w/overprint'g of original alterat'ns w/wk-mod silica-py vnlts & vns

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
960	965					
965	970					
970	975					
975	979.7					
979.7	984					
984	986					
986	990					
990	995					
995	996					
996	1000					
1000	1005					
1005	1010					
1010	1015					
1015	1018					
1018	1022					
1022	1025					
1025	1030					

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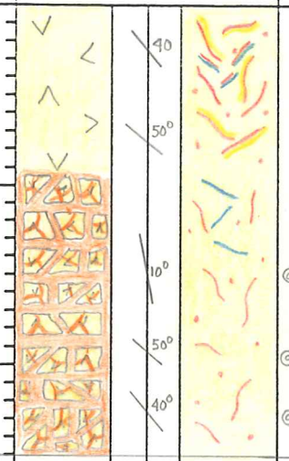
%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		@1039'-1055' lt-dk grey volcanic bx text heal'd w/hematite & clasts heal'd w/hairline hematite stkwk @1055' E.O.H. - T.D.	1030 1040 1050 1055		@1045'-1047' fx w/10°∠ to C.A. lined w/hematite @1049' fx w/50°∠ to C.A. lined w/hematite @1053' fx w/40°∠ to C.A. lined w/hem. w/yellow alter'n selvage	@1033'-1035 wk calcite-py vns @1039'-1055' rx unit perv silicif'd, but original dk grey color & dk brn hematite lining fxs & heal'g volcanic bx clasts still present; wk calcite vns & vnlts, fine-gr py or marcasite vnlts @1044.5'-1055' is a hard pale yellow alter'n mineral (silicif'd limonite oxidat'n?) as a selvage around hematite fxs & w/in rx by itself (same as bottom of dd'h 95-350) yellow selvages - hem fx

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
1030	1035					
1035	1039					
1039	1040					
1040	1045					
1045	1050					
1050	1055					
1055'	T.D.					

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/9/95 LOGGED BY: LES PAGE 1 OF 13

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)
29	29.5	30	30	Ø							29.7	945	400	2.36
29.5	31	100	147	33										
31	31.5	20	20	Ø										
31.5	33	47	120	Ø										
33	35	90	100	20										
35	36.5	80	107	23										
36.5	39	84	112	Ø										
39	40.5	87	87	53										
40.5	42.5	75	115	48										
42.5	45	72	88	28										
45	46.5	53	87	Ø										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/9/95 LOGGED BY: LES PAGE 2 OF 13

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)
46.5	49	88	104	14							49.8	992.5	400	2.48
49	52	90	93	50										
52	53	80	160	70										
53	55.2	122	136	23										
55.2	64.4	64	90	14										
64.4	69.5	61	100	16										
69.5	78.2	80	95	26										
78.2	83	60	100	23										
83	93	96	102	55										
93	103	90	100	50							99.6	1154	480	2.40
103	113.2	92	103	32										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/9/95 LOGGED BY: LES PAGE 3 OF 13

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)
113.2	123	100	103	74										
123	133	93	100	59										
133	145	14	25	7										
145	147	80	100	50							146.7	1078	455	2.37
147	150	100	100	23										
150	155	20	110	8							153.3	898	460	1.95
155	157.5	48	104	36										
157.5	165	96	96	80										
165	169.6	109	109	90										
169.6	175	102	102	76										
175	182	77	111	41										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/11/95 LOGGED BY: LES

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)
182	188.1	72	107	38										
188.1	193	71	100	18										
193	202.6	79	105	32							200.3	1391	545	2.55
202.6	213	100	100	62										
213	223	92	101	72										
223	233	96	104	80										
233	241.2	91	107	34										
241.2	248	72	103	12										
248	251	97	103	90							250.7	1172	510	2.30
251	254	100	100	73										
254	260	82	98	50										
260	264	100	100	56										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/11/95 LOGGED BY: LES PAGE 5 OF 13

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)
264	268.5	96	102	6.4										
268.5	275.5	86	101	31										
275.5	277.5	83	83	50										
277.5	285.5	100	108	40										
285.5	289	74	114	36										
289	294.5	36	100	16										
294.5	297.7	103	103	40										
297.7	299	100	100	69							298.2	930	370	2.51
299	300	105	105	0										
300	308.3	98	108	45										
308.3	315.3	93	96	57										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/11/95 LOGGED BY: LES PAGE 6 OF 13

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
315.3	317.3	60	60	⊖										
317.3	318.3	105	105	⊖										
318.3	322.3	120	120	55										
322.3	323	129	129	50										
323	325	95	115	⊖										
325	333.3	82	96	46										
333.3	340	81	106	39										
340	350	100	102	54							348.5	976	455	2.15
350	352	80	93	58							351.8	922	400	2.31
352	360	91	106	44										
360	370	102	102	84										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/13/95 LOGGED BY: LES PAGE 7 OF 13

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)
370	380.3	102	107	70										
380.3	390.7	102	102	78										
390.7	401	85	108	37							398.5	1004	460	2.18
401	411	105	105	68										
411	419.2	95	107	46										
419.2	427	90	113	40										
427	430	83	100	13										
430	435	100	102	62										
435	442	98	98	67										
442	446	94	94	55										
446	455	121	121	87							450.8	1018	420	2.42

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/13/95 LOGGED BY: LES PAGE 8 OF 13

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)
455	459	98	98	68										
459	468	93	100	62										
468	478.3	94	102	79										
478.3	488.6	99	99	92										
488.6	492.5	107	107	62										
492.5	499	100	100	95										
499	508	103	103	57							501	1330	530	2.51
508	518	103	103	73										
518	528	101	104	58										
528	538	104	104	58										
538	546.5	91	91	72										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/15/95 LOGGED BY: LES PAGE 9 OF 13

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)
546.5	556.8	101	101	95							553.5	758	320	2.37
556.8	567	102	102	93										
567	577.2	101	101	97										
577.2	587.5	99	99	79										
587.5	597.5	102	102	91										
597.5	607.7	100	100	89							600.7	1129	460	2.45
607.7	617.7	102	102	96										
617.7	621.7	101	101	101										
621.7	629.9	100	100	96										
629.9	640.4	99	99	91										
640.4	650.7	100	100	86							650.2	1208.5	480	2.52

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/17/95 LOGGED BY: LES PAGE 10 OF 13

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)
650.7	660.7	103	103	95										
660.7	671	103	103	85										
671	681	97	104	77										
681	691	101	101	93										
691	701	101	101	99										
701	711	99	99	93							703.5	1295	540	2.40
711	721	81	103	59										
721	731	98	102	78										
731	735	95	95	55										
735	741	100	100	86										
741	745	110	110	100										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/17/95 LOGGED BY: LES PAGE 11 OF 13

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)
745	755	98	98	88							752.5	1248	525	2.38
755	765	101	101	83										
765	775	100	100	78										
775	785	103	103	89										
785	795	99	99	80										
795	805	99	99	88							801.2	1408	575	2.45
805	815	99	103	85										
815	825	96	100	93										
825	835	99	99	88										
835	842	99	99	89										
842	852	103	103	90							848.5	1748	700	2.50

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/19/95 LOGGED BY: LES PAGE 12 OF 13

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)
852	856.6	100	100	89										
856.6	865	98	98	86										
865	875	100	100	92										
875	885	103	103	93										
885	895	90	100	69										
895	905	103	103	88							898.8	1525	620	2.46
905	915	102	102	89										
915	925	101	101	86										
925	935	102	102	74										
935	945	103	103	72										
945	955	101	101	91							948	1826	740	2.47

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 95-346 HQ DATE: 9/20/95 LOGGED BY: LES PAGE 13 OF 13

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
955	965	101	101	90										
965	975	93	100	56										
975	985	99	101	81										
985	995	98	98	64										
995	997	100	100	65										
997	1005	102	102	71							1000.5	1138	445	2.56
1005	1015	102	102	82										
1015	1025	97	100	60										
1025	1035	102	104	80										
1035	1045	100	100	91										
1045	1055	103	103	60							1050	1520	600	2.53

1055' T.D.

DRILLHOLE DIP AND DIRECTION MEASUREMENTS WITH REFLEX FOTOBOR DDI

CUSTOMER: HECLA
CUSTOMER REFERENCE: ROSEBUD
SURVEYOR: LANCE SENTER
DATE: 09-195
DRILL HOLE: 95-346
NO CASING

COLLAR POSITION

X(FT)	Y(FT)	Z(FT)	DIP (DEG.)	DIR. (DEG.)
483393.7	2203728	5375.18	88.49	330.99

POSITION AT 1010 FT

X(FT)	Y(FT)	Z(FT)	DIP (DEG.)	DIR. (DEG.)
483419	2203718	4365.54	88.24	328.76

LOCAL COORDINATES AT 1010 FT
Y-LOC= 3.66 FT TO THE RIGHT
Z-LOC= .48 FT UPWARDS

N

RESULTS

STATION (FT)	X(FT)	Y(FT)	Z(FT)	DIP (DEG.)	DIR. (DEG.)
0	483393.7	2203728	5375.18	88.49	330.99
20	483394.2	2203728	5355.18	88.48	331.01
40	483394.6	2203728	5335.19	88.48	334.13
60	483395.1	2203728	5315.2	88.43	335.46
80	483395.6	2203727	5295.2	88.49	336.1
100	483396.1	2203727	5275.21	88.51	337.16
* 100	2.55	.24	-.06		
120	483396.5	2203727	5255.22	88.56	340.43
140	483397	2203727	5235.22	88.59	344.34
160	483397.5	2203727	5215.23	88.61	344.89
180	483397.9	2203726	5195.23	88.6	348.47
200	483398.4	2203726	5175.24	88.64	343.8
* 200	5.07	.46	-.17		
220	483398.8	2203726	5155.25	88.5	345.54
240	483399.4	2203726	5135.25	88.49	348.55
260	483399.9	2203726	5115.26	88.53	349.75
280	483400.4	2203726	5095.27	88.59	351.12
300	483400.9	2203726	5075.27	88.59	355.12
* 300	7.46	1.32	-.39		
320	483401.4	2203726	5055.28	88.57	350.04
340	483401.9	2203726	5035.28	88.54	353
360	483402.4	2203726	5015.29	88.54	349.75
380	483402.9	2203725	4995.3	88.48	346.9
400	483403.4	2203725	4975.3	88.52	342.29
* 400	9.86	2.18	-.61		
420	483403.9	2203725	4955.31	88.51	345.57

440	483404.4	2203725	4935.32	88.37	346.2
460	483405	2203725	4915.33	88.37	344.16
480	483405.6	2203724	4895.33	88.4	348.04
500	483406.1	2203724	4875.34	88.43	345.73
* 500	12.69	2.58	-.4		
520	483406.6	2203724	4855.35	88.36	348.89
540	483407.2	2203724	4835.36	88.37	346.13
560	483407.7	2203724	4815.37	88.38	342.87
580	483408.2	2203723	4795.37	88.39	347.07
600	483408.8	2203723	4775.38	88.47	350.56
* 600	15.56	3	-.14		
620	483409.3	2203723	4755.39	88.44	349
640	483409.8	2203723	4735.4	88.47	352.02
660	483410.4	2203723	4715.4	88.42	354.17
680	483410.9	2203723	4695.41	88.35	351.35
700	483411.5	2203723	4675.42	88.3	347.01
* 700	18.04	4.14	-.29		
720	483412.1	2203723	4655.43	88.42	342.79
740	483412.6	2203723	4635.43	88.4	339.51
760	483413.1	2203722	4615.44	88.41	337.18
780	483413.6	2203722	4595.45	88.36	334.82
800	483414.1	2203722	4575.46	88.31	333.4
* 800	20.82	4.51	-.12		
820	483414.6	2203722	4555.47	88.25	328.78
840	483415.2	2203721	4535.48	88.36	326.24
860	483415.6	2203721	4515.48	88.38	321.99
880	483416	2203721	4495.49	88.32	318.73
900	483416.5	2203720	4475.5	88.4	324.34
* 900	23.78	4.04	.22		
920	483416.9	2203720	4455.51	88.46	328.37
940	483417.4	2203720	4435.51	88.52	327.37
960	483417.8	2203719	4415.52	88.41	326.68
980	483418.3	2203719	4395.53	88.28	323.62

1010	483419	2203718	4365.54	88.24	328.76
* 1010	26.92	3.66	.48		

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
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CLIENT REFERENCE No: 95-346 RECEIVED : 18 SEP 1995

No. SAMPLES : 110 REPORTED : 29 SEP 1995

MAIN SAMPLE TYPE : DRILL CORE

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 29 SEP 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 29-30	<0.001		<0.02
95-346 30-35	<0.001		<0.02
95-346 35-40	<0.001		<0.02
95-346 40-45	<0.001		<0.02
95-346 45-50.5	<0.001		<0.02
95-346 50.5-55	<0.001		<0.02
95-346 55-60	<0.001	<0.001	<0.02
95-346 60-65	0.002		<0.02
95-346 65-70	0.001		<0.02
95-346 70-75	0.001		<0.02
95-346 75-80	<0.001		0.02
95-346 80-85	<0.001		<0.02
95-346 85-90	<0.001		<0.02
95-346 90-93.5	<0.001		<0.02
95-346 93.5-95	<0.001		<0.02
95-346 95-100	<0.001		<0.02
95-346 100-105	<0.001		<0.02
95-346 105-110	<0.001		<0.02
95-346 110-115	<0.001		<0.02
95-346 115-117.2	<0.001		<0.02
95-346 117.2-119.5	<0.001	<0.001	<0.02
95-346 119.5-125	<0.001		<0.02
95-346 125-130	<0.001		<0.02
95-346 130-135	<0.001		<0.02
95-346 135-140	0.002		0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 29 SEP 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 140-145	0.001		0.03
95-346 145-147	<0.001		<0.02
95-346 147-150	0.001		0.14
95-346 150-155	0.002		0.08
95-346 155-156.2	<0.001		0.02
95-346 156.2-160	<0.001		<0.02
95-346 160-165	<0.001	<0.001	0.03
95-346 165-170	<0.001		<0.02
95-346 170-175	<0.001		<0.02
95-346 175-180	<0.001		<0.02
95-346 180-181	0.002		0.13
95-346 181-185	<0.001		0.04
95-346 185-190	0.004		0.05
95-346 190-195	0.001	0.001	0.05
95-346 195-200	0.002		0.04
95-346 200-205	<0.001	<0.001	0.02
95-346 205-210	0.001		0.02
95-346 210-212.2	0.002		0.04
95-346 212.2-213.5	<0.001		<0.02
95-346 213.5-219	0.011		0.05
95-346 219-220	<0.001		<0.02
95-346 220-225	<0.001		<0.02
95-346 225-229	<0.001		<0.02
95-346 229-230	0.005		0.02
95-346 230-235	0.047		0.27

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 29 SEP 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 235-240.5	0.005		0.05
95-346 240.5-245	<0.001		<0.02
95-346 245-250	<0.001		<0.02
95-346 250-255	0.005		<0.02
95-346 255-259.5	<0.001		0.02
95-346 259.5-264	<0.001		<0.02
95-346 264-266	<0.001		<0.02
95-346 266-270	<0.001		<0.02
95-346 270-274	<0.001		<0.02
95-346 274-275.5	0.014		0.07
95-346 275.5-280	0.001		0.02
95-346 280-284.5	<0.001		<0.02
95-346 284.5-289	0.004		0.21
95-346 289-293	0.001		0.05
95-346 293-294.5	0.076		7.35
95-346 294.5-300	<0.001		0.05
95-346 300-305	<0.001		<0.02
95-346 305-310	0.004		0.09
95-346 310-315	0.001	0.001	0.04
95-346 315-320	<0.001		<0.02
95-346 320-323.5	0.001		0.09
95-346 323.5-325	0.005		0.05
95-346 325-330	<0.001		0.02
95-346 330-335	0.009		0.12
95-346 335-336	0.007		0.28

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 29 SEP 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 336-337.5	0.061		6.39
95-346 337.5-340	0.004		0.19
95-346 340-345	0.031		0.62
95-346 345-350	0.004		0.05
95-346 350-352	0.004		0.07
95-346 352-355	0.004		0.10
95-346 355-360	0.015		0.26
95-346 360-362	<0.001		0.03
95-346 362-365.5	<0.001		<0.02
95-346 365.5-370	<0.001		<0.02
95-346 370-375	<0.001		0.04
95-346 375-380	<0.001		<0.02
95-346 380-382.5	<0.001		<0.02
95-346 382.5-386	<0.001	<0.001	<0.02
95-346 386-390	<0.001		<0.02
95-346 390-391.7	<0.001	<0.001	<0.02
95-346 391.7-395	0.003		0.02
95-346 395-400	<0.001		<0.02
95-346 400-403	<0.001		0.02
95-346 403-405	<0.001		<0.02
95-346 405-410	<0.001		<0.02
95-346 410-415	<0.001		<0.02
95-346 415-420	0.004		0.07
95-346 420-425	0.001		0.04
95-346 425-430	0.004		0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035562

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 29 SEP 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 430-435.5	0.003		0.06
95-346 435.5-440	<0.001		<0.02
95-346 440-445	<0.001		<0.02
95-346 445-450	<0.001		<0.02
95-346 450-452	<0.001		<0.02
95-346 452-456	<0.001		0.02
95-346 456-458	<0.001		<0.02
95-346 458-460	<0.001		0.06
95-346 460-465	0.001		0.04
95-346 465-467	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035684

American Assay Laboratories

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HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
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:

CLIENT REFERENCE No: 95-346 RECEIVED : 26 SEP 1995

No. SAMPLES : 138 REPORTED : 6 OCT 1995

MAIN SAMPLE TYPE : DRILL CORE

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035684

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 6 OCT 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 467-470	0.002		0.10
95-346 470-471	0.006		0.06
95-346 471-471.5	0.009		0.04
95-346 471.5-475	<0.001	<0.001	<0.02
95-346 475-480	0.005		<0.02
95-346 480-485	0.038	0.035	0.08
95-346 485-490	<0.001		0.02
95-346 490-495	0.001		0.02
95-346 495-500	0.003		0.03
95-346 500-505	0.001		0.02
95-346 505-510	<0.001		0.02
95-346 510-515	0.002		0.02
95-346 515-520	<0.001		<0.02
95-346 520-525	0.002		<0.02
95-346 525-530	0.001		0.02
95-346 530-535	0.004		0.02
95-346 535-540	<0.001		<0.02
95-346 540-545	0.003		<0.02
95-346 545-550	0.001		<0.02
95-346 550-555	<0.001	<0.001	<0.02
95-346 555-556.5	<0.001		0.02
95-346 556.5-560	<0.001		<0.02
95-346 560-565	<0.001		<0.02
95-346 565-567.5	0.001		0.02
95-346 567.5-570	0.002		0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035684

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 95-346

REPORTED : 6 OCT 1995

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 570-575	0.002		0.03
95-346 575-578	0.003		0.04
95-346 578-580	0.001		0.05
95-346 580-585	0.002		0.04
95-346 585-590	0.004		0.04
95-346 590-595	0.002		0.15
95-346 595-600	0.002		0.06
95-346 600-605	0.001		0.05
95-346 605-610	0.004		0.06
95-346 610-613.2	0.006		0.07
95-346 613.2-615	0.003		0.05
95-346 615-620	0.003		0.05
95-346 620-625	0.002		0.03
95-346 625-630	0.006		0.07
95-346 630-635	0.002		0.02
95-346 635-640	0.001		0.02
95-346 640-645	0.001		0.02
95-346 645-650	0.001		0.02
95-346 650-652	0.007		0.05
95-346 652-655	0.002		0.03
95-346 655-660	<0.001	<0.001	<0.02
95-346 660-665	<0.001		<0.02
95-346 665-670	<0.001		<0.02
95-346 670-671.2	<0.001		<0.02
95-346 671.2-675	0.007		0.04

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 675-676.7	0.001		0.03
95-346 676.7-680	<0.001		<0.02
95-346 680-682.3	0.002		<0.02
95-346 682.3-685	<0.001		0.03
95-346 685-690	0.009		0.04
95-346 690-695	0.001		0.04
95-346 695-700	<0.001		0.04
95-346 700-705	<0.001		0.02
95-346 705-710	<0.001		0.02
95-346 710-715	0.007		0.03
95-346 715-720	0.008		0.02
95-346 720-725	<0.001		<0.02
95-346 725-730	<0.001		<0.02
95-346 730-735	0.001	0.001	0.02
95-346 735-740	0.001		0.02
95-346 740-745	0.002		0.02
95-346 745-750	0.004		0.08
95-346 750-755	0.004		0.05
95-346 755-760	<0.001		0.02
95-346 760-765	<0.001		<0.02
95-346 765-770.5	<0.001		<0.02
95-346 770.5-771	<0.001		0.02
95-346 771-775	0.002		0.02
95-346 775-780	0.009		0.05
95-346 780-785	0.022		0.06

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 785-790	0.001		0.05
95-346 790-795	0.013		0.06
95-346 795-800	0.001		0.04
95-346 800-805	0.001		0.03
95-346 805-810.2	0.001		0.02
95-346 810.2-815	0.012		0.02
95-346 815-820	0.001		0.03
95-346 820-825	0.006		0.04
95-346 825-830	0.017		0.10
95-346 830-835	0.004		0.08
95-346 835-840	0.004		0.05
95-346 840-841.8	0.002		0.05
95-346 841.8-843	0.021		0.96
95-346 843-845	0.002		0.07
95-346 845-850	0.003		0.04
95-346 850-855	<0.001		<0.02
95-346 855-860	0.001		0.02
95-346 860-865	<0.001		0.02
95-346 865-870	<0.001		0.02
95-346 870-875	<0.001		0.02
95-346 875-880	0.003		0.05
95-346 880-885	0.005		0.05
95-346 885-890	0.001		0.02
95-346 890-892	0.001		0.03
95-346 892-894	0.013		0.04

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 894-895	0.002		0.03
95-346 895-900	0.014		0.09
95-346 900-905	0.001		0.04
95-346 905-907.5	0.001	0.001	0.02
95-346 907.5-910	0.001		0.02
95-346 910-915	<0.001		<0.02
95-346 915-920	<0.001	<0.001	<0.02
95-346 920-925	<0.001		<0.02
95-346 925-930	<0.001		<0.02
95-346 930-935	<0.001		<0.02
95-346 935-940	<0.001		<0.02
95-346 940-945	<0.001		0.02
95-346 945-950	<0.001		0.02
95-346 950-955	<0.001		<0.02
95-346 955-960	<0.001		<0.02
95-346 960-965	<0.001		<0.02
95-346 965-970	<0.001		<0.02
95-346 970-975	<0.001		<0.02
95-346 975-979.7	0.002		0.02
95-346 979.7-984	0.001	0.001	0.02
95-346 984-986	0.001		0.03
95-346 986-990	0.004		0.03
95-346 990-995	0.003		0.03
95-346 995-996	<0.001		<0.02
95-346 996-1000	<0.001		<0.02

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SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Ag(OZ) D210 OPT
95-346 1000-1005	0.001		0.02
95-346 1005-1010	0.001		<0.02
95-346 1010-1015	<0.001		<0.02
95-346 1015-1018	<0.001		0.02
95-346 1018-1022	0.001		0.04
95-346 1022-1025	<0.001		<0.02
95-346 1025-1030	<0.001		<0.02
95-346 1030-1035	<0.001		<0.02
95-346 1035-1039	<0.001		<0.02
95-346 1039-1040	<0.001		<0.02
95-346 1040-1045	<0.001		<0.02
95-346 1045-1050	<0.001		<0.02
95-346 1050-1055	<0.001		<0.02

FIELD NOTE SHEET NOTES: No HQ rubber stabilizers could be found & were not used!! DRILLHOLE 95-346

REFLEX—FOTOBOR DDI LOCATION Far East

BY Lance Senter 9/16 DIP -88.5° DATE N29°W

TIME MIN	DEPTH	NOTES	DEPTH	NOTES	TIME MIN	DEPTH	NOTES	DEPTH	NOTES
1	setup				31	400'			
2	setup				32	420'			
3	setup				33	440'			
4	setup				34	460'			
5	setup				35	480'			
6	0'	taking pix			36	500'			
7	0'	blurred shot			37	520'			
8	0'	blurred shot			38	540'			
9	20'				39	560'			
10	40'				40	580'			
11	60'				41	600'			
12	80'?	my mistake			42	620'			
13	80'?	my mistake			43	640'			
14	80'				44	660'			
15	100'				45	680'			
16	120'				46	700'			
17	140'				47	720'			
18	160'				48	740'			
19	180'				49	760'			
20	200'				50	780'			
21	220'				51	800'			
22		→ wire line got stuck			52	820'			
23	240'				53	840'			
24	260'				54	860'			
25	280'				55	880'			
26	300'				56	900'			
27	320'				57	920'			
28	340'				58	940'			
29	360'				59	960'			
30	380'				60	980'	End T.D.		

@ 2 hrs 5min from start. I opened the rod to turn the camera off

1055
− 40 rods
1015
− 4 off bottom
1011
− 12 core barrel
999

survey to 980'

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

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

Company: Hecla Mining Company

Address: P.O. Box 1861, 7000 Pit Road, Lovelock, NV 89419

Telephone Number: (702) 427-7751 Fax Number: (702) 427-7781

Project Name: Rosebud Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: 9/22/95 Number of Packages: 138 [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED

SAMPLE	TYPE	ELEMENTS REQUIRED
95-346	CORE	Au/Ag 2AT FA w/
467'-470' through 1050'-1055' T.D.		Rosebud Custom Prep

138 Samples

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[X] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[X] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

CLIENT FILE COPY

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
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Fax
(702) 738-2594

Company: Hecla Mining Company

Address: P.O. Box 1861, 7000 Pit Road, Lovelock, NV 89419

Telephone Number: (702) 427-7751 Fax Number: (702) 427-7781

Project Name: Rosebud Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: 9/15/95 Number of Packages: 110 [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED

SAMPLE	TYPE	ELEMENTS REQUIRED
95-346	CORE	Au/Ag 2AT FA w/
29'-30', 30'-35' through 465'-467'		Rosebud Custom Prep
110 Samples		

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[X] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[X] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

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