60001181

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-280-98
AUTHOR	S. King; K. Allen; C. Ballew; R Vance
DATE OF DOC(S)	1998
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Rosebud Mining Co. LLC Hecla Mining Co.; Newmont Gold Co.
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; photographs; total depth 825' receipt; handwritten notes; downhole camera images 94p. 7 down hole camera images

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DP 5/14/08
Initials Date
DB: mch
Initials Date
SCANNED: NB
Initials Date

Revised: 1/22/08

D-280-98

60001181 4010

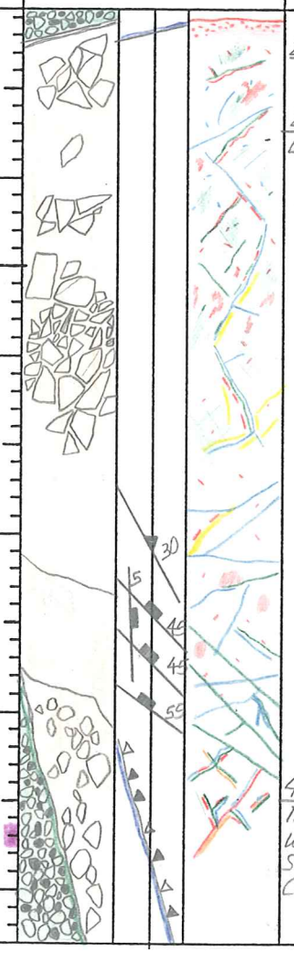
6000 1181

Hecla MINING COMPANY

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

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-280-98	LOCATION		REMARKS	
PAGE 1 OF 13		NORTHING			
DATE	07/20/98-8/9/98	EASTING			
LOGGED BY	HJM/AJW	ELEVATION			
SCALE	1"=10'	AZIMUTH			
TOTAL DEPTH	825'	INCLINATION	+11°		

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
0.0-2. Tos 2.0-47.4' LBT		0.0-2.0': SPECKLED LT. TO MEDIUM GRN LITHIC LAPILLI TUFF. ANGULAR LAPILLI FRAGMENTS RANGING FROM SMALL PEBBLE TO VERY COARSE SAND-SIZED. 2.0': FAIRLY SHARP, WEAKLY SHEARED, CONTACT AT HI ∠ TO CORE AXIS. 2.0-47.4': BUFF TO FAINTLY GRN-TAN, FAINTLY FLOW BANDED APHANITIC & HARD APHYRIC UNIT. POSSIBLY FG MASSIVE TO SLIGHTLY PLANAR LAMINATED LBT SUB-UNIT. INTERMITTENTLY CRACKLE BRECCIATED THRD DUT. W/ DK GRN/BRN CLAY +/- SILICA & PY CEMENT. 33.6-40': SOLID MASSIVE GRN-BUFF INTERVAL.	0 10 20 30 40 50		2.0': WK SHEAR AT CNTCT 2.0-2.2': WK MIXED LITHOLOGY RUBBLE ZONE 47.0-47.8': 15° TO CA MILLED SHEAR ZONE, HEALED W/ SILICA + PY/MARC. SEMI-HEAL RUBBLE AT CONTACT W/ LOWER LLT	0.0-2.0': MOD/STR GRN CLAY ALT'N, POSS. TRACE BLCHING. MOD. SILICA + PY/~~MARC~~ +/- LATER CALCITE VNLTS. TR. DISS'D SULFIDE. 2.0-2.2': PROBABLE PERVASIVE SILICIFICATN. 2.0-33.6': MODERATE INTERMITTENT CRACKLE BRECCIA CEMENTED WITH RUDDY TO DK GRN CLAY + LATER CALCITE +/- PY. WK SPARRY CALCITE VNLTS CUT GRN CLAY +/- Py. TRACE TO WK DISS'D Py. 33.6-40': WK GRN CLAY + PY ON FRAX & IN DOK BXA VN STKWK. MOD/WK Py BLEBS. CONT'D WK PERVASIVE ARGILLIZAT'N IN WALLRKS. 40-46.7': MOD. CRACKLE BRECCIA CEMENTED W/ DK GRN CLAY + PY + L WHT CLAY IN INTERSTICES. 46.7-48.0': STR SILICA + MARC/PY STKWK TO FLOODING WITH LATER SPARRY CALCITE AT BREAKS
47.4'-57.5' Tos ?						

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
0.0	2.0					
2.0	7.0					
7.0	12.0					
12.0	17.0					
17.0	21.7					
21.7	27.1					
27.1	32.0					
32.0	37.0					
37.0	41.3					
41.3	46.7					
46.7	47.4					

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LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
47.4'-57.4' TOS?(BUD-LIKE INTERVAL) ↓		47.4'-57.4': PEA- TO VCG SAND-SIZED, LITHIC LAPILLI TUFF. PALE GRN TO BUFF SPECKLED. HARDER THAN ABOVE. FOLIATION FABRIC AT 15° TO CORE AXIS, // TO UPPER CONTACT. LOWER CONTACT NOT //. THERE APPEARS TO BE A PIECE OF THE LOWER LBT UNIT CAUGHT UP IN THIS LLT @ ~56'. IGNEOUS CNTCT.	50	15 90	57.4': THIN HEALED MYLONITE SUB ⊥ TO CA QUITE PROBABLY A CONFORMABLE CONTACT.	47.4'-57.4': MOD PERVASIVE GRN CLY ALT'N. WK Py VNLTS. TR. TO NO VN CALCITE BUT DISS'D W/IN 1' OF THE MARGINS. TR. DISS'D PYRITE.	47.4	52.3				
57.4'- LBT FG. MASSIVE		57.4'-84.8': MASSIVE, APHANITIC GRY-BUFF FG MASSIVE TO SLIGHTLY PLANAR LBT.	60			57.4'-84.8': MOD. WHT CLAY + CALCITE +/- MARC VNLT STKWK WITH FINER WAXY GRN TO DK BLUE-GRN CLAY + PY FRAX COATINGS & VNLTS. WK PERVASIVE WALLRK ARGILLIZATN; MOD ~~PA STAR~~ BLCHING.	52.3	57.5				
			70	40			57.5	62.3				
							62.3	67.1				
							67.1	72.3				
						~75-80': PREDOMINANCE OF BLADED MARCASITE OVER Py IN VNLTS & QZ-LINED VUGS	72.3	77.4				
PLANAR LAMINAR		84.8'-~95': CRACKLE TO MOSAIC BRECCIATED MASSIVE, APHANITIC GREY-BUFF RK FROM ABOVE. HYDROTHERMAL BRECCIA MOSTLY CEMENTED WITH SILICA +/- Py AFTER MARC. DK GRN TO YELLOW CLAY MATRIX + COMMINUTED RK MAT'L. CLAST-SUPPORTED. MONOLITHIC.	80	65			77.4	80.4				
						84.8-~95': MOD/STR. QZ + PY/MARC CEMENT. MOD GRN CLAY VNLTS; MOD. LATE WHT CLAY IN VUGS; BUFF (FeOx?) STAINING OF FRAGMTS. CONT'D WK PERVASIVE ARG. & BLCHING.	80.4	84.8				
			90				84	90.2				
		~95-100.7': CRACKLE BRECCIATED TO STOCKWORKED, COARSER GRAINED TO SPOTTED LBT SUBUNIT.				~95-100.7': MOD/STR QZ + PY CEMENT TO STKWK STRINGERS. LATER WHT CLAY + CALCITE VNLTS & VUG FILL.	90.2	95.2				
			100	50			95.2	100.7				
		100.7'-~113': LARGELY UNBRECCIATED, LOCALLY STKWKED LBT SUBUNIT.				100.7-~108': MOD/WK GRN CLAY +/- Py VNLTS.	100.7	105.2				
			110			~108'-125': GRADATIONAL INCREASE IN QUARTZ + Py/MARC VNLT STKWK TO MOD/STR. WAXY WHT TO YELLOW CLAY LATE IN VUGS BECOMES CRACKLE BXA BY ~113'.	105.2	110.3				
							110.3	115.0				
			120				115.0	120.4				

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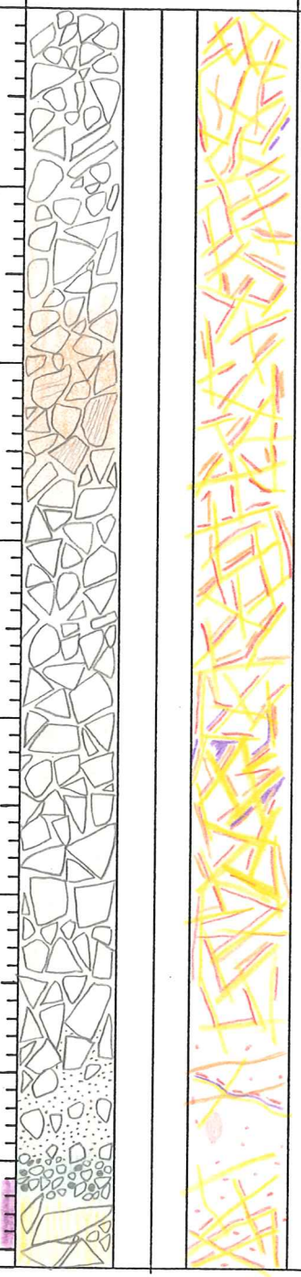
LITH.	OX/RED	LITHOLOGY	FT	STRUCTURE	ALTERATION AND MINERALIZATION
57.4'-183.4' LBT		~113-137.3': CRACKLE TO MOSAIC BRECCIATED, FG SPOTTED LBT AS ABOVE. CONTINUED PALE BRN. NO TRUE LST FABRIC SEEN.	120	113': HYDROTHERMAL VEIN STKWK/BRECCIA	125-129.0': QZ+PY/MARC+WHT CLAY STKWK = STR. W/ MOD. BARITE IN VUGS.
		SLIGHTLY MORE SUB-ROUNDED FRAGMTS; MOSAIC TEXTURE	130		~129-~157.0': ~~STR TO~~ MOD. QZ+PY/MARC+LATER WHT TO CRM CLAY STKWK. CONT'D WK PERVASIVE ARGILLIZATN & BLCHING OF WALLRK FRAGMTS. LOCAL BLOCKY BARITE IN VUGS IN QZ+PY/MARC VNLTS
		137.3-147.1': INTERVAL OF FINER GRAINED, PROBABLY FLOW BANDED FRAGMENTS. SLIGHTLY PALER TAN TO BRN BANDED. CRACKLE BRECCIA TEXTURE CONTINUES OTHERWISE UNCHANGED FROM ABOVE.	140		
			150		
			160		157'-183.4': INCREASED GREYISH SILICA CEMENTED CRACKLE BXA + PY/MARC + LATE WHT CLAY. QZ+PY/MARC = STR. CONT'D WK PERVASIVE ARGILLIZATION & BLCHING. ~165: BARITE + MARC IN VUGS.
			170		
		~180': GRADATIONAL TEXTURE CHANGE FROM MOSAIC/CRACKLE, CLAST-SUPPORTED BRECCIA TO MATRIX-SUPPORTED BRECCIA. SUB-ROUNDED, POSSIBLY HETEROLITHIC. TO ~183.5'.	180		175.4-183.4': INCREASING COMMINUTED MATRIX MAT'L MOD'LY FLOODED W/ SILICA + Py. WHT CLAY IS SPARSER, THINLY COATING FRAX. 180.4-183.4': SLIGHTLY WKER VNING.
183.4-233.6 BUD? LITHIC UNIT.	HETERO FRAGMENTAL	~183.5'-186': HETEROLITHIC FG BXA DOMINATED BY PEA-SIZED WKLY GRN CLAY-ALTERED FRAGMTS. 186.0-190.5 HETEROLITHIC APHANITIC BXA FRAGS. IN A FINE GRAIN VOLCANIC CLAY MATRIX.	190		188.5-190.5 ROUGES TO 3"Ø OF VUGGY SILICA REP. OF MATRIX W/ BLADED MARC. IN VUGS

GRAPHIC LOG



FROM	TO	W	Au	Ag	Au2
120.4	125.1				
125.1	129.0				
129.0	134.0				
134.0	137.3				
137.3	142.1				
142.1	147.1				
147.1	151.8				
151.8	157.0				
157.0	160.6				
160.6	165.3				
165.3	170.3				
170.3	175.4				
175.4	180.4				
180.4	183.4				
183.4	186.1				
186.1	190.5				

PLANAR LAM.

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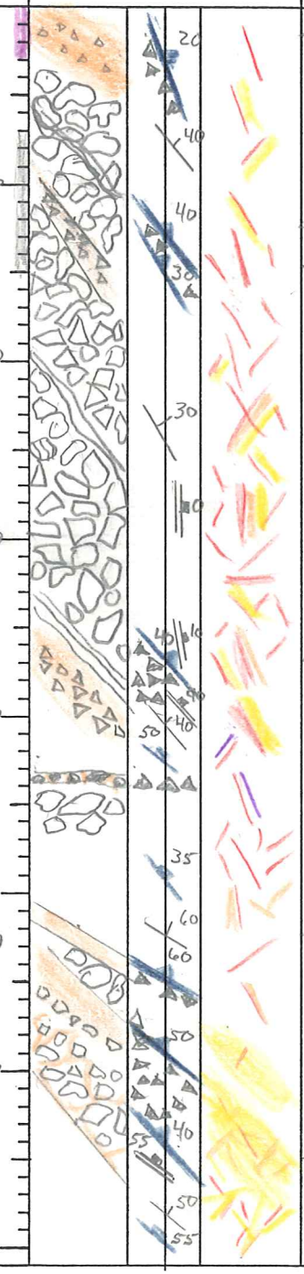
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
183.4 – 233.6 PLANAR / LAMINAR		190.5 – 196.0 GRADATIONAL, DECREASING CLAST SIZE, INFLUX OF TUFFACEOUS MATERIAL IN MATRIX, MOSTLY GREEN, PIMA →				192.0 – 194.5 STOCKWORK SILICA REP. W/ VUGS & BLADED MARC & BARITE. 196.0 – 198.0 MOD DISSEM MARC. BLADES. 198.0 – 202.0 STOCKWORK SILICA REP. OF MATRIX W/ BLADED MARC, BARITE IN RARE VUGS
PHOTOS INDICATE SRF MAY START ~202'.		196.0 – 207.0 HETEROLITHIC BRECCIA, GRAY SILICIOUS TO WHITE TUFFY TO PINK BXA IN BXA CLASTS MOST PEA SIZE OR SMALLER, IN A GREEN APHANITIC MATRIX	200	5, 15, 30, 50, 65	199.0 – 200.0 POSSIBLE OLDER FAULT BXA FRAGS TO 2" Ø MOSTLY CLAST SUPPORT W/ STOCKWORK SILICA CEMENT	202.0 – 207.0 MOD. BLADED MARC., DRUZY QUARTZ & SOME BARITE IN VUGGY POCKETS LEACHED FROM MATRIX.
		207.0 – 233.6 INDISTINCT BOUNDRY, MAYBE ALT. ASPECT OF HETEROLITHIC BRECCIA 196.0-207.0 MORE COMMON GRAY SILICIOUS CLASTS THAN ABOVE, MOST FRAGS STILL PEA SIZE OR SMALLER. OTHER CLASTS ARE WHITE CLAY ALT. VOLCANICS, PINK, ROUND, FINE GRAIN CLASTS. MATRIX IS GREEN APHANITIC HARD CLAY.	210			209.0 – 222.5 FRACTURE ASSOC. LEACHED ZONES LINED/FILLED W/ DRUZY QUARTZ, MARCASITE SOME BARITE, MINOR DISSEM. BLADED MARC.
			220	45		222.5 – 232.8 VEINS ARE MOSTLY WHITE CLAY, RARE. RARE DISSEM. MARC. BLADES.
			230	35		232.8 – 233.6 COMPLETE SILICA REP.
233.6 – 246.8 SRF	ZONE	233.6 – 238.0 GRAY → DK. GRAY, GLASSY, BXA OVERPRINTED W/ COMPLETE SILICA FLOODING. PIMA →		20, 35, 25, 25	233.6 – 238.0 FRACTURES FOLLOW GENERAL DIP OF FAULT PLANES BUT ARE OFFSET 90° – X FAULT PLANES	233.6 – 238.0 SILICA FLOODED, DK. COLOR MAYBE DUE TO ULTRA FINE SULFIDES FRACTURES FILLED W/ WHITE CLAY & MINOR SULFIDES. BARITE LOCALLY MOD → STRONG
		238.0 – 241.6 GREEN, MASSIVE?, SILICA & CLAY ALT. HAS DESTROYED ANY PROTOLITHIC TEXT.	240	20, 30	241.6 – 246.8 FAULT – BRECCIA & MYLONITE SMALL ROUND BXA FRAGS IN LAMINAR MYLONITE, SILICA FLOODING 241.6 – 243.0	241.6 – 246.8 SILICA REP. ALONG CONTACT & IN MANY BXA CLASTS, DISSEM SULFIDES IN MYLONITE & SILIC. FRAGS. FRAGMENTED SULFIDE VEINS.
246.8 – 525.0 DOZER		241.6 – 246.8 GREEN TO GRAY TO DK. GRAY TO WHITE BRECCIA, APPEARS TO BE FORMED FROM DOZER FRAGS FROM 243.0 – 246.8.		20, 68	248.2 – 251.0 FAULT GOUGE, PUNKY SOFT CLAY GOUGE, MAY HAVE VERY SMALL BXA FRAGS. SYMPATHETIC TO SRF	248.2 – 251.0 FRAGMENTED MARC. & WHITE CLAY IN MATRIX. 251.0 – 256.0 MOD – STRONG SULFIDE VEINING
		246.8 – 275.2 MOTTLED, LAPILLI RICH FLOW. PINKISH GRAY ROUND, IRREGULAR SHAPED CLASTS, F.G. IN APHANITIC LT. GREEN-GRAY MATRIX. RARE FLOW BANDS	250	60, 70, 80	260.2 – 262.8 FAULT GOUGE	246.8 – 248.2 MOD – STRONG SULFIDE VEINING, IRREGULAR PODS OF CONCENTRATED SULFIDES
			260			

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
190.5	192.0				
192.0	194.5				
194.5	196.5				
196.5	199.0				
199.0	202.2				
202.2	204.0				
204.0	206.3				
206.3	209.0				
209.0	214.0				
214.0	218.5				
218.5	223.5				
223.5	229.0				
229.0	232.8				
232.8	236.0				
236.0	238.0				
238.0	240.0				
240.0	243.0				
243.0	245.0				
245.0	246.8				
246.8	248.5				
248.5	250.0				
250.0	254.0				
254.0	256.5				
256.5	259.0				

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
246.8 - 525.0 DOZER		266.0 — * POSSIBLE CONTAMINATION BETWEEN SAMPLES DUE TO FRAGILE/LOOSE NATURE OF X-TALS IN VUGS/FRACTURES PIMA → 275.2 - 306.0 AUTO BRECCIA / FLOW, GRAYISH, SUBANGULAR TO ROUND APHANITIC CLASTS SUPPORTED BY A LT. GREEN-GRAY APHANITIC CLAY MATRIX, INTERMITTANT FLOW FEATURES TO 1' ø SEEM TO HAVE A DEFINED PATTERN. 306.0 - 525.0 FLOWS / AUTO BRECCIAS LT. GRAY MASSIVE TEXTURE FLOWS W/ NO VISIBLE BOUNDRIES. OCCASIONAL FAINT LINEAR FEATURES MAY BE FLOW STRUCTURES. INTERMITTANT MOTTLED / AUTO BRECCIA ZONES UP TO 10' ø W/ ROUND TO ANGULAR APHANITIC CLASTS TO 2" DIA, GRAY, IN A GRAY TO PINKISH APHANITIC VOLCANIC CLAY MATRIX.	270 280 290 300 310 PIMA 320 330		260.2-262.8 SOFT, POWDY CLAY GOUGE W/ SMALL ROUND CLAY BXA FRAGS. 272.0-273.4 FAULT BXA W/ CLAY GOUGE, SMALL CLAY ROUND FRAGS IN CLAY MATRIX. 296.1 - 298.0 FAULT BRECCIA & GOUGE 303.5 - 303.8 THIN FAULT W/ VERY SMALL ROUND BXA FRAGS, CLAST SUPPORT 311.8-312.5 FAULT GOUGE W/ SMALL ROUND BXA FRAGS. 315.0 - 318.5 FAULT GOUGE, ROUNDED SILICIFIED CHIPS 317.8-318.5 319.5 - 322.5 FAULT BRECCIA, CLAST SUPPORT MOSAIC.	260.2-262.8 MOD. FRAGMENTED SULFIDE VEINS 266.5 QUARTZ-MARC. VEIN W/ MINOR PYRARGYRITE X-TALS 270.4 - MARC. VEIN W/ SOME PYRARGYRITE X-TALS COATING BLADES 273.0 - 273.3 STRONG LEACHING OF BXA FRAGS LEAVING VOIDS & SMALL POCKETS OF CLAY 274.9 PYRARGYRITE X-TALS? SOFT, FRAGILE, SOME W/ SOFT? YELLOW METAL COATING MARC.? LINING VUG, POSSIBLE GOLD 280.3 - 290.0 STIBNITE IN FRACTURES COMMON 291.0 - 300.0 QUARTZ - MARC. VEINS W/ MINOR PYRARGYRITE X-TALS ON MARC. OR QUARTZ. POSSIBLE STIBNITE ALSO. 300.0 - 323.5 MOD VEINING W/ QUARTZ, WHITE CLAY, MARC. +/- PYRITE, RARE BARITE 303.5 - 303.8 FRAGMENTED SULFIDE VEINS. STRONG 306.0 - 309.0 INCREASED SULFIDE VEINING 311.8 - 312.5 FRAGMENTED SULFIDE VEINS. 317.8 - 318.5 MAY BE PART OF 319 - 322 FAULT DUE TO SILICIFIED CHIPS. 319.5 - 322.5 WHITE CLAY CEMENTING SILICA REPLACED FRAGS 323.5 - 329.0 MOD → STRONG QUARTZ / MARC / WHITE CLAY VEINS & VUG LININGS

ANALYTICAL DATA					
FROM	TO	W	Au	Ag	Au2
259.0	260.5				
260.5	263.0				
263.0	264.0				
264.0	266.0				
266.0	268.0				
268.0	269.8				
269.8	271.6				
271.6	274.0				
274.0	275.1				
275.1	277.0				
277.0	279.0				
279.0	281.0				
281.0	284.0				
284.0	285.5				
285.5	288.0				
288.0	290.0				
290.0	292.0				
292.0	295.0				
295.0	296.0				
296.0	298.0				
298.0	299.0				
299.0	300.4				
300.4	303.0				
303.0	306.0				
306.0	309.0				
309.0	314.0				
314.0	318.5				
318.5	322.5				
322.5	323.5				
323.5	326.0				
326.0	328.5				

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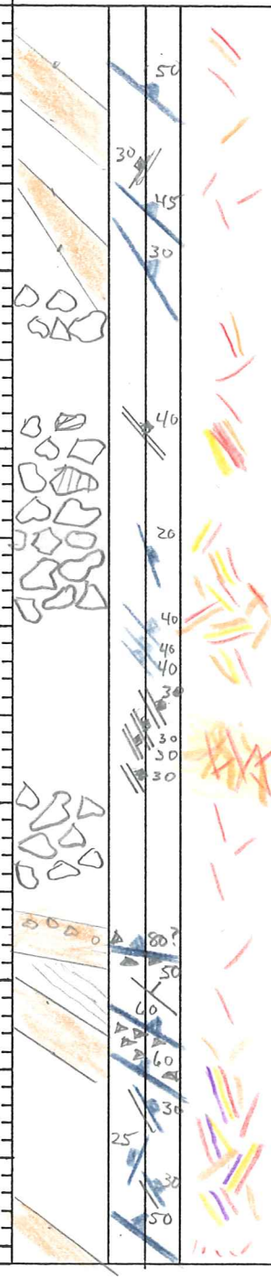
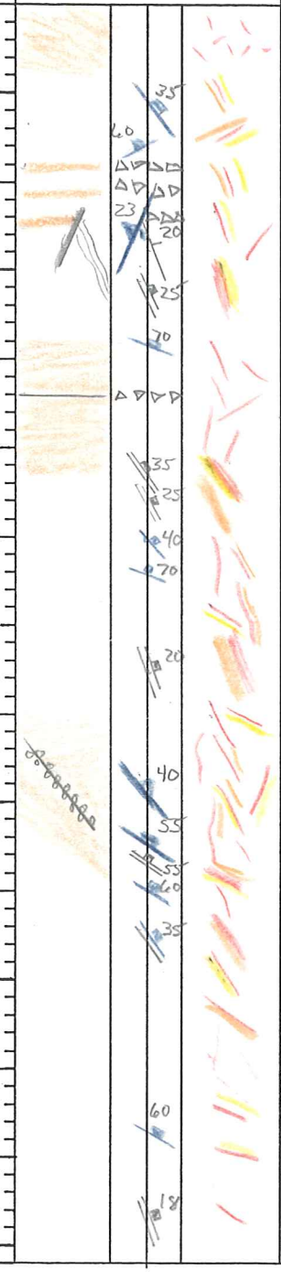
LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
246.8 – 525.0		306.0 – 525.0 FLOWS / AUTO BRECCIAS				
DOZER		SEE DESCRIPTION PAGE 5				
			340		333.0 – 336.0 FAULT GOUGE	333.0 – 336.0 FRAGMENTED WHITE CLAY & SULFIDE VEINS, PROPYL. STAINED CLAY 333 – 334.
					340.3 – 344.0 FAULT GOUGE & BRECCIA VERY SMALL ROUND BXA FRAGS IN CLAY	340.3 – 344.0 FRAGMENTED SULFIDE VEINS.
			350			
			360			359.0 – 365.0 MOD. QUARTZ / WHITE CLAY / SULFIDE VEINS OFTEN @ HIGH ∡ TO CORE AXIS. ASSOC. WEAK, PERVASIVE SILICA REP.
			370		371.7 – 374.5 STRONG FRACTURING W/ WHITE CLAY FILLING	371.7 – 374.5 MOD SILICA FLOODING ASSOC. W/ FRACTURES
			380		381.5 – 383.5 FAULT GOUGE & BRECCIA, VERY SMALL ROUND BXA FRAGS	379.0 – 381.5 MOD. → STRONG ARGILLIC ALT. 381.5 – 383.5 FRAGMENTED SULFIDES
					386.5 – 389.2 POSSIBLE FAULT GOUGE	386.5 – 389.2 STRONG ARGILLIC ALT., WK. GREEN PROPYL. STAIN, MAY BE GOUGE DUE TO FRAGMENTED SULFIDES
		392.0 – 397.5 POSSIBLE PIMA → CONTAMINATION OF SAMPLES DUE TO LOOSE X-TALS ON FRACTURES	390			389.0 – 398.0 VUGS FORMED BY LEACHED FRACTURES, LINED W/ MARC. BLADES, BARITE, PYRITE ON MARC., QUARTZ
			400		398.0 – 399.5 FAULT GOUGE & BRECCIA, SMALL ROUND FRAGS, MATRIX SUPPORT	398.0 – 399.5 FRAGMENTED SULFIDES, MOD. DISSEM PYRITE



ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
328.5	332.5				
332.5	334.0				
334.0	336.0				
336.0	340.3				
340.3	344.0				
344.0	349.0				
349.0	354.0				
354.0	359.4				
359.4	361.5				
361.5	365.0				
365.0	369.0				
369.0	371.5				
371.5	374.5				
374.5	379.0				
379.0	384.0				
384.0	386.5				
386.5	389.0				
389.0	392.0				
392.0	394.0				
394.0	397.5				
397.5	400.1				

HOLE NUMBER D-280-98 PAGE 7 OF 13

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
246.8-525.0 DOZER		306.0-525.0 SEE DESCRIPTION PAGE 5	410 420 PIMA → 430 440 450 460 470		400.8-403.0 POSSIBLE FAULT GOUGE. 409.0-412.5 3 CLAY GOUGE ZONES ~3" ø FAULTS 413.5 THIN, OLDER, WELL HEALED FAULT 422 POSSIBLE FAULT FRAGMENTED SULFIDES 426.5-438.5 FRACTURES RUNNING MOSTLY 10°-20° TO CORE AXIS 444 THIN FAULT w/ FRAGMENTED SULFIDE VEINS, VERY SMALL ROUND BXA FRAGS IN CLAY 447.0-518.0 SUBSET OF FRACTURES RUNNING ~65° TO CORE AXIS ARE OLDER THAN 10°-20° FRACTS.	399.5-403.0 STRONG ARGILLIC ALT., MOD SULFIDES-MAY BE FRAGMENTED VEINS 419.0-426.5 VERY STRONG ARGILLIC ALT. & BLEACHING PROBABLY ASSOC W/ UNSEEN FAULT NEAR 422' WHERE THERE ARE FRAGMENTS OF SULFIDES IN THE CLAY. 426.5-438.5 FILLED/LINED W/ WHITE CLAY, BLADED MARC. 431.5-435.0 INCREASE SULFIDE VEINING & SOME PODS OF SULFIDE CONCENTRATION 440.0-447.0 VERY STRONG ARGILLIC ALT. WHITE CLAY & QUARTZ/MARC. VEINS MOSTLY INTACT. ARGILLIC ALT STOPS AT SULFIDE FILLED FRACT @ 447. 447.0-518.0 FRACTURES ARE FILLED PRIMARILY W/ QUARTZ & MARC., LITTLE CLAY 447.0-484.0 SOME FRACTURES MAY BE MINERALIZED. ROCK IS RELATIVELY UNALTERED & UN-MINERALIZED.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
400.1	403.0				
403.0	406.0				
406.0	409.0				
409.0	414.0				
414.0	419.0				
419.0	424.0				
424.0	426.5				
426.5	429.0				
429.0	431.5				
431.5	434.0				
434.0	435.5				
435.5	438.5				
438.5	440.0				
440.0	442.6				
442.0	444.0				
444.0	447.0				
447.0	449.0				
449.0	454.0				
454.0	459.0				
459.0	464.0				
464.0	469.0				

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LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
246.8 – 525.0 DOZER		306.0 – 525.0 FLOWS & AUTOBRECCIAS GRAY, SOMETIMES PINKISH, MASSIVE FLOWS? W/ NO OBSERVED BOUNDRIES. MASSIVE W/ RARE LINEAR FEATURES THAT MAY BE FLOW STRUCTURES. RARE LAPILLI-LIKE ZONES TO 1' W/ FAINT FABRIC ALIGNMENT. RARE AUTOBRECCIAS W/ ELONGATED → ROUNDED FRAGS IN A CLAY MATRIX OF THE SAME COMPOSITION. PIMA →	480 490 500 510 520 530 540		472.0 – 503.5 FRACTURES RUNNING CLOSE TO CORE AXIS MAKES FOR LOW RQD TYPICAL X'S ARE 5° TO 20°. 500.7 – POSSIBLE FLOW BOUNDRY W/ AUTOBRECCIA 504.1 POSSIBLE FLOW CONTACT, QUARTZ VEIN 2" Ø RICH IN SULFIDES 509.0 THIN FAULT W/ FRAGMENTED SULFIDES 525.0 CONTACT IS BRECCIATE W/ ANGULAR LT. GREEN FRAGS IN SILICA 525.0 – 560.4 VEINS OCCUPY A CRACKLE-LIKE PATTEN OF THIN FRACTURES OFTEN X EACH OTHER.	472.0 – 503.5 FRACTURES USUALLY FILLED/LINED W/ WHITE CLAY/QUARTZ/MARC/PYRITE UNLESS NOTED OTHERWISE. SHORTENED SAMPLE INTERVALS DUE TO PROXIMITY TO PYRARGYRITE 484.0 – 485.0 VEIN W/ DRUZY QUARTZ & WHITE CLAY, COATED W/ ABUNDANT PYRARGYRITE & STIBNITE. 485.0 – 490.0 SPOTTY/WEAK SILICA REPLACEMENT. VEINS W/ BLADED MARC. OFTEN W/ QUART COATING. MINOR PYRARGYRITE & STIBNITE ON QUARTZ OR CLAY. 496.5 – 499.5 PROMINENT VEINS LINED W/ BLADED MARC. COATED W/ QUARTZ. 499.5 – 504.1 STRONG SULFIDE VEINING W/ QUARTZ 507.6 – 510.2 MOD → STRONG ARGILLIC ALT & BLEACHING 513.0 – 517.8 WEAK → MOD ARGILLIC ALT. & BLEACHING 519.0 – 525.0 CALCITE MIXED W/ WHITE CLAY & SULFIDES IN SOME VEINS 525.0 CONTACT IS DK. GRAY SULFIDE RICH, 3" Ø, IN QUARTZ. 525.0 – 529.0 MINOR CALCITE VEINING. 525.0 – 560.4 STRONG SULFIDE VEINING. 535.0 – 536.0 COMMON BLEBS OF SULFIDES, UP TO 1/4" DIA. 548 – 550 CALCITE
525.0 – 560.4 VITROPHYRE		525.0 – 560.4 HOMOGENEOUS, VERY LT. GREEN COLOR; ULTRA-FINE GRAIN, PERVASIVE WEAK, LOCALLY STRONG ARGILLIC ALT W/ PROPYLITIC STAIN. MOD. DISSEM. MARC. FOR 5'-6' NEAR BOTH CONTACTS, WEAK IN INTERIOR 519.0 – 519.2 PIECE OF ARGILLIC ALT ROCK DOESN'T FIT W/ ROCK ON EITHER SIDE. PROBABLE CAVE/CONTAMINATION, AT DRILLERS BLOCK.				

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
469.0	474.0				
474.0	479.0				
479.0	482.3				
482.3	484.0				
484.0	485.0				
485.0	487.0				
487.0	489.0				
489.0	494.0				
494.0	496.5				
496.5	499.4				
499.4	501.0				
501.0	504.3				
504.3	507.0				
507.0	511.2				
511.2	514.0				
514.0	519.0				
519.0	524.0				
524.0	525.0				
525.0	526.7				
526.7	529.0				
529.0	531.4				
531.4	534.0				
534.0	536.3				
536.3	539.0				

HOLE NUMBER D-280-98 PAGE 9 OF 13

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
525.0-560.4 VITROPHYRE?		525.0-560.4 SEE DESCRIPTION PAGE 8	550 PIMA →		553.3-554.3 FAULT BRECCIA, HEALED, MOSAIC TYPE, SEEMS TO BE REACTIVATED	539.0-544.5 MODERATE ARGILLIC ALT 549.3-557.3 MOD→STRONG ARGILLIC ALT. 558.9-574.0 MOD→V. STRONG ARGILLIC ALT. 553.3-554.3 OLDER? BXA W/SMALL ROUND CLASTS & BROKEN SULFIDES IN QUARTZ CEMENT. YOUNGER? LARGER SILICIOUS FRAGS IN WHITE CLAY W/ MARC. BLADES.
560.4-658.0 DOZER		560.4-568.0 LT. GREEN, APHANITIC, "GHOST" OF POSSIBLE AUTO BRECCIA PATTERN (MAYBE CRACKLE BXA RELATED TO NEAR BY FAULT) SEEN 261-262, ALMOST INDISTINGUISHABLE FROM VITROPHYRE EXCEPT FOR CONTACT AND FRACTURE PATTERN IS NOT CRIS-CROSSED AS IN ABOVE UNIT. 568.0- LT. PINK & GREEN W/ FAINT MOTTLED TEXTURE DUE TO DIFFERENTIAL PROPYLITIC STAIN MIGRATING ALONG VERY THIN INTERSECTING, SINUOUS FRACTURE LINES. APHANITIC. ZONES OF VARIABLE INTENSITY ARGILLIC ALT ARE ALWAYS VERY LT. GREEN IN COLOR.	560 570 580 590 600 610		560.4 CONTACT IS DK. GRAY W/ LT. GREEN ANGULAR ARG. ALT SMALL BXA FRAGS. 578.0 THIN 1" Ø FAULT W/GREEN FRAGS IN QUARTZ & CLAY 591.0-592.3 HEALED BXA, GREEN ROUND CLASTS, CLAST SUPPORT MOSAIC.	560.4 CONTACT ~3" Ø W/MOD. SULFIDES IN QUARTZ/SILICA MATRIX, WHITE CLAY VEIN DEVIDES 2 UNITS. 560.4-564.0 STRONG SULFIDES. 564.0-568.0 VERY STRONG SULFIDES. 568.0-583.0 MINOR TO MOD. SULFIDE VEINING MINOR ROUND TO CUBIC PYRITE X-TALS & AGGREGATES UP TO 1/4" DIA, SOME MARC. 583.0-587.0 MOD→STRONG PYRITE & MARC. X-TAL & AGGREGATES TO 1/4" DIA. 573.0- SPORADIC QUARTZ SULFIDE VEINS TO 1.5" Ø 591.0-592.3 CEMENTED W/WHITE CLAY/CALCITE/QUARTZ/MARC. 586.0-614.0 WEAK CALCITE W/CLAY/QUARTZ/SULFIDE VEINS 605.0-607.5 STRONG SULFIDES (MARC/PY) AS SPOTS/BLEBS OF X-TAL AGGREGATES & AS VEINS W/QUARTZ.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
539.0	541.5				
541.5	544.0				
544.0	546.3				
546.3	549.0				
549.0	552.0				
552.0	554.8				
554.8	557.0				
557.0	559.0				
559.0	560.3				
560.3	562.3				
562.3	565.8				
565.8	568.4				
568.4	573.0				
573.0	578.0				
578.0	583.0				
583.0	587.0				
587.0	591.0				
591.0	592.8				
592.8	597.0				
597.0	602.0				
602.0	605.2				
605.2	607.5				

HOLE NUMBER D-280-98 PAGE 10 OF 13

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
560.4 - 658.0		568.0 - 640.5					607.5	612.0				
DOZER		SEE DESCRIPTION PAGE 9				613.8 - 629.1 MOD. TO VERY STRONG ARGILLIC ALT. & B LEACHING. INCREASED SULFIDES	612.0	614.0				
							614.0	617.0				
			620		620.5 - 621.3 HEALED MOSAIC BRECCIA - ROUNDED CLASTS.	620.5 - 621.3 QUARTZ & SULFIDE CEMENT	617.0	621.0				
							621.0	624.8				
					627.0 1" ø MOSAIC BXA CLAST SUPPORTED	627.0 FRAGMENTED SULFIDES ARGILLIC ALT. CLASTS CEMENTED W/ CLAY & QUARTZ.	624.8	629.0				
			630									
							629.0	634.0				
		640.5 - 658.0					634.0	638.0				
		LT. GREEN TO WHITE, APHANITIC, STRONGLY CLAY ALT. WHICH DESTROYS ALL PROTOLITHIC TEXTURES. SULFIDE VEINLETS RETAIN SAME PATTERN & ORIENTATION AS OBSERVED IN NON-ARG. DOZER	640			640.5 - 658.0 MOD TO VERY STRONG ARGILLIC ALT. W/ WEAK PROPYLITIC STAIN. INDICATES FAULT.	638.0	641.0				
							641.0	644.0				
		648 - 654 SUBSTANTIAL CORE LOSS (6') DUE TO MISLATCH.			647.0 - 654 POSSIBLE FAULT ZONE! ROUND, GREEN FRAGS IN SOFT GREEN CLAY.	646.0 - 656.0 STRONG SULFIDES, VEINS & AGGREGATES, SOME QUARTZ VEINS W/ SULFIDES & FRAGMENTS OF SAME IN ARGILLIC MATRIX.	644.0	648.0				
			650	NO CORE			NO SAMPLE		NO SAMPLE			
							648.0	654.0				
658.0 - 698.5		658.0 - 668.0			658.0 POSSIBLE CONTACT W/ PORPHYRITIC UNIT		654.0	657.2				
PORPHYRIC UNIT (BMB TYPE)		LT. GREEN, APHANITIC, STRONGLY CLAY ALT. W/ DESTRUCTION OF PROTOLITHIC FEATURES, THERE SEEMS TO BE A SUBTLE CHANGE IN VEINLET PATTERN AT 662.3 FROM MOSTLY PLANAR - PARALLEL TO A CRACKLE/SPIDERWEB TYPE PATTERN. BRECCIA HERE WOULD BE THE BASE OF FLOW.	660		661.6 - 662.3 HEALED MOSAIC BRECCIA. ANGULAR → SUBROUND CLASTS. ALTERNATIVE CONTACT POINT. CHANGE IN VEINLET PATTERN MAY INDICATE CHANGE IN ROCK.	661.6 - 662.3 SMALLER CLASTS STRONGLY ARGILLIZED CEMENT IS QUARTZ & SULFIDES	657.2	661.0				
							661.0	665.5				
						658.0 - 668.0 STRONG ARGILLIC ALT. W/ WEAK PROPYLITIC STAIN.	665.5	668.0				
		668.0 - 698.5	670			664.8 - 690.0 WEAK CALCITE W/ QUARTZ-CLAY VEINS & IN PHENO MOLDS.	668.0	673.0				
		LT. PINKISH GRAY, APHANITIC. MASSIVE GROUNDMASS W/ PLAG. PHENO'S & VERY SMALL MAFIC. PHENO'S. MOST PLAG PHENO'S ARE ALTERED TO WHITE CLAY OR ARE BEING	680				673.0	679.0				

HOLE NUMBER D-280-98 PAGE 11 OF 13

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
658.0 - 698.5 PORPHYRITIC UNIT (BMB TYPE)		668.0 - 698.5 REPLACED BY QUARTZ/CLAY/CALCITE COMPOUNDS +/- MARC. COMMON, VERY SMALL ROUND OR IRREGULAR SHAPED VACUOLES FILLED W/ GREEN CLAY.	690		688.0-688.5 OLDER HEALED BXA W/ ROUND CLASTS, CLAST SUPPORTED.	687.0 - 689.0 WEAK ARGILLIC ALT. 688.0-688.5 GREEN PROPYLITIC CLAY & SULFIDES ARE CEMENTING AGENTS, INCREASED SULFIDES ASSOC. W/ARGILLIC ALT. 693.8 - 695.0 1/4" Ø QUARTZ CLAY VEIN W/ WELL DEVELOPED MARC. BLADES
698.5 - 711.2 DOZER		698.5 - 702.7 LT. GRAY, MOTTLED TEXTURE W/ SMALL ROUND, OFTEN ELONGATED CLASTS. IN A MOSAIC-LIKE SETTING W/ PINK CLAY CEMENTING THE FRAGS. VAGUE LINEAR-WAVY FEATURES RESEMBLING FLOW STRUCTURES. RESEMBLES FLOW BASE. 702.7 - 711.2 WHITE, VERY STRONG ARGILLIC ALT., ALL PROTOLITHIC TEXTURES ERASED.	700 710		698.5 CONTACT SHARP, CLEAN PORPHRY CONTACT IS CHILLED W/ DIFFUSION BANDS FOR 2' OR SO. DOZER HAS FLOW BANDS AND PLASTIC DEFORMATION FOR 2" ABOVE CONTACT 704.0 - 705.0 FAULT ANGULAR CLASTS. 711.2 CONTACT SHARP.	698.5 1/2" Ø QUARTZ BXA, QUARTZ/SILIC. CLASTS IN QUARTZ W/ MARC. 699.6 - 700.0 DK. GRAY QUARTZ BXA VEINS 1"-2" Ø W/ QUARTZ & SILIC. CLASTS IN QUARTZ W/ MARC. 704.0 - 705.0 STRONG, THICK QUARTZ VEINS TO 2" Ø W/ WHITE CLAY & SULFIDES 704.0 - 711.2 STRONG QUARTZ/SULFIDE/CLAY VEINING; PROBABLY ASSOC. W/ ARGILLIC ALT. 702.7 - 711.5 MOD. TO VERY STRONG ARGILLIC ALT. ASSOC. W/ FAULT. SULFIDES ~ 10%-15%.
711.2 - 776.4 PORPHYRITIC UNIT (BMB TYPE)		711.2 - 776.5 LT. GRAY TO NEAR WHITE. APHANITIC. STRUCTURELESS GROUND MASS W/ PLAG. PHENO'S MOSTLY REPLACED W/ WHITE/GREEN CLAY OR LEACHED OUT TO FORM MOLDS. SULFIDES OFTEN FILL OR LINE OPEN SPACES/PHENO MOLDS.	720 730 740 750		721.0 - 723.0 POSSIBLE FAULT. GRAY CLAYEY FRAGS IN VERY SOFT GRAY CLAY. 723.0 - 744.0 COMMON, IRREGULAIR SURFACED SUTURES GENERALLY @ 50°-60° TO CORE AXIS, LOW RQD.	721.0 - 723.0 INCREASED SULFIDES, MOSTLY PY. 723.0 - 756.0 OPEN SPACES & SOME FRACTURES FILLED/LINED W/ QUARTZ/SULFIDES. 745.8 - 1" Ø DRUZY QUARTZ & MARC. VEIN. 749.6 1/2" Ø DRUZY QUARTZ & MARC. VEIN

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
679.0	684.0				
684.0	689.0				
689.0	693.0				
693.0	695.5				
695.5	698.5				
698.5	701.0				
701.0	703.0				
703.0	705.0				
705.0	709.0				
709.0	711.2				
711.2	715.0				
715.0	719.0				
719.0	721.0				
721.0	723.0				
723.0	729.0				
729.0	734.0				
734.0	739.0				
739.0	744.0				
744.0	749.0				

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LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
711.2 – 776.4 PORPHYRITIC UNIT (BMB TYPE)	776.4	711.2 – 776.4 SEE DESCRIPTION PAGE 11 PIMA →	760 770			752.0 – 756.4 BARITE IN QUARTZ/SULFIDE VEINS. 759.6 – 767.7 STRONG TO VERY STRONG ARGILLIC ALT.
776.4 – 825.0 DOZER		776.5 – 779.0 SUBSTANTIAL CORE LOSS, ARGILLIC & SULFIDE ALT. @ CONTACT = SHORT SAMPLE 776.4 – 797.0 WHITE, ARGILLIC ALT. CLASTS OR LAPILLIS IN A PINKISH, APHANITIC TO FINEGRAIN TUFFY TEXTURED VOLCANIC CLAY MATRIX W/ WELL DEFINED WAVY-LAMINAR FEATURES, INDICATIVE OF BEDDING. 797.0 – 825.0 TD PINK → GRAY → WHITE, APHANITIC FEATURELESS GROUNDMASS, 797 – 801.5 HAS SMALL LAPILLI CLASTS AS DESCRIBED ABOVE BUT THIS UNIT IS TRUNCATED BY FAULT @ 801.5.	780 790 800 810 820		776.4 CONTACT IS SHARP LOOKS LIKE FLOW TYPE BASE W/ BANDS & EJECT FRAGS, MICRO-SCALE UNDULATION MAYBE EROSIONAL SURFACE 799.0 – 806.0 VERY STRONG FRACTURING ASSOC. W/ FAULT 801.5 – 802.8 801.5 – 802.8 FAULT, ROUND BXA FRAGS IN A FINE GRAIN PARTIALLY HEALED ROCK FLOUR CEMENT 806.2 – 808.3 FAULT SUBANGULAR → ROUND BXA FRAGS OFTEN W/ WEAK SILICA REP. IN A SILICA STOCKWORK W/ MARC. & PYRITE. 815.5 – 822.3 CRACKLE ZONE, STRONG FRACTURING,	776.4 THIN SULFIDE VEIN FOLLOWS CONTACT 776.4 – 797.0 VEINS TEND TO FOLLOW BED PLANES. 790.0 – 793.5 MOD → STRONG ARGILLIC ALT. SEEMS TO BE SOME INCREASE IN SULFIDE VEINING. 799.0 – 802.8 STRONG SILICA REPLACEMENT, SOME DRUZY QUARTZ & MARC. BLADES LINING VUGS. 801.5 – 802.8 GRAY SILICIFIED CLAST, BROKEN QUARTZ VEINS, SOME LATE STAGE QUARTZ AS DRUZY LINING IN VUGS, ROUND SULFIDE BLEBS IN QUARTZ CEMENT. 802.8 – 806.2 MOD. ARGILLIC ALT. 806.0 – 808.3 INCREASED SULFIDE VEINING RELATED TO SILICA & FAULTING 815.5 – 822.3 PROPYLITIC ALT. & SLIGHT INCREASE IN SULFIDE IN FRACTURES

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
749.0	754.0				
754.0	756.4				
756.4	759.8				
759.8	764.0				
764.0	767.7				
767.7	772.0				
772.0	776.5				
776.5	779.0				
779.	783.5				
783.5	789.0				
789.0	791.3				
791.3	794.0				
794.0	797.0				
797.0	799.0				
799.0	802.8				
802.8	806.0				
806.0	808.3				
808.3	811.0				
811.0	815.5				
815.5	819.0				

HOLE NUMBER D-280-98 PAGE 13 OF 13

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
776.4 - 825.0		797.0 - 825.0		65		822.0 - 825.0 MOD → STRONG SILICA FLOODING, NO OBSERVED SULIDE	819.0	825.0				
DOZER		SEE DESCRIPTION PAGE 12				INCREASE ASSOC. W/ SILICA REP.						

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 07/20/98 LOGGED BY: HBM PAGE 1 OF 15

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	5.0	88.0	88.0	22.0										
5.0	9.0	100.0	100.0	52.0										
9.0	14.0	102.0	102.0	44.0										
14.0	19.0	100.0	100.0	62.0										
19.0	24.0	100.0	100.0	62.0										
24.0	29.0	96.0	96.0	54.0										
29.0	34.0	102.0	102.0	84.0										
34.0	39.0	106.0	106.0	66.0										
39.0	44.0	106.0	106.0	86.0										
44.0	49.0	98.0	98.0	33.0										
49.0	54.0	102.0	102.0	74.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 07/20/98 LOGGED BY: AB/MM PAGE 2 OF 15

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)
54.0	59.0	96.0	96.0	72.0										
59.0	64.0	100.0	100.0	74.0										
64.0	69.0	100.0	100.0	60.0										
69.0	74.0	98.0	98.0	0										
74.0	79.0	94.0	94.0	40.0										
79.0	84.0	108.0	108.0	60.0										
84.0	89.0	94.0	94.0	66.0										
89.0	94.0	104.0	104.0	64.0										
94.0	99.0	96.0	96.0	40.0										
99.0	104.0	96.0	96.0	66.0										
104.0	109.0	87.0	90.0	62.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 07/22/98 LOGGED BY: HSM PAGE 3 OF 15

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
109.0	114.0	102.0	102.0	84.0										
114.0	117.0	60.0	90.0	60.0										
117.0	122.0	100.0	100.0	68.0										
122.0	124.0	100.0	100.0	100.0										
124.0	129.0	100.0	100.0	80.0										
129.0	134.0	102.0	102.0	102.0										
134.0	139.0	100.0	100.0	72.0										
139.0	144.0	98.0	98.0	92.0										
144.0	149.0	100.0	100.0	36.0										
149.0	154.0	100.0	100.0	32.0										
154.0	159.0	100.0	100.0	100.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 07/22/98 LOGGED BY: HSM PAGE 4 OF 15

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)
159.0	164.0	98.0	98.0	90.0										
164.0	169.0	104.0	104.0	74.0										
169.0	174.0	100.0	100.0	88.0										
174.0	179.0	98.0	98.0	76.0										
179.0	184.0	102.0	102.0	86.0										
184.0	194.0	100.0	100.0	67.0										
194.0	199.0	102.0	102.0	76.0										
199.0	204.0	100.0	100.0	40.0										
204.0	209.0	100.0	100.0	72.0										
209.0	214.0	94.0	94.0	90.0										
214.0	218.5	100.0	100.0	84.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 7/29/98 LOGGED BY: ALLYN NILES PAGE 5 OF 15

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)
218.5	223.5	100.0	102.0	93.3										
223.5	229.0	100.0	91.0	74.5										
229.0	233.5	100.0	104.4	66.6										
233.5	236.0	100.0	105.0	32.0										
236.0	240.0	100.0	105.0	30.0										
240.0	245.0	80.0	90.0	68.0										
245.0	250.0	24.0	100.0	22.0										
250.0	254.0	50.0	82.5	35.0										
254.0	259.0	70.0	100.0	70.0										
259.0	264.0	42.0	100.0	42.0										
264.0	269.0	100.0	102.0	86.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 7/29 - 8/5/98 LOGGED BY: _____ PAGE 6 OF 15

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
269.0	274.0	84.0	100.0	44.0										
274.0	279.0	100.0	102.0	98.0										
279.0	284.0	100.0	100.0	82.0										
284.0	285.5	100.0	100.0	46.6										
285.5	290.0	100.0	95.5	62.2										
290.0	295.0	32.0	62.0	24.0										
295.0	299.0	65.0	94.0	40.0										
299.0	304.0	100.0	102.0	46.0										
304.0	309.0	60.0	102.0	36.0										
309.	314.0	50.0	100.0	50.0										
314.0	318.5	0	95.5	8.9										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/5/98 LOGGED BY: _____ PAGE 7 OF 15

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)
318.5	323.5	0	88.0	0										
323.5	328.5	100.0	100.0	34.0										
328.5	332.5	100.0	95.0	75.0										
332.5	334.0	90.0	100.0	0										
334.0	336.0	75.0	100.0	0										
336.0	339.0	73.0	90.0	73.3										
339.0	344.0	40.0	90.0	14.0										
344.0	346.0	100.0	100.0	60.0										
346.0	349.0	80.0	93.3	70.0										
349.0	354.0	100.0	100.0	94.0										
354.0	359.0	100.0	102.0	88.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/5/98 LOGGED BY: _____ PAGE 8 OF 15

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)
359.0	364.0	100.0	104.0	52.0										
364.0	369.0	100.0	102.0	66.0										
369.0	374.0	100.0	96.0	78.0										
374.0	379.0	80.0	94.0	56.0										
379.0	384.0	60.0	100.0	34.0										
384.0	389.0	100.0	88.0	78.0										
389.0	394.0	96.0	100.0	52.0										
394.0	399.0	100.0	102.0	50.0										
399.0	404.0	84.0	96.0	52.0										
404.0	409.0	60.0	90.0	26.0										
409.0	414.0	30.0	100.0	40.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/5/98 LOGGED BY: ALLYN NILES PAGE 9 OF 15

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)
414.0	419.0	100.0	100.0	72.0										
419.0	424.0	100.0	102.0	88.0										
424.0	429.0	100.0	88.0	56.0										
429.0	434.0	100.0	100.0	56.0										
434.0	438.5	88.8	108.8	60.0										
438.5	444.0	100.0	96.4	69.1										
444.0	449.0	100.0	100.0	68.0										
449.0	454.0	100.0	96.0	28.0										
454.0	459.0	100.0	102.0	80.0										
459.0	464.0	100.0	100.0	80.0										
464.0	469.0	100.0	96.0	72.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/6/98 LOGGED BY: ALLYN NILES. PAGE 10 OF 15

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)
469.0	474.0	100.0	100.0	46.0										
474.0	479.0	100.0	100.0	34.0										
479.0	484.0	100.0	100.0	54.0										
484.0	489.0	100.0	100.0	20.0										
489.0	494.0	100.0	100.0	46.0										
494.0	499.0	100.0	94.0	42.0										
499.0	504.0	80.0	100.0	46.0										
504.0	509.0	100.0	100.0	72.0										
509.0	514.0	100.0	100.0	82.0										
514.0	519.0	90.0	100.0	92.0										
519.0	524.0	98.0	100.0	86.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/6/98 LOGGED BY: _____ PAGE 11 OF 15

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)
524.0	529.0	100.0	100.0	94.0										
529.0	534.0	100.0	100.0	84.0										
534.0	539.0	90.0	90.0	86.0										
539.0	544.0	60.0	96.0	32.0										
544.0	549.0	98.0	98.0	84.0										
549.0	554.0	100.0	100.0	50.0										
554.0	559.0	100.0	100.0	76.0										
559.0	564.0	96.0	96.0	68.0										
564.0	569.0	100.0	100.0	60.0										
569.0	573.0	20.0	92.5	44.0										
573.0	578.0	80.0	100.0	46.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/6/98 LOGGED BY: ALLYN ADILES PAGE 12 OF 15

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)
578.0	583.0	98.0	98.0	44.0										
583.0	587.0	95.0	95.0	70.0										
587.0	592.0	74.0	100.0	72.0										
592.0	597.0	100.0	100.0	92.0										
597.0	599.0	100.0	100.0	85.0										
599.0	602.0	100.0	100.0	100.0										
602.0	607.0	60.0	94.0	30.0										
607.0	612.0	88.0	96.0	68.0										
612.0	617.0	60.0	96.0	68.0										
617.0	621.0	90.0	90.0	90.0										
621.0	624.0	83.3	83.3	80.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/7/98 LOGGED BY: ALLYN NILES PAGE 13 OF 15

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)
624.0	629.0	100.0	94.0	76.0										
629.0	634.0	70.0	90.0	58.0										
634.0	638.0	96.0	80.0	40.0										
638.0	644.0	100.0	96.6	71.6										
644.0	654.0	10.0	40.0	8.0										
654.0	659.0	94.0	100.0	80.0										
659.0	669.0	63.0	98.0	74.0										
669.0	679.0	100.0	100.0	65.0										
679.0	689.0	100.0	100.0	74.0										
689.0	699.0	94.0	100.0	75.0										
699.0	709.0	90.0	100.0	61.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/7 - 8/98 LOGGED BY: _____ PAGE 14 OF 15

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)
709.0	719.0	100.0	98.0	70.0										
719.0	723.0	66.0	80.0	22.5										
723.0	729.0	92.0	112.0	23.3										
729.0	735.0	100.0	100.0	20.0										
735.0	741.0	90.0	95.0	26.6										
741.0	749.0	91.3	96.2	57.3										
749.0	757.0	91.3	91.3	88.6										
757.0	764.0	0	67.1	17.1										
764.0	772.0	62.5	90.0	33.8										
772.0	779.0	90.0	94.0	35.7										
779.0	789.0	98.0	98.0	70.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-280-98 DATE: 8/8/98 LOGGED BY: ALLYN NILES. PAGE 15 OF 15

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)
789.0	797.0	91.1	91.1	51.3										
797.0	799.0	0	45.0	0										
799.0	800.0	0	60.0	0										
800.0	802.0	0	85.0	0										
802.0	804.0	0	80.0	0										
804.0	806.0	0	75.0	0										
806.0	811.0	72.0	80.0	38.0										
811.0	819.0	56.2	78.8	30.0										
819.0	825.0	0	61.6	6.6										

American Assay Laboratories

INVOICE

Remit To: P.O. Box11530
Reno, Nevada 89510
Phone NO.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431-5902

(702) 356-0606

INVOICE NO: SP 0050068-IN
INVOICE DATE: 08/31/98

INVOICE TO:
THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

CUSTOMER P.O.	PROJECT	TERMS
D-280-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
115	SAMPLES RECEIVED	.00	.00
114	JAW CRUSHING CHARGE	1.30	148.20
114	COARSE MILLING CHARGE	4.50	513.00
114	SPLITTING CHARGE	2.40	273.60
114	FINE MILLING CHARGE	2.00	228.00
115	Au (1 A.T/ FIRE ASSAY)	8.00	920.00
21	Au ANALYSES/GRAVIMETRIC	8.75	183.75
115	HYDROCHLORIC/NITRIC DIGESTION	2.00	230.00
115	Ag ANALYSES	1.00	115.00
8	Ag (ore grade) ANALYSES	5.00	40.00

86-5110-477
EDA

NET INVOICE	2,651.55
LESS DISCOUNT	530.31
FREIGHT	.00
INVOICE TOTAL	2,121.24

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SR050068

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-280-98 RECEIVED : 13 AUG 1998

No. SAMPLES : 115 REPORTED : 28 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 0-2	<0.001			<0.02
D-280-98 2-7	<0.001			<0.02
D-280-98 7-12	0.002			0.06
D-280-98 12-17	<0.001			0.02
D-280-98 17.0-21.7	0.002			0.03
D-280-98 21.7-27.1	0.009			0.09
D-280-98 27.1-32.0	0.011			0.11
D-280-98 32-37	0.001			0.04
D-280-98 37.0-41.3	0.055		0.036	0.07
D-280-98 41.3-46.7	0.050		0.043	0.16
D-280-98 46.7-47.4	0.207		0.227	0.50
D-280-98 47.4-52.3	0.011			0.07
D-280-98 52.3-57.5	0.010			0.36
D-280-98 57.5-62.3	0.039			0.11
D-280-98 62.3-67.1	0.117	0.127	0.163	0.24
D-280-98 67.1-72.3	0.060		0.058	0.16
D-280-98 72.3-77.4	0.086		0.076	0.24
D-280-98 77.4-80.4	0.041			0.09
D-280-98 80.4-84.8	0.004			0.05
D-280-98 84.8-90.2	0.030			0.08
D-280-98 90.2-95.0	0.082		0.093	0.08
D-280-98 95.2-100.7	0.039	0.045		0.05
D-280-98 100.7-105.2	0.014			0.05
D-280-98 105.2-110.3	0.004			0.06
D-280-98 110.3-115.0	0.004			0.06

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 115.0-120.4	0.004			0.12
D-280-98 120.4-125.1	0.003			0.06
D-280-98 125.1-129.0	0.005			0.09
D-280-98 129-134	0.003			0.05
D-280-98 134.0-137.3	0.002			0.04
D-280-98 137.3-142.1	0.003			0.04
D-280-98 142.1-147.1	0.002			0.04
D-280-98 147.1-151.8	0.006			0.05
D-280-98 151.8-157.0	0.024		0.031	0.06
D-280-98 157.0-160.6	0.008			0.05
D-280-98 160.6-165.3	0.003			0.05
D-280-98 165.3-170.3	0.003			0.03
D-280-98 170.3-175.4	0.003			0.05
D-280-98 175.4-180.4	0.009			0.05
D-280-98 180.4-183.4	0.007			0.03
D-280-98 183.4-186.1	0.064		0.070	0.06
D-280-98 186.1-190.5	0.983		0.961	1.30
D-280-98 190.5-192.0	0.365		0.349	0.33
D-280-98 192.0-194.5	0.132		0.109	0.22
D-280-98 194.5-196.5	0.037			0.06
D-280-98 196.5-199.0	0.011			0.06
D-280-98 199.0-202.2	0.201		0.115	0.10
D-280-98 202.2-204.0	0.005			0.05
D-280-98 204.0-206.3	0.006			0.06
D-280-98 206.3-209.0	0.018			0.04

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 209-214	0.107		0.118	0.08
D-280-98 214.0-218.5	0.466		0.501	0.67
D-280-98 218.5-223.5	0.450		0.293	0.20
D-280-98 223.5-229.0	0.034		0.053	0.07
D-280-98 229.0-232.8	0.128			0.42
D-280-98 232.8-236.0	0.028			0.24
D-280-98 236-238	0.007			0.43
D-280-98 238-240	0.003			0.06
D-280-98 240-243	0.004			0.21
D-280-98 243-245	0.006			0.40
D-280-98 245.0-246.8	0.002			0.04
D-280-98 246.8-248.5	0.002			0.05
D-280-98 248.5-250.0	0.004			0.02
D-280-98 250-254	0.007			0.23
D-280-98 254.0-256.5	0.005			0.10
D-280-98 256.5-259.0	0.008			1.87
D-280-98 259.0-260.5	0.035			1.29
D-280-98 260.5-263.0	0.410		0.414	23.16
D-280-98 263-264	0.012			0.46
D-280-98 264-266	0.004			0.13
D-280-98 266-268	0.021			0.56
D-280-98 268.0-269.8	0.086		0.101	22.40
D-280-98 269.8-271.6	0.028			6.62
D-280-98 271.6-274.0	0.117		0.124	8.70
D-280-98 274.0-275.1	0.040			14.61

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 275.1-277.0	0.012			0.83
D-280-98 277-279	0.014			0.17
D-280-98 279-281	0.011			0.23
D-280-98 281-284	0.037			0.17
D-280-98 284.0-285.5	0.034			0.53
D-280-98 285.5-288.0	0.006			0.08
D-280-98 288-290	0.020			0.29
D-280-98 290-292	0.008			0.75
D-280-98 292-295	0.009	0.011		1.33
D-280-98 295-296	0.026		0.023	1.36
D-280-98 296-298	0.007			0.18
D-280-98 298-299	0.009			2.06
D-280-98 299.0-300.4	0.008			0.39
D-280-98 300.4-303.0	0.005			0.22
D-280-98 303-306	0.004			0.84
D-280-98 306-309	0.005			0.22
D-280-98 309-314	0.003			0.06
D-280-98 314.0-318.5	0.002			0.15
D-280-98 318.5-322.5	0.007			0.06
D-280-98 322.5-323.5	0.001			0.03
D-280-98 323.5-326.0	0.005			0.44
D-280-98 326.0-328.5	0.005			0.20
D-280-98 328.5-332.5	0.003			0.03
D-280-98 332.5-334.0	0.019			6.26
D-280-98 334-336	0.011			0.60

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

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REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 336.0-340.3	0.005			0.07
D-280-98 340.3-344	0.009			0.22
D-280-98 344-349	0.004			0.32
D-280-98 349-354	0.002			0.02
D-280-98 354.0-359.4	0.004			0.02
D-280-98 359.4-361.5	0.003			0.15
D-280-98 361.5-365.0	0.006			0.12
D-280-98 365-369	0.002			0.03
D-280-98 369.0-371.5	0.002			0.04
D-280-98 371.5-374.5	0.004			0.08
D-280-98 374.5-379.0	0.002			0.10
D-280-98 379-384	0.003			0.14
D-280-98 384.0-386.5	0.001			0.02
D-280-98 386.5-389.0	0.003			0.07
34526	0.520			2.65

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-280-98 RECEIVED : 13 AUG 1998

No. SAMPLES : 115 REPORTED : 28 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 0-2	<0.001			<0.02
D-280-98 2-7	<0.001			<0.02
D-280-98 7-12	0.002			0.06
D-280-98 12-17	<0.001			0.02
D-280-98 17.0-21.7	0.002			0.03
D-280-98 21.7-27.1	0.009			0.09
D-280-98 27.1-32.0	0.011			0.11
D-280-98 32-37	0.001			0.04
D-280-98 37.0-41.3	0.055		0.036	0.07
D-280-98 41.3-46.7	0.050		0.043	0.16
D-280-98 46.7-47.4	0.207		0.227	0.50
D-280-98 47.4-52.3	0.011			0.07
D-280-98 52.3-57.5	0.010			0.36
D-280-98 57.5-62.3	0.039			0.11
D-280-98 62.3-67.1	0.117	0.127	0.163	0.24
D-280-98 67.1-72.3	0.060		0.058	0.16
D-280-98 72.3-77.4	0.086		0.076	0.24
D-280-98 77.4-80.4	0.041			0.09
D-280-98 80.4-84.8	0.004			0.05
D-280-98 84.8-90.2	0.030			0.08
D-280-98 90.2-95.0	0.082		0.093	0.08
D-280-98 95.2-100.7	0.039	0.045		0.05
D-280-98 100.7-105.2	0.014			0.05
D-280-98 105.2-110.3	0.004			0.06
D-280-98 110.3-115.0	0.004			0.06

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 115.0-120.4	0.004			0.12
D-280-98 120.4-125.1	0.003			0.06
D-280-98 125.1-129.0	0.005			0.09
D-280-98 129-134	0.003			0.05
D-280-98 134.0-137.3	0.002			0.04
D-280-98 137.3-142.1	0.003			0.04
D-280-98 142.1-147.1	0.002			0.04
D-280-98 147.1-151.8	0.006			0.05
D-280-98 151.8-157.0	0.024		0.031	0.06
D-280-98 157.0-160.6	0.008			0.05
D-280-98 160.6-165.3	0.003			0.05
D-280-98 165.3-170.3	0.003			0.03
D-280-98 170.3-175.4	0.003			0.05
D-280-98 175.4-180.4	0.009			0.05
D-280-98 180.4-183.4	0.007			0.03
D-280-98 183.4-186.1	0.064		0.070	0.06
D-280-98 186.1-190.5	0.983		0.961	1.30
D-280-98 190.5-192.0	0.365		0.349	0.33
D-280-98 192.0-194.5	0.132		0.109	0.22
D-280-98 194.5-196.5	0.037			0.06
D-280-98 196.5-199.0	0.011			0.06
D-280-98 199.0-202.2	0.201		0.115	0.10
D-280-98 202.2-204.0	0.005			0.05
D-280-98 204.0-206.3	0.006			0.06
D-280-98 206.3-209.0	0.018			0.04

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 209-214	0.107		0.118	0.08
D-280-98 214.0-218.5	0.466		0.501	0.67
D-280-98 218.5-223.5	0.450		0.293	0.20
D-280-98 223.5-229.0	0.034		0.053	0.07
D-280-98 229.0-232.8	0.128			0.42
D-280-98 232.8-236.0	0.028			0.24
D-280-98 236-238	0.007			0.43
D-280-98 238-240	0.003			0.06
D-280-98 240-243	0.004			0.21
D-280-98 243-245	0.006			0.40
D-280-98 245.0-246.8	0.002			0.04
D-280-98 246.8-248.5	0.002			0.05
D-280-98 248.5-250.0	0.004			0.02
D-280-98 250-254	0.007			0.23
D-280-98 254.0-256.5	0.005			0.10
D-280-98 256.5-259.0	0.008			1.87
D-280-98 259.0-260.5	0.035			1.29
D-280-98 260.5-263.0	0.410		0.414	23.16
D-280-98 263-264	0.012			0.46
D-280-98 264-266	0.004			0.13
D-280-98 266-268	0.021			0.56
D-280-98 268.0-269.8	0.086		0.101	22.40
D-280-98 269.8-271.6	0.028			6.62
D-280-98 271.6-274.0	0.117		0.124	8.70
D-280-98 274.0-275.1	0.040			14.61

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 275.1-277.0	0.012			0.83
D-280-98 277-279	0.014			0.17
D-280-98 279-281	0.011			0.23
D-280-98 281-284	0.037			0.17
D-280-98 284.0-285.5	0.034			0.53
D-280-98 285.5-288.0	0.006			0.08
D-280-98 288-290	0.020			0.29
D-280-98 290-292	0.008			0.75
D-280-98 292-295	0.009	0.011		1.33
D-280-98 295-296	0.026		0.023	1.36
D-280-98 296-298	0.007			0.18
D-280-98 298-299	0.009			2.06
D-280-98 299.0-300.4	0.008			0.39
D-280-98 300.4-303.0	0.005			0.22
D-280-98 303-306	0.004			0.84
D-280-98 306-309	0.005			0.22
D-280-98 309-314	0.003			0.06
D-280-98 314.0-318.5	0.002			0.15
D-280-98 318.5-322.5	0.007			0.06
D-280-98 322.5-323.5	0.001			0.03
D-280-98 323.5-326.0	0.005			0.44
D-280-98 326.0-328.5	0.005			0.20
D-280-98 328.5-332.5	0.003			0.03
D-280-98 332.5-334.0	0.019			6.26
D-280-98 334-336	0.011			0.60

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP050068

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-280-98 336.0-340.3	0.005			0.07
D-280-98 340.3-344	0.009			0.22
D-280-98 344-349	0.004			0.32
D-280-98 349-354	0.002			0.02
D-280-98 354.0-359.4	0.004			0.02
D-280-98 359.4-361.5	0.003			0.15
D-280-98 361.5-365.0	0.006			0.12
D-280-98 365-369	0.002			0.03
D-280-98 369.0-371.5	0.002			0.04
D-280-98 371.5-374.5	0.004			0.08
D-280-98 374.5-379.0	0.002			0.10
D-280-98 379-384	0.003			0.14
D-280-98 384.0-386.5	0.001			0.02
D-280-98 386.5-389.0	0.003			0.07
34526	0.520			2.65

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-280-98 RECEIVED : 13 AUG 1998

No. SAMPLES : 115 REPORTED : 28 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

08/28/1998 13:43 7023561414 AMERICAN ASSAY LABS PAGE 01
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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-280-98 0-2	<0.001			<0.02
D-280-98 2-7	<0.001			<0.02
D-280-98 7-12	0.002			0.06
D-280-98 12-17	<0.001			0.02
D-280-98 17.0-21.7	0.002			0.03
D-280-98 21.7-27.1	0.009			0.09
D-280-98 27.1-32.0	0.011			0.11
D-280-98 32-37	0.001			0.04
D-280-98 37.0-41.3	0.055		0.036	0.07
D-280-98 41.3-46.7	0.050		0.043	0.16
D-280-98 46.7-47.4	0.207		0.227	0.50
D-280-98 47.4-52.3	0.011			0.07
D-280-98 52.3-57.5	0.010			0.36
D-280-98 57.5-62.3	0.039			0.11
D-280-98 62.3-67.1	0.117	0.127	0.163	0.24
D-280-98 67.1-72.3	0.060		0.058	0.16
D-280-98 72.3-77.4	0.086		0.076	0.24
D-280-98 77.4-80.4	0.041			0.09
D-280-98 80.4-84.8	0.004			0.05
D-280-98 84.8-90.2	0.030			0.08
D-280-98 90.2-95.0	0.082		0.093	0.08
D-280-98 95.2-100.7	0.039	0.045		0.05
D-280-98 100.7-105.2	0.014			0.05
D-280-98 105.2-110.3	0.004			0.06
D-280-98 110.3-115.0	0.004			0.06

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-280-98 115.0-120.4		0.004			0.12	
D-280-98 120.4-125.1		0.003			0.06	
D-280-98 125.1-129.0		0.005			0.09	
D-280-98 129-134		0.003			0.05	
D-280-98 134.0-137.3		0.002			0.04	
D-280-98 137.3-142.1		0.003			0.04	
D-280-98 142.1-147.1		0.002			0.04	
D-280-98 147.1-151.8		0.006			0.05	
D-280-98 151.8-157.0		0.024		0.031	0.06	
D-280-98 157.0-160.6		0.008			0.05	
D-280-98 160.6-165.3		0.003			0.05	
D-280-98 165.3-170.3		0.003			0.03	
D-280-98 170.3-175.4		0.003			0.05	
D-280-98 175.4-180.4		0.009			0.05	
D-280-98 180.4-183.4		0.007			0.03	
D-280-98 183.4-186.1		0.064		0.070	0.06	186.1-192' = 5.9'
D-280-98 186.1-190.5	4.4	0.983		0.961	1.30	0.826 Au
D-280-98 190.5-192.0	1.5	0.365		0.349	0.33	1.05 Ag
D-280-98 192.0-194.5		0.132		0.109	0.22	
D-280-98 194.5-196.5		0.037			0.05	
D-280-98 196.5-199.0		0.011			0.06	199-202.2 = 3.2' @
D-280-98 199.0-202.2		0.201		0.115	0.10	
D-280-98 202.2-204.0		0.005			0.05	
D-280-98 204.0-206.3		0.006			0.06	
D-280-98 206.3-209.0		0.018			0.04	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

CLIENT : BECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	214-223.5' = 9.5'
D-280-98 209-214		0.107		0.118	0.08	@
D-280-98 214.0-218.5	4.5	0.466		0.501	0.67	0.458 Ag
D-280-98 218.5-223.5	5'	0.450		0.293	0.20	0.42 Ag
D-280-98 223.5-229.0		0.034		0.053	0.07	
D-280-98 229.0-232.8		0.128			0.42	
D-280-98 232.8-236.0		0.028			0.24	
D-280-98 236-238		0.007			0.43	
D-280-98 238-240		0.003			0.06	
D-280-98 240-243		0.004			0.21	
D-280-98 243-245		0.006			0.40	
D-280-98 245.0-246.8		0.002			0.04	
D-280-98 246.8-248.5		0.002			0.05	
D-280-98 248.5-250.0		0.004			0.02	
D-280-98 250-254		0.007			0.23	
D-280-98 254.0-256.5		0.005			0.10	
D-280-98 256.5-259.0		0.008			1.87	
D-280-98 259.0-260.5		0.035			1.29	260.5-263 = 2.5'
D-280-98 260.5-263.0		0.410		0.414	23.16	
D-280-98 263-264		0.012			0.46	
D-280-98 264-266		0.004			0.13	
D-280-98 266-268		0.021			0.56	268-275.1' = 7.1'
D-280-98 268.0-269.8	1.8	0.086		0.101	22.40	
D-280-98 269.8-271.6	1.8	0.028			6.62	0.075 Ag
D-280-98 271.6-274.0	2.4	0.117		0.124	8.70	12.56 Ag
D-280-98 274.0-275.1	1.1	0.040			14.61	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

CLIENT : BECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-280-98 275.1-277.0	0.012			0.83
D-280-98 277-279	0.014			0.17
D-280-98 279-281	0.011			0.23
D-280-98 281-284	0.037			0.17
D-280-98 284.0-285.5	0.034			0.53
D-280-98 285.5-288.0	0.006			0.08
D-280-98 288-290	0.020			0.29
D-280-98 290-292	0.008			0.75
D-280-98 292-295	0.009	0.011		1.33
D-280-98 295-296	0.026		0.023	1.36
D-280-98 296-298	0.007			0.18
D-280-98 298-299	0.009			2.06
D-280-98 299.0-300.4	0.008			0.39
D-280-98 300.4-303.0	0.005			0.22
D-280-98 303-306	0.004			0.84
D-280-98 306-309	0.005			0.22
D-280-98 309-314	0.003			0.06
D-280-98 314.0-318.5	0.002			0.15
D-280-98 318.5-322.5	0.007			0.06
D-280-98 322.5-323.5	0.001			0.03
D-280-98 323.5-326.0	0.005			0.44
D-280-98 326.0-328.5	0.005			0.20
D-280-98 328.5-332.5	0.003			0.03
D-280-98 332.5-334.0	0.019			6.26
D-280-98 334-336	0.011			0.60

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050068

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-280-98

REPORTED : 28 AUG 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-280-98 336.0-340.3	0.005			0.07
D-280-98 340.3-344	0.009			0.22
D-280-98 344-349	0.004			0.32
D-280-98 349-354	0.002			0.02
D-280-98 354.0-359.4	0.004			0.02
D-280-98 359.4-361.5	0.003			0.15
D-280-98 361.5-365.0	0.006			0.12
D-280-98 365-369	0.002			0.03
D-280-98 369.0-371.5	0.002			0.04
D-280-98 371.5-374.5	0.004			0.08
D-280-98 374.5-379.0	0.002			0.10
D-280-98 379-384	0.003			0.14
D-280-98 384.0-386.5	0.001			0.02
D-280-98 386.5-389.0	0.003			0.07
34526	0.520			2.65

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

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

NEWMONT GOLD COMPANY

COPIES TO : C. BALLEW

: R. VANCE

:

:

CLIENT REFERENCE No: D-280-98 RECEIVED : 18 AUG 1998

No. SAMPLES : 52 REPORTED : 18 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

08/26/1998 13:23 7023561413 AMERICAN ASSAY LABS PAGE 01
AUG-26-98 14:11 7023561413 P.01 R-154 Job-501

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ
D-280-98 389-392	74		0.002			
D-280-98 392-394	74		0.002			
D-280-98 394.0-397.5	66		0.002			
D-280-98 397.5-400.1	174		0.005			
D-280-98 400.1-403.0	128		0.004			
D-280-98 403-406	78		0.002			
D-280-98 406-409	282		0.008			
D-280-98 409-414	124		0.004			
D-280-98 414-419	74	66	0.002	0.002		
D-280-98 409-414B	94		0.003			
D-280-98 414-419	72		0.002			
D-280-98 419-424	196		0.006			
D-280-98 424.0-426.5	172		0.005			
D-280-98 426.5-429.0	74		0.002			
D-280-98 429.0-431.5	50		0.001			
D-280-98 431.5-434.0	226		0.007			
D-280-98 434.0-435.5	114		0.003			
D-280-98 435.5-438.5	144		0.004			
D-280-98 438.5-440.0	634		0.018			
D-280-98 440-442	446		0.013			
D-280-98 442-444	132		0.004			
D-280-98 444-447	122		0.004			
D-280-98 447-449	52		0.002			
D-280-98 449-454	100		0.003			
D-280-98 454-459	90		0.003			

08/26/1998 13:23 7023561413 AMERICAN ASSAY LABS PAGE 02
AUG-26-98 14:11 7023561413 P.02 R-154 Job-501

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES		Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 459-464		72	60	0.002	0.002		
D-280-98 464-469		204		0.006			
D-280-98 469-474		216		0.006			
D-280-98 474-479		168		0.005			
D-280-98 479.0-482.3		154		0.004			
D-280-98 482.3-484.0		1612		0.047			
D-280-98 484-485		720		0.021			
D-280-98 485-487		216		0.006			
D-280-98 487-489		68		0.002			
D-280-98 489-494		82		0.002			
D-280-98 494.0-496.5		70	70	0.002	0.002		
D-280-98 496.5-499.4		604		0.018			
D-280-98 499.4-501.0		218		0.006			
D-280-98 501.0-504.3		174		0.005			
D-280-98 504.3-507.0		62		0.002			
D-280-98 507.0-511.2		94		0.003			
D-280-98 511.2-514.0		96		0.003			
D-280-98 514-519		70		0.002			
D-280-98 519-524		48		0.001			
D-280-98 524-525		56		0.002			
D-280-98 525.0-526.7		732		0.021			
D-280-98 526.7-529.0	2.3	4648		0.136			
D-280-98 529.0-531.4	2.4	4754		0.139			
D-280-98 531.4-534.0	2.6	2436		0.071			
D-280-98 534.0-536.3	2.3	1468		0.043			

4.7'

08/26/1998 13:23 7023561413 AMERICAN ASSAY LABS PAGE 03
AUG-26-98 14:11 7023561413 P.03 R-154 Job-501

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES		Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 536.3-539.0	2.7	892		0.026			
D-280-98 539.0-541.5	2.5	1508		0.044			

AUG-26-98 14:11 7023561413 P.04 R-154 Job-501
08/26/1998 13:23 7023561413 AMERICAN ASSAY LABS PAGE 04

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

PO BOX 11538
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NEWMONT GOLD COMPANY

COPIES TO : C. BALLEW

: R. VANCE

:

:

CLIENT REFERENCE No: D-280-98 RECEIVED : 18 AUG 1998

No. SAMPLES : 56 REPORTED : 28 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP0501125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 389-392	74		0.002			
D-280-98 392-394	74		0.002			
D-280-98 394.0-397.5	66		0.002			
D-280-98 397.5-400.1	174	176	0.005	0.005		
D-280-98 400.1-403.0	128		0.004			
D-280-98 403-406	78		0.002			
D-280-98 406-409	282	102	0.008	0.003		
D-280-98 409-414	124		0.004			
D-280-98 414-419	74	66	0.002	0.002		
D-280-98 409-414R	94		0.003			
D-280-98 414-419	72		0.002			
D-280-98 419-424	196	224	0.006	0.007		
D-280-98 424.0-426.5	172		0.005			
D-280-98 426.5-429.0	74		0.002			
D-280-98 429.0-431.5	50		0.001			
D-280-98 431.5-434.0	226		0.007			
D-280-98 434.0-435.5	114		0.003			
D-280-98 435.5-438.5	144		0.004			
D-280-98 438.5-440.0	634		0.018			
D-280-98 440-442	446		0.013			
D-280-98 442-444	122		0.004			
D-280-98 444-447	122		0.004			
D-280-98 447-449	52		0.002			
D-280-98 449-454	100		0.003			
D-280-98 454-459	90		0.003			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 459-464	72	60	0.002	0.002		
D-280-98 464-469	204		0.006			
D-280-98 469-474	216	218	0.006	0.006		
D-280-98 474-479	168		0.005			
D-280-98 479.0-482.3	154		0.004			
D-280-98 482.3-484.0	1612	602	0.047	0.018		
D-280-98 484-485	720	790	0.021	0.023		
D-280-98 485-487	216		0.006			
D-280-98 487-489	68		0.002			
D-280-98 489-494	82		0.002			
D-280-98 494.0-496.5	70	70	0.002	0.002		
D-280-98 496.5-499.4	604	476	0.018	0.014		
D-280-98 499.4-501.0	218		0.006			
D-280-98 501.0-504.3	174		0.005			
D-280-98 504.3-507.0	62		0.002			
D-280-98 507.0-511.2	94		0.003			
D-280-98 511.2-514.0	96		0.003			
D-280-98 514-519	70		0.002			
D-280-98 519-524	48		0.001			
D-280-98 524-525	56		0.002			
D-280-98 525.0-526.7	732		0.021			
D-280-98 526.7-529.0	4648	4166	0.136	0.122		
D-280-98 529.0-531.4	4254	5210	0.129	0.152		
D-280-98 531.4-534.0	2436	2140	0.071	0.062		
D-280-98 534.0-536.3	1468		0.043			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050125

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 536.3-539.0	892	1004	0.026	0.029		
D-280-98 539.0-541.5	1508	1630	0.044	0.048		

AUG-31-98 10:42 7023561413 P.16 R-177 Job-539
08/31/1998 09:54 7023561413 AMERICAN ASSAY LABS PAGE 16

Kurt

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050144

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NEWMONT GOLD COMPANY

COPIES TO : C. BALLEW

: R. VANCE

:

:

CLIENT REFERENCE No: D-280-98 RECEIVED : 18 AUG 1998

No. SAMPLES : 49 REPORTED : 18 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

08/27/1998 13:28 7023561413 AMERICAN ASSAY LABS PAGE 01
AUG-27-98 14:16 7023561413 P.01 R-160 Job-514

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050144

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 541.5-544.0	924		0.027			
D-280-98 544.0-546.3	940		0.027			
D-280-98 546.3-549.0	1218		0.036			
D-280-98 549-552	1220		0.036			
D-280-98 552.0-554.8	284		0.008			
D-280-98 554.8-557.0	500		0.015			
D-280-98 557-559	168		0.005			
D-280-98 559.0-560.3	492		0.014			
D-280-98 560.3-562.3	670		0.020			
D-280-98 562.3-565.8	1408		0.041			
D-280-98 565.8-568.4	1074		0.031			
D-280-98 568.4-573.0	282		0.008			
D-280-98 573-578	150		0.004			
D-280-98 578-583	140		0.004			
D-280-98 583-587	94		0.003			
D-280-98 587-591	108		0.003			
D-280-98 591.0-592.8	DTF		DTF			
D-280-98 592.8-597.0	666		0.019			
D-280-98 597-602	52		0.002			
D-280-98 602.0-605.2	138		0.004			
D-280-98 605.2-607.5	56		0.002			
D-280-98 607.5-612.0	116		0.003			
D-280-98 612-614	98		0.003			
D-280-98 614-617	320		0.009			
D-280-98 617-621	DTF		DTF			

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 621.0-624.8	668		0.019			
D-280-98 624.8-629.0	156		0.005			
D-280-98 629-634	54		0.002			
D-280-98 634-638	1072		0.031			
D-280-98 638-641	104		0.003			
D-280-98 641-644	158		0.005			
D-280-98 644-648	118		0.003			
D-280-98 648-654	SAMPLE NOT RECEIVED					
D-280-98 654.0-657.2	1178		0.034			
D-280-98 657.2-661.0	1722		0.050			
D-280-98 661.0-665.5	1782		0.052			
D-280-98 665.5-668.0	274		0.008			
D-280-98 668-673	208		0.006			
D-280-98 673-679	1278		0.037			
D-280-98 679-684	68		0.002			
D-280-98 684-689	212		0.006			
D-280-98 689-693	52		0.002			
D-280-98 693.0-695.5	344		0.010			
D-280-98 695.5-698.5	DTF		DTF			
D-280-98 698.5-701.0	166		0.005			
D-280-98 701-703	272		0.008			
D-280-98 703-705	192		0.006			
D-280-98 705-709	1060		0.031			
D-280-98 709.0-711.2	1696		0.049			
D-280-98 711.2-715.0B	DTF		DTF			

08/27/1998 13:28 7023561413 AMERICAN ASSAY LABS PAGE 03
AUG-27-98 14:16 7023561413 P.03 R-160 Job-514

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050145

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

NEWMONT GOLD COMPANY

COPIES TO : C. BALLEW

: R. VANCE

:

:

CLIENT REFERENCE No: D-280-98 RECEIVED : 18 AUG 1998

No. SAMPLES : 31 REPORTED : 18 AUG 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples or geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag	D210	10%	ppm	0.5
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

SEP-01-98 15:27 7023561414 P.01 R-191 Job-558
09/01/1998 14:41 7023561414 AMERICAN ASSAY LABS PAGE 01

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050145

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 711.2-715.0	66	68	0.002	0.002		
D-280-98 715-719	40		0.001			
D-280-98 719-721	14		<0.001			
D-280-98 721-723	100	90	0.003	0.003		
D-280-98 723-729	36		0.001			
D-280-98 729-734	54		0.002			
D-280-98 734-739	20		<0.001			
D-280-98 739-744	78		0.002			
D-280-98 744-749	138		0.004			
D-280-98 749-754	150		0.004			
D-280-98 754.0-756.4	242		0.007			
D-280-98 756.4-759.8	116		0.003			
D-280-98 759.8-764.0	348		0.010			
D-280-98 764.0-767.7	340		0.010			
D-280-98 767.7-772.0	98		0.003			
D-280-98 772.0-776.5	144		0.004			
D-280-98 776.5-779.0	780	1000	0.023	0.029		
D-280-98 779.0-783.5	56		0.002			
D-280-98 783.5-789.0	54		0.002			
D-280-98 789.0-791.3	72		0.002			
D-280-98 791.3-794.0	112		0.003			
D-280-98 794-797	96		0.003			
D-280-98 797-799	78		0.002			
D-280-98 799.0-802.8	232	212	0.007	0.006		
D-280-98 802.8-806.0	164		0.005			

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP050145

CLIENT : NEWMONT GOLD COMPANY
PROJECT : ROSEBUD
REFERENCE : D-280-98

REPORTED : 18 AUG 1998

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
D-280-98 806.0-808.3	84		0.002			
D-280-98 808.3-811.0	50		0.001			
D-280-98 811.0-815.5	30		<0.001			
D-280-98 815.5-819.0	88	102	0.003	0.003		
D-280-98 819-825	8		<0.001			
D-280-98 819-825B	12650	11440	0.369	0.334		

09/01/1998 14:41 7023561414 AMERICAN ASSAY LABS PAGE 03
SEP-01-98 15:27 7023561414 P.03 R-191 Job-558

SP

SUBMITTAL FORM

PAGE 1

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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Elko, NV 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Mazatlan Office
Telephone/Fax
011-52-69-170035

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: ROSEBUD MINING CO. LLC

Address: P.O. BOX 2610

City WINNEMUCCA State NV Zip 89446

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

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 8/11/98 Number of Samples: 50

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

D-280-98 SAMPLE IDENTIFICATION		TYPE	ELEMENTS REQUIRED	
0-2	67.1-72.3	CORE	AU-AG ACCORDING TO ROSEBUD	
2-7	72.3-77.4		& MINE PROTOCOLS	
	77.4-80.4			
7-12	80.4-84.8		137.3-142.1	186.1-190.5
12-17	84.8-90.2		142.1-147.1	190.5-192
17-27.1	90.2-95		147.1-151.8	192-194.5
27.1-32	95.2-100.7		151.8-157	194.5-196.5
32-37	100.7-105.2		157-160.6	196.5-199
37-41.3	105.2-110.3		160.6-165.3	199-202.2
41.3-46.7	110.3-115		165.3-170.3	202.2-204
46.7-47.4	115-120.4		170.3-175.4	204-206.3
47.4-52.3	120.4-125.1		175.4-180.4	206.3-209
52.3-57.5	125.1-129		180.4-183.4	
57.5-62.3	129-134		183.4-186.1	
62.3-67.1	134-137.3			

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

KURT ALLEN

Results to:

KURT ALLEN

Comments:

CLIENT FILE COPY

SP

SUBMITTAL FORM

PAGE 2

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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Fax
(702) 738-2594

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011-52-69-170035

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: Rosebud Mining Co LLC

Address: P.O. Box 2610

City Winnemucca State NV Zip 89445

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

Project Name: Development Purchase Order Number:

Date Submitted: 8/11/98 Number of Samples: 64

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

SAMPLE IDENTIFICATION		TYPE	ELEMENTS REQUIRED		
209-214	256.5-259	Core	Au-Ag	PER	
214-218.5	259-260.5		Rosebud Mine		
218.5-223.5	260.5-263		Protocols		
223.5-229	263-264				344-349
229-232.8	264-266		285.5-288	309-314	349-354
232.8-236	266-268		288-290	314-318.5	354-359.4
236-238	268-269.8		290-292	318.5-322.5	359.4-361.5
238-240	269.8-271.6		292-295	322.5-323.5	361.5-365
240-243	271.6-274		295-296	323.5-326	365-369
243-245	274-275.1		296-298	326-328.5	369-371.5
245-246.8	275.1-277		298-299	328.5-332.5	371.5-374.5
246.8-248.5	277-279		299-300.4	332.5-334	374.5-379
248.5-250	279-281		300.4-303	334-336	379-384
250-254	281-284		303-306	336-340.3	384-386.5
254-256.5	284-285.5		306-309	340.3-344	386.5-389

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month

[ ] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

Results to:

Comments:

CLIENT FILE COPY

D-280-98	0	10	123.5
	200	9.3	122.7
	404	9	123.2
	604	7	121.2
	789	6.5	120.2

D-280-98	0	11	111.7
	200	9.3	122.7
	404	9	123.2
	604	7	121.2
	789	6.5	120.2

D-280-98
BOX 02
DEPTH
10.0-19_0

D-280-98
BOX 01
DEPTH
0.0-10_0

D-280-98
BOX 03
DEPTH
19.0-28_5

D-280-98
BOX 05
DEPTH
38.5-47.0
39
44
43
46.7

D-280-98
BOX 04
DEPTH
28.5-38.5
32.0
34
37.0

D-280-98
BOX 06
DEPTH
47.0-56.5
47.4
49
52.3
54

D-280-98
BOX 08
DEPTH
66.0-76.0
67.2
69
72.3
74

D-280-98
BOX 07
DEPTH
56.5-66.0
62.3
64
57.5
59

D-280-98
BOX 09
DEPTH
76.0-85.0
77.4
79
80.4
84.8

D-280-98
BOX 11
DEPTH
94.5-104.5
99'
104'
95.2
100.7

D-280-98
BOX 10
DEPTH
85.0-94.5
89
94'
90.4

D-280-98
BOX 12
DEPTH
104.5-114.0
105.7
109'
110.3
114'

D-280-98
BOX 14
DEPTH
123.5-133.0
124
129

D-280-98
BOX 13
DEPTH
114.0-123.5
115.0
117
120.4
122

D-280-98
BOX 15
DEPTH
133.0-142.5
134
137.3
139
142.1

D-280-98
BOX 17
DEPTH
152.0-161.0
151.8
154'
157.0
159'

D-280-98
BOX 16
DEPTH
142.5-152.0
144'
147.1
149'

D-280-98
BOX 18
DEPTH
161.0-170.0
160.6
164'
165.3
169'

D-280-98
BOX 20
DEPTH
179.5-189.0
180.4
184
186.1
183.4

D-280-98
BOX 19
DEPTH
170.0-179.5
170.3
174
175.4
179

D-280-98
BOX 21
DEPTH
189.0-198.5
190.5
192.6
194
195.5
196.5

D-280-98
BOX 23
DEPTH
207.5-217.5
214
209

D-280-98
BOX 22
DEPTH
198.5-207.5
199
202
204
206.3

D-280-98
BOX 24
DEPTH
217.5-226.0
218
223

D-280-98
BOX 26
DEPTH
235.5-245.0

D-280-98
BOX 25
DEPTH
226.0-235.5

D-280-98
BOX 27
DEPTH
245.0-255.0

D-280-98
BOX 29
DEPTH
264.0-273.5
271.6
269
271.0
269.0
270.0

D-280-98
BOX 28
DEPTH
255.0-264.0
256.5
264
260.5
259
263.0

D-280-98
BOX 30
DEPTH
273.5-283.0
277.1
277.0
275.1
279
280

295
MIS-LAT-4
298.0
299
292.0
D-280-98
BOX 32
DEPTH
292.0-302.0

284
285
288.0
290
D-280-98
BOX 31
DEPTH
283.0-292.0

D-280-98
BOX 33
DEPTH
302.0-311.0
305
306.0
309
310

D-280-98
BOX 35
DEPTH
319.0-328.5
322.5
326.0
325

D-280-98
BOX 34
DEPTH
311.0-319.0
318.5
314

D-280-98
BOX 36
DEPTH
328.5-338.0
335
332.5
334
336

349
354
D-280-98
BOX 38
DEPTH
347.5-357.5

344
339
340.3
342
D-280-98
BOX 37
DEPTH
338.0-347.5

D-280-98
DEPTH
357.5-366.0
BOX 39
354
359
364

D-280-98
BOX 41
DEPTH
375.0-384.5

D-280-98
BOX 40
DEPTH
366.0-375.0

D-280-98
BOX 42
DEPTH
384.5-394.0

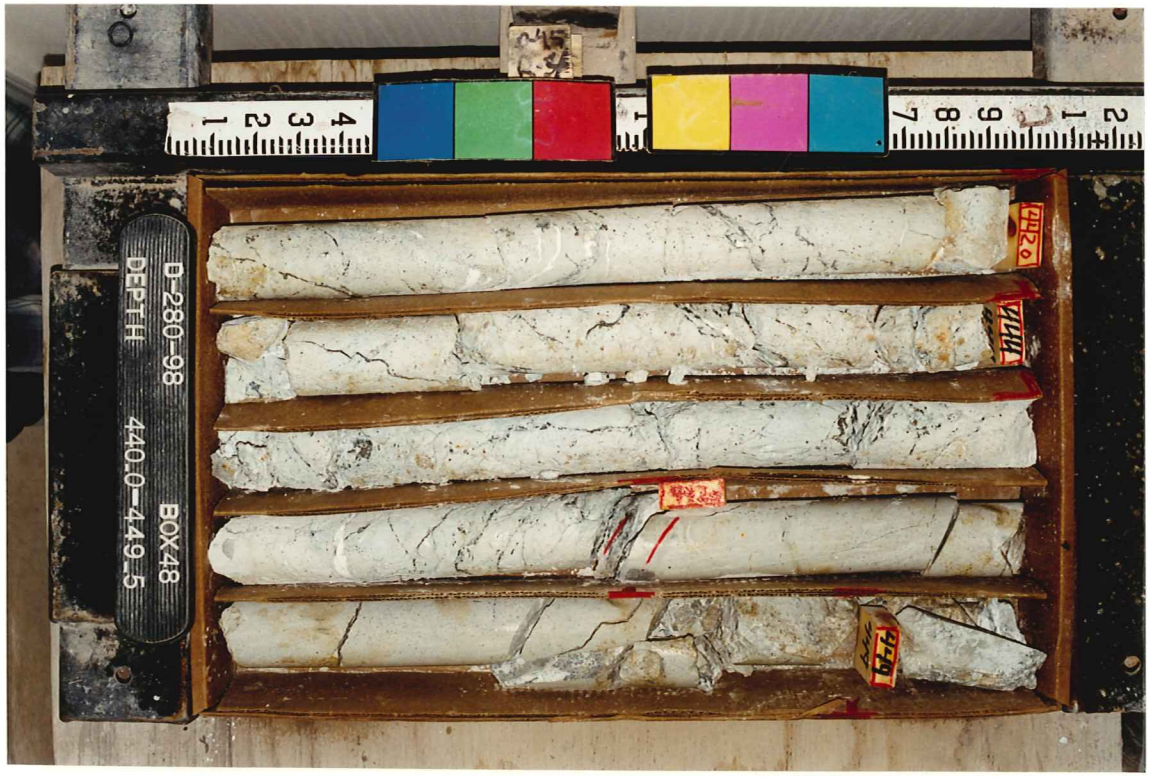
D-280-98
BOX 44
DEPTH 403.0-413.0

D-280-98
BOX 43
DEPTH 394.0-403.0

D-280-98
BOX 45
DEPTH 413.0-422.0

D-280-98
BOX47
DEPTH
432.0-440.0

D-280-98
BOX46
DEPTH
422.0-432.0


D-280-98
BOX48
DEPTH
440.0-449.5

D-280-98
BOX 50
DEPTH
458.5-467.5

D-280-98
BOX 49
DEPTH
449.5-458.5

D-280-98
BOX 51
DEPTH
467.5-477.0

D-280-98
BOX 53
DEPTH
485.0-494.0

D-280-98
BOX 52
DEPTH
477.0-485.0

D-280-98
BOX 54
DEPTH
494.0-503.0

514
517
D-280-98
BOX 56
DEPTH
512.5-522.0

503
504
509
D-280-98
BOX 55
DEPTH
503.0-512.5

524
525
527
529
D-280-98
BOX 57
DEPTH
522.0-530.5

D-280-98
BOX 59
DEPTH
540.5-550_5
541.5
544
549
546.3

D-280-98
BOX 58
DEPTH
530.5-540_5
536.3
534
531.4
539

D-280-98
BOX 60
DEPTH
550.5-559_5
552.0
554.8
554
557.0
559

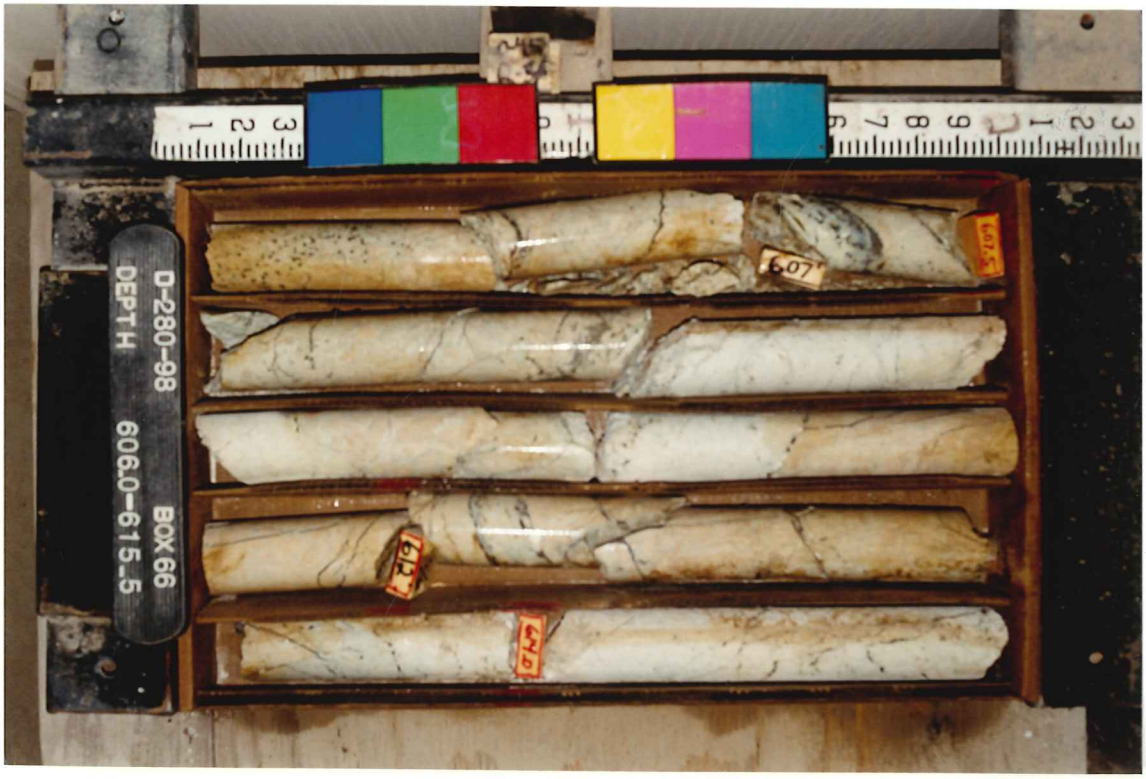
D-280-98
BOX 62
DEPTH
569.5-579.0

D-280-98
BOX 61
DEPTH
559.5-569.5

D-280-98
BOX 63
DEPTH
579.0-588.0

D-280-98
BOX 65
DEPTH
597.0-606.0

D-280-98
BOX 64
DEPTH
588.0-597.0


D-280-98
BOX 66
DEPTH
606.0-615.5

D-280-98
BOX 68
DEPTH
625.0-635.5
629
634

D-280-98
BOX 67
DEPTH
615.5-625.0
621
624

D-280-98
BOX 69
DEPTH
635.5-644.5
638
641.0
644

661.0
665.5
669
D-280-98
BOX 71
DEPTH
659.0-669.0

652.2
659
654
D-280-98
BOX 70
DEPTH
644.5-659.0

678
D-280-98
BOX 73
DEPTH
678.5-688.0

D-280-98
BOX 76
DEPTH
706.0-715.5
709
715.0
711.2

D-280-98
BOX 75
DEPTH
696.5-706.0
699'
694.5
705.0

D-280-98
BOX 77
DEPTH
715.5-725.0
719
721.0
723

D-280-98
BOX 79
DEPTH
733.5-742_0

D-280-98
BOX 78
DEPTH
725.0-733_5

D-280-98
BOX 80
DEPTH
742.0-751_0

D-280-98
BOX 82
DEPTH
760.5-772.0

D-280-98
BOX 81
DEPTH
751.0-760.5

D-280-98
BOX 83
DEPTH
772.0-783.5

D-280-98
BOX 85
DEPTH
793.0-804.0
794.0
799'
802.8
800'
802'
797'

D-280-98
BOX 84
DEPTH
783.5-793.0
789'
791.3

D-280-98
BOX 86
DEPTH
804.0-813.5
801'
806
813
817

D-280-98
BOX 87
DEPTH
813.5-825.0
819

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-98
LEASE Retake
TAKEN BY Hunter
DEPTH Collar
DATE 7-24-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO. 1

HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hec 1A
WELL NAME D-280-98
LEASE
TAKEN BY Hughes
DEPTH 404
DATE 7/13/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-98
LEASE
TAKEN BY Hughes
DEPTH 200
DATE 7/9/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-91
LEASE Retake
TAKEN BY
DEPTH Collar
DATE 7-23-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-98
LEASE
TAKEN BY Magaw / Cowhowich
DEPTH Collar
DATE 7-21-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-98
LEASE
TAKEN BY Magnum/Crnkovich
DEPTH 789'
DATE 7-19-98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

SINGLE SHOT
PHOTO DISC RECORD

COMPANY Hecla
WELL NAME D-280-98
LEASE
TAKEN BY Hughes
DEPTH 604
DATE 7/16/98
DRIFT ANGLE
DIRECTION
TYPE
JOB NO.
HI-1408

06
NW
06
NW
80
NW
80
NW