60000624

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. RS-503
AUTHOR	D. Schoorl; J.P. Rogowski; B. Morris; K. Allen; L.E. Markedon; V. Reid
DATE OF DOC(S)	2000
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Mining Co. LLC;
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 1920'; invoice; geochemistry 89p.

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 2/21/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

RS-503

yr 2000

E. Dreamland.

6000 0624
4010

503

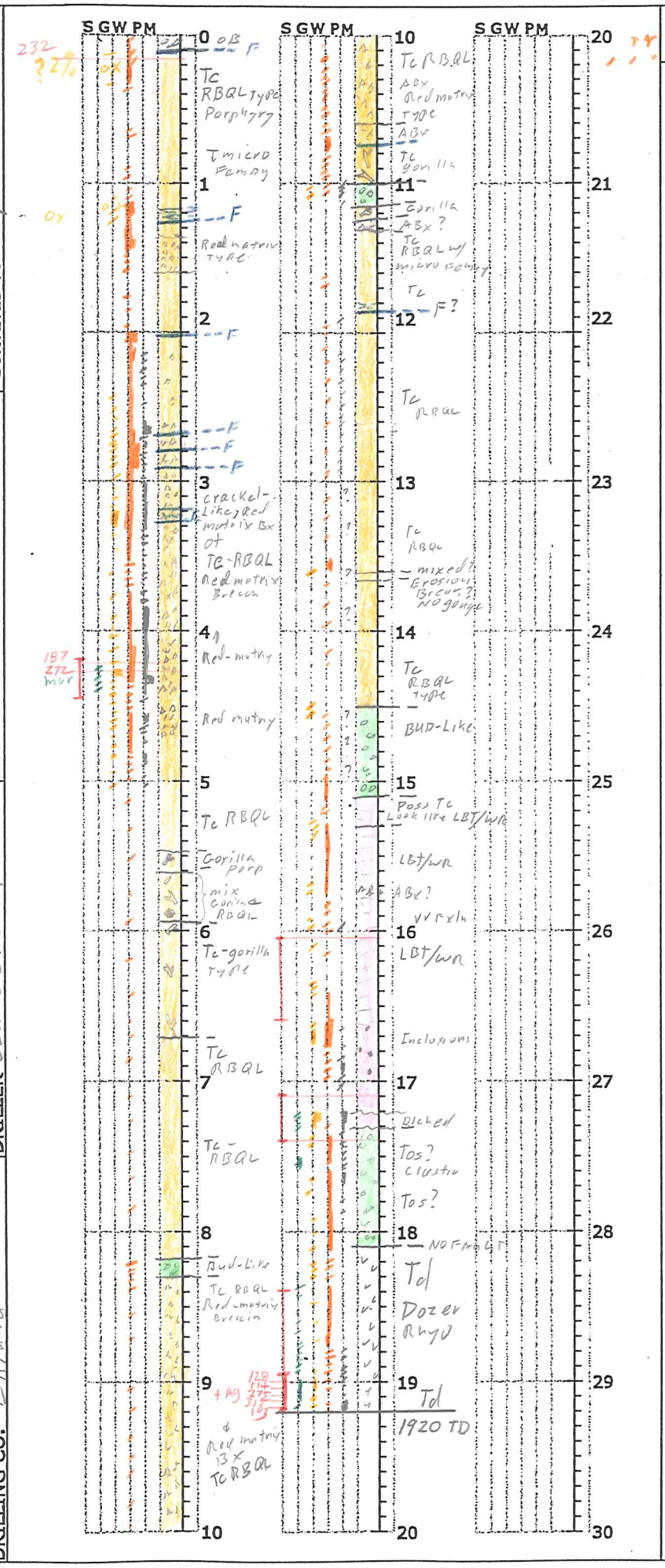
60000624

ROSEBUD MINING COMPANY, LLC.

To Test above 1.5 oz Au at

E. Dreamland

HOLE #	RS-503
START HOLE	14 July 2000
FINISH HOLE	20 July 2000
HOLE TYPE	6" RC
LOGGED BY	Rogowski
BEARING	N 15° W
ANGLE	-48°
T.D	1920
PAGE 1 OF	21
SURVEYED TO	well pad / 1850
COLLAR COORDINATES	
NORTH	2,206,500
EAST	479,448
ELEV	5570
DRILLER	Don Schoon
DRILLING CO.	Eklund



ALTERATION INTENSITY

1 WEAK — 2 MODERATE — 3 STRONG

VERITHIN COLOR

~~737~~ 741	SILICIFICATION
751	GREEN CLAY
747½	WHITE CLAY
755	PYRITE
~~757~~ 737	MARCASITE

GRAPHIC LOG

VERITHIN COLOR

	BRECCIA
741	FAULT 741
	CONTACT
737	QUARTZ VEIN
741½	CALCITE VEIN
747½	CLAY VEIN
755	PYRITE VEIN

(Tc) porphrys Gorilla + RBQL

BUD-Like Clastics

Td - Dozer Rhyo

Hecla MINING COMPANY
ROSEBUD PROJECT
DRILL LOG

INTENSITY
1 = WEAK
2 = MODERATE
3 = STRONG
or % by Vol

HOLE NUMBER RS-503
PAGE 2 OF 21
DATE 14 July to 20 July 2000
LOGGED BY Rogowski
TOTAL DEPTH 1920 TD

LOCATION ROSEBUD. NV
NORTHING 2,206,500
EASTING 479,448
ELEVATION 5570
AZIMUTH N.15W
INCLINATION -48°

AREA E. Dreamland
DRILLING CO. Eklund-Dongschoon
RIG TYPE RC -IR75E
HOLE SIZE 6"
DOWN HOLE SURVEY BY Vern Roell/Wet-Haw to: 1850

0-100 2/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
0		OB	? clay alt. tcpar	MS	Ltgray & dove yellow
10		OB F	? ob prob (RBQLtyp with yell gouge) very strong		
20			argillic alt. consil		
			ox. diss py		
30				MS	
				H	
40		TC RBQL Type porphyry	30 to 100 TC — RBQL type		TC RBQL type porphyry Hem/Kaolin S-Brown
50			mottled blue-gray		
			to Hem red matrix		
60			w/ K-spar (some		
			sanidine) and bio		
70			phenos. — vare		
			Fe may phenos also		
80			weakly Flow		
			banded		
90					
100				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	BIOTITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
0	0					1+2					3							
10	0										0							
20						1+4												
						2												
30	0					2												
	0					1												
40						Tr					0							
50						0					1							
60						0												
	0					Tr												
70	0					1												
80						0												
						0												
90						0												
						Tr												
100	0					Tr					1							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBITE %	BARITE %	METALLURGY: OXIDE	SULF	OPEBOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
0				0	X	Py	< 2%			Jarosite & Gaet w/ clay alt.								
30				Ox	Py	[2%												
				0														

FEET	ANALYTICAL DATA: FROM	TO	W	Au	Ag

503

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RB-503
PAGE 3 OF
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

1 - 200 3/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	CHLORITE	CALCITE	PROPYLITIC %	K-SPAR	ALUNITE	POTASSIC %	OXIDATION 5%	15%	+25%	%	VIENING TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXBOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
100			100 - 200 Tc	H	Tg "RBQL type" Porphyry Jaro Yel + Hem Red-Brn Reddish Brown	0					1					1											0																	
110			100-140 Tc RBQL	H							1					tr											0																	
			type w/ micro	H							1					tr											tr	PyC							Ox	Jaro	etc,	ok	strong					
120			Femags.	S							2-3					tr											tr Ox																	
		F	Pink Gouge	VS							2-3					Tr											tr																	
130				H							2					tr											0																	
											2					tr																											
140			From 135 to 160								1-2					tr																											
			is a micro bx of								1+2					1																											
150			same material								1																																	
			soft clasts & harder								1																																	
160			matrix w/ Red color as in Red matrix Bx								1																																	
											Tr-1																																	
170			160 to 200 - same								tr-1																																	
			as 100 to 135 w/								tr																																	
180			some mottling								Tr																																	
			gray & hemfeld								Tr																																	
190											Tr																																	
											Tr					1																												
200				H		0					TV					0											0																	

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

2-300

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
200		F	Pink gouge	H	Fine matrix porphyry Brick red & m. gray	0					3	gouge only				0											0														
						0					2-3	clast + tr matrix				0											0														
210			200-300 Tc porp.			0					2 & 3					Tr																									
			w/ micro Bx text,			1	in stgrs				2					tr-1																									
220			very similar to			1?					2					1																									
			crushed Bx. Clasts			1					1-2					1																									
230			are usually very			1					1-2					0																									
			soft & matrix			1					2	clasts				tr											0														
240			very hard.			tr					2	clasts only				0											tr														
			Most clasts do			tr or 1	matrix				2					tr											tr						← Py A on fract.								
250			not appear rotated			tr					2					0											tr						"								
			Py A (anhedral) is			tr	matrix				2	clasts															tr														
260			confined to matrix			2					2	clast															tr														
		F	wt gouge			2 & 3	matrix-gray				2 3	clasts															-1	Py A & H													
270			matrix is dry			1	matrix				2 3	clasts															tr														
			red/Brn. or gray			?					3																tr						Py A & H in Bx matrix								
			where silicified			2	matrix/w Py				3	clasts				0											1														
280		F	wt gouge			1	"				3	"				tr											1						"								
			Very difficult			1	"				2	"				0											tr														
			to tell what original			1	"				3																														
290			rock is but Probably			1	"				2	"				0											tr														
		F	wt gouge			1	"				2	"				0											0														
			Tc porphyry			1	"				2	"				0																									
300				H																																					

503

3-400

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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or % by Vol

HOLE NUMBER RB-503
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAGS	SILICIFICATION QUARTS	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VEINING %	VEINING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SEBNIT %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
300		c-Bx	300-400 Tc porphyry & Breccias...(RBQL type)			1-2					2					0											Tr														
310			300-360 & 385 to 400			1-2					2																tr														
			cracked-like red			2					2																tr														
320		F	matrix Breccia			1					2																1														
		F	clasts are soft			2					2																2														
330			& argillized and			2					2																3														
			matrix is reddish-			1					2																1							Trucks of clay stgks				Pale green				
340			brn to gray &			1					2																tr														
			hard, often gray			Tr-1					2																tr														
350			silica w/ diss Py			Tr1					2																														
			in matrix			tr					1					0																									
360						tr					1					1																									
			360-375																																						
			RBQL type porphyry			tr					1					1																									
370			w/ K-spar, plag & Bio			Tr					1					1																									
						tr					1					tr																									
380		c-Bx	375-400 same as 300-400			1					2					0																									
						1					2+3					0																									
390						2-3					2					tr																									
						2-3					2					0																									
400						2-3					2					0																									

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

503 4-500 6/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX	SILICIFICATION CLASTS	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CHLORITE	POTASSIC % K-SPAR	POTASSIC % ALBITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENNING %	VIENNING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	X-SUL %	SEBENITE %	BARITE %	METALLURGY: OXIDE	SULF	OPBOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
400			400 to 440 & 450 to 470	H		2+3					R				0												tr-1														
			Red matrix crackle																																						
410			type Bx of (Tc)			2+3					2																tr														
			or chocolate porphyry			2+3					2+3																tr														
420		Tc Porphyry w/ Crackled Bx	(RBQL type) see																								Tr														
			a few Qt phenos																								1														
430			rare K-spar																								3		tr												
			Clasts are 90%			3					1																1		tr												
440			strongly Argillized			2					1																1		Tr												
			but are area			1					1																1														
450			silicified			tr					1																tr														
						1					2																Tr														
460			440 to 450 - similar			2+3					2																1														
			w/ 304 75 to 500			1					2																1	- w/ silica													
470			but not bxed			1+3					2																2														
			see K-spar, plag,			2					2				0												1														
480			bio & rare Fe-mag			1					2				Tr												1														
			phenos			tr					1				Tr												1	- clots													
490						1+2					1				1												tr														
						tr					1				1												Tr														
500				H		tr					Tr				1												0														

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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or % by Vol

HOLE NUMBER RS-503
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LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

5-600

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGR %	QUARTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	CHLORITE	POTASSIC % K-SPAR	BIOTITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SLF %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXDUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
500		Tc Porphyry & Flows	500 – 600 (Tc)	H	Fxln Flow w/ minor porphyry & Hem/Goethite Frm	1					tr-	1				tr											tr														
510			Could be two			0					tr					1											0														
			porphyry D RBQL													1																									
520			type w/ num micro													1																									
			Femags and																																						
530			Gorilla type w																																						
			Fxln red matrix																																						
540			& glomerophyric													1																									
			plag phenos.													tr																									
550																1																									
560																1																									
			560 – 595 ? ?													tr																									
570			looks like a mix													1																									
			of Gorilla & RBQL																																						
580																																									
590																																									
																1																									
600				H		0					Tr					3											0														

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6-700

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-503
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LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAGN	SILICIFICATION QUARTZ	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % BIOTITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOSURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
600		Gorilla Type Porphyry	600 to 670	H	Hem & Reddish-Brown	0					Tr					/											0														
610			T.C. Gorilla type													/																									
			Hem. Reddish-Brn													/																									
			very fine x'ln matrix													/																									
620			w/ Plag. phenos													Tr																									
			& bio.																																					
630																																									
640																Tr																									
																/																									
650																Tr																									
660																																									
670		RBQL type (Tc) Porphyry	670 to 700 Tc		Hem Red-Brn & Gray																																			
680			RBQL type																																					
			K-spar, plag																																					
690			Bio + Fe mag																																					
			phenos																																					
700				H		0					Tr					Tr											0														

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-503
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TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 7-800
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGS	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALBITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	SEBENE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDE	MIXTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
700		TC RBQL Porphyry	700 to 800 TC	H	1=xln matrix w/ rare phenos & Hem. reddish Brown	0					0-tr					1											0														
710			(RBQL type porp.)													1																										
			Has num. mixe													1																										
720			F.e mags w/													1																										
			occa K-spar,													1																										
730			Plag. & Bio. phenos													1																										
			Ground mass													1																										
740			or matrix is													2																										
			mo. blue-gray to													1																										
750			Hem. reddiss. brn.													1																										
760																																									
770																																									
780																																									
790																																									
800				H		0					0-tr					1											0														

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-503
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LOCATION ROSEBUD. NV
NORTHING
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ELEVATION
AZIMUTH
INCLINATION

AREA 8-900
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

10/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	CHLORITE	CALCITE	PROPYLITIC %	K-SPAR	ALUNITE	POTASSIC %	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDIZ	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
800			800-820 TC			0					0					2													0														
			RBQL type porp	H																																							
810		TC porp	Hum Fenags w	L	Rubble						0					1																											
											0																															
820		Tuff Clay		H							tr																															
			820-830 ? Bud like? cream color Gm w/ Gray Rhyo clasts	MH	gray						1																															
830				MH							1																															
			830 to 900	H							tr																															
840			Appears to be								0																															
			a micro flow Bx																																							
850		TC	Very similar to		gray											1																											
			RBQL type TC porp													2																											
860			but fragmental													1																											
			w/ Blue gray clast													2																											
870			& drk red to													1																											
			gray matrix																																							
880		Fragmental			Heavy Rubble & Bx																																					
890																																										
900				H		0					0					1													0														

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HOLE NUMBER RS-503
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LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 9-1000 11
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEDIME %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
900			900-1000 TC			0					tr					tr										0														
			monolithic	Mod																																					
910			Fragmental RBQ													1																									
			type porphyry																																						
920			See up to 5% bio																																						
			& rare K-spar micro																																						
930			phenos. also plag																																						
			Matrix is Lt Blue-																																						
940			Gray to Hem reddish																																						
			brown. Clasts													1																									
950			are gray. Also													0																									
			contains numerous													1																									
960			micro specks of																																						
			specularite																																						
970			same as 830																																						
			to 900																																						
980			Note: A few of																																						
			the larger clasts																																						
990			could pass for an													1																									
			epiclastic													0																									
1000				Mod		0					tr					0										0															

Fx lv (Auto Bx Like) micro porphyry
Lt Blue Green and Hem reddish brown

Tc RBQ type Porphyry

503

10-1100

12/

Hecla MINING COMPANY

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INTENSITY
1 = WEAK
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DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1000			1000 TO 1060		Porphyry
			T.C. (RBQ type) Bx		
1010			This is NOT a		
			crackel Bx.		
1020			Is the same as		
			900 to 1000		
1030					
1040					Auto Bx and LT Blue grey to Blue grey
1050					
1060			1060 TO 1075 Tc		
			Auto bxa. Similar		
			to above but no Hem		
1070			stain or color		
		F?			mpray
1080			Tc Gorilla type		Porphyry Drk gray
			Fxln matrix is drk		
1090			gray w/ Glomerophyric		
			plagi		
1100			← Trace of cream color		

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX	CLASTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEDIMT %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXDUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1000	0					Tr				tr												0														
1010																																				
1020										tr																										
1030																																				
1040																																				
1050																																				
1060																																				
1070						Tr				1																										
						1?				2																										
1080						Tr				1																										
1090																																				
1100	0					Tr				1												0														

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11-1200

13/

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAJOR	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALBITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SUL %	SEBONE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1100			1100 – 1115																																						
			cream to l.t green	H		1					1					0										tr															
			clastic. Prob Bedline																																						
1110			but very solid			1					1					tr										tr															
					clastic																																				
						0					0					0										0															
			1115 – 1125 near glassy																																						
1120			p.w.p. Gaulla type													1																									
			porp.		porp																																				
																1																									
			1125 – 1130 clastic? or																																						
1130			Au to By		clastic																																				
			1130 to 1180																																						
1140			V.F.xln matrix																																						
			t.c porp. w/																																						
1150			micro Femags																																						
			bio & K spar																																						
					porp																																				
1160				H							0					1																									
				MH	F.xln						Tr-	1				2																									
1170				H							0					tr																									
																1																									
1180																																									
	?F		POSS FAULT		Fault																																				
			1185 – 1200 Tc																																						
1190			V.F.xln. chec porp.																																						
			seen a few sanidine																																						
			& some bio		F.xln porp																																				
1200				H		0					0					1										0															

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12-1300 14/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1200		Tc (chocolate porphyrys)	1200-1300 Tc Confusing! appear to be a v.f.x/ln matrix of both Gorilla & RBQL w/ Fe mag phenos. see Sanidine & equant K-spar w/ bio & rare Fe mags (both micro & larger) matrix is VFx/ln, Lt gray to Hem. Reddish brown, & some almost conchoidal fract. poss. has silicified stgrs.	H	VFx/ln matrix w/ micro porp text.
1210					
1220					
1230					
1240					
1250					
1260					
1270					
1280					
1290					
1300				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXDUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1200	tr+					Tr					1											0														
1210											1																									
1220											1																									
1230											1																									
1240											2																									
1250											1																									
1260											Tr																									
1270											0																									
1280											1																									
1290											2																									
1300	tr					Tr					1											0														

CANT tell if silicification or not is prob very weak

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13-1400

15

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	BIOTITE	OXIDATION 5%	15%	+25%	%	VEINING TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBONE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1300		Tc Porp (RBQ type)	1300 – 1400 Tc porphyry	H		0?					tr?					1											0														
1310			Fxln, Lt gray to Hem Reddish Brown ground mass with bio, k spar and rare Qtz phenos. Has micro specks of specularite in groundmass & poss rare Femags		Mic-Bio											1																										
1320																1																									
1330																tr																									
1340					Porphyritic Mt Rubber Mt						tr					1																										
1350											tr					tr																									
1360			← Poss erosion break appears mixed								2					tr											tr							← single large Py cluster. Pyh.								
1370			more Femags after 1360		F-Xln Red Brn																																				
1380											Tr					1																									
1390					Rbb Mt						1					0																									
											tr					1																									
1400				H		0?					tr?					1											0														

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14 – 1500

16/

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIV	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	CHLORITE	CALCITE	K-SPAR	ALUNITE	PROPYLITIC %	POTASSIC %	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SILBENE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXOXE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1400		TC RHYO PORPHYRY	1400 – 1450	H	Tan	0					1					1																											
			Tc porphyry																																								
1410			Same as 13-1400								tr					2																											
			perhaps less								tr					1																											
1420			Femag								0																																
1430					Less Red																																						
1440																1																											
											0					3																											
1450				H		0					tr					1													tr							← Large cluster of cubes + wet clay							
			1450	MH																																							
			Bud-like cluster,			tr?					1					0													1															
1460			some green in																																								
			matrix, becomes																																								
1470			a tight Bx from																																								
			1490-1500. Do not																																								
1480			see any bio.													0																											
																tr																											
1490		CLASTIC (not)																																									
1500				MH	CREAM to Gray to Pale grn	tr?					1					tr													1							— Single Py A				cube + some			

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15-1600 17

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MASSIVE	SILICIFICATION CLASTS	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SEBNIT %	BARITE %	METALLURGY: OXIDE	SULF	OXIDEX	MOSURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1500			1500–1510			0					2					1																								
			Bud like clastic																																						
1510			as above								2																														
			1510–1530 ?? LBT/WR																																						
			Poss tc but looks								1																														
1520			like LBT/WR, is clastic								tr																														
			input tc could be								tr																														
1530			reddish Bud-like mudstone								tr																														
			1530 LBT/WR ??								2																1														
1540			Cream color, F-xln																																						
			to V.F-xln, Bio																								1														
1550			phyric. Alt													1																									
			masks most of													0																									
1560			it													1																									
																5																									
1570																1											1														
		or ABX									2					0											tr														
1580			Red color								tr					1																									
			mix of Fiber mud & Red F-xln								?																														
1590			← Tr clasts								1																														
						tr					tr																Tr														
1600			← V.V. F-xln			1					1					1											TR														

Lt gray & Hemp Red Brn & Cream

Lt gray to cream

Lt gray & Hemp Red

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AREA 16-1700
DRILLING CO.
RIG TYPE
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DOWN HOLE SURVEY BY

18/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX	CLASTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1600		F?	@ 1600 to 1605 poss Fault. has a mix of Rock types	H	Very Reddish Brn	0					0					2										0														
1610			1605 to 1665								0					2										0														
			? LBT/WR ?? probably,								tr					3										tr	PY A	?? tr												
1620			It looks too fine								0					2										0														
			& In & traces of								0					2										0														
1630			flow bands to								0					1										0														
			be dozer								1					2										tr														
1640											1					2										1						← Large cubes								
											1-2					1										1+														
1650											1-2					1										0						← green clay on fract								
											1															0														
1660											2															-1		tr												
			1665 to 1700 ? LBT/WR?								2					1										tr														
1670			w/ inclusions								2					0										tr														
			Fx In; Flow banded			0					2					0										1														
1680						tr					1					0										2														
			weakly silicified			tr					1					1										tr														
1690			From 1675 to 1700		Pale Green	1					1					2										0														
						tr					1					2										0														
1700				H		1					1					1										0														

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	CHLORITE	POTASSIC % K-SPAR	BIOTITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SILI %	SERICITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDE	MOLYB	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1700			1700-1735																																						
			LBT/WR, Flow	H		0					0					1										0														
1710			banded, Bio phyric																							0														
			FXln		radiolarian																					0														
1720						0					0					1										0														
			Blanket			2					tr					0										3		? tr												
1730						12					1					0										1		tr												
			LBT?			1					1					0										tr														
1740			contam 1735 to 1800			tr					12					1										tr?														
			clastic (Tos?)			tr					2					1										0														
1750			prob. Tos			1					2					1										0														
			well alt &			tr					2					2										1		1				← single frag w mar & Py?								
1760			multi-lithic			1					1															0														
						tr					1															tr	Py H + H					← single Large frag mostly w. silica							
1770					Pale Green	1					2															0														
			Tight 90% mono lithic	MH		2					2					2										tr	Py H						Py H w micro over grains of Py H							
1780						tr					2					1										0														
						tr					2					1																								
1790						tr					2					1																								
						tr					2					2																								
1800				MH		tr					2					1										0														

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18-1900 20/

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1800		Tos Clastic	1800 – 1810 Tos	M H	Pale green
1810			Trace of AL, NO FRACT	M H	
			TD	H	
1820			1810-1900 Dozer		
			Has micro		
1830			marcacite from		
			1850 down, very		
1840		Dozer Rhyo	typical Dozer		
			Rhyo – mx/ln,		
1850			cream to pale		
			mav green		Mx/ln Rhyo (Flow?) Cream to Pale green
1860			Tr to 1% marcacite		
			on fract & diss as		
1870			micro lath		
1880					
1890					
1900				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGN	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
1800	0					2-1					1							
						2-1					1							
						1-2					Tr							
1820						1					0							
						1					0							
1830						Tr?					1-2							
						1					Tr							
1840						2					0							
											1							
1850											1							
											0							
1860											Tr							
											1							
1870						2					1							
						1					0							
1880	0					1					1							
	Tr					1					1							
1890	Tr					1					1							
	1					1					1							
1900	1					1					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OPBOX	MOLUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1800				0														
				0														
				Tr														
1820				Tr														
				Tr														
1830				1								← one Large XI						
				1		Tr						← on Fract						
1840																		
1850																		
						Tr/					Mar Lath (micro)							
1860																		
1870																		
1880																		
1890																		
1900						Tr/												

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FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAJOR	SILICIFICATION QUARTZ	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	DIFFOX	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1900	L V	Dozer Rhyo	1400-1920 TD Dozer Rhyo	H	M.X.F. V.F. Ge. Gneiss	1					2					1											1		2								←		gray w/ Py + SiO2	m g	
1910	L V					tr					2					1											2		2								←		Stgrs		
						tr					2					0											1		2												
1920				M		tr					2					0											tr		tr												
			1920 TD																																						
30			still alt @ 1920 & should have continued even though it was weak.																																						
40																																									
50																																									
60			Great, Best hydrothermal alt																																						
70																																									
80																																									
90																																									
00																																									

American Assay Laboratories

INVOICE

Remit To: P.O. Box 11530
Reno, Nevada 89510
Phone No.: 775-356-0606
Fax No.: 775-356-1413

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

(775) 356-0606

INVOICE NO: SP 0058035-IN
INVOICE DATE: 08/23/00

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
RS-503	KURT ALLEN	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
386	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
385	DRY/JAW CRUSH ENTIRE SAMPLE	2.30	885.50
385	"JONES" RIFFLE SPLIT	2.40	924.00
385	FINE MILLING CHARGE	2.00	770.00
386	Au (1 A.T. FIRE ASSAY)	8.00	3,088.00
386	HYDROCHLORIC/NITRIC DIGESTION	2.00	772.00
386	Ag ANALYSES	1.00	386.00
385	COMPOSITE CHARGE	1.25	481.25
97	MULTI-ELEMENT ICP PACKAGE	13.75	1,333.75

86-2510-477
CA

NET INVOICE:	8,640.50
LESS DISCOUNT:	3,024.18
FREIGHT:	.00
INVOICE TOTAL:	5,616.32

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: RS-503 RECEIVED : 26 JUL 2000

No. SAMPLES : 386 REPORTED : 21 AUG 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 000-005	<5		<0.001		<0.5	<0.02
RS-503 005-010	18		<0.001		<0.5	<0.02
RS-503 010-015	6		<0.001		<0.5	<0.02
RS-503 015-020	232	236	0.007	0.007	<0.5	<0.02
RS-503 020-025	63		0.002		<0.5	<0.02
RS-503 025-030	<5		<0.001		<0.5	<0.02
RS-503 030-035	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 035-040	<5		<0.001		<0.5	<0.02
RS-503 040-045	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 045-050	<5		<0.001		<0.5	<0.02
RS-503 050-055	<5		<0.001		<0.5	<0.02
RS-503 055-060	<5		<0.001		<0.5	<0.02
RS-503 060-065	<5		<0.001		<0.5	<0.02
RS-503 065-070	<5		<0.001		<0.5	<0.02
RS-503 070-075	<5		<0.001		<0.5	<0.02
RS-503 075-080	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 080-085	<5		<0.001		0.8	0.02
RS-503 085-090	<5		<0.001		<0.5	<0.02
RS-503 090-095	<5		<0.001		<0.5	<0.02
RS-503 095-100	<5		<0.001		<0.5	<0.02
RS-503 100-105	<5		<0.001		<0.5	<0.02
RS-503 105-110	<5		<0.001		<0.5	<0.02
RS-503 110-115	<5		<0.001		<0.5	<0.02
RS-503 115-120	<5		<0.001		<0.5	<0.02
RS-503 120-125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 125-130	<5		<0.001		<0.5	<0.02
RS-503 130-135	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 135-140	<5		<0.001		<0.5	<0.02
RS-503 140-145	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 145-150	<5		<0.001		<0.5	<0.02
RS-503 150-155	<5		<0.001		<0.5	<0.02
RS-503 155-160	<5		<0.001		<0.5	<0.02
RS-503 160-165	<5		<0.001		<0.5	<0.02
RS-503 165-170	<5		<0.001		<0.5	<0.02
RS-503 170-175	<5		<0.001		<0.5	<0.02
RS-503 175-180	<5		<0.001		<0.5	<0.02
RS-503 180-185	<5		<0.001		<0.5	<0.02
RS-503 185-190	<5		<0.001		<0.5	<0.02
RS-503 190-195	<5		<0.001		<0.5	<0.02
RS-503 195-200	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 200-205	<5		<0.001		<0.5	<0.02
RS-503 205-210	<5		<0.001		<0.5	<0.02
RS-503 210-215	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 215-220	<5		<0.001		<0.5	<0.02
RS-503 220-225	<5		<0.001		<0.5	<0.02
RS-503 225-230	<5		<0.001		<0.5	<0.02
RS-503 230-235	<5		<0.001		<0.5	<0.02
RS-503 235-240	<5		<0.001		<0.5	<0.02
RS-503 240-245	<5		<0.001		<0.5	<0.02
RS-503 245-250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 250-255	<5		<0.001		<0.5	<0.02
RS-503 255-260	<5		<0.001		<0.5	<0.02
RS-503 260-265	6		<0.001		<0.5	<0.02
RS-503 265-270	7	6	<0.001	<0.001	0.5	<0.02
RS-503 270-275	<5		<0.001		<0.5	<0.02
RS-503 275-280	5		<0.001		<0.5	<0.02
RS-503 280-285	<5		<0.001		<0.5	<0.02
RS-503 285-290	6		<0.001		<0.5	<0.02
RS-503 290-295	5		<0.001		<0.5	<0.02
RS-503 295-300	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 300-305	<5		<0.001		<0.5	<0.02
RS-503 305-310	<5		<0.001		<0.5	<0.02
RS-503 310-315	5		<0.001		<0.5	<0.02
RS-503 315-320	<5		<0.001		<0.5	<0.02
RS-503 320-325	10	10	<0.001	<0.001	<0.5	<0.02
RS-503 325-330	5		<0.001		<0.5	<0.02
RS-503 325-330A	<5	<5	<0.001	<0.001	0.5	<0.02
RS-503 330-335	<5		<0.001		<0.5	<0.02
RS-503 335-340	<5		<0.001		<0.5	<0.02
RS-503 340-345	<5		<0.001		<0.5	<0.02
RS-503 345-350	<5		<0.001		<0.5	<0.02
RS-503 350-355	<5		<0.001		<0.5	<0.02
RS-503 355-360	<5		<0.001		<0.5	<0.02
RS-503 360-365	<5		<0.001		<0.5	<0.02
RS-503 365-370	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 370-375	<5		<0.001		<0.5	<0.02
RS-503 375-380	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 380-385	<5		<0.001		<0.5	<0.02
RS-503 385-390	<5		<0.001		<0.5	<0.02
RS-503 390-395	25	24	<0.001	<0.001	<0.5	<0.02
RS-503 395-400	24		<0.001		<0.5	<0.02
RS-503 400-405	<5		<0.001		<0.5	<0.02
RS-503 405-410	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 410-415	<5		<0.001		<0.5	<0.02
RS-503 415-420	<5		<0.001		<0.5	<0.02
RS-503 420-425	53		0.002		<0.5	<0.02
RS-503 425-430	187		0.005		0.6	<0.02
RS-503 430-435	272		0.008		<0.5	<0.02
RS-503 435-440	59		0.002		<0.5	<0.02
RS-503 440-445	44		0.001		<0.5	<0.02
RS-503 445-450	<5		<0.001		<0.5	<0.02
RS-503 450-455	<5		<0.001		<0.5	<0.02
RS-503 455-460	<5		<0.001		<0.5	<0.02
RS-503 460-465	61		0.002		0.5	<0.02
RS-503 465-470	<5		<0.001		<0.5	<0.02
RS-503 470-475	5		<0.001		<0.5	<0.02
RS-503 475-480	<5		<0.001		<0.5	<0.02
RS-503 480-485	<5		<0.001		0.5	<0.02
RS-503 485-490	<5		<0.001		<0.5	<0.02
RS-503 490-495	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 495-500	<5		<0.001		<0.5	<0.02
RS-503 500-505	<5		<0.001		<0.5	<0.02
RS-503 505-510	<5		<0.001		<0.5	<0.02
RS-503 510-515	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 515-520	<5		<0.001		<0.5	<0.02
RS-503 520-525	<5		<0.001		<0.5	<0.02
RS-503 525-530	<5		<0.001		<0.5	<0.02
RS-503 530-535	<5		<0.001		<0.5	<0.02
RS-503 535-540	<5		<0.001		<0.5	<0.02
RS-503 540-545	<5		<0.001		<0.5	<0.02
RS-503 545-550	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 550-555	<5		<0.001		<0.5	<0.02
RS-503 555-560	<5		<0.001		<0.5	<0.02
RS-503 560-565	<5		<0.001		<0.5	<0.02
RS-503 565-570	<5		<0.001		<0.5	<0.02
RS-503 570-575	<5		<0.001		<0.5	<0.02
RS-503 575-580	<5		<0.001		<0.5	<0.02
RS-503 580-585	<5		<0.001		<0.5	<0.02
RS-503 585-590	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 590-595	<5		<0.001		<0.5	<0.02
RS-503 595-600	<5		<0.001		<0.5	<0.02
RS-503 600-605	<5		<0.001		<0.5	<0.02
RS-503 605-610	5		<0.001		<0.5	<0.02
RS-503 610-615	<5		<0.001		<0.5	<0.02
RS-503 615-620	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

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PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 620-625	<5		<0.001		<0.5	<0.02
RS-503 625-630	<5		<0.001		<0.5	<0.02
RS-503 630-635	<5		<0.001		<0.5	<0.02
RS-503 635-640	<5		<0.001		<0.5	<0.02
RS-503 640-645	<5		<0.001		<0.5	<0.02
RS-503 645-650	<5		<0.001		<0.5	<0.02
RS-503 650-655	<5		<0.001		<0.5	<0.02
RS-503 655-660	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 660-665	<5		<0.001		<0.5	<0.02
RS-503 665-670	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 670-675	<5		<0.001		<0.5	<0.02
RS-503 675-680	<5		<0.001		<0.5	<0.02
RS-503 680-685	<5		<0.001		<0.5	<0.02
RS-503 685-690	<5		<0.001		<0.5	<0.02
RS-503 690-695	<5		<0.001		<0.5	<0.02
RS-503 695-700	<5		<0.001		<0.5	<0.02
RS-503 700-705	<5		<0.001		<0.5	<0.02
RS-503 705-710	<5		<0.001		<0.5	<0.02
RS-503 710-715	<5		<0.001		<0.5	<0.02
RS-503 715-720	<5		<0.001		<0.5	<0.02
RS-503 720-725	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 725-730	<5		<0.001		<0.5	<0.02
RS-503 730-735	<5		<0.001		<0.5	<0.02
RS-503 735-740	<5		<0.001		<0.5	<0.02
RS-503 740-745	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 745-750	<5		<0.001		<0.5	<0.02
RS-503 750-755	<5		<0.001		<0.5	<0.02
RS-503 755-760	<5		<0.001		<0.5	<0.02
RS-503 760-765	<5		<0.001		<0.5	<0.02
RS-503 765-770	<5		<0.001		<0.5	<0.02
RS-503 770-775	<5		<0.001		<0.5	<0.02
RS-503 775-780	<5		<0.001		<0.5	<0.02
RS-503 780-785	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 785-790	<5		<0.001		<0.5	<0.02
RS-503 790-795	<5		<0.001		<0.5	<0.02
RS-503 795-800	<5		<0.001		<0.5	<0.02
RS-503 800-805	<5		<0.001		<0.5	<0.02
RS-503 805-810	<5		<0.001		<0.5	<0.02
RS-503 810-815	<5		<0.001		<0.5	<0.02
RS-503 815-820	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 820-825	<5		<0.001		<0.5	<0.02
RS-503 825-830	<5		<0.001		<0.5	<0.02
RS-503 830-835	<5		<0.001		<0.5	<0.02
RS-503 835-840	<5		<0.001		<0.5	<0.02
RS-503 840-845	<5		<0.001		<0.5	<0.02
RS-503 845-850	<5		<0.001		<0.5	<0.02
RS-503 850-855	<5		<0.001		<0.5	<0.02
RS-503 855-860	<5		<0.001		<0.5	<0.02
RS-503 860-865	<5		<0.001		<0.5	<0.02
RS-503 865-870	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 870-875	<5		<0.001		<0.5	<0.02
RS-503 875-880	<5		<0.001		<0.5	<0.02
RS-503 880-885	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 885-890	<5		<0.001		<0.5	<0.02
RS-503 890-895	<5		<0.001		<0.5	<0.02
RS-503 895-900	<5		<0.001		<0.5	<0.02
RS-503 900-905	<5		<0.001		<0.5	<0.02
RS-503 905-910	<5		<0.001		<0.5	<0.02
RS-503 910-915	<5		<0.001		<0.5	<0.02
RS-503 915-920	<5		<0.001		<0.5	<0.02
RS-503 920-925	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 925-930	<5		<0.001		<0.5	<0.02
RS-503 930-935	<5		<0.001		<0.5	<0.02
RS-503 935-940	<5		<0.001		<0.5	<0.02
RS-503 940-945	<5		<0.001		<0.5	<0.02
RS-503 945-950	<5		<0.001		<0.5	<0.02
RS-503 950-955	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 955-960	<5		<0.001		<0.5	<0.02
RS-503 960-965	<5		<0.001		<0.5	<0.02
RS-503 965-970	<5		<0.001		<0.5	<0.02
RS-503 970-975	<5		<0.001		<0.5	<0.02
RS-503 975-980	<5		<0.001		<0.5	<0.02
RS-503 980-985	<5		<0.001		<0.5	<0.02
RS-503 985-990	<5		<0.001		<0.5	<0.02
RS-503 990-995	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 995-1000	<5		<0.001		<0.5	<0.02
RS-503 1000-1005	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1005-1010	<5		<0.001		<0.5	<0.02
RS-503 1010-1015	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1015-1020	<5		<0.001		<0.5	<0.02
RS-503 1020-1025	<5		<0.001		<0.5	<0.02
RS-503 1025-1030	<5		<0.001		<0.5	<0.02
RS-503 1030-1035	<5		<0.001		<0.5	<0.02
RS-503 1035-1040	<5		<0.001		<0.5	<0.02
RS-503 1040-1045	<5		<0.001		<0.5	<0.02
RS-503 1045-1050	<5		<0.001		<0.5	<0.02
RS-503 1050-1055	<5		<0.001		<0.5	<0.02
RS-503 1055-1060	<5		<0.001		<0.5	<0.02
RS-503 1060-1065	<5		<0.001		<0.5	<0.02
RS-503 1065-1070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1070-1075	<5		<0.001		<0.5	<0.02
RS-503 1075-1080	<5		<0.001		<0.5	<0.02
RS-503 1080-1085	<5		<0.001		<0.5	<0.02
RS-503 1085-1090	<5		<0.001		<0.5	<0.02
RS-503 1090-1095	<5		<0.001		<0.5	<0.02
RS-503 1095-1100	<5		<0.001		<0.5	<0.02
RS-503 1100-1105	<5		<0.001		<0.5	<0.02
RS-503 1105-1110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1110-1115	<5		<0.001		<0.5	<0.02
RS-503 1115-1120	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 21 AUG 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1120-1125	<5		<0.001		<0.5	<0.02
RS-503 1125-1130	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1130-1135	<5		<0.001		<0.5	<0.02
RS-503 1135-1140	<5		<0.001		<0.5	<0.02
RS-503 1140-1145	<5		<0.001		<0.5	<0.02
RS-503 1145-1150	<5		<0.001		<0.5	<0.02
RS-503 1150-1155	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1155-1160	<5		<0.001		<0.5	<0.02
RS-503 1160-1165	<5		<0.001		<0.5	<0.02
RS-503 1165-1170	<5		<0.001		<0.5	<0.02
RS-503 1170-1175	<5		<0.001		<0.5	<0.02
RS-503 1175-1180	<5		<0.001		<0.5	<0.02
RS-503 1180-1185	<5		<0.001		<0.5	<0.02
RS-503 1185-1190	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1190-1195	<5		<0.001		<0.5	<0.02
RS-503 1195-1200	<5		<0.001		<0.5	<0.02
RS-503 1200-1205	<5		<0.001		<0.5	<0.02
RS-503 1205-1210	<5		<0.001		<0.5	<0.02
RS-503 1210-1215	<5		<0.001		<0.5	<0.02
RS-503 1215-1220	<5		<0.001		<0.5	<0.02
RS-503 1220-1225	<5		<0.001		<0.5	<0.02
RS-503 1225-1230	<5		<0.001		<0.5	<0.02
RS-503 1230-1235	<5		<0.001		<0.5	<0.02
RS-503 1235-1240	<5		<0.001		<0.5	<0.02
RS-503 1240-1245	<5		<0.001		<0.5	<0.02

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ANALYSIS REPORT SP058035

American Assay Laboratories

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REFERENCE : RS-503

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1245-1250	<5		<0.001		<0.5	<0.02
RS-503 1250-1255	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1255-1260	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1260-1265	<5		<0.001		<0.5	<0.02
RS-503 1265-1270	<5		<0.001		<0.5	<0.02
RS-503 1270-1275	<5		<0.001		<0.5	<0.02
RS-503 1275-1280	<5		<0.001		<0.5	<0.02
RS-503 1280-1285	<5		<0.001		<0.5	<0.02
RS-503 1285-1290	<5		<0.001		<0.5	<0.02
RS-503 1290-1295	<5		<0.001		<0.5	<0.02
RS-503 1295-1300	<5		<0.001		<0.5	<0.02
RS-503 1300-1305	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1305-1310	<5		<0.001		<0.5	<0.02
RS-503 1310-1315	<5		<0.001		<0.5	<0.02
RS-503 1315-1320	<5		<0.001		<0.5	<0.02
RS-503 1320-1325	<5		<0.001		<0.5	<0.02
RS-503 1325-1330	<5		<0.001		<0.5	<0.02
RS-503 1330-1335	<5		<0.001		<0.5	<0.02
RS-503 1335-1340	<5		<0.001		<0.5	<0.02
RS-503 1340-1345	<5		<0.001		<0.5	<0.02
RS-503 1345-1350	<5		<0.001		<0.5	<0.02
RS-503 1350-1355	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1355-1360	<5		<0.001		<0.5	<0.02
RS-503 1360-1365	<5		<0.001		<0.5	<0.02
RS-503 1365-1370	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1370-1375	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1375-1380	<5		<0.001		<0.5	<0.02
RS-503 1380-1385	<5		<0.001		<0.5	<0.02
RS-503 1385-1390	<5		<0.001		<0.5	<0.02
RS-503 1390-1395	<5		<0.001		<0.5	<0.02
RS-503 1395-1400	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1400-1405	<5		<0.001		<0.5	<0.02
RS-503 1405-1410	<5		<0.001		<0.5	<0.02
RS-503 1410-1415	<5		<0.001		<0.5	<0.02
RS-503 1415-1420	<5		<0.001		<0.5	<0.02
RS-503 1420-1425	<5		<0.001		<0.5	<0.02
RS-503 1425-1430	<5		<0.001		<0.5	<0.02
RS-503 1430-1435	<5		<0.001		<0.5	<0.02
RS-503 1435-1440	<5		<0.001		<0.5	<0.02
RS-503 1440-1445	<5		<0.001		<0.5	<0.02
RS-503 1445-1450	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1450-1455	<5		<0.001		<0.5	<0.02
RS-503 1455-1460	<5		<0.001		<0.5	<0.02
RS-503 1460-1465	<5		<0.001		<0.5	<0.02
RS-503 1465-1470	<5		<0.001		<0.5	<0.02
RS-503 1470-1475	<5		<0.001		0.6	<0.02
RS-503 1475-1480	<5		<0.001		<0.5	<0.02
RS-503 1480-1485	<5		<0.001		<0.5	<0.02
RS-503 1485-1490	<5		<0.001		<0.5	<0.02
RS-503 1490-1495	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058035

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1495-1500	<5		<0.001		<0.5	<0.02
RS-503 1500-1505	<5		<0.001		<0.5	<0.02
RS-503 1505-1510	<5		<0.001		<0.5	<0.02
RS-503 1510-1515	<5		<0.001		<0.5	<0.02
RS-503 1515-1520	<5		<0.001		<0.5	<0.02
RS-503 1520-1525	<5		<0.001		<0.5	<0.02
RS-503 1525-1530	<5		<0.001		<0.5	<0.02
RS-503 1530-1535	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1535-1540	<5		<0.001		<0.5	<0.02
RS-503 1540-1545	8		<0.001		<0.5	<0.02
RS-503 1545-1550	5		<0.001		<0.5	<0.02
RS-503 1550-1555	7		<0.001		<0.5	<0.02
RS-503 1555-1560	8		<0.001		<0.5	<0.02
RS-503 1560-1565	<5		<0.001		<0.5	<0.02
RS-503 1565-1570	5	6	<0.001	<0.001	<0.5	<0.02
RS-503 1570-1575	8		<0.001		<0.5	<0.02
RS-503 1575-1580	<5		<0.001		<0.5	<0.02
RS-503 1580-1585	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1585-1590	5		<0.001		<0.5	<0.02
RS-503 1590-1595	8		<0.001		<0.5	<0.02
RS-503 1595-1600	<5		<0.001		<0.5	<0.02
RS-503 1600-1605	5		<0.001		<0.5	<0.02
RS-503 1605-1610	10		<0.001		<0.5	<0.02
RS-503 1610-1615	23		<0.001		<0.5	<0.02
RS-503 1615-1620	30	38	<0.001	0.001	<0.5	<0.02

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American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1620-1625	10		<0.001		<0.5	<0.02
RS-503 1625-1630	15		<0.001		<0.5	<0.02
RS-503 1630-1635	33	26	<0.001	<0.001	<0.5	<0.02
RS-503 1635-1640	14		<0.001		<0.5	<0.02
RS-503 1640-1645	31		<0.001		<0.5	<0.02
RS-503 1645-1650	22		<0.001		<0.5	<0.02
RS-503 1650-1655	47	52	0.001	0.002	<0.5	<0.02
RS-503 1655-1660	12		<0.001		<0.5	<0.02
RS-503 1660-1665	<5		<0.001		<0.5	<0.02
RS-503 1665-1670	5		<0.001		<0.5	<0.02
RS-503 1670-1675	26		<0.001		<0.5	<0.02
RS-503 1675-1680	<5		<0.001		<0.5	<0.02
RS-503 1680-1685	<5		<0.001		<0.5	<0.02
RS-503 1685-1690	<5		<0.001		<0.5	<0.02
RS-503 1690-1695	5		<0.001		<0.5	<0.02
RS-503 1695-1700	<5		<0.001		<0.5	<0.02
RS-503 1700-1705	<5		<0.001		<0.5	<0.02
RS-503 1705-1710	<5		<0.001		<0.5	<0.02
RS-503 1710-1715	32	36	<0.001	0.001	<0.5	<0.02
RS-503 1715-1720	12		<0.001		<0.5	<0.02
RS-503 1720-1725	15		<0.001		0.7	0.02
RS-503 1725-1730	15		<0.001		<0.5	<0.02
RS-503 1730-1735	31		<0.001		<0.5	<0.02
RS-503 1735-1740	32		<0.001		<0.5	<0.02
RS-503 1740-1745	9	8	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1745-1750	<5		<0.001		<0.5	<0.02
RS-503 1750-1755	5		<0.001		<0.5	<0.02
RS-503 1755-1760	16		<0.001		<0.5	<0.02
RS-503 1760-1765	10		<0.001		<0.5	<0.02
RS-503 1765-1770	5		<0.001		<0.5	<0.02
RS-503 1770-1775	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1775-1780	8		<0.001		<0.5	<0.02
RS-503 1780-1785	7		<0.001		<0.5	<0.02
RS-503 1785-1790	7		<0.001		<0.5	<0.02
RS-503 1790-1795	6		<0.001		<0.5	<0.02
RS-503 1795-1800	<5		<0.001		<0.5	<0.02
RS-503 1800-1805	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1805-1810	5		<0.001		<0.5	<0.02
RS-503 1810-1815	<5		<0.001		<0.5	<0.02
RS-503 1815-1820	<5		<0.001		<0.5	<0.02
RS-503 1820-1825	<5		<0.001		<0.5	<0.02
RS-503 1825-1830	<5		<0.001		<0.5	<0.02
RS-503 1830-1835		SAMPLE NOT RECEIVED				
RS-503 1835-1840	<5		<0.001		<0.5	<0.02
RS-503 1840-1845	24	24	<0.001	<0.001	0.7	0.02
RS-503 1840-1845A	13	16	<0.001	<0.001	0.5	<0.02
RS-503 1845-1850	12		<0.001		<0.5	<0.02
RS-503 1850-1855	7		<0.001		<0.5	<0.02
RS-503 1855-1860	5		<0.001		<0.5	<0.02
RS-503 1860-1865	20		<0.001		<0.5	<0.02

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-503 1865-1870	11	12	<0.001	<0.001	<0.5	<0.02
RS-503 1870-1875	13		<0.001		0.5	<0.02
RS-503 1875-1880	28	32	<0.001	<0.001	1.9	0.06
RS-503 1880-1885	14		<0.001		<0.5	<0.02
RS-503 1885-1890	8		<0.001		<0.5	<0.02
RS-503 1890-1895	56		0.002		1.2	0.04
RS-503 1895-1900	128		0.004		2.0	0.06
RS-503 1900-1905	114	136	0.003	0.004	1.6	0.05
RS-503 1905-1910	275		0.008		4.5	0.13
RS-503 1910-1915	315		0.009		6.8	0.20
RS-503 1915-1920	103		0.003		2.2	0.06
75294	5896		0.172		71.2	2.08

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

PO BOX 11530
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HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

CLIENT REFERENCE No: RS-503 RECEIVED : 26 JUL 2000

No. SAMPLES : 386 REPORTED : 7 AUG 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 000-005	<5		<0.001		<0.5	<0.02
RS-503 005-010	18		<0.001		<0.5	<0.02
RS-503 010-015	6		<0.001		<0.5	<0.02
RS-503 015-020	232	236	0.007	0.007	<0.5	<0.02
RS-503 020-025	63		0.002		<0.5	<0.02
RS-503 025-030	<5		<0.001		<0.5	<0.02
RS-503 030-035	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 035-040	<5		<0.001		<0.5	<0.02
RS-503 040-045	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 045-050	<5		<0.001		<0.5	<0.02
RS-503 050-055	<5		<0.001		<0.5	<0.02
RS-503 055-060	<5		<0.001		<0.5	<0.02
RS-503 060-065	<5		<0.001		<0.5	<0.02
RS-503 065-070	<5		<0.001		<0.5	<0.02
RS-503 070-075	<5		<0.001		<0.5	<0.02
RS-503 075-080	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 080-085	<5		<0.001		0.8	0.02
RS-503 085-090	<5		<0.001		<0.5	<0.02
RS-503 090-095	<5		<0.001		<0.5	<0.02
RS-503 095-100	<5		<0.001		<0.5	<0.02
RS-503 100-105	<5		<0.001		<0.5	<0.02
RS-503 105-110	<5		<0.001		<0.5	<0.02
RS-503 110-115	<5		<0.001		<0.5	<0.02
RS-503 115-120	<5		<0.001		<0.5	<0.02
RS-503 120-125	<5		<0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 125-130	<5		<0.001		<0.5	<0.02
RS-503 130-135	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 135-140	<5		<0.001		<0.5	<0.02
RS-503 140-145	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 145-150	<5		<0.001		<0.5	<0.02
RS-503 150-155	<5		<0.001		<0.5	<0.02
RS-503 155-160	<5		<0.001		<0.5	<0.02
RS-503 160-165	<5		<0.001		<0.5	<0.02
RS-503 165-170	<5		<0.001		<0.5	<0.02
RS-503 170-175	<5		<0.001		<0.5	<0.02
RS-503 175-180	<5		<0.001		<0.5	<0.02
RS-503 180-185	<5		<0.001		<0.5	<0.02
RS-503 185-190	<5		<0.001		<0.5	<0.02
RS-503 190-195	<5		<0.001		<0.5	<0.02
RS-503 195-200	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 200-205	<5		<0.001		<0.5	<0.02
RS-503 205-210	<5		<0.001		<0.5	<0.02
RS-503 210-215	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 215-220	<5		<0.001		<0.5	<0.02
RS-503 220-225	<5		<0.001		<0.5	<0.02
RS-503 225-230	<5		<0.001		<0.5	<0.02
RS-503 230-235	<5		<0.001		<0.5	<0.02
RS-503 235-240	<5		<0.001		<0.5	<0.02
RS-503 240-245	<5		<0.001		<0.5	<0.02
RS-503 245-250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 250-255	<5		<0.001		<0.5	<0.02
RS-503 255-260	<5		<0.001		<0.5	<0.02
RS-503 260-265	6		<0.001		<0.5	<0.02
RS-503 265-270	7	6	<0.001	<0.001	0.5	<0.02
RS-503 270-275	<5		<0.001		<0.5	<0.02
RS-503 275-280	5		<0.001		<0.5	<0.02
RS-503 280-285	<5		<0.001		<0.5	<0.02
RS-503 285-290	6		<0.001		<0.5	<0.02
RS-503 290-295	5		<0.001		<0.5	<0.02
RS-503 295-300	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 300-305	<5		<0.001		<0.5	<0.02
RS-503 305-310	<5		<0.001		<0.5	<0.02
RS-503 310-315	5		<0.001		<0.5	<0.02
RS-503 315-320	<5		<0.001		<0.5	<0.02
RS-503 320-325	10	10	<0.001	<0.001	<0.5	<0.02
RS-503 325-330	5		<0.001		<0.5	<0.02
RS-503 325-330A	<5	<5	<0.001	<0.001	0.5	<0.02
RS-503 330-335	<5		<0.001		<0.5	<0.02
RS-503 335-340	<5		<0.001		<0.5	<0.02
RS-503 340-345	<5		<0.001		<0.5	<0.02
RS-503 345-350	<5		<0.001		<0.5	<0.02
RS-503 350-355	<5		<0.001		<0.5	<0.02
RS-503 355-360	<5		<0.001		<0.5	<0.02
RS-503 360-365	<5		<0.001		<0.5	<0.02
RS-503 365-370	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 370-375	<5		<0.001		<0.5	<0.02
RS-503 375-380	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 380-385	<5		<0.001		<0.5	<0.02
RS-503 385-390	<5		<0.001		<0.5	<0.02
RS-503 390-395	25	24	<0.001	<0.001	<0.5	<0.02
RS-503 395-400	24		<0.001		<0.5	<0.02
RS-503 400-405	<5		<0.001		<0.5	<0.02
RS-503 405-410	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 410-415	<5		<0.001		<0.5	<0.02
RS-503 415-420	<5		<0.001		<0.5	<0.02
RS-503 420-425	53		0.002		<0.5	<0.02
RS-503 425-430	187		0.005		0.6	<0.02
RS-503 430-435	272		0.008		<0.5	<0.02
RS-503 435-440	59		0.002		<0.5	<0.02
RS-503 440-445	44		0.001		<0.5	<0.02
RS-503 445-450	<5		<0.001		<0.5	<0.02
RS-503 450-455	<5		<0.001		<0.5	<0.02
RS-503 455-460	<5		<0.001		<0.5	<0.02
RS-503 460-465	61		0.002		0.5	<0.02
RS-503 465-470	<5		<0.001		<0.5	<0.02
RS-503 470-475	5		<0.001		<0.5	<0.02
RS-503 475-480	<5		<0.001		<0.5	<0.02
RS-503 480-485	<5		<0.001		0.5	<0.02
RS-503 485-490	<5		<0.001		<0.5	<0.02
RS-503 490-495	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 495-500	<5		<0.001		<0.5	<0.02
RS-503 500-505	<5		<0.001		<0.5	<0.02
RS-503 505-510	<5		<0.001		<0.5	<0.02
RS-503 510-515	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 515-520	<5		<0.001		<0.5	<0.02
RS-503 520-525	<5		<0.001		<0.5	<0.02
RS-503 525-530	<5		<0.001		<0.5	<0.02
RS-503 530-535	<5		<0.001		<0.5	<0.02
RS-503 535-540	<5		<0.001		<0.5	<0.02
RS-503 540-545	<5		<0.001		<0.5	<0.02
RS-503 545-550	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 550-555	<5		<0.001		<0.5	<0.02
RS-503 555-560	<5		<0.001		<0.5	<0.02
RS-503 560-565	<5		<0.001		<0.5	<0.02
RS-503 565-570	<5		<0.001		<0.5	<0.02
RS-503 570-575	<5		<0.001		<0.5	<0.02
RS-503 575-580	<5		<0.001		<0.5	<0.02
RS-503 580-585	<5		<0.001		<0.5	<0.02
RS-503 585-590	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 590-595	<5		<0.001		<0.5	<0.02
RS-503 595-600	<5		<0.001		<0.5	<0.02
RS-503 600-605	<5		<0.001		<0.5	<0.02
RS-503 605-610	5		<0.001		<0.5	<0.02
RS-503 610-615	<5		<0.001		<0.5	<0.02
RS-503 615-620	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 620-625	<5		<0.001		<0.5	<0.02
RS-503 625-630	<5		<0.001		<0.5	<0.02
RS-503 630-635	<5		<0.001		<0.5	<0.02
RS-503 635-640	<5		<0.001		<0.5	<0.02
RS-503 640-645	<5		<0.001		<0.5	<0.02
RS-503 645-650	<5		<0.001		<0.5	<0.02
RS-503 650-655	<5		<0.001		<0.5	<0.02
RS-503 655-660	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 660-665	<5		<0.001		<0.5	<0.02
RS-503 665-670	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 670-675	<5		<0.001		<0.5	<0.02
RS-503 675-680	<5		<0.001		<0.5	<0.02
RS-503 680-685	<5		<0.001		<0.5	<0.02
RS-503 685-690	<5		<0.001		<0.5	<0.02
RS-503 690-695	<5		<0.001		<0.5	<0.02
RS-503 695-700	<5		<0.001		<0.5	<0.02
RS-503 700-705	<5		<0.001		<0.5	<0.02
RS-503 705-710	<5		<0.001		<0.5	<0.02
RS-503 710-715	<5		<0.001		<0.5	<0.02
RS-503 715-720	<5		<0.001		<0.5	<0.02
RS-503 720-725	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 725-730	<5		<0.001		<0.5	<0.02
RS-503 730-735	<5		<0.001		<0.5	<0.02
RS-503 735-740	<5		<0.001		<0.5	<0.02
RS-503 740-745	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 745-750	<5		<0.001		<0.5	<0.02
RS-503 750-755	<5		<0.001		<0.5	<0.02
RS-503 755-760	<5		<0.001		<0.5	<0.02
RS-503 760-765	<5		<0.001		<0.5	<0.02
RS-503 765-770	<5		<0.001		<0.5	<0.02
RS-503 770-775	<5		<0.001		<0.5	<0.02
RS-503 775-780	<5		<0.001		<0.5	<0.02
RS-503 780-785	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 785-790	<5		<0.001		<0.5	<0.02
RS-503 790-795	<5		<0.001		<0.5	<0.02
RS-503 795-800	<5		<0.001		<0.5	<0.02
RS-503 800-805	<5		<0.001		<0.5	<0.02
RS-503 805-810	<5		<0.001		<0.5	<0.02
RS-503 810-815	<5		<0.001		<0.5	<0.02
RS-503 815-820	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 820-825	<5		<0.001		<0.5	<0.02
RS-503 825-830	<5		<0.001		<0.5	<0.02
RS-503 830-835	<5		<0.001		<0.5	<0.02
RS-503 835-840	<5		<0.001		<0.5	<0.02
RS-503 840-845	<5		<0.001		<0.5	<0.02
RS-503 845-850	<5		<0.001		<0.5	<0.02
RS-503 850-855	<5		<0.001		<0.5	<0.02
RS-503 855-860	<5		<0.001		<0.5	<0.02
RS-503 860-865	<5		<0.001		<0.5	<0.02
RS-503 865-870	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 870-875	<5		<0.001		<0.5	<0.02
RS-503 875-880	<5		<0.001		<0.5	<0.02
RS-503 880-885	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 885-890	<5		<0.001		<0.5	<0.02
RS-503 890-895	<5		<0.001		<0.5	<0.02
RS-503 895-900	<5		<0.001		<0.5	<0.02
RS-503 900-905	<5		<0.001		<0.5	<0.02
RS-503 905-910	<5		<0.001		<0.5	<0.02
RS-503 910-915	<5		<0.001		<0.5	<0.02
RS-503 915-920	<5		<0.001		<0.5	<0.02
RS-503 920-925	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 925-930	<5		<0.001		<0.5	<0.02
RS-503 930-935	<5		<0.001		<0.5	<0.02
RS-503 935-940	<5		<0.001		<0.5	<0.02
RS-503 940-945	<5		<0.001		<0.5	<0.02
RS-503 945-950	<5		<0.001		<0.5	<0.02
RS-503 950-955	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 955-960	<5		<0.001		<0.5	<0.02
RS-503 960-965	<5		<0.001		<0.5	<0.02
RS-503 965-970	<5		<0.001		<0.5	<0.02
RS-503 970-975	<5		<0.001		<0.5	<0.02
RS-503 975-980	<5		<0.001		<0.5	<0.02
RS-503 980-985	<5		<0.001		<0.5	<0.02
RS-503 985-990	<5		<0.001		<0.5	<0.02
RS-503 990-995	<5		<0.001		<0.5	<0.02

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PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 995-1000	<5		<0.001		<0.5	<0.02
RS-503 1000-1005	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1005-1010	<5		<0.001		<0.5	<0.02
RS-503 1010-1015	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1015-1020	<5		<0.001		<0.5	<0.02
RS-503 1020-1025	<5		<0.001		<0.5	<0.02
RS-503 1025-1030	<5		<0.001		<0.5	<0.02
RS-503 1030-1035	<5		<0.001		<0.5	<0.02
RS-503 1035-1040	<5		<0.001		<0.5	<0.02
RS-503 1040-1045	<5		<0.001		<0.5	<0.02
RS-503 1045-1050	<5		<0.001		<0.5	<0.02
RS-503 1050-1055	<5		<0.001		<0.5	<0.02
RS-503 1055-1060	<5		<0.001		<0.5	<0.02
RS-503 1060-1065	<5		<0.001		<0.5	<0.02
RS-503 1065-1070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1070-1075	<5		<0.001		<0.5	<0.02
RS-503 1075-1080	<5		<0.001		<0.5	<0.02
RS-503 1080-1085	<5		<0.001		<0.5	<0.02
RS-503 1085-1090	<5		<0.001		<0.5	<0.02
RS-503 1090-1095	<5		<0.001		<0.5	<0.02
RS-503 1095-1100	<5		<0.001		<0.5	<0.02
RS-503 1100-1105	<5		<0.001		<0.5	<0.02
RS-503 1105-1110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1110-1115	<5		<0.001		<0.5	<0.02
RS-503 1115-1120	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1120-1125	<5		<0.001		<0.5	<0.02
RS-503 1125-1130	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1130-1135	<5		<0.001		<0.5	<0.02
RS-503 1135-1140	<5		<0.001		<0.5	<0.02
RS-503 1140-1145	<5		<0.001		<0.5	<0.02
RS-503 1145-1150	<5		<0.001		<0.5	<0.02
RS-503 1150-1155	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1155-1160	<5		<0.001		<0.5	<0.02
RS-503 1160-1165	<5		<0.001		<0.5	<0.02
RS-503 1165-1170	<5		<0.001		<0.5	<0.02
RS-503 1170-1175	<5		<0.001		<0.5	<0.02
RS-503 1175-1180	<5		<0.001		<0.5	<0.02
RS-503 1180-1185	<5		<0.001		<0.5	<0.02
RS-503 1185-1190	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1190-1195	<5		<0.001		<0.5	<0.02
RS-503 1195-1200	<5		<0.001		<0.5	<0.02
RS-503 1200-1205	<5		<0.001		<0.5	<0.02
RS-503 1205-1210	<5		<0.001		<0.5	<0.02
RS-503 1210-1215	<5		<0.001		<0.5	<0.02
RS-503 1215-1220	<5		<0.001		<0.5	<0.02
RS-503 1220-1225	<5		<0.001		<0.5	<0.02
RS-503 1225-1230	<5		<0.001		<0.5	<0.02
RS-503 1230-1235	<5		<0.001		<0.5	<0.02
RS-503 1235-1240	<5		<0.001		<0.5	<0.02
RS-503 1240-1245	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

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PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1245-1250	<5		<0.001		<0.5	<0.02
RS-503 1250-1255	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1255-1260	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1260-1265	<5		<0.001		<0.5	<0.02
RS-503 1265-1270	<5		<0.001		<0.5	<0.02
RS-503 1270-1275	<5		<0.001		<0.5	<0.02
RS-503 1275-1280	<5		<0.001		<0.5	<0.02
RS-503 1280-1285	<5		<0.001		<0.5	<0.02
RS-503 1285-1290	<5		<0.001		<0.5	<0.02
RS-503 1290-1295	<5		<0.001		<0.5	<0.02
RS-503 1295-1300	<5		<0.001		<0.5	<0.02
RS-503 1300-1305	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1305-1310	<5		<0.001		<0.5	<0.02
RS-503 1310-1315	<5		<0.001		<0.5	<0.02
RS-503 1315-1320	<5		<0.001		<0.5	<0.02
RS-503 1320-1325	<5		<0.001		<0.5	<0.02
RS-503 1325-1330	<5		<0.001		<0.5	<0.02
RS-503 1330-1335	<5		<0.001		<0.5	<0.02
RS-503 1335-1340	<5		<0.001		<0.5	<0.02
RS-503 1340-1345	<5		<0.001		<0.5	<0.02
RS-503 1345-1350	<5		<0.001		<0.5	<0.02
RS-503 1350-1355	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1355-1360	<5		<0.001		<0.5	<0.02
RS-503 1360-1365	<5		<0.001		<0.5	<0.02
RS-503 1365-1370	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1370-1375	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1375-1380	<5		<0.001		<0.5	<0.02
RS-503 1380-1385	<5		<0.001		<0.5	<0.02
RS-503 1385-1390	<5		<0.001		<0.5	<0.02
RS-503 1390-1395	<5		<0.001		<0.5	<0.02
RS-503 1395-1400	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1400-1405	<5		<0.001		<0.5	<0.02
RS-503 1405-1410	<5		<0.001		<0.5	<0.02
RS-503 1410-1415	<5		<0.001		<0.5	<0.02
RS-503 1415-1420	<5		<0.001		<0.5	<0.02
RS-503 1420-1425	<5		<0.001		<0.5	<0.02
RS-503 1425-1430	<5		<0.001		<0.5	<0.02
RS-503 1430-1435	<5		<0.001		<0.5	<0.02
RS-503 1435-1440	<5		<0.001		<0.5	<0.02
RS-503 1440-1445	<5		<0.001		<0.5	<0.02
RS-503 1445-1450	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1450-1455	<5		<0.001		<0.5	<0.02
RS-503 1455-1460	<5		<0.001		<0.5	<0.02
RS-503 1460-1465	<5		<0.001		<0.5	<0.02
RS-503 1465-1470	<5		<0.001		<0.5	<0.02
RS-503 1470-1475	<5		<0.001		0.6	<0.02
RS-503 1475-1480	<5		<0.001		<0.5	<0.02
RS-503 1480-1485	<5		<0.001		<0.5	<0.02
RS-503 1485-1490	<5		<0.001		<0.5	<0.02
RS-503 1490-1495	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1495-1500	<5		<0.001		<0.5	<0.02
RS-503 1500-1505	<5		<0.001		<0.5	<0.02
RS-503 1505-1510	<5		<0.001		<0.5	<0.02
RS-503 1510-1515	<5		<0.001		<0.5	<0.02
RS-503 1515-1520	<5		<0.001		<0.5	<0.02
RS-503 1520-1525	<5		<0.001		<0.5	<0.02
RS-503 1525-1530	<5		<0.001		<0.5	<0.02
RS-503 1530-1535	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-503 1535-1540	<5		<0.001		<0.5	<0.02
RS-503 1540-1545	8		<0.001		<0.5	<0.02
RS-503 1545-1550	5		<0.001		<0.5	<0.02
RS-503 1550-1555	7		<0.001		<0.5	<0.02
RS-503 1555-1560	8		<0.001		<0.5	<0.02
RS-503 1560-1565	<5		<0.001		<0.5	<0.02
RS-503 1565-1570	5	6	<0.001	<0.001	<0.5	<0.02
RS-503 1570-1575	8		<0.001		<0.5	<0.02
RS-503 1575-1580	<5		<0.001		<0.5	<0.02
RS-503 1580-1585	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1585-1590	5		<0.001		<0.5	<0.02
RS-503 1590-1595	8		<0.001		<0.5	<0.02
RS-503 1595-1600	<5		<0.001		<0.5	<0.02
RS-503 1600-1605	5		<0.001		<0.5	<0.02
RS-503 1605-1610	10		<0.001		<0.5	<0.02
RS-503 1610-1615	23		<0.001		<0.5	<0.02
RS-503 1615-1620	30	38	<0.001	0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1620-1625	10		<0.001		<0.5	<0.02
RS-503 1625-1630	15		<0.001		<0.5	<0.02
RS-503 1630-1635	33	26	<0.001	<0.001	<0.5	<0.02
RS-503 1635-1640	14		<0.001		<0.5	<0.02
RS-503 1640-1645	31		<0.001		<0.5	<0.02
RS-503 1645-1650	22		<0.001		<0.5	<0.02
RS-503 1650-1655	47	52	0.001	0.002	<0.5	<0.02
RS-503 1655-1660	12		<0.001		<0.5	<0.02
RS-503 1660-1665	<5		<0.001		<0.5	<0.02
RS-503 1665-1670	5		<0.001		<0.5	<0.02
RS-503 1670-1675	26		<0.001		<0.5	<0.02
RS-503 1675-1680	<5		<0.001		<0.5	<0.02
RS-503 1680-1685	<5		<0.001		<0.5	<0.02
RS-503 1685-1690	<5		<0.001		<0.5	<0.02
RS-503 1690-1695	5		<0.001		<0.5	<0.02
RS-503 1695-1700	<5		<0.001		<0.5	<0.02
RS-503 1700-1705	<5		<0.001		<0.5	<0.02
RS-503 1705-1710	<5		<0.001		<0.5	<0.02
RS-503 1710-1715	32	36	<0.001	0.001	<0.5	<0.02
RS-503 1715-1720	12		<0.001		<0.5	<0.02
RS-503 1720-1725	15		<0.001		0.7	0.02
RS-503 1725-1730	15		<0.001		<0.5	<0.02
RS-503 1730-1735	31		<0.001		<0.5	<0.02
RS-503 1735-1740	32		<0.001		<0.5	<0.02
RS-503 1740-1745	9	8	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

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REFERENCE : RS-503

REPORTED : 7 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1745-1750	<5		<0.001		<0.5	<0.02
RS-503 1750-1755	5		<0.001		<0.5	<0.02
RS-503 1755-1760	16		<0.001		<0.5	<0.02
RS-503 1760-1765	10		<0.001		<0.5	<0.02
RS-503 1765-1770	5		<0.001		<0.5	<0.02
RS-503 1770-1775	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1775-1780	8		<0.001		<0.5	<0.02
RS-503 1780-1785	7		<0.001		<0.5	<0.02
RS-503 1785-1790	7		<0.001		<0.5	<0.02
RS-503 1790-1795	6		<0.001		<0.5	<0.02
RS-503 1795-1800	<5		<0.001		<0.5	<0.02
RS-503 1800-1805	6	6	<0.001	<0.001	<0.5	<0.02
RS-503 1805-1810	5		<0.001		<0.5	<0.02
RS-503 1810-1815	<5		<0.001		<0.5	<0.02
RS-503 1815-1820	<5		<0.001		<0.5	<0.02
RS-503 1820-1825	<5		<0.001		<0.5	<0.02
RS-503 1825-1830	<5		<0.001		<0.5	<0.02
RS-503 1830-1835	SAMPLE NOT RECEIVED					
RS-503 1835-1840	<5		<0.001		<0.5	<0.02
RS-503 1840-1845	24	24	<0.001	<0.001	0.7	0.02
RS-503 1840-1845A	13	16	<0.001	<0.001	0.5	<0.02
RS-503 1845-1850	12		<0.001		<0.5	<0.02
RS-503 1850-1855	7		<0.001		<0.5	<0.02
RS-503 1855-1860	5		<0.001		<0.5	<0.02
RS-503 1860-1865	20		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RS-503

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1865-1870	11	12	<0.001	<0.001	<0.5	<0.02
RS-503 1870-1875	13		<0.001		0.5	<0.02
RS-503 1875-1880	DTF		DTF		1.9	0.06
RS-503 1880-1885	14		<0.001		<0.5	<0.02
RS-503 1885-1890	8		<0.001		<0.5	<0.02
RS-503 1890-1895	56		0.002		1.2	0.04
RS-503 1895-1900	128		0.004		2.0	0.06
RS-503 1900-1905	114	136	0.003	0.004	1.6	0.05
RS-503 1905-1910	275	605	0.008		4.5	0.13
RS-503 1910-1915	315		0.009		6.8	0.20
RS-503 1915-1920	103		0.003		2.2	0.06
75294	5896		0.172		71.2	2.08

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

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RENO NV,USA
Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
: DTF Results
:

CLIENT REFERENCE No: RS-503 RECEIVED : 26 JUL 2000

No. SAMPLES : 386 REPORTED : 9 AUG 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

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 : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058035

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-503

REPORTED : 9 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-503 1865-1870	11	12	<0.001	<0.001	<0.5	<0.02
RS-503 1870-1875	13		<0.001		0.5	<0.02
RS-503 1875-1880	28	32	<0.001	<0.001	1.9	0.06
RS-503 1880-1885	14		<0.001		<0.5	<0.02
RS-503 1885-1890	8		<0.001		<0.5	<0.02
RS-503 1890-1895	56		0.002		1.2	0.04
RS-503 1895-1900	128		0.004		2.0	0.06
RS-503 1900-1905	114	136	0.003	0.004	1.6	0.05
RS-503 1905-1910	275		0.008		4.5	0.13
RS-503 1910-1915	315		0.009		6.8	0.20
RS-503 1915-1920	103		0.003		2.2	0.06
75294	5896		0.172		71.2	2.08

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
PHONE: (775) 356-0606
FAX: (775) 356-1413

CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP68035
METHOD: AAL03-0

ELEMENT SAMPLES	Ca %	Cd ppm	Co ppm	Ag ppb	Al %	As ppm	Au ppb	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
RS-503 0000-0020	0.68	0.17	0.9	63	0.62	18.8	63.8	8	108.00	0.24	0.6	0.09	0.60	4.5	8.29	2.28	4.6	663	0.24	22.7	0.1	72	1.31	0.103	6.2	0.014	23.64	0.06	10.19	1	2	52.6	<.02	9.3	0.003	0.07	1.1	14	0.5	19.6
RS-503 0020-0040	0.68	0.05	0.9	61	0.56	13.8	20.9	4	72.60	0.04	0.16	1.01	0.50	3.8	4.67	2.14	3	602	0.23	31.8	0.03	390	1.3	0.035	3.5	0.012	17.89	0.01	7.71	1.2	1.4	49.5	<.02	11.5	0.009	0.38	1.3	16	1	34.8
RS-503 0040-0060	1.06	0.14	0.9	38	0.46	3.3	2	8	56.60	0.05	1.06	0.96	0.30	4.4	3.63	1.97	1.6	32	0.23	25.2	0.04	690	1.67	0.034	3.4	0.012	16.74	<.01	2.35	1.3	0.2	49.2	<.02	10.8	0.021	0.06	1.9	10	1.5	27.6
RS-503 0060-0080	1.08	0.16	0.8	60	0.47	3.4	0.9	4	49.70	0.09	2.13	1.13	0.60	4.3	9.71	2	1.7	9	0.24	23.8	0.04	1020	1.7	0.035	3.2	0.007	17.01	<.01	2.61	1.8	0.2	75.4	<.02	10.8	0.021	0.04	3.1	9	1.7	29.7
RS-503 0080-0100	1.83	0.56	0.7	45	0.45	2.5	1.4	3	62.60	0.04	1.53	0.44	0.30	3.1	3.67	1.98	1.6	8	0.21	22.4	0.03	914	1.64	0.03	2.6	0.007	17.31	<.01	2.41	1.3	0.2	61.7	0.03	11.1	0.022	0.06	2.6	8	2	28.7
RS-503 0100-0120	1.27	0.16	0.5	99	0.49	3.3	1.8	2	39.20	0.03	0.66	0.48	0.30	3.8	4.32	1.63	1.7	56	0.23	25.2	0.03	440	1.91	0.019	2.7	0.006	20.93	0.01	2.47	0.9	<.1	34.9	<.02	8.9	0.013	0.03	2.1	6	1.3	34.4
RS-503 0120-0140	1.03	0.07	0.7	148	0.62	3.6	0.6	2	57.70	<.02	0.25	0.45	0.40	3.3	6.24	1.57	2.2	63	0.26	24.9	0.03	586	1.38	0.017	1.9	0.009	23.47	<.01	2.13	0.9	<.1	25.5	<.02	9.3	0.012	0.05	1.2	4	2	32
RS-503 0140-0160	0.77	0.05	0.6	79	0.38	1.8	0.9	1.0	40.30	<.02	0.8	0.23	0.20	3.8	6.44	1.46	1	12	0.22	21.7	0.02	357	0.86	0.032	2.4	0.005	18.93	<.01	1.47	0.6	0.1	46.2	<.02	9.5	0.015	0.02	0.8	4	2.1	18.3
RS-503 0160-0180	0.93	0.04	0.6	59	0.42	2.5	0.8	4	<.5	0.02	1.53	0.51	0.40	<.5	6.65	2	1.8	6	0.2	25.9	0.03	704	1.63	0.047	6.3	0.009	16.36	<.01	1.69	1.7	<.1	67.6	<.02	10.4	<.001	0.03	0.8	4	1.1	33.7
RS-503 0180-0200	1.03	0.1	0.8	61	0.51	1.6	1.7	2	43.40	0.06	0.93	0.66	0.60	4.4	5.39	1.72	1.9	39	0.25	25.4	0.03	690	1.76	0.036	2.9	0.004	18.66	0.01	1.77	1	0.2	61.8	<.02	10	0.016	0.05	2	7	1.3	46.5
RS-503 0200-0220	1.03	0.07	0.8	104	0.43	2	1.4	2	75.00	0.65	0.58	0.42	0.40	4.3	6.16	1.61	1.3	73	0.22	21	0.03	401	1.36	0.035	3.5	0.004	18.65	0.01	1.77	0.7	<.1	40.9	<.02	9.7	0.017	0.03	1.2	4	1.7	48.6
RS-503 0220-0240	0.69	0.06	1.3	175	0.38	1.7	1.3	1	27.20	0.19	0.37	1.07	0.30	6.6	8.27	1.93	1.4	20	0.24	20.4	0.02	1066	1.27	0.036	4.9	0.004	17.28	<.01	1.37	0.9	<.1	28	0.02	10.3	0.03	0.02	0.6	4	1	85.3
RS-503 0240-0260	0.9	0.13	1.5	163	0.46	5.6	1.5	1	38.60	0.09	0.16	0.79	0.50	7.7	7.04	1.73	1.9	166	0.22	18.3	0.02	483	1.36	0.03	6.8	0.003	16.62	0.21	3.6	0.6	0.2	18.8	<.02	9.1	0.012	0.06	0.4	3	0.7	86.9
RS-503 0260-0280	0.96	0.29	2.7	227	0.52	21.6	6.2	1	40.60	0.04	0.19	1.26	0.90	6.2	7.38	1.96	1.7	128	0.32	19.2	0.03	391	1.5	0.013	4.4	0.003	22.64	0.8	8.32	0.4	1.7	22.2	<.02	9.2	<.001	0.12	0.6	3	0.6	80.4
RS-503 0280-0300	1.74	0.61	2.8	185	0.49	14.5	5	<1	20.60	0.06	0.16	0.11	0.50	5.3	4.82	1.53	1.6	128	0.28	18.4	0.03	353	1.34	0.014	3.8	0.003	21.63	0.58	10.64	0.4	0.6	19.1	0.02	8.3	<.001	0.14	0.4	2	0.6	65.9
RS-503 0300-0320	0.67	0.37	2.3	163	0.64	6.3	2.5	1	36.30	0.04	0.17	0.13	0.40	6.4	4.05	1.52	1.8	138	0.27	20.3	0.02	229	0.92	0.016	3.7	0.004	19	0.67	6.8	0.4	0.3	17.8	<.02	9.2	0.001	0.09	0.4	2	0.5	82.4
RS-503 0320-0340	0.82	0.55	2.6	256	0.87	28.5	5.6	1	27.80	0.1	0.16	0.76	0.70	6.2	13.19	2.69	2.1	148	0.26	18.6	0.02	365	1.76	0.014	6.4	0.004	124.76	1.51	9.41	0.6	0.7	16.2	<.02	9.1	0.001	0.14	0.4	2	0.6	96.5
RS-503 0340-0360	0.85	0.42	2.9	141	0.43	6.1	0.8	1	37.60	0.03	0.37	0.52	0.60	5.6	6.06	1.61	1.4	146	0.24	19.9	0.02	844	0.99	0.017	4.8	0.004	18.58	0.18	3.95	0.9	0.1	22.8	<.02	9.6	0.006	0.06	0.4	<2	0.6	80.8
RS-503 0360-0380	1.11	0.4	3.1	110	0.44	3.3	1.7	2	44.90	0.03	0.51	1.4	0.50	5.7	8.42	1.91	1.4	63	0.26	14.1	0.02	1614	1.08	0.016	4.8	0.007	20.41	0.09	3.43	1.1	<.1	29.6	<.02	9.6	0.009	0.05	0.5	2	1	79.6
RS-503 0380-0400	1.9	0.61	4.4	156	0.45	11.7	12.7	4	72.00	<.02	0.2	0.84	0.70	6.6	7.44	2.17	1.7	144	0.24	14.8	0.03	1460	1.52	0.013	6.4	0.006	20.35	0.99	19.74	0.7	1	16.9	<.02	9.4	<.001	0.33	0.3	2	0.8	64.8
RS-503 0400-0420	1.96	0.96	6.8	140	0.4	5.8	2.6	5	38.00	<.02	0.21	0.36	0.40	6.1	7.25	1.77	1.6	211	0.23	15.6	0.04	1226	2.35	0.013	5.6	0.007	17.93	0.41	5.35	0.8	0.1	18.6	<.02	9.3	0.001	0.15	0.4	2	0.4	68
RS-503 0420-0440	0.28	0.22	1	240	0.87	11.5	147.6	4	78.90	0.04	0.16	0.4	0.60	9	16.27	2.33	2.1	236	0.27	16.6	0.02	167	2.02	0.017	11	0.007	107.83	1.48	17.86	0.9	1.6	23	<.02	8.1	0.002	0.5	0.3	3	0.9	83.2
RS-503 0440-0460	0.75	0.21	0.5	180	0.39	3.9	14.1	4	38.10	<.02	0.21	0.33	0.40	7.4	5.69	1.61	1.4	181	0.23	20.5	0.03	634	1.59	0.033	8	0.009	27.29	0.31	6.44	1.2	0.3	26.6	<.02	9.8	0.006	0.09	0.7	5	1.1	61.8
RS-503 0460-0480	1.06	0.25	0.5	237	0.68	21.6	23.7	4	87.00	0.03	0.17	0.43	1.00	7.2	9.16	1.98	3	277	0.25	20.3	0.06	484	2.72	0.027	7.6	0.008	78.43	0.84	13.16	1	1.2	24.4	<.02	10.2	<.001	0.24	0.7	3	0.8	105
RS-503 0480-0500	0.86	0.21	0.5	213	0.51	11.7	6	5	69.70	0.04	0.86	0.34	0.70	6.3	4.84	1.97	2.1	142	0.24	18.7	0.06	970	3.18	0.029	6.2	0.007	27.76	0.33	7.11	1.1	0.3	53.3	0.02	9.2	0.006	0.09	0.8	3	0.7	73.5
RS-503 0500-0520	0.78	0.22	0.5	80	0.51	3.6	5.4	3	49.80	0.02	1.09	0.37	0.70	8.7	3.68	2.2	2.3	27	0.23	24.9	0.04	714	2.61	0.036	10.6	0.015	18.19	0.07	2.37	1.6	<.1	66.8	0.02	11.4	0.031	0.04	1.1	5	1.5	66.1
RS-503 0520-0540	0.66	0.16	0.6	60	0.42	3.3	4	4	40.60	<.02	0.85	0.34	0.70	6.9	4.26	2.22	2.1	10	0.16	27.8	0.04	612	2	0.044	6.8	0.021	18.69	0.06	1.75	1.7	0.2	71.3	<.02	10.6	0.034	0.03	0.6	4	1.4	54.8
RS-503 0540-0560	0.61	0.2	0.6	67	0.42	3.5	2	4	46.70	<.02	0.59	0.21	0.80	12.6	5.82	2.39	2	13	0.16	26.9	0.04	494	2.84	0.057	7.4	0.02	37.11	0.04	1.66	1.7	<.1	73.3	<.02	11.3	0.035	0.02	0.5	5	1.8	47.1
RS-503 0560-0580	0.69	0.23	0.5	102	0.46	2.3	3.2	2	47.10	0.02	0.73	0.27	0.80	11.6	8.91	2.16	2	7	0.23	25.1	0.07	524	2.1	0.061	8	0.017	19.06	0.03	1.49	1.5	0.1	91.9	<.02	9.8	0.024	0.04	1.7	9	1.4	74.4
RS-503 0580-0600	0.68	0.22	0.9	66	0.48	2	1.2	2.0	61.40	0.0	0.84	0.36	0.60	10.1	8.24	1.79	1.7	10	0.23	18.7	0.04	608	1.48	0.065	7.7	0.014	27.06	0.03	1.31	1.2	<.1	113.7	<.02	8.9	0.01	0.05	1.1	9	1.6	42.4
RS-503 0600-0620	0.79	0.2	0.8	73	0.62	2.4	0.7	3	41.8	0.02	0.73	0.24	0.7	13.6	12.03	1.99	2.1	7	0.23	18.7	0.04	658	1.69	0.066	9.6	0.012	16.27	0.02	1.40	1.3	0.1	109.7	<.02	9.7	0.014	0.05	1.2	8	1.6	48.7
RS-503 0620-0640	0.62	0.2	0.5	83	0.61	2.7	2	2	72.4	0.02	1.07	0.31	1.1	11.1	10.64	2.02	3	6	0.3	18.1	0.11	832	1.43	0.057	6	0.014	18.4	0.01	1.94	1.7	<.1	105.5	<.02	10.1	0.035	0.1	0.9	7	1.5	70.7
RS-503 0640-0660	0.54	10.26	11.5	52	0.4	3.8	4.6	3	44.5	0.03	0.76	0.25	1	7.4	4.24	1.8	2.2	13	0.19	15	0.05	667	1.32	0.047	3.6	0.016	21.89	<.01	1.92	1.1	<.1	89.5	<.02	8.6	0.034	0.06	0.6	3	1.5	71.5
STANDARD DS2	0.69	0.29	0.5	255	1.7	54.9	212.4	2	146.4	10.36	0.52	9.6	11.8	168	120.63	2.95	5.9	232	0.16	14.9	0.58	760	13.57	0.032	33.6	0.088	30.95	0.02	9.64	3.1	2.2	28	1.79	3.4	0.061	1.79	18.5	72	6.7	154.4
RS-503 0660-0680	1.1	0.48	0.7	51	0.36	4.1	0.5	5	38.8	0.05	0.64	0.22	1.1	8.9	5.66	1.89	2	<5	0.16	14.2	0.03	578	1.42	0.056	4.8	0.02	17.62	0.01	1.74	1.1	0.1	77.6	0.02	8.5	0.033	0.06	0.5	5	1.8	63.4

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58035
METHOD: AAL03-0

ELEMENT / SAMPLES	Ag ppb	Al %	As ppm	Au ppb	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
RS-503 1360-1380	141	0.6	3	1.7	2	87.9	2.54	0.88	0.33	0.7	11	11.89	1.99	3.5	64	0.4	28.2	0.03	485	2.02	0.06	11.3	0.014	23.55	0.04	1.09	1.3	0.7	88.7	0.34	11.3	0.017	0.21	1.5	4	1.4	50.2
RS-503 1380-1400	163	0.68	10.1	1.4	3	82.8	2.67	0.67	0.27	0.7	9.8	9.84	1.94	3.7	16	0.44	29.2	0.03	381	1.93	0.067	9.6	0.017	26.49	0.2	1.86	1.2	0.9	86.3	0.16	11.9	0.01	0.24	1.6	4	1.1	65.1
RS-503 1400-1420	209	1.08	5	1.5	4	70.4	0.79	0.88	0.29	1.1	13.3	13.21	2.22	6.1	17	0.52	29	0.06	540	3.47	0.072	16	0.022	43.54	0.09	1.22	1.5	0.5	94.3	0.1	11.5	0.01	0.3	1.8	6	0.7	68.3
RS-503 1420-1440	175	1.06	1.5	0.5	4	68.9	0.8	1.17	0.36	1.2	17.1	20.51	2.69	5.9	20	0.45	27.8	0.05	847	3.19	0.06	14.5	0.019	22.32	0.03	0.68	1.8	0.5	106.9	0.09	11.7	0.012	0.22	1.7	4	0.8	99.9
RS-503 1440-1460	177	1.51	3.9	2	1	67.9	2.57	0.93	0.61	0.6	7.1	5.91	1.41	5.7	57	0.54	30.6	0.05	468	1.08	0.048	5.5	0.02	32.45	0.1	1.01	1.2	1.1	138.6	0.13	10.8	0.006	0.24	1.4	3	0.5	51.4
RS-503 1460-1480	176	0.92	6.8	1.1	2	82.7	2.44	0.19	0.61	0.8	7.2	6.59	1.72	3.8	96	0.51	30.3	0.07	525	1.16	0.048	5.1	0.021	49.74	0.22	2.94	0.8	< .1	100.5	0.28	9.2	0.006	0.46	1.1	3	0.4	46
RS-503 1480-1500	105	0.79	4	0.6	2	64	1.86	0.87	0.52	0.6	3.2	5.06	0.81	3	23	0.51	32.2	0.06	365	0.59	0.05	2.2	0.023	31.15	0.17	1.76	0.6	< .1	124.1	0.08	8.4	0.009	0.47	0.7	< 2	0.3	20.7
RS-503 1500-1520	69	0.57	6.4	0.7	1	81.9	0.25	1.05	0.7	0.5	6.2	7.1	1	1.9	15	0.35	29.6	0.04	629	1.16	0.064	4.9	0.026	31.34	0.05	1.03	0.8	< .1	120.9	0.08	8.3	0.007	0.23	0.6	< 2	0.9	17.2
RS-503 1520-1540	97	0.81	11.6	1.1	1	62.6	0.14	0.81	0.41	0.7	6.6	7.89	1.67	2.7	36	0.42	28.1	0.06	375	1.09	0.053	4.9	0.029	25.12	0.14	2.17	0.6	0.7	113.4	0.1	8.1	0.009	0.31	0.7	2	1.1	24.2
RS-503 1540-1560	111	0.75	21.7	5.4	< 1	52.2	0.1	0.72	0.2	0.6	7	7.11	1.96	1.7	32	0.25	23.2	0.03	309	1.26	0.043	3.3	0.021	22.9	0.38	6.65	0.4	1.1	104.4	0.06	7.7	0.001	0.14	0.5	< 2	0.4	25.7
RS-503 1560-1580	93	0.77	14.2	4.8	< 1	122.6	0.15	1	0.24	0.9	9.7	9.67	1.97	2	46	0.31	34.3	0.05	645	1.37	0.047	4.6	0.024	25.83	0.24	3.78	0.9	0.9	170.3	0.16	8.8	0.005	0.23	0.6	3	1	33.2
RS-503 1580-1600	103	0.76	10.4	4.7	1	95.3	0.39	0.66	0.51	1.6	10.4	12.9	2.23	2.6	108	0.29	50.3	0.04	714	1.56	0.064	5.7	0.027	25.92	0.28	2.6	1.6	0.8	130.8	0.03	10.6	0.006	0.15	0.8	9	0.9	50.9
RS-503 1600-1620	117	0.78	4.5	23.2	1	120.4	0.22	1.43	0.97	1.7	10.8	12.58	2.18	2.9	48	0.34	56.3	0.04	1203	1.23	0.066	6.8	0.027	23.46	0.11	1.07	1.6	0.2	183	0.14	12	0.014	0.12	1.5	16	1.5	46.3
RS-503 1620-1640	120	0.97	3.4	14.7	1	73.3	0.16	1.76	0.61	1.4	8.1	9.47	1.77	2.7	104	0.41	60	0.04	997	0.85	0.04	3	0.023	29.72	0.14	2.62	1.3	0.9	222.9	0.16	9.7	0.006	0.1	0.8	11	1.1	46.3
RS-503 1640-1660	184	1.3	17	29.5	1	67.4	0.27	1.37	0.67	1.8	8.2	12.14	2.11	3.4	144	0.47	48.8	0.05	764	1.21	0.034	5.4	0.03	31.97	0.41	4.45	1.6	1	218.9	0.05	9.9	0.001	0.22	0.8	13	0.3	60.1
RS-503 1660-1680	89	1.46	4.7	3.2	1	46.7	0.19	0.41	0.33	5	7.5	8.36	2.39	6.7	163	0.33	55.1	0.24	786	2.14	0.024	5.2	0.033	24.32	0.24	1.88	2.8	0.7	133.4	0.16	10.9	0.002	0.15	0.7	14	< .2	87.9
RS-503 1680-1700	73	1.26	1.6	2.5	1	61.4	0.11	1.54	0.22	3.8	9.8	15.22	2.6	5	187	0.39	63.3	0.14	982	2.63	0.053	9.8	0.033	19.12	0.12	1.12	2.6	0.5	137.8	0.06	11.1	0.004	0.14	0.8	16	< .2	87.5
RS-503 1700-1720	110	0.79	1.6	10	3	77.4	0.07	1.62	0.39	1.8	10.9	18.24	2.39	2.7	58	0.39	54.1	0.04	1266	2.23	0.058	11.1	0.029	22.47	0.09	1.01	1.8	0.8	143.5	0.05	11.7	0.016	0.1	1.5	22	0.8	77.6
RS-503 1720-1740	276	0.95	4.8	24.2	1	132.2	0.07	0.29	0.52	2.5	7.8	17.18	2.48	4.5	219	0.37	47.2	0.06	841	1.47	0.031	6.6	0.023	39.34	0.07	4.33	1.6	1.7	116.8	< .02	10	0.001	0.2	1.2	8	0.5	92.3
RS-503 1740-1760	90	0.74	1.9	2.2	< 1	46.3	0.07	1.03	0.31	1.2	11.9	13.74	1.96	3.9	50	0.32	51.1	0.05	874	2.25	0.041	6.6	0.013	49.02	0.11	0.97	1.1	0.6	110.7	0.1	11.4	0.002	0.09	0.7	3	0.4	78
RS-503 1760-1780	111	0.65	3.8	4.5	1	60.3	0.13	0.77	0.34	0.6	14.5	27.46	1.45	2.4	74	0.42	48.2	0.03	344	2.58	0.039	5.3	0.011	312.43	0.28	1.6	0.8	0.8	96	0.1	10.5	0.001	0.17	0.6	2	0.4	149.6
RS-503 1780-1800	86	0.58	3.7	1	< 1	47.7	0.06	0.65	0.18	0.6	9.2	12.64	1.3	2.8	76	0.36	56.1	0.03	500	1.66	0.039	5.6	0.011	82.34	0.1	0.89	1	0.8	96.2	0.12	11.5	0.001	0.14	0.4	2	0.3	91
RS-503 1800-1820	121	0.54	5.3	2.3	< 1	56.5	0.07	0.66	0.34	0.6	10.3	10.71	1.09	2.7	32	0.35	52	0.03	471	2.73	0.042	4.8	0.011	93.51	0.09	1.11	0.7	0.8	97.5	< .02	12.6	0.001	0.15	0.7	< 2	0.4	71.5
RS-503 1820-1840	117	0.6	3.4	0.8	1	48.4	0.06	0.62	0.29	0.5	10.8	12.2	1.22	3.1	11	0.4	53.3	0.02	544	3.14	0.039	3.9	0.009	89.06	0.09	0.76	0.7	0.6	100.8	0.02	12.9	0.001	0.14	0.7	< 2	0.4	60.4
RS-503 1840-1860	313	0.52	9.1	11.4	< 1	38.3	0.04	0.46	0.4	0.3	5	5.23	1.3	2.8	23	0.36	49.5	0.02	662	1.93	0.044	3.1	0.009	45.08	0.4	1.62	0.8	2.2	84.4	0.12	11	< .001	0.08	0.5	< 2	0.4	75
RS-503 1860-1880	328	0.45	9.2	26.3	1	49.6	0.07	0.46	0.26	0.5	8.2	8.77	1.23	2	35	0.37	48.5	0.03	534	2.75	0.044	2.4	0.011	79.29	0.42	2.04	0.6	1.9	87.6	0.12	11.1	0.001	0.08	0.6	< 2	0.4	71.6
RS-503 1880-1900	668	0.43	26.6	38.1	< 1	45.1	0.19	0.47	0.18	0.4	7	7.3	1.81	1.7	28	0.36	36	0.02	886	4.43	0.042	2.9	0.006	58.9	0.83	2.46	0.4	4.5	91.3	0.12	8.8	0.001	0.07	0.5	< 2	0.6	89.7
RS-503 1900-1920	2565	0.41	87.3	158.1	1	38.6	1.2	0.74	0.07	0.8	6.9	7.74	2.36	1.4	9	0.34	23.3	0.02	2209	5.46	0.045	3	0.007	49.98	1.26	4.44	0.5	12.2	120.6	0.52	6	< .001	0.08	0.4	2	0.6	116.2
75294	53448	2.19	110.9	6050.6	1	72.9	0.19	0.85	1.68	3.8	6	22.56	2.45	7.4	396	0.83	16.5	0.13	304	5.76	0.062	3.3	0.053	29.72	1.76	19.4	0.9	20.8	62.3	0.08	3.6	0.004	0.42	1.4	9	0.3	86.3
STANDARD DS2	253	1.74	66.4	214.6	3	151.8	10.14	0.54	10.35	11.8	162.2	124.16	3.07	6.4	204	0.17	16.7	0.6	615	13.65	0.031	36	0.085	31.89	0.01	9.28	2.7	2.5	28.8	1.86	3.4	0.093	1.6	16.8	74	6.6	172.2

AMERICAN ASSAY LABORATORIES
AAL 03-0 ICP PACKAGE DETECTION LIMITS

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	30	0.01	0.5	3	1	0.1	0.01	.01	1	1	0.2	0.01	0.5	10	0.01	1	0.01	2	0.1	0.01	1	0.001	0.3	0.2	0.4	1	0.2	2	0.01	0.2	5	1	2	1

5.0 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR Al, B, Ba, Ca, Co, Cr, Fe, K, La, Mg, Mn, Na, Ni, P, Sr, Th, Ti, U, V AND W.
ORGANIC SOLUTION EXTRACTION AND ULTRASONIC ICP FOR Ag, As, Bi, Cd, Cu, Ga, Mo, Pb, Sb, Se, Te AND Tl.
Hg BY COLD VAPOR AAS.

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58035
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-503 0000-0020	63	0.62	18.8	63.8	8	108.00	0.24	0.6	0.09	0.60	4.5	5.29	2.28	4.6	563	0.24	22.7	0.1	72	1.31	0.103	5.2	0.014	23.54	0.06	10.19	1	2	52.6	< .02	9.3	0.003	0.07	1.1	14	0.5	19.6
RS-503 0020-0040	61	0.55	13.8	20.9	4	72.60	0.04	0.15	1.01	0.50	3.8	4.67	2.14	3	502	0.23	31.8	0.03	380	1.3	0.035	3.5	0.012	17.99	0.01	7.71	1.2	1.4	49.5	< .02	11.5	0.009	0.38	1.3	15	1	34.8
RS-503 0040-0060	38	0.46	3.3	2	5	56.60	0.05	1.05	0.96	0.30	4.4	3.63	1.97	1.8	32	0.23	25.2	0.04	690	1.67	0.034	3.4	0.012	16.74	< .01	2.35	1.3	0.2	49.2	< .02	10.8	0.021	0.08	1.9	10	1.5	27.5
RS-503 0060-0080	60	0.47	3.4	0.9	4	49.70	0.09	2.13	1.13	0.60	4.3	9.71	2	1.7	9	0.24	23.8	0.04	1020	1.7	0.035	3.2	0.007	17.01	< .01	2.61	1.8	0.2	75.4	< .02	10.8	0.021	0.04	3.1	9	1.7	29.7
RS-503 0080-0100	45	0.45	2.5	1.4	3	62.50	0.04	1.53	0.44	0.30	3.1	3.57	1.98	1.6	8	0.21	22.4	0.03	914	1.54	0.03	2.5	0.007	17.31	< .01	2.41	1.3	0.2	61.7	0.03	11.1	0.022	0.06	2.5	8	2	28.7
RS-503 0100-0120	99	0.49	3.3	1.8	2	39.20	0.03	0.65	0.48	0.30	3.8	4.32	1.63	1.7	86	0.23	25.2	0.03	440	1.91	0.019	2.7	0.006	20.93	0.01	2.47	0.9	< .1	34.9	< .02	8.9	0.013	0.03	2.1	5	1.3	34.4
RS-503 0120-0140	148	0.62	3.6	0.6	2	57.70	< .02	0.25	0.45	0.40	3.3	5.24	1.57	2.2	63	0.26	24.9	0.03	586	1.38	0.017	1.9	0.009	23.47	< .01	2.13	0.9	< .1	25.5	< .02	9.3	0.012	0.05	1.2	4	2	32
RS-503 0140-0160	79	0.38	1.8	0.9	1.0	40.30	< .02	0.8	0.23	0.20	3.8	5.44	1.45	1	12	0.22	21.7	0.02	357	0.85	0.032	2.4	0.005	18.93	< .01	1.47	0.6	0.1	45.2	< .02	9.5	0.015	0.02	0.8	4	2.1	18.3
RS-503 0160-0180	59	0.42	2.5	0.8	4	< .5	0.02	1.53	0.51	0.40	< .5	5.65	2	1.8	6	0.2	25.9	0.03	704	1.63	0.047	6.3	0.009	15.36	< .01	1.59	1.7	< .1	67.6	< .02	10.4	< .001	0.03	0.8	4	1.1	33.7
RS-503 0180-0200	61	0.51	1.6	1.7	2	43.40	0.06	0.93	0.56	0.50	4.4	5.39	1.72	1.9	39	0.25	25.4	0.03	690	1.76	0.036	2.9	0.004	18.98	0.01	1.77	1	0.2	51.8	< .02	10	0.016	0.05	2	7	1.3	46.5
RS-503 0200-0220	104	0.43	2	1.4	2	75.00	0.65	0.59	0.42	0.40	4.3	5.16	1.61	1.3	73	0.22	21	0.03	401	1.35	0.035	3.5	0.004	18.65	0.01	1.77	0.7	< .1	40.9	< .02	9.7	0.017	0.03	1.2	4	1.7	48.6
RS-503 0220-0240	175	0.38	1.7	1.3	1	27.20	0.19	0.37	1.07	0.30	6.6	8.27	1.93	1.4	20	0.24	20.4	0.02	1056	1.27	0.036	4.9	0.004	17.28	< .01	1.37	0.9	< .1	28	0.02	10.3	0.03	0.02	0.5	4	1	85.3
RS-503 0240-0260	163	0.45	5.5	1.5	1	38.60	0.09	0.15	0.79	0.50	7.7	7.04	1.73	1.9	166	0.22	18.3	0.02	493	1.36	0.03	5.8	0.003	15.52	0.21	3.6	0.6	0.2	18.5	< .02	9.1	0.012	0.06	0.4	3	0.7	85.9
RS-503 0260-0280	227	0.52	21.6	6.2	1	40.50	0.04	0.19	1.26	0.90	6.2	7.38	1.86	1.7	128	0.32	19.2	0.03	391	1.5	0.013	4.4	0.003	22.64	0.9	8.32	0.4	1.7	22.2	< .02	9.2	< .001	0.12	0.6	3	0.6	80.4
RS-503 0280-0300	185	0.49	14.5	5	< 1	20.60	0.06	0.18	0.11	0.50	5.3	4.82	1.53	1.6	128	0.28	18.4	0.03	353	1.34	0.014	3.8	0.003	21.53	0.58	10.54	0.4	0.6	19.1	0.02	8.3	< .001	0.14	0.4	2	0.6	65.9
RS-503 0300-0320	163	0.54	6.3	2.5	1	36.30	0.04	0.17	0.13	0.40	5.4	4.05	1.52	1.8	138	0.27	20.3	0.02	229	0.92	0.016	3.7	0.004	19	0.57	6.8	0.4	0.3	17.5	< .02	9.2	0.001	0.09	0.4	2	0.5	52.4
RS-503 0320-0340	255	0.57	28.5	5.6	1	27.80	0.1	0.16	0.78	0.70	6.2	13.19	2.59	2.1	148	0.26	18.6	0.02	368	1.76	0.014	5.4	0.004	124.76	1.51	9.41	0.6	0.7	15.2	< .02	9.1	0.001	0.14	0.4	2	0.6	96.5
RS-503 0340-0360	141	0.43	5.1	0.8	1	37.60	0.03	0.37	0.52	0.50	5.6	5.06	1.61	1.4	146	0.24	19.9	0.02	944	0.99	0.017	4.8	0.004	18.59	0.18	3.95	0.9	0.1	22.8	< .02	9.6	0.006	0.06	0.4	< 2	0.6	80.8
RS-503 0360-0380	110	0.44	3.3	1.7	2	44.90	0.03	0.51	1.4	0.50	5.7	5.42	1.91	1.4	53	0.26	14.1	0.02	1514	1.08	0.016	4.8	0.007	20.41	0.09	3.43	1.1	< .1	29.6	< .02	9.5	0.009	0.05	0.5	2	1	79.6
RS-503 0380-0400	156	0.45	11.7	12.7	4	72.60	< .02	0.2	0.84	0.70	6.6	7.44	2.17	1.7	144	0.24	14.8	0.03	1469	1.52	0.013	6.4	0.008	20.35	0.99	19.74	0.7	1	15.9	< .02	9.4	< .001	0.33	0.3	2	0.6	64.8
RS-503 0400-0420	140	0.4	5.8	2.6	5	36.00	< .02	0.21	0.36	0.40	6.1	7.25	1.77	1.6	211	0.23	15.6	0.04	1226	2.35	0.013	5.6	0.007	17.93	0.41	8.35	0.8	0.1	18.6	< .02	9.3	0.001	0.15	0.4	2	0.4	68
RS-503 0420-0440	240	0.57	11.5	147.6	4	78.80	0.04	0.16	0.4	0.50	9	16.27	2.33	2.1	235	0.27	16.6	0.02	167	2.02	0.017	11	0.007	107.83	1.48	17.86	0.9	1.6	23	< .02	8.1	0.002	0.5	0.3	3	0.9	83.2
RS-503 0440-0460	180	0.39	3.9	14.1	4	38.10	< .02	0.21	0.33	0.40	7.4	5.69	1.81	1.4	181	0.23	20.5	0.03	634	1.58	0.033	8	0.009	27.29	0.31	6.44	1.2	0.3	26.6	< .02	9.8	0.006	0.09	0.7	5	1.1	61.8
RS-503 0460-0480	237	0.68	21.6	23.7	4	87.00	0.03	0.17	0.43	1.00	7.2	9.16	1.98	3	277	0.25	20.3	0.06	484	2.72	0.027	7.6	0.008	78.43	0.84	13.14	1	1.2	24.4	< .02	10.2	< .001	0.24	0.7	3	0.6	105
RS-503 0480-0500	213	0.51	11.7	6	5	69.70	0.04	0.86	0.34	0.70	6.3	4.84	1.87	2.1	142	0.24	18.7	0.06	970	3.18	0.029	8.2	0.007	27.75	0.33	7.11	1.1	0.3	53.3	0.02	9.2	0.006	0.09	0.6	3	0.7	73.5
RS-503 0500-0520	80	0.51	3.6	5.4	3	48.80	0.02	1.09	0.37	0.70	8.7	3.88	2.2	2.3	27	0.23	24.9	0.04	714	2.51	0.036	10.5	0.015	18.19	0.07	2.37	1.6	< .1	66.8	0.02	11.4	0.031	0.04	1.1	5	1.5	66.1
RS-503 0520-0540	60	0.42	3.3	4	4	40.60	< .02	0.85	0.34	0.70	6.9	4.26	2.22	2.1	10	0.18	27.8	0.04	612	2	0.044	5.5	0.021	18.69	0.06	1.75	1.7	0.2	71.3	< .02	10.5	0.034	0.03	0.5	4	1.4	54.8
RS-503 0540-0560	67	0.42	3.5	2	4	45.70	< .02	0.59	0.21	0.80	12.8	8.82	2.39	2	13	0.18	26.9	0.04	494	2.84	0.057	7.4	0.02	37.11	0.04	1.66	1.7	< .1	73.3	< .02	11.3	0.035	0.02	0.5	5	1.6	47.1
RS-503 0560-0580	102	0.46	2.3	3.2	2	47.10	0.02	0.73	0.27	0.80	11.6	8.91	2.16	2	7	0.23	25.1	0.07	524	2.1	0.051	8	0.017	19.06	0.03	1.49	1.5	0.1	91.9	< .02	9.8	0.024	0.04	1.7	9	1.4	74.4
RS-503 0580-0600	65	0.48	2	1.2	2.0	61.40	0.0	0.84	0.36	0.60	10.1	8.24	1.79	1.7	10	0.23	18.7	0.04	608	1.48	0.055	7.7	0.014	27.05	0.03	1.31	1.2	< .1	113.7	< .02	8.9	0.01	0.05	1.1	9	1.6	42.4
RS-503 0600-0620	73	0.52	2.4	0.7	3	41.8	0.02	0.73	0.24	0.7	13.5	12.03	1.99	2.1	7	0.23	18.7	0.04	658	1.69	0.056	9.5	0.012	16.27	0.02	1.49	1.3	0.1	109.7	< .02	9.7	0.014	0.05	1.2	8	1.8	48.7
RS-503 0620-0640	83	0.61	2.7	2	2	72.4	0.02	1.07	0.31	1.1	11.1	10.64	2.02	3	6	0.3	18.1	0.11	832	1.43	0.057	6	0.014	18.4	0.01	1.94	1.7	< .1	105.5	< .02	10.1	0.035	0.1	0.9	7	1.5	70.7
RS-503 0640-0660	52	0.4	3.5	4.6	3	44.5	0.03	0.78	0.25	1	7.4	4.24	1.8	2.2	13	0.19	15	0.05	567	1.32	0.047	3.6	0.016	21.88	< .01	1.92	1.1	< .1	89.5	< .02	8.6	0.034	0.06	0.6	3	1.5	71.5
STANDARD DS2	255	1.7	54.9	212.4	2	146.4	10.36	0.52	9.6	11.8	158	120.63	2.95	5.9	232	0.16	14.9	0.58	790	13.57	0.032	33.5	0.088	30.95	0.02	9.64	3.1	2.2	28	1.79	3.4	0.091	1.79	18.5	72	6.7	154.4
RS-503 0660-0680	51	0.36	4.1	0.5	5	38.8	0.05	0.64	0.22	1.1	8.9	5.66	1.89	2	< 5	0.16	14.2	0.03	578	1.42	0.056	4.8	0.02	17.62	0.01	1.74	1.1	0.1	77.6	0.02	8.5	0.033	0.05	0.5	5	1.8	63.4

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58035
METHOD: AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-503 0680-0700	52	0.35	3.6	< .2	3	38.7	0.05	0.68	0.17	0.9	8.6	5.57	1.85	1.7	< 5	0.17	14.5	0.03	522	1.16	0.059	4.7	0.018	17.84	0.01	2.09	1.2	0.1	85.2	< .02	8.9	0.025	0.04	0.6	5	1.5	50.3
RS-503 0700-0720	43	0.36	6.9	1.3	4	44.7	0.04	0.68	0.05	0.9	11	6.73	1.96	1.9	5	0.17	12.8	0.02	370	1.68	0.057	8.4	0.016	17.5	< .01	1.62	1	0.1	83.1	< .02	8.7	0.02	0.03	0.3	3	1.7	45.2
RS-503 0720-0740	39	0.37	5.8	0.5	4	30.8	0.03	1.06	0.14	0.9	10	7.72	1.85	2.1	< 5	0.17	11.4	0.03	669	1.65	0.052	6.7	0.012	14.7	0.01	1.55	1.2	0.1	101	< .02	8.6	0.02	0.02	0.3	3	1.7	64.3
RS-503 0740-0760	32	0.35	4.5	0.6	3	34.2	< .02	1.08	0.16	0.8	7.8	4.78	1.83	1.7	14	0.16	14.4	0.03	699	1.56	0.049	5.1	0.011	13.24	0.01	2.36	1.3	0.2	105.3	0.02	8.8	0.021	0.02	0.3	3	1.5	58.3
RS-503 0760-0780	95	0.35	2.5	0.9	2	36.3	< .02	1.83	0.56	0.7	6.8	5.67	1.64	1.7	7	0.17	19.6	0.06	1817	1.53	0.044	3.6	0.011	13.5	0.01	1.25	0.9	0.1	113	< .02	8.9	0.023	0.02	1.7	8	1.7	62.8
RS-503 0780-0800	103	0.38	1.9	1.1	1	28.1	< .02	1.27	0.16	0.5	8.6	7.35	1.8	1.7	31	0.18	18.8	0.04	696	1.77	0.034	5.9	0.009	19.65	0.02	1.01	0.9	< .1	116.6	< .02	8.5	0.022	0.02	1.8	7	1.7	60.5
RS-503 0800-0820	166	0.45	4.3	0.7	1	31.8	0.02	1.03	0.07	0.7	7.1	5.37	1.64	2.3	174	0.19	18	0.04	397	1.42	0.035	3.8	0.009	16.31	0.07	1.85	0.8	0.1	115.6	< .02	8.7	0.015	0.03	2	7	1.1	73.1
RS-503 0820-0840	140	0.53	6.3	0.6	2	29.9	< .02	0.77	0.05	0.6	6	6.45	1.63	2.5	227	0.19	20.9	0.04	336	1.26	0.035	4.6	0.01	16.88	0.18	4.83	0.9	0.1	104.8	< .02	8.6	0.007	0.05	0.8	4	0.8	71.6
RS-503 0840-0860	57	0.44	2.7	0.5	2	33.4	< .02	0.93	0.04	0.6	7.5	6.59	1.85	2.1	13	0.19	20.4	0.03	264	1.55	0.053	5.9	0.013	15.96	0.01	1.91	0.9	< .1	111.6	< .02	9.4	0.02	0.02	0.8	4	1.3	63
RS-503 0860-0880	45	0.42	2.8	1	2	36.6	0.02	1.03	0.1	0.8	5.3	4.68	1.76	2.1	14	0.17	21.8	0.04	473	1.21	0.054	3.6	0.015	15.71	0.01	2.29	1	< .1	122.3	< .02	8.9	0.02	0.02	0.7	4	1.2	61.9
RS-503 0880-0900	63	0.43	2.6	1.3	1	44	0.1	1.03	0.07	0.8	5.6	4.13	1.87	2.2	9	0.18	23.1	0.05	577	1.24	0.032	3.1	0.02	20.22	0.01	1.89	1.3	0.2	135.7	0.04	9.4	0.023	0.04	1.5	6	1.3	67.2
RS-503 0900-0920	96	0.47	2.1	1.2	1	46.5	0.17	0.69	0.06	1.3	6.7	6.01	2.16	2.6	6	0.18	23.8	0.06	235	1.71	0.06	4.9	0.029	19.76	0.01	1.84	1.2	0.1	146.8	0.02	9.8	0.027	0.04	2.8	11	0.9	90.3
RS-503 0920-0940	60	0.5	2.6	1.6	1	87.1	0.07	0.9	0.13	1.5	7.3	6.36	2.21	2.4	10	0.17	20.8	0.07	341	1.36	0.055	4.7	0.035	20.38	0.02	2.04	1.4	< .1	167.7	0.02	8.9	0.026	0.04	1.7	10	0.9	73
RS-503 0940-0960	76	0.66	3.2	1.8	2	60.4	0.08	0.96	0.29	2.7	8	5.48	2.22	2.9	13	0.19	17	0.13	398	0.98	0.052	4.2	0.043	26.66	0.02	1.94	1.8	0.2	198.1	0.02	6.8	0.026	0.08	1.6	16	0.9	73.8
RS-503 0960-0980	104	0.78	2.7	0.9	2	164.2	0.2	1.74	0.61	2.8	7.8	4.48	1.98	3.5	10	0.24	20.1	0.18	690	0.97	0.052	3.7	0.048	16.11	0.03	1.48	1.8	< .1	244.3	0.02	6.1	0.026	0.14	1.4	14	0.9	70.2
RS-503 0980-1000	68	0.83	3.1	0.4	2	79.9	0.58	0.67	0.37	2.3	6.6	5.04	2.31	4.5	< 5	0.31	20.7	0.21	351	1.26	0.052	4.3	0.038	14.94	0.02	1.31	1.7	< .1	168.7	0.02	7.8	0.038	0.53	1.3	11	1.3	82.3
RS-503 1000-1020	76	0.77	2.8	0.7	2	148.4	0.24	0.82	0.55	2.6	10	6.36	2.35	4.1	7	0.3	17.9	0.19	361	1.35	0.047	7.7	0.045	24.8	0.02	1.12	1.9	< .1	157.3	0.02	6.6	0.038	0.45	1.3	14	1	81.2
RS-503 1020-1040	99	0.85	2.9	0.8	3	77.5	0.42	0.85	0.42	2.9	8.8	4.75	2.14	4.6	7	0.3	19.7	0.22	337	0.92	0.051	5.9	0.047	16.22	0.01	0.84	2	< .1	176.4	0.06	6.4	0.037	0.21	1.1	16	1.1	72
RS-503 1040-1060	102	0.9	2.2	0.6	2	53.5	0.15	1.11	0.4	3.1	9.7	5.32	1.87	4.5	9	0.25	16.2	0.18	381	0.88	0.049	6	0.043	14.66	< .01	0.76	2	< .1	214.4	0.03	5.4	0.021	0.12	1	19	0.9	68.6
RS-503 1060-1080	105	1.42	1.9	0.4	2	160.9	0.13	1.9	0.51	4.4	12.5	7.44	2.05	6	11	0.29	13.4	0.28	721	1.1	0.077	6.4	0.039	22.42	0.01	0.58	1.9	< .1	367.2	0.05	5.4	0.008	0.11	2.4	20	0.4	73.4
RS-503 1080-1100	127	0.97	4.4	1.2	2	178.1	1.59	1.86	0.96	6.8	13.5	12.81	3.24	4.4	47	0.24	21.4	0.3	919	1.68	0.041	9.2	0.111	16.79	0.11	2.47	3.2	< .1	211.3	0.07	6.1	0.038	0.32	2.2	37	0.7	91.7
RS-503 1100-1120	147	0.52	8.4	1.2	1	126.9	0.08	0.28	0.22	1	9.9	6.88	1.76	2.1	182	0.18	26.5	0.04	385	1.71	0.036	10.2	0.024	25.02	0.22	3	0.8	0.2	103.5	< .02	10.4	0.008	0.13	0.7	3	0.5	79.4
RS-503 1120-1140	123	0.46	2	0.9	1	72.5	0.04	0.75	0.21	0.5	5.4	4.56	1.54	1.9	38	0.2	27	0.03	497	1.1	0.044	4.4	0.017	18.39	0.02	1.86	0.8	0.2	138.5	0.02	10.8	0.017	0.07	0.6	2	0.9	46.5
RS-503 1140-1160	102	0.47	1.7	0.4	2	75.5	0.05	1.05	0.25	0.5	11.1	9.32	1.87	1.9	10	0.23	24.1	0.02	664	1.84	0.047	10.3	0.016	22.39	0.02	2.01	1	0.1	121.1	< .02	10.7	0.015	0.07	0.5	3	0.7	54.7
RS-503 1160-1180	103	0.53	1.7	5.1	1	61.4	0.05	0.65	0.21	0.5	9	9.21	2.15	2.1	14	0.27	23.2	0.02	579	1.49	0.044	6.4	0.014	56.61	0.01	2.15	0.8	0.2	130.9	< .02	10.1	0.012	0.07	0.4	2	2	41
RS-503 1180-1200	104	0.46	1.5	2.4	1	53.1	0.02	0.78	0.22	0.5	10.1	8.89	2.18	2.1	< 5	0.23	25.7	0.02	571	1.73	0.059	10.2	0.015	17.37	< .01	1.66	1	< .1	125	0.02	11.7	0.02	0.06	0.5	4	1	55.1
RS-503 1200-1220	113	0.48	1.5	0.8	1	49.2	0.12	0.66	0.16	0.6	10.9	7.94	1.97	1.8	10	0.2	20.3	0.03	481	1.68	0.055	10.6	0.016	13.52	< .01	1.17	0.9	0.2	142.5	0.02	10.3	0.015	0.05	0.6	4	1	30.1
RS-503 1220-1240	123	0.48	1.8	0.9	1	52.4	0.16	0.61	0.2	0.6	11.8	12.34	2	2	< 5	0.21	19.7	0.03	435	1.82	0.06	9.7	0.014	15.95	0.01	1.2	0.9	0.3	145.6	< .02	9.7	0.017	0.06	0.6	5	1	34.1
RS-503 1240-1260	149	0.5	2.5	1.3	6	41.6	0.59	0.69	0.23	0.5	8	8.41	1.31	2.2	19	0.24	16.2	0.03	453	0.99	0.045	6	0.011	29.08	0.05	1.45	0.7	0.3	124.2	< .02	8.6	0.006	0.11	0.8	3	0.7	20.1
RS-503 1260-1280	116	0.48	3.1	2	2	49.6	1.66	0.68	0.22	0.9	12.1	14.07	2.13	2.5	5	0.25	24	0.04	424	1.56	0.057	10.2	0.016	25.79	0.02	1.39	1.1	0.2	105	< .02	10.8	0.018	0.12	1.6	6	1.4	51.4
RS-503 1280-1300	107	0.49	3	0.8	2	46.8	5.81	0.79	0.2	0.6	12.8	17.31	2.01	2.5	< 5	0.29	25.5	0.02	365	1.84	0.057	11.1	0.016	21	< .01	1.37	0.9	0.1	82.7	0.02	10.9	0.02	0.14	1.5	5	1.2	44.2
RS-503 1300-1320	151	0.53	5	0.9	2	50.4	2.23	0.62	0.2	0.5	10.5	12.26	1.77	2.7	59	0.35	27.4	0.03	271	1.71	0.054	10.3	0.014	22.94	0.05	1.45	0.9	< .1	68.6	0.15	10.6	0.016	0.14	1.2	4	1.1	38.5
STANDARD DS2	263	1.74	58	213.2	2	152.4	11.29	0.54	10.26	11.5	164.2	125.56	3.08	6	249	0.17	16.4	0.61	826	13.91	0.034	34.1	0.09	30.66	0.02	9.62	3.2	2.2	28.4	1.81	3.5	0.093	1.9	18.2	74	6.6	161.2
RS-503 1320-1340	148	0.62	6.8	2.8	3	54.7	2.16	0.89	0.29	0.5	9.4	10.25	1.66	3.3	94	0.4	29.3	0.02	367	1.41	0.06	8.2	0.014	25.64	0.07	1.67	0.7	0.4	78.3	0.44	12.1	0.012	0.17	1.3	3	1.1	43.1
RS-503 1340-1360	149	0.63	47.1	1.2	2	53.4	1.97	1.1	0.48	0.7	8	8.7	1.5	3.3	98	0.41	29	0.03	452	1.25	0.057	6.6	0.015	24.66	0.27	2.69	1.1	0.5	93.9	0.41	11.6	0.009	0.3	1.4	3	1	46.5

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
PHONE: (775) 356-0606
FAX: (775) 356-1413

CLIENT:	HECLA MINING CO.
CLIENT REF:	KURT ALLEN
AAL REF:	SP58035
METHOD:	AAL03-0

ELEMENT	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	U	V	W	Zn
SAMPLES	ppb	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
RS-503 1360-1380	141	0.6	3	1.7	2	57.9	2.54	0.88	0.33	0.7	11	11.89	1.99	3.5	64	0.4	28.2	0.03	485	2.02	0.06	11.3	0.014	23.55	0.04	1.09	1.3	0.7	86.7	0.34	11.3	0.017	0.21	1.5	4	1.4	50.2
RS-503 1380-1400	163	0.68	10.1	1.4	3	52.5	2.67	0.67	0.27	0.7	9.8	9.84	1.94	3.7	15	0.44	29.2	0.03	381	1.93	0.057	9.6	0.017	26.49	0.2	1.86	1.2	0.9	86.3	0.16	11.9	0.01	0.24	1.6	4	1.1	55.1
RS-503 1400-1420	209	1.08	5	1.5	4	70.4	0.79	0.88	0.29	1.1	13.3	13.21	2.22	6.1	17	0.52	29	0.06	540	3.47	0.072	16	0.022	43.54	0.09	1.22	1.5	0.5	94.3	0.1	11.5	0.01	0.3	1.8	5	0.7	68.3
RS-503 1420-1440	175	1.06	1.5	0.5	4	68.9	0.8	1.17	0.36	1.2	17.1	20.51	2.59	5.9	20	0.45	27.5	0.05	847	3.19	0.08	14.5	0.019	22.32	0.03	0.68	1.8	0.5	105.9	0.09	11.7	0.012	0.22	1.7	4	0.8	99.9
RS-503 1440-1460	177	1.51	3.9	2	1	57.9	2.57	0.93	0.61	0.6	7.1	5.91	1.41	5.7	57	0.54	30.6	0.05	468	1.08	0.048	5.5	0.02	32.45	0.1	1.01	1.2	1.1	138.6	0.13	10.8	0.006	0.24	1.4	3	0.5	51.4
RS-503 1460-1480	176	0.92	6.8	1.1	2	82.7	2.44	0.19	0.61	0.8	7.2	6.59	1.72	3.8	96	0.51	30.3	0.07	525	1.16	0.048	5.1	0.021	49.74	0.22	2.94	0.8	< .1	100.5	0.28	9.2	0.006	0.46	1.1	3	0.4	46
RS-503 1480-1500	105	0.79	4	0.6	2	64	1.86	0.87	0.52	0.6	3.2	5.08	0.81	3	23	0.51	32.2	0.06	355	0.59	0.05	2.2	0.023	31.15	0.17	1.76	0.6	< .1	124.1	0.08	8.4	0.009	0.47	0.7	< 2	0.3	20.7
RS-503 1500-1520	89	0.57	5.4	0.7	1	51.9	0.25	1.05	0.7	0.5	6.2	7.1	1	1.9	15	0.35	29.6	0.04	529	1.16	0.054	4.9	0.026	31.34	0.05	1.03	0.8	< .1	120.9	0.08	8.3	0.007	0.23	0.6	< 2	0.9	17.2
RS-503 1520-1540	97	0.81	11.5	1.1	1	62.6	0.14	0.81	0.41	0.7	5.6	7.89	1.57	2.7	36	0.42	28.1	0.05	375	1.09	0.053	4.9	0.029	25.12	0.14	2.17	0.6	0.7	113.4	0.1	8.1	0.009	0.31	0.7	2	1.1	24.2
RS-503 1540-1560	111	0.73	21.7	5.4	< 1	52.2	0.1	0.72	0.2	0.6	7	7.11	1.96	1.7	32	0.25	23.2	0.03	309	1.25	0.043	3.3	0.021	22.9	0.38	6.85	0.4	1.1	104.4	0.08	7.7	0.001	0.14	0.5	< 2	0.4	25.7
RS-503 1560-1580	93	0.77	14.2	4.8	< 1	122.5	0.15	1	0.24	0.9	9.7	9.67	1.97	2	46	0.31	34.3	0.05	645	1.37	0.047	4.6	0.024	25.83	0.24	3.75	0.9	0.9	170.3	0.18	8.8	0.005	0.23	0.6	3	1	33.2
RS-503 1580-1600	103	0.76	10.4	4.7	1	95.3	0.39	0.65	0.51	1.8	10.4	12.9	2.23	2.5	108	0.29	50.3	0.04	714	1.56	0.054	5.7	0.027	25.92	0.28	2.6	1.5	0.8	130.8	0.03	10.6	0.006	0.15	0.8	9	0.9	50.9
RS-503 1600-1620	117	0.78	4.5	23.2	1	120.4	0.22	1.43	0.97	1.7	10.8	12.58	2.18	2.9	48	0.34	56.3	0.04	1203	1.23	0.056	6.8	0.027	23.46	0.11	1.07	1.6	0.2	183	0.14	12	0.014	0.12	1.5	16	1.5	45.3
RS-503 1620-1640	120	0.97	3.4	14.7	1	73.3	0.16	1.76	0.51	1.4	8.1	9.47	1.77	2.7	104	0.41	50	0.04	997	0.85	0.04	3	0.023	29.72	0.14	2.62	1.3	0.9	222.9	0.18	9.7	0.006	0.1	0.8	11	1.1	46.3
RS-503 1640-1660	184	1.3	17	29.5	1	67.4	0.27	1.37	0.57	1.8	8.2	12.14	2.11	3.4	144	0.47	48.8	0.05	764	1.21	0.034	5.4	0.03	31.97	0.41	4.45	1.6	1	218.9	0.05	9.9	0.001	0.22	0.8	13	0.3	50.1
RS-503 1660-1680	89	1.46	4.7	3.2	1	46.7	0.19	0.41	0.33	5	7.5	8.36	2.39	6.7	163	0.33	55.1	0.24	756	2.14	0.024	5.2	0.033	24.32	0.24	1.58	2.6	0.7	133.4	0.18	10.9	0.002	0.15	0.7	14	< .2	87.9
RS-503 1680-1700	73	1.26	1.6	2.5	1	51.4	0.11	1.54	0.22	3.8	9.8	15.22	2.6	5	187	0.39	53.3	0.14	982	2.53	0.053	9.6	0.033	19.12	0.12	1.12	2.6	0.5	137.8	0.06	11.1	0.004	0.14	0.8	16	< .2	87.5
RS-503 1700-1720	110	0.79	1.6	10	3	77.4	0.07	1.62	0.39	1.8	10.9	18.24	2.39	2.7	58	0.39	54.1	0.04	1266	2.23	0.058	11.1	0.029	22.47	0.09	1.01	1.8	0.8	143.5	0.05	11.7	0.016	0.1	1.5	22	0.8	77.8
RS-503 1720-1740	276	0.95	4.8	24.2	1	132.2	0.07	0.29	0.52	2.5	7.8	17.18	2.46	4.5	219	0.37	47.2	0.06	841	1.47	0.031	6.6	0.023	39.34	0.87	4.33	1.6	1.7	116.8	< .02	10	0.001	0.2	1.2	8	0.5	92.3
RS-503 1740-1760	90	0.74	1.9	2.2	< 1	46.3	0.07	1.03	0.31	1.2	11.9	13.74	1.95	3.9	50	0.32	51.1	0.05	874	2.25	0.041	6.6	0.013	49.02	0.11	0.97	1.1	0.6	110.7	0.1	11.4	0.002	0.09	0.7	3	0.4	78
RS-503 1760-1780	111	0.66	3.8	4.5	1	60.3	0.13	0.77	0.34	0.6	14.5	27.46	1.45	2.4	74	0.42	48.2	0.03	344	2.58	0.039	5.3	0.011	312.43	0.28	1.6	0.8	0.8	98	0.1	10.5	0.001	0.17	0.6	2	0.4	149.6
RS-503 1780-1800	86	0.58	3.7	1	< 1	47.7	0.06	0.65	0.18	0.6	9.2	12.64	1.3	2.8	76	0.36	56.1	0.03	500	1.66	0.039	5.6	0.011	82.34	0.1	0.89	1	0.8	96.2	0.12	11.5	0.001	0.14	0.4	2	0.3	91
RS-503 1800-1820	121	0.54	5.3	2.3	< 1	56.5	0.07	0.66	0.34	0.6	10.3	10.71	1.09	2.7	32	0.35	52	0.03	471	2.73	0.042	4.8	0.011	93.51	0.09	1.11	0.7	0.8	97.5	< .02	12.8	0.001	0.15	0.7	< 2	0.4	71.5
RS-503 1820-1840	117	0.6	3.4	0.8	1	48.4	0.06	0.62	0.29	0.5	10.8	12.2	1.22	3.1	11	0.4	53.3	0.02	544	3.14	0.039	3.9	0.009	89.05	0.09	0.78	0.7	0.6	100.8	0.02	12.9	0.001	0.14	0.7	< 2	0.4	80.4
RS-503 1840-1860	313	0.52	9.1	11.4	< 1	38.3	0.04	0.46	0.4	0.3	5	5.23	1.3	2.8	23	0.36	49.5	0.02	662	1.93	0.044	3.1	0.009	45.08	0.4	1.62	0.8	2.2	84.4	0.12	11	< .001	0.08	0.5	< 2	0.4	75
RS-503 1860-1880	328	0.45	9.2	26.3	1	49.6	0.07	0.46	0.26	0.5	8.2	8.77	1.23	2	35	0.37	48.5	0.03	534	2.75	0.044	2.4	0.011	79.29	0.42	2.04	0.6	1.9	87.6	0.12	11.1	0.001	0.08	0.5	< 2	0.4	71.5
RS-503 1880-1900	668	0.43	26.6	38.1	< 1	45.1	0.19	0.47	0.18	0.4	7	7.3	1.51	1.7	26	0.36	36	0.02	886	4.43	0.042	2.9	0.008	58.9	0.63	2.46	0.4	4.5	91.3	0.12	8.8	0.001	0.07	0.5	< 2	0.5	89.7
RS-503 1900-1920	2555	0.41	87.3	156.1	1	38.6	1.2	0.74	0.07	0.8	6.9	7.74	2.36	1.4	9	0.34	23.3	0.02	2209	5.46	0.045	3	0.007	49.98	1.26	4.44	0.5	12.2	120.6	0.52	6	< .001	0.08	0.4	2	0.6	116.2
75294	53448	2.19	110.9	6050.6	1	72.9	0.19	0.85	1.58	3.8	6	22.56	2.45	7.4	396	0.83	15.5	0.13	304	5.76	0.062	3.3	0.053	29.72	1.76	19.4	0.9	20.8	62.3	0.08	3.8	0.004	0.42	1.4	9	0.3	86.3
STANDARD DS2	253	1.74	56.4	214.6	3	151.8	10.14	0.54	10.35	11.8	162.2	124.16	3.07	6.4	204	0.17	16.7	0.6	815	13.65	0.031	36	0.085	31.89	0.01	9.28	2.7	2.5	28.8	1.86	3.4	0.093	1.8	18.8	74	6.8	172.2

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
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Reno, NV. 89570
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Elko, NV. 89801
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(702) 738-2594

Company: Rosebud Mining Co LLC

Address: PO Box 2610 Winn. NV 89446

Telephone Number: (775) 623-6912 Fax Number: (775) 623-6967

Project Name: Rosebud Purchase Order Number: _____

Transport Company: _____ Waybill Number: _____

Date Shipped: 24 Jul, 2000 Number of Packages: 384 [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED in PPb & oz/ton

SAMPLE	TYPE	ELEMENTS REQUIRED
Drill Hole RS 503	RC	Au+Ag—Use Rosebud exploration
0 to 1920		protocol for sample prep
		& assays.
Note: Please make up		20 ft composite for
ICP + Se trace elements		
1 (one) pulp @ end of run		(Rosebud Production Standard)

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[ ] 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) Kurt Allen
PO Box 2610
(2) Winnemucca NV 89446
(3)

Comments:

Report in PPb & oz/ton

CLIENT FILE COPY

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

****
* HECLA MINING COMPANY *
****

JOB NUMBER: 29-0588-311

WELL NAME: RS-503 / VS 035.00

LOCATION: ROSEBUD MINE

SURVEY DATE: 07/18/2000

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: TRUE NORTH

TIE-ON COORDINATES AT: 0 M.D.
TAKEN FROM: COLLAR

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 125.00

****
****** DEPTH MEASURED IN FEET *******
****

COMMENTS: ***** EKLUND ****
** DON SCHOORL **

PROJECTED F/1750' T/1800'.

****
****
*** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
**
**
** **********
** COMPANY REPRESENTATIVE **
****
****

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-503 / VS 035.00

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
0.0	0.00	0.00	0.000	-46.73	345.00	0.00 N	0.00 E	0.00		0.00	AT 000.00
50.0	36.45	-26.01	-22.237	-46.89	346.06	33.13 N	8.55 W	1.49	0.74	34.22	AT 345.53
100.0	73.17	-51.16	-45.029	-47.59	348.32	66.23 N	16.08 W	3.37	1.69	68.15	AT 346.35
150.0	110.17	-75.46	-68.276	-47.88	349.15	99.21 N	22.65 W	1.26	0.63	101.76	AT 347.14
200.0	147.33	-99.33	-91.704	-48.14	349.77	132.09 N	28.77 W	0.98	0.49	135.19	AT 347.71
250.0	184.64	-122.76	-115.352	-48.37	350.76	164.91 N	34.40 W	1.40	0.70	168.45	AT 348.22
300.0	222.03	-145.70	-139.344	-48.45	351.83	197.71 N	39.42 W	1.43	0.71	201.60	AT 348.72
350.0	259.71	-168.09	-163.399	-49.35	352.26	230.26 N	43.97 W	1.89	0.94	234.42	AT 349.19
400.0	297.83	-190.11	-187.114	-49.99	351.99	262.32 N	48.41 W	1.33	0.66	266.75	AT 349.54
450.0	336.23	-211.77	-210.695	-50.36	352.87	294.06 N	52.63 W	1.35	0.67	298.73	AT 349.85
500.0	374.88	-232.95	-234.317	-50.88	353.39	325.55 N	56.42 W	1.23	0.62	330.41	AT 350.17
550.0	413.99	-253.53	-257.704	-52.04	353.92	356.52 N	59.87 W	2.41	1.21	361.51	AT 350.47
600.0	453.63	-273.71	-280.532	-52.86	353.11	386.79 N	63.30 W	1.91	0.96	391.94	AT 350.71
650.0	493.74	-293.69	-302.696	-53.85	352.81	416.41 N	66.96 W	2.01	1.01	421.76	AT 350.86
700.0	534.40	-313.39	-324.112	-54.97	351.96	445.25 N	70.81 W	2.45	1.22	450.85	AT 350.96
750.0	575.63	-332.65	-344.827	-56.13	352.22	473.27 N	74.71 W	2.34	1.17	479.13	AT 351.03
800.0	617.44	-351.21	-365.023	-57.34	352.64	500.45 N	78.32 W	2.46	1.23	506.54	AT 351.11
850.0	659.66	-369.12	-384.934	-57.88	353.41	527.04 N	81.58 W	1.36	0.68	533.31	AT 351.20
900.0	702.26	-386.46	-404.545	-58.98	353.63	553.05 N	84.53 W	2.21	1.11	559.47	AT 351.31
950.0	745.30	-403.16	-423.737	-59.84	354.31	578.35 N	87.21 W	1.85	0.93	584.89	AT 351.43
1000.0	788.70	-419.22	-442.672	-60.62	355.11	603.07 N	89.50 W	1.75	0.88	609.67	AT 351.56
1050.0	832.36	-434.83	-461.386	-61.03	355.20	627.36 N	91.56 W	0.82	0.41	634.00	AT 351.70
1100.0	876.28	-450.11	-479.756	-61.88	355.31	651.17 N	93.53 W	1.70	0.85	657.85	AT 351.83
1150.0	920.48	-465.09	-497.694	-62.39	354.96	674.45 N	95.51 W	1.07	0.54	681.18	AT 351.94
1200.0	964.86	-479.88	-515.348	-62.76	355.14	697.39 N	97.50 W	0.76	0.38	704.18	AT 352.04
1250.0	1009.40	-494.41	-532.813	-63.18	355.32	720.04 N	99.39 W	0.86	0.43	726.87	AT 352.14
1300.0	1054.10	-508.54	-550.209	-63.56	356.52	742.39 N	100.99 W	1.32	0.66	749.23	AT 352.25
1350.0	1099.00	-522.21	-567.453	-64.22	356.68	764.36 N	102.29 W	1.33	0.66	771.17	AT 352.38
1400.0	1144.06	-535.64	-584.449	-64.43	356.68	785.98 N	103.55 W	0.42	0.21	792.78	AT 352.49
1450.0	1189.27	-548.82	-601.252	-65.00	357.10	807.31 N	104.71 W	1.20	0.60	814.07	AT 352.61
1500.0	1234.70	-561.61	-617.758	-65.64	357.39	828.16 N	105.71 W	1.30	0.65	834.88	AT 352.73
1550.0	1280.34	-574.03	-633.972	-66.14	357.71	848.57 N	106.58 W	1.03	0.52	855.24	AT 352.84
1600.0	1326.08	-586.21	-650.076	-66.22	358.07	868.75 N	107.33 W	0.33	0.17	875.35	AT 352.96
1650.0	1371.97	-598.13	-665.949	-66.99	358.10	888.59 N	107.99 W	1.54	0.77	895.13	AT 353.07
1700.0	1418.05	-609.82	-681.447	-67.33	357.88	907.99 N	108.67 W	0.70	0.35	914.47	AT 353.18
1750.0	1464.18	-621.44	-696.829	-67.31	357.97	927.25 N	109.37 W	0.08	0.04	933.68	AT 353.27

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-503 / VS 035.00

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
1800.0	1510.31	-633.06	-712.225	-67.30	357.93	946.53 N	110.06 W	0.04	0.02	952.91	AT 353.37

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*                          ********                         *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*  1800.0 FEET EQUALS    952.91    FEET AT   353.37         *
*                          ********                         *
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