60000625

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-504
AUTHOR	D. Schoerl; J.P. Rogowski; V. Reid; B. Morris; K. Allen; L.E. Machedon
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; Hecla Mining Co.; Rosebud Project
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 1745'; invoice; geochemistry 104 p.

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 3/21/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

RS-504 yr 2000

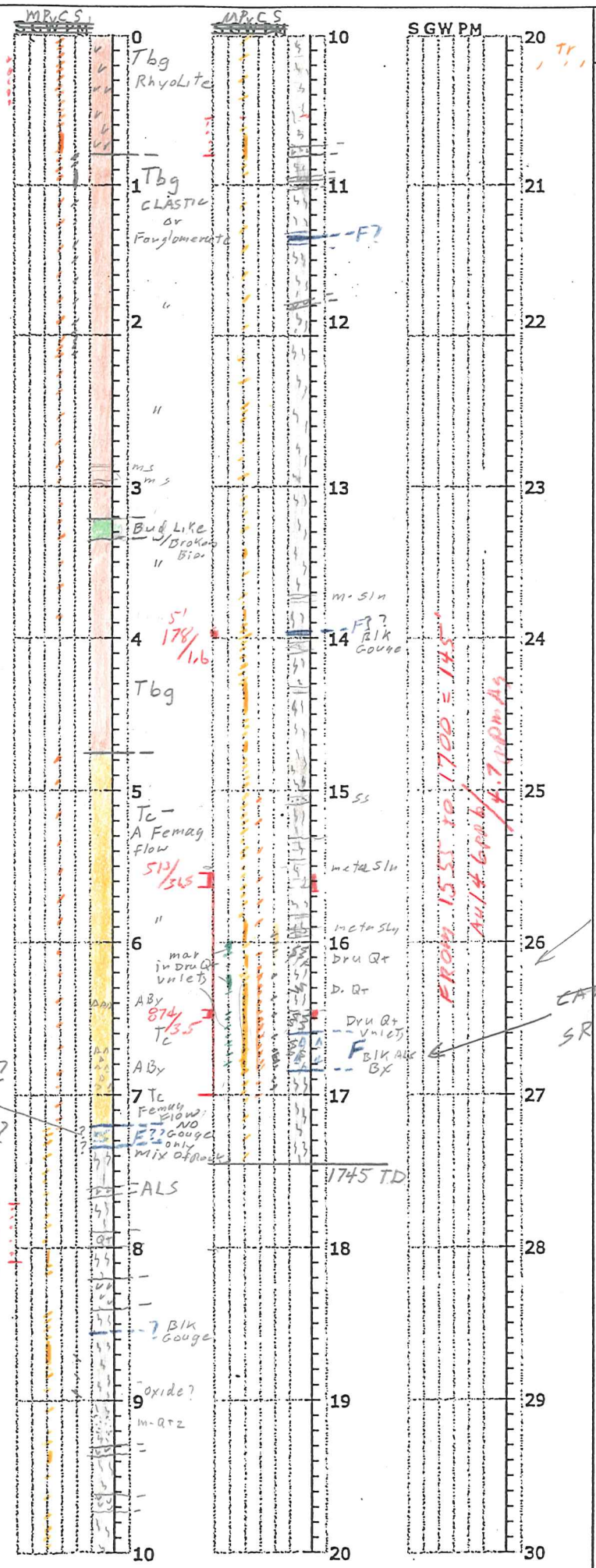
NE SRF

ROSEBUD MINING COMPANY, LLC.

To explore the SRF to the NE, also the Cave Fault. Drilled 1000' at ALS looking for SRF & may have found it.

DRILLING CO. Eklund

HOLE #	RS-504
START HOLE	20 July 2000
FINISH HOLE	27 July 2000
T.D	1745'
COLLAR COORDINATES	
NORTH	2,206,973
EAST	483,984
ELEV	5355'
DRILLER	Don Schoorl
HOLE TYPE	RCB
LOGGED BY	Rogowski
BEARING	—
ANGLE	-90
SURVEYED TO	well-Mar vern Red 1620'
PAGE 1 OF	



ALTERATION INTENSITY

1 WEAK — 2 MODERATE — 3 STRONG

VERITHIN COLOR

2H ~~737~~	SILICIFICATION
~~751~~	GREEN CLAY
737 ~~747½~~	WHITE CLAY
755	PYRITE
739 ~~757~~	MARCASITE

GRAPHIC LOG

VERITHIN COLOR

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

Note: If this is the SRF then this alteration & mineralization is very significant

~~CAVE FAULT~~ or SRF NOT SURE

(Tbg) BADGER RHYO

(Tbg) BADGER CLASTIC (Fanglomerate)

(Tc) Chocolate Fm Porphyrys

ALS phyllites + Dozer-Like Dikes w/ poss meta-siltstone + also qtzites

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-504
PAGE 2 OF 19
DATE 20 July 2000 to 27 July 2000
LOGGED BY Rogowski
TOTAL DEPTH 1745 TD

LOCATION ROSEBUD. NV
NORTHING 2,206,973
EASTING 483,984
ELEVATION 5355
AZIMUTH —
INCLINATION -90

AREA N.E. SRF 0-100
DRILLING CO. Eklund - Don Schoerl
RIG TYPE R.C - 75E
HOLE SIZE 6"
DOWN HOLE SURVEY BY Wel-Nav to 1600 (Vern Reed)

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MUSC %	QUARTS %	ARGILLIC 5%	15%	+25%	TYPE	CHLORITE	CALCITE	PROPHYLITIC %	K-SPAR	POTASSIC %	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
0		BADGER RHYOLITE	0 to Tbg Badger Rhyolite flow	H		0					1					0												0														
10			Has a Dozer Like																																							
			texture, generally																																							
20			cream colored but																																							
			lt gray where																																							
30			argillized. Has																																							
			strong Goet. often																																							
40			Py & oxPy appears																																							
			to be on fract																																							
50			only. Some MnO2																																							
			on fracts lower								1																															
60			contact w/ Tb ground								1																															
			is sharp.								1																															
70											2																															
											2																															
80				H		0					2																															
		BADGER CLASTIC	80-100 Tbg Clastic 5% rounded	H		?					1																															
90			some clasts silicified.																																							
			matrix is red.								1																															
			Clasts are Rhyo Aphyric																																							
			+ porphyrys.			1-2					1																															
100			Both silicified + clay altered.	H		1-2					1					0												0															

Some Ox fg on fract pass +/- 2 %

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-504
PAGE 3 OF 19
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. HV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

1-200

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
100			100-210 Tbg?	H	Clastic / Breccia Brick red matrix / white clasts
			(Almost mono lithic)		
110			well indurated		
			clastic or Breccia		
120			Has a brick red		
			micro clastic		
130			matrix		
			most clasts are		
140			cream colored &		
		Either Tbg or TC	could be Dacite		
150			or Tbg or LBt		
			matrix has Bio		
160			~~D~~ poss ALS clasts		
170			would say 90% of		
			clasts look like		
180			Dacite or LBt (Fxln		
			Porphyric)		
190			Note: this could		
			be related to the		
200			tbg Phyo.	H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	CHLORITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
100	?tr					tr				0								
110																		
120																		
130																		
140										0								
150										1								
160										0								
170										1								
180										0								
190										1								
200	?tr					tr				0								

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SLF %	SLEBNE %	BAPTE %	METALLURGY: OXIDE	SULF	OXBOX	MOLSUL	ANALYTICAL DATA: FROM	TO	W	Au	Ag
100				0														
110																		
120																		
130																		
140																		
150																		
160																		
170																		
180																		
190																		
200				0														

504

4/19

Hecla MINING COMPANY
ROSEBUD PROJECT
DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-504
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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%	%	VEINING TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDION	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
200			200-210 Tbg			?																																			
			as above	m H		/					/					Tv										0															
			Hard & well indurated																																						
210						1?					/					/																									
		mud stn	210-300 tbg			0					Tv					/																									
220			Soft & multi													Tv																									
			lithic-Tbg													Tv																									
230			See Tc, LBT/WR,													/																									
			Td, & Andesite													/																									
240			clasts w/a																																						
			soft sandy																																						
250			mud like matrix																																						
260			Larger clasts are																																						
			slightly rounded.																																						
270																/																									
																Tv																									
280																Tv																									
																Tv																									
290		mud stn														/																									
																/																									
300		mud stn		m H		0					Tv					/										0															

BADGER CONG

Clastic Like an Alva Fan w/ Brecciated matrix colors

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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or % by Vol

HOLE NUMBER RS-504
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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

504 3-400 5/19

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	ALBITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	ASP %	SPHALERITE %	BARITE %	METALLURGY: OXIDE	SULF	OPEN	MOLYB	ANALYTICAL DATA: FROM	TO	W	Au	Ag
300			300 to 320 Tbg	H+		0					Tr					1											0													
			c. lastic sandstone	soft																																					
310			+ cong.													Tr																									
																Tr																									
320																Tr																									
			320 to 335 Tbg													1																									
			Bud-like unit, yellow																																						
330			+ has Broken bio phenos													1																									
			also clasts are																																						
			multi-lithic																																						
																1																									
340			Tbg 335 to 365																																						
			as a multi-																																						
350			lithic gravel																																						
			mix of many																																						
360			rock types																																						
			cong + mudstone																																						
370			365 - 390 Tbg																																						
			mud matrix																																						
380			dark Red Brn																																						
390																1																									
			Same as 335 to 365													Tr																									
400				H+ soft		0					Tr					Tr											0														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-504
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TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 4-500
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-SLF %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
400			400 to 475 Tbg	H		0					Tr					1											0													
410			multi. lithic, sand & mud cemented gravels. Reddish matrix & multi-colored clasts.	H & S												1																									
420																																									
430		Tbg Conf			Gravel like																																				
440																																									
450																																									
																1																									
460																2																									
																2																									
470			Tbg	1+8												2																									
			sel contact	S							0					2																									
480		Femag porph. Rhyol = Tow	475 to 500 Tc	H	Femag porph. Lt. gray						Tr					1																									
			Femag porphyry flow, micro Femag phenos, very weak clay alt. Rare K-spar													1																									
490																1																									
																1																									
500				H		0					Tr					1											0														

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Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

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LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 5-600
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

7/19

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	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
500			500 to 600 Tc	H		0					tr					1											0														
510			chocolate, Femag													1																										
			flow w/ micro													1																										
520			Femag, Femags													1																										
			K-Span & Bio													1																										
530			phenos.													tr																										
			Poss. some													0																										
540			sanidine													0																										
																0																										
550																tr																										
																tr																										
560																1																										
																1																										
570																tr																										
																0																										
580																																										
590																																										
		ABy														0																										
600		ABO		H		0					tr					tr											0															

Fx in matrix, Porphyry
LT blue ish grey

Dark Brn

504

8/19

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 6-700
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
600			600-700 TC	H	Femag Flow Lt Blue Gray ~ 1-2 cm Pebbles Bxc
610			Femag Flow		
			bio + micro Femag		
620			phenos		
			Auto Bxed in		
630			parts Mast		
			Femags are		
640		ABx	very small		
			bio phenos		
650			less than 3%		
660		TC Fe Mag Rhyo Flow			
670		ABx			
680					
690					
700				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE %	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXDUR	ANALYTICAL DATA: FROM	TO	W	Au	Ag
600	0					tr				1												0														
610										tr																										
										tr																										
620										tr																										
										0																										
630										1																										
										tr																										
640										1																										
650																																				
660																																				
670																																				
680																																				
690																																				
700	0					Tr				1												0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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LOCATION ROSEBUD. HV
NORTHING
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INCLINATION

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

7-800

504

9/19

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	±25%	MAGN	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	MIXIDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
700		ABx	700 to 820 Tc Auto Bxal micro	H	Fe mag Flow Hem Rubbly Brn	0					tr					tr											0														
		ABx	Fe mag Rhyo Flow	H																																				
710		ABx	of the chocolate Fm.	H												1																								
		ABx		H												1																								
720		AB		H		0					tr					1											0														
OX		F	mix of Rock + Gray Qtz + w/ Py	H		?					?					3											tr		cubic												
		F	Gray "Qtzite" Appears																																					
OX		F	Silicified No gouge	H		?					?					tr											tr		on Qtz-Anhedral												
730		F	Some Rusty Feox																																					
		F	Prob CAVE FAULT	H	M V	?					?					2											tr		on QTZ-Anhedral												
			635 - 700 ALS																																					
740				MH		0					0					0											+/?														
			Black phyllite																																					
			w/ Py. Wt Qt + wt calc																																					
750			veinlets																																					
			Most Py appears																																					
760			syn G. (wt Qt)																																					
			@ 760 to 765 is																																					
770			Pass Dike (Dozer																																					
			Line)																																					
780																																								
			some meth-in Qt																								+													
			veinlets																																					
790																0											tr													
		Qtz																																						
																tr											1													
800		Qtz		mH		0					0					tr											1													

Most appears to be syn G. Py

Extremely Fine

S-04

8-900 10/19

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-504
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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%	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-SUL %	SEDRITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
800			800-900 ALS Blk phylite w/Qtzite & dikes & Qtz vns.	H	Thin Bedded Phyllite & Qtz Blk w/ white stringers	0					0					1											1.2	—	digen												
810			wt Qtzite?													1											2									w + b gray Qtz w/py					
820																1											1														
			820-840 White dike or whatever. Has a dozer like appearance													1											tr														
830																											tr														
																1											tr														
840		ALS	Note: meta-Qtz vnlets & Alum calc veinlets													tr											tr														
																2											1														
850																											1														
																											tr														
860		??	Blk Gouge — Poss Fault see striations																								tr														
																2											2														
870			Poss sandy shale mixed in w/phyllite			0										1											1														
						tr										2											3														
880						?										2											Tr														
																1											0														
890																Tr											?														
			Note: some rusty oxidation													Tr											tr							L								
900				H		tr?					0					Tr											tr							L								

S-504

504

9-1000 11/19

Hecla MINING COMPANY

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INCLINATION

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

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
900			900-1000 ALS phyllites & silty quartzites - 85% qtzite also meta-Q wacke. Note: m. gray color is granular & was prob a siltstone or silty shale. The jet black carbonaceous phyllite was prob a black carbonaceous shale. Also there are numerous layers of Arkosic sandstone 965 to 975 is prob a subistose dike of Rhyolitic composition. NOTE: The silty areas are lighter color & this is prob not alteration.	H	13-14 & gray; PHYLLITE (Crs); Blk & gray; Cream; Blk & gray
910					
920					
930					
940					
950					
960					
970					
980					
990					
1000				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
900	0					0					Tr							
910											1							
920											1							
930											0							
940											Tr							
950											Tr							
960											0							
970											Tr							
980											1							
990											0							
1000	0					0					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	SLBNITE %	BARITE %
900				Tr					
910				Tr					
920				Tr					
930				0					
940				1					
950				Tr					
960				Tr					
970				Tr					
980				1					
990				Tr					
1000				1					

Prob a long substosity of an hedral Py is prob dia. G. + 95-96 of Py. See Cubes

METALLURGY: OXIDE | SULF | OXIDOX | MIXDUE

ANALYTICAL DATA: FROM | TO | W | Au | Ag

504

10-1100 12/19

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-504
PAGE 12 OF 19
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%	15%	+25%	MAGG	QUARTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	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	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1000		ALS Phyllites	1000 to 1100 ALS	H	Phyllite & m. gray	0					0					0											tr													
1010			Mix of m. gray siltstone & blk. carbonaceous shale																								1														
																											1														
1020																											tr														
			some meta-m. Qt.																								tr														
1030			veinlets																								tr														
																											tr														
1040																											tr														
																											tr														
1050																											tr														
																											tr														
1060																											tr														
																0											tr														
1070																tr											1									mix from contact					
																0											3														
1080																0											-1														
			calc. veinlets													tr											2														
1090																1											1														
																2											1														
1100				H		0					0					2											tr														

Dike Gr. Py

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-504
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 11-1200
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 MAGG	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%	VIENNING %	VIENNING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXBOX	MIXURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1100			1100-1200 ALS	H		0					0					1											Tr													
																		calc stgrs																							
1110			mix of siltstone													1											Tr															
			& shale phyllite													2											1															
1120			more shale here													23																										
			than 1000 to 1100													23																										
1130			see Num calcite													23																										
			stgrs and more													23																										
1140		F?	BIK Gouge													+3																										
			eff blk shale																																						
			other than before													2																										
1150			also num micro													2											1															
			Qtz vnlets (meta-m)													2											Tr															
1160																3											1														
																3																										
1170																2																										
																2																										
1180																1																										
																3																										
1190																3																										
																3																										
1200				H		0					0					3											1														

Phyllite & blk & siltstone

Phyllite + white
Blk - gray

Py is all disc except when in QT vnlets

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-504
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 12-1300
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 MASSIVE %	SILICIFICATION QUARTZITE %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	X-SLF %	SLBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MIXDUE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1200			1200 - 1300 ALS	H	BLK Phyllite w/ white $CaCO_3$ & QT	0					0				3											tr														
1210			Blk phyllitic shale & thin layers of siltstone																														wt QT vnlet							
1220			Num calc vnlets & several metamorphic Qt veinlets																																					
1230																																	wt QT vnlet							
1240		ALS Phyllites																																						
1250															3											tr														
1260															2											1														
1270															3											1														
1280																										tr														
1290																	?									tr							Pink Ankerite				?	?		
1300				H		0					0				2											tr														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-504
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 13 - 1400
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

15/19

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%	%	VIENING TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SUL %	SEBENITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1300			1300 - 1400 ALS	H		0					0					2											tr													
1310			Generally blk													3											1														
			phyllitic shale													3											tr														
1320			(carbon rich) w/													3											tr														
			v. sm. fine diss.													3											tr														
1330			py also a large													3											tr														
			number of calcite													3											0														
1340			veinlets & some													3											tr														
			w/ metamorp QT													3											2														
1350			veinlets.													3											tr														
																+3											tr														
1360																2											tr					← along bedding								
																2											tr														
1370																2											tr														
			← slv, very thin													1											tr														
1380																2											2														
																3											1														
1390																2											1														
																3											1														
1400		F?	Blk Gouge	H		0					0					+3											1														

ALS Blk Phyllitic

Blk phyllitic shale

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-504
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LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 14-1500
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 %	SELENITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1400			1400 to 1500 ALS	H	Black Phyllite (Carbonaceous)	0					0					3											1														
1410			Blk, carbonaceous phyllite shale w/ 1% siltstone (Gray)													3											1															
																2											1														
1420																2											1	?		X				Poss Cp		Not positive					
																2											1	?												
1430			Qtz veinlets.													3											2														
			Arkosic ss & sltn very thin.													2											2														
1440																1											2														
			Usual metamorphic Qtz veinlets (WT)													1											3							Layered-diss							
1450																1											3								"						
																2											1														
1460																3											1														
																3											2														
			Calc & Qtz veinlets													3											1														
1470																2											3														
1480																3											1														
																3											2														
1490																1											1														
																1											1														
1500				H		0					0					2											1														

RS-504

15-1600 17/19

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-504
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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
1500		SS	1500-1600 ALs	H	Schistose & Phyllitic shales & siltstones
1510			carbonaceous phyllite		
			shale and siltstone		
1520			poss clay alt of siltstone some metamorphic Qtz & num Calc veinlets		
1530		SLN	From 1540 to 1600 shows		
1540		SLN	an increase in schistose siltstone		
1550		SLN			
1560		SLN SLN	Note: if the meta siltstone is Arkosic then the feldspar is argil alto. It is much softer than the blk phyllite		
1580					
1590		SLN SLN			
1600		SLN		H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE %	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	CHLORITE	CALCITE	PROPYLITIC %	POTASSIC % K-SPAR	INTENSE	OXIDATION 5%	15%	+25%	VEINING %	TYPE
1500	0 ?					? Tr					3								
1510											3								
											2								
1520											2								
											3								
1530											2								
											2								
1540											2								
											3								
1550											2								
											2								
1560											2								
											1								
1570											3								
											3								
1580											3								
											3								
1590											2								
											2								
1600	0					Tr ?					Tr								

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1500				Tr														
1510				Tr														
				1														
1520				1														
				Tr														
1530				Tr						strong contam from above								
				1														
1540				Tr														
				1														
1550				1														
				1														
1560				1														
				Tr														
1570				Tr														
				Tr														
1580				1														
				Tr														
1590				2														
				2														
1600				2														

Diss Diag Py - 90% along schistosity

504

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-504
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

18/19

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGR	QUARTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VEINING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	X-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1600		Drusy Qt	1600 – 1700 ALS	H	Phyllitic Shales & siltstones Blk & gr.	1?					1						1								Py 1-3		1	tr xls					mar drus	xls	in Qt	vug	w
1610			mix of Blk carbonaceous phyllite (shale) and Lt to gray micaceous meta-siltstone & Qtzite cub by matr			tr?					1-2						2										2		tr												
1620																	2										2														
																	1										1														
1630		Dru Qt															tr										4		1												
																	tr										2		1												
																	tr										3		tr												
1640			Rusty FeOx Qt stgrs & later Drusy Qt stgrs w/ traces of marcasite														1										1														
																	2										1														
1650						tr											tr										3		tr												
																	tr										3		tr												
1660						?											2										2		tr												
		F?	very Alt.			tr											2										2		tr												
1670		F?				tr											3										2		1												
		F	Bx & Dru Qt			tr											3										4		tr?												
			Dru Qt														3										3		tr												
1680		F?				1											2										2														
		1F	Bx & dru Qt			tr					1-2						2										1														
1690			Blk phyllite								tr						2										2														
																	2										tr														
1700				H		tr					tr						2										1														

NOTE: Poss large fault, not sure which one ?SR?? or something else.

Appears Argillized but not positive

Some of it is hard but cant tell if this is HT silicification

Usual Dra & Py Occur in total wipeout

Definite Increase in Py & mar

Py 1-3 mar drus xls in Qt vug w

504

17-1800 19/19

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-504
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DATE
LOGGED BY
TOTAL DEPTH 1745 TD

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH —
INCLINATION -90

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

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGCA	QUARTS	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-SLF %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDEX	MOLBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1700		ALS PHYLLITE	1700 TO 1745 TD																																							
			Set. black phyllite	H	PHYLLITIC	0					0					3										?	1	← Large cubic													
1710			Has num. w/ calcite													2										?	2	" "													
			stgrs & stock work													2											Tr														
1720			(very after)													3											Tr														
																3											Tr														
1730																3										Diag. very fine?															
																3																									
1740																3										Appears															
				H		0					0					3											Tr														
1745			1745 TD																																							
1750																																										
1760																																										
1770																																										
1780																																										
1790																																										
1800																																										

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 0058058-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
RC-504	KURT ALLEN	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
349	SAMPLES RECEIVED	.00	.00
349	DRY/JAW CRUSH ENTIRE SAMPLE	2.30	802.70
349	"JONES" RIFFLE SPLIT	2.40	837.60
349	FINE MILLING CHARGE	2.00	698.00
349	Au (1 A.T. FIRE ASSAY)	8.00	2,792.00
349	HYDROCHLORIC/NITRIC DIGESTION	2.00	698.00
349	Ag ANALYSES	1.00	349.00
328	COMPOSITE CHARGE	1.25	410.00
102	MULTI-ELEMENT ICP PACKAGE	13.75	1,402.50

86-2510-477
KAA

NET INVOICE:	7,989.80
LESS DISCOUNT:	2,796.43
FREIGHT:	.00
INVOICE TOTAL:	5,193.37

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

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: RC-504 RECEIVED : 31 JUL 2000

No. SAMPLES : 349 REPORTED : 22 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 SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0000-0005	<5		<0.001		<0.5	<0.02
RS-504 0005-0010	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0010-0015	<5		<0.001		<0.5	<0.02
RS-504 0015-0020	16		<0.001		<0.5	<0.02
RS-504 0020-0025	7		<0.001		<0.5	<0.02
RS-504 0025-0030	8		<0.001		<0.5	<0.02
RS-504 0030-0035	9		<0.001		<0.5	<0.02
RS-504 0035-0040	6		<0.001		<0.5	<0.02
RS-504 0040-0045	5		<0.001		<0.5	<0.02
RS-504 0045-0050	<5		<0.001		<0.5	<0.02
RS-504 0050-0055	5		<0.001		<0.5	<0.02
RS-504 0055-0060	<5		<0.001		<0.5	<0.02
RS-504 0060-0065	<5		<0.001		<0.5	<0.02
RS-504 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0070-0075	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0075-0080	<5		<0.001		<0.5	<0.02
RS-504 0080-0085	<5		<0.001		<0.5	<0.02
RS-504 0085-0090	<5		<0.001		<0.5	<0.02
RS-504 0090-0095	<5		<0.001		<0.5	<0.02
RS-504 0095-0100	<5		<0.001		<0.5	<0.02
RS-504 0100-0105	<5		<0.001		<0.5	<0.02
RS-504 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0110-0115	<5		<0.001		<0.5	<0.02
RS-504 0115-0120	<5		<0.001		<0.5	<0.02
RS-504 0120-0125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0125-0130	<5		<0.001		<0.5	<0.02
RS-504 0130-0135	<5		<0.001		<0.5	<0.02
RS-504 0135-0140	<5		<0.001		<0.5	<0.02
RS-504 0140-0145	<5		<0.001		<0.5	<0.02
RS-504 0145-0150	<5		<0.001		<0.5	<0.02
RS-504 0150-0155	<5		<0.001		<0.5	<0.02
RS-504 0155-0160	<5		<0.001		<0.5	<0.02
RS-504 0160-0165	<5		<0.001		<0.5	<0.02
RS-504 0165-0170	<5		<0.001		<0.5	<0.02
RS-504 0170-0175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0175-0180	<5		<0.001		<0.5	<0.02
RS-504 0180-0185	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0185-0190	<5		<0.001		<0.5	<0.02
RS-504 0190-0195	<5		<0.001		<0.5	<0.02
RS-504 0195-0200	<5		<0.001		<0.5	<0.02
RS-504 0200-0205	<5		<0.001		<0.5	<0.02
RS-504 0205-0210	<5		<0.001		<0.5	<0.02
RS-504 0210-0215	<5		<0.001		<0.5	<0.02
RS-504 0215-0220	<5		<0.001		<0.5	<0.02
RS-504 0220-0225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0225-0230	<5		<0.001		<0.5	<0.02
RS-504 0230-0235	<5		<0.001		<0.5	<0.02
RS-504 0235-0240	<5		<0.001		<0.5	<0.02
RS-504 0240-0245	<5		<0.001		<0.5	<0.02
RS-504 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0250-0255	<5		<0.001		<0.5	<0.02
RS-504 0255-0260	<5		<0.001		<0.5	<0.02
RS-504 0260-0265	<5		<0.001		<0.5	<0.02
RS-504 0265-0270	<5		<0.001		<0.5	<0.02
RS-504 0270-0275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0275-0280	<5		<0.001		<0.5	<0.02
RS-504 0280-0285	<5		<0.001		<0.5	<0.02
RS-504 0285-0290	<5		<0.001		<0.5	<0.02
RS-504 0290-0295	<5		<0.001		<0.5	<0.02
RS-504 0295-0300	<5		<0.001		<0.5	<0.02
RS-504 0300-0305	<5		<0.001		<0.5	<0.02
RS-504 0305-0310	<5		<0.001		<0.5	<0.02
RS-504 0310-0315	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0315-0320	<5		<0.001		<0.5	<0.02
RS-504 0320-0325	<5		<0.001		<0.5	<0.02
RS-504 0325-0330	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0330-0335	<5		<0.001		<0.5	<0.02
RS-504 0335-0340	<5		<0.001		<0.5	<0.02
RS-504 0340-0345	<5		<0.001		<0.5	<0.02
RS-504 0345-0350	<5		<0.001		<0.5	<0.02
RS-504 0350-0355	<5		<0.001		<0.5	<0.02
RS-504 0355-0360	<5		<0.001		<0.5	<0.02
RS-504 0360-0365	<5		<0.001		<0.5	<0.02
RS-504 0365-0370	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0370-0375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0375-0380	<5		<0.001		<0.5	<0.02
RS-504 0380-0385	<5		<0.001		<0.5	<0.02
RS-504 0385-0390	<5		<0.001		<0.5	<0.02
RS-504 0390-0395	<5		<0.001		<0.5	<0.02
RS-504 0395-0400	<5		<0.001		<0.5	<0.02
RS-504 0400-0405	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0405-0410	<5		<0.001		<0.5	<0.02
RS-504 0410-0415	<5		<0.001		<0.5	<0.02
RS-504 0415-0420	<5		<0.001		<0.5	<0.02
RS-504 0420-0425	<5		<0.001		<0.5	<0.02
RS-504 0425-0430	<5		<0.001		<0.5	<0.02
RS-504 0430-0435	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0435-0440	<5		<0.001		<0.5	<0.02
RS-504 0440-0445	<5		<0.001		<0.5	<0.02
RS-504 0445-0450	<5		<0.001		<0.5	<0.02
RS-504 0450-0455	<5		<0.001		<0.5	<0.02
RS-504 0455-0460	<5		<0.001		<0.5	<0.02
RS-504 0460-0465	<5		<0.001		<0.5	<0.02
RS-504 0465-0470	<5		<0.001		<0.5	<0.02
RS-504 0470-0475	<5		<0.001		<0.5	<0.02
RS-504 0475-0480	<5		<0.001		<0.5	<0.02
RS-504 0480-0485	<5		<0.001		<0.5	<0.02
RS-504 0485-0490	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0490-0495	<5		<0.001		<0.5	<0.02
RS-504 0495-0500	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0500-0505	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0505-0510	<5		<0.001		<0.5	<0.02
RS-504 0510-0515	<5		<0.001		<0.5	<0.02
RS-504 0515-0520	<5		<0.001		<0.5	<0.02
RS-504 0520-0525	<5		<0.001		<0.5	<0.02
RS-504 0525-0530	<5		<0.001		<0.5	<0.02
RS-504 0530-0535	<5		<0.001		<0.5	<0.02
RS-504 0535-0540	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0540-0545	<5		<0.001		<0.5	<0.02
RS-504 0545-0550	<5		<0.001		<0.5	<0.02
RS-504 0550-0555	<5		<0.001		<0.5	<0.02
RS-504 0555-0560	<5		<0.001		<0.5	<0.02
RS-504 0560-0565	<5		<0.001		<0.5	<0.02
RS-504 0565-0570	<5		<0.001		<0.5	<0.02
RS-504 0570-0575	<5		<0.001		<0.5	<0.02
RS-504 0575-0580	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0580-0585	<5		<0.001		<0.5	<0.02
RS-504 0585-0590	<5		<0.001		<0.5	<0.02
RS-504 0590-0595	<5		<0.001		<0.5	<0.02
RS-504 0595-0600	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0600-0605	<5		<0.001		<0.5	<0.02
RS-504 0605-0610	<5		<0.001		<0.5	<0.02
RS-504 0610-0615	<5		<0.001		<0.5	<0.02
RS-504 0615-0620	<5		<0.001		<0.5	<0.02
RS-504 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0625-0630	<5		<0.001		<0.5	<0.02
RS-504 0630-0635	<5		<0.001		<0.5	<0.02
RS-504 0635-0640	<5		<0.001		<0.5	<0.02
RS-504 0640-0645	<5		<0.001		<0.5	<0.02
RS-504 0645-0650	<5		<0.001		<0.5	<0.02
RS-504 0650-0655	<5		<0.001		<0.5	<0.02
RS-504 0655-0660	<5		<0.001		<0.5	<0.02
RS-504 0660-0665	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0665-0670	<5		<0.001		<0.5	<0.02
RS-504 0670-0675	<5		<0.001		<0.5	<0.02
RS-504 0675-0680	<5		<0.001		<0.5	<0.02
RS-504 0680-0685	<5		<0.001		<0.5	<0.02
RS-504 0685-0690	<5		<0.001		<0.5	<0.02
RS-504 0690-0695	6	6	<0.001	<0.001	<0.5	<0.02
RS-504 0695-0700	<5		<0.001		<0.5	<0.02
RS-504 0700-0705	<5		<0.001		<0.5	<0.02
RS-504 0705-0710	<5		<0.001		<0.5	<0.02
RS-504 0710-0715	<5		<0.001		<0.5	<0.02
RS-504 0715-0720	<5		<0.001		<0.5	<0.02
RS-504 0720-0725	<5		<0.001		<0.5	<0.02
RS-504 0725-0730	<5		<0.001		<0.5	<0.02
RS-504 0730-0735	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0735-0740	<5		<0.001		0.8	0.02
RS-504 0740-0745	<5		<0.001		1.2	0.04
RS-504 0745-0750	<5		<0.001		0.9	0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0750-0755	<5		<0.001		1.1	0.03
RS-504 0755-0760	<5		<0.001		1.0	0.03
RS-504 0760-0765	<5		<0.001		<0.5	<0.02
RS-504 0765-0770	<5		<0.001		<0.5	<0.02
RS-504 0770-0775	52		0.002		<0.5	<0.02
RS-504 0775-0780	48		0.001		<0.5	<0.02
RS-504 0780-0785	48	42	0.001	0.001	1.7	0.05
RS-504 0785-0790	36	34	0.001	<0.001	0.9	0.03
RS-504 0790-0795	52		0.002		0.7	0.02
RS-504 0795-0800	38		0.001		0.9	0.03
RS-504 0800-0805	64		0.002		1.8	0.05
RS-504 0805-0810	54		0.002		1.2	0.04
RS-504 0810-0815	26		<0.001		1.0	0.03
RS-504 0815-0820	16		<0.001		1.4	0.04
RS-504 0820-0825	18		<0.001		0.6	<0.02
RS-504 0825-0830	<5		<0.001		<0.5	<0.02
RS-504 0830-0835	<5		<0.001		<0.5	<0.02
RS-504 0835-0840	<5		<0.001		<0.5	<0.02
RS-504 0840-0845	<5		<0.001		1.6	0.05
RS-504 0845-0850	<5		<0.001		1.8	0.05
RS-504 0850-0855	<5		<0.001		1.8	0.05
RS-504 0855-0860	20		<0.001		2.0	0.06
RS-504 0860-0865	10		<0.001		1.8	0.05
RS-504 0865-0870	<5		<0.001		<0.5	<0.02
RS-504 0870-0875	<5	<5	<0.001	<0.001	0.6	<0.02

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ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0875-0880	26		<0.001		0.8	0.02
RS-504 0880-0885	34		<0.001		<0.5	<0.02
RS-504 0885-0890	10		<0.001		<0.5	<0.02
RS-504 0890-0895	10		<0.001		<0.5	<0.02
RS-504 0895-0900	6		<0.001		<0.5	<0.02
RS-504 0900-0905	8		<0.001		<0.5	<0.02
RS-504 0905-0910	12		<0.001		<0.5	<0.02
RS-504 0910-0915	6		<0.001		<0.5	<0.02
RS-504 0915-0920	18		<0.001		0.5	<0.02
RS-504 0920-0925	20		<0.001		<0.5	<0.02
RS-504 0925-0930	34		<0.001		<0.5	<0.02
RS-504 0930-0935	36		0.001		<0.5	<0.02
RS-504 0935-0940	12		<0.001		<0.5	<0.02
RS-504 0940-0945	12		<0.001		<0.5	<0.02
RS-504 0945-0950	6		<0.001		<0.5	<0.02
RS-504 0950-0955	18		<0.001		0.6	<0.02
RS-504 0955-0960	8		<0.001		<0.5	<0.02
RS-504 0960-0965	6		<0.001		<0.5	<0.02
RS-504 0965-0970	<5		<0.001		<0.5	<0.02
RS-504 0970-0975	8		<0.001		<0.5	<0.02
RS-504 0975-0980	16	20	<0.001	<0.001	0.6	<0.02
RS-504 0980-0985	10		<0.001		0.6	<0.02
RS-504 0985-0990	22		<0.001		0.8	0.02
RS-504 0990-0995	24		<0.001		0.9	0.03
RS-504 0995-1000	20		<0.001		0.8	0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1000-1005	16		<0.001		0.6	<0.02
RS-504 1005-1010	14	12	<0.001	<0.001	0.6	<0.02
RS-504 1010-1015	12		<0.001		0.8	0.02
RS-504 1015-1020	12		<0.001		0.7	0.02
RS-504 1020-1025	12		<0.001		0.7	0.02
RS-504 1025-1030	12		<0.001		0.7	0.02
RS-504 1030-1035	10		<0.001		0.7	0.02
RS-504 1035-1040	24		<0.001		0.9	0.03
RS-504 1040-1045	16		<0.001		0.7	0.02
RS-504 1045-1050	12		<0.001		0.9	0.03
RS-504 1050-1055	32	36	<0.001	0.001	0.9	0.03
RS-504 1055-1060	30	24	<0.001	<0.001	0.9	0.03
RS-504 1060-1065	24		<0.001		0.8	0.02
RS-504 1065-1070	58		0.002		1.1	0.03
RS-504 1070-1075	82		0.002		2.7	0.08
RS-504 1075-1080	54		0.002		0.6	<0.02
RS-504 1080-1085	12		<0.001		1.2	0.04
RS-504 1085-1090	24		<0.001		0.7	0.02
RS-504 1090-1095	10		<0.001		0.9	0.03
RS-504 1095-1100	6		<0.001		0.7	0.02
RS-504 1100-1105	12		<0.001		<0.5	<0.02
RS-504 1105-1110	6		<0.001		0.7	0.02
RS-504 1110-1115	10		<0.001		<0.5	<0.02
RS-504 1115-1120	<5	<5	<0.001	<0.001	1.5	0.04
RS-504 1120-1125	<5		<0.001		2.2	0.06

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1125-1130	<5		<0.001		1.7	0.05
RS-504 1130-1135	12		<0.001		1.7	0.05
RS-504 1135-1140	<5	<5	<0.001	<0.001	1.6	0.05
RS-504 1140-1145	<5		<0.001		0.8	0.02
RS-504 1145-1150	<5		<0.001		1.2	0.04
RS-504 1150-1155	<5		<0.001		0.9	0.03
RS-504 1155-1160	<5	<5	<0.001	<0.001	0.7	0.02
RS-504 1160-1165	<5		<0.001		<0.5	<0.02
RS-504 1165-1170	<5		<0.001		0.7	0.02
RS-504 1170-1175	<5		<0.001		0.8	0.02
RS-504 1175-1180	<5		<0.001		0.8	0.02
RS-504 1180-1185	<5		<0.001		<0.5	<0.02
RS-504 1185-1190	<5		<0.001		<0.5	<0.02
RS-504 1190-1195	<5		<0.001		<0.5	<0.02
RS-504 1195-1200	<5		<0.001		<0.5	<0.02
RS-504 1200-1205	<5		<0.001		<0.5	<0.02
RS-504 1205-1210	<5		<0.001		<0.5	<0.02
RS-504 1210-1215	<5		<0.001		<0.5	<0.02
RS-504 1215-1220	<5		<0.001		<0.5	<0.02
RS-504 1220-1225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 1225-1230	<5		<0.001		<0.5	<0.02
RS-504 1230-1235	<5		<0.001		<0.5	<0.02
RS-504 1235-1240	<5		<0.001		<0.5	<0.02
RS-504 1240-1245	<5		<0.001		<0.5	<0.02
RS-504 1245-1250	<5	<5	<0.001	<0.001	<0.5	<0.02

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American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

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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-504 1250-1255	<5		<0.001		<0.5	<0.02
RS-504 1255-1260	<5		<0.001		<0.5	<0.02
RS-504 1260-1265	<5		<0.001		<0.5	<0.02
RS-504 1265-1270	<5		<0.001		<0.5	<0.02
RS-504 1270-1275	<5		<0.001		<0.5	<0.02
RS-504 1275-1280	<5		<0.001		0.7	0.02
RS-504 1280-1285	<5		<0.001		<0.5	<0.02
RS-504 1285-1290	<5		<0.001		0.6	<0.02
RS-504 1290-1295	<5		<0.001		<0.5	<0.02
RS-504 1295-1300	<5		<0.001		0.6	<0.02
RS-504 1300-1305	<5		<0.001		1.1	0.03
RS-504 1305-1310	<5		<0.001		0.8	0.02
RS-504 1310-1315	<5		<0.001		0.6	<0.02
RS-504 1315-1320	<5		<0.001		<0.5	<0.02
RS-504 1320-1325	<5		<0.001		<0.5	<0.02
RS-504 1325-1330	<5	<5	<0.001	<0.001	1.1	0.03
RS-504 1330-1335	<5		<0.001		0.6	<0.02
RS-504 1335-1340	<5		<0.001		0.6	<0.02
RS-504 1340-1345	<5		<0.001		<0.5	<0.02
RS-504 1345-1350	8	10	<0.001	<0.001	0.8	0.02
RS-504 1350-1355	<5		<0.001		<0.5	<0.02
RS-504 1355-1360	<5		<0.001		1.1	0.03
RS-504 1360-1365	<5		<0.001		1.4	0.04
RS-504 1365-1370	16		<0.001		1.1	0.03
RS-504 1370-1375	16		<0.001		1.1	0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1375-1380	12		<0.001		1.0	0.03
RS-504 1380-1385	14		<0.001		1.3	0.04
RS-504 1385-1390	12		<0.001		1.5	0.04
RS-504 1390-1395	6		<0.001		1.2	0.04
RS-504 1395-1400	178		0.005		1.6	0.05
RS-504 1400-1405	8		<0.001		1.1	0.03
RS-504 1405-1410	14		<0.001		1.0	0.03
RS-504 1410-1415	<5		<0.001		1.0	0.03
RS-504 1415-1420	<5		<0.001		0.8	0.02
RS-504 1420-1425	<5		<0.001		1.5	0.04
RS-504 1425-1430	<5	<5	<0.001	<0.001	1.8	0.05
RS-504 1430-1435	6		<0.001		1.1	0.03
RS-504 1435-1440	12		<0.001		1.7	0.05
RS-504 1440-1445	12		<0.001		1.2	0.04
RS-504 1445-1450	<5		<0.001		1.6	0.05
RS-504 1450-1455	<5		<0.001		1.2	0.04
RS-504 1455-1460	<5		<0.001		1.3	0.04
RS-504 1460-1465	<5		<0.001		1.1	0.03
RS-504 1465-1470	<5		<0.001		1.2	0.04
RS-504 1470-1475	<5	<5	<0.001	<0.001	1.0	0.03
RS-504 1475-1480	<5		<0.001		0.9	0.03
RS-504 1480-1485	<5		<0.001		1.4	0.04
RS-504 1485-1490	<5		<0.001		1.6	0.05
RS-504 1490-1495	<5		<0.001		1.9	0.06
RS-504 1495-1500	6		<0.001		1.8	0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1500-1505	6		<0.001		1.7	0.05
RS-504 1505-1510	<5		<0.001		1.2	0.04
RS-504 1510-1515	<5		<0.001		1.0	0.03
RS-504 1515-1520	<5		<0.001		1.0	0.03
RS-504 1520-1525	<5		<0.001		0.9	0.03
RS-504 1525-1530	<5		<0.001		0.8	0.02
RS-504 1530-1535	<5		<0.001		1.4	0.04
RS-504 1535-1540	<5		<0.001		0.7	0.02
RS-504 1540-1545	<5		<0.001		0.7	0.02
RS-504 1545-1550	<5		<0.001		0.7	0.02
RS-504 1550-1555	32	32	<0.001	<0.001	0.6	<0.02
RS-504 1555-1560	594		0.017		26.9	0.78
RS-504 1560-1565	432	434	0.013	0.013	46.7	1.36
RS-504 1565-1570	26		<0.001		1.7	0.05
RS-504 1570-1575	32		<0.001		1.8	0.05
RS-504 1575-1580	148		0.004		1.5	0.04
RS-504 1580-1585	80		0.002		1.5	0.04
RS-504 1585-1590	54		0.002		1.3	0.04
RS-504 1590-1595	88		0.003		1.3	0.04
RS-504 1595-1600	82	74	0.002	0.002	2.1	0.06
RS-504 1600-1605	82		0.002		2.7	0.08
RS-504 1605-1610	54		0.002		3.3	0.10
RS-504 1610-1615	92		0.003		4.8	0.14
RS-504 1615-1620	128	120	0.004	0.004	2.9	0.08
RS-504 1620-1625	84		0.002		2.4	0.07

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ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : RC-504

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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-504 1625-1630	98		0.003		5.8	0.17
RS-504 1630-1635	88		0.003		2.9	0.08
RS-504 1635-1640	70		0.002		1.9	0.06
RS-504 1640-1645	66		0.002		2.5	0.07
RS-504 1645-1650	874	812	0.025	0.024	3.5	0.10
RS-504 1650-1655	140		0.004		3.5	0.10
RS-504 1655-1660	70		0.002		2.2	0.06
RS-504 1660-1665	96		0.003		2.4	0.07
RS-504 1665-1670	122		0.004		1.5	0.04
RS-504 1670-1675	54		0.002		1.3	0.04
RS-504 1675-1680	88		0.003		3.0	0.09
RS-504 1680-1685	88		0.003		1.7	0.05
RS-504 1685-1690	152		0.004		0.8	0.02
RS-504 1690-1695	172		0.005		1.4	0.04
RS-504 1695-1700	80		0.002		2.2	0.06
RS-504 1700-1705	18		<0.001		<0.5	<0.02
RS-504 1705-1710	14		<0.001		<0.5	<0.02
RS-504 1710-1715	18		<0.001		<0.5	<0.02
RS-504 1715-1720	<5		<0.001		<0.5	<0.02
RS-504 1720-1725	8	10	<0.001	<0.001	<0.5	<0.02
RS-504 1725-1730	<5		<0.001		<0.5	<0.02
RS-504 1730-1735	<5		<0.001		<0.5	<0.02
RS-504 1735-1740	<5		<0.001		<0.5	<0.02
RS-504 1740-1745	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

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HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

: KURT ALLEN

:

:

CLIENT REFERENCE No: RC-504 RECEIVED : 31 JUL 2000

No. SAMPLES : 349 REPORTED : 22 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 SP058058

American Assay Laboratories

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PROJECT : ROSEBUD
REFERENCE : RC-504

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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-504 0000-0005	<5		<0.001		<0.5	<0.02
RS-504 0005-0010	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0010-0015	<5		<0.001		<0.5	<0.02
RS-504 0015-0020	16		<0.001		<0.5	<0.02
RS-504 0020-0025	7		<0.001		<0.5	<0.02
RS-504 0025-0030	8		<0.001		<0.5	<0.02
RS-504 0030-0035	9		<0.001		<0.5	<0.02
RS-504 0035-0040	6		<0.001		<0.5	<0.02
RS-504 0040-0045	5		<0.001		<0.5	<0.02
RS-504 0045-0050	<5		<0.001		<0.5	<0.02
RS-504 0050-0055	5		<0.001		<0.5	<0.02
RS-504 0055-0060	<5		<0.001		<0.5	<0.02
RS-504 0060-0065	<5		<0.001		<0.5	<0.02
RS-504 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0070-0075	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0075-0080	<5		<0.001		<0.5	<0.02
RS-504 0080-0085	<5		<0.001		<0.5	<0.02
RS-504 0085-0090	<5		<0.001		<0.5	<0.02
RS-504 0090-0095	<5		<0.001		<0.5	<0.02
RS-504 0095-0100	<5		<0.001		<0.5	<0.02
RS-504 0100-0105	<5		<0.001		<0.5	<0.02
RS-504 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0110-0115	<5		<0.001		<0.5	<0.02
RS-504 0115-0120	<5		<0.001		<0.5	<0.02
RS-504 0120-0125	<5		<0.001		<0.5	<0.02

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ANALYSIS REPORT SP058058

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-504 0125-0130	<5		<0.001		<0.5	<0.02
RS-504 0130-0135	<5		<0.001		<0.5	<0.02
RS-504 0135-0140	<5		<0.001		<0.5	<0.02
RS-504 0140-0145	<5		<0.001		<0.5	<0.02
RS-504 0145-0150	<5		<0.001		<0.5	<0.02
RS-504 0150-0155	<5		<0.001		<0.5	<0.02
RS-504 0155-0160	<5		<0.001		<0.5	<0.02
RS-504 0160-0165	<5		<0.001		<0.5	<0.02
RS-504 0165-0170	<5		<0.001		<0.5	<0.02
RS-504 0170-0175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0175-0180	<5		<0.001		<0.5	<0.02
RS-504 0180-0185	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0185-0190	<5		<0.001		<0.5	<0.02
RS-504 0190-0195	<5		<0.001		<0.5	<0.02
RS-504 0195-0200	<5		<0.001		<0.5	<0.02
RS-504 0200-0205	<5		<0.001		<0.5	<0.02
RS-504 0205-0210	<5		<0.001		<0.5	<0.02
RS-504 0210-0215	<5		<0.001		<0.5	<0.02
RS-504 0215-0220	<5		<0.001		<0.5	<0.02
RS-504 0220-0225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0225-0230	<5		<0.001		<0.5	<0.02
RS-504 0230-0235	<5		<0.001		<0.5	<0.02
RS-504 0235-0240	<5		<0.001		<0.5	<0.02
RS-504 0240-0245	<5		<0.001		<0.5	<0.02
RS-504 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

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PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0250-0255	<5		<0.001		<0.5	<0.02
RS-504 0255-0260	<5		<0.001		<0.5	<0.02
RS-504 0260-0265	<5		<0.001		<0.5	<0.02
RS-504 0265-0270	<5		<0.001		<0.5	<0.02
RS-504 0270-0275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0275-0280	<5		<0.001		<0.5	<0.02
RS-504 0280-0285	<5		<0.001		<0.5	<0.02
RS-504 0285-0290	<5		<0.001		<0.5	<0.02
RS-504 0290-0295	<5		<0.001		<0.5	<0.02
RS-504 0295-0300	<5		<0.001		<0.5	<0.02
RS-504 0300-0305	<5		<0.001		<0.5	<0.02
RS-504 0305-0310	<5		<0.001		<0.5	<0.02
RS-504 0310-0315	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0315-0320	<5		<0.001		<0.5	<0.02
RS-504 0320-0325	<5		<0.001		<0.5	<0.02
RS-504 0325-0330	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0330-0335	<5		<0.001		<0.5	<0.02
RS-504 0335-0340	<5		<0.001		<0.5	<0.02
RS-504 0340-0345	<5		<0.001		<0.5	<0.02
RS-504 0345-0350	<5		<0.001		<0.5	<0.02
RS-504 0350-0355	<5		<0.001		<0.5	<0.02
RS-504 0355-0360	<5		<0.001		<0.5	<0.02
RS-504 0360-0365	<5		<0.001		<0.5	<0.02
RS-504 0365-0370	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0370-0375	<5		<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-504 0375-0380	<5		<0.001		<0.5	<0.02
RS-504 0380-0385	<5		<0.001		<0.5	<0.02
RS-504 0385-0390	<5		<0.001		<0.5	<0.02
RS-504 0390-0395	<5		<0.001		<0.5	<0.02
RS-504 0395-0400	<5		<0.001		<0.5	<0.02
RS-504 0400-0405	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0405-0410	<5		<0.001		<0.5	<0.02
RS-504 0410-0415	<5		<0.001		<0.5	<0.02
RS-504 0415-0420	<5		<0.001		<0.5	<0.02
RS-504 0420-0425	<5		<0.001		<0.5	<0.02
RS-504 0425-0430	<5		<0.001		<0.5	<0.02
RS-504 0430-0435	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0435-0440	<5		<0.001		<0.5	<0.02
RS-504 0440-0445	<5		<0.001		<0.5	<0.02
RS-504 0445-0450	<5		<0.001		<0.5	<0.02
RS-504 0450-0455	<5		<0.001		<0.5	<0.02
RS-504 0455-0460	<5		<0.001		<0.5	<0.02
RS-504 0460-0465	<5		<0.001		<0.5	<0.02
RS-504 0465-0470	<5		<0.001		<0.5	<0.02
RS-504 0470-0475	<5		<0.001		<0.5	<0.02
RS-504 0475-0480	<5		<0.001		<0.5	<0.02
RS-504 0480-0485	<5		<0.001		<0.5	<0.02
RS-504 0485-0490	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0490-0495	<5		<0.001		<0.5	<0.02
RS-504 0495-0500	<5		<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-504 0500-0505	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0505-0510	<5		<0.001		<0.5	<0.02
RS-504 0510-0515	<5		<0.001		<0.5	<0.02
RS-504 0515-0520	<5		<0.001		<0.5	<0.02
RS-504 0520-0525	<5		<0.001		<0.5	<0.02
RS-504 0525-0530	<5		<0.001		<0.5	<0.02
RS-504 0530-0535	<5		<0.001		<0.5	<0.02
RS-504 0535-0540	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0540-0545	<5		<0.001		<0.5	<0.02
RS-504 0545-0550	<5		<0.001		<0.5	<0.02
RS-504 0550-0555	<5		<0.001		<0.5	<0.02
RS-504 0555-0560	<5		<0.001		<0.5	<0.02
RS-504 0560-0565	<5		<0.001		<0.5	<0.02
RS-504 0565-0570	<5		<0.001		<0.5	<0.02
RS-504 0570-0575	<5		<0.001		<0.5	<0.02
RS-504 0575-0580	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0580-0585	<5		<0.001		<0.5	<0.02
RS-504 0585-0590	<5		<0.001		<0.5	<0.02
RS-504 0590-0595	<5		<0.001		<0.5	<0.02
RS-504 0595-0600	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0600-0605	<5		<0.001		<0.5	<0.02
RS-504 0605-0610	<5		<0.001		<0.5	<0.02
RS-504 0610-0615	<5		<0.001		<0.5	<0.02
RS-504 0615-0620	<5		<0.001		<0.5	<0.02
RS-504 0620-0625	<5		<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-504 0625-0630	<5		<0.001		<0.5	<0.02
RS-504 0630-0635	<5		<0.001		<0.5	<0.02
RS-504 0635-0640	<5		<0.001		<0.5	<0.02
RS-504 0640-0645	<5		<0.001		<0.5	<0.02
RS-504 0645-0650	<5		<0.001		<0.5	<0.02
RS-504 0650-0655	<5		<0.001		<0.5	<0.02
RS-504 0655-0660	<5		<0.001		<0.5	<0.02
RS-504 0660-0665	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0665-0670	<5		<0.001		<0.5	<0.02
RS-504 0670-0675	<5		<0.001		<0.5	<0.02
RS-504 0675-0680	<5		<0.001		<0.5	<0.02
RS-504 0680-0685	<5		<0.001		<0.5	<0.02
RS-504 0685-0690	<5		<0.001		<0.5	<0.02
RS-504 0690-0695	6	6	<0.001	<0.001	<0.5	<0.02
RS-504 0695-0700	<5		<0.001		<0.5	<0.02
RS-504 0700-0705	<5		<0.001		<0.5	<0.02
RS-504 0705-0710	<5		<0.001		<0.5	<0.02
RS-504 0710-0715	<5		<0.001		<0.5	<0.02
RS-504 0715-0720	<5		<0.001		<0.5	<0.02
RS-504 0720-0725	<5		<0.001		<0.5	<0.02
RS-504 0725-0730	<5		<0.001		<0.5	<0.02
RS-504 0730-0735	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0735-0740	<5		<0.001		0.8	0.02
RS-504 0740-0745	<5		<0.001		1.2	0.04
RS-504 0745-0750	<5		<0.001		0.9	0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0750-0755	<5		<0.001		1.1	0.03
RS-504 0755-0760	<5		<0.001		1.0	0.03
RS-504 0760-0765	<5		<0.001		<0.5	<0.02
RS-504 0765-0770	<5		<0.001		<0.5	<0.02
RS-504 0770-0775	52		0.002		<0.5	<0.02
RS-504 0775-0780	48		0.001		<0.5	<0.02
RS-504 0780-0785	48	42	0.001	0.001	1.7	0.05
RS-504 0785-0790	36	34	0.001	<0.001	0.9	0.03
RS-504 0790-0795	52		0.002		0.7	0.02
RS-504 0795-0800	38		0.001		0.9	0.03
RS-504 0800-0805	64		0.002		1.8	0.05
RS-504 0805-0810	54		0.002		1.2	0.04
RS-504 0810-0815	26		<0.001		1.0	0.03
RS-504 0815-0820	16		<0.001		1.4	0.04
RS-504 0820-0825	18		<0.001		0.6	<0.02
RS-504 0825-0830	<5		<0.001		<0.5	<0.02
RS-504 0830-0835	<5		<0.001		<0.5	<0.02
RS-504 0835-0840	<5		<0.001		<0.5	<0.02
RS-504 0840-0845	<5		<0.001		1.6	0.05
RS-504 0845-0850	<5		<0.001		1.8	0.05
RS-504 0850-0855	<5		<0.001		1.8	0.05
RS-504 0855-0860	20		<0.001		2.0	0.06
RS-504 0860-0865	10		<0.001		1.8	0.05
RS-504 0865-0870	<5		<0.001		<0.5	<0.02
RS-504 0870-0875	<5	<5	<0.001	<0.001	0.6	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 0875-0880	26		<0.001		0.8	0.02
RS-504 0880-0885	34		<0.001		<0.5	<0.02
RS-504 0885-0890	10		<0.001		<0.5	<0.02
RS-504 0890-0895	10		<0.001		<0.5	<0.02
RS-504 0895-0900	6		<0.001		<0.5	<0.02
RS-504 0900-0905	8		<0.001		<0.5	<0.02
RS-504 0905-0910	12		<0.001		<0.5	<0.02
RS-504 0910-0915	6		<0.001		<0.5	<0.02
RS-504 0915-0920	18		<0.001		0.5	<0.02
RS-504 0920-0925	20		<0.001		<0.5	<0.02
RS-504 0925-0930	34		<0.001		<0.5	<0.02
RS-504 0930-0935	36		0.001		<0.5	<0.02
RS-504 0935-0940	12		<0.001		<0.5	<0.02
RS-504 0940-0945	12		<0.001		<0.5	<0.02
RS-504 0945-0950	6		<0.001		<0.5	<0.02
RS-504 0950-0955	18		<0.001		0.6	<0.02
RS-504 0955-0960	8		<0.001		<0.5	<0.02
RS-504 0960-0965	6		<0.001		<0.5	<0.02
RS-504 0965-0970	<5		<0.001		<0.5	<0.02
RS-504 0970-0975	8		<0.001		<0.5	<0.02
RS-504 0975-0980	16	20	<0.001	<0.001	0.6	<0.02
RS-504 0980-0985	10		<0.001		0.6	<0.02
RS-504 0985-0990	22		<0.001		0.8	0.02
RS-504 0990-0995	24		<0.001		0.9	0.03
RS-504 0995-1000	20		<0.001		0.8	0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1000-1005	16		<0.001		0.6	<0.02
RS-504 1005-1010	14	12	<0.001	<0.001	0.6	<0.02
RS-504 1010-1015	12		<0.001		0.8	0.02
RS-504 1015-1020	12		<0.001		0.7	0.02
RS-504 1020-1025	12		<0.001		0.7	0.02
RS-504 1025-1030	12		<0.001		0.7	0.02
RS-504 1030-1035	10		<0.001		0.7	0.02
RS-504 1035-1040	24		<0.001		0.9	0.03
RS-504 1040-1045	16		<0.001		0.7	0.02
RS-504 1045-1050	12		<0.001		0.9	0.03
RS-504 1050-1055	32	36	<0.001	0.001	0.9	0.03
RS-504 1055-1060	30	24	<0.001	<0.001	0.9	0.03
RS-504 1060-1065	24		<0.001		0.8	0.02
RS-504 1065-1070	58		0.002		1.1	0.03
RS-504 1070-1075	82		0.002		2.7	0.08
RS-504 1075-1080	54		0.002		0.6	<0.02
RS-504 1080-1085	12		<0.001		1.2	0.04
RS-504 1085-1090	24		<0.001		0.7	0.02
RS-504 1090-1095	10		<0.001		0.9	0.03
RS-504 1095-1100	6		<0.001		0.7	0.02
RS-504 1100-1105	12		<0.001		<0.5	<0.02
RS-504 1105-1110	6		<0.001		0.7	0.02
RS-504 1110-1115	10		<0.001		<0.5	<0.02
RS-504 1115-1120	<5	<5	<0.001	<0.001	1.5	0.04
RS-504 1120-1125	<5		<0.001		2.2	0.06

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1125-1130	<5		<0.001		1.7	0.05
RS-504 1130-1135	12		<0.001		1.7	0.05
RS-504 1135-1140	<5	<5	<0.001	<0.001	1.6	0.05
RS-504 1140-1145	<5		<0.001		0.8	0.02
RS-504 1145-1150	<5		<0.001		1.2	0.04
RS-504 1150-1155	<5		<0.001		0.9	0.03
RS-504 1155-1160	<5	<5	<0.001	<0.001	0.7	0.02
RS-504 1160-1165	<5		<0.001		<0.5	<0.02
RS-504 1165-1170	<5		<0.001		0.7	0.02
RS-504 1170-1175	<5		<0.001		0.8	0.02
RS-504 1175-1180	<5		<0.001		0.8	0.02
RS-504 1180-1185	<5		<0.001		<0.5	<0.02
RS-504 1185-1190	<5		<0.001		<0.5	<0.02
RS-504 1190-1195	<5		<0.001		<0.5	<0.02
RS-504 1195-1200	<5		<0.001		<0.5	<0.02
RS-504 1200-1205	<5		<0.001		<0.5	<0.02
RS-504 1205-1210	<5		<0.001		<0.5	<0.02
RS-504 1210-1215	<5		<0.001		<0.5	<0.02
RS-504 1215-1220	<5		<0.001		<0.5	<0.02
RS-504 1220-1225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 1225-1230	<5		<0.001		<0.5	<0.02
RS-504 1230-1235	<5		<0.001		<0.5	<0.02
RS-504 1235-1240	<5		<0.001		<0.5	<0.02
RS-504 1240-1245	<5		<0.001		<0.5	<0.02
RS-504 1245-1250	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1250-1255	<5		<0.001		<0.5	<0.02
RS-504 1255-1260	<5		<0.001		<0.5	<0.02
RS-504 1260-1265	<5		<0.001		<0.5	<0.02
RS-504 1265-1270	<5		<0.001		<0.5	<0.02
RS-504 1270-1275	<5		<0.001		<0.5	<0.02
RS-504 1275-1280	<5		<0.001		0.7	0.02
RS-504 1280-1285	<5		<0.001		<0.5	<0.02
RS-504 1285-1290	<5		<0.001		0.6	<0.02
RS-504 1290-1295	<5		<0.001		<0.5	<0.02
RS-504 1295-1300	<5		<0.001		0.6	<0.02
RS-504 1300-1305	<5		<0.001		1.1	0.03
RS-504 1305-1310	<5		<0.001		0.8	0.02
RS-504 1310-1315	<5		<0.001		0.6	<0.02
RS-504 1315-1320	<5		<0.001		<0.5	<0.02
RS-504 1320-1325	<5		<0.001		<0.5	<0.02
RS-504 1325-1330	<5	<5	<0.001	<0.001	1.1	0.03
RS-504 1330-1335	<5		<0.001		0.6	<0.02
RS-504 1335-1340	<5		<0.001		0.6	<0.02
RS-504 1340-1345	<5		<0.001		<0.5	<0.02
RS-504 1345-1350	8	10	<0.001	<0.001	0.8	0.02
RS-504 1350-1355	<5		<0.001		<0.5	<0.02
RS-504 1355-1360	<5		<0.001		1.1	0.03
RS-504 1360-1365	<5		<0.001		1.4	0.04
RS-504 1365-1370	16		<0.001		1.1	0.03
RS-504 1370-1375	16		<0.001		1.1	0.03

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 22 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-504 1375-1380	12		<0.001		1.0	0.03
RS-504 1380-1385	14		<0.001		1.3	0.04
RS-504 1385-1390	12		<0.001		1.5	0.04
RS-504 1390-1395	6		<0.001		1.2	0.04
RS-504 1395-1400	178		0.005		1.6	0.05
RS-504 1400-1405	8		<0.001		1.1	0.03
RS-504 1405-1410	14		<0.001		1.0	0.03
RS-504 1410-1415	<5		<0.001		1.0	0.03
RS-504 1415-1420	<5		<0.001		0.8	0.02
RS-504 1420-1425	<5		<0.001		1.5	0.04
RS-504 1425-1430	<5	<5	<0.001	<0.001	1.8	0.05
RS-504 1430-1435	6		<0.001		1.1	0.03
RS-504 1435-1440	12		<0.001		1.7	0.05
RS-504 1440-1445	12		<0.001		1.2	0.04
RS-504 1445-1450	<5		<0.001		1.6	0.05
RS-504 1450-1455	<5		<0.001		1.2	0.04
RS-504 1455-1460	<5		<0.001		1.3	0.04
RS-504 1460-1465	<5		<0.001		1.1	0.03
RS-504 1465-1470	<5		<0.001		1.2	0.04
RS-504 1470-1475	<5	<5	<0.001	<0.001	1.0	0.03
RS-504 1475-1480	<5		<0.001		0.9	0.03
RS-504 1480-1485	<5		<0.001		1.4	0.04
RS-504 1485-1490	<5		<0.001		1.6	0.05
RS-504 1490-1495	<5		<0.001		1.9	0.06
RS-504 1495-1500	6		<0.001		1.8	0.05

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP058058

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REFERENCE : RC-504

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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-504 1500-1505	6		<0.001		1.7	0.05
RS-504 1505-1510	<5		<0.001		1.2	0.04
RS-504 1510-1515	<5		<0.001		1.0	0.03
RS-504 1515-1520	<5		<0.001		1.0	0.03
RS-504 1520-1525	<5		<0.001		0.9	0.03
RS-504 1525-1530	<5		<0.001		0.8	0.02
RS-504 1530-1535	<5		<0.001		1.4	0.04
RS-504 1535-1540	<5		<0.001		0.7	0.02
RS-504 1540-1545	<5		<0.001		0.7	0.02
RS-504 1545-1550	<5		<0.001		0.7	0.02
RS-504 1550-1555	32	32	<0.001	<0.001	0.6	<0.02
RS-504 1555-1560	594		0.017		26.9	0.78
RS-504 1560-1565	432	434	0.013	0.013	46.7	1.36
RS-504 1565-1570	26		<0.001		1.7	0.05
RS-504 1570-1575	32		<0.001		1.8	0.05
RS-504 1575-1580	148		0.004		1.5	0.04
RS-504 1580-1585	80		0.002		1.5	0.04
RS-504 1585-1590	54		0.002		1.3	0.04
RS-504 1590-1595	88		0.003		1.3	0.04
RS-504 1595-1600	82	74	0.002	0.002	2.1	0.06
RS-504 1600-1605	82		0.002		2.7	0.08
RS-504 1605-1610	54		0.002		3.3	0.10
RS-504 1610-1615	92		0.003		4.8	0.14
RS-504 1615-1620	128	120	0.004	0.004	2.9	0.08
RS-504 1620-1625	84		0.002		2.4	0.07

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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-504 1625-1630	98		0.003		5.8	0.17
RS-504 1630-1635	88		0.003		2.9	0.08
RS-504 1635-1640	70		0.002		1.9	0.06
RS-504 1640-1645	66		0.002		2.5	0.07
RS-504 1645-1650	874	812	0.025	0.024	3.5	0.10
RS-504 1650-1655	140		0.004		3.5	0.10
RS-504 1655-1660	70		0.002		2.2	0.06
RS-504 1660-1665	96		0.003		2.4	0.07
RS-504 1665-1670	122		0.004		1.5	0.04
RS-504 1670-1675	54		0.002		1.3	0.04
RS-504 1675-1680	88		0.003		3.0	0.09
RS-504 1680-1685	88		0.003		1.7	0.05
RS-504 1685-1690	152		0.004		0.8	0.02
RS-504 1690-1695	172		0.005		1.4	0.04
RS-504 1695-1700	80		0.002		2.2	0.06
RS-504 1700-1705	18		<0.001		<0.5	<0.02
RS-504 1705-1710	14		<0.001		<0.5	<0.02
RS-504 1710-1715	18		<0.001		<0.5	<0.02
RS-504 1715-1720	<5		<0.001		<0.5	<0.02
RS-504 1720-1725	8	10	<0.001	<0.001	<0.5	<0.02
RS-504 1725-1730	<5		<0.001		<0.5	<0.02
RS-504 1730-1735	<5		<0.001		<0.5	<0.02
RS-504 1735-1740	<5		<0.001		<0.5	<0.02
RS-504 1740-1745	<5		<0.001		<0.5	<0.02

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.

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:	SP58058
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-504 0000-0020	91	0.76	35.5	6.2	3	100.20	0.08	0.19	0.3	0.70	4.5	6.26	1.83	3.1	102	0.24	54.2	0.09	527	1.44	0.049	4.7	0.012	30.9	0.09	1.21	2.2	0.3	24.1	< .02	15.6	0.004	0.5	2.5	7	0.3	83.2
RS-504 0020-0040	117	0.54	17.4	7.8	1	78.00	0.26	0.12	0.55	0.40	4.9	5.56	1.38	2.2	68	0.14	60.9	0.03	1013	1.23	0.045	4.2	0.01	16.77	0.03	0.7	1.9	0.4	17.4	< .02	17.4	0.001	0.33	3	5	< .2	87.7
RS-504 0040-0060	81	0.47	0.6	2.5	1	19.50	0.08	0.14	0.42	0.30	4.4	5.54	1.44	2.3	17	0.12	63.7	0.03	890	0.87	0.038	4.5	0.016	11.35	< .01	0.14	1.6	0.3	17.6	< .02	15.9	0.001	0.06	3	3	< .2	135.1
RS-504 0060-0080	82	0.41	< .1	0.9	< 1	35.00	0.1	0.18	0.17	0.20	2.2	2.38	1.21	2.2	< 5	0.1	61.7	0.05	1533	0.34	0.026	1.2	0.015	11.1	0.01	0.07	1.9	0.2	18.9	< .02	17.2	< .001	0.04	3.3	< 2	< .2	69.4
RS-504 0080-0100	60	0.43	0.4	2.3	1	20.60	0.05	0.18	0.1	0.10	2.3	3.75	1.12	1.9	8	0.1	56.5	0.05	237	1.15	0.035	1.8	0.011	10.44	< .01	0.22	1.4	0.1	21.9	< .02	17	0.005	0.03	2.8	< 2	0.8	67.8
RS-504 0100-0120	60	0.47	1.7	2	2	19.70	0.04	0.11	0.27	0.20	2.9	4.38	1.39	2.5	23	0.1	59.1	0.03	251	2.43	0.028	3	0.011	12.12	< .01	0.45	1.5	0.2	15.9	< .02	17.3	0.009	0.03	1.9	2	1	64.2
RS-504 0120-0140	114	0.57	3.4	1.8	< 1	55.00	0.21	0.38	0.1	0.50	2.3	3.21	0.81	2.9	9	0.12	64.7	0.04	158	0.91	0.034	2.4	0.009	12.34	< .01	0.29	1.5	0.1	25.4	< .02	17.5	0.004	0.08	1.7	2	0.4	45.1
RS-504 0140-0160	60	0.56	14.2	2.3	1.0	138.90	0.58	0.65	0.15	0.30	4.9	7.74	1.46	3.5	13	0.1	61.9	0.05	1040	1.85	0.038	2.4	0.009	21.07	0.01	0.52	2.6	0.2	29	< .02	16.5	0.006	0.1	1.3	2	1.4	98.2
RS-504 0160-0180	50	0.6	4.7	1.1	1	61.00	0.16	0.77	0.11	0.20	5.5	7.56	1.13	3.2	< 5	0.1	58.9	0.06	454	2.52	0.047	2.2	0.012	11.54	0.01	0.52	2.5	0.2	34.4	< .02	16.8	0.006	0.06	1.6	< 2	0.7	75.3
RS-504 0180-0200	49	0.63	23.1	1.6	2	40.30	0.09	0.86	0.12	0.20	5.4	6.44	1.72	4.1	8	0.09	68.2	0.06	357	2.1	0.049	1.5	0.012	15.29	0.01	0.35	2.8	0.1	42.2	< .02	18.1	0.005	0.07	2.8	< 2	0.9	83.6
RS-504 0200-0220	69	1.01	6.1	0.4	1	65.30	0.18	1.07	0.17	2.00	9.4	9.14	1.91	4	< 5	0.11	43.7	0.14	592	1.95	0.074	6	0.019	12.64	< .01	0.33	3	0.2	79.1	< .02	14.6	0.013	0.07	2.3	12	0.4	81.5
RS-504 0220-0240	66	0.78	< .1	3.7	1	75.10	0.11	1.18	0.19	2.90	12.3	14.48	1.89	2.9	6	0.11	41.1	0.1	952	1.8	0.082	9.4	0.046	8.16	0.01	0.23	3.2	0.2	64.1	0.02	12.9	0.011	0.07	2.5	13	< .2	70.3
RS-504 0240-0260	70	0.56	0.1	1.1	< 1	37.70	0.1	0.7	0.11	1.50	8.8	14.02	1.56	2.3	6	0.11	44.2	0.08	734	1.31	0.076	5.7	0.018	8.77	0.01	0.16	2.3	0.2	53.9	< .02	15	0.003	0.06	2.2	7	< .2	68.9
RS-504 0260-0280	74	0.83	< .1	0.8	1	90.20	0.12	0.9	0.34	1.90	7.7	12.1	1.82	3.2	7	0.11	34.8	0.11	971	1.36	0.095	5.4	0.029	11.29	0.02	0.16	2.5	0.2	93.7	< .02	11.9	0.008	0.07	2.1	11	< .2	78.2
RS-504 0280-0300	71	1.42	2.2	1.6	2	641.10	0.15	1.15	0.11	2.20	5.6	8.32	2.23	5.4	< 5	0.12	30.1	0.13	482	1.38	0.083	3.4	0.021	46.02	0.05	0.51	2.9	0.2	136.7	< .02	11.4	0.008	0.12	3.3	21	0.3	82.3
RS-504 0300-0320	104	1.72	0.9	2	< 1	350.80	0.18	1.07	0.24	1.80	6	8.56	1.96	5.7	9	0.14	29.6	0.28	467	1.33	0.128	3.3	0.023	40.29	0.03	0.49	1.8	< .1	246.4	0.02	10.9	0.006	0.09	1.9	8	< .2	72.3
RS-504 0320-0340	86	1.55	< .1	2	2	482.60	0.24	1.49	0.52	1.20	4	5.65	1.29	4.4	< 5	0.1	29.3	0.31	660	0.71	0.163	2.4	0.039	30.88	0.03	0.42	1.5	0.2	353.5	0.04	8.2	0.002	0.06	2.4	5	< .2	51.7
RS-504 0340-0360	65	0.78	< .1	1.3	1	1622.60	0.11	1.29	0.22	1.90	10.7	10.21	1.63	3.5	< 5	0.14	37.1	0.11	748	1.47	0.056	4.3	0.029	81.23	0.05	0.54	2.6	0.2	100.2	< .02	11.5	0.012	0.08	2.1	12	0.3	97.6
RS-504 0360-0380	70	1.56	0.7	1.2	2	195.80	0.15	1.38	0.11	4.50	15.4	23.19	2.12	4.9	8	0.16	32.9	0.28	689	1.12	0.086	16.5	0.025	120.69	0.03	0.64	3.2	0.3	216.2	0.04	11.2	0.011	0.12	2	25	< .2	113.3
RS-504 0380-0400	65	1.2	0.2	0.3	1	113.00	0.12	1.74	0.3	5.20	30.8	12.74	2.44	4.3	< 5	0.13	27.7	0.24	1326	1.45	0.105	21.7	0.053	16.31	0.03	0.58	3.4	0.1	180.1	0.03	8.8	0.026	0.09	1.8	32	0.3	75.2
RS-504 0400-0420	84	1.06	0.8	1.6	< 1	74.10	0.11	1.42	0.21	3.00	8.2	7.9	2.33	4.3	16	0.14	27	0.16	670	1.73	0.065	5.6	0.034	26.3	0.03	0.92	2.3	0.1	134	0.03	9.4	0.023	0.09	1.8	19	0.5	90.2
RS-504 0420-0440	80	1.06	0.9	2.3	1	63.40	0.11	1.29	0.11	2.50	10.2	27.49	2.26	4.4	14	0.14	30.2	0.15	518	1.8	0.06	7.6	0.033	29.54	0.04	1.63	2.5	0.2	115.1	< .02	11.3	0.016	0.08	1.3	16	0.6	78.8
RS-504 0440-0460	72	1.28	1.3	1.6	1	70.10	0.14	1.3	0.12	3.10	11.9	29.84	1.99	4.7	5	0.14	37.8	0.2	519	1.47	0.061	8.9	0.035	94.78	0.03	1.31	2.6	0.2	163.3	< .02	12.5	0.011	0.09	1.9	19	0.4	105.4
RS-504 0460-0480	66	0.58	0.1	< .2	< 1	289.70	0.09	1.44	0.12	2.00	4.8	9.09	1.55	2.9	5	0.1	35.2	0.1	912	1.18	0.046	3	0.027	89.1	0.02	1.51	2	0.1	107.3	< .02	12.4	0.013	0.04	1.8	12	0.5	87.3
RS-504 0480-0500	58	0.47	< .1	0.2	< 1	67.60	0.02	1.48	0.04	1.70	3.4	5.28	1.6	2.8	< 5	0.1	17.8	0.06	735	1.31	0.029	2.4	0.032	47.96	0.03	2.36	1.7	0.1	73.6	< .02	9.7	0.012	0.02	0.8	10	0.7	75.9
RS-504 0500-0520	66	0.39	0.3	0.5	< 1	73.80	0.02	1.06	0.03	1.60	2.5	5.28	1.52	2.6	< 5	0.09	15.2	0.05	520	1.25	0.023	1.6	0.032	45.05	0.03	2.55	1.6	0.1	58.6	< .02	9.5	0.013	0.02	0.6	8	0.9	69.6
RS-504 0520-0540	96	0.44	1.3	3.5	< 1	100.30	< .02	0.21	0.04	2.00	3.3	3.05	1.67	2.8	155	0.12	16.2	0.04	151	1.48	0.025	2.2	0.034	30.45	0.03	2.54	1.5	< .1	43.5	< .02	10.8	0.019	0.03	0.6	8	1.8	91.3
RS-504 0540-0560	70	0.43	1.0	1.3	< 1	53.00	< .02	0.95	0.08	3.20	3.8	4.29	1.65	2.5	154	0.11	13.9	0.06	677	1.31	0.027	2.4	0.031	41.83	0.03	4.39	1.5	0.1	60.8	< .02	8.6	0.013	0.03	0.6	9	1.2	91.5
RS-504 0560-0580	78	0.45	0.8	< .2	< 1	30.30	0.02	0.55	0.12	1.20	5.4	7.16	1.67	2.5	91	0.1	13.9	0.04	320	1.39	0.023	3.2	0.032	48.37	0.03	3.51	1.2	0.1	44.9	< .02	8	0.024	0.02	1.1	13	1.3	78.3
RS-504 0580-0600	72	0.35	0.6	0.4	< 1	36.00	0.0	0.32	0.11	1.60	8.6	5.75	1.59	1.8	165	0.1	15	0.04	306	1.81	0.02	10.2	0.032	68.56	0.19	4.04	1	< .1	39.9	< .02	8	0.013	0.06	1.2	11	1	71.1
RS-504 0600-0620	73	0.45	0.9	0.4	< 1	32.3	0.02	1.22	0.2	1.4	7.8	4.04	1.73	2.1	46	0.1	16.1	0.06	740	1.9	0.029	8.6	0.032	30.68	0.03	2.08	1.7	0.2	76.1	< .02	8	0.013	0.03	2	13	0.8	64.8
RS-504 0620-0640	75	0.47	0.4	0.8	< 1	54	0.02	0.82	0.2	1.6	6.4	5.67	1.56	2.1	130	0.11	15.3	0.06	429	1.67	0.026	7	0.034	46.11	0.05	1.93	1.3	< .1	54.9	< .02	8.8	0.012	0.03	1.5	13	0.8	92.4
RS-504 0640-0660	81	0.44	< .1	0.3	< 1	27.1	< .02	1.4	0.27	1.5	3.4	4.31	1.51	2	9	0.13	14.9	0.09	692	1.4	0.032	2.5	0.032	29.52	0.02	1.27	1.4	< .1	70.4	< .02	8.7	0.014	0.03	1.6	13	0.8	71.7
STANDARD DS2	256	1.66	58.1	212.8	2	145.8	10.47	0.52	9.33	11.2	157.4	124.2	3	5.7	249	0.16	15.2	0.6	819	14.01	0.028	33.1	0.088	33.63	0.02	9.12	3.1	2.2	27.8	1.8	3.4	0.085	1.83	18.3	72	7	163.4
RS-504 0660-0680	84	0.47	0.2	1.3	1	29.9	< .02	0.91	0.12	1.1	4.2	5.44	1.68	2.3	< 5	0.14	15.7	0.09	442	1.46	0.043	3.9	0.033	31.1	< .01	1.34	1	0.1	82.5	0.02	8.9	0.014	0.03	1.8	13	0.9	72.7

AMERICAN ASSAY LABORATORIES
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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58058
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	Tl	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-504 0680-0700	55	0.49	0.1	0.6	1	29.3	< .02	1.12	0.14	1.3	4	5.78	1.58	2.3	< 5	0.12	13.9	0.16	934	1.5	0.047	3.9	0.032	33.77	0.01	1.18	1.4	0.2	116.7	0.02	7.9	0.009	0.03	0.9	8	0.8	79.1
RS-504 0700-0720	68	0.49	0.1	0.8	1	29.5	< .02	0.8	0.09	1	4.1	6.81	1.69	2.1	9	0.11	14.3	0.11	287	1.53	0.05	3.9	0.034	40.42	< .01	0.9	0.9	< .1	113.4	< .02	7.9	0.011	0.02	1.5	9	0.9	89.1
RS-504 0720-0740	253	0.36	7.7	0.7	< 1	116.4	0.14	3.57	0.24	7.4	12.6	29.19	2.76	1	34	0.15	4.5	1.22	696	4.27	0.015	31	0.05	18.74	0.34	1.49	1.6	1.6	139.3	0.02	3.1	0.001	0.05	0.4	11	0.2	69.2
RS-504 0740-0760	902	0.35	18.3	0.5	1	97.1	0.17	2.46	0.96	8.2	10.6	58.89	2.98	0.9	62	0.17	2.5	1.2	467	11.68	0.011	60.1	0.065	21.3	1.21	7.25	1.8	6.9	138.2	0.06	2	0.002	0.12	0.6	11	< .2	131.4
RS-504 0760-0780	354	0.4	102.7	1.4	1	108.9	0.16	3.57	3.23	11.5	18.1	47.29	2.95	0.9	66	0.17	2.1	1.79	513	42.09	0.01	109.4	0.064	34.08	1.04	11.59	2	9.3	182.8	0.08	1.8	< .001	0.29	1	33	0.2	255
RS-504 0780-0800	935	0.28	320.7	0.8	1	80.4	0.12	3.5	3.48	8.7	11.7	43.16	3.08	0.7	49	0.13	2.4	1.61	677	15.14	0.014	52.7	0.053	20.42	1.02	7.55	2.2	13.6	211.4	0.07	1.9	< .001	0.15	0.8	21	0.4	312.8
RS-504 0800-0820	1162	0.36	181	< .2	1	73.9	0.15	2.91	10.5	9.6	10.5	68.28	3.15	0.9	123	0.17	3	1.07	630	32.72	0.018	80.6	0.076	20.78	1.49	14.1	1.7	18.4	202.3	0.08	2.1	0.001	0.27	1.1	34	0.3	948.2
RS-504 0820-0840	368	0.51	32.4	< .2	< 1	219.7	0.14	1.7	3.55	3	6.6	27.68	1.57	1.6	35	0.13	8.4	0.54	393	9.66	0.023	28.9	0.023	30	0.45	3.87	1.1	5.7	223.4	0.05	5.2	< .001	0.15	1.8	12	0.4	323.8
RS-504 0840-0860	1666	0.3	97.9	< .2	1	47.1	0.17	3.47	17.97	10.6	8.8	96.47	3.18	0.7	196	0.15	2.6	0.61	520	55.57	0.02	120.6	0.105	20.76	2.09	23.25	1.6	28.8	253	0.08	2.3	0.002	0.57	1.3	36	< .2	1629.2
RS-504 0860-0880	852	0.35	51.3	< .2	1	79.6	0.18	2.41	6.21	6.9	9	52.41	2.54	0.9	97	0.15	2.7	0.59	503	26.94	0.02	61.4	0.057	17.42	1.27	11.27	1.4	14.4	166.2	0.07	3	0.002	0.39	1	22	0.3	601.7
RS-504 0880-0900	271	0.89	15.4	0.6	2	214.5	0.11	1.71	0.95	14.9	21.4	48.62	3.14	3.5	269	0.17	4.6	0.8	471	3.33	0.027	36.2	0.062	17.58	0.42	4.76	5.7	2.6	99.2	0.03	1.8	0.002	0.19	0.3	76	< .2	158.3
RS-504 0900-0920	374	0.75	16.1	0.4	1	168.6	0.13	2.05	1.48	12.8	15.3	42.79	2.75	2.4	340	0.17	10.9	0.91	580	4.43	0.024	37.7	0.052	13.02	0.41	4.26	3.8	3.1	107.1	0.04	3.9	0.005	0.2	0.9	51	< .2	176
RS-504 0920-0940	300	0.65	94.9	1.2	3	147.7	0.16	3.96	0.85	11.1	39.5	42.23	3.16	1.7	44	0.16	3.7	1.9	643	9.06	0.012	49.1	0.048	30.05	0.5	3.64	3	2.1	175.6	0.04	2	0.002	0.07	0.2	22	0.2	99.8
RS-504 0940-0960	397	0.62	19.6	0.9	1	266.7	0.15	3.57	0.77	7.8	18.6	37.47	2.59	1.7	35	0.17	7.1	1.56	500	3.95	0.017	33.3	0.057	28.35	0.36	2.22	1.8	2.3	143.6	0.03	2.8	0.004	0.06	0.4	15	0.2	101.3
RS-504 0960-0980	345	0.86	8.8	1.8	2	158.4	0.14	4.32	0.24	12.6	85.6	52.5	2.86	2.4	37	0.14	3.7	2.31	626	2.15	0.018	69.4	0.051	36.5	0.4	2.33	3.4	2	153.9	0.02	2	0.002	0.04	0.3	37	< .2	82.8
RS-504 0980-1000	694	0.41	13.1	1.4	2	158.1	0.14	4.06	2.39	7.5	13.7	63.37	2.22	1.1	104	0.19	4.5	2.03	731	4.44	0.012	60	0.08	25.12	0.64	4.95	1.7	5.7	128.4	0.07	1.9	0.001	0.06	0.4	16	0.2	175.1
RS-504 1000-1020	644	0.52	9.3	< .2	2	175.8	0.18	3.41	0.94	7.5	15.5	80.49	2.39	1.4	79	0.21	4.1	1.73	653	4.15	0.011	64.1	0.07	176.98	0.6	3.41	1.7	5	115.5	0.05	2.1	0.001	0.06	0.4	14	0.2	186.5
RS-504 1020-1040	784	0.47	19.9	0.3	2	172.4	0.17	3.01	0.53	8.3	15.4	89.96	2.9	1.3	71	0.2	3.6	1.57	633	6.46	0.008	70	0.058	45.77	0.55	4.3	1.8	4.6	133.1	0.07	1.7	0.003	0.06	0.3	13	0.3	149.5
RS-504 1040-1060	854	0.44	40.7	3	1	309.5	0.18	2.69	0.6	8.5	11.5	56.34	2.68	1	56	0.17	5.5	1.33	544	3.45	0.01	58.4	0.058	40.77	0.73	6.24	1.8	6.3	174.8	0.06	2.1	< .001	0.08	0.3	11	0.3	141.9
RS-504 1060-1080	1257	0.38	70	< .2	2	81.7	0.15	3.05	4.29	9	24.2	68.44	3.35	1	64	0.13	3.8	1.36	625	11.25	0.012	64.3	0.065	43.5	1.07	10.25	1.9	12.1	182.8	0.05	1.8	0.003	0.17	0.7	23	0.4	385.1
RS-504 1080-1100	917	0.48	32.2	< .2	2	53.2	0.2	3.32	6.4	10.6	44.3	72	3.64	1.3	114	0.15	2.7	1.01	607	24.16	0.014	105.6	0.06	64.38	1.52	7.48	1.8	16.4	143.2	0.05	2.1	0.004	0.39	0.8	41	0.3	595.9
RS-504 1100-1120	814	0.54	63.2	< .2	3	44.3	0.14	3.64	10.19	11.1	28.3	73.59	3.53	1.3	114	0.16	3	0.86	717	29.52	0.014	87.3	0.088	66.83	1.59	8.85	1.8	14.8	215	0.07	1.9	0.003	0.44	0.8	37	0.4	916
RS-504 1120-1140	1595	0.31	54.5	< .2	2	37.1	0.17	3.43	13.06	8.9	9.8	80.69	3.09	0.8	191	0.14	1.8	0.46	554	40.49	0.013	94.1	0.064	39.79	2.02	15.99	1.6	25.9	206.6	0.07	2	0.002	0.55	1.2	38	0.3	1207.1
RS-504 1140-1160	877	0.37	39.7	< .2	1	86.6	0.14	5.69	11.34	9.5	21.9	69.15	2.77	0.9	132	0.14	2.4	0.89	616	33.95	0.012	80.6	0.08	18.36	1.53	10.12	1.9	14.3	439.2	0.09	1.8	0.003	0.47	0.9	28	0.3	1060.4
RS-504 1160-1180	683	0.39	37.6	< .2	1	84.6	0.13	5.32	7.53	9.7	22.8	57.36	2.87	1	103	0.12	5.1	0.98	614	29.85	0.016	79	0.08	49.12	1.38	8.42	2.2	11.6	391.9	0.06	2.4	0.002	0.39	0.9	28	0.3	702.4
RS-504 1180-1200	186	0.39	15.7	< .2	2	89.3	0.12	10.3	1.75	9.2	15.8	35.26	2.57	1	138	0.13	2.7	1.07	382	33.67	0.012	60.8	0.122	27.92	1.7	2.38	1.9	4	528.1	0.09	2	0.002	0.17	3.7	17	0.3	185.1
RS-504 1200-1220	202	0.29	16.5	2.2	3	51	0.16	5.56	1.5	5.6	14.3	30.64	2.05	0.6	109	0.12	2.1	0.33	361	29.27	0.008	51.9	0.071	32.03	1.38	2.42	1	3.4	338.8	0.05	2.2	0.004	0.24	1.6	8	0.4	167.8
RS-504 1220-1240	208	0.29	18.5	0.3	4	81.2	0.14	10.36	1.92	7.5	10	33.6	2.18	0.7	90	0.13	2.6	1.47	329	37.02	0.011	64.9	0.09	27.71	1.34	2.86	1.7	4.2	581.6	0.11	1.8	0.003	0.24	1.5	14	0.3	200.1
RS-504 1240-1260	291	0.29	22	< .2	2	101.1	0.14	7.87	4.26	5.9	9.1	34.95	1.98	0.7	106	0.12	3.1	0.78	342	43.05	0.012	72.9	0.088	25.42	1.34	4	1.4	6	557.6	0.09	2	0.004	0.31	1.8	16	0.3	384.2
RS-504 1260-1280	521	0.32	27.2	< .2	3	73.9	0.13	8.4	5.33	6	14.1	42.13	2.06	0.8	96	0.13	3.7	0.54	353	41.6	0.009	87.6	0.091	15.16	1.34	6.83	1.5	8.2	597.7	0.11	2	0.004	0.36	2.3	22	0.3	477.2
RS-504 1280-1300	565	0.35	30.6	< .2	3	97.9	0.14	6.53	6.28	5.9	9.7	51.4	2.23	0.8	86	0.15	2.7	0.38	420	33.59	0.01	66.6	0.089	17.25	1.31	6.95	1.3	9.2	427.6	0.09	2	0.003	0.34	1.2	22	0.3	586.3
RS-504 1300-1320	744	0.37	39.7	< .2	3	85.9	0.15	6.98	7.17	6.8	10.7	54.92	2.4	0.9	89	0.16	3.5	0.45	424	35.3	0.013	78.3	0.086	39.92	1.44	9.47	1.7	10.8	519.3	0.1	2.1	0.003	0.39	1.3	29	0.3	657.8
STANDARD DS2	261	1.65	59.3	211.9	2	147	10.47	0.51	9.74	10.8	156.3	123.85	2.98	5.8	243	0.15	16.8	0.59	808	13.88	0.03	34.5	0.087	35.1	0.01	9.07	2.8	2.4	27.6	1.77	3.5	0.083	1.76	17.9	75	6.7	156
RS-504 1320-1340	712	0.28	41.9	< .2	3	118.8	0.13	9.02	9.93	6.5	9.6	54.36	2.17	0.7	136	0.13	3	0.89	377	40.56	0.012	71.5	0.093	18.06	1.3	10.98	1.9	12.5	686.5	0.13	2	0.001	0.43	1.6	35	0.4	902.6
RS-504 1340-1360	678	0.33	41	< .2	2	82.6	0.13	7.18	8.26	6.3	10.2	55.71	2.21	0.8	186	0.13	2.6	0.93	427	40.49	0.012	66.5	0.072	13.08	1.23	9.99	1.8	11.9	535.7	0.09	1.9	0.001	0.39	1.4	31	0.4	774.3

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58058
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-504 1360-1380	1120	0.4	44.6	0.6	3	58.8	0.16	3.08	9.86	9.2	12.3	69.72	3.07	1	280	0.14	6.5	0.74	627	30.36	0.013	67.1	0.06	14.29	1.5	11.55	1.8	17.8	181.6	0.08	3	0.001	0.54	1.2	32	0.4	944.2
RS-504 1380-1400	1449	0.55	61.8	< .2	4	50.8	0.21	3.33	13.74	11	19.7	88.39	3.42	1.2	740	0.19	2.8	0.69	533	41.13	0.013	106	0.064	32.87	2.06	16.71	1.8	24.1	198.4	0.09	1.7	0.001	0.82	1.4	57	0.7	1343.5
RS-504 1400-1420	1125	0.84	54.8	0.2	6	53.7	0.17	3.38	12.68	9.8	14.1	79.88	3.19	1.7	491	0.27	2.3	0.72	541	33.89	0.017	78.5	0.067	29.85	1.9	12.66	1.8	21.6	272.3	0.07	1.6	0.002	0.57	1.1	69	0.7	1125.5
RS-504 1420-1440	1561	0.52	61.3	< .2	4	45.6	0.18	3.17	13.16	9.1	12.4	85.06	3.13	1.2	350	0.18	3.2	0.79	590	39.14	0.013	83.9	0.069	18.62	1.89	16.31	1.8	24.5	205.2	0.11	1.8	0.002	0.57	1.5	53	0.5	1137.8
RS-504 1440-1460	1389	0.62	79.3	< .2	3	55.5	0.19	3.13	10.98	12.9	12.2	91.01	3.63	1.1	320	0.16	1.5	0.74	484	42.83	0.013	101.8	0.07	40.67	2.2	20.16	1.7	21.4	216.8	0.1	1.2	0.002	0.67	1.2	42	0.6	1122.9
RS-504 1460-1480	1286	0.92	72.4	< .2	3	51.8	0.19	3.6	13.36	13.5	13.4	91.31	3.76	1.4	281	0.17	1.7	0.92	581	40.84	0.012	99.7	0.076	18.1	2.17	13.8	2	26.5	243.4	0.09	1.6	0.003	0.48	1.3	53	0.6	1311.2
RS-504 1480-1500	1691	0.58	72.4	< .2	2	55.9	0.19	2.79	14.5	11.3	13.6	99.26	3.35	1.1	254	0.17	1.6	0.54	470	40.31	0.009	98.4	0.063	20.24	2.08	16.01	1.5	30.4	176.4	0.09	1.7	0.001	0.56	1.4	50	0.5	1340.2
RS-504 1500-1520	1303	0.6	62.2	< .2	2	55.2	0.21	2.92	11.02	12	12.3	86.77	3.42	1.3	249	0.17	3.7	0.56	547	42.45	0.014	100.7	0.066	15.79	2.08	17.97	1.8	22.9	248.2	0.1	2.2	0.003	0.59	1.7	48	0.6	1039.9
RS-504 1520-1540	954	0.54	51.1	0.3	3	60.7	0.18	3.28	7.99	9.4	12.2	66.35	3.13	1.3	148	0.17	6.7	0.65	591	32.11	0.016	75.1	0.07	18.84	1.65	11.42	1.9	15.4	233.5	0.08	3.6	0.002	0.35	1.7	36	0.5	798.8
RS-504 1540-1560	5054	1.09	62.4	0.7	3	93.2	0.12	3.95	3.47	11	14.7	53.66	3.46	2.2	79	0.18	4.4	0.8	692	12.55	0.015	35.8	0.069	12.61	1.19	5.67	1.9	11.6	246.6	0.06	1.8	0.001	0.29	0.5	26	0.5	366.4
RS-504 1560-1580	10885	0.49	107	< .2	3	61.6	0.24	4.95	4.24	8.9	13.6	53.45	2.9	1.2	82	0.18	2.7	0.54	430	31.99	0.01	60.8	0.084	16.46	1.85	11.72	1.5	15.8	257.2	0.09	3.1	0.001	0.13	1.9	20	0.7	434.6
RS-504 1580-1600	1738	0.72	240.1	1	2	66.5	0.15	3.79	2.8	11.9	15.2	53.53	3.6	1.4	93	0.17	3.6	0.83	700	12.81	0.015	34.6	0.076	17.44	1.86	12.34	2.2	12.9	216	0.06	1.9	0.002	0.34	0.5	21	0.9	300.5
RS-504 1600-1605	2628	0.67	163.5	7.9	2	43.1	0.07	1.84	0.93	10.6	10.9	52.46	3.15	1.4	68	0.19	2.8	0.58	397	6.17	0.011	18.8	0.059	10.05	1.96	12.81	1.4	12.7	90.2	0.07	1.2	< .001	0.36	0.2	13	1.6	129.5
RS-504 1605-1610	3210	0.52	106.1	0.5	4	29.7	0.13	2.46	8.01	8.5	13.5	71.32	3.21	1.2	146	0.17	1.5	0.53	380	25.13	0.009	72.3	0.052	14.26	1.8	11.39	1.4	21.1	128.6	0.06	1.1	0.003	0.43	0.8	43	1.5	766.1
RS-504 1610-1615	4942	0.67	309.4	3.2	2	39	0.1	3.11	2.14	13.6	10	49.85	3.65	1.4	121	0.19	3.4	0.62	575	7.41	0.014	24.6	0.071	10.82	2.33	13.9	1.7	14.7	154.4	0.07	1.2	< .001	0.33	0.3	19	1.4	243.3
RS-504 1615-1620	2607	0.88	353.2	1.8	1	44.3	0.09	3.09	3.01	14	11	49.57	4.17	2	114	0.21	3.8	0.98	631	8.93	0.021	35.7	0.078	10.05	2.2	13.87	2.5	19.2	160.4	0.05	1.2	0.001	0.41	0.3	30	0.4	334.5
RS-504 1620-1625	2332	0.96	206.6	3.4	3	69.7	0.08	5.33	1.13	12.7	9.4	42.79	4.14	2	40	0.23	5.5	1.74	1005	4.82	0.019	18.4	0.067	10.7	1.97	8.71	2.9	10.7	264.1	0.05	1.1	0.001	0.3	0.2	27	0.7	151.9
RS-504 1625-1630	7070	0.61	853.5	0.8	3	24.1	0.11	2.31	3.46	10.9	24.6	48.28	4.06	1.4	77	0.18	2.9	0.64	511	11.03	0.014	47.5	0.051	20	2.28	11.65	1.5	19.7	101.5	0.05	1.1	0.004	0.35	0.4	28	5	337.8
RS-504 1630-1635	2896	1	148.2	1.9	3	45.1	0.08	3.68	1.78	15.2	11.2	49.67	4.8	2.2	74	0.24	5.1	1.14	896	6.1	0.019	25.5	0.08	11.78	2.77	15.16	2.7	14.1	183.9	0.04	1.3	0.002	0.5	0.3	30	0.4	228.5
RS-504 1635-1640	1692	1.21	113.8	< .2	3	66.2	0.1	4.59	2.86	14.9	12.5	49.25	4.14	2.4	69	0.27	5.1	1.41	881	8.88	0.02	32.5	0.086	11.5	1.6	7	2.9	12.5	230.4	0.06	1.5	0.003	0.3	0.4	42	0.3	325.3
RS-504 1640-1645	2358	0.9	187.5	< .2	3	60.4	0.11	4.01	3.23	12.8	9.7	54.95	3.84	1.9	70	0.25	4.6	0.88	725	10.93	0.012	32	0.072	18.26	2.07	9.69	2	13.5	215.4	0.06	1.4	0.001	0.33	0.4	30	0.4	341.8
RS-504 1645-1650	3861	0.93	137.7	10.5	2	33.8	0.11	2.33	2.08	11.6	10.8	50.68	3.93	2	85	0.28	4	0.66	617	6.91	0.013	31.5	0.08	12.25	2.73	17.24	1.9	15.8	116.6	0.04	1.3	< .001	0.46	0.4	26	0.4	246.2
RS-504 1650-1655	3133	0.79	165.9	0.7	3	52.4	0.14	4.23	4.29	12.7	12.7	59.53	3.68	1.6	92	0.21	4.2	1.14	705	14.57	0.01	39.6	0.071	16.52	2.05	11.51	2.1	18.3	236.7	0.08	1.2	0.001	0.36	0.5	33	0.6	442
RS-504 1655-1660	2136	0.88	108.4	< .2	3	59.4	0.12	3.14	4.5	10.4	15.5	59.7	3.09	1.9	98	0.23	3.6	0.83	585	13.6	0.012	43	0.059	15.47	1.62	9.27	2.1	15.6	169.5	0.05	1.3	0.003	0.35	0.5	39	0.6	447.9
RS-504 1660-1665	2488	1.24	336.7	3.5	4	38.9	0.13	3.95	4.54	15.4	16.6	75.08	4.65	2.6	102	0.34	4.7	1.04	686	11.61	0.014	39.9	0.079	18.13	2.96	10.54	2.4	20.1	183.1	0.08	1.4	0.002	0.37	0.5	47	0.5	462.9
RS-504 1665-1670	1557	1	130	5.5	2	93.5	0.12	6	1.24	11.9	11.8	42.52	3.39	2.1	25	0.21	5.6	0.57	1046	4.81	0.026	23.6	0.069	21.28	1.63	5.19	1.8	10.1	281.9	0.04	2.2	0.001	0.19	0.5	17	0.5	162.4
RS-504 1670-1675	1254	1.4	72.7	2.5	1	138.7	0.1	4.98	0.68	11.2	12.3	37.75	3.15	3.2	14	0.22	4.9	0.7	787	3.71	0.028	15.8	0.063	19.46	1.01	3.04	2	4.9	278.4	0.04	2	0.005	0.14	0.4	21	0.4	112.2
RS-504 1675-1680	3233	0.84	122	0.5	4	65.3	0.15	4.99	0.94	12.7	13.6	36.94	3.17	2.2	17	0.29	4.2	1.11	882	5.56	0.017	32.9	0.093	20.43	1.9	8.3	1.5	7.8	230.2	0.06	3	0.002	0.09	0.6	16	0.5	119.6
RS-504 1680-1685	1657	0.73	90.1	0.2	3	74.9	0.17	4.82	0.87	10.2	9.4	38.48	2.7	2	10	0.27	4.2	0.92	730	7.92	0.015	27.4	0.094	18.42	1.68	5.42	1.4	6.4	257.9	0.06	3.3	0.001	0.06	0.9	13	0.2	111
RS-504 1685-1690	888	0.82	116.3	< .2	3	76.1	0.18	3	0.94	7.8	7.2	21.16	2.35	2.1	5	0.29	5.1	0.53	506	9.11	0.024	27.7	0.066	20.52	1.49	2.9	1.1	5.2	196.5	0.07	4.1	0.007	0.04	0.7	11	0.2	110.6
RS-504 1690-1695	1470	0.71	124.7	0.4	3	75.5	0.16	4.33	0.73	9	8.5	25.34	2.54	1.7	14	0.27	4.8	1.06	674	7.79	0.028	22.8	0.082	19.58	1.64	4.29	1.3	4.7	250.2	0.07	3.7	0.011	0.06	0.9	11	0.3	91.5
STANDARD DS2	275	1.68	57.6	216.3	2	148.6	10.55	0.52	9.91	11.6	157.8	124.74	2.99	5.7	225	0.15	16	0.59	819	13.71	0.032	32.7	0.084	35.42	< .01	8.99	2.8	2.4	27.1	1.76	3.7	0.084	1.8	19.5	75	6.6	156.2
RS-504 1695-1700	2095	0.48	86.6	0.7	3	106.1	0.15	4.22	0.89	9.6	8.1	33.66	2.75	1.3	16	0.22	4.1	0.87	585	8.54	0.025	39.6	0.093	16.83	1.92	7.21	1.4	5.1	289.7	0.06	2.5	0.007	0.11	1.7	10	0.3	99.3
RS-504 1700-1720	227	0.49	18.2	< .2	3	110.7	0.17	5.11	0.87	11.1	9.4	43.46	3.14	1.1	26	0.21	3.4	1.28	743	8.93	0.021	38.5	0.098	15.75	1.6	3.63	1.7	2.2	373.5	0.08	2.6	0.005	0.07	1.3	11	< .2	100.3
RS-504 1720-1745	275	0.29	23.3	0.6	1	103.5	0.12	7.87	2.16	7.3	9.1	48.12	2.58	0.6	66	0.14	3.1	0.88	400	41.2	0.015	85.3	0.112	10.96	1.68	4.55	1.8	3.5	584.2	0.11	2.4	0.003	0.14	2.7	12	0.5	234

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.

AMERICAN ASSAY LABORATORIES
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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58058
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-504 0000-0020	91	0.76	35.5	6.2	3	100.20	0.08	0.19	0.3	0.70	4.5	6.26	1.83	3.1	102	0.24	54.2	0.09	527	1.44	0.049	4.7	0.012	30.9	0.09	1.21	2.2	0.3	24.1	< .02	15.6	0.004	0.5	2.5	7	0.3	83.2
RS-504 0020-0040	117	0.54	17.4	7.8	1	78.00	0.26	0.12	0.55	0.40	4.9	5.56	1.38	2.2	68	0.14	60.9	0.03	1013	1.23	0.045	4.2	0.01	16.77	0.03	0.7	1.9	0.4	17.4	< .02	17.4	0.001	0.33	3	5	< .2	87.7
RS-504 0040-0060	81	0.47	0.6	2.5	1	19.50	0.08	0.14	0.42	0.30	4.4	5.54	1.44	2.3	17	0.12	63.7	0.03	890	0.87	0.038	4.5	0.016	11.35	< .01	0.14	1.6	0.3	17.6	< .02	15.9	0.001	0.06	3	3	< .2	135.1
RS-504 0060-0080	82	0.41	< .1	0.9	< 1	35.00	0.1	0.18	0.17	0.20	2.2	2.38	1.21	2.2	< 5	0.1	61.7	0.05	1533	0.34	0.026	1.2	0.015	11.1	0.01	0.07	1.9	0.2	18.9	< .02	17.2	< .001	0.04	3.3	< 2	< .2	69.4
RS-504 0080-0100	60	0.43	0.4	2.3	1	20.60	0.05	0.18	0.1	0.10	2.3	3.75	1.12	1.9	8	0.1	56.5	0.05	237	1.15	0.035	1.8	0.011	10.44	< .01	0.22	1.4	0.1	21.9	< .02	17	0.005	0.03	2.8	< 2	0.8	67.8
RS-504 0100-0120	60	0.47	1.7	2	2	19.70	0.04	0.11	0.27	0.20	2.9	4.38	1.39	2.5	23	0.1	59.1	0.03	251	2.43	0.028	3	0.011	12.12	< .01	0.45	1.5	0.2	15.9	< .02	17.3	0.009	0.03	1.9	2	1	64.2
RS-504 0120-0140	114	0.57	3.4	1.8	< 1	55.00	0.21	0.38	0.1	0.50	2.3	3.21	0.81	2.9	9	0.12	64.7	0.04	158	0.91	0.034	2.4	0.009	12.34	< .01	0.29	1.5	0.1	25.4	< .02	17.5	0.004	0.08	1.7	2	0.4	45.1
RS-504 0140-0160	60	0.56	14.2	2.3	1.0	138.90	0.58	0.65	0.15	0.30	4.9	7.74	1.46	3.5	13	0.1	61.9	0.05	1040	1.85	0.038	2.4	0.009	21.07	0.01	0.52	2.6	0.2	29	< .02	16.5	0.006	0.1	1.3	2	1.4	98.2
RS-504 0160-0180	50	0.6	4.7	1.1	1	61.00	0.16	0.77	0.11	0.20	5.5	7.56	1.13	3.2	< 5	0.1	58.9	0.06	454	2.52	0.047	2.2	0.012	11.54	0.01	0.52	2.5	0.2	34.4	< .02	16.8	0.006	0.06	1.6	< 2	0.7	75.3
RS-504 0180-0200	49	0.63	23.1	1.6	2	40.30	0.09	0.86	0.12	0.20	5.4	6.44	1.72	4.1	8	0.09	68.2	0.06	357	2.1	0.049	1.5	0.012	15.29	0.01	0.35	2.8	0.1	42.2	< .02	18.1	0.005	0.07	2.8	< 2	0.9	83.6
RS-504 0200-0220	69	1.01	6.1	0.4	1	65.30	0.18	1.07	0.17	2.00	9.4	9.14	1.91	4	< 5	0.11	43.7	0.14	592	1.95	0.074	6	0.019	12.64	< .01	0.33	3	0.2	79.1	< .02	14.6	0.013	0.07	2.3	12	0.4	81.5
RS-504 0220-0240	66	0.78	< .1	3.7	1	75.10	0.11	1.18	0.19	2.90	12.3	14.48	1.89	2.9	6	0.11	41.1	0.1	952	1.8	0.082	9.4	0.046	8.16	0.01	0.23	3.2	0.2	64.1	0.02	12.9	0.011	0.07	2.5	13	< .2	70.3
RS-504 0240-0260	70	0.56	0.1	1.1	< 1	37.70	0.1	0.7	0.11	1.50	8.8	14.02	1.56	2.3	6	0.11	44.2	0.08	734	1.31	0.076	5.7	0.018	8.77	0.01	0.16	2.3	0.2	53.9	< .02	15	0.003	0.06	2.2	7	< .2	68.9
RS-504 0260-0280	74	0.83	< .1	0.8	1	90.20	0.12	0.9	0.34	1.90	7.7	12.1	1.82	3.2	7	0.11	34.8	0.11	971	1.36	0.095	5.4	0.029	11.29	0.02	0.16	2.5	0.2	93.7	< .02	11.9	0.008	0.07	2.1	11	< .2	78.2
RS-504 0280-0300	71	1.42	2.2	1.6	2	641.10	0.15	1.15	0.11	2.20	5.6	8.32	2.23	5.4	< 5	0.12	30.1	0.13	482	1.38	0.083	3.4	0.021	46.02	0.05	0.51	2.9	0.2	136.7	< .02	11.4	0.008	0.12	3.3	21	0.3	82.3
RS-504 0300-0320	104	1.72	0.9	2	< 1	350.80	0.18	1.07	0.24	1.80	6	8.56	1.96	5.7	9	0.14	29.6	0.28	467	1.33	0.128	3.3	0.023	40.29	0.03	0.49	1.8	< .1	246.4	0.02	10.9	0.006	0.09	1.9	8	< .2	72.3
RS-504 0320-0340	86	1.55	< .1	2	2	482.60	0.24	1.49	0.52	1.20	4	5.65	1.29	4.4	< 5	0.1	29.3	0.31	660	0.71	0.163	2.4	0.039	30.88	0.03	0.42	1.5	0.2	353.5	0.04	8.2	0.002	0.06	2.4	5	< .2	51.7
RS-504 0340-0360	65	0.78	< .1	1.3	1	1622.60	0.11	1.29	0.22	1.90	10.7	10.21	1.63	3.5	< 5	0.14	37.1	0.11	748	1.47	0.056	4.3	0.029	81.23	0.05	0.54	2.6	0.2	100.2	< .02	11.5	0.012	0.08	2.1	12	0.3	97.6
RS-504 0360-0380	70	1.56	0.7	1.2	2	195.80	0.15	1.38	0.11	4.50	15.4	23.19	2.12	4.9	8	0.16	32.9	0.28	689	1.12	0.086	16.5	0.025	120.69	0.03	0.64	3.2	0.3	216.2	0.04	11.2	0.011	0.12	2	25	< .2	113.3
RS-504 0380-0400	65	1.2	0.2	0.3	1	113.00	0.12	1.74	0.3	5.20	30.8	12.74	2.44	4.3	< 5	0.13	27.7	0.24	1326	1.45	0.105	21.7	0.053	16.31	0.03	0.58	3.4	0.1	180.1	0.03	8.8	0.026	0.09	1.8	32	0.3	75.2
RS-504 0400-0420	84	1.06	0.8	1.6	< 1	74.10	0.11	1.42	0.21	3.00	8.2	7.9	2.33	4.3	16	0.14	27	0.16	670	1.73	0.065	5.6	0.034	26.3	0.03	0.92	2.3	0.1	134	0.03	9.4	0.023	0.09	1.8	19	0.5	90.2
RS-504 0420-0440	80	1.06	0.9	2.3	1	63.40	0.11	1.29	0.11	2.50	10.2	27.49	2.26	4.4	14	0.14	30.2	0.15	518	1.8	0.06	7.6	0.033	29.54	0.04	1.63	2.5	0.2	115.1	< .02	11.3	0.016	0.08	1.3	16	0.6	78.8
RS-504 0440-0460	72	1.28	1.3	1.6	1	70.10	0.14	1.3	0.12	3.10	11.9	29.84	1.99	4.7	5	0.14	37.8	0.2	519	1.47	0.061	8.9	0.035	94.78	0.03	1.31	2.6	0.2	163.3	< .02	12.5	0.011	0.09	1.9	19	0.4	105.4
RS-504 0460-0480	66	0.58	0.1	< .2	< 1	289.70	0.09	1.44	0.12	2.00	4.8	9.09	1.55	2.9	5	0.1	35.2	0.1	912	1.18	0.046	3	0.027	89.1	0.02	1.51	2	0.1	107.3	< .02	12.4	0.013	0.04	1.8	12	0.5	87.3
RS-504 0480-0500	58	0.47	< .1	0.2	< 1	67.60	0.02	1.48	0.04	1.70	3.4	5.28	1.6	2.8	< 5	0.1	17.8	0.06	735	1.31	0.029	2.4	0.032	47.96	0.03	2.36	1.7	0.1	73.6	< .02	9.7	0.012	0.02	0.8	10	0.7	75.9
RS-504 0500-0520	66	0.39	0.3	0.5	< 1	73.80	0.02	1.06	0.03	1.60	2.5	5.28	1.52	2.6	< 5	0.09	15.2	0.05	520	1.25	0.023	1.6	0.032	45.05	0.03	2.55	1.6	0.1	58.6	< .02	9.5	0.013	0.02	0.6	8	0.9	69.6
RS-504 0520-0540	96	0.44	1.3	3.5	< 1	100.30	< .02	0.21	0.04	2.00	3.3	3.05	1.67	2.8	155	0.12	16.2	0.04	151	1.48	0.025	2.2	0.034	30.45	0.03	2.54	1.5	< .1	43.5	< .02	10.8	0.019	0.03	0.6	8	1.8	91.3
RS-504 0540-0560	70	0.43	1.0	1.3	< 1	53.00	< .02	0.95	0.08	3.20	3.8	4.29	1.65	2.5	154	0.11	13.9	0.06	677	1.31	0.027	2.4	0.031	41.83	0.03	4.39	1.5	0.1	60.8	< .02	8.6	0.013	0.03	0.6	9	1.2	91.5
RS-504 0560-0580	78	0.45	0.8	< .2	< 1	30.30	0.02	0.55	0.12	1.20	5.4	7.16	1.67	2.5	91	0.1	13.9	0.04	320	1.39	0.023	3.2	0.032	48.37	0.03	3.51	1.2	0.1	44.9	< .02	8	0.024	0.02	1.1	13	1.3	78.3
RS-504 0580-0600	72	0.35	0.6	0.4	< 1	36.00	0.0	0.32	0.11	1.60	8.6	5.75	1.59	1.8	165	0.1	15	0.04	306	1.81	0.02	10.2	0.032	68.56	0.19	4.04	1	< .1	39.9	< .02	8	0.013	0.06	1.2	11	1	71.1
RS-504 0600-0620	73	0.45	0.9	0.4	< 1	32.3	0.02	1.22	0.2	1.4	7.8	4.04	1.73	2.1	46	0.1	16.1	0.06	740	1.9	0.029	8.6	0.032	30.68	0.03	2.08	1.7	0.2	76.1	< .02	8	0.013	0.03	2	13	0.8	64.8
RS-504 0620-0640	75	0.47	0.4	0.8	< 1	54	0.02	0.82	0.2	1.6	6.4	5.67	1.56	2.1	130	0.11	15.3	0.06	429	1.67	0.026	7	0.034	46.11	0.05	1.93	1.3	< .1	54.9	< .02	8.8	0.012	0.03	1.5	13	0.8	92.4
RS-504 0640-0660	81	0.44	< .1	0.3	< 1	27.1	< .02	1.4	0.27	1.5	3.4	4.31	1.51	2	9	0.13	14.9	0.09	692	1.4	0.032	2.5	0.032	29.52	0.02	1.27	1.4	< .1	70.4	< .02	8.7	0.014	0.03	1.6	13	0.8	71.7
STANDARD DS2	256	1.66	58.1	212.8	2	145.8	10.47	0.52	9.33	11.2	157.4	124.2	3	5.7	249	0.16	15.2	0.6	819	14.01	0.028	33.1	0.088	33.63	0.02	9.12	3.1	2.2	27.8	1.8	3.4	0.085	1.83	18.3	72	7	163.4
RS-504 0660-0680	84	0.47	0.2	1.3	1	29.9	< .02	0.91	0.12	1.1	4.2	5.44	1.68	2.3	< 5	0.14	15.7	0.09	442	1.46	0.043	3.9	0.033	31.1	< .01	1.34	1	0.1	82.5	0.02	8.9	0.014	0.03	1.8	13	0.9	72.7

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AAL REF: SP58058
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	Tl	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-504 0680-0700	55	0.49	0.1	0.6	1	29.3	< .02	1.12	0.14	1.3	4	5.78	1.58	2.3	< 5	0.12	13.9	0.16	934	1.5	0.047	3.9	0.032	33.77	0.01	1.18	1.4	0.2	116.7	0.02	7.9	0.009	0.03	0.9	8	0.8	79.1
RS-504 0700-0720	68	0.49	0.1	0.8	1	29.5	< .02	0.8	0.09	1	4.1	6.81	1.69	2.1	9	0.11	14.3	0.11	287	1.53	0.05	3.9	0.034	40.42	< .01	0.9	0.9	< .1	113.4	< .02	7.9	0.011	0.02	1.5	9	0.9	89.1
RS-504 0720-0740	253	0.36	7.7	0.7	< 1	116.4	0.14	3.57	0.24	7.4	12.6	29.19	2.76	1	34	0.15	4.5	1.22	696	4.27	0.015	31	0.05	18.74	0.34	1.49	1.6	1.6	139.3	0.02	3.1	0.001	0.05	0.4	11	0.2	69.2
RS-504 0740-0760	902	0.35	18.3	0.5	1	97.1	0.17	2.46	0.96	8.2	10.6	58.89	2.98	0.9	62	0.17	2.5	1.2	467	11.68	0.011	60.1	0.065	21.3	1.21	7.25	1.8	6.9	138.2	0.06	2	0.002	0.12	0.6	11	< .2	131.4
RS-504 0760-0780	354	0.4	102.7	1.4	1	108.9	0.16	3.57	3.23	11.5	18.1	47.29	2.95	0.9	66	0.17	2.1	1.79	513	42.09	0.01	109.4	0.064	34.08	1.04	11.59	2	9.3	182.8	0.08	1.8	< .001	0.29	1	33	0.2	255
RS-504 0780-0800	935	0.28	320.7	0.8	1	80.4	0.12	3.5	3.48	8.7	11.7	43.16	3.08	0.7	49	0.13	2.4	1.61	677	15.14	0.014	52.7	0.053	20.42	1.02	7.55	2.2	13.6	211.4	0.07	1.9	< .001	0.15	0.8	21	0.4	312.8
RS-504 0800-0820	1162	0.36	181	< .2	1	73.9	0.15	2.91	10.5	9.6	10.5	68.28	3.15	0.9	123	0.17	3	1.07	630	32.72	0.018	80.6	0.076	20.78	1.49	14.1	1.7	18.4	202.3	0.08	2.1	0.001	0.27	1.1	34	0.3	948.2
RS-504 0820-0840	368	0.51	32.4	< .2	< 1	219.7	0.14	1.7	3.55	3	6.6	27.68	1.57	1.6	35	0.13	8.4	0.54	393	9.66	0.023	28.9	0.023	30	0.45	3.87	1.1	5.7	223.4	0.05	5.2	< .001	0.15	1.8	12	0.4	323.8
RS-504 0840-0860	1666	0.3	97.9	< .2	1	47.1	0.17	3.47	17.97	10.6	8.8	96.47	3.18	0.7	196	0.15	2.6	0.61	520	55.57	0.02	120.6	0.105	20.76	2.09	23.25	1.6	28.8	253	0.08	2.3	0.002	0.57	1.3	36	< .2	1629.2
RS-504 0860-0880	852	0.35	51.3	< .2	1	79.6	0.18	2.41	6.21	6.9	9	52.41	2.54	0.9	97	0.15	2.7	0.59	503	26.94	0.02	61.4	0.057	17.42	1.27	11.27	1.4	14.4	166.2	0.07	3	0.002	0.39	1	22	0.3	601.7
RS-504 0880-0900	271	0.89	15.4	0.6	2	214.5	0.11	1.71	0.95	14.9	21.4	48.62	3.14	3.5	269	0.17	4.6	0.8	471	3.33	0.027	36.2	0.062	17.58	0.42	4.76	5.7	2.6	99.2	0.03	1.8	0.002	0.19	0.3	76	< .2	158.3
RS-504 0900-0920	374	0.75	16.1	0.4	1	168.6	0.13	2.05	1.48	12.8	15.3	42.79	2.75	2.4	340	0.17	10.9	0.91	580	4.43	0.024	37.7	0.052	13.02	0.41	4.26	3.8	3.1	107.1	0.04	3.9	0.005	0.2	0.9	51	< .2	176
RS-504 0920-0940	300	0.65	94.9	1.2	3	147.7	0.16	3.96	0.85	11.1	39.5	42.23	3.16	1.7	44	0.16	3.7	1.9	643	9.06	0.012	49.1	0.048	30.05	0.5	3.64	3	2.1	175.6	0.04	2	0.002	0.07	0.2	22	0.2	99.8
RS-504 0940-0960	397	0.62	19.6	0.9	1	266.7	0.15	3.57	0.77	7.8	18.6	37.47	2.59	1.7	35	0.17	7.1	1.56	500	3.95	0.017	33.3	0.057	28.35	0.36	2.22	1.8	2.3	143.6	0.03	2.8	0.004	0.06	0.4	15	0.2	101.3
RS-504 0960-0980	345	0.86	8.8	1.8	2	158.4	0.14	4.32	0.24	12.6	85.6	52.5	2.86	2.4	37	0.14	3.7	2.31	626	2.15	0.018	69.4	0.051	36.5	0.4	2.33	3.4	2	153.9	0.02	2	0.002	0.04	0.3	37	< .2	82.8
RS-504 0980-1000	694	0.41	13.1	1.4	2	158.1	0.14	4.06	2.39	7.5	13.7	63.37	2.22	1.1	104	0.19	4.5	2.03	731	4.44	0.012	60	0.08	25.12	0.64	4.95	1.7	5.7	128.4	0.07	1.9	0.001	0.06	0.4	16	0.2	175.1
RS-504 1000-1020	644	0.52	9.3	< .2	2	175.8	0.18	3.41	0.94	7.5	15.5	80.49	2.39	1.4	79	0.21	4.1	1.73	653	4.15	0.011	64.1	0.07	176.98	0.6	3.41	1.7	5	115.5	0.05	2.1	0.001	0.06	0.4	14	0.2	186.5
RS-504 1020-1040	784	0.47	19.9	0.3	2	172.4	0.17	3.01	0.53	8.3	15.4	89.96	2.9	1.3	71	0.2	3.6	1.57	633	6.46	0.008	70	0.058	45.77	0.55	4.3	1.8	4.6	133.1	0.07	1.7	0.003	0.06	0.3	13	0.3	149.5
RS-504 1040-1060	854	0.44	40.7	3	1	309.5	0.18	2.69	0.6	8.5	11.5	56.34	2.68	1	56	0.17	5.5	1.33	544	3.45	0.01	58.4	0.058	40.77	0.73	6.24	1.8	6.3	174.8	0.06	2.1	< .001	0.08	0.3	11	0.3	141.9
RS-504 1060-1080	1257	0.38	70	< .2	2	81.7	0.15	3.05	4.29	9	24.2	68.44	3.35	1	64	0.13	3.8	1.36	625	11.25	0.012	64.3	0.065	43.5	1.07	10.25	1.9	12.1	182.8	0.05	1.8	0.003	0.17	0.7	23	0.4	385.1
RS-504 1080-1100	917	0.48	32.2	< .2	2	53.2	0.2	3.32	6.4	10.6	44.3	72	3.64	1.3	114	0.15	2.7	1.01	607	24.16	0.014	105.6	0.06	64.38	1.52	7.48	1.8	16.4	143.2	0.05	2.1	0.004	0.39	0.8	41	0.3	595.9
RS-504 1100-1120	814	0.54	63.2	< .2	3	44.3	0.14	3.64	10.19	11.1	28.3	73.59	3.53	1.3	114	0.16	3	0.86	717	29.52	0.014	87.3	0.088	66.83	1.59	8.85	1.8	14.8	215	0.07	1.9	0.003	0.44	0.8	37	0.4	916
RS-504 1120-1140	1595	0.31	54.5	< .2	2	37.1	0.17	3.43	13.06	8.9	9.8	80.69	3.09	0.8	191	0.14	1.8	0.46	554	40.49	0.013	94.1	0.064	39.79	2.02	15.99	1.6	25.9	206.6	0.07	2	0.002	0.55	1.2	38	0.3	1207.1
RS-504 1140-1160	877	0.37	39.7	< .2	1	86.6	0.14	5.69	11.34	9.5	21.9	69.15	2.77	0.9	132	0.14	2.4	0.89	616	33.95	0.012	80.6	0.08	18.36	1.53	10.12	1.9	14.3	439.2	0.09	1.8	0.003	0.47	0.9	28	0.3	1060.4
RS-504 1160-1180	683	0.39	37.6	< .2	1	84.6	0.13	5.32	7.53	9.7	22.8	57.36	2.87	1	103	0.12	5.1	0.98	614	29.85	0.016	79	0.08	49.12	1.38	8.42	2.2	11.6	391.9	0.06	2.4	0.002	0.39	0.9	28	0.3	702.4
RS-504 1180-1200	186	0.39	15.7	< .2	2	89.3	0.12	10.3	1.75	9.2	15.8	35.26	2.57	1	138	0.13	2.7	1.07	382	33.67	0.012	60.8	0.122	27.92	1.7	2.38	1.9	4	528.1	0.09	2	0.002	0.17	3.7	17	0.3	185.1
RS-504 1200-1220	202	0.29	16.5	2.2	3	51	0.16	5.56	1.5	5.6	14.3	30.64	2.05	0.6	109	0.12	2.1	0.33	361	29.27	0.008	51.9	0.071	32.03	1.38	2.42	1	3.4	338.8	0.05	2.2	0.004	0.24	1.6	8	0.4	167.8
RS-504 1220-1240	208	0.29	18.5	0.3	4	81.2	0.14	10.36	1.92	7.5	10	33.6	2.18	0.7	90	0.13	2.6	1.47	329	37.02	0.011	64.9	0.09	27.71	1.34	2.86	1.7	4.2	581.6	0.11	1.8	0.003	0.24	1.5	14	0.3	200.1
RS-504 1240-1260	291	0.29	22	< .2	2	101.1	0.14	7.87	4.26	5.9	9.1	34.95	1.98	0.7	106	0.12	3.1	0.78	342	43.05	0.012	72.9	0.088	25.42	1.34	4	1.4	6	557.6	0.09	2	0.004	0.31	1.8	16	0.3	384.2
RS-504 1260-1280	521	0.32	27.2	< .2	3	73.9	0.13	8.4	5.33	6	14.1	42.13	2.06	0.8	96	0.13	3.7	0.54	353	41.6	0.009	87.6	0.091	15.16	1.34	6.83	1.5	8.2	597.7	0.11	2	0.004	0.36	2.3	22	0.3	477.2
RS-504 1280-1300	565	0.35	30.6	< .2	3	97.9	0.14	6.53	6.28	5.9	9.7	51.4	2.23	0.8	86	0.15	2.7	0.38	420	33.59	0.01	66.6	0.089	17.25	1.31	6.95	1.3	9.2	427.6	0.09	2	0.003	0.34	1.2	22	0.3	586.3
RS-504 1300-1320	744	0.37	39.7	< .2	3	85.9	0.15	6.98	7.17	6.8	10.7	54.92	2.4	0.9	89	0.16	3.5	0.45	424	35.3	0.013	78.3	0.086	39.92	1.44	9.47	1.7	10.8	519.3	0.1	2.1	0.003	0.39	1.3	29	0.3	657.8
STANDARD DS2	261	1.65	59.3	211.9	2	147	10.47	0.51	9.74	10.8	156.3	123.85	2.98	5.8	243	0.15	16.8	0.59	808	13.88	0.03	34.5	0.087	35.1	0.01	9.07	2.8	2.4	27.6	1.77	3.5	0.083	1.76	17.9	75	6.7	156
RS-504 1320-1340	712	0.28	41.9	< .2	3	118.8	0.13	9.02	9.93	6.5	9.6	54.36	2.17	0.7	136	0.13	3	0.89	377	40.56	0.012	71.5	0.093	18.06	1.3	10.98	1.9	12.5	686.5	0.13	2	0.001	0.43	1.6	35	0.4	902.6
RS-504 1340-1360	678	0.33	41	< .2	2	82.6	0.13	7.18	8.26	6.3	10.2	55.71	2.21	0.8	186	0.13	2.6	0.93	427	40.49	0.012	66.5	0.072	13.08	1.23	9.99	1.8	11.9	535.7	0.09	1.9	0.001	0.39	1.4	31	0.4	774.3

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CLIENT REF: KURT ALLEN
AAL REF: SP58058
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	Tl	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-504 1360-1380	1120	0.4	44.6	0.6	3	58.8	0.16	3.08	9.86	9.2	12.3	69.72	3.07	1	280	0.14	6.5	0.74	627	30.36	0.013	67.1	0.06	14.29	1.5	11.55	1.8	17.8	181.6	0.08	3	0.001	0.54	1.2	32	0.4	944.2
RS-504 1380-1400	1449	0.55	61.8	< .2	4	50.8	0.21	3.33	13.74	11	19.7	88.39	3.42	1.2	740	0.19	2.8	0.69	533	41.13	0.013	106	0.064	32.87	2.06	16.71	1.8	24.1	198.4	0.09	1.7	0.001	0.82	1.4	57	0.7	1343.5
RS-504 1400-1420	1125	0.84	54.8	0.2	6	53.7	0.17	3.38	12.68	9.8	14.1	79.88	3.19	1.7	491	0.27	2.3	0.72	541	33.89	0.017	78.5	0.067	29.85	1.9	12.66	1.8	21.6	272.3	0.07	1.6	0.002	0.57	1.1	69	0.7	1125.5
RS-504 1420-1440	1561	0.52	61.3	< .2	4	45.6	0.18	3.17	13.16	9.1	12.4	85.06	3.13	1.2	350	0.18	3.2	0.79	590	39.14	0.013	83.9	0.069	18.62	1.89	16.31	1.8	24.5	205.2	0.11	1.8	0.002	0.57	1.5	53	0.5	1137.8
RS-504 1440-1460	1389	0.62	79.3	< .2	3	55.5	0.19	3.13	10.98	12.9	12.2	91.01	3.63	1.1	320	0.16	1.5	0.74	484	42.83	0.013	101.8	0.07	40.67	2.2	20.16	1.7	21.4	216.8	0.1	1.2	0.002	0.67	1.2	42	0.6	1122.9
RS-504 1460-1480	1286	0.92	72.4	< .2	3	51.8	0.19	3.6	13.36	13.5	13.4	91.31	3.76	1.4	281	0.17	1.7	0.92	581	40.84	0.012	99.7	0.076	18.1	2.17	13.8	2	26.5	243.4	0.09	1.6	0.003	0.48	1.3	53	0.6	1311.2
RS-504 1480-1500	1691	0.58	72.4	< .2	2	55.9	0.19	2.79	14.5	11.3	13.6	99.26	3.35	1.1	254	0.17	1.6	0.54	470	40.31	0.009	98.4	0.063	20.24	2.08	16.01	1.5	30.4	176.4	0.09	1.7	0.001	0.56	1.4	50	0.5	1340.2
RS-504 1500-1520	1303	0.6	62.2	< .2	2	55.2	0.21	2.92	11.02	12	12.3	86.77	3.42	1.3	249	0.17	3.7	0.56	547	42.45	0.014	100.7	0.066	15.79	2.08	17.97	1.8	22.9	248.2	0.1	2.2	0.003	0.59	1.7	48	0.6	1039.9
RS-504 1520-1540	954	0.54	51.1	0.3	3	60.7	0.18	3.28	7.99	9.4	12.2	66.35	3.13	1.3	148	0.17	6.7	0.65	591	32.11	0.016	75.1	0.07	18.84	1.65	11.42	1.9	15.4	233.5	0.08	3.6	0.002	0.35	1.7	36	0.5	798.8
RS-504 1540-1560	5054	1.09	62.4	0.7	3	93.2	0.12	3.95	3.47	11	14.7	53.66	3.46	2.2	79	0.18	4.4	0.8	692	12.55	0.015	35.8	0.069	12.61	1.19	5.67	1.9	11.6	246.6	0.06	1.8	0.001	0.29	0.5	26	0.5	366.4
RS-504 1560-1580	10885	0.49	107	< .2	3	61.6	0.24	4.95	4.24	8.9	13.6	53.45	2.9	1.2	82	0.18	2.7	0.54	430	31.99	0.01	60.8	0.084	16.46	1.85	11.72	1.5	15.8	257.2	0.09	3.1	0.001	0.13	1.9	20	0.7	434.6
RS-504 1580-1600	1738	0.72	240.1	1	2	66.5	0.15	3.79	2.8	11.9	15.2	53.53	3.6	1.4	93	0.17	3.6	0.83	700	12.81	0.015	34.6	0.076	17.44	1.86	12.34	2.2	12.9	216	0.06	1.9	0.002	0.34	0.5	21	0.9	300.5
RS-504 1600-1605	2628	0.67	163.5	7.9	2	43.1	0.07	1.84	0.93	10.6	10.9	52.46	3.15	1.4	68	0.19	2.8	0.58	397	6.17	0.011	18.8	0.059	10.05	1.96	12.81	1.4	12.7	90.2	0.07	1.2	< .001	0.36	0.2	13	1.6	129.5
RS-504 1605-1610	3210	0.52	106.1	0.5	4	29.7	0.13	2.46	8.01	8.5	13.5	71.32	3.21	1.2	146	0.17	1.5	0.53	380	25.13	0.009	72.3	0.052	14.26	1.8	11.39	1.4	21.1	128.6	0.06	1.1	0.003	0.43	0.8	43	1.5	766.1
RS-504 1610-1615	4942	0.67	309.4	3.2	2	39	0.1	3.11	2.14	13.6	10	49.85	3.65	1.4	121	0.19	3.4	0.62	575	7.41	0.014	24.6	0.071	10.82	2.33	13.9	1.7	14.7	154.4	0.07	1.2	< .001	0.33	0.3	19	1.4	243.3
RS-504 1615-1620	2607	0.88	353.2	1.8	1	44.3	0.09	3.09	3.01	14	11	49.57	4.17	2	114	0.21	3.8	0.98	631	8.93	0.021	35.7	0.078	10.05	2.2	13.87	2.5	19.2	160.4	0.05	1.2	0.001	0.41	0.3	30	0.4	334.5
RS-504 1620-1625	2332	0.96	206.6	3.4	3	69.7	0.08	5.33	1.13	12.7	9.4	42.79	4.14	2	40	0.23	5.5	1.74	1005	4.82	0.019	18.4	0.067	10.7	1.97	8.71	2.9	10.7	264.1	0.05	1.1	0.001	0.3	0.2	27	0.7	151.9
RS-504 1625-1630	7070	0.61	853.5	0.8	3	24.1	0.11	2.31	3.46	10.9	24.6	48.28	4.06	1.4	77	0.18	2.9	0.64	511	11.03	0.014	47.5	0.051	20	2.28	11.65	1.5	19.7	101.5	0.05	1.1	0.004	0.35	0.4	28	5	337.8
RS-504 1630-1635	2896	1	148.2	1.9	3	45.1	0.08	3.68	1.78	15.2	11.2	49.67	4.8	2.2	74	0.24	5.1	1.14	896	6.1	0.019	25.5	0.08	11.78	2.77	15.16	2.7	14.1	183.9	0.04	1.3	0.002	0.5	0.3	30	0.4	228.5
RS-504 1635-1640	1692	1.21	113.8	< .2	3	66.2	0.1	4.59	2.86	14.9	12.5	49.25	4.14	2.4	69	0.27	5.1	1.41	881	8.88	0.02	32.5	0.086	11.5	1.6	7	2.9	12.5	230.4	0.06	1.5	0.003	0.3	0.4	42	0.3	325.3
RS-504 1640-1645	2358	0.9	187.5	< .2	3	60.4	0.11	4.01	3.23	12.8	9.7	54.95	3.84	1.9	70	0.25	4.6	0.88	725	10.93	0.012	32	0.072	18.26	2.07	9.69	2	13.5	215.4	0.06	1.4	0.001	0.33	0.4	30	0.4	341.8
RS-504 1645-1650	3861	0.93	137.7	10.5	2	33.8	0.11	2.33	2.08	11.6	10.8	50.68	3.93	2	85	0.28	4	0.66	617	6.91	0.013	31.5	0.08	12.25	2.73	17.24	1.9	15.8	116.6	0.04	1.3	< .001	0.46	0.4	26	0.4	246.2
RS-504 1650-1655	3133	0.79	165.9	0.7	3	52.4	0.14	4.23	4.29	12.7	12.7	59.53	3.68	1.6	92	0.21	4.2	1.14	705	14.57	0.01	39.6	0.071	16.52	2.05	11.51	2.1	18.3	236.7	0.08	1.2	0.001	0.36	0.5	33	0.6	442
RS-504 1655-1660	2136	0.88	108.4	< .2	3	59.4	0.12	3.14	4.5	10.4	15.5	59.7	3.09	1.9	98	0.23	3.6	0.83	585	13.6	0.012	43	0.059	15.47	1.62	9.27	2.1	15.6	169.5	0.05	1.3	0.003	0.35	0.5	39	0.6	447.9
RS-504 1660-1665	2488	1.24	336.7	3.5	4	38.9	0.13	3.95	4.54	15.4	16.6	75.08	4.65	2.6	102	0.34	4.7	1.04	686	11.61	0.014	39.9	0.079	18.13	2.96	10.54	2.4	20.1	183.1	0.08	1.4	0.002	0.37	0.5	47	0.5	462.9
RS-504 1665-1670	1557	1	130	5.5	2	93.5	0.12	6	1.24	11.9	11.8	42.52	3.39	2.1	25	0.21	5.6	0.57	1046	4.81	0.026	23.6	0.069	21.28	1.63	5.19	1.8	10.1	281.9	0.04	2.2	0.001	0.19	0.5	17	0.5	162.4
RS-504 1670-1675	1254	1.4	72.7	2.5	1	138.7	0.1	4.98	0.68	11.2	12.3	37.75	3.15	3.2	14	0.22	4.9	0.7	787	3.71	0.028	15.8	0.063	19.46	1.01	3.04	2	4.9	278.4	0.04	2	0.005	0.14	0.4	21	0.4	112.2
RS-504 1675-1680	3233	0.84	122	0.5	4	65.3	0.15	4.99	0.94	12.7	13.6	36.94	3.17	2.2	17	0.29	4.2	1.11	882	5.56	0.017	32.9	0.093	20.43	1.9	8.3	1.5	7.8	230.2	0.06	3	0.002	0.09	0.6	16	0.5	119.6
RS-504 1680-1685	1657	0.73	90.1	0.2	3	74.9	0.17	4.82	0.87	10.2	9.4	38.48	2.7	2	10	0.27	4.2	0.92	730	7.92	0.015	27.4	0.094	18.42	1.68	5.42	1.4	6.4	257.9	0.06	3.3	0.001	0.06	0.9	13	0.2	111
RS-504 1685-1690	888	0.82	116.3	< .2	3	76.1	0.18	3	0.94	7.8	7.2	21.16	2.35	2.1	5	0.29	5.1	0.53	506	9.11	0.024	27.7	0.066	20.52	1.49	2.9	1.1	5.2	196.5	0.07	4.1	0.007	0.04	0.7	11	0.2	110.6
RS-504 1690-1695	1470	0.71	124.7	0.4	3	75.5	0.16	4.33	0.73	9	8.5	25.34	2.54	1.7	14	0.27	4.8	1.06	674	7.79	0.028	22.8	0.082	19.58	1.64	4.29	1.3	4.7	250.2	0.07	3.7	0.011	0.06	0.9	11	0.3	91.5
STANDARD DS2	275	1.68	57.6	216.3	2	148.6	10.55	0.52	9.91	11.6	157.8	124.74	2.99	5.7	225	0.15	16	0.59	819	13.71	0.032	32.7	0.084	35.42	< .01	8.99	2.8	2.4	27.1	1.76	3.7	0.084	1.8	19.5	75	6.6	156.2
RS-504 1695-1700	2095	0.48	86.6	0.7	3	106.1	0.15	4.22	0.89	9.6	8.1	33.66	2.75	1.3	16	0.22	4.1	0.87	585	8.54	0.025	39.6	0.093	16.83	1.92	7.21	1.4	5.1	289.7	0.06	2.5	0.007	0.11	1.7	10	0.3	99.3
RS-504 1700-1720	227	0.49	18.2	< .2	3	110.7	0.17	5.11	0.87	11.1	9.4	43.46	3.14	1.1	26	0.21	3.4	1.28	743	8.93	0.021	38.5	0.098	15.75	1.6	3.63	1.7	2.2	373.5	0.08	2.6	0.005	0.07	1.3	11	< .2	100.3
RS-504 1720-1745	275	0.29	23.3	0.6	1	103.5	0.12	7.87	2.16	7.3	9.1	48.12	2.58	0.6	66	0.14	3.1	0.88	400	41.2	0.015	85.3	0.112	10.96	1.68	4.55	1.8	3.5	584.2	0.11	2.4	0.003	0.14	2.7	12	0.5	234

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

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: RC-504 RECEIVED : 31 JUL 2000

No. SAMPLES : 349 REPORTED : 14 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.

08/14/2000 11:10 7753561413 AMERICAN ASSAY LABS PAGE 01

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0000-0005	<5		<0.001		<0.5	<0.02
RS-504 0005-0010	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0010-0015	<5		<0.001		<0.5	<0.02
RS-504 0015-0020	16		<0.001		<0.5	<0.02
RS-504 0020-0025	7		<0.001		<0.5	<0.02
RS-504 0025-0030	8		<0.001		<0.5	<0.02
RS-504 0030-0035	9		<0.001		<0.5	<0.02
RS-504 0035-0040	6		<0.001		<0.5	<0.02
RS-504 0040-0045	5		<0.001		<0.5	<0.02
RS-504 0045-0050	<5		<0.001		<0.5	<0.02
RS-504 0050-0055	5		<0.001		<0.5	<0.02
RS-504 0055-0060	<5		<0.001		<0.5	<0.02
RS-504 0060-0065	<5		<0.001		<0.5	<0.02
RS-504 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0070-0075	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0075-0080	<5		<0.001		<0.5	<0.02
RS-504 0080-0085	<5		<0.001		<0.5	<0.02
RS-504 0085-0090	<5		<0.001		<0.5	<0.02
RS-504 0090-0095	<5		<0.001		<0.5	<0.02
RS-504 0095-0100	<5		<0.001		<0.5	<0.02
RS-504 0100-0105	<5		<0.001		<0.5	<0.02
RS-504 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0110-0115	<5		<0.001		<0.5	<0.02
RS-504 0115-0120	<5		<0.001		<0.5	<0.02
RS-504 0120-0125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0125-0130	<5		<0.001		<0.5	<0.02
RS-504 0130-0135	<5		<0.001		<0.5	<0.02
RS-504 0135-0140	<5		<0.001		<0.5	<0.02
RS-504 0140-0145	<5		<0.001		<0.5	<0.02
RS-504 0145-0150	<5		<0.001		<0.5	<0.02
RS-504 0150-0155	<5		<0.001		<0.5	<0.02
RS-504 0155-0160	<5		<0.001		<0.5	<0.02
RS-504 0160-0165	<5		<0.001		<0.5	<0.02
RS-504 0165-0170	<5		<0.001		<0.5	<0.02
RS-504 0170-0175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0175-0180	<5		<0.001		<0.5	<0.02
RS-504 0180-0185	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0185-0190	<5		<0.001		<0.5	<0.02
RS-504 0190-0195	<5		<0.001		<0.5	<0.02
RS-504 0195-0200	<5		<0.001		<0.5	<0.02
RS-504 0200-0205	<5		<0.001		<0.5	<0.02
RS-504 0205-0210	<5		<0.001		<0.5	<0.02
RS-504 0210-0215	<5		<0.001		<0.5	<0.02
RS-504 0215-0220	<5		<0.001		<0.5	<0.02
RS-504 0220-0225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0225-0230	<5		<0.001		<0.5	<0.02
RS-504 0230-0235	<5		<0.001		<0.5	<0.02
RS-504 0235-0240	<5		<0.001		<0.5	<0.02
RS-504 0240-0245	<5		<0.001		<0.5	<0.02
RS-504 0245-0250	<5		<0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0250-0255	<5		<0.001		<0.5	<0.02
RS-504 0255-0260	<5		<0.001		<0.5	<0.02
RS-504 0260-0265	<5		<0.001		<0.5	<0.02
RS-504 0265-0270	<5		<0.001		<0.5	<0.02
RS-504 0270-0275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0275-0280	<5		<0.001		<0.5	<0.02
RS-504 0280-0285	<5		<0.001		<0.5	<0.02
RS-504 0285-0290	<5		<0.001		<0.5	<0.02
RS-504 0290-0295	<5		<0.001		<0.5	<0.02
RS-504 0295-0300	<5		<0.001		<0.5	<0.02
RS-504 0300-0305	<5		<0.001		<0.5	<0.02
RS-504 0305-0310	<5		<0.001		<0.5	<0.02
RS-504 0310-0315	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0315-0320	<5		<0.001		<0.5	<0.02
RS-504 0320-0325	<5		<0.001		<0.5	<0.02
RS-504 0325-0330	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0330-0335	<5		<0.001		<0.5	<0.02
RS-504 0335-0340	<5		<0.001		<0.5	<0.02
RS-504 0340-0345	<5		<0.001		<0.5	<0.02
RS-504 0345-0350	<5		<0.001		<0.5	<0.02
RS-504 0350-0355	<5		<0.001		<0.5	<0.02
RS-504 0355-0360	<5		<0.001		<0.5	<0.02
RS-504 0360-0365	<5		<0.001		<0.5	<0.02
RS-504 0365-0370	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0370-0375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0375-0380	<5		<0.001		<0.5	<0.02
RS-504 0380-0385	<5		<0.001		<0.5	<0.02
RS-504 0385-0390	<5		<0.001		<0.5	<0.02
RS-504 0390-0395	<5		<0.001		<0.5	<0.02
RS-504 0395-0400	<5		<0.001		<0.5	<0.02
RS-504 0400-0405	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0405-0410	<5		<0.001		<0.5	<0.02
RS-504 0410-0415	<5		<0.001		<0.5	<0.02
RS-504 0415-0420	<5		<0.001		<0.5	<0.02
RS-504 0420-0425	<5		<0.001		<0.5	<0.02
RS-504 0425-0430	<5		<0.001		<0.5	<0.02
RS-504 0430-0435	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0435-0440	<5		<0.001		<0.5	<0.02
RS-504 0440-0445	<5		<0.001		<0.5	<0.02
RS-504 0445-0450	<5		<0.001		<0.5	<0.02
RS-504 0450-0455	<5		<0.001		<0.5	<0.02
RS-504 0455-0460	<5		<0.001		<0.5	<0.02
RS-504 0460-0465	<5		<0.001		<0.5	<0.02
RS-504 0465-0470	<5		<0.001		<0.5	<0.02
RS-504 0470-0475	<5		<0.001		<0.5	<0.02
RS-504 0475-0480	<5		<0.001		<0.5	<0.02
RS-504 0480-0485	<5		<0.001		<0.5	<0.02
RS-504 0485-0490	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0490-0495	<5		<0.001		<0.5	<0.02
RS-504 0495-0500	<5		<0.001		<0.5	<0.02

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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0500-0505	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0505-0510	<5		<0.001		<0.5	<0.02
RS-504 0510-0515	<5		<0.001		<0.5	<0.02
RS-504 0515-0520	<5		<0.001		<0.5	<0.02
RS-504 0520-0525	<5		<0.001		<0.5	<0.02
RS-504 0525-0530	<5		<0.001		<0.5	<0.02
RS-504 0530-0535	<5		<0.001		<0.5	<0.02
RS-504 0535-0540	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0540-0545	<5		<0.001		<0.5	<0.02
RS-504 0545-0550	<5		<0.001		<0.5	<0.02
RS-504 0550-0555	<5		<0.001		<0.5	<0.02
RS-504 0555-0560	<5		<0.001		<0.5	<0.02
RS-504 0560-0565	<5		<0.001		<0.5	<0.02
RS-504 0565-0570	<5		<0.001		<0.5	<0.02
RS-504 0570-0575	<5		<0.001		<0.5	<0.02
RS-504 0575-0580	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0580-0585	<5		<0.001		<0.5	<0.02
RS-504 0585-0590	<5		<0.001		<0.5	<0.02
RS-504 0590-0595	<5		<0.001		<0.5	<0.02
RS-504 0595-0600	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0600-0605	<5		<0.001		<0.5	<0.02
RS-504 0605-0610	<5		<0.001		<0.5	<0.02
RS-504 0610-0615	<5		<0.001		<0.5	<0.02
RS-504 0615-0620	<5		<0.001		<0.5	<0.02
RS-504 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0625-0630	<5		<0.001		<0.5	<0.02
RS-504 0630-0635	<5		<0.001		<0.5	<0.02
RS-504 0635-0640	<5		<0.001		<0.5	<0.02
RS-504 0640-0645	<5		<0.001		<0.5	<0.02
RS-504 0645-0650	<5		<0.001		<0.5	<0.02
RS-504 0650-0655	<5		<0.001		<0.5	<0.02
RS-504 0655-0660	<5		<0.001		<0.5	<0.02
RS-504 0660-0665	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0665-0670	<5		<0.001		<0.5	<0.02
RS-504 0670-0675	<5		<0.001		<0.5	<0.02
RS-504 0675-0680	<5		<0.001		<0.5	<0.02
RS-504 0680-0685	<5		<0.001		<0.5	<0.02
RS-504 0685-0690	<5		<0.001		<0.5	<0.02
RS-504 0690-0695	6	6	<0.001	<0.001	<0.5	<0.02
RS-504 0695-0700	<5		<0.001		<0.5	<0.02
RS-504 0700-0705	<5		<0.001		<0.5	<0.02
RS-504 0705-0710	<5		<0.001		<0.5	<0.02
RS-504 0710-0715	<5		<0.001		<0.5	<0.02
RS-504 0715-0720	<5		<0.001		<0.5	<0.02
RS-504 0720-0725	<5		<0.001		<0.5	<0.02
RS-504 0725-0730	<5		<0.001		<0.5	<0.02
RS-504 0730-0735	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0735-0740	<5		<0.001		0.8	0.02
RS-504 0740-0745	<5		<0.001		1.2	0.04
RS-504 0745-0750	<5		<0.001		0.9	0.03

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0750-0755	<5		<0.001		1.1	0.03
RS-504 0755-0760	<5		<0.001		1.0	0.03
RS-504 0760-0765	<5		<0.001		<0.5	<0.02
RS-504 0765-0770	<5		<0.001		<0.5	<0.02
RS-504 0770-0775	52		0.002		<0.5	<0.02
RS-504 0775-0780	48		0.001		<0.5	<0.02
RS-504 0780-0785	48	42	0.001	0.001	1.7	0.05
RS-504 0785-0790	36	34	0.001	<0.001	0.9	0.03
RS-504 0790-0795	52		0.002		0.7	0.02
RS-504 0795-0800	38		0.001		0.9	0.03
RS-504 0800-0805	64		0.002		1.8	0.05
RS-504 0805-0810	54		0.002		1.2	0.04
RS-504 0810-0815	26		<0.001		1.0	0.03
RS-504 0815-0820	16		<0.001		1.4	0.04
RS-504 0820-0825	18		<0.001		0.6	<0.02
RS-504 0825-0830	<5		<0.001		<0.5	<0.02
RS-504 0830-0835	<5		<0.001		<0.5	<0.02
RS-504 0835-0840	<5		<0.001		<0.5	<0.02
RS-504 0840-0845	<5		<0.001		1.6	0.05
RS-504 0845-0850	<5		<0.001		1.8	0.05
RS-504 0850-0855	<5		<0.001		1.8	0.05
RS-504 0855-0860	20		<0.001		2.0	0.06
RS-504 0860-0865	10		<0.001		1.8	0.05
RS-504 0865-0870	<5		<0.001		<0.5	<0.02
RS-504 0870-0875	<5	<5	<0.001	<0.001	0.6	<0.02

770 to 810 40'

392/8 = 49 ppb

40' 8.20 1.02 ppm

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0875-0880	26		<0.001		0.8	0.02
RS-504 0880-0885	34		<0.001		<0.5	<0.02
RS-504 0885-0890	10		<0.001		<0.5	<0.02
RS-504 0890-0895	10		<0.001		<0.5	<0.02
RS-504 0895-0900	6		<0.001		<0.5	<0.02
RS-504 0900-0905	8		<0.001		<0.5	<0.02
RS-504 0905-0910	12		<0.001		<0.5	<0.02
RS-504 0910-0915	6		<0.001		<0.5	<0.02
RS-504 0915-0920	18		<0.001		0.5	<0.02
RS-504 0920-0925	20		<0.001		<0.5	<0.02
RS-504 0925-0930	34		<0.001		<0.5	<0.02
RS-504 0930-0935	36		0.001		<0.5	<0.02
RS-504 0935-0940	12		<0.001		<0.5	<0.02
RS-504 0940-0945	12		<0.001		<0.5	<0.02
RS-504 0945-0950	6		<0.001		<0.5	<0.02
RS-504 0950-0955	18		<0.001		0.6	<0.02
RS-504 0955-0960	8		<0.001		<0.5	<0.02
RS-504 0960-0965	6		<0.001		<0.5	<0.02
RS-504 0965-0970	<5		<0.001		<0.5	<0.02
RS-504 0970-0975	8		<0.001		<0.5	<0.02
RS-504 0975-0980	16	20	<0.001	<0.001	0.6	<0.02
RS-504 0980-0985	10		<0.001		0.6	<0.02
RS-504 0985-0990	22		<0.001		0.8	0.02
RS-504 0990-0995	24		<0.001		0.9	0.03
RS-504 0995-1000	20		<0.001		0.8	0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1000-1005	16		<0.001		0.6	<0.02
RS-504 1005-1010	14	12	<0.001	<0.001	0.6	<0.02
RS-504 1010-1015	12		<0.001		0.8	0.02
RS-504 1015-1020	12		<0.001		0.7	0.02
RS-504 1020-1025	12		<0.001		0.7	0.02
RS-504 1025-1030	12		<0.001		0.7	0.02
RS-504 1030-1035	10		<0.001		0.7	0.02
RS-504 1035-1040	24		<0.001		0.9	0.03
RS-504 1040-1045	16		<0.001		0.7	0.02
RS-504 1045-1050	12		<0.001		0.9	0.03
RS-504 1050-1055	32	36	<0.001	0.001	0.9	0.03
RS-504 1055-1060	30	24	<0.001	<0.001	0.9	0.03
RS-504 1060-1065	24		<0.001		0.8	0.02
RS-504 1065-1070	58		0.002		1.1	0.03
RS-504 1070-1075	82		0.002		2.7	0.08
RS-504 1075-1080	54		0.002		0.6	<0.02
RS-504 1080-1085	12		<0.001		1.2	0.04
RS-504 1085-1090	24		<0.001		0.7	0.02
RS-504 1090-1095	10		<0.001		0.9	0.03
RS-504 1095-1100	6		<0.001		0.7	0.02
RS-504 1100-1105	12		<0.001		<0.5	<0.02
RS-504 1105-1110	6		<0.001		0.7	0.02
RS-504 1110-1115	10		<0.001		<0.5	<0.02
RS-504 1115-1120	<5	<5	<0.001	<0.001	1.5	0.04
RS-504 1120-1125	<5		<0.001		2.2	0.06

1055 to 1080 25' 1.2 ppm Ag

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1125-1130	<5		<0.001		1.7	0.05
RS-504 1130-1135	12		<0.001		1.7	0.05
RS-504 1135-1140	<5	<5	<0.001	<0.001	1.6	0.05
RS-504 1140-1145	<5		<0.001		0.8	0.02
RS-504 1145-1150	<5		<0.001		1.2	0.04
RS-504 1150-1155	<5		<0.001		0.9	0.03
RS-504 1155-1160	<5	<5	<0.001	<0.001	0.7	0.02
RS-504 1160-1165	<5		<0.001		<0.5	<0.02
RS-504 1165-1170	<5		<0.001		0.7	0.02
RS-504 1170-1175	<5		<0.001		0.8	0.02
RS-504 1175-1180	<5		<0.001		0.8	0.02
RS-504 1180-1185	<5		<0.001		<0.5	<0.02
RS-504 1185-1190	<5		<0.001		<0.5	<0.02
RS-504 1190-1195	<5		<0.001		<0.5	<0.02
RS-504 1195-1200	<5		<0.001		<0.5	<0.02
RS-504 1200-1205	<5		<0.001		<0.5	<0.02
RS-504 1205-1210	<5		<0.001		<0.5	<0.02
RS-504 1210-1215	<5		<0.001		<0.5	<0.02
RS-504 1215-1220	<5		<0.001		<0.5	<0.02
RS-504 1220-1225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 1225-1230	<5		<0.001		<0.5	<0.02
RS-504 1230-1235	<5		<0.001		<0.5	<0.02
RS-504 1235-1240	<5		<0.001		<0.5	<0.02
RS-504 1240-1245	<5		<0.001		<0.5	<0.02
RS-504 1245-1250	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1250-1255	<5		<0.001		<0.5	<0.02
RS-504 1255-1260	<5		<0.001		<0.5	<0.02
RS-504 1260-1265	<5		<0.001		<0.5	<0.02
RS-504 1265-1270	<5		<0.001		<0.5	<0.02
RS-504 1270-1275	<5		<0.001		<0.5	<0.02
RS-504 1275-1280	<5		<0.001		0.7	0.02
RS-504 1280-1285	<5		<0.001		<0.5	<0.02
RS-504 1285-1290	<5		<0.001		0.6	<0.02
RS-504 1290-1295	<5		<0.001		<0.5	<0.02
RS-504 1295-1300	<5		<0.001		0.6	<0.02
RS-504 1300-1305	<5		<0.001		1.1	0.03
RS-504 1305-1310	<5		<0.001		0.8	0.02
RS-504 1310-1315	<5		<0.001		0.6	<0.02
RS-504 1315-1320	<5		<0.001		<0.5	<0.02
RS-504 1320-1325	<5		<0.001		<0.5	<0.02
RS-504 1325-1330	<5	<5	<0.001	<0.001	1.1	0.03
RS-504 1330-1335	<5		<0.001		0.6	<0.02
RS-504 1335-1340	<5		<0.001		0.6	<0.02
RS-504 1340-1345	<5		<0.001		<0.5	<0.02
RS-504 1345-1350	8	10	<0.001	<0.001	0.8	0.02
RS-504 1350-1355	<5		<0.001		<0.5	<0.02
RS-504 1355-1360	<5		<0.001		1.1	0.03
RS-504 1360-1365	<5		<0.001		1.4	0.04
RS-504 1365-1370	16		<0.001		1.1	0.03
RS-504 1370-1375	16		<0.001		1.1	0.03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1375-1380	12		<0.001		1.0	0.03
RS-504 1380-1385	14		<0.001		1.3	0.04
RS-504 1385-1390	12		<0.001		1.5	0.04
RS-504 1390-1395	6		<0.001		1.2	0.04
RS-504 1395-1400	178		0.005		1.6	0.05
RS-504 1400-1405	8		<0.001		1.1	0.03
RS-504 1405-1410	14		<0.001		1.0	0.03
RS-504 1410-1415	<5		<0.001		1.0	0.03
RS-504 1415-1420	<5		<0.001		0.8	0.02
RS-504 1420-1425	<5		<0.001		1.5	0.04
RS-504 1425-1430	<5	<5	<0.001	<0.001	1.8	0.05
RS-504 1430-1435	6		<0.001		1.1	0.03
RS-504 1435-1440	12		<0.001		1.7	0.05
RS-504 1440-1445	12		<0.001		1.2	0.04
RS-504 1445-1450	<5		<0.001		1.6	0.05
RS-504 1450-1455	<5		<0.001		1.2	0.04
RS-504 1455-1460	<5		<0.001		1.3	0.04
RS-504 1460-1465	<5		<0.001		1.1	0.03
RS-504 1465-1470	<5		<0.001		1.2	0.04
RS-504 1470-1475	<5	<5	<0.001	<0.001	1.0	0.03
RS-504 1475-1480	<5		<0.001		0.9	0.03
RS-504 1480-1485	<5		<0.001		1.4	0.04
RS-504 1485-1490	<5		<0.001		1.6	0.05
RS-504 1490-1495	<5		<0.001		1.9	0.06
RS-504 1495-1500	6		<0.001		1.8	0.05

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1500-1505	6		<0.001		1.7	0.05
RS-504 1505-1510	<5		<0.001		1.2	0.04
RS-504 1510-1515	<5		<0.001		1.0	0.03
RS-504 1515-1520	<5		<0.001		1.0	0.03
RS-504 1520-1525	<5		<0.001		0.9	0.03
RS-504 1525-1530	<5		<0.001		0.8	0.02
RS-504 1530-1535	<5		<0.001		1.4	0.04
RS-504 1535-1540	<5		<0.001		0.7	0.02
RS-504 1540-1545	<5		<0.001		0.7	0.02
RS-504 1545-1550 10'	<5		<0.001		0.7	0.02
RS-504 1550-1555	32	32	<0.001	<0.001	0.6	<0.02
RS-504 1555-1560 10 26/2 = 13	594		0.017	10' 36.8 ppm Ag	26.9	0.78
RS-504 1560-1565	432	434	0.013	0.013	46.7	1.36
RS-504 1565-1570	26		<0.001		1.7	0.05
RS-504 1570-1575	32		<0.001		1.8	0.05
RS-504 1575-1580	148		0.004		1.5	0.04
RS-504 1580-1585	80		0.002		1.5	0.04
RS-504 1585-1590	54		0.002		1.3	0.04
RS-504 1590-1595	88		0.003		1.3	0.04
RS-504 1595-1600	82	74	0.002	0.002	2.1	0.06
RS-504 1600-1605	82		0.002		2.7	0.08
RS-504 1605-1610	54		0.002		3.3	0.10
RS-504 1610-1615	92		0.003		4.8	0.14
RS-504 1615-1620	128	120	0.004	0.004	2.9	0.08
RS-504 1620-1625	84		0.002		2.4	0.07

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1625-1630	98		0.003		5.8	0.17
RS-504 1630-1635	88		0.003		2.9	0.08
RS-504 1635-1640	70		0.002		1.9	0.06
RS-504 1640-1645	66		0.002		2.5	0.07
RS-504 1645-1650 5'	874	812	0.025	0.024	3.5	0.10
RS-504 1650-1655	140		0.004		3.5	0.10
RS-504 1655-1660	70		0.002		2.2	0.06
RS-504 1660-1665	96		0.003		2.4	0.07
RS-504 1665-1670	122		0.004		1.5	0.04
RS-504 1670-1675	54		0.002		1.3	0.04
RS-504 1675-1680 1555 to 1700	88		0.003 137.6/29 = 4.7		3.0	0.09
RS-504 1680-1685	88		0.003		1.7	0.05
RS-504 1685-1690 4234/29 = 146 ppb	152		0.004		0.8	0.02
RS-504 1690-1695	172		0.005		1.4	0.04
RS-504 1695-1700	80		0.002		2.2	0.06
RS-504 1700-1705	18		<0.001		<0.5	<0.02
RS-504 1705-1710	14		<0.001		<0.5	<0.02
RS-504 1710-1715	18		<0.001		<0.5	<0.02
RS-504 1715-1720	<5		<0.001		<0.5	<0.02
RS-504 1720-1725	8	10	<0.001	<0.001	<0.5	<0.02
RS-504 1725-1730	<5		<0.001		<0.5	<0.02
RS-504 1730-1735	<5		<0.001		<0.5	<0.02
RS-504 1735-1740	<5		<0.001		<0.5	<0.02
RS-504 1740-1745	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

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: RC-504 RECEIVED : 31 JUL 2000

No. SAMPLES : 349 REPORTED : 14 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.

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0000-0005	<5		<0.001		<0.5	<0.02
RS-504 0005-0010	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0010-0015	<5		<0.001		<0.5	<0.02
RS-504 0015-0020	16		<0.001		<0.5	<0.02
RS-504 0020-0025	7		<0.001		<0.5	<0.02
RS-504 0025-0030	8		<0.001		<0.5	<0.02
RS-504 0030-0035	9		<0.001		<0.5	<0.02
RS-504 0035-0040	6		<0.001		<0.5	<0.02
RS-504 0040-0045	5		<0.001		<0.5	<0.02
RS-504 0045-0050	<5		<0.001		<0.5	<0.02
RS-504 0050-0055	5		<0.001		<0.5	<0.02
RS-504 0055-0060	<5		<0.001		<0.5	<0.02
RS-504 0060-0065	<5		<0.001		<0.5	<0.02
RS-504 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0070-0075	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0075-0080	<5		<0.001		<0.5	<0.02
RS-504 0080-0085	<5		<0.001		<0.5	<0.02
RS-504 0085-0090	<5		<0.001		<0.5	<0.02
RS-504 0090-0095	<5		<0.001		<0.5	<0.02
RS-504 0095-0100	<5		<0.001		<0.5	<0.02
RS-504 0100-0105	<5		<0.001		<0.5	<0.02
RS-504 0105-0110	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0110-0115	<5		<0.001		<0.5	<0.02
RS-504 0115-0120	<5		<0.001		<0.5	<0.02
RS-504 0120-0125	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0125-0130	<5		<0.001		<0.5	<0.02
RS-504 0130-0135	<5		<0.001		<0.5	<0.02
RS-504 0135-0140	<5		<0.001		<0.5	<0.02
RS-504 0140-0145	<5		<0.001		<0.5	<0.02
RS-504 0145-0150	<5		<0.001		<0.5	<0.02
RS-504 0150-0155	<5		<0.001		<0.5	<0.02
RS-504 0155-0160	<5		<0.001		<0.5	<0.02
RS-504 0160-0165	<5		<0.001		<0.5	<0.02
RS-504 0165-0170	<5		<0.001		<0.5	<0.02
RS-504 0170-0175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0175-0180	<5		<0.001		<0.5	<0.02
RS-504 0180-0185	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0185-0190	<5		<0.001		<0.5	<0.02
RS-504 0190-0195	<5		<0.001		<0.5	<0.02
RS-504 0195-0200	<5		<0.001		<0.5	<0.02
RS-504 0200-0205	<5		<0.001		<0.5	<0.02
RS-504 0205-0210	<5		<0.001		<0.5	<0.02
RS-504 0210-0215	<5		<0.001		<0.5	<0.02
RS-504 0215-0220	<5		<0.001		<0.5	<0.02
RS-504 0220-0225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0225-0230	<5		<0.001		<0.5	<0.02
RS-504 0230-0235	<5		<0.001		<0.5	<0.02
RS-504 0235-0240	<5		<0.001		<0.5	<0.02
RS-504 0240-0245	<5		<0.001		<0.5	<0.02
RS-504 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0250-0255	<5		<0.001		<0.5	<0.02
RS-504 0255-0260	<5		<0.001		<0.5	<0.02
RS-504 0260-0265	<5		<0.001		<0.5	<0.02
RS-504 0265-0270	<5		<0.001		<0.5	<0.02
RS-504 0270-0275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0275-0280	<5		<0.001		<0.5	<0.02
RS-504 0280-0285	<5		<0.001		<0.5	<0.02
RS-504 0285-0290	<5		<0.001		<0.5	<0.02
RS-504 0290-0295	<5		<0.001		<0.5	<0.02
RS-504 0295-0300	<5		<0.001		<0.5	<0.02
RS-504 0300-0305	<5		<0.001		<0.5	<0.02
RS-504 0305-0310	<5		<0.001		<0.5	<0.02
RS-504 0310-0315	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0315-0320	<5		<0.001		<0.5	<0.02
RS-504 0320-0325	<5		<0.001		<0.5	<0.02
RS-504 0325-0330	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0330-0335	<5		<0.001		<0.5	<0.02
RS-504 0335-0340	<5		<0.001		<0.5	<0.02
RS-504 0340-0345	<5		<0.001		<0.5	<0.02
RS-504 0345-0350	<5		<0.001		<0.5	<0.02
RS-504 0350-0355	<5		<0.001		<0.5	<0.02
RS-504 0355-0360	<5		<0.001		<0.5	<0.02
RS-504 0360-0365	<5		<0.001		<0.5	<0.02
RS-504 0365-0370	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0370-0375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
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REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0375-0380	<5		<0.001		<0.5	<0.02
RS-504 0380-0385	<5		<0.001		<0.5	<0.02
RS-504 0385-0390	<5		<0.001		<0.5	<0.02
RS-504 0390-0395	<5		<0.001		<0.5	<0.02
RS-504 0395-0400	<5		<0.001		<0.5	<0.02
RS-504 0400-0405	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0405-0410	<5		<0.001		<0.5	<0.02
RS-504 0410-0415	<5		<0.001		<0.5	<0.02
RS-504 0415-0420	<5		<0.001		<0.5	<0.02
RS-504 0420-0425	<5		<0.001		<0.5	<0.02
RS-504 0425-0430	<5		<0.001		<0.5	<0.02
RS-504 0430-0435	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0435-0440	<5		<0.001		<0.5	<0.02
RS-504 0440-0445	<5		<0.001		<0.5	<0.02
RS-504 0445-0450	<5		<0.001		<0.5	<0.02
RS-504 0450-0455	<5		<0.001		<0.5	<0.02
RS-504 0455-0460	<5		<0.001		<0.5	<0.02
RS-504 0460-0465	<5		<0.001		<0.5	<0.02
RS-504 0465-0470	<5		<0.001		<0.5	<0.02
RS-504 0470-0475	<5		<0.001		<0.5	<0.02
RS-504 0475-0480	<5		<0.001		<0.5	<0.02
RS-504 0480-0485	<5		<0.001		<0.5	<0.02
RS-504 0485-0490	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0490-0495	<5		<0.001		<0.5	<0.02
RS-504 0495-0500	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0500-0505	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0505-0510	<5		<0.001		<0.5	<0.02
RS-504 0510-0515	<5		<0.001		<0.5	<0.02
RS-504 0515-0520	<5		<0.001		<0.5	<0.02
RS-504 0520-0525	<5		<0.001		<0.5	<0.02
RS-504 0525-0530	<5		<0.001		<0.5	<0.02
RS-504 0530-0535	<5		<0.001		<0.5	<0.02
RS-504 0535-0540	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0540-0545	<5		<0.001		<0.5	<0.02
RS-504 0545-0550	<5		<0.001		<0.5	<0.02
RS-504 0550-0555	<5		<0.001		<0.5	<0.02
RS-504 0555-0560	<5		<0.001		<0.5	<0.02
RS-504 0560-0565	<5		<0.001		<0.5	<0.02
RS-504 0565-0570	<5		<0.001		<0.5	<0.02
RS-504 0570-0575	<5		<0.001		<0.5	<0.02
RS-504 0575-0580	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0580-0585	<5		<0.001		<0.5	<0.02
RS-504 0585-0590	<5		<0.001		<0.5	<0.02
RS-504 0590-0595	<5		<0.001		<0.5	<0.02
RS-504 0595-0600	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0600-0605	<5		<0.001		<0.5	<0.02
RS-504 0605-0610	<5		<0.001		<0.5	<0.02
RS-504 0610-0615	<5		<0.001		<0.5	<0.02
RS-504 0615-0620	<5		<0.001		<0.5	<0.02
RS-504 0620-0625	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0625-0630	<5		<0.001		<0.5	<0.02
RS-504 0630-0635	<5		<0.001		<0.5	<0.02
RS-504 0635-0640	<5		<0.001		<0.5	<0.02
RS-504 0640-0645	<5		<0.001		<0.5	<0.02
RS-504 0645-0650	<5		<0.001		<0.5	<0.02
RS-504 0650-0655	<5		<0.001		<0.5	<0.02
RS-504 0655-0660	<5		<0.001		<0.5	<0.02
RS-504 0660-0665	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0665-0670	<5		<0.001		<0.5	<0.02
RS-504 0670-0675	<5		<0.001		<0.5	<0.02
RS-504 0675-0680	<5		<0.001		<0.5	<0.02
RS-504 0680-0685	<5		<0.001		<0.5	<0.02
RS-504 0685-0690	<5		<0.001		<0.5	<0.02
RS-504 0690-0695	6	6	<0.001	<0.001	<0.5	<0.02
RS-504 0695-0700	<5		<0.001		<0.5	<0.02
RS-504 0700-0705	<5		<0.001		<0.5	<0.02
RS-504 0705-0710	<5		<0.001		<0.5	<0.02
RS-504 0710-0715	<5		<0.001		<0.5	<0.02
RS-504 0715-0720	<5		<0.001		<0.5	<0.02
RS-504 0720-0725	<5		<0.001		<0.5	<0.02
RS-504 0725-0730	<5		<0.001		<0.5	<0.02
RS-504 0730-0735	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 0735-0740	<5		<0.001		0.8	0.02
RS-504 0740-0745	<5		<0.001		1.2	0.04
RS-504 0745-0750	<5		<0.001		0.9	0.03

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AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0750-0755	<5		<0.001		1.1	0.03
RS-504 0755-0760	<5		<0.001		1.0	0.03
RS-504 0760-0765	<5		<0.001		<0.5	<0.02
RS-504 0765-0770	<5		<0.001		<0.5	<0.02
RS-504 0770-0775	52		0.002		<0.5	<0.02
RS-504 0775-0780	48		0.001		<0.5	<0.02
RS-504 0780-0785	48	42	0.001	0.001	1.7	0.05
RS-504 0785-0790	36	34	0.001	<0.001	0.9	0.03
RS-504 0790-0795	52		0.002		0.7	0.02
RS-504 0795-0800	38		0.001		0.9	0.03
RS-504 0800-0805	64		0.002		1.8	0.05
RS-504 0805-0810	54		0.002		1.2	0.04
RS-504 0810-0815	26		<0.001		1.0	0.03
RS-504 0815-0820	16		<0.001		1.4	0.04
RS-504 0820-0825	18		<0.001		0.6	<0.02
RS-504 0825-0830	<5		<0.001		<0.5	<0.02
RS-504 0830-0835	<5		<0.001		<0.5	<0.02
RS-504 0835-0840	<5		<0.001		<0.5	<0.02
RS-504 0840-0845	<5		<0.001		1.6	0.05
RS-504 0845-0850	<5		<0.001		1.8	0.05
RS-504 0850-0855	<5		<0.001		1.8	0.05
RS-504 0855-0860	20		<0.001		2.0	0.06
RS-504 0860-0865	10		<0.001		1.8	0.05
RS-504 0865-0870	<5		<0.001		<0.5	<0.02
RS-504 0870-0875	<5	<5	<0.001	<0.001	0.6	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 0875-0880	26		<0.001		0.8	0.02
RS-504 0880-0885	34		<0.001		<0.5	<0.02
RS-504 0885-0890	10		<0.001		<0.5	<0.02
RS-504 0890-0895	10		<0.001		<0.5	<0.02
RS-504 0895-0900	6		<0.001		<0.5	<0.02
RS-504 0900-0905	8		<0.001		<0.5	<0.02
RS-504 0905-0910	12		<0.001		<0.5	<0.02
RS-504 0910-0915	6		<0.001		<0.5	<0.02
RS-504 0915-0920	18		<0.001		0.5	<0.02
RS-504 0920-0925	20		<0.001		<0.5	<0.02
RS-504 0925-0930	34		<0.001		<0.5	<0.02
RS-504 0930-0935	36		0.001		<0.5	<0.02
RS-504 0935-0940	12		<0.001		<0.5	<0.02
RS-504 0940-0945	12		<0.001		<0.5	<0.02
RS-504 0945-0950	6		<0.001		<0.5	<0.02
RS-504 0950-0955	18		<0.001		0.6	<0.02
RS-504 0955-0960	8		<0.001		<0.5	<0.02
RS-504 0960-0965	6		<0.001		<0.5	<0.02
RS-504 0965-0970	<5		<0.001		<0.5	<0.02
RS-504 0970-0975	8		<0.001		<0.5	<0.02
RS-504 0975-0980	16	20	<0.001	<0.001	0.6	<0.02
RS-504 0980-0985	10		<0.001		0.6	<0.02
RS-504 0985-0990	22		<0.001		0.8	0.02
RS-504 0990-0995	24		<0.001		0.9	0.03
RS-504 0995-1000	20		<0.001		0.8	0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1000-1005	16		<0.001		0.6	<0.02
RS-504 1005-1010	14	12	<0.001	<0.001	0.6	<0.02
RS-504 1010-1015	12		<0.001		0.8	0.02
RS-504 1015-1020	12		<0.001		0.7	0.02
RS-504 1020-1025	12		<0.001		0.7	0.02
RS-504 1025-1030	12		<0.001		0.7	0.02
RS-504 1030-1035	10		<0.001		0.7	0.02
RS-504 1035-1040	24		<0.001		0.9	0.03
RS-504 1040-1045	16		<0.001		0.7	0.02
RS-504 1045-1050	12		<0.001		0.9	0.03
RS-504 1050-1055	32	36	<0.001	0.001	0.9	0.03
RS-504 1055-1060	30	24	<0.001	<0.001	0.9	0.03
RS-504 1060-1065	24		<0.001		0.8	0.02
RS-504 1065-1070	58		0.002		1.1	0.03
RS-504 1070-1075	82		0.002		2.7	0.08
RS-504 1075-1080	54		0.002		0.6	<0.02
RS-504 1080-1085	12		<0.001		1.2	0.04
RS-504 1085-1090	24		<0.001		0.7	0.02
RS-504 1090-1095	10		<0.001		0.9	0.03
RS-504 1095-1100	6		<0.001		0.7	0.02
RS-504 1100-1105	12		<0.001		<0.5	<0.02
RS-504 1105-1110	6		<0.001		0.7	0.02
RS-504 1110-1115	10		<0.001		<0.5	<0.02
RS-504 1115-1120	<5	<5	<0.001	<0.001	1.5	0.04
RS-504 1120-1125	<5		<0.001		2.2	0.06

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1125-1130	<5		<0.001		1.7	0.05
RS-504 1130-1135	12		<0.001		1.7	0.05
RS-504 1135-1140	<5	<5	<0.001	<0.001	1.6	0.05
RS-504 1140-1145	<5		<0.001		0.8	0.02
RS-504 1145-1150	<5		<0.001		1.2	0.04
RS-504 1150-1155	<5		<0.001		0.9	0.03
RS-504 1155-1160	<5	<5	<0.001	<0.001	0.7	0.02
RS-504 1160-1165	<5		<0.001		<0.5	<0.02
RS-504 1165-1170	<5		<0.001		0.7	0.02
RS-504 1170-1175	<5		<0.001		0.8	0.02
RS-504 1175-1180	<5		<0.001		0.8	0.02
RS-504 1180-1185	<5		<0.001		<0.5	<0.02
RS-504 1185-1190	<5		<0.001		<0.5	<0.02
RS-504 1190-1195	<5		<0.001		<0.5	<0.02
RS-504 1195-1200	<5		<0.001		<0.5	<0.02
RS-504 1200-1205	<5		<0.001		<0.5	<0.02
RS-504 1205-1210	<5		<0.001		<0.5	<0.02
RS-504 1210-1215	<5		<0.001		<0.5	<0.02
RS-504 1215-1220	<5		<0.001		<0.5	<0.02
RS-504 1220-1225	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-504 1225-1230	<5		<0.001		<0.5	<0.02
RS-504 1230-1235	<5		<0.001		<0.5	<0.02
RS-504 1235-1240	<5		<0.001		<0.5	<0.02
RS-504 1240-1245	<5		<0.001		<0.5	<0.02
RS-504 1245-1250	<5	<5	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1250-1255	<5		<0.001		<0.5	<0.02
RS-504 1255-1260	<5		<0.001		<0.5	<0.02
RS-504 1260-1265	<5		<0.001		<0.5	<0.02
RS-504 1265-1270	<5		<0.001		<0.5	<0.02
RS-504 1270-1275	<5		<0.001		<0.5	<0.02
RS-504 1275-1280	<5		<0.001		0.7	0.02
RS-504 1280-1285	<5		<0.001		<0.5	<0.02
RS-504 1285-1290	<5		<0.001		0.6	<0.02
RS-504 1290-1295	<5		<0.001		<0.5	<0.02
RS-504 1295-1300	<5		<0.001		0.6	<0.02
RS-504 1300-1305	<5		<0.001		1.1	0.03
RS-504 1305-1310	<5		<0.001		0.8	0.02
RS-504 1310-1315	<5		<0.001		0.6	<0.02
RS-504 1315-1320	<5		<0.001		<0.5	<0.02
RS-504 1320-1325	<5		<0.001		<0.5	<0.02
RS-504 1325-1330	<5	<5	<0.001	<0.001	1.1	0.03
RS-504 1330-1335	<5		<0.001		0.6	<0.02
RS-504 1335-1340	<5		<0.001		0.6	<0.02
RS-504 1340-1345	<5		<0.001		<0.5	<0.02
RS-504 1345-1350	8	10	<0.001	<0.001	0.8	0.02
RS-504 1350-1355	<5		<0.001		<0.5	<0.02
RS-504 1355-1360	<5		<0.001		1.1	0.03
RS-504 1360-1365	<5		<0.001		1.4	0.04
RS-504 1365-1370	16		<0.001		1.1	0.03
RS-504 1370-1375	16		<0.001		1.1	0.03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1375-1380	12		<0.001		1.0	0.03
RS-504 1380-1385	14		<0.001		1.3	0.04
RS-504 1385-1390	12		<0.001		1.5	0.04
RS-504 1390-1395	6		<0.001		1.2	0.04
RS-504 1395-1400	178		0.005		1.6	0.05
RS-504 1400-1405	8		<0.001		1.1	0.03
RS-504 1405-1410	14		<0.001		1.0	0.03
RS-504 1410-1415	<5		<0.001		1.0	0.03
RS-504 1415-1420	<5		<0.001		0.8	0.02
RS-504 1420-1425	<5		<0.001		1.5	0.04
RS-504 1425-1430	<5	<5	<0.001	<0.001	1.8	0.05
RS-504 1430-1435	6		<0.001		1.1	0.03
RS-504 1435-1440	12		<0.001		1.7	0.05
RS-504 1440-1445	12		<0.001		1.2	0.04
RS-504 1445-1450	<5		<0.001		1.6	0.05
RS-504 1450-1455	<5		<0.001		1.2	0.04
RS-504 1455-1460	<5		<0.001		1.3	0.04
RS-504 1460-1465	<5		<0.001		1.1	0.03
RS-504 1465-1470	<5		<0.001		1.2	0.04
RS-504 1470-1475	<5	<5	<0.001	<0.001	1.0	0.03
RS-504 1475-1480	<5		<0.001		0.9	0.03
RS-504 1480-1485	<5		<0.001		1.4	0.04
RS-504 1485-1490	<5		<0.001		1.6	0.05
RS-504 1490-1495	<5		<0.001		1.9	0.06
RS-504 1495-1500	6		<0.001		1.8	0.05

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CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1500-1505	6		<0.001		1.7	0.05
RS-504 1505-1510	<5		<0.001		1.2	0.04
RS-504 1510-1515	<5		<0.001		1.0	0.03
RS-504 1515-1520	<5		<0.001		1.0	0.03
RS-504 1520-1525	<5		<0.001		0.9	0.03
RS-504 1525-1530	<5		<0.001		0.8	0.02
RS-504 1530-1535	<5		<0.001		1.4	0.04
RS-504 1535-1540	<5		<0.001		0.7	0.02
RS-504 1540-1545	<5		<0.001		0.7	0.02
RS-504 1545-1550	<5		<0.001		0.7	0.02
RS-504 1550-1555	32	32	<0.001	<0.001	0.6	<0.02
RS-504 1555-1560	594		0.017		26.9	0.78
RS-504 1560-1565	432	434	0.013	0.013	46.7	1.36
RS-504 1565-1570	26		<0.001		1.7	0.05
RS-504 1570-1575	32		<0.001		1.8	0.05
RS-504 1575-1580	148		0.004		1.5	0.04
RS-504 1580-1585	80		0.002		1.5	0.04
RS-504 1585-1590	54		0.002		1.3	0.04
RS-504 1590-1595	88		0.003		1.3	0.04
RS-504 1595-1600	82	74	0.002	0.002	2.1	0.06
RS-504 1600-1605	82		0.002		2.7	0.08
RS-504 1605-1610	54		0.002		3.3	0.10
RS-504 1610-1615	92		0.003		4.8	0.14
RS-504 1615-1620	128	120	0.004	0.004	2.9	0.08
RS-504 1620-1625	84		0.002		2.4	0.07

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP058058

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RC-504

REPORTED : 14 AUG 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-504 1625-1630	98		0.003		5.8	0.17
RS-504 1630-1635	88		0.003		2.9	0.08
RS-504 1635-1640	70		0.002		1.9	0.06
RS-504 1640-1645	66		0.002		2.5	0.07
RS-504 1645-1650	874	812	0.025	0.024	3.5	0.10
RS-504 1650-1655	140		0.004		3.5	0.10
RS-504 1655-1660	70		0.002		2.2	0.06
RS-504 1660-1665	96		0.003		2.4	0.07
RS-504 1665-1670	122		0.004		1.5	0.04
RS-504 1670-1675	54		0.002		1.3	0.04
RS-504 1675-1680	88		0.003		3.0	0.09
RS-504 1680-1685	88		0.003		1.7	0.05
RS-504 1685-1690	152		0.004		0.8	0.02
RS-504 1690-1695	172		0.005		1.4	0.04
RS-504 1695-1700	80		0.002		2.2	0.06
RS-504 1700-1705	18		<0.001		<0.5	<0.02
RS-504 1705-1710	14		<0.001		<0.5	<0.02
RS-504 1710-1715	18		<0.001		<0.5	<0.02
RS-504 1715-1720	<5		<0.001		<0.5	<0.02
RS-504 1720-1725	8	10	<0.001	<0.001	<0.5	<0.02
RS-504 1725-1730	<5		<0.001		<0.5	<0.02
RS-504 1730-1735	<5		<0.001		<0.5	<0.02
RS-504 1735-1740	<5		<0.001		<0.5	<0.02
RS-504 1740-1745	<5		<0.001		<0.5	<0.02

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP68058
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-504 0000-0020	91	0.76	36.5	6.2	3	100.20	0.08	0.19	0.3	0.70	4.5	6.26	1.83	3.1	102	0.24	54.2	0.09	627	1.44	0.049	4.7	0.012	30.9	0.09	1.21	2.2	0.3	24.1	< .02	16.6	0.004	0.5	2.5	7	0.3	83.2
RS-504 0020-0040	117	0.54	17.4	7.8	1	78.00	0.26	0.12	0.55	0.40	4.9	5.66	1.36	2.2	68	0.14	60.9	0.03	1013	1.23	0.045	4.2	0.01	16.77	0.03	0.7	1.9	0.4	17.4	< .02	17.4	0.001	0.33	3	5	< .2	87.7
RS-504 0040-0060	81	0.47	0.6	2.6	1	19.60	0.08	0.14	0.42	0.30	4.4	5.54	1.44	2.3	17	0.12	63.7	0.03	890	0.87	0.038	4.5	0.016	11.35	< .01	0.14	1.6	0.3	17.6	< .02	16.9	0.001	0.06	3	3	< .2	135.1
RS-504 0060-0080	82	0.41	< .1	0.9	< 1	36.00	0.1	0.18	0.17	0.20	2.2	2.38	1.21	2.2	< 5	0.1	61.7	0.05	1533	0.34	0.026	1.2	0.015	11.1	0.01	0.07	1.9	0.2	18.9	< .02	17.2	< .001	0.04	3.3	< 2	< .2	89.4
RS-504 0080-0100	60	0.43	0.4	2.3	1	20.60	0.05	0.18	0.1	0.10	2.3	3.75	1.12	1.9	8	0.1	56.5	0.05	237	1.15	0.035	1.8	0.011	10.44	< .01	0.22	1.4	0.1	21.9	< .02	17	0.005	0.03	2.8	< 2	0.8	67.8
RS-504 0100-0120	60	0.47	1.7	2	2	19.70	0.04	0.11	0.27	0.20	2.9	4.38	1.39	2.5	23	0.1	59.1	0.03	261	2.43	0.028	3	0.011	12.12	< .01	0.45	1.5	0.2	15.9	< .02	17.3	0.009	0.03	1.9	2	1	64.2
RS-504 0120-0140	114	0.57	3.4	1.8	< 1	56.00	0.21	0.38	0.1	0.50	2.3	3.21	0.81	2.9	9	0.12	64.7	0.04	158	0.91	0.034	2.4	0.009	12.34	< .01	0.29	1.5	0.1	25.4	< .02	17.5	0.004	0.08	1.7	2	0.4	45.1
RS-504 0140-0160	60	0.56	14.2	2.3	1.0	138.90	0.58	0.65	0.15	0.30	4.9	7.74	1.46	3.5	13	0.1	61.9	0.05	1040	1.86	0.038	2.4	0.009	21.07	0.01	0.52	2.6	0.2	29	< .02	16.5	0.008	0.1	1.3	2	1.4	96.2
RS-504 0160-0180	50	0.6	4.7	1.1	1	61.00	0.16	0.77	0.11	0.20	5.5	7.68	1.13	3.2	< 5	0.1	58.9	0.06	464	2.62	0.047	2.2	0.012	11.54	0.01	0.52	2.5	0.2	34.4	< .02	16.6	0.006	0.06	1.6	< 2	0.7	75.3
RS-504 0180-0200	49	0.63	23.1	1.6	2	40.30	0.09	0.86	0.12	0.20	5.4	8.44	1.72	4.1	8	0.09	68.2	0.06	357	2.1	0.049	1.6	0.012	16.29	0.01	0.35	2.8	0.1	42.2	< .02	18.1	0.006	0.07	2.8	< 2	0.9	83.6
RS-504 0200-0220	69	1.01	6.1	0.4	1	65.30	0.18	1.07	0.17	2.00	9.4	9.14	1.91	4	< 5	0.11	43.7	0.14	692	1.95	0.074	8	0.019	12.64	< .01	0.33	3	0.2	79.1	< .02	14.6	0.013	0.07	2.3	12	0.4	81.5
RS-504 0220-0240	66	0.78	< .1	3.7	1	76.10	0.11	1.18	0.19	2.90	12.3	14.48	1.89	2.9	6	0.11	41.1	0.1	962	1.8	0.082	9.4	0.046	8.16	0.01	0.23	3.2	0.2	64.1	0.02	12.9	0.011	0.07	2.5	13	< .2	70.3
RS-504 0240-0260	70	0.66	0.1	1.1	< 1	37.70	0.1	0.7	0.11	1.60	8.6	14.02	1.66	2.3	6	0.11	44.2	0.08	734	1.31	0.076	5.7	0.016	6.77	0.01	0.16	2.3	0.2	53.9	< .02	16	0.003	0.06	2.2	7	< .2	68.9
RS-504 0260-0280	74	0.83	< .1	0.8	1	90.20	0.12	0.9	0.34	1.90	7.7	12.1	1.82	3.2	7	0.11	34.9	0.11	971	1.36	0.095	5.4	0.029	11.29	0.02	0.16	2.5	0.2	93.7	< .02	11.9	0.008	0.07	2.1	11	< .2	78.2
RS-504 0280-0300	71	1.42	2.2	1.6	2	641.10	0.15	1.15	0.11	2.20	5.6	8.32	2.23	5.4	< 5	0.12	30.1	0.13	482	1.39	0.083	3.4	0.021	46.02	0.05	0.51	2.9	0.2	136.7	< .02	11.4	0.008	0.12	3.3	21	0.3	82.3
RS-504 0300-0320	104	1.72	0.9	2	< 1	350.80	0.18	1.07	0.24	1.80	6	8.66	1.96	5.7	9	0.14	29.6	0.28	467	1.33	0.128	3.3	0.023	40.29	0.03	0.49	1.8	< .1	248.4	0.02	10.9	0.006	0.09	1.9	8	< .2	72.3
RS-504 0320-0340	86	1.65	< .1	2	2	482.60	0.24	1.49	0.52	1.20	4	5.65	1.29	4.4	< 5	0.1	29.3	0.31	860	0.71	0.163	2.4	0.039	30.88	0.03	0.42	1.6	0.2	353.5	0.04	8.2	0.002	0.06	2.4	5	< .2	51.7
RS-504 0340-0360	65	0.78	< .1	1.3	1	1622.60	0.11	1.29	0.22	1.90	10.7	10.21	1.63	3.6	< 5	0.14	37.1	0.11	748	1.47	0.056	4.3	0.029	81.23	0.05	0.54	2.6	0.2	100.2	< .02	11.5	0.012	0.08	2.1	12	0.3	97.6
RS-504 0360-0380	70	1.56	0.7	1.2	2	196.80	0.15	1.38	0.11	4.60	15.4	23.19	2.12	4.9	8	0.16	32.9	0.28	659	1.12	0.088	16.5	0.025	120.69	0.03	0.64	3.2	0.3	210.2	0.04	11.2	0.011	0.12	2	25	< .2	113.3
RS-504 0380-0400	65	1.2	0.2	0.3	1	113.00	0.12	1.74	0.3	5.20	30.8	12.74	2.44	4.3	< 5	0.13	27.7	0.24	1326	1.45	0.105	21.7	0.053	16.31	0.03	0.58	3.4	0.1	180.1	0.03	8.8	0.026	0.09	1.8	32	0.3	75.2
RS-504 0400-0420	84	1.96	0.8	1.6	< 1	74.10	0.11	1.42	0.21	3.00	8.2	7.9	2.33	4.3	16	0.14	27	0.16	670	1.73	0.065	5.6	0.034	26.3	0.03	0.92	2.3	0.1	134	0.03	9.4	0.023	0.09	1.8	19	0.5	90.2
RS-504 0420-0440	80	1.06	0.9	2.3	1	83.40	0.11	1.29	0.11	2.60	10.2	27.49	2.26	4.4	14	0.14	30.2	0.15	518	1.8	0.06	7.6	0.033	29.54	0.04	1.63	2.5	0.2	116.1	< .02	11.3	0.016	0.08	1.3	16	0.6	76.8
RS-504 0440-0460	72	1.28	1.3	1.6	1	70.10	0.14	1.3	0.12	3.10	11.9	29.84	1.99	4.7	5	0.14	37.8	0.2	519	1.47	0.061	8.9	0.035	94.78	0.03	1.31	2.6	0.2	163.3	< .02	12.5	0.011	0.09	1.9	19	0.4	106.4
RS-504 0460-0480	86	0.58	0.1	< .2	< 1	288.70	0.09	1.44	0.12	2.00	4.8	9.09	1.55	2.9	5	0.1	35.2	0.1	912	1.18	0.046	3	0.027	89.1	0.02	1.51	2	0.1	107.3	< .02	12.4	0.013	0.04	1.8	12	0.5	87.3
RS-504 0480-0500	58	0.47	< .1	0.2	< 1	87.60	0.02	1.48	0.04	1.70	3.4	5.28	1.6	2.8	< 5	0.1	17.8	0.06	735	1.31	0.029	2.4	0.032	47.96	0.03	2.36	1.7	0.1	73.6	< .02	9.7	0.012	0.02	0.8	10	0.7	75.9
RS-504 0500-0520	68	0.39	0.3	0.5	< 1	73.80	0.02	1.08	0.03	1.80	2.5	5.26	1.52	2.6	< 5	0.09	15.2	0.05	520	1.25	0.023	1.6	0.032	45.05	0.03	2.55	1.6	0.1	68.6	< .02	9.5	0.013	0.02	0.6	8	0.9	69.6
RS-504 0520-0540	96	0.44	1.3	3.5	< 1	100.30	< .02	0.21	0.04	2.00	3.3	3.06	1.67	2.8	155	0.12	16.2	0.04	151	1.48	0.025	2.2	0.034	30.46	0.03	2.54	1.5	< .1	43.5	< .02	10.8	0.019	0.03	0.6	8	1.8	91.3
RS-504 0540-0560	70	0.43	1.0	1.3	< 1	53.00	< .02	0.95	0.08	3.20	3.8	4.29	1.65	2.5	154	0.11	13.9	0.06	677	1.31	0.027	2.4	0.031	41.83	0.03	4.39	1.5	0.1	60.8	< .02	8.6	0.013	0.03	0.8	9	1.2	91.5
RS-504 0560-0580	78	0.45	0.8	< .2	< 1	30.30	0.02	0.55	0.12	1.20	5.4	7.16	1.57	2.5	91	0.1	13.9	0.04	320	1.39	0.023	3.2	0.032	48.37	0.03	3.51	1.2	0.1	44.9	< .02	8	0.024	0.02	1.1	13	1.3	78.3
RS-504 0580-0600	72	0.35	0.6	0.4	< 1	38.00	0.0	0.32	0.11	1.60	8.6	5.75	1.59	1.8	165	0.1	15	0.04	306	1.81	0.02	10.2	0.032	68.56	0.19	4.04	1	< .1	39.9	< .02	8	0.013	0.06	1.2	11	1	71.1
RS-504 0600-0620	73	0.45	0.9	0.4	< 1	32.3	0.02	1.22	0.2	1.4	7.8	4.04	1.73	2.1	46	0.1	16.1	0.06	740	1.9	0.029	8.6	0.032	30.66	0.03	2.08	1.7	0.2	76.1	< .02	8	0.013	0.03	2	13	0.8	84.8
RS-504 0620-0640	75	0.47	0.4	0.8	< 1	54	0.02	0.82	0.2	1.6	8.4	5.67	1.56	2.1	130	0.11	15.3	0.06	429	1.67	0.026	7	0.034	46.11	0.05	1.93	1.3	< .1	54.9	< .02	8.8	0.012	0.03	1.5	13	0.8	92.4
RS-504 0640-0660	81	0.44	< .1	0.3	< 1	27.1	< .02	1.4	0.27	1.5	3.4	4.31	1.51	2	9	0.13	14.9	0.09	692	1.4	0.032	2.5	0.032	29.52	0.02	1.27	1.4	< .1	70.4	< .02	8.7	0.014	0.03	1.6	13	0.8	71.7
STANDARD DS2	256	1.66	58.1	212.6	2	145.8	10.47	0.52	9.33	11.2	157.4	124.2	3	5.7	249	0.16	15.2	0.5	819	14.01	0.028	33.1	0.068	33.63	0.02	9.12	3.1	2.2	27.8	1.6	3.4	0.065	1.83	18.3	72	7	183.4
RS-504 0660-0680	84	0.47	0.2	1.3	1	29.9	< .02	0.91	0.12	1.1	4.2	5.44	1.68	2.3	< 5	0.14	15.7	0.09	442	1.46	0.043	3.9	0.033	31.1	< .01	1.34	1	0.1	82.5	0.02	8.9	0.014	0.03	1.8	13	0.9	72.7

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AAL REF: SP68058
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-504 0680-0700	56	0.49	0.1	0.6	1	29.3	< .02	1.12	0.14	1.3	4	5.78	1.58	2.3	< 5	0.12	13.9	0.16	934	1.5	0.047	3.9	0.032	33.77	0.01	1.16	1.4	0.2	116.7	0.02	7.9	0.009	0.03	0.9	6	0.8	79.1
RS-504 0700-0720	68	0.49	0.1	0.8	1	29.5	< .02	0.8	0.09	1	4.1	5.81	1.69	2.1	9	0.11	14.3	0.11	287	1.63	0.06	3.9	0.034	40.42	< .01	0.9	0.9	< .1	113.4	< .02	7.9	0.011	0.02	1.5	9	0.9	89.1
RS-504 0720-0740	253	0.36	7.7	0.7	< 1	116.4	0.14	3.57	0.24	7.4	12.6	29.19	2.76	1	34	0.16	4.5	1.22	696	4.27	0.015	31	0.05	18.74	0.34	1.49	1.6	1.6	139.3	0.02	3.1	0.001	0.05	0.4	11	0.2	69.2
RS-504 0740-0760	902	0.35	18.3	0.5	1	97.1	0.17	2.46	0.96	8.2	10.6	59.89	2.98	0.9	62	0.17	2.5	1.2	487	11.88	0.011	60.1	0.065	21.3	1.21	7.25	1.8	6.9	139.2	0.06	2	0.002	0.12	0.6	11	< .2	131.4
RS-504 0760-0780	354	0.4	102.7	1.4	1	108.9	0.16	3.67	3.23	11.6	18.1	47.29	2.95	0.9	66	0.17	2.1	1.79	513	42.09	0.01	109.4	0.064	34.06	1.04	11.69	2	9.3	152.6	0.08	1.8	< .001	0.29	1	33	0.2	255
RS-504 0780-0800	935	0.28	320.7	0.8	1	80.4	0.12	3.6	3.48	8.7	11.7	43.16	3.08	0.7	49	0.13	2.4	1.61	677	18.14	0.014	62.7	0.053	20.42	1.02	7.65	2.2	13.6	211.4	0.07	1.9	< .001	0.15	0.8	21	0.4	312.8
RS-504 0800-0820	1162	0.36	181	< .2	1	73.9	0.15	2.91	10.5	9.6	10.5	69.28	3.15	0.9	123	0.17	3	1.07	630	32.72	0.018	80.6	0.076	20.78	1.49	14.1	1.7	18.4	202.3	0.08	2.1	0.001	0.27	1.1	34	0.3	948.2
RS-504 0820-0840	368	0.51	32.4	< .2	< 1	219.7	0.14	1.7	3.55	3	6.6	27.88	1.57	1.6	35	0.13	8.4	0.54	393	9.88	0.023	28.9	0.023	30	0.46	3.87	1.1	5.7	223.4	0.05	5.2	< .001	0.15	1.8	12	0.4	323.8
RS-504 0840-0860	1666	0.3	97.9	< .2	1	47.1	0.17	3.47	17.97	10.6	8.8	96.47	3.18	0.7	196	0.15	2.6	0.61	520	55.57	0.02	120.6	0.105	20.78	2.09	23.25	1.6	26.8	263	0.08	2.3	0.002	0.57	1.3	36	< .2	1629.2
RS-504 0860-0880	852	0.35	51.3	< .2	1	70.6	0.18	2.41	6.21	6.9	9	52.41	2.54	0.9	97	0.15	2.7	0.69	603	26.94	0.02	61.4	0.067	17.42	1.27	11.27	1.4	14.4	166.2	0.07	3	0.002	0.39	1	22	0.3	601.7
RS-504 0880-0900	271	0.89	16.4	0.6	2	214.5	0.11	1.71	0.95	14.9	21.4	48.62	3.14	3.5	289	0.17	4.6	0.8	471	3.33	0.027	36.2	0.062	17.68	0.42	4.76	5.7	2.6	99.2	0.03	1.8	0.002	0.19	0.3	76	< .2	158.3
RS-504 0900-0920	374	0.75	16.1	0.4	1	168.6	0.13	2.05	1.49	12.8	16.3	42.79	2.75	2.4	340	0.17	10.9	0.91	680	4.43	0.024	37.7	0.052	13.02	0.41	4.26	3.8	3.1	107.1	0.04	3.9	0.005	0.2	0.9	61	< .2	176
RS-504 0920-0940	300	0.55	94.9	1.2	3	147.7	0.16	3.96	0.85	11.1	39.5	42.23	3.16	1.7	44	0.16	3.7	1.9	643	9.08	0.012	49.1	0.045	30.05	0.5	3.64	3	2.1	175.6	0.04	2	0.002	0.07	0.2	22	0.2	89.8
RS-504 0940-0960	387	0.62	19.6	0.9	1	266.7	0.15	3.57	0.77	7.8	18.6	37.47	2.59	1.7	35	0.17	7.1	1.56	500	3.96	0.017	33.3	0.067	28.36	0.36	2.22	1.8	2.3	143.6	0.03	2.8	0.004	0.06	0.4	16	0.2	101.3
RS-504 0960-0980	345	0.86	8.8	1.8	2	168.4	0.14	4.32	0.24	12.6	85.6	52.5	2.86	2.4	37	0.14	3.7	2.31	626	2.16	0.018	60.4	0.051	36.6	0.4	2.33	3.4	2	153.9	0.02	2	0.002	0.04	0.3	37	< .2	82.6
RS-504 0980-1000	694	0.41	13.1	1.4	2	168.1	0.14	4.06	2.39	7.5	13.7	63.37	2.22	1.1	104	0.19	4.5	2.03	731	4.44	0.012	60	0.08	28.12	0.64	4.95	1.7	5.7	128.4	0.07	1.9	0.001	0.06	0.4	16	0.2	176.1
RS-504 1000-1020	644	0.52	9.3	< .2	2	176.8	0.18	3.41	0.94	7.5	16.5	80.40	2.39	1.4	79	0.21	4.1	1.73	653	4.16	0.011	64.1	0.07	176.98	0.6	3.41	1.7	5	115.5	0.05	2.1	0.001	0.06	0.4	14	0.2	186.5
RS-504 1020-1040	784	0.47	19.9	0.3	2	172.4	0.17	3.01	0.53	8.3	15.4	89.96	2.9	1.3	71	0.2	3.6	1.57	533	6.46	0.008	70	0.058	46.77	0.55	4.3	1.8	4.6	133.1	0.07	1.7	0.003	0.06	0.3	13	0.3	149.5
RS-504 1040-1060	854	0.44	40.7	3	1	309.5	0.18	2.69	0.6	8.5	11.5	66.34	2.68	1	66	0.17	5.5	1.33	644	3.45	0.01	58.4	0.068	40.77	0.73	6.24	1.8	8.3	174.8	0.06	2.1	< .001	0.06	0.3	11	0.3	141.9
RS-504 1060-1080	1257	0.38	70	< .2	2	81.7	0.15	3.05	4.29	9	24.2	68.44	3.35	1	64	0.13	3.8	1.36	625	11.26	0.012	64.3	0.065	43.6	1.07	10.25	1.9	12.1	182.8	0.05	1.8	0.003	0.17	0.7	23	0.4	386.1
RS-504 1080-1100	917	0.48	32.2	< .2	2	63.2	0.2	3.32	8.4	10.6	44.3	72	3.84	1.3	114	0.16	2.7	1.01	607	24.16	0.014	105.6	0.06	64.38	1.52	7.48	1.8	16.4	143.2	0.06	2.1	0.004	0.39	0.8	41	0.3	595.9
RS-504 1100-1120	814	0.54	63.2	< .2	3	44.3	0.14	3.84	10.19	11.1	28.3	73.59	3.53	1.3	114	0.16	3	0.86	717	29.62	0.014	87.3	0.068	66.83	1.59	8.85	1.8	14.8	215	0.07	1.9	0.003	0.44	0.8	37	0.4	916
RS-504 1120-1140	1595	0.31	54.5	< .2	2	37.1	0.17	3.43	13.96	8.9	9.8	80.69	3.09	0.8	191	0.14	1.8	0.46	564	40.49	0.013	94.1	0.064	39.79	2.02	16.99	1.8	25.9	206.6	0.07	2	0.002	0.55	1.2	38	0.3	1207.1
RS-504 1140-1160	677	0.37	39.7	< .2	1	86.6	0.14	5.69	11.34	9.6	21.9	69.15	2.77	0.9	132	0.14	2.4	0.89	518	33.96	0.012	80.6	0.06	18.38	1.63	10.12	1.9	14.3	439.2	0.09	1.8	0.003	0.47	0.9	28	0.3	1060.4
RS-504 1160-1180	663	0.39	37.6	< .2	1	84.6	0.13	5.32	7.63	9.7	22.8	67.38	2.67	1	103	0.12	5.1	0.98	614	29.85	0.016	79	0.08	49.12	1.38	8.42	2.2	11.6	391.9	0.06	2.4	0.002	0.39	0.9	28	0.3	702.4
RS-504 1180-1200	186	0.39	16.7	< .2	2	69.3	0.12	10.3	1.75	9.2	16.8	36.26	2.57	1	138	0.13	2.7	1.07	382	33.67	0.012	60.8	0.122	27.92	1.7	2.38	1.9	4	528.1	0.09	2	0.002	0.17	3.7	17	0.3	185.1
RS-504 1200-1220	202	0.29	16.5	2.2	3	51	0.16	5.66	1.5	5.8	14.3	30.64	2.05	0.8	109	0.12	2.1	0.33	361	29.27	0.008	51.9	0.071	32.03	1.38	2.42	1	3.4	338.8	0.05	2.2	0.004	0.24	1.6	8	0.4	167.8
RS-504 1220-1240	208	0.29	18.5	0.3	4	81.2	0.14	10.36	1.92	7.5	10	33.6	2.16	0.7	90	0.13	2.6	1.47	329	37.02	0.011	84.9	0.09	27.71	1.34	2.86	1.7	4.2	581.8	0.11	1.8	0.003	0.24	1.6	14	0.3	200.1
RS-504 1240-1260	291	0.29	22	< .2	2	101.1	0.14	7.87	4.26	5.9	9.1	34.95	1.98	0.7	106	0.12	3.1	0.78	342	43.05	0.012	72.9	0.038	25.42	1.34	4	1.4	6	567.6	0.09	2	0.004	0.31	1.8	16	0.3	384.2
RS-504 1260-1280	521	0.32	27.2	< .2	3	73.9	0.13	8.4	5.33	8	14.1	42.13	2.06	0.8	96	0.13	3.7	0.54	353	41.6	0.009	87.6	0.091	15.16	1.34	6.83	1.6	8.2	597.7	0.11	2	0.004	0.36	2.3	22	0.3	477.2
RS-504 1280-1300	565	0.35	30.6	< .2	3	97.9	0.14	8.53	6.28	5.9	9.7	51.4	2.23	0.8	86	0.15	2.7	0.38	420	33.59	0.01	66.6	0.069	17.26	1.31	6.95	1.3	9.2	427.6	0.09	2	0.003	0.34	1.2	22	0.3	586.3
RS-504 1300-1320	744	0.37	39.7	< .2	3	85.9	0.15	6.96	7.17	6.8	10.7	54.92	2.4	0.9	89	0.16	3.5	0.45	424	35.3	0.013	78.3	0.086	39.92	1.44	9.47	1.7	10.9	519.3	0.1	2.1	0.003	0.39	1.3	29	0.3	657.8
STANDARD DS2	261	1.85	59.3	211.9	2	147	10.47	0.51	9.74	10.6	166.3	123.85	2.98	5.8	243	0.15	16.8	0.59	808	13.89	0.03	34.5	0.087	35.1	0.01	9.07	2.8	2.4	27.6	1.77	3.5	0.063	1.76	17.9	75	6.7	156
RS-504 1320-1340	712	0.26	41.9	< .2	3	118.8	0.13	8.02	9.93	8.5	9.6	54.36	2.17	0.7	136	0.13	3	0.89	377	40.66	0.012	71.5	0.093	16.06	1.3	10.98	1.9	12.5	686.5	0.13	2	0.001	0.43	1.6	35	0.4	902.6
RS-504 1340-1360	678	0.33	41	< .2	2	82.6	0.13	7.16	8.26	6.3	10.2	55.71	2.21	0.8	186	0.13	2.6	0.93	427	40.49	0.012	66.5	0.072	13.08	1.23	9.99	1.8	11.9	536.7	0.09	1.9	0.001	0.39	1.4	31	0.4	774.3

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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP58058
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-504 1360-1380	1120	0.4	44.6	0.6	3	58.8	0.16	3.08	9.86	9.2	12.3	69.72	3.07	1	280	0.14	6.5	0.74	627	30.36	0.013	67.1	0.06	14.29	1.5	11.55	1.8	17.8	181.6	0.08	3	0.001	0.54	1.2	32	0.4	944.2
RS-504 1380-1400	1449	0.56	61.8	< .2	4	50.8	0.21	3.33	13.74	11	19.7	88.39	3.42	1.2	740	0.19	2.8	0.69	533	41.13	0.013	106	0.064	32.87	2.06	16.71	1.6	24.1	198.4	0.09	1.7	0.001	0.82	1.4	57	0.7	1343.5
RS-504 1400-1420	1125	0.84	54.6	0.2	6	53.7	0.17	3.38	12.68	9.8	14.1	79.88	3.19	1.7	481	0.27	2.3	0.72	641	33.89	0.017	78.5	0.067	29.85	1.9	12.66	1.8	21.6	272.3	0.07	1.6	0.002	0.57	1.1	69	0.7	1125.5
RS-504 1420-1440	1561	0.52	61.3	< .2	4	45.6	0.18	3.17	13.16	9.1	12.4	85.06	3.13	1.2	350	0.18	3.2	0.78	580	39.14	0.013	83.9	0.069	18.62	1.89	16.31	1.8	24.5	205.2	0.11	1.8	0.002	0.57	1.5	53	0.6	1137.6
RS-504 1440-1460	1389	0.62	79.3	< .2	3	56.5	0.19	3.13	10.96	12.9	12.2	91.01	3.63	1.1	320	0.16	1.5	0.74	484	42.83	0.013	101.8	0.07	40.67	2.2	20.16	1.7	21.4	216.8	0.1	1.2	0.002	0.67	1.2	42	0.6	1122.9
RS-504 1460-1480	1286	0.92	72.4	< .2	3	61.8	0.19	3.8	13.36	13.5	13.4	91.31	3.76	1.4	281	0.17	1.7	0.92	581	40.84	0.012	99.7	0.076	16.1	2.17	13.8	2	26.5	243.4	0.09	1.6	0.003	0.48	1.3	53	0.6	1311.2
RS-504 1480-1500	1691	0.58	72.4	< .2	2	65.9	0.19	2.79	14.5	11.3	13.8	89.26	3.35	1.1	254	0.17	1.6	0.64	470	40.31	0.009	98.4	0.063	20.24	2.08	16.01	1.5	30.4	176.4	0.09	1.7	0.001	0.56	1.4	50	0.5	1340.2
RS-504 1500-1520	1303	0.6	62.2	< .2	2	55.2	0.21	2.92	11.02	12	12.3	86.77	3.42	1.3	249	0.17	3.7	0.56	547	42.45	0.014	100.7	0.065	15.79	2.08	17.97	1.8	22.9	248.2	0.1	2.2	0.003	0.59	1.7	48	0.6	1039.9
RS-504 1520-1540	954	0.54	61.1	0.3	3	60.7	0.18	3.28	7.99	9.4	12.2	66.35	3.13	1.3	148	0.17	6.7	0.65	591	32.11	0.016	75.1	0.07	18.84	1.65	11.42	1.9	16.4	233.5	0.08	3.6	0.002	0.35	1.7	36	0.5	798.8
RS-504 1540-1560	5054	1.09	62.4	0.7	3	93.2	0.12	3.95	3.47	11	14.7	53.68	3.46	2.2	79	0.18	4.4	0.8	692	12.56	0.015	35.8	0.069	12.61	1.19	5.67	1.9	11.6	248.6	0.06	1.8	0.001	0.29	0.5	26	0.5	366.4
RS-504 1560-1580	10885	0.49	107	< .2	3	61.8	0.24	4.95	4.24	8.9	13.6	63.45	2.9	1.2	82	0.18	2.7	0.54	430	31.99	0.01	60.8	0.084	16.46	1.86	11.72	1.5	15.6	267.2	0.09	3.1	0.001	0.13	1.9	20	0.7	434.8
RS-504 1580-1600	1739	0.72	240.1	1	2	66.5	0.16	3.79	2.8	11.9	15.2	63.63	3.6	1.4	93	0.17	3.6	0.83	700	12.61	0.016	34.6	0.076	17.44	1.88	12.34	2.2	12.9	216	0.06	1.9	0.002	0.34	0.5	21	0.9	300.5
RS-504 1600-1605	2628	0.67	183.5	7.9	2	43.1	0.07	1.84	0.93	10.6	10.9	52.46	3.15	1.4	68	0.19	2.8	0.68	397	8.17	0.011	18.6	0.059	10.05	1.96	12.81	1.4	12.7	90.2	0.07	1.2	< .001	0.36	0.2	13	1.6	129.5
RS-504 1605-1610	3210	0.62	106.1	0.5	4	20.7	0.13	2.46	8.01	8.6	13.5	71.32	3.21	1.2	148	0.17	1.5	0.53	380	25.13	0.008	72.3	0.052	14.26	1.8	11.39	1.4	21.1	128.6	0.06	1.1	0.003	0.43	0.8	43	1.5	766.1
RS-504 1610-1615	4942	0.87	309.4	3.2	2	39	0.1	3.11	2.14	13.6	10	49.85	3.65	1.4	121	0.19	3.4	0.82	576	7.41	0.014	24.6	0.071	10.82	2.33	13.9	1.7	14.7	164.4	0.07	1.2	< .001	0.33	0.3	19	1.4	243.3
RS-504 1615-1620	2607	0.88	353.2	1.8	1	44.3	0.09	3.09	3.01	14	11	49.57	4.17	2	114	0.21	3.8	0.86	531	8.93	0.021	36.7	0.078	10.05	2.2	13.87	2.5	19.2	160.4	0.05	1.2	0.001	0.41	0.3	30	0.4	334.6
RS-504 1620-1625	2332	0.96	208.8	3.4	3	69.7	0.08	5.33	1.13	12.7	9.4	42.79	4.14	2	40	0.23	5.5	1.74	1005	4.82	0.019	18.4	0.067	10.7	1.97	8.71	2.9	10.7	264.1	0.05	1.1	0.001	0.3	0.2	27	0.7	151.9
RS-504 1625-1630	7070	0.61	853.5	0.8	3	24.1	0.11	2.31	3.46	10.9	24.6	48.28	4.06	1.4	77	0.18	2.9	0.64	511	11.03	0.014	47.6	0.051	20	2.28	11.65	1.5	19.7	101.6	0.05	1.1	0.004	0.35	0.4	28	5	337.8
RS-504 1630-1635	2896	1	148.2	1.9	3	45.1	0.08	3.88	1.78	15.2	11.2	49.67	4.6	2.2	74	0.24	5.1	1.14	896	6.1	0.019	28.6	0.08	11.78	2.77	15.16	2.7	14.1	183.9	0.04	1.3	0.002	0.5	0.3	30	0.4	228.5
RS-504 1635-1640	1692	1.21	113.8	< .2	3	69.2	0.1	4.59	2.06	14.9	12.5	49.25	4.14	2.4	69	0.27	5.1	1.41	681	8.88	0.02	32.5	0.086	11.6	1.6	7	2.9	12.5	230.4	0.06	1.5	0.003	0.3	0.4	42	0.3	325.3
RS-504 1640-1645	2368	0.9	187.6	< .2	3	60.4	0.11	4.01	3.23	12.8	9.7	54.95	3.84	1.9	70	0.25	4.6	0.88	725	10.93	0.012	32	0.072	18.25	2.07	9.69	2	13.5	215.4	0.06	1.4	0.001	0.33	0.4	30	0.4	341.8
RS-504 1645-1650	3861	0.93	137.7	10.5	2	33.8	0.11	2.33	2.08	11.6	10.8	50.68	3.93	2	85	0.28	4	0.96	617	8.91	0.013	31.6	0.08	12.25	2.73	17.24	1.9	15.8	116.6	0.04	1.3	< .001	0.46	0.4	26	0.4	246.2
RS-504 1650-1655	3133	0.79	165.9	0.7	3	52.4	0.14	4.23	4.29	12.7	12.7	59.53	3.68	1.6	92	0.21	4.2	1.14	706	14.57	0.01	39.6	0.071	16.52	2.05	11.61	2.1	18.3	236.7	0.05	1.2	0.001	0.36	0.5	33	0.6	442
RS-504 1655-1660	2136	0.88	108.4	< .2	3	59.4	0.12	3.14	4.5	10.4	15.5	59.7	3.09	1.9	98	0.23	3.6	0.83	585	13.6	0.012	43	0.059	15.47	1.82	9.27	2.1	15.8	169.5	0.05	1.3	0.003	0.35	0.5	39	0.6	447.9
RS-504 1660-1665	2488	1.24	338.7	3.5	4	38.9	0.13	3.85	4.54	15.4	16.6	75.08	4.65	2.6	102	0.34	4.7	1.04	686	11.61	0.014	39.9	0.079	18.13	2.98	10.54	2.4	20.1	183.1	0.08	1.4	0.002	0.37	0.5	47	0.6	482.9
RS-504 1665-1670	1557	1	130	5.5	2	93.5	0.12	6	1.24	11.9	11.8	42.52	3.39	2.1	25	0.21	5.6	0.57	1046	4.81	0.026	23.6	0.069	21.26	1.63	5.19	1.8	10.1	281.9	0.04	2.2	0.001	0.19	0.5	17	0.5	162.4
RS-504 1670-1675	1254	1.4	72.7	2.5	1	138.7	0.1	4.98	0.68	11.2	12.3	37.75	3.15	3.2	14	0.22	4.9	0.7	787	3.71	0.028	15.8	0.063	19.48	1.61	3.04	2	4.9	278.4	0.04	2	0.006	0.14	0.4	21	0.4	112.2
RS-504 1675-1680	3233	0.84	122	0.5	4	65.3	0.15	4.98	0.94	12.7	13.6	36.84	3.17	2.2	17	0.29	4.2	1.11	862	5.06	0.017	32.9	0.093	20.43	1.9	8.3	1.6	7.8	230.2	0.06	3	0.002	0.09	0.6	16	0.5	119.6
RS-504 1680-1685	1657	0.73	90.1	0.2	3	74.9	0.17	4.92	0.87	10.2	9.4	38.48	2.7	2	10	0.27	4.2	0.92	730	7.92	0.015	27.4	0.094	18.42	1.68	5.42	1.4	6.4	257.9	0.06	3.3	0.001	0.06	0.9	13	0.2	111
RS-504 1685-1690	888	0.82	116.3	< .2	3	76.1	0.16	3	0.94	7.8	7.2	21.16	2.35	2.1	5	0.29	5.1	0.53	506	9.11	0.024	27.7	0.066	20.52	1.49	2.9	1.1	5.2	196.5	0.07	4.1	0.007	0.04	0.7	11	0.2	110.6
RS-504 1690-1695	1470	0.71	124.7	0.4	3	75.5	0.16	4.33	0.73	9	8.6	25.34	2.54	1.7	14	0.27	4.8	1.06	674	7.79	0.028	22.8	0.062	19.58	1.84	4.29	1.3	4.7	250.2	0.07	3.7	0.011	0.06	0.9	11	0.3	91.5
STANDARD DS2	275	1.68	57.6	218.3	2	148.8	10.55	0.52	9.91	11.6	157.8	124.74	2.99	5.7	225	0.15	16	0.59	819	13.71	0.032	32.7	0.084	35.42	< .01	8.99	2.8	2.4	27.1	1.76	3.7	0.084	1.8	19.5	75	6.6	156.2
RS-504 1695-1700	2095	0.48	86.6	0.7	3	106.1	0.15	4.22	0.69	9.6	8.1	33.86	2.75	1.3	16	0.22	4.1	0.87	585	8.64	0.025	39.6	0.093	16.83	1.92	7.21	1.4	5.1	289.7	0.06	2.5	0.007	0.11	1.7	10	0.3	99.3
RS-504 1700-1720	227	0.49	18.2	< .2	3	110.7	0.17	5.11	0.87	11.1	9.4	43.46	3.14	1.1	26	0.21	3.4	1.28	743	8.03	0.021	38.5	0.098	15.76	1.6	3.63	1.7	2.2	373.5	0.06	2.6	0.005	0.07	1.3	11	< .2	100.3
RS-504 1720-1745	275	0.29	23.3	0.6	1	103.5	0.12	7.87	2.16	7.3	9.1	48.12	2.58	0.5	86	0.14	3.1	0.68	400	41.2	0.015	85.3	0.112	10.98	1.68	4.65	1.8	3.5	584.2	0.11	2.4	0.003	0.14	2.7	12	0.5	234

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

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

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

Company: Rosebud Mining Co, LLC

Address: PO Box 2610 Winnemucca NV 89446

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

Project Name: _____ Purchase Order Number: _____

Transport Company: _____ Waybill Number: _____

Date Shipped: 28 July 2000 Number of Packages: _____ [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED in PPb & oz/ton

SAMPLE	TYPE	ELEMENTS REQUIRED
Drill Hole RC-5044	RC	Au & Ag - Use Rosebud Exploration
		Protocol for Sample Prep & Assays
0 - 1745		
Note: Please make up		20 foot composits
for ICP + Se Trace		elements
Also: ICP every 5'		from 1600 to 1700 + Se
Use one (1) Rosebud Standard @ end of Run		

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:

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-504 / VS 305.00

LOCATION: ROSEBUD MINE

SURVEY DATE: JULY 25,2000

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: 035.00

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

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

PROJECTED F/1600' T/2000'.

****
****
*** 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-504 / VS 305.00

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	-89.79	116.31	0.00 N	0.00 E	0.00		0.00	AT 000.00
50.0	50.00	0.32	-0.021	-89.26	014.79	0.27 N	0.16 E	1.62	0.81	0.32	AT 031.21
100.0	99.99	0.97	-0.327	-89.09	005.75	0.98 N	0.29 E	0.43	0.21	1.02	AT 016.33
150.0	149.99	1.49	-0.722	-89.38	346.91	1.64 N	0.27 E	0.76	0.38	1.66	AT 009.20
200.0	199.99	1.75	-1.027	-89.70	342.40	2.03 N	0.16 E	0.64	0.32	2.03	AT 004.64
250.0	249.99	1.77	-1.170	-89.84	248.40	2.12 N	0.06 E	0.70	0.35	2.13	AT 001.62
300.0	299.98	1.29	-1.241	-89.02	219.36	1.77 N	0.28 W	1.69	0.84	1.79	AT 351.12
350.0	349.97	0.05	-1.267	-88.14	214.59	0.77 N	1.01 W	1.77	0.89	1.27	AT 307.37
400.0	399.93	-1.81	-1.136	-87.57	208.20	0.83 S	1.97 W	1.23	0.62	2.14	AT 247.09
450.0	449.87	-4.17	-0.550	-86.83	195.56	3.10 S	2.84 W	1.92	0.96	4.20	AT 222.52
500.0	499.78	-6.87	0.774	-86.22	183.36	6.08 S	3.31 W	1.91	0.96	6.92	AT 208.57
550.0	549.63	-10.05	3.008	-84.87	177.25	9.95 S	3.30 W	2.86	1.43	10.49	AT 198.33
600.0	599.41	-13.66	5.984	-84.38	173.96	14.62 S	2.93 W	1.16	0.58	14.91	AT 191.34
650.0	649.14	-17.65	9.262	-83.75	177.12	19.77 S	2.54 W	1.42	0.71	19.94	AT 187.32
700.0	698.83	-22.10	12.657	-83.40	178.15	25.36 S	2.31 W	0.74	0.37	25.47	AT 185.20
750.0	748.63	-25.98	14.771	-86.28	201.09	29.75 S	2.80 W	6.98	3.49	29.88	AT 185.38
800.0	798.53	-28.55	13.678	-85.90	270.99	31.23 S	5.17 W	8.98	4.49	31.66	AT 189.40
850.0	848.37	-30.52	10.205	-84.92	279.13	30.85 S	9.15 W	2.35	1.17	32.18	AT 196.51
900.0	898.17	-32.00	5.945	-84.66	292.10	29.63 S	13.49 W	2.41	1.20	32.55	AT 204.48
950.0	947.84	-32.62	0.263	-82.15	303.43	26.87 S	18.49 W	5.63	2.82	32.62	AT 214.54
1000.0	997.08	-32.83	-8.308	-78.10	303.64	22.13 S	25.64 W	8.10	4.05	33.87	AT 229.20
1050.0	1045.64	-32.91	-20.189	-74.40	305.35	15.38 S	35.42 W	7.44	3.72	38.61	AT 246.52
1100.0	1093.63	-32.77	-34.229	-72.98	305.77	7.21 S	46.84 W	2.85	1.42	47.39	AT 261.24
1150.0	1141.38	-32.87	-49.045	-72.54	303.51	1.20 N	59.03 W	1.60	0.80	59.04	AT 271.17
1200.0	1189.05	-33.70	-64.106	-72.33	300.23	9.17 N	71.84 W	2.02	1.01	72.42	AT 277.27
1250.0	1236.49	-34.97	-79.857	-70.82	300.55	17.16 N	85.47 W	3.03	1.51	87.18	AT 281.35
1300.0	1283.48	-36.21	-96.900	-69.21	301.08	25.92 N	100.14 W	3.24	1.62	103.44	AT 284.51
1350.0	1330.06	-36.74	-115.055	-68.16	305.46	35.90 N	115.32 W	3.81	1.91	120.78	AT 287.29
1400.0	1376.51	-35.74	-133.530	-68.36	310.75	47.31 N	129.88 W	3.94	1.97	138.23	AT 290.01
1450.0	1423.20	-33.99	-151.333	-69.71	310.49	58.96 N	143.46 W	2.71	1.35	155.10	AT 292.34
1500.0	1470.48	-31.30	-167.325	-72.33	319.19	70.33 N	155.02 W	7.70	3.85	170.23	AT 294.40
1550.0	1518.39	-27.40	-181.073	-74.44	322.69	81.41 N	164.04 W	4.67	2.33	183.13	AT 296.39
1600.0	1566.48	-22.32	-193.793	-73.68	330.71	92.88 N	171.55 W	4.66	2.33	195.07	AT 298.43
1650.0	1614.46	-16.23	-206.461	-73.67	330.63	105.13 N	178.43 W	0.05	0.02	207.10	AT 300.51
1700.0	1662.44	-10.14	-219.133	-73.67	330.69	117.38 N	185.32 W	0.03	0.02	219.37	AT 302.35
1750.0	1710.43	-4.03	-231.792	-73.68	330.80	129.65 N	192.19 W	0.06	0.03	231.83	AT 304.00
1800.0	1758.41	2.09	-244.448	-73.66	330.81	141.92 N	199.04 W	0.04	0.02	244.46	AT 305.49

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-504 / VS 305.00

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
1850.0	1806.39	8.20	-257.117	-73.66	330.71	154.19 N	205.92 W	0.06	0.03	257.25	AT 306.83
1900.0	1854.37	14.31	-269.789	-73.66	330.76	166.46 N	212.79 W	0.03	0.01	270.17	AT 308.04
1950.0	1902.35	20.43	-282.460	-73.65	330.79	178.74 N	219.66 W	0.03	0.01	283.20	AT 309.14
2000.0	1950.33	26.55	-295.120	-73.68	330.82	191.02 N	226.52 W	0.06	0.03	296.31	AT 310.14

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*************************************************************
*                          ********                         *
*       THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF         *
*                          ********                         *
*  2000.0 FEET EQUALS    296.31    FEET AT   310.14         *
*                          ********                         *
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WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-504 / 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
1850.0	1806.39	-257.12	-8.199	-73.66	330.71	154.19 N	205.92 W	0.06	0.03	257.25	AT 306.83
1900.0	1854.37	-269.79	-14.307	-73.66	330.76	166.46 N	212.79 W	0.03	0.01	270.17	AT 308.04
1950.0	1902.35	-282.46	-20.425	-73.65	330.79	178.74 N	219.66 W	0.03	0.01	283.20	AT 309.14
2000.0	1950.33	-295.12	-26.547	-73.68	330.82	191.02 N	226.52 W	0.06	0.03	296.31	AT 310.14

```
*************************************************************
*                          ********                         *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*  2000.0 FEET EQUALS    296.31    FEET AT   310.14         *
*                          ********                         *
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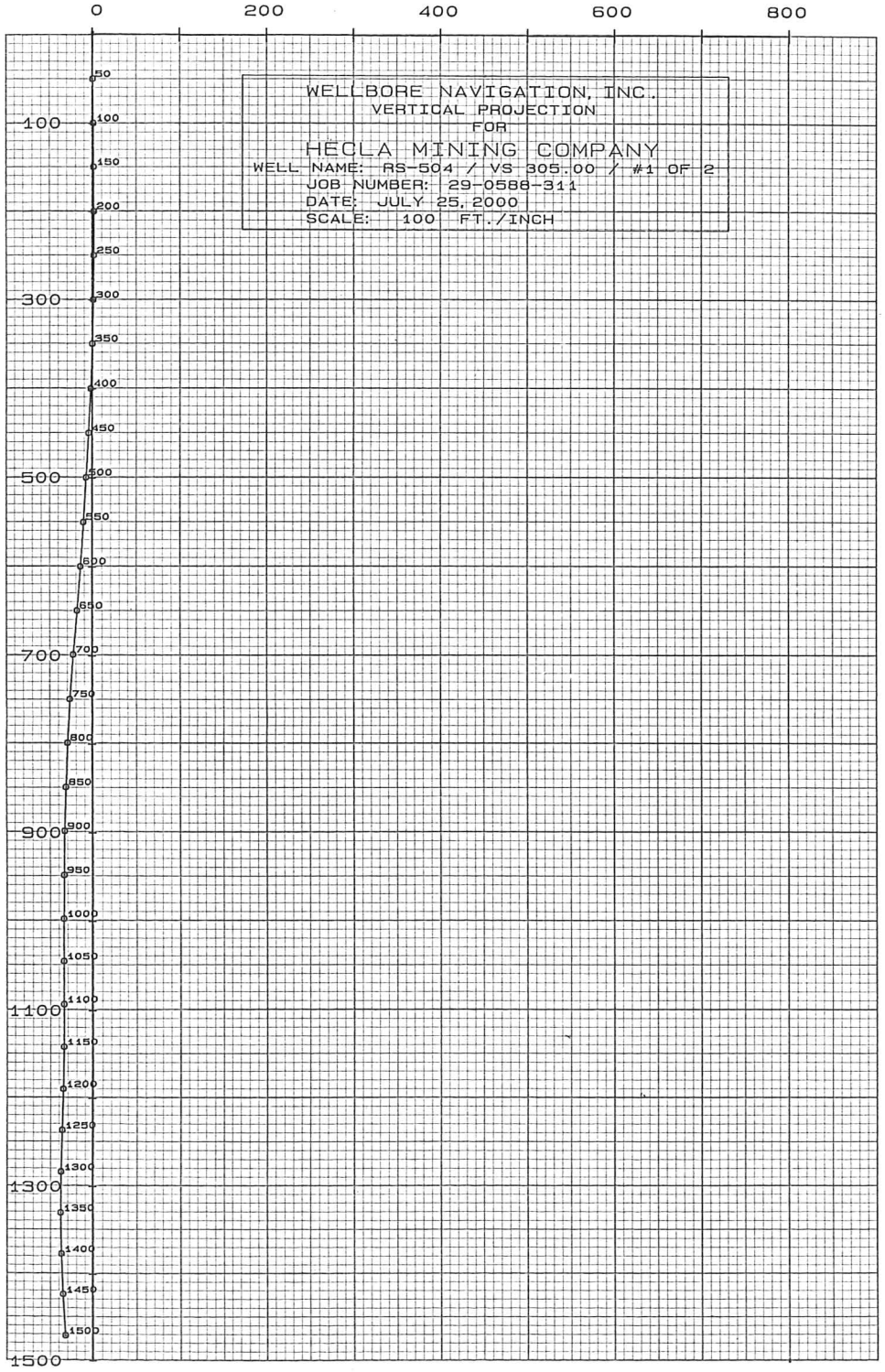

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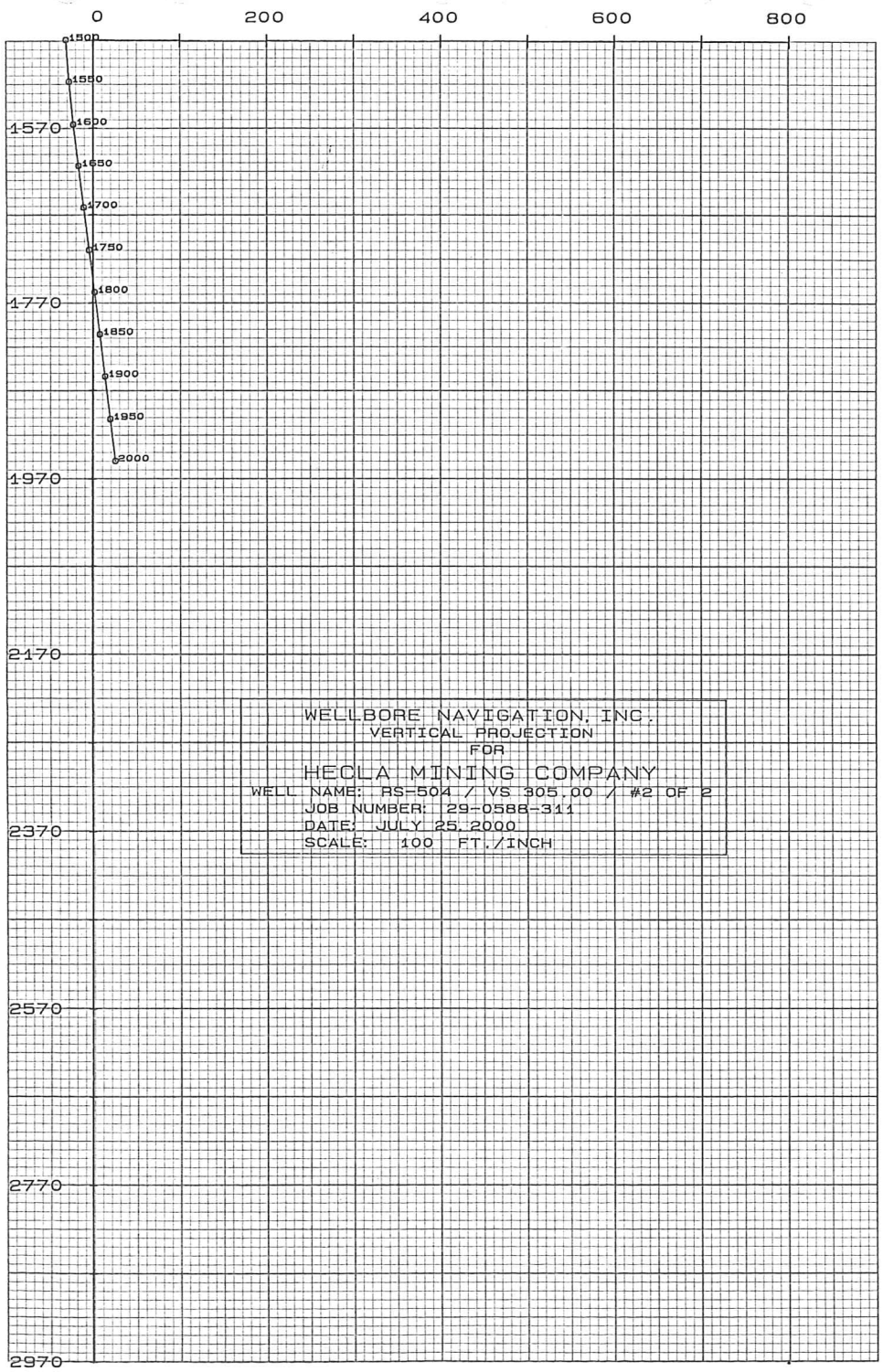

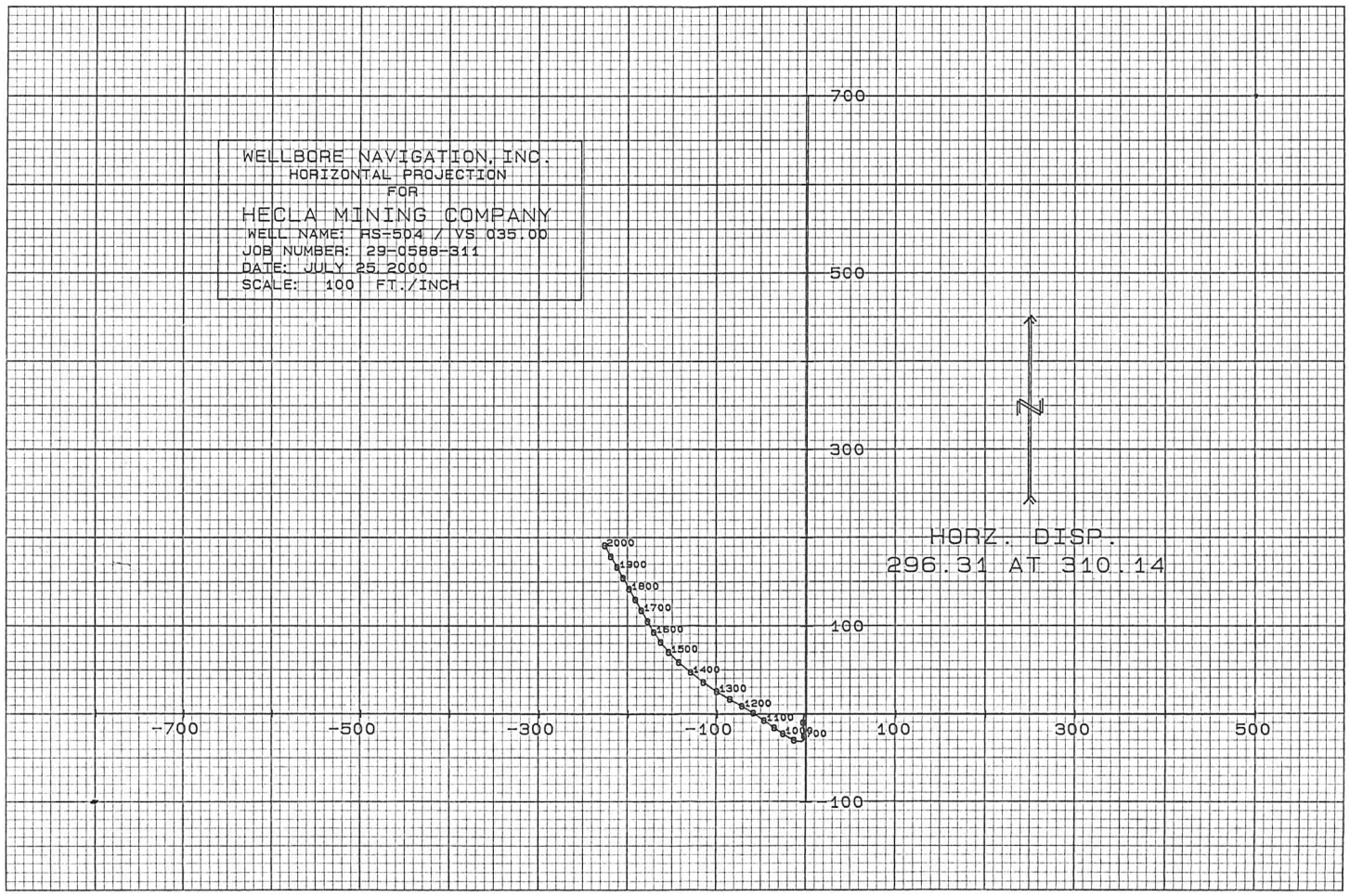

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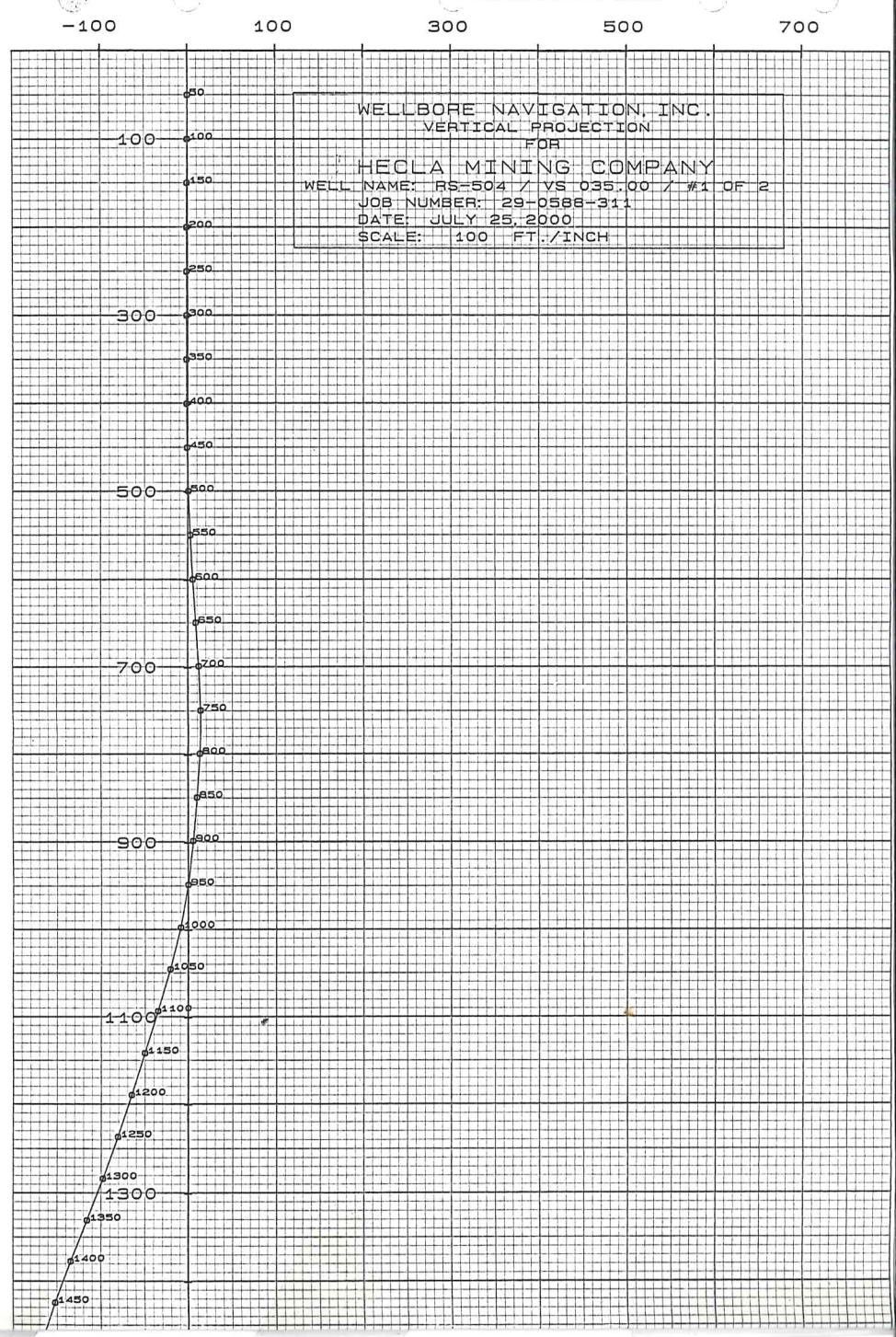
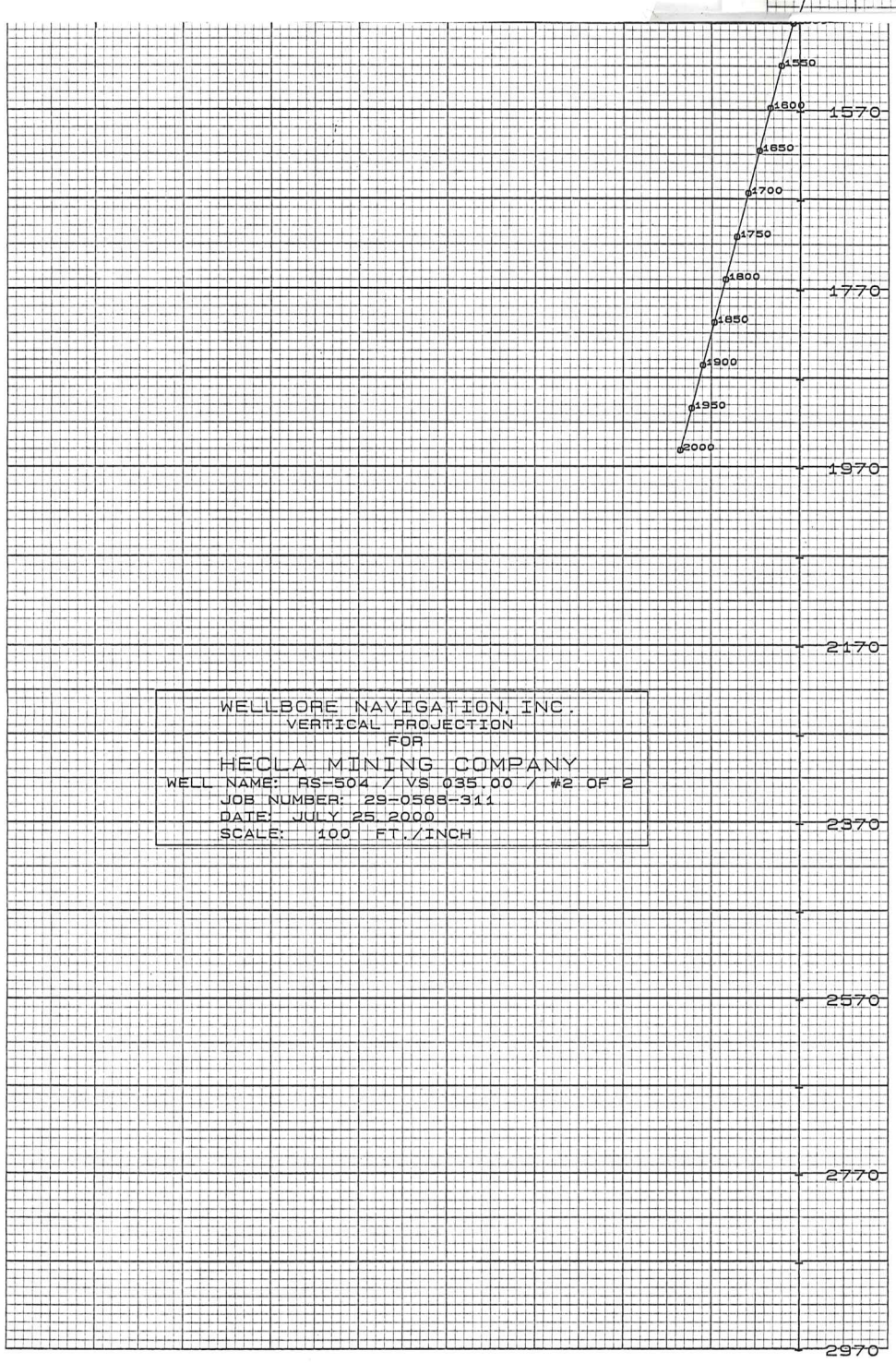
STARLIGHT PRINTING (801) 467-2841





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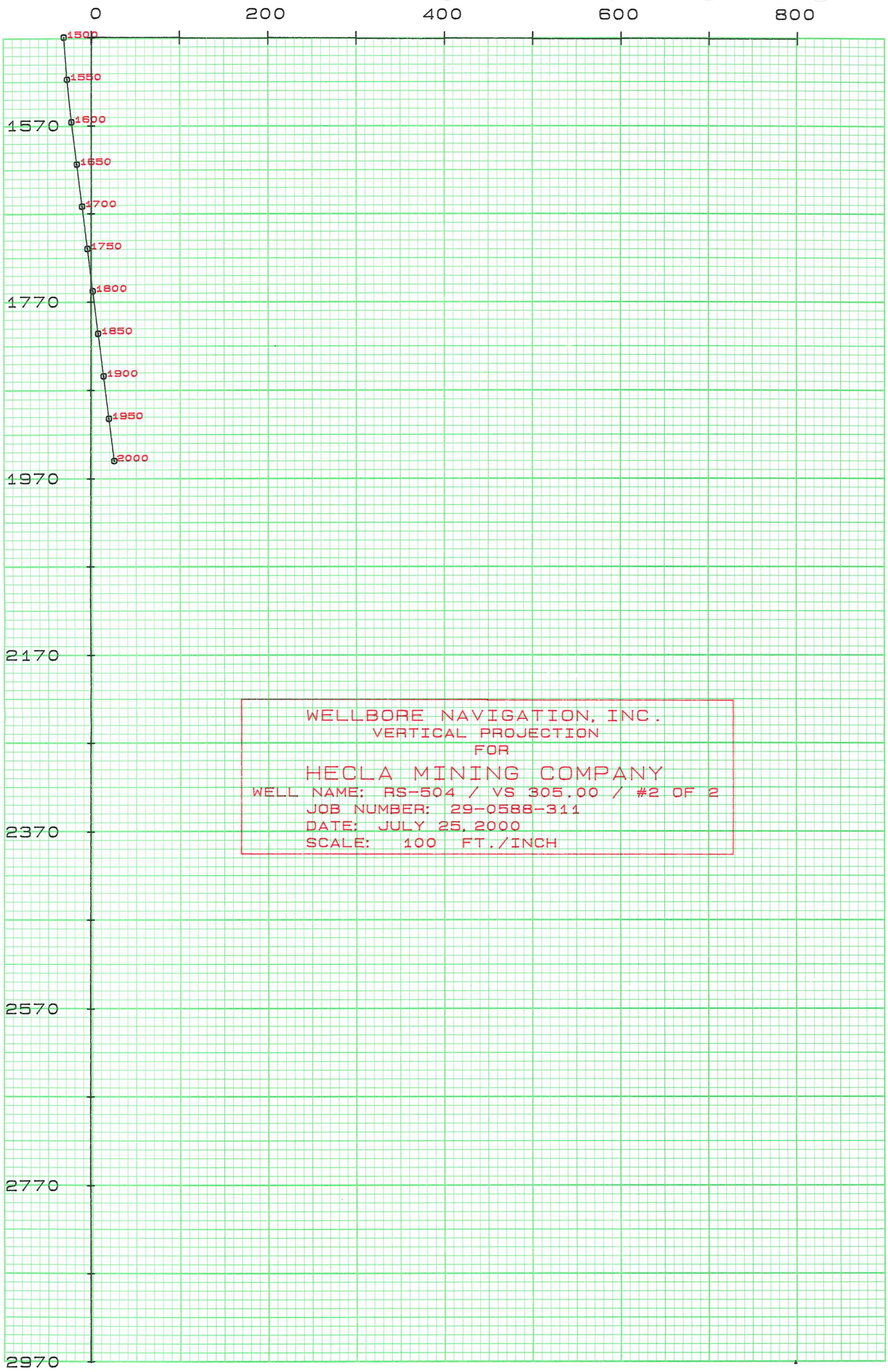

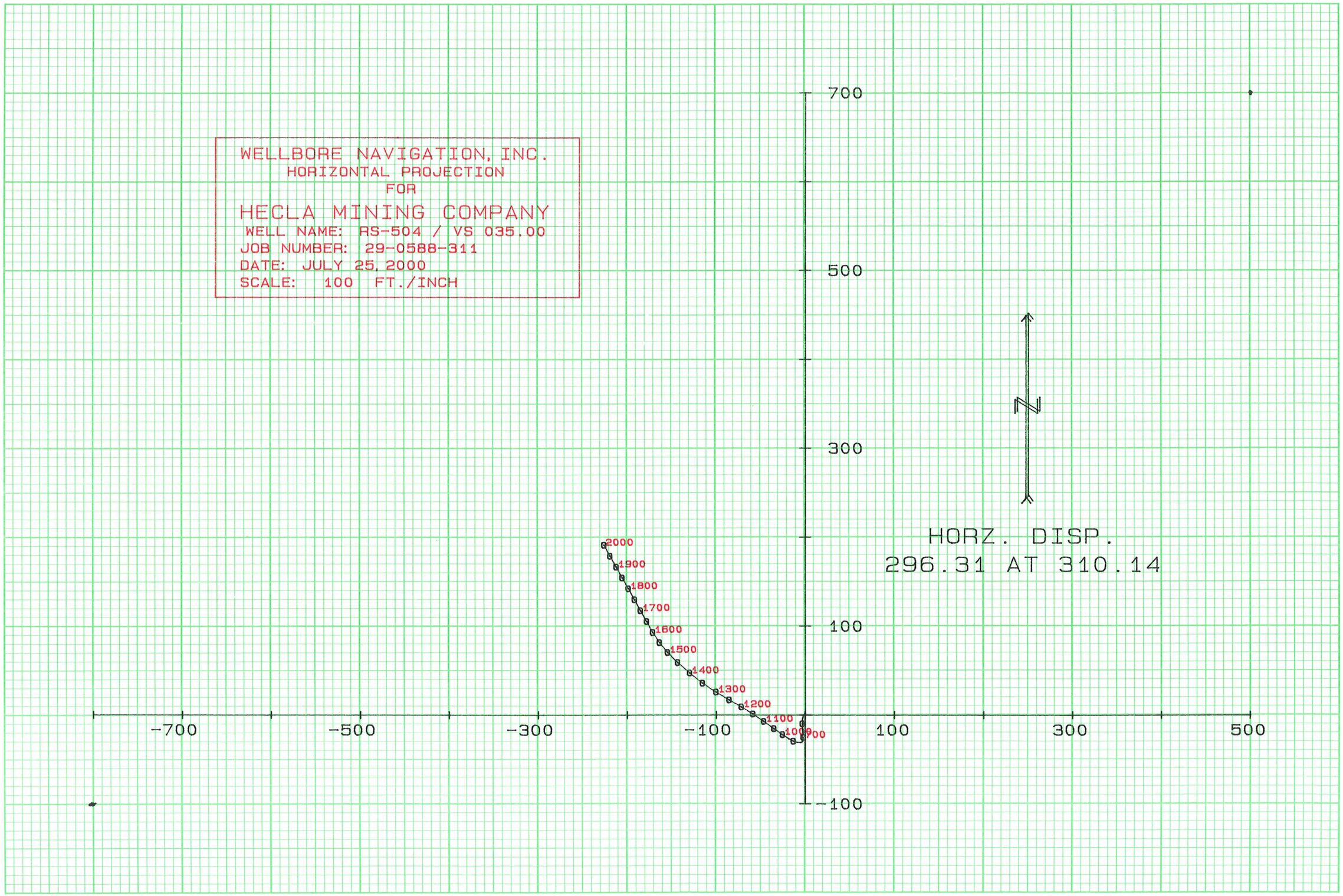

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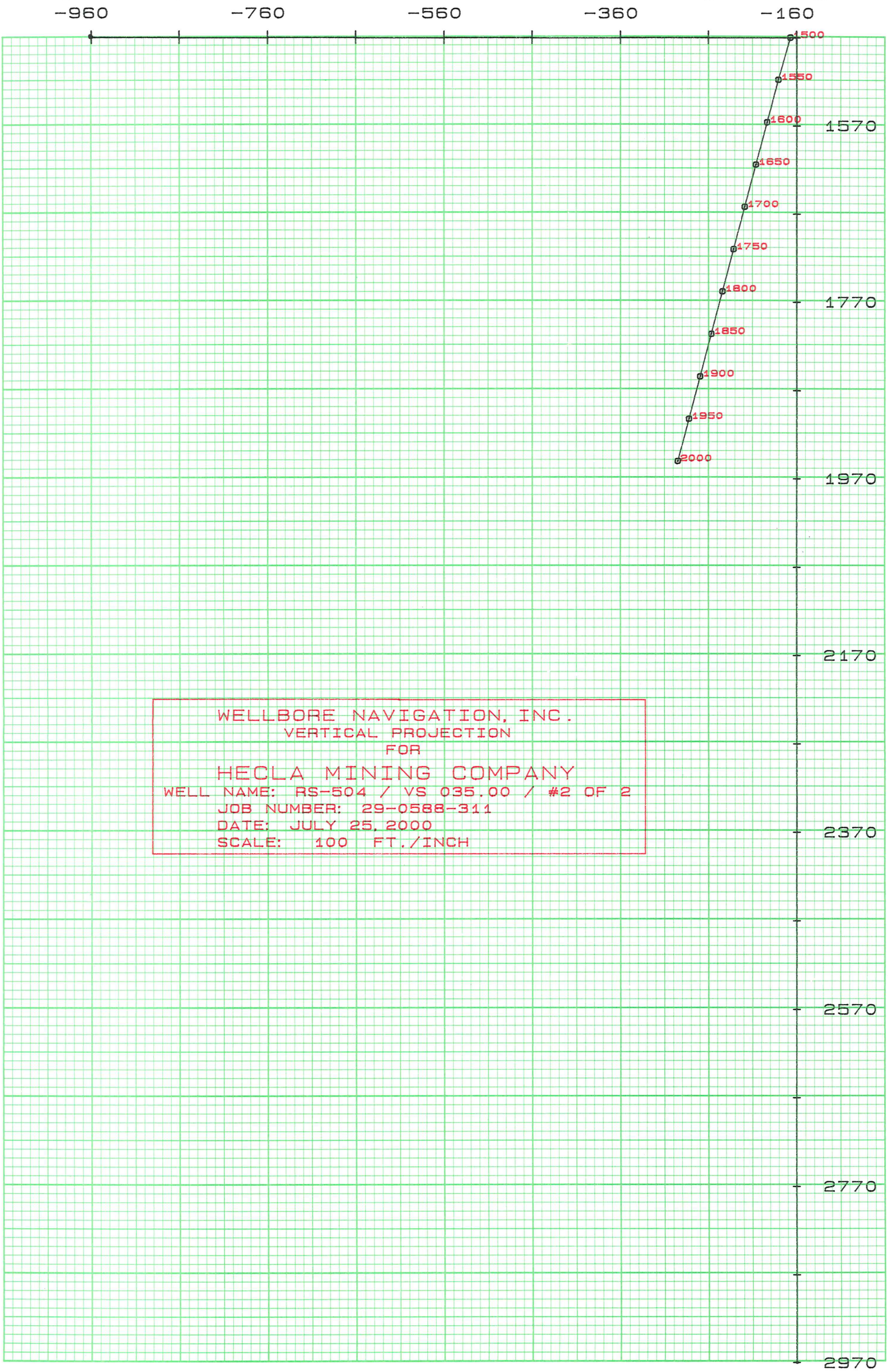

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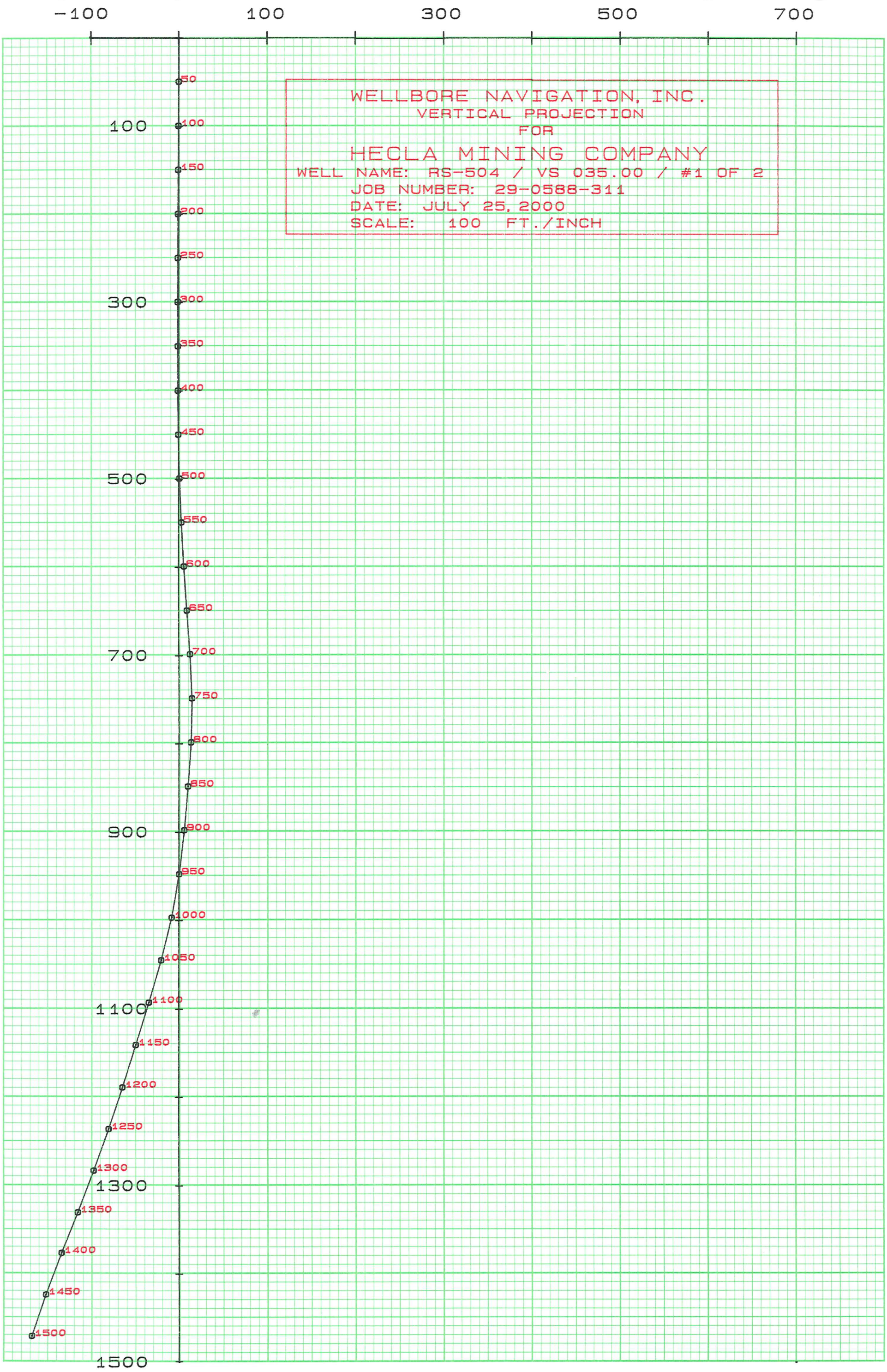
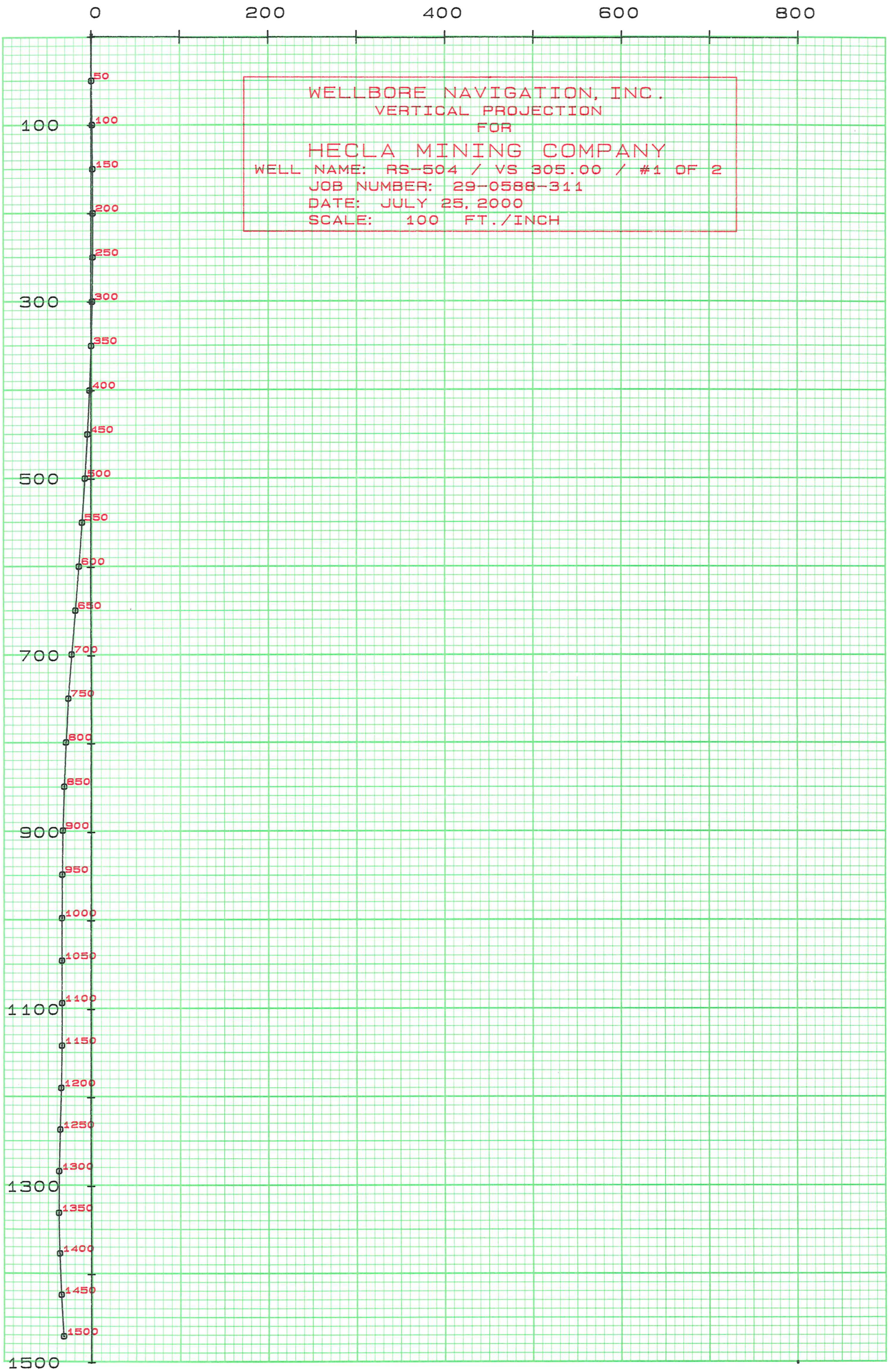
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