6000 0621

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-500
AUTHOR	D. Schoor!; J.P. Rogowski; K. Allen; B. Morris; L.E. Mackedon; V. Reid
DATE OF DOC(S)	2000
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Mining Co, LLC; Gator; Hecla Mining Co.; Rosebud Project
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 1450' invoice; geochemistry 70p.

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)

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

Revised: 1/22/08

RS-500

Gator

60000621
4010

6000 0621

ROSEBUD MINING COMPANY, LLC.

N. side of gator to Cheyenne Intersection of Cerro Cyn & CZY Fault

DRILLING CO. EKlund

COLLAR COORDINATES

NORTH 2,219,519

EAST 480,000

ELEV 5725

DRILLER Don Schoor

HOLE # RS-500

T.D 1450

SURVEYED TO 1025'

Wel-Nav - Vern Reed.

START HOLE 6 June 2000

HOLE TYPE RC-6"

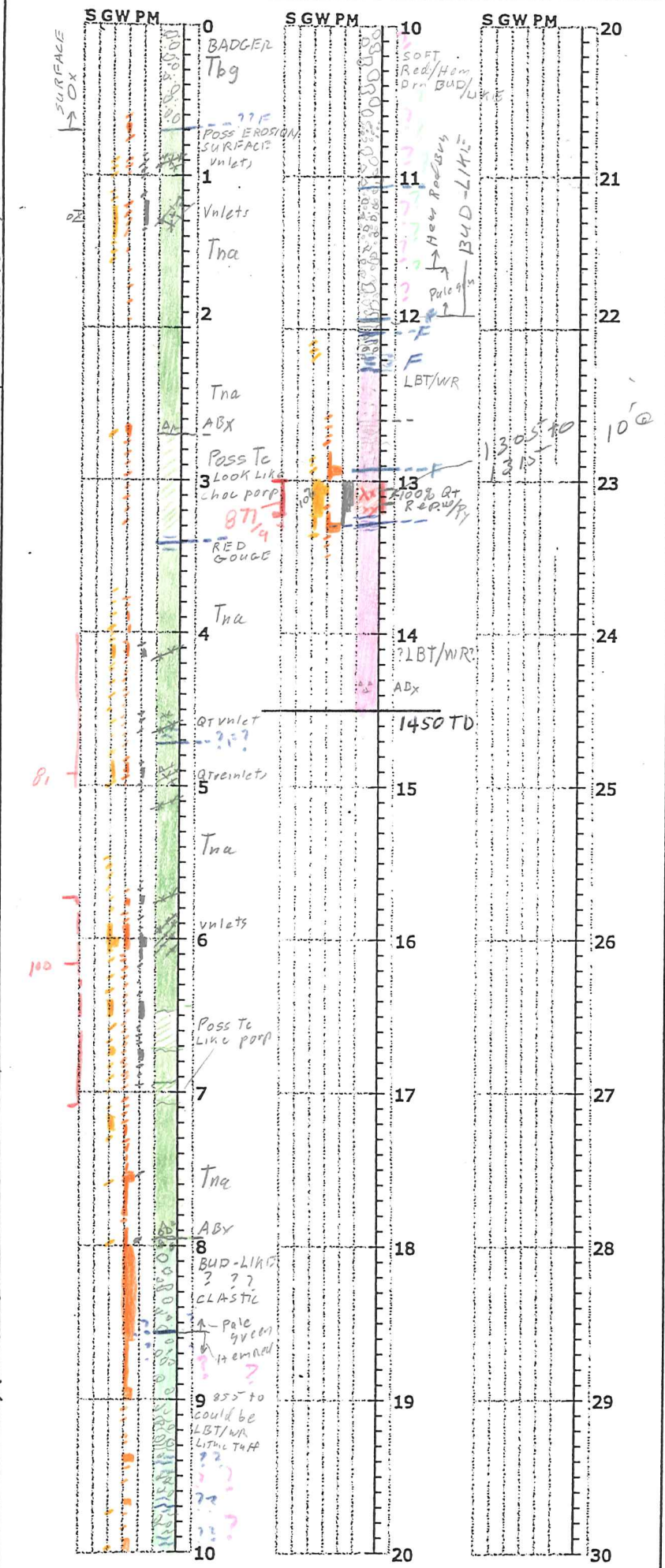
BEARING —

FINISH HOLE 15 June 2000

LOGGED BY Rogowski

ANGLE -90

PAGE 1 OF



ALTERATION INTENSITY

1 WEAK — 2 MODERATE — 3 STRONG

VERITHIN COLOR

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

GRAPHIC LOG

VERITHIN COLOR

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

	NORTH "ANDESITE" (Tna)
	POSS Tc PORP
	BUD-LIKE UNIT
	LBT/WR

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-500
PAGE 2 OF 16
DATE 6 June 2000 TO 15 June 2000
LOGGED BY Rogowski
TOTAL DEPTH 1450 TD

LOCATION ROSEBUD, NV
NORTHING 2,219,519
EASTING 480,000
ELEVATION 5725
AZIMUTH —
INCLINATION -90°

AREA Gator
DRILLING CO. Eklund
RIG TYPE RC
HOLE SIZE 6"
DOWN HOLE SURVEY BY Vern Reed (wel-MAV) to 1,025'

0-100

2/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	QUARTS %	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 %	AS-SUL %	SULFOSALT %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
0			0-70 (very questionable)			0					Tr to 1					1										0														
10			Best guess is (Tba)													1																								
20			Badgers made													0																								
			up of North andesite													0																								
			and other porphyrys.	MH												tr	EFFER OK FRACTURES																							
30			What looks like Qt													0																								
			grains in mud on																																				
40			occa.																																				
50																																							
											Tr to 1																												
60			clay (white) & mix								1															0														
			of above rocks								2															?														
			COULD BE EROSION SURFACE OR FAULT																																				
70	22										1					0										0														
			70-100 North "Andesite"	H							0					1																								
80			From 80 to 95 prob cut																																					
			thin steep dipping alt			0					0																													
90			struct w/ tr silica & Bx			Tr					1						EFFER OF PLAG PHENOS									Tr							TABULAR PY LIKE XIS ?Arsenopy?								
			& mod clay.			Tr					1															Tr														
100			(Tna) North "Andesite" (cont)	H		Tr					1					1										Tr														

SURFACE OXIDIZATION

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-500
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

1-200

3/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
100			100 to 200 (cont)	H	
110			North "Andesite" – weakly		
			propylitic (phenos		
120		Bleached	effer). Has 5 to 15%		with vel silic
			micro plag. phenos.		
130			Some are glomerophyric		
			also see rare		
140			K-spar + Femag phenos		Fx in Porphyry matrix of olive and gray frags
			& poss a rare bio.		
150		"NORTH ANDESITE"	Also 3% specularite/		
			magnetite.		
160			120 to 130 is a min.		
			struct. central silic.		
170			w/ argillic alt out-		
			side. Py is PyH & A		
180			w/ red rims (ox)		
			Note:		
			Matrix varies in		
190			color from olive green		
			to med gray but is same		
			rock.		
			ALSO! some chance that		
200			the gray is a choc porp	H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	QUARTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
100	0					Tr					1							
110	0										1							
	1					Tr					0							
120	2					1												
	2					1												
130	2					1					0							
	Tr					Tr					1							
140	0																	
150																		
160																		
170																		
180																		
190											1							
											0							
200	0					Tr					Tr							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SUL %	SULBNE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
100				0														
110				Tr														
				1														
120			very fine x'ln	2														
				2														
130				2	Py H + A					surface ox along structure								
				0														
140				Tr														
150				Tr														
160				0														
170																		
180																		
190																		
200				0														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-500
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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 4/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
200		tr ABX	200-300 (Tna) North "Andesite"	H	1-2 mm micro porphyritic mix of gray and olive green
210		"	same as 100-200		
		"	more certain		
220		"	now that the gray color		
			is from weak clay		
230			or argillic alteration		
			All of it has wt		
240			clay on fract		
			& plag. Femags are		
250			soft		
			Alunite? stgr 1/16"		
260		ABX			
270					
280			275-300 mod Ltgray		
		?	(Tc)? chloc? Porphyry?		
290			still has num plag		
			as above but		
300			also num bio & Kspar (Long)	H	

FEET	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
200	0					tr					0							
210											1							
											1							
220											0							
											tr							
230											1							
240																		
250													?					
260																		
270	0					tr												
						1-2												
						1												
280											1							
											tr							
290											Tr							
											0							
300	0					1					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
200				0														
300				0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

AREA 3-400
DRILLING CO.
RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

5/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
300			270 to (CONT)	14	
		cxln porph	phenocrys. also consid.		1.4cm Red & grey
310			speculante, and		
			more granular &		
320			has a different		
			tex. Also num.		
330			Fmag. & occa. strong		
			Flow banding. (Tc?)		
340	F?		Red Gouge		
			After 340 is a		Micro porphyritic
350			change in texture		
		Fxln porp	to a fine xln, Hem red		
360			matrix & small		
			plag planes similar		
370			to tna but more		
			coarse xln & fewer		olive green
380			plag planes		
		Tna	Note From 380 to 400		
390			appears to grade back		
			in to Tna		
400		Olivin		14	1.4cm Red

FEET	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
300	0					1					0							
310	0					1					0							
320	0					tr					0							
	?					1					1							
330	0					0					0							
	0					1					tr							
340	0					0					tr							
	0					0					tr							
350	0					0												
	0					0												
360	0					1												
	0					0												
370	0					0												
	0					0					tr							
380	0					1					1							
	0					tr					2							
390	0					1					2							
	0					1-2					2							
400	1					1-2					2							

Red clay
Red clay
Plag phenos are soft/white
Red clays tgr

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
300				0														
310																		
320																		
330																		
340																		
350																		
360																		
370																		
380				0														
				tr														
390				tr														
				tr														
400				tr														
				1														

Very fine Pyrite in white silicic/clay

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-500
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DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
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AZIMUTH
INCLINATION

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

4-500

6/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
400			380 TO 500 Tna Prob. North "Andesite" that is cut by num. silica-py-clay stgrs. usual — Fx lm ground mass w/ micro. plag. + rare bio. + specular	H	Micro porphyritic lm. Fx lm ground mass
410					
420		BK			
430					
440					
450					
460		BLK			
470	?	BK	Poss Fault but very questionable		
480		BLK STRKS			
490					
500			TNa	H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	%	VIENING TYPE
400	tr					tr					1							
410	1					1					1							
	2					2					1							
420	tr					tr					1							
	0					tr					1							
430	1					1					tr							
	1					1					2							
440	1					1					1							
	1					1					1							
450	0					tr					1							
	tr					tr					1							
460	tr					1					1							
	0					tr					1							
470	0					tr					2							
	0					tr					1							
480	0					tr					tr							
	1					1					tr							
490	2					2					0							
	tr					2					0							
500	tr					tr					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SUL %	SUBEDRE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
400				1														
410				2														
				3	Vnlet													
420				3														
				tr														
430				tr														
				tr														
440				tr														
				0														
450				0														
				1														
460				3														
				tr														
470				2														
				2														
480				tr														
				2														
490				5														
				3														
500				2														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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TOTAL DEPTH

LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

7/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
500		NORTH "ANDESITE"	500-600 (Tna)	H	↑ 1=xln groundmass w/ micro plag phenos. ↓
510			North Andesite — prob same as +-500 Fxln groundmass w/ plag phenos & rare bio + hum specs of specularite. this is cut by several narrow stringers w/ silica-pyclay		
520					
530					
540					
550					
560					
570		BIC			
580					
590		BIC			
600				H	

FEET	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
500	0					Tr to 1					Tr							
510											1							
520																		
530																		
540																		
550											1							
560											2							
											2							
570	0					Tr 1					2							
	Tr					1					2							
580	2					2					Tr							
	Tr					1					Tr							
590	0					1					0							
	1					1												
	Tr					2												
600	Tr					2					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	SLBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
500				Tr														
510				0														
520				0														
530				Tr														
540				0														
550				Tr														
560				1														
				Tr														
570				1														
				Tr														
580				3														
				1														
590				Tr														
				1														
				2														
600				2														

Py is VEx'd in cubic & Py-C) overhadhar

Hecla MINING COMPANY

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HOLE NUMBER RS-500
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NORTHING
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AZIMUTH
INCLINATION

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

6 - 700

8/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
600		BIch	Py, SiO2, clay stgrs	H	
610			600 to 645 Tna as usual		
			Has several		
620			py-SiO2-clay veinlets		
630		Tna			
640		BIch			
			645 to 670 Appears to be a Tc porp - Lt to med gray, basal Lava K-spar & Tna-like plag & bio w/ specularite - looks like a Tc porphyry		
650					
660					
670		Ar BY	← spider text		
		TBY	670 - 700 Tna		
680		TBY	Tna very similar to 600 to 645		
690					
700			similar to 645-670	H	

Fxln matrix & numerous phenos. 1 Reddish-gray

Item Rare

FEET	SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
600	2+3					2					Tr							
610	2					1					1							
	Tr					Tr					2							
620	Tr					Tr					2							
	1					1					2							
630	1					1					1							
	1					1					1							
640	1+2					1					1							
	2					1					0							
650	2	crush el 3%				1					1							
	1					1					0							
660	1					1					0							
	Tr					1					Tr							
670	Tr					1					0							
	2					1					0							
680	1					1					0							
	1					1					1							
690	Tr					Tr					1							
	Tr					Tr					1							
700	Tr					1	wt clay s + gr s				1							

Item Rare

FEET	MINERALIZATION SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SUL %	SULFOSALT %	BARITE %	METALLURGY OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA FROM	TO	W	Au	Ag
600				5														
610				3														
				Tr														
620				1														
630				0														
				Tr														
640				1														
				2														
650				3									← dr gray iron rimmy py					
				0														
660				0														
				1														
670				1														
				2 - Tr spider text														
680				1														
				1														
690				Tr														
				0														
700				Tr														
				0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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HOLE NUMBER RS-500
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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

7-800 9/16

FEET	ROCK TYPE	LITHOLOGY	HARDNESS	SILICIFICATION 5%	ARGILLIC 5%	PROPYLITIC % CALCITE	PY %	Notes
700	North Andesite (Tna)	Tna w/ Larg kspar	m H	0	1	Tr	1	
		710 to 800 (Tna)		0	Tr	Tr	Tr	
710		Difference may be		0	1	1 ← Plag	0	
		that the matrix		0	1	0	1	in wt Alt only
720		is more coarse		0	1-2	Tr	1	abt 30%
		xln & do see		0	1	1	Tr	← Large cubes in vemlet coated w/ small cubes.
730		a rare K-spar		0	1-2	1	0	
		(larger). All	S	0	2	1	0	
740		Feldspar is soft		0	1+2	1	0	
		wt clay & from		1	1	1	0	
750		750 to 795 the plag		0	1+2	1	0	
		is usually effer.		0	3	2	Tr	— Py Hov fract or vnlets
760		also a rare bio		0	2	1	0	
		(very small) & num		0	2	2		
770		specularite specks		0	2	2		
		& wt clay stars		0	1+2	2		
780				0	1	2		
				0	2	2		
790	TBx			0	1+2	1	0	
800	Bud-like	← red silica vnlets	S	1	1+2	1	Tr	

TEXTURE: Fxln porphyritic & clay soft Hem red w/ wt clay Py vnlets

Propylitic distal

Hecla MINING COMPANY
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LOCATION ROSEBUD. NV
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INCLINATION

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

8-900 10/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
800		BUD LIKE CLASTIC	795 — BUD-LIKE	5	CLASTIC Pale green & gray
810			Abrupt change to clastic w/ very soft mudstone or clay matrix, matrix and clasts often have perlitic rings		
820					
830					
840			traces of broken bio.		
850		CLAY/COARSE MATRIX BUD LIKE	Multilithic. Appears that groundmass is very strongly clay alt. but clasts much less so.		CLASTIC Pale green
860		BUD LIKE CLASTIC			
870					CLASTIC Hem Red
880					
890			Basalt Dike ??? (1) magnetic 5' of mono. lith. Femuy		
900					

FEET	SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
795	0					3					1							
800	0					3					1							
805	0					3					1							
810	0					3					2							
815	0					+3					2							
820						3					2							
825						3					1							
830						3					2							
835						+3					3							
840						+3					3							
845	0					+3					3							
850						2				tr	2							
855						+3+1				tr	1							
860						2				tr	1							
865						2+1				tr	1							
870						2+1				tr	tr							
875						2+3				tr	tr							
880						1				2	tr							
885						3+2				tr	tr							
890	0					3+2				tr	tr							

FEET	MINERALIZATION SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	STIBNITE %	BARITE %	METALLURGY OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA FROM	TO	W	Au	Ag
795				0														
800																		
805																		
810																		
815																		
820																		
825																		
830																		
835																		
840																		
845																		
850																		
855																		
860																		
865																		
870				0														
875				tr														
880				0														
885				0														
890				0														
895				0														
900				tr														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-500
PAGE 11 OF 16
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

9-1000 11/16

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 %	STIBNITE %	BARITE %	METALLURGY (OXIDE / SULF / CARBON / MCURE)	ANALYTICAL DATA (FROM / TO / W / Au / Ag)
900			900-1000	S		0		1					0							
910			Drk clastic or bed-like unit					1												
920		Tg / Tg	between Tna + LBT/WR. Multi-				matrix always a 3 clay	1 / tr / Tr												
930		CLASTIC - DRK colour	Lithic. some of it would pass		CLASTIC Hem ld + gray + Pale green			1												
940	≈		Gray Gouge; for a wispy,				3; clasts 1 to 3 clay													
950			compacted, welded multi lithic tuff																	
960			matrix has broken bio + is often wisp.																	
970	≈	?	Gray Gouge				3													
980																				
990	≈	?	Gray Gouge				3													
1000				S		0		1	1				0							

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
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or % by Vol

HOLE NUMBER RS-500
PAGE 12 OF 16
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD. NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

10-1100

12/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1000		HEM RED BUD-LIKE LAYER IN THE LBT/tuff	1000 — 1100		
			multi lithic	S	VERY COARSE CLASTIC Hem-Red bis Brn
1010			clasts, med Hard		
			matrix is particulate		
1020			or similar to a	S	
			Hem red mudstone	MH	
1030			although it is		
			multi lithic about		
1040			90% of clast are		
			LBT Like rhyo. Broken		
1050			bio in soft matrix		
			Not sure if clast,		
1060			or lithic tuff or		
			Flow Bx		
1070				MS	
			1070 — 1100 could	MS	
1080			pass for LBT/wr	H	
			Auto Bx		
1090					
1100				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CALCITE	CHLORITE	POTASSIC % K-SPAR	BIOTITE	OXIDATION 5%	15%	+25%	%	VIENING TYPE
1000	0					tr?			soft clay?	matrix	1							
1010						1												
						tr												
1020																		
1030																		
1040						tr												
1050						0												
1060																		
1070											1							
1080											2							
1090											1							
1100	0					0					1							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1000				tr?														
1010				0														
1020																		
1030																		
1040																		
1050																		
1060																		
1070																		
1080																		
1090																		
1100				0														

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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3 = STRONG
or % by Vol

HOLE NUMBER RS-500
PAGE 13 OF 16
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

13/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1100			1100 - 1110	H	
			clastic, Hard		
		F	Red clay clasts.		
1110			Gouge	H	
			1110 to 1165 very	S	
1120			soft Red mud sty.	VS	
			matrix w. bio (broken)		
1130			Note: this red mud-		
			stone matrix looks		
1140			the same as the green		
			waxy material in		
1150			the pale green BUD,		Hem Reddish Brown
			even the same		
1160			broken bio. many		
			clasts soft	VS	
			1165 - 1200		
1170			pale green soft		
			matrix + Hard		
1180			Hem red, Rhyo		
			clasts		
1190					
		?	Gray Gouge		
			1195 - 1200 Poss some		Pale green + Red Bryl
1200			LBT/WR Rhyo Flow		

ALTERATION

FEET	SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	SILICIFICATION CLASTS %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE
1100	0					? 2°					1							
1110																		
1120																		
1130																		
1140																		
1150																		
1160																		
1170																		
1180											1							
1190											2							
1200											2							

Clay Alt or Red mudstone

soft matrix may not be a lay alt.

MINERALIZATION

FEET	SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SLF %	SILBNITE %	BARITE %
1100				0					
1200				0					

METALLURGY

FEET	OXIDE	SULF	CARBON	MOLYBDE

ANALYTICAL DATA

FEET	FROM	TO	W	Au	Ag

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER: RS-500
PAGE 14 OF 16
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%	15%	+25%	MASSIVE	QUARTS	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 %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1200		F?	Gray Gouge 1200 to 1300 LBT/WR	VS		0					3					Tr											0														
1210			Flow bands. Note: Poss a mix of some bud-like + LBT/WR	S		0					2-3					Tr											Tr														
											2					Tr											Tr														
1220		F	Grn + wt Gouge 12-1300 all very								2+3					0											Tr														
		F									2+3					1											0														
1230			soft + clay alt.								1+2					2																									
																1																									
1240			clearly LBT+WR																																						
			Note — almost all																																						
1250			is strong clay alt																																						
			& gray in color.								1+2																														
1260											1																														
			Flow bands																																						
1270											S					1																									
																2																									
1280				S							1					2																									
				V.S							2					1																									
1290		F	wt CLAY After 1290 to 1300 Green + wt clay alt w/ some Brn. Green along stgrs.	V/S	Grn + wt Grn + Brn	0					2+3					2											0														
				V/S		Tr-1			several frags of 3S		3					2											Tr														
1300				H		1					2 — Brnish green					Tr											Tr-1 — Diss, outwind from stgrs Py Cb H+A													

Gray gouge w/ some wt and Green stgrs

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER RS-500
PAGE 15 OF 16
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

15/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGQ	QSTS	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	OXIDOX	NCOLE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1300	Qt	Vn Rep	1300 to 1320 – Complete silicin rep. w/ very	VH		+3					tr					0											7	Py	A, H, CO											
1310	Qt	Vn Rep	strong Py. Prob			+3					tr																10		H											
	Qt	Vn Rep	LBT/WR. Py is			+3					0																7		"											
1320	Qt	Vn Qu	dissem. on fract &	VH		3					1	w/ clay															5		"											
		F	in Vugs w/ drusy Qt	S		1+2					2					tr	ito xl										2													
1330		F	WT GOUGE 1300 to 1320 Looks very good	S		2					3+2					1											2													
				MH		Tr					1					1											tr													
1340				H		0					tr																0													
											0																													
1350			From 1330 to 1400																																					
			is Hem. Rd-Brn																																					
1360			LBT/WR.																																					
			Note: Not 100%																																					
1370			positive this is LBT/																																					
			WR, has usual LBT																																					
1380			but also an													1																									
			occasional (?Plag?)													0																									
1390			Approaching "wt-"													tr																									
			spot alt.													tr																									
1400				H		0					0					tr											0													

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

INTENSITY
1 = WEAK
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or % by Vol

HOLE NUMBER: RS-500
PAGE 16 OF 16
DATE:
LOGGED BY:
TOTAL DEPTH: 1450 TD

LOCATION: ROSEBUD. NV
NORTHING:
EASTING:
ELEVATION:
AZIMUTH:
INCLINATION:

AREA: N. Gator
DRILLING CO.:
RIG TYPE:
HOLE SIZE:
DOWN HOLE SURVEY BY:

14-1450TD 16/16

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MAJOR	SILICIFICATION QUARTZ %	ARGILLIC 5%	ARGILLIC 15%	ARGILLIC +25%	ARGILLIC TYPE	PROPYLITIC % CHLORITE	PROPYLITIC % CALCITE	POTASSIC % K-SPAR	POTASSIC % ALUNITE	OXIDATION 5%	OXIDATION 15%	OXIDATION +25%	VIENING %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	K-SUL %	SEBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1400		1B	1400-1450TD LBT/WR (Note: see	H	Flaw bonded Rhyo. Hemimorphite - Brn	0					0					1											0						Hem Oxidized NOT Oxidized								
1410		V	a few plag. phenos and													1																									
		V	several at 142-) all													Tr																									
1420			other indications													1																									
		R1	indicate it is LBT/WR.													Tr																									
1430		ABY	A few minor chalc																																						
		ABY	Qt. in fract fillings																																						
1440			Approaching "white"																																						
		V	spot" alt.																																						
1450				H		0					0					Tr											0														
			1450TD																																						
60																																									
70																																									
80																																									
90																																									
00																																									

90% on thin calc. stgrs

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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Fax
(702) 738-2594

Zacatecas Office
Telephone/Fax
011-52-49-234530

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: Rosebud Mining, LLC

Address: PO Box 2610

City Winnemucca State NV Zip 89446

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

Project Name: Wildrose East Purchase Order Number:

Date Submitted: 16 June 2008 Number of Samples: 290

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

SAMPLE IDENTIFICATION	TYPE	ELEMENTS REQUIRED
Drill Hole: RS-500	RC	Au+Ag Use Rosebud Exploration
0 to 1450		Protocol sample prep & assays
Note: Please make up 20foot composits for		
ICP + Se Trace elements		
1 (one) Pulp - Rosebud Production Standard at		
End of Run.		

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month

[X] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

Kurt Allen
PO Box 2610
Winnemucca, NV 89446

Results to:

Kurt Allen

— Same —

Comments:

CLIENT FILE COPY

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS
: KURT ALLEN
:
:

RS-500

CLIENT REFERENCE No: RS-500 RECEIVED : 19 JUN 2000

No. SAMPLES : 291 REPORTED : 5 JUL 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.

07/05/2000 10:43 7753561413 AMERICAN ASSAY LABS PAGE 01
7753561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 000-005	<5		<0.001		<0.5	<0.02
RS-500 005-010	<5		<0.001		<0.5	<0.02
RS-500 010-015	<5		<0.001		<0.5	<0.02
RS-500 015-020	<5		<0.001		<0.5	<0.02
RS-500 020-025	12		<0.001		<0.5	<0.02
RS-500 025-030	8		<0.001		<0.5	<0.02
RS-500 030-035	<5		<0.001		<0.5	<0.02
RS-500 035-040	7		<0.001		<0.5	<0.02
RS-500 040-045	6		<0.001		<0.5	<0.02
RS-500 045-050	<5		<0.001		<0.5	<0.02
RS-500 050-055	<5		<0.001		<0.5	<0.02
RS-500 055-060	6		<0.001		<0.5	<0.02
RS-500 060-065	<5		<0.001		<0.5	<0.02
RS-500 065-070	<5		<0.001		<0.5	<0.02
RS-500 070-075	<5		<0.001		<0.5	<0.02
RS-500 075-080	5		<0.001		<0.5	<0.02
RS-500 080-085	<5		<0.001		<0.5	<0.02
RS-500 085-090	<5		<0.001		<0.5	<0.02
RS-500 090-095	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 095-100	7		<0.001		<0.5	<0.02
RS-500 100-105	<5		<0.001		<0.5	<0.02
RS-500 105-110	<5		<0.001		<0.5	<0.02
RS-500 110-115	6		<0.001		<0.5	<0.02
RS-500 115-120	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 120-125	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 125-130	66	78	0.002	0.002	<0.5	<0.02
RS-500 130-135	8		<0.001		<0.5	<0.02
RS-500 135-140	7		<0.001		<0.5	<0.02
RS-500 140-145	<5		<0.001		<0.5	<0.02
RS-500 145-150	<5		<0.001		<0.5	<0.02
RS-500 150-155	<5		<0.001		<0.5	<0.02
RS-500 155-160	6		<0.001		<0.5	<0.02
RS-500 160-165	<5		<0.001		<0.5	<0.02
RS-500 165-170	9		<0.001		<0.5	<0.02
RS-500 170-175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 175-180	6		<0.001		<0.5	<0.02
RS-500 180-185	<5		<0.001		<0.5	<0.02
RS-500 185-190	7		<0.001		<0.5	<0.02
RS-500 190-195	6		<0.001		<0.5	<0.02
RS-500 195-200	<5		<0.001		<0.5	<0.02
RS-500 200-205	<5		<0.001		<0.5	<0.02
RS-500 205-210	<5		<0.001		<0.5	<0.02
RS-500 210-215	6		<0.001		<0.5	<0.02
RS-500 215-220	<5		<0.001		<0.5	<0.02
RS-500 220-225	8		<0.001		<0.5	<0.02
RS-500 225-230	<5		<0.001		<0.5	<0.02
RS-500 230-235	5		<0.001		<0.5	<0.02
RS-500 235-240	<5		<0.001		<0.5	<0.02
RS-500 240-245	<5		<0.001		<0.5	<0.02
RS-500 245-250	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 250-255	<5		<0.001		<0.5	<0.02
RS-500 255-260	5		<0.001		<0.5	<0.02
RS-500 260-265	<5		<0.001		<0.5	<0.02
RS-500 265-270	<5		<0.001		<0.5	<0.02
RS-500 270-275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 275-280	8		<0.001		<0.5	<0.02
RS-500 280-285	<5		<0.001		<0.5	<0.02
RS-500 285-290	8		<0.001		<0.5	<0.02
RS-500 290-295	<5		<0.001		<0.5	<0.02
RS-500 295-300	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 300-305	7		<0.001		<0.5	<0.02
RS-500 305-310	6		<0.001		<0.5	<0.02
RS-500 310-315	<5		<0.001		<0.5	<0.02
RS-500 315-320	6		<0.001		<0.5	<0.02
RS-500 320-325	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 325-330	5		<0.001		<0.5	<0.02
RS-500 330-335	<5		<0.001		<0.5	<0.02
RS-500 335-340	<5		<0.001		<0.5	<0.02
RS-500 340-345	<5		<0.001		<0.5	<0.02
RS-500 345-350	<5		<0.001		<0.5	<0.02
RS-500 350-355	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 355-360	13		<0.001		<0.5	<0.02
RS-500 360-365	5		<0.001		<0.5	<0.02
RS-500 365-370	5		<0.001		<0.5	<0.02
RS-500 370-375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 375-380	6		<0.001		<0.5	<0.02
RS-500 380-385	6		<0.001		<0.5	<0.02
RS-500 385-390	<5		<0.001		<0.5	<0.02
RS-500 390-395	<5		<0.001		<0.5	<0.02
RS-500 395-400	<5		<0.001		<0.5	<0.02
RS-500 400-405	13	12	<0.001	<0.001	<0.5	<0.02
RS-500 405-410	14		<0.001		<0.5	<0.02
RS-500 410-415	6		<0.001		<0.5	<0.02
RS-500 415-420	24	24	<0.001	<0.001	<0.5	<0.02
RS-500 420-425	14		<0.001		<0.5	<0.02
RS-500 425-430	7		<0.001		<0.5	<0.02
RS-500 430-435	20		<0.001		<0.5	<0.02
RS-500 435-440	11		<0.001		<0.5	<0.02
RS-500 440-445	<5		<0.001		<0.5	<0.02
RS-500 445-450	<5		<0.001		<0.5	<0.02
RS-500 450-455	25		<0.001		<0.5	<0.02
RS-500 455-460	12		<0.001		<0.5	<0.02
RS-500 460-465	<5		<0.001		<0.5	<0.02
RS-500 465-470	19		<0.001		<0.5	<0.02
RS-500 470-475	25	26	<0.001	<0.001	<0.5	<0.02
RS-500 475-480	6		<0.001		<0.5	<0.02
RS-500 480-485	10		<0.001		<0.5	<0.02
RS-500 485-490	81	88	0.002	0.003	<0.5	<0.02
RS-500 490-495	42		0.001		<0.5	<0.02
RS-500 495-500	20		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 500-505	5		<0.001		<0.5	<0.02
RS-500 505-510	<5		<0.001		<0.5	<0.02
RS-500 510-515	<5		<0.001		<0.5	<0.02
RS-500 515-520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 520-525	<5		<0.001		<0.5	<0.02
RS-500 525-530	5		<0.001		<0.5	<0.02
RS-500 530-535	<5		<0.001		<0.5	<0.02
RS-500 535-540	8		<0.001		<0.5	<0.02
RS-500 540-545	<5		<0.001		<0.5	<0.02
RS-500 545-550	<5		<0.001		<0.5	<0.02
RS-500 550-555	<5		<0.001		<0.5	<0.02
RS-500 555-560	16		<0.001		<0.5	<0.02
RS-500 560-565	<5		<0.001		<0.5	<0.02
RS-500 565-570	<5		<0.001		<0.5	<0.02
RS-500 570-575	38	46	0.001	0.001	<0.5	<0.02
RS-500 575-580	6		<0.001		<0.5	<0.02
RS-500 580-585	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 585-590	22		<0.001		<0.5	<0.02
RS-500 590-595	9		<0.001		<0.5	<0.02
RS-500 595-600	8		<0.001		<0.5	<0.02
RS-500 600-605	48		0.001		<0.5	<0.02
RS-500 605-610	67		0.002		<0.5	<0.02
RS-500 610-615	100		0.003		<0.5	<0.02
RS-500 615-620	28		<0.001		<0.5	<0.02
RS-500 620-625	10	14	<0.001	<0.001	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 625-630	26		<0.001		<0.5	<0.02
RS-500 630-635	8		<0.001		<0.5	<0.02
RS-500 635-640	19		<0.001		<0.5	<0.02
RS-500 640-645	32		<0.001		<0.5	<0.02
RS-500 645-650	20	28	<0.001	<0.001	<0.5	<0.02
RS-500 650-655	7		<0.001		<0.5	<0.02
RS-500 655-660	10		<0.001		<0.5	<0.02
RS-500 660-665	22		<0.001		<0.5	<0.02
RS-500 665-670	81	74	0.002	0.002	<0.5	<0.02
RS-500 670-675	22		<0.001		<0.5	<0.02
RS-500 675-680	14		<0.001		<0.5	<0.02
RS-500 680-685			SAMPLE NOT RECEIVED			
RS-500 685-690	12		<0.001		<0.5	<0.02
RS-500 690-695	7		<0.001		<0.5	<0.02
RS-500 695-700	21	26	<0.001	<0.001	<0.5	<0.02
RS-500 695-700A	6		<0.001		<0.5	<0.02
RS-500 700-705	10		<0.001		<0.5	<0.02
RS-500 705-710	5		<0.001		<0.5	<0.02
RS-500 710-715	6		<0.001		<0.5	<0.02
RS-500 715-720	<5		<0.001		<0.5	<0.02
RS-500 720-725	6		<0.001		<0.5	<0.02
RS-500 725-730	11		<0.001		<0.5	<0.02
RS-500 730-735	5		<0.001		<0.5	<0.02
RS-500 735-740	6		<0.001		<0.5	<0.02
RS-500 740-745	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 745-750	9		<0.001		<0.5	<0.02
RS-500 750-755	7		<0.001		<0.5	<0.02
RS-500 755-760	5		<0.001		<0.5	<0.02
RS-500 760-765	6		<0.001		<0.5	<0.02
RS-500 765-770	6		<0.001		<0.5	<0.02
RS-500 770-775	6		<0.001		<0.5	<0.02
RS-500 775-780	13		<0.001		<0.5	<0.02
RS-500 780-785	8		<0.001		<0.5	<0.02
RS-500 785-790	6		<0.001		<0.5	<0.02
RS-500 790-795	7		<0.001		<0.5	<0.02
RS-500 795-800	5		<0.001		<0.5	<0.02
RS-500 800-805	<5		<0.001		<0.5	<0.02
RS-500 805-810	<5		<0.001		<0.5	<0.02
RS-500 810-815	5		<0.001		<0.5	<0.02
RS-500 815-820	7		<0.001		<0.5	<0.02
RS-500 820-825	<5		<0.001		<0.5	<0.02
RS-500 825-830	6		<0.001		<0.5	<0.02
RS-500 830-835	8		<0.001		<0.5	<0.02
RS-500 835-840	8		<0.001		<0.5	<0.02
RS-500 840-845	9		<0.001		<0.5	<0.02
RS-500 845-850	10		<0.001		<0.5	<0.02
RS-500 850-855	6		<0.001		<0.5	<0.02
RS-500 855-860	8		<0.001		<0.5	<0.02
RS-500 860-865	6		<0.001		<0.5	<0.02
RS-500 865-870	8		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 870-875	<5		<0.001		<0.5	<0.02
RS-500 875-880	7		<0.001		<0.5	<0.02
RS-500 880-885	<5		<0.001		<0.5	<0.02
RS-500 885-890	11		<0.001		<0.5	<0.02
RS-500 890-895	7		<0.001		<0.5	<0.02
RS-500 895-900	5		<0.001		<0.5	<0.02
RS-500 900-905	9		<0.001		<0.5	<0.02
RS-500 905-910	8		<0.001		<0.5	<0.02
RS-500 910-915	6		<0.001		<0.5	<0.02
RS-500 915-920	8		<0.001		<0.5	<0.02
RS-500 920-925	9		<0.001		<0.5	<0.02
RS-500 925-930	8		<0.001		<0.5	<0.02
RS-500 930-935	5		<0.001		<0.5	<0.02
RS-500 935-940	9		<0.001		<0.5	<0.02
RS-500 940-945	8		<0.001		<0.5	<0.02
RS-500 945-950	9		<0.001		<0.5	<0.02
RS-500 950-955	9		<0.001		<0.5	<0.02
RS-500 955-960	11		<0.001		<0.5	<0.02
RS-500 960-965	10		<0.001		<0.5	<0.02
RS-500 965-970	8		<0.001		<0.5	<0.02
RS-500 970-975	<5		<0.001		<0.5	<0.02
RS-500 975-980	9		<0.001		<0.5	<0.02
RS-500 980-985	8		<0.001		<0.5	<0.02
RS-500 985-990	6		<0.001		<0.5	<0.02
RS-500 990-995	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 995-1000	9		<0.001		<0.5	<0.02
RS-500 1000-1005	8		<0.001		<0.5	<0.02
RS-500 1005-1010	6		<0.001		<0.5	<0.02
RS-500 1010-1015	<5		<0.001		<0.5	<0.02
RS-500 1015-1020	12		<0.001		0.9	0.03
RS-500 1020-1025	5		<0.001		<0.5	<0.02
RS-500 1025-1030	8		<0.001		<0.5	<0.02
RS-500 1030-1035	6		<0.001		<0.5	<0.02
RS-500 1035-1040	6		<0.001		<0.5	<0.02
RS-500 1040-1045	<5		<0.001		<0.5	<0.02
RS-500 1045-1050	8		<0.001		0.5	<0.02
RS-500 1050-1055	9		<0.001		<0.5	<0.02
RS-500 1055-1060	8		<0.001		0.7	0.02
RS-500 1060-1065	<5		<0.001		<0.5	<0.02
RS-500 1065-1070	8		<0.001		<0.5	<0.02
RS-500 1070-1075	5		<0.001		<0.5	<0.02
RS-500 1075-1080	5		<0.001		<0.5	<0.02
RS-500 1080-1085	<5		<0.001		<0.5	<0.02
RS-500 1085-1090	<5		<0.001		<0.5	<0.02
RS-500 1090-1095	7		<0.001		<0.5	<0.02
RS-500 1095-1100	<5		<0.001		<0.5	<0.02
RS-500 1100-1105	6		<0.001		<0.5	<0.02
RS-500 1105-1110	6		<0.001		<0.5	<0.02
RS-500 1110-1115	7		<0.001		<0.5	<0.02
RS-500 1115-1120	7		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

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REFERENCE : RS-500

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 1120-1125	6		<0.001		<0.5	<0.02
RS-500 1125-1130	7		<0.001		<0.5	<0.02
RS-500 1130-1135	<5		<0.001		<0.5	<0.02
RS-500 1135-1140	6		<0.001		<0.5	<0.02
RS-500 1140-1145	9		<0.001		<0.5	<0.02
RS-500 1145-1150	8		<0.001		<0.5	<0.02
RS-500 1150-1155	6		<0.001		<0.5	<0.02
RS-500 1155-1160	<5		<0.001		<0.5	<0.02
RS-500 1160-1165	6		<0.001		<0.5	<0.02
RS-500 1165-1170	12		<0.001		<0.5	<0.02
RS-500 1170-1175	8		<0.001		<0.5	<0.02
RS-500 1175-1180	7		<0.001		<0.5	<0.02
RS-500 1180-1185	14		<0.001		0.6	<0.02
RS-500 1185-1190	7		<0.001		<0.5	<0.02
RS-500 1190-1195	6		<0.001		<0.5	<0.02
RS-500 1195-1200	6		<0.001		<0.5	<0.02
RS-500 1200-1205	5		<0.001		<0.5	<0.02
RS-500 1205-1210	9		<0.001		<0.5	<0.02
RS-500 1210-1215	<5		<0.001		<0.5	<0.02
RS-500 1215-1220	13		<0.001		<0.5	<0.02
RS-500 1220-1225	5		<0.001		<0.5	<0.02
RS-500 1225-1230	8		<0.001		<0.5	<0.02
RS-500 1230-1235	11		<0.001		<0.5	<0.02
RS-500 1235-1240	9		<0.001		<0.5	<0.02
RS-500 1240-1245	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 1245-1250	6		<0.001		<0.5	<0.02
RS-500 1250-1255	6		<0.001		<0.5	<0.02
RS-500 1255-1260	9		<0.001		<0.5	<0.02
RS-500 1260-1265	6		<0.001		<0.5	<0.02
RS-500 1265-1270	10		<0.001		<0.5	<0.02
RS-500 1270-1275	9		<0.001		<0.5	<0.02
RS-500 1275-1280	9		<0.001		<0.5	<0.02
RS-500 1280-1285	5		<0.001		<0.5	<0.02
RS-500 1285-1290	6		<0.001		<0.5	<0.02
RS-500 1290-1295	6		<0.001		<0.5	<0.02
RS-500 1295-1300	11		<0.001		<0.5	<0.02
RS-500 1300-1305	439		0.013		4.8	0.14
RS-500 1305-1310	1518		0.044		13.4	0.39
RS-500 1310-1315	929		0.027		10.8	0.32
RS-500 1315-1320	622		0.018		7.1	0.21
RS-500 1320-1325	81		0.002		1.3	0.04
RS-500 1325-1330	84		0.002		1.8	0.05
RS-500 1330-1335	12		<0.001		<0.5	<0.02
RS-500 1335-1340	8		<0.001		0.8	0.02
RS-500 1340-1345	11		<0.001		<0.5	<0.02
RS-500 1345-1350	8		<0.001		<0.5	<0.02
RS-500 1350-1355	10		<0.001		<0.5	<0.02
RS-500 1355-1360	8		<0.001		<0.5	<0.02
RS-500 1360-1365	11		<0.001		<0.5	<0.02
RS-500 1365-1370	8		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP057762

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REFERENCE : RS-500

REPORTED : 5 JUL 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-500 1370-1375	7		<0.001		<0.5	<0.02
RS-500 1375-1380	7		<0.001		<0.5	<0.02
RS-500 1380-1385	14		<0.001		<0.5	<0.02
RS-500 1385-1390	11		<0.001		<0.5	<0.02
RS-500 1390-1395	12		<0.001		<0.5	<0.02
RS-500 1395-1400	8		<0.001		<0.5	<0.02
RS-500 1400-1405	6		<0.001		<0.5	<0.02
RS-500 1405-1410	7		<0.001		<0.5	<0.02
RS-500 1410-1415	9		<0.001		0.9	0.03
RS-500 1415-1420	5		<0.001		<0.5	<0.02
RS-500 1420-1425	7		<0.001		<0.5	<0.02
RS-500 1425-1430	8		<0.001		<0.5	<0.02
RS-500 1430-1435	10		<0.001		<0.5	<0.02
RS-500 1435-1440	6		<0.001		<0.5	<0.02
RS-500 1440-1445	8		<0.001		<0.5	<0.02
RS-500 1445-1450	10		<0.001		<0.5	<0.02
89742	5790	5756	0.169	0.168	63.6	1.86

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 0057762-IN
INVOICE DATE: 07/19/00

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

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

CUSTOMER P.O.	PROJECT	TERMS
RS-500	WILDROSE EAST	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
291	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
290	DRY/JAW CRUSH ENTIRE SAMPLE	2.30	667.00
290	"JONES" RIFFLE SPLIT	2.40	696.00
290	FINE MILLING CHARGE	2.00	580.00
291	Au (1 A.T. FIRE ASSAY)	8.00	2,328.00
291	HYDROCHLORIC/NITRIC DIGESTION	2.00	582.00
291	Ag ANALYSES	1.00	291.00
290	COMPOSITE CHARGE	1.25	362.50
74	MULTI-ELEMENT ICP PACKAGE	13.75	1,017.50

86-2510-477
KDA

NET INVOICE:	6,524.00
LESS DISCOUNT:	2,283.40
FREIGHT:	.00
INVOICE TOTAL:	4,240.60

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

: KURT ALLEN

:

:

CLIENT REFERENCE No: RS-500 RECEIVED : 19 JUN 2000

No. SAMPLES : 291 REPORTED : 19 JUL 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 SP057762

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 19 JUL 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-500 000-005	<5		<0.001		<0.5	<0.02
RS-500 005-010	<5		<0.001		<0.5	<0.02
RS-500 010-015	<5		<0.001		<0.5	<0.02
RS-500 015-020	<5		<0.001		<0.5	<0.02
RS-500 020-025	12		<0.001		<0.5	<0.02
RS-500 025-030	8		<0.001		<0.5	<0.02
RS-500 030-035	<5		<0.001		<0.5	<0.02
RS-500 035-040	7		<0.001		<0.5	<0.02
RS-500 040-045	6		<0.001		<0.5	<0.02
RS-500 045-050	<5		<0.001		<0.5	<0.02
RS-500 050-055	<5		<0.001		<0.5	<0.02
RS-500 055-060	6		<0.001		<0.5	<0.02
RS-500 060-065	<5		<0.001		<0.5	<0.02
RS-500 065-070	<5		<0.001		<0.5	<0.02
RS-500 070-075	<5		<0.001		<0.5	<0.02
RS-500 075-080	5		<0.001		<0.5	<0.02
RS-500 080-085	<5		<0.001		<0.5	<0.02
RS-500 085-090	<5		<0.001		<0.5	<0.02
RS-500 090-095	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 095-100	7		<0.001		<0.5	<0.02
RS-500 100-105	<5		<0.001		<0.5	<0.02
RS-500 105-110	<5		<0.001		<0.5	<0.02
RS-500 110-115	6		<0.001		<0.5	<0.02
RS-500 115-120	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 120-125	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-500 125-130	66	78	0.002	0.002	<0.5	<0.02
RS-500 130-135	8		<0.001		<0.5	<0.02
RS-500 135-140	7		<0.001		<0.5	<0.02
RS-500 140-145	<5		<0.001		<0.5	<0.02
RS-500 145-150	<5		<0.001		<0.5	<0.02
RS-500 150-155	<5		<0.001		<0.5	<0.02
RS-500 155-160	6		<0.001		<0.5	<0.02
RS-500 160-165	<5		<0.001		<0.5	<0.02
RS-500 165-170	9		<0.001		<0.5	<0.02
RS-500 170-175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 175-180	6		<0.001		<0.5	<0.02
RS-500 180-185	<5		<0.001		<0.5	<0.02
RS-500 185-190	7		<0.001		<0.5	<0.02
RS-500 190-195	6		<0.001		<0.5	<0.02
RS-500 195-200	<5		<0.001		<0.5	<0.02
RS-500 200-205	<5		<0.001		<0.5	<0.02
RS-500 205-210	<5		<0.001		<0.5	<0.02
RS-500 210-215	6		<0.001		<0.5	<0.02
RS-500 215-220	<5		<0.001		<0.5	<0.02
RS-500 220-225	8		<0.001		<0.5	<0.02
RS-500 225-230	<5		<0.001		<0.5	<0.02
RS-500 230-235	5		<0.001		<0.5	<0.02
RS-500 235-240	<5		<0.001		<0.5	<0.02
RS-500 240-245	<5		<0.001		<0.5	<0.02
RS-500 245-250	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-500 250-255	<5		<0.001		<0.5	<0.02
RS-500 255-260	5		<0.001		<0.5	<0.02
RS-500 260-265	<5		<0.001		<0.5	<0.02
RS-500 265-270	<5		<0.001		<0.5	<0.02
RS-500 270-275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 275-280	8		<0.001		<0.5	<0.02
RS-500 280-285	<5		<0.001		<0.5	<0.02
RS-500 285-290	8		<0.001		<0.5	<0.02
RS-500 290-295	<5		<0.001		<0.5	<0.02
RS-500 295-300	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 300-305	7		<0.001		<0.5	<0.02
RS-500 305-310	6		<0.001		<0.5	<0.02
RS-500 310-315	<5		<0.001		<0.5	<0.02
RS-500 315-320	6		<0.001		<0.5	<0.02
RS-500 320-325	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 325-330	5		<0.001		<0.5	<0.02
RS-500 330-335	<5		<0.001		<0.5	<0.02
RS-500 335-340	<5		<0.001		<0.5	<0.02
RS-500 340-345	<5		<0.001		<0.5	<0.02
RS-500 345-350	<5		<0.001		<0.5	<0.02
RS-500 350-355	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 355-360	13		<0.001		<0.5	<0.02
RS-500 360-365	5		<0.001		<0.5	<0.02
RS-500 365-370	5		<0.001		<0.5	<0.02
RS-500 370-375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REPORTED : 19 JUL 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-500 375-380	6		<0.001		<0.5	<0.02
RS-500 380-385	6		<0.001		<0.5	<0.02
RS-500 385-390	<5		<0.001		<0.5	<0.02
RS-500 390-395	<5		<0.001		<0.5	<0.02
RS-500 395-400	<5		<0.001		<0.5	<0.02
RS-500 400-405	13	12	<0.001	<0.001	<0.5	<0.02
RS-500 405-410	14		<0.001		<0.5	<0.02
RS-500 410-415	6		<0.001		<0.5	<0.02
RS-500 415-420	24	24	<0.001	<0.001	<0.5	<0.02
RS-500 420-425	14		<0.001		<0.5	<0.02
RS-500 425-430	7		<0.001		<0.5	<0.02
RS-500 430-435	20		<0.001		<0.5	<0.02
RS-500 435-440	11		<0.001		<0.5	<0.02
RS-500 440-445	<5		<0.001		<0.5	<0.02
RS-500 445-450	<5		<0.001		<0.5	<0.02
RS-500 450-455	25		<0.001		<0.5	<0.02
RS-500 455-460	12		<0.001		<0.5	<0.02
RS-500 460-465	<5		<0.001		<0.5	<0.02
RS-500 465-470	19		<0.001		<0.5	<0.02
RS-500 470-475	25	26	<0.001	<0.001	<0.5	<0.02
RS-500 475-480	6		<0.001		<0.5	<0.02
RS-500 480-485	10		<0.001		<0.5	<0.02
RS-500 485-490	81	88	0.002	0.003	<0.5	<0.02
RS-500 490-495	42		0.001		<0.5	<0.02
RS-500 495-500	20		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

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REFERENCE : RS-500

REPORTED : 19 JUL 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-500 500-505	5		<0.001		<0.5	<0.02
RS-500 505-510	<5		<0.001		<0.5	<0.02
RS-500 510-515	<5		<0.001		<0.5	<0.02
RS-500 515-520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 520-525	<5		<0.001		<0.5	<0.02
RS-500 525-530	5		<0.001		<0.5	<0.02
RS-500 530-535	<5		<0.001		<0.5	<0.02
RS-500 535-540	8		<0.001		<0.5	<0.02
RS-500 540-545	<5		<0.001		<0.5	<0.02
RS-500 545-550	<5		<0.001		<0.5	<0.02
RS-500 550-555	<5		<0.001		<0.5	<0.02
RS-500 555-560	16		<0.001		<0.5	<0.02
RS-500 560-565	<5		<0.001		<0.5	<0.02
RS-500 565-570	<5		<0.001		<0.5	<0.02
RS-500 570-575	38	46	0.001	0.001	<0.5	<0.02
RS-500 575-580	6		<0.001		<0.5	<0.02
RS-500 580-585	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 585-590	22		<0.001		<0.5	<0.02
RS-500 590-595	9		<0.001		<0.5	<0.02
RS-500 595-600	8		<0.001		<0.5	<0.02
RS-500 600-605	48		0.001		<0.5	<0.02
RS-500 605-610	67		0.002		<0.5	<0.02
RS-500 610-615	100		0.003		<0.5	<0.02
RS-500 615-620	28		<0.001		<0.5	<0.02
RS-500 620-625	10	14	<0.001	<0.001	<0.5	<0.02

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-500 625-630	26		<0.001		<0.5	<0.02
RS-500 630-635	8		<0.001		<0.5	<0.02
RS-500 635-640	19		<0.001		<0.5	<0.02
RS-500 640-645	32		<0.001		<0.5	<0.02
RS-500 645-650	20	28	<0.001	<0.001	<0.5	<0.02
RS-500 650-655	7		<0.001		<0.5	<0.02
RS-500 655-660	10		<0.001		<0.5	<0.02
RS-500 660-665	22		<0.001		<0.5	<0.02
RS-500 665-670	81	74	0.002	0.002	<0.5	<0.02
RS-500 670-675	22		<0.001		<0.5	<0.02
RS-500 675-680	14		<0.001		<0.5	<0.02
RS-500 680-685			SAMPLE NOT RECEIVED			
RS-500 685-690	12		<0.001		<0.5	<0.02
RS-500 690-695	7		<0.001		<0.5	<0.02
RS-500 695-700	21	26	<0.001	<0.001	<0.5	<0.02
RS-500 695-700A	6		<0.001		<0.5	<0.02
RS-500 700-705	10		<0.001		<0.5	<0.02
RS-500 705-710	5		<0.001		<0.5	<0.02
RS-500 710-715	6		<0.001		<0.5	<0.02
RS-500 715-720	<5		<0.001		<0.5	<0.02
RS-500 720-725	6		<0.001		<0.5	<0.02
RS-500 725-730	11		<0.001		<0.5	<0.02
RS-500 730-735	5		<0.001		<0.5	<0.02
RS-500 735-740	6		<0.001		<0.5	<0.02
RS-500 740-745	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-500 745-750	9		<0.001		<0.5	<0.02
RS-500 750-755	7		<0.001		<0.5	<0.02
RS-500 755-760	5		<0.001		<0.5	<0.02
RS-500 760-765	6		<0.001		<0.5	<0.02
RS-500 765-770	6		<0.001		<0.5	<0.02
RS-500 770-775	6		<0.001		<0.5	<0.02
RS-500 775-780	13		<0.001		<0.5	<0.02
RS-500 780-785	8		<0.001		<0.5	<0.02
RS-500 785-790	6		<0.001		<0.5	<0.02
RS-500 790-795	7		<0.001		<0.5	<0.02
RS-500 795-800	5		<0.001		<0.5	<0.02
RS-500 800-805	<5		<0.001		<0.5	<0.02
RS-500 805-810	<5		<0.001		<0.5	<0.02
RS-500 810-815	5		<0.001		<0.5	<0.02
RS-500 815-820	7		<0.001		<0.5	<0.02
RS-500 820-825	<5		<0.001		<0.5	<0.02
RS-500 825-830	6		<0.001		<0.5	<0.02
RS-500 830-835	8		<0.001		<0.5	<0.02
RS-500 835-840	8		<0.001		<0.5	<0.02
RS-500 840-845	9		<0.001		<0.5	<0.02
RS-500 845-850	10		<0.001		<0.5	<0.02
RS-500 850-855	6		<0.001		<0.5	<0.02
RS-500 855-860	8		<0.001		<0.5	<0.02
RS-500 860-865	6		<0.001		<0.5	<0.02
RS-500 865-870	8		<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-500 870-875	<5		<0.001		<0.5	<0.02
RS-500 875-880	7		<0.001		<0.5	<0.02
RS-500 880-885	<5		<0.001		<0.5	<0.02
RS-500 885-890	11		<0.001		<0.5	<0.02
RS-500 890-895	7		<0.001		<0.5	<0.02
RS-500 895-900	5		<0.001		<0.5	<0.02
RS-500 900-905	9		<0.001		<0.5	<0.02
RS-500 905-910	8		<0.001		<0.5	<0.02
RS-500 910-915	6		<0.001		<0.5	<0.02
RS-500 915-920	8		<0.001		<0.5	<0.02
RS-500 920-925	9		<0.001		<0.5	<0.02
RS-500 925-930	8		<0.001		<0.5	<0.02
RS-500 930-935	5		<0.001		<0.5	<0.02
RS-500 935-940	9		<0.001		<0.5	<0.02
RS-500 940-945	8		<0.001		<0.5	<0.02
RS-500 945-950	9		<0.001		<0.5	<0.02
RS-500 950-955	9		<0.001		<0.5	<0.02
RS-500 955-960	11		<0.001		<0.5	<0.02
RS-500 960-965	10		<0.001		<0.5	<0.02
RS-500 965-970	8		<0.001		<0.5	<0.02
RS-500 970-975	<5		<0.001		<0.5	<0.02
RS-500 975-980	9		<0.001		<0.5	<0.02
RS-500 980-985	8		<0.001		<0.5	<0.02
RS-500 985-990	6		<0.001		<0.5	<0.02
RS-500 990-995	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-500 995-1000	9		<0.001		<0.5	<0.02
RS-500 1000-1005	8		<0.001		<0.5	<0.02
RS-500 1005-1010	6		<0.001		<0.5	<0.02
RS-500 1010-1015	<5		<0.001		<0.5	<0.02
RS-500 1015-1020	12		<0.001		0.9	0.03
RS-500 1020-1025	5		<0.001		<0.5	<0.02
RS-500 1025-1030	8		<0.001		<0.5	<0.02
RS-500 1030-1035	6		<0.001		<0.5	<0.02
RS-500 1035-1040	6		<0.001		<0.5	<0.02
RS-500 1040-1045	<5		<0.001		<0.5	<0.02
RS-500 1045-1050	8		<0.001		0.5	<0.02
RS-500 1050-1055	9		<0.001		<0.5	<0.02
RS-500 1055-1060	8		<0.001		0.7	0.02
RS-500 1060-1065	<5		<0.001		<0.5	<0.02
RS-500 1065-1070	8		<0.001		<0.5	<0.02
RS-500 1070-1075	5		<0.001		<0.5	<0.02
RS-500 1075-1080	5		<0.001		<0.5	<0.02
RS-500 1080-1085	<5		<0.001		<0.5	<0.02
RS-500 1085-1090	<5		<0.001		<0.5	<0.02
RS-500 1090-1095	7		<0.001		<0.5	<0.02
RS-500 1095-1100	<5		<0.001		<0.5	<0.02
RS-500 1100-1105	6		<0.001		<0.5	<0.02
RS-500 1105-1110	6		<0.001		<0.5	<0.02
RS-500 1110-1115	7		<0.001		<0.5	<0.02
RS-500 1115-1120	7		<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-500 1120-1125	6		<0.001		<0.5	<0.02
RS-500 1125-1130	7		<0.001		<0.5	<0.02
RS-500 1130-1135	<5		<0.001		<0.5	<0.02
RS-500 1135-1140	6		<0.001		<0.5	<0.02
RS-500 1140-1145	9		<0.001		<0.5	<0.02
RS-500 1145-1150	8		<0.001		<0.5	<0.02
RS-500 1150-1155	6		<0.001		<0.5	<0.02
RS-500 1155-1160	<5		<0.001		<0.5	<0.02
RS-500 1160-1165	6		<0.001		<0.5	<0.02
RS-500 1165-1170	12		<0.001		<0.5	<0.02
RS-500 1170-1175	8		<0.001		<0.5	<0.02
RS-500 1175-1180	7		<0.001		<0.5	<0.02
RS-500 1180-1185	14		<0.001		0.6	<0.02
RS-500 1185-1190	7		<0.001		<0.5	<0.02
RS-500 1190-1195	6		<0.001		<0.5	<0.02
RS-500 1195-1200	6		<0.001		<0.5	<0.02
RS-500 1200-1205	5		<0.001		<0.5	<0.02
RS-500 1205-1210	9		<0.001		<0.5	<0.02
RS-500 1210-1215	<5		<0.001		<0.5	<0.02
RS-500 1215-1220	13		<0.001		<0.5	<0.02
RS-500 1220-1225	5		<0.001		<0.5	<0.02
RS-500 1225-1230	8		<0.001		<0.5	<0.02
RS-500 1230-1235	11		<0.001		<0.5	<0.02
RS-500 1235-1240	9		<0.001		<0.5	<0.02
RS-500 1240-1245	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 19 JUL 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-500 1245-1250	6		<0.001		<0.5	<0.02
RS-500 1250-1255	6		<0.001		<0.5	<0.02
RS-500 1255-1260	9		<0.001		<0.5	<0.02
RS-500 1260-1265	6		<0.001		<0.5	<0.02
RS-500 1265-1270	10		<0.001		<0.5	<0.02
RS-500 1270-1275	9		<0.001		<0.5	<0.02
RS-500 1275-1280	9		<0.001		<0.5	<0.02
RS-500 1280-1285	5		<0.001		<0.5	<0.02
RS-500 1285-1290	6		<0.001		<0.5	<0.02
RS-500 1290-1295	6		<0.001		<0.5	<0.02
RS-500 1295-1300	11		<0.001		<0.5	<0.02
RS-500 1300-1305	439		0.013		4.8	0.14
RS-500 1305-1310	1518		0.044		13.4	0.39
RS-500 1310-1315	929		0.027		10.8	0.32
RS-500 1315-1320	622		0.018		7.1	0.21
RS-500 1320-1325	81		0.002		1.3	0.04
RS-500 1325-1330	84		0.002		1.8	0.05
RS-500 1330-1335	12		<0.001		<0.5	<0.02
RS-500 1335-1340	8		<0.001		0.8	0.02
RS-500 1340-1345	11		<0.001		<0.5	<0.02
RS-500 1345-1350	8		<0.001		<0.5	<0.02
RS-500 1350-1355	10		<0.001		<0.5	<0.02
RS-500 1355-1360	8		<0.001		<0.5	<0.02
RS-500 1360-1365	11		<0.001		<0.5	<0.02
RS-500 1365-1370	8		<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-500 1370-1375	7		<0.001		<0.5	<0.02
RS-500 1375-1380	7		<0.001		<0.5	<0.02
RS-500 1380-1385	14		<0.001		<0.5	<0.02
RS-500 1385-1390	11		<0.001		<0.5	<0.02
RS-500 1390-1395	12		<0.001		<0.5	<0.02
RS-500 1395-1400	8		<0.001		<0.5	<0.02
RS-500 1400-1405	6		<0.001		<0.5	<0.02
RS-500 1405-1410	7		<0.001		<0.5	<0.02
RS-500 1410-1415	9		<0.001		0.9	0.03
RS-500 1415-1420	5		<0.001		<0.5	<0.02
RS-500 1420-1425	7		<0.001		<0.5	<0.02
RS-500 1425-1430	8		<0.001		<0.5	<0.02
RS-500 1430-1435	10		<0.001		<0.5	<0.02
RS-500 1435-1440	6		<0.001		<0.5	<0.02
RS-500 1440-1445	8		<0.001		<0.5	<0.02
RS-500 1445-1450	10		<0.001		<0.5	<0.02
89742	5790	5756	0.169	0.168	63.6	1.86

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : BRIAN MORRIS

: KURT ALLEN

:

:

CLIENT REFERENCE No: RS-500 RECEIVED : 19 JUN 2000

No. SAMPLES : 291 REPORTED : 19 JUL 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 SP057762

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

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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-500 000-005	<5		<0.001		<0.5	<0.02
RS-500 005-010	<5		<0.001		<0.5	<0.02
RS-500 010-015	<5		<0.001		<0.5	<0.02
RS-500 015-020	<5		<0.001		<0.5	<0.02
RS-500 020-025	12		<0.001		<0.5	<0.02
RS-500 025-030	8		<0.001		<0.5	<0.02
RS-500 030-035	<5		<0.001		<0.5	<0.02
RS-500 035-040	7		<0.001		<0.5	<0.02
RS-500 040-045	6		<0.001		<0.5	<0.02
RS-500 045-050	<5		<0.001		<0.5	<0.02
RS-500 050-055	<5		<0.001		<0.5	<0.02
RS-500 055-060	6		<0.001		<0.5	<0.02
RS-500 060-065	<5		<0.001		<0.5	<0.02
RS-500 065-070	<5		<0.001		<0.5	<0.02
RS-500 070-075	<5		<0.001		<0.5	<0.02
RS-500 075-080	5		<0.001		<0.5	<0.02
RS-500 080-085	<5		<0.001		<0.5	<0.02
RS-500 085-090	<5		<0.001		<0.5	<0.02
RS-500 090-095	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 095-100	7		<0.001		<0.5	<0.02
RS-500 100-105	<5		<0.001		<0.5	<0.02
RS-500 105-110	<5		<0.001		<0.5	<0.02
RS-500 110-115	6		<0.001		<0.5	<0.02
RS-500 115-120	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 120-125	5		<0.001		<0.5	<0.02

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-500 125-130	66	78	0.002	0.002	<0.5	<0.02
RS-500 130-135	8		<0.001		<0.5	<0.02
RS-500 135-140	7		<0.001		<0.5	<0.02
RS-500 140-145	<5		<0.001		<0.5	<0.02
RS-500 145-150	<5		<0.001		<0.5	<0.02
RS-500 150-155	<5		<0.001		<0.5	<0.02
RS-500 155-160	6		<0.001		<0.5	<0.02
RS-500 160-165	<5		<0.001		<0.5	<0.02
RS-500 165-170	9		<0.001		<0.5	<0.02
RS-500 170-175	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 175-180	6		<0.001		<0.5	<0.02
RS-500 180-185	<5		<0.001		<0.5	<0.02
RS-500 185-190	7		<0.001		<0.5	<0.02
RS-500 190-195	6		<0.001		<0.5	<0.02
RS-500 195-200	<5		<0.001		<0.5	<0.02
RS-500 200-205	<5		<0.001		<0.5	<0.02
RS-500 205-210	<5		<0.001		<0.5	<0.02
RS-500 210-215	6		<0.001		<0.5	<0.02
RS-500 215-220	<5		<0.001		<0.5	<0.02
RS-500 220-225	8		<0.001		<0.5	<0.02
RS-500 225-230	<5		<0.001		<0.5	<0.02
RS-500 230-235	5		<0.001		<0.5	<0.02
RS-500 235-240	<5		<0.001		<0.5	<0.02
RS-500 240-245	<5		<0.001		<0.5	<0.02
RS-500 245-250	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

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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-500 250-255	<5		<0.001		<0.5	<0.02
RS-500 255-260	5		<0.001		<0.5	<0.02
RS-500 260-265	<5		<0.001		<0.5	<0.02
RS-500 265-270	<5		<0.001		<0.5	<0.02
RS-500 270-275	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 275-280	8		<0.001		<0.5	<0.02
RS-500 280-285	<5		<0.001		<0.5	<0.02
RS-500 285-290	8		<0.001		<0.5	<0.02
RS-500 290-295	<5		<0.001		<0.5	<0.02
RS-500 295-300	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 300-305	7		<0.001		<0.5	<0.02
RS-500 305-310	6		<0.001		<0.5	<0.02
RS-500 310-315	<5		<0.001		<0.5	<0.02
RS-500 315-320	6		<0.001		<0.5	<0.02
RS-500 320-325	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 325-330	5		<0.001		<0.5	<0.02
RS-500 330-335	<5		<0.001		<0.5	<0.02
RS-500 335-340	<5		<0.001		<0.5	<0.02
RS-500 340-345	<5		<0.001		<0.5	<0.02
RS-500 345-350	<5		<0.001		<0.5	<0.02
RS-500 350-355	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 355-360	13		<0.001		<0.5	<0.02
RS-500 360-365	5		<0.001		<0.5	<0.02
RS-500 365-370	5		<0.001		<0.5	<0.02
RS-500 370-375	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

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REFERENCE : RS-500

REPORTED : 19 JUL 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-500 375-380	6		<0.001		<0.5	<0.02
RS-500 380-385	6		<0.001		<0.5	<0.02
RS-500 385-390	<5		<0.001		<0.5	<0.02
RS-500 390-395	<5		<0.001		<0.5	<0.02
RS-500 395-400	<5		<0.001		<0.5	<0.02
RS-500 400-405	13	12	<0.001	<0.001	<0.5	<0.02
RS-500 405-410	14		<0.001		<0.5	<0.02
RS-500 410-415	6		<0.001		<0.5	<0.02
RS-500 415-420	24	24	<0.001	<0.001	<0.5	<0.02
RS-500 420-425	14		<0.001		<0.5	<0.02
RS-500 425-430	7		<0.001		<0.5	<0.02
RS-500 430-435	20		<0.001		<0.5	<0.02
RS-500 435-440	11		<0.001		<0.5	<0.02
RS-500 440-445	<5		<0.001		<0.5	<0.02
RS-500 445-450	<5		<0.001		<0.5	<0.02
RS-500 450-455	25		<0.001		<0.5	<0.02
RS-500 455-460	12		<0.001		<0.5	<0.02
RS-500 460-465	<5		<0.001		<0.5	<0.02
RS-500 465-470	19		<0.001		<0.5	<0.02
RS-500 470-475	25	26	<0.001	<0.001	<0.5	<0.02
RS-500 475-480	6		<0.001		<0.5	<0.02
RS-500 480-485	10		<0.001		<0.5	<0.02
RS-500 485-490	81	88	0.002	0.003	<0.5	<0.02
RS-500 490-495	42		0.001		<0.5	<0.02
RS-500 495-500	20		<0.001		<0.5	<0.02

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-500 500-505	5		<0.001		<0.5	<0.02
RS-500 505-510	<5		<0.001		<0.5	<0.02
RS-500 510-515	<5		<0.001		<0.5	<0.02
RS-500 515-520	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-500 520-525	<5		<0.001		<0.5	<0.02
RS-500 525-530	5		<0.001		<0.5	<0.02
RS-500 530-535	<5		<0.001		<0.5	<0.02
RS-500 535-540	8		<0.001		<0.5	<0.02
RS-500 540-545	<5		<0.001		<0.5	<0.02
RS-500 545-550	<5		<0.001		<0.5	<0.02
RS-500 550-555	<5		<0.001		<0.5	<0.02
RS-500 555-560	16		<0.001		<0.5	<0.02
RS-500 560-565	<5		<0.001		<0.5	<0.02
RS-500 565-570	<5		<0.001		<0.5	<0.02
RS-500 570-575	38	46	0.001	0.001	<0.5	<0.02
RS-500 575-580	6		<0.001		<0.5	<0.02
RS-500 580-585	10	10	<0.001	<0.001	<0.5	<0.02
RS-500 585-590	22		<0.001		<0.5	<0.02
RS-500 590-595	9		<0.001		<0.5	<0.02
RS-500 595-600	8		<0.001		<0.5	<0.02
RS-500 600-605	48		0.001		<0.5	<0.02
RS-500 605-610	67		0.002		<0.5	<0.02
RS-500 610-615	100		0.003		<0.5	<0.02
RS-500 615-620	28		<0.001		<0.5	<0.02
RS-500 620-625	10	14	<0.001	<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-500 625-630	26		<0.001		<0.5	<0.02
RS-500 630-635	8		<0.001		<0.5	<0.02
RS-500 635-640	19		<0.001		<0.5	<0.02
RS-500 640-645	32		<0.001		<0.5	<0.02
RS-500 645-650	20	28	<0.001	<0.001	<0.5	<0.02
RS-500 650-655	7		<0.001		<0.5	<0.02
RS-500 655-660	10		<0.001		<0.5	<0.02
RS-500 660-665	22		<0.001		<0.5	<0.02
RS-500 665-670	81	74	0.002	0.002	<0.5	<0.02
RS-500 670-675	22		<0.001		<0.5	<0.02
RS-500 675-680	14		<0.001		<0.5	<0.02
RS-500 680-685			SAMPLE NOT RECEIVED			
RS-500 685-690	12		<0.001		<0.5	<0.02
RS-500 690-695	7		<0.001		<0.5	<0.02
RS-500 695-700	21	26	<0.001	<0.001	<0.5	<0.02
RS-500 695-700A	6		<0.001		<0.5	<0.02
RS-500 700-705	10		<0.001		<0.5	<0.02
RS-500 705-710	5		<0.001		<0.5	<0.02
RS-500 710-715	6		<0.001		<0.5	<0.02
RS-500 715-720	<5		<0.001		<0.5	<0.02
RS-500 720-725	6		<0.001		<0.5	<0.02
RS-500 725-730	11		<0.001		<0.5	<0.02
RS-500 730-735	5		<0.001		<0.5	<0.02
RS-500 735-740	6		<0.001		<0.5	<0.02
RS-500 740-745	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-500 745-750	9		<0.001		<0.5	<0.02
RS-500 750-755	7		<0.001		<0.5	<0.02
RS-500 755-760	5		<0.001		<0.5	<0.02
RS-500 760-765	6		<0.001		<0.5	<0.02
RS-500 765-770	6		<0.001		<0.5	<0.02
RS-500 770-775	6		<0.001		<0.5	<0.02
RS-500 775-780	13		<0.001		<0.5	<0.02
RS-500 780-785	8		<0.001		<0.5	<0.02
RS-500 785-790	6		<0.001		<0.5	<0.02
RS-500 790-795	7		<0.001		<0.5	<0.02
RS-500 795-800	5		<0.001		<0.5	<0.02
RS-500 800-805	<5		<0.001		<0.5	<0.02
RS-500 805-810	<5		<0.001		<0.5	<0.02
RS-500 810-815	5		<0.001		<0.5	<0.02
RS-500 815-820	7		<0.001		<0.5	<0.02
RS-500 820-825	<5		<0.001		<0.5	<0.02
RS-500 825-830	6		<0.001		<0.5	<0.02
RS-500 830-835	8		<0.001		<0.5	<0.02
RS-500 835-840	8		<0.001		<0.5	<0.02
RS-500 840-845	9		<0.001		<0.5	<0.02
RS-500 845-850	10		<0.001		<0.5	<0.02
RS-500 850-855	6		<0.001		<0.5	<0.02
RS-500 855-860	8		<0.001		<0.5	<0.02
RS-500 860-865	6		<0.001		<0.5	<0.02
RS-500 865-870	8		<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-500 870-875	<5		<0.001		<0.5	<0.02
RS-500 875-880	7		<0.001		<0.5	<0.02
RS-500 880-885	<5		<0.001		<0.5	<0.02
RS-500 885-890	11		<0.001		<0.5	<0.02
RS-500 890-895	7		<0.001		<0.5	<0.02
RS-500 895-900	5		<0.001		<0.5	<0.02
RS-500 900-905	9		<0.001		<0.5	<0.02
RS-500 905-910	8		<0.001		<0.5	<0.02
RS-500 910-915	6		<0.001		<0.5	<0.02
RS-500 915-920	8		<0.001		<0.5	<0.02
RS-500 920-925	9		<0.001		<0.5	<0.02
RS-500 925-930	8		<0.001		<0.5	<0.02
RS-500 930-935	5		<0.001		<0.5	<0.02
RS-500 935-940	9		<0.001		<0.5	<0.02
RS-500 940-945	8		<0.001		<0.5	<0.02
RS-500 945-950	9		<0.001		<0.5	<0.02
RS-500 950-955	9		<0.001		<0.5	<0.02
RS-500 955-960	11		<0.001		<0.5	<0.02
RS-500 960-965	10		<0.001		<0.5	<0.02
RS-500 965-970	8		<0.001		<0.5	<0.02
RS-500 970-975	<5		<0.001		<0.5	<0.02
RS-500 975-980	9		<0.001		<0.5	<0.02
RS-500 980-985	8		<0.001		<0.5	<0.02
RS-500 985-990	6		<0.001		<0.5	<0.02
RS-500 990-995	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 19 JUL 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-500 995-1000	9		<0.001		<0.5	<0.02
RS-500 1000-1005	8		<0.001		<0.5	<0.02
RS-500 1005-1010	6		<0.001		<0.5	<0.02
RS-500 1010-1015	<5		<0.001		<0.5	<0.02
RS-500 1015-1020	12		<0.001		0.9	0.03
RS-500 1020-1025	5		<0.001		<0.5	<0.02
RS-500 1025-1030	8		<0.001		<0.5	<0.02
RS-500 1030-1035	6		<0.001		<0.5	<0.02
RS-500 1035-1040	6		<0.001		<0.5	<0.02
RS-500 1040-1045	<5		<0.001		<0.5	<0.02
RS-500 1045-1050	8		<0.001		0.5	<0.02
RS-500 1050-1055	9		<0.001		<0.5	<0.02
RS-500 1055-1060	8		<0.001		0.7	0.02
RS-500 1060-1065	<5		<0.001		<0.5	<0.02
RS-500 1065-1070	8		<0.001		<0.5	<0.02
RS-500 1070-1075	5		<0.001		<0.5	<0.02
RS-500 1075-1080	5		<0.001		<0.5	<0.02
RS-500 1080-1085	<5		<0.001		<0.5	<0.02
RS-500 1085-1090	<5		<0.001		<0.5	<0.02
RS-500 1090-1095	7		<0.001		<0.5	<0.02
RS-500 1095-1100	<5		<0.001		<0.5	<0.02
RS-500 1100-1105	6		<0.001		<0.5	<0.02
RS-500 1105-1110	6		<0.001		<0.5	<0.02
RS-500 1110-1115	7		<0.001		<0.5	<0.02
RS-500 1115-1120	7		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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REFERENCE : RS-500

REPORTED : 19 JUL 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-500 1120-1125	6		<0.001		<0.5	<0.02
RS-500 1125-1130	7		<0.001		<0.5	<0.02
RS-500 1130-1135	<5		<0.001		<0.5	<0.02
RS-500 1135-1140	6		<0.001		<0.5	<0.02
RS-500 1140-1145	9		<0.001		<0.5	<0.02
RS-500 1145-1150	8		<0.001		<0.5	<0.02
RS-500 1150-1155	6		<0.001		<0.5	<0.02
RS-500 1155-1160	<5		<0.001		<0.5	<0.02
RS-500 1160-1165	6		<0.001		<0.5	<0.02
RS-500 1165-1170	12		<0.001		<0.5	<0.02
RS-500 1170-1175	8		<0.001		<0.5	<0.02
RS-500 1175-1180	7		<0.001		<0.5	<0.02
RS-500 1180-1185	14		<0.001		0.6	<0.02
RS-500 1185-1190	7		<0.001		<0.5	<0.02
RS-500 1190-1195	6		<0.001		<0.5	<0.02
RS-500 1195-1200	6		<0.001		<0.5	<0.02
RS-500 1200-1205	5		<0.001		<0.5	<0.02
RS-500 1205-1210	9		<0.001		<0.5	<0.02
RS-500 1210-1215	<5		<0.001		<0.5	<0.02
RS-500 1215-1220	13		<0.001		<0.5	<0.02
RS-500 1220-1225	5		<0.001		<0.5	<0.02
RS-500 1225-1230	8		<0.001		<0.5	<0.02
RS-500 1230-1235	11		<0.001		<0.5	<0.02
RS-500 1235-1240	9		<0.001		<0.5	<0.02
RS-500 1240-1245	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

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REFERENCE : RS-500

REPORTED : 19 JUL 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-500 1245-1250	6		<0.001		<0.5	<0.02
RS-500 1250-1255	6		<0.001		<0.5	<0.02
RS-500 1255-1260	9		<0.001		<0.5	<0.02
RS-500 1260-1265	6		<0.001		<0.5	<0.02
RS-500 1265-1270	10		<0.001		<0.5	<0.02
RS-500 1270-1275	9		<0.001		<0.5	<0.02
RS-500 1275-1280	9		<0.001		<0.5	<0.02
RS-500 1280-1285	5		<0.001		<0.5	<0.02
RS-500 1285-1290	6		<0.001		<0.5	<0.02
RS-500 1290-1295	6		<0.001		<0.5	<0.02
RS-500 1295-1300	11		<0.001		<0.5	<0.02
RS-500 1300-1305	439		0.013		4.8	0.14
RS-500 1305-1310	1518		0.044		13.4	0.39
RS-500 1310-1315	929		0.027		10.8	0.32
RS-500 1315-1320	622		0.018		7.1	0.21
RS-500 1320-1325	81		0.002		1.3	0.04
RS-500 1325-1330	84		0.002		1.8	0.05
RS-500 1330-1335	12		<0.001		<0.5	<0.02
RS-500 1335-1340	8		<0.001		0.8	0.02
RS-500 1340-1345	11		<0.001		<0.5	<0.02
RS-500 1345-1350	8		<0.001		<0.5	<0.02
RS-500 1350-1355	10		<0.001		<0.5	<0.02
RS-500 1355-1360	8		<0.001		<0.5	<0.02
RS-500 1360-1365	11		<0.001		<0.5	<0.02
RS-500 1365-1370	8		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP057762

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD
REFERENCE : RS-500

REPORTED : 19 JUL 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-500 1370-1375	7		<0.001		<0.5	<0.02
RS-500 1375-1380	7		<0.001		<0.5	<0.02
RS-500 1380-1385	14		<0.001		<0.5	<0.02
RS-500 1385-1390	11		<0.001		<0.5	<0.02
RS-500 1390-1395	12		<0.001		<0.5	<0.02
RS-500 1395-1400	8		<0.001		<0.5	<0.02
RS-500 1400-1405	6		<0.001		<0.5	<0.02
RS-500 1405-1410	7		<0.001		<0.5	<0.02
RS-500 1410-1415	9		<0.001		0.9	0.03
RS-500 1415-1420	5		<0.001		<0.5	<0.02
RS-500 1420-1425	7		<0.001		<0.5	<0.02
RS-500 1425-1430	8		<0.001		<0.5	<0.02
RS-500 1430-1435	10		<0.001		<0.5	<0.02
RS-500 1435-1440	6		<0.001		<0.5	<0.02
RS-500 1440-1445	8		<0.001		<0.5	<0.02
RS-500 1445-1450	10		<0.001		<0.5	<0.02
89742	5790	5756	0.169	0.168	63.6	1.86

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: SP57762
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-500 0000-0020	40	1.63	6.1	3.2	9	82.80	0.87	0.41	0.11	2.50	8.4	34.18	2.63	6.3	19	0.17	42.6	0.13	408	1.94	0.097	5.5	0.02	20.02	0.01	0.71	4	0.4	38.9	< .02	14	0.016	0.16	2.6	26	0.5	60
RS-500 0020-0040	34	1.49	5	2.7	9	85.60	0.39	0.35	0.07	2.30	11.7	32.83	2.71	6.5	12	0.16	36.1	0.12	448	1.63	0.053	4.8	0.021	25.49	< .01	0.89	3.9	0.2	30	0.02	13.5	0.016	0.37	2.5	27	0.4	144.2
RS-500 0040-0060	47	1.16	4.9	1.5	7	48.60	0.24	0.37	0.08	1.90	11.5	15.94	2.59	4.9	31	0.14	30.7	0.12	268	2.09	0.056	6	0.038	14.13	< .01	3.14	2.4	0.2	29.5	< .02	11.9	0.015	0.12	2.5	14	0.5	84.9
RS-500 0060-0080	53	0.87	3.4	1.4	5	199.00	0.1	0.62	0.23	1.90	14.3	12.65	2.75	4.3	47	0.18	25.5	0.11	980	2.8	0.062	10.5	0.032	10.93	0.04	3.61	2	0.4	27.4	< .02	10.7	0.025	0.17	2.2	10	1.2	77.6
RS-500 0080-0100	55	0.79	12.0	1	3	115.70	0.03	0.91	0.26	2.00	9.1	8.94	2.36	3.9	74	0.18	21.3	0.1	838	2.04	0.048	7.6	0.03	9.86	0.17	2.22	1.8	< .1	39.4	< .02	9.4	0.022	0.19	1.8	5	0.9	87.2
RS-500 0100-0120	43	0.95	32	2.7	3	90.70	0.04	0.55	0.21	2.40	8.3	8.84	2.29	4.3	4743	0.16	25.5	0.08	641	2.15	0.03	7	0.029	12.47	0.33	20.44	1.6	0.8	43.9	< .02	9.1	0.024	0.49	2.8	4	1.1	95.8
RS-500 0120-0140	43	0.82	36.6	19.9	3	84.80	0.05	0.47	0.19	2.50	8.7	9.71	2.1	3.9	6844	0.15	28.3	0.06	508	2.53	0.032	7	0.027	12.2	0.19	33.94	1.4	2.2	76	< .02	9.7	0.02	0.61	4.1	7	0.9	78.9
RS-500 0140-0160	37	0.77	2.4	1.2	5.0	57.00	0.08	1.42	0.16	1.90	5.7	6.38	2.05	3.9	102	0.13	25.5	0.09	794	1.22	0.039	3.4	0.024	9.88	< .01	1.64	2	0.1	48.7	0.02	10.3	0.036	0.08	1.1	5	0.8	92.7
RS-500 0160-0180	29	0.67	3.9	3.3	2	97.10	0.08	1.09	0.13	1.80	3.9	5.1	1.82	3.5	80	0.1	21.5	0.09	887	1.04	0.041	2.7	0.02	8.41	< .01	0.55	1.8	0.2	50.9	< .02	9.3	0.03	0.05	0.9	4	0.5	80.7
RS-500 0180-0200	37	0.7	2.9	3.4	5	119.00	0.23	0.6	0.12	1.70	7.1	8.45	2.21	3.7	44	0.12	19.7	0.12	486	1.72	0.047	5.1	0.018	7.82	< .01	1.24	1.7	< .1	48.9	< .02	8.7	0.039	0.06	1.1	4	0.7	84.4
RS-500 0200-0220	47	0.83	3.7	2	3	125.80	0.19	0.87	0.25	2.00	8.7	9.56	2.51	4.5	27	0.15	19.7	0.12	831	2.27	0.069	8.3	0.02	7.35	< .01	0.58	1.8	0.3	57.7	< .02	8.5	0.049	0.05	1.3	3	0.6	88.7
RS-500 0220-0240	51	1.02	4.6	1.2	7	129.10	0.16	1.46	0.32	2.00	5.6	8.67	2.45	4.9	24	0.17	21.5	0.1	1034	2.17	0.075	6.6	0.027	9.08	< .01	0.49	1.9	< .1	58.2	< .02	9	0.053	0.05	1.6	4	0.7	105.2
RS-500 0240-0260	66	1.07	4.6	1.1	6	127.00	0.2	1.6	0.22	1.60	6.7	8.39	2.26	4.7	22	0.14	18.1	0.1	1121	1.91	0.061	4.5	0.03	9.19	< .01	0.49	1.9	< .1	63.4	< .02	8	0.045	0.03	1.7	3	0.7	113.3
RS-500 0260-0280	57	0.77	4.1	0.8	5	105.10	0.08	1.02	0.17	1.70	7.4	9.05	2.41	3.8	31	0.13	20.2	0.08	930	2.27	0.07	8.8	0.023	7.81	0.01	0.5	1.6	< .1	57	< .02	9.5	0.045	0.03	1.2	3	0.8	77.6
RS-500 0280-0300	43	0.62	2.7	1.2	1	113.10	0.06	0.72	0.09	1.30	3.9	6.07	2.09	3.1	16	0.09	20.2	0.05	726	1.45	0.045	4.5	0.022	8.27	0.01	0.35	1.3	< .1	59.8	< .02	10.1	0.031	< .02	1.2	2	0.7	58.4
RS-500 0300-0320	49	0.53	6.4	1.1	5	48.80	0.09	0.46	0.08	1.20	11	11.08	2.68	2.7	28	0.09	15.6	0.06	555	3.66	0.057	15.2	0.016	17.61	0.01	0.51	1.4	< .1	62.7	< .02	10.5	0.029	0.02	1.5	6	1.3	77.6
RS-500 0320-0340	65	0.54	6.4	1	4	93.70	0.07	0.49	0.11	1.30	13.1	7.09	2.56	2.9	9	0.1	16.5	0.08	646	3.71	0.057	12.8	0.022	8	0.01	0.51	1.3	< .1	54.2	< .02	9.8	0.026	0.02	1.3	5	1.3	60.4
RS-500 0340-0360	68	0.61	6.9	1.2	7	62.50	0.11	0.41	0.15	1.60	7.1	6.65	2.55	2.9	45	0.12	16.9	0.1	465	2.73	0.069	10.1	0.023	7.02	0.01	1.23	1.4	< .1	55.8	< .02	10.4	0.029	0.04	1.7	6	1.7	54.2
RS-500 0360-0380	42	0.79	5.2	1.6	4	83.10	0.13	0.88	0.15	1.70	9.9	8.9	2.43	3.5	326	0.12	15.4	0.11	750	2.63	0.06	11.4	0.024	9.26	0.28	2.69	1.3	0.1	72.9	< .02	8.7	0.016	0.06	1.5	6	1.2	73.4
RS-500 0380-0400	58	0.86	34.3	2	4	128.50	0.14	1.38	0.29	3.30	5.9	4.94	2.23	3.8	930	0.13	19.3	0.09	760	2.18	0.039	12.3	0.025	11.33	0.38	6.68	1.4	0.3	60.7	< .02	8.6	0.018	0.17	1.7	6	1.6	110
RS-500 0400-0420	59	0.77	50.0	11.1	3	47.90	0.1	0.87	0.17	2.00	5.6	5.6	2.5	3.7	854	0.14	17.7	0.07	480	1.83	0.031	22.3	0.025	10.51	1.31	12.39	1.2	1.1	37.1	< .02	7	0.016	0.29	2.3	3	1.2	78
RS-500 0420-0440	53	0.67	31.8	8.7	3	60.10	0.05	0.89	0.21	2.10	6.4	8.15	2.86	3.6	1036	0.13	16	0.11	703	2.33	0.04	83.1	0.03	16.01	0.66	8.51	1.4	1	39.1	0.02	7.5	0.021	0.25	1.4	5	1.3	100.2
RS-500 0440-0460	44	0.87	12.8	9.4	3	69.80	0.02	0.8	0.16	1.70	7.6	9.64	2.91	4.2	242	0.16	16.3	0.14	700	2.27	0.049	83	0.03	13.13	0.34	5.53	1.6	0.6	43	< .02	8.1	0.024	0.15	1.5	6	1	94.6
RS-500 0460-0480	43	0.75	10	8.7	2	153.30	0.02	0.8	0.15	2.30	9.1	8.67	2.97	3.7	292	0.14	16.7	0.11	677	2.22	0.041	76.5	0.03	14.87	0.5	9.44	1.5	0.7	42.2	< .02	8.4	0.028	0.14	1.7	8	1.1	107.4
RS-500 0480-0500	57	0.63	30.5	34.1	1	60.10	0.02	0.23	0.17	2.30	5.2	6.6	2.98	3.4	2139	0.13	19.4	0.08	334	2.67	0.028	78.6	0.03	11.46	1.86	19.29	1.2	2.8	19.1	< .02	7.7	0.016	0.41	1.8	7	1	75.7
RS-500 0500-0520	37	0.75	2.4	2.5	4	75.70	0.02	1.41	0.17	2.20	5.9	8.28	2.55	4.1	46	0.14	21.2	0.13	863	1.78	0.036	47.8	0.034	8.42	0.02	4.2	1.9	0.2	53.9	< .02	10.1	0.031	0.07	1.8	6	1.1	71.2
RS-500 0520-0540	42	0.78	1.7	2.2	2	49.70	< .02	1.09	0.18	1.30	8.4	9.21	2.6	4.2	72	0.15	23.3	0.1	683	1.95	0.036	36.6	0.036	9.12	0.01	4.58	1.8	0.1	43.6	< .02	10.5	0.037	0.05	1.6	6	1.4	55.2
RS-500 0540-0560	44	0.78	5.0	4.6	2	60.20	< .02	1.12	0.19	1.50	6.2	7.23	2.44	4.3	558	0.13	21.1	0.07	783	1.57	0.035	27.3	0.031	9.97	0.16	5.92	1.7	0.2	41.6	< .02	9.1	0.032	0.09	1.5	8	1.3	59
RS-500 0560-0580	56	0.78	16.7	11.7	3	59.10	< .02	0.83	0.2	1.90	8.3	8.86	2.54	4	1691	0.14	19	0.08	707	1.87	0.032	36.4	0.031	11.61	0.65	11.74	1.6	1	33.5	< .02	7.8	0.032	0.23	1.4	9	1.8	71.4
RS-500 0580-0600	69	0.82	23.8	8.1	4.0	49.60	0.0	0.16	0.26	3.30	6.6	8.4	2.66	3.9	4321	0.13	20.2	0.06	1568	2.07	0.021	52.2	0.031	13.22	0.94	16.12	1.5	1.1	10.1	< .02	7.8	0.026	0.33	1.5	11	2.1	83.6
RS-500 0600-0620	68	0.64	64.1	63.6	1	101.4	< .02	0.67	0.25	2.2	3.4	4.12	3.11	3.4	2125	0.12	15.1	0.06	1134	2.91	0.027	36.9	0.029	10.16	1.75	26.32	1.4	5	26.9	< .02	6.1	0.026	0.65	1.2	10	1.3	66.5
RS-500 0620-0640	59	0.75	21.2	13.1	2	45.5	0.03	0.75	0.16	2	3	5.14	2.72	3.7	1606	0.12	16.9	0.06	890	1.78	0.027	48.3	0.026	8.83	1	8.56	1.4	1.3	27.3	< .02	7.1	0.026	0.2	1.3	6	1	64.8
RS-500 0640-0660	49	0.91	22.4	14.4	3	106.2	0.04	0.29	0.08	1.7	2.7	3.82	2.44	4	1343	0.14	20.5	0.05	485	2.04	0.024	32.6	0.028	9.94	0.78	9.52	1.2	1.5	16	< .02	8.4	0.031	0.2	1.5	5	1	56.9
STANDARD DS2	261	1.78	59.6	196.5	2	157	10.82	0.55	10.22	11.8	167.6	131.97	3.11	6.2	240	0.17	17.1	0.61	837	14.34	0.032	35.4	0.091	34.07	0.02	9.11	3.2	2.2	30.1	1.82	3.8	0.096	1.84	18.8	75	6.8	161.7
RS-500 0660-0680	54	0.72	40.3	23	< 1	61.8	0.02	0.26	0.2	2	2.5	4.33	2.32	3.2	761	0.12	16.9	0.07	529	2.68	0.027	36	0.032	16.57	0.96	7.84	1.1	1.8	18	< .02	6.8	0.019	0.27	3.1	6	1	99.3

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CLIENT REF: KURT ALLEN
AAL REF: SP57762
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-500 0680-0700	42	0.66	7.1	7.5	4	41.9	0.05	0.77	0.15	1.4	1.5	3.19	1.97	3	336	0.11	18	0.08	692	1.22	0.028	21.3	0.027	15.71	0.32	3.19	1.2	0.5	31.5	< .02	8.1	0.021	0.09	1.1	3	0.7	49.6
RS-500 0700-0720	32	0.79	5	3.8	3	40.3	0.19	0.68	0.13	1.3	3	1.9	1.8	3.3	138	0.12	17.1	0.11	573	0.82	0.029	18.8	0.024	8.47	0.18	1.41	1.1	0.4	35.9	< .02	8.1	0.017	0.05	0.8	2	0.3	38.4
RS-500 0720-0740	50	0.87	4.7	3.2	3	50.8	0.16	0.83	0.13	1.4	1.3	1.64	2.02	3.9	110	0.15	17.7	0.12	578	0.75	0.029	11.9	0.027	9.81	0.08	1.32	1.4	0.2	41	< .02	7.9	0.025	0.05	0.7	2	0.4	41.3
RS-500 0740-0760	71	1.24	4	2.2	2	48.2	0.08	1.58	0.09	1.7	1.4	1.44	2.06	5	45	0.14	21.1	0.16	685	0.65	0.035	5.2	0.033	12.52	0.02	0.73	1.2	0.2	60.6	< .02	8.3	0.011	0.03	0.7	< 2	0.4	39.3
RS-500 0760-0780	75	0.94	1.3	2.5	2	39.9	0.07	2.36	0.09	1.2	< .5	1.35	2.17	4.1	10	0.12	27.1	0.09	739	0.4	0.029	3.1	0.031	17.45	0.01	0.65	1.1	< .1	54.1	< .02	9	0.017	0.02	1.4	2	1.3	40.5
RS-500 0780-0800	59	0.77	1.1	1.2	1	52	0.09	1.75	0.13	1.1	1.6	2.57	2.24	3.3	15	0.13	19.2	0.09	659	1.04	0.048	22.3	0.033	10.26	0.01	0.66	1	0.1	50.1	< .02	7	0.017	0.05	2.1	4	0.6	40.3
RS-500 0800-0820	95	1.83	1	2.2	2	85.3	0.22	2.23	0.28	3	< .5	3.23	1.68	5.5	12	0.21	27.4	0.17	1059	0.39	0.069	3.5	0.066	17.3	0.01	0.23	1.9	< .1	131.6	< .02	5.4	0.006	0.07	1.1	11	< .2	64.2
RS-500 0820-0840	80	1.7	1	2.2	2	328.4	0.23	1.89	0.34	2.3	4.9	3.2	1.42	4.8	32	0.16	26.7	0.18	933	0.68	0.091	3.8	0.037	16.95	0.02	0.24	1.6	0.3	360.4	0.03	5.8	0.005	0.05	1.1	6	< .2	61.3
RS-500 0840-0860	85	1.91	1.2	1.4	1	764	0.19	2.11	0.27	3.9	7.4	3.95	1.96	5.7	28	0.24	23.6	0.26	1042	1.44	0.084	5.5	0.043	17.87	0.03	0.35	2.6	0.3	272.3	0.03	5.8	0.011	0.1	1.1	12	< .2	70.1
RS-500 0860-0880	70	1.21	2.2	2.1	3	183.1	0.13	0.87	0.14	2.2	13.9	4.34	2.5	4.7	12	0.36	27.1	0.17	532	3.74	0.073	15.8	0.046	10.63	0.01	0.47	1.5	0.1	61.2	0.02	7.7	0.016	0.15	1.5	11	0.5	72.6
RS-500 0880-0900	70	2.11	2.9	1.8	2	1579.8	0.08	1.46	0.21	2.2	12.5	4.05	2.27	5.8	17	0.36	29.2	0.23	676	2.92	0.181	12.2	0.052	12.71	0.01	0.38	1.9	0.2	1085.8	0.07	6.3	0.011	0.15	1.4	12	0.2	71
RS-500 0900-0920	62	1.41	2.8	2.3	3	1071.6	0.09	1.12	0.18	2.1	15.3	4.37	2.34	4.5	10	0.37	27.5	0.16	742	3.74	0.133	16	0.05	14.26	0.01	0.43	1.6	< .1	581.4	0.05	6.4	0.017	0.16	1.5	13	0.3	68.4
RS-500 0920-0940	83	2.62	2.7	1.2	3	2462.4	0.11	1.46	0.12	2.1	6.1	3.2	2.15	6.1	8	0.37	29.6	0.24	503	1.62	0.292	14.2	0.041	12.8	< .01	0.27	1.5	0.1	1945.7	0.12	6.4	0.008	0.15	1.2	6	< .2	62.6
RS-500 0940-0960	92	1.57	1.9	2.6	5	409.1	0.15	1.17	0.14	2.8	7	3.95	2.6	5.3	22	0.35	24.7	0.25	835	1.87	0.108	56.1	0.045	12.26	0.03	0.52	1.8	0.2	183.1	0.03	6.6	0.023	0.15	1.4	12	0.3	71.2
RS-500 0960-0980	83	1.43	3	3.7	5	471	0.15	1.16	0.22	3.1	13.7	4.43	2.6	5.2	49	0.34	23.5	0.21	803	3.51	0.084	23.8	0.043	12.86	0.06	0.85	1.8	0.2	80.6	< .02	7.1	0.021	0.17	1.6	11	0.8	67.2
RS-500 0980-1000	81	1.35	2.2	1.8	2	362.9	0.16	1.16	0.18	2.8	10.8	3.94	2.49	4.9	26	0.32	23.8	0.26	772	2.6	0.076	28.2	0.049	11.22	0.03	0.48	1.6	0.1	88.8	< .02	7	0.012	0.14	1.8	9	0.2	64.1
RS-500 1000-1020	222	1.22	3.9	2.9	3	109.9	0.17	1.52	0.23	2.1	6.3	4.82	2.46	4.8	50	0.32	26.9	0.15	851	2.54	0.089	37.9	0.032	12	0.04	0.85	1.7	0.2	66.5	< .02	9.5	0.023	0.11	2	6	0.5	66.2
RS-500 1020-1040	85	0.69	1.4	2.5	4	84.8	0.15	0.88	0.15	1.3	4.6	3.05	2.1	3.6	< 5	0.33	30.8	0.07	440	2.54	0.079	6.5	0.024	12.88	0.01	0.55	1.5	0.3	37.2	< .02	11.5	0.031	0.11	1.9	5	0.4	39.6
RS-500 1040-1060	208	0.73	1.4	2.2	5	102.2	0.15	0.86	0.15	1.1	4.5	2.8	2.11	3.9	16	0.36	33.1	0.06	488	2.4	0.086	23	0.028	14.7	0.02	0.55	1.4	0.3	40.6	< .02	11.9	0.024	0.11	2.9	4	0.4	38.8
RS-500 1060-1080	88	1	2.7	2.4	3	98.9	0.16	0.87	0.13	1.7	6.9	4.11	2.61	3.7	30	0.31	24.2	0.12	577	2.44	0.074	82.4	0.028	17.55	0.03	0.79	1.3	0.1	58.6	< .02	9.4	0.018	0.1	2.3	6	0.7	44.8
RS-500 1080-1100	80	0.8	2.4	1.2	2	120	0.17	1.18	0.16	1.6	5	3.95	2.7	3.2	8	0.33	25	0.11	701	2.32	0.067	117.5	0.047	13.01	0.02	0.53	1.3	0.2	56.6	< .02	9.2	0.024	0.11	3.8	9	0.5	30.6
RS-500 1100-1120	99	1.48	5.6	2	4	285.5	0.27	1.33	0.19	2	7.9	4.13	2.3	5	16	0.53	28.9	0.19	675	2.17	0.061	8.6	0.051	27.32	0.02	0.6	1.5	0.2	93.5	< .02	7.8	0.02	0.17	2.2	8	0.2	41.1
RS-500 1120-1140	330	1.63	6.6	0.8	3	192.5	0.22	1.34	0.13	1.9	9.3	3.71	2.13	5.2	27	0.43	31.8	0.26	630	2.41	0.062	10.5	0.045	23.22	0.02	0.56	1.4	< .1	142.6	< .02	7.7	0.009	0.15	1.9	5	0.3	41.2
RS-500 1140-1160	111	2.1	3.6	1.9	4	286	0.21	1.52	0.26	1.8	8.7	3.7	2.16	6.8	39	0.62	31.5	0.3	776	2.21	0.072	11.2	0.04	25.41	0.05	0.79	1.6	< .1	126.8	< .02	7.3	0.012	0.21	1.8	4	0.3	58.9
RS-500 1160-1180	129	1.8	3.5	3.2	2	1089.1	0.19	1.83	0.29	1.7	5.5	2.68	1.5	5.5	60	0.45	29.8	0.3	1002	1.52	0.05	7	0.035	18.78	0.1	0.74	1.2	0.1	137.6	< .02	5.9	0.004	0.17	1.2	2	< .2	58.3
RS-500 1180-1200	193	1.49	2.1	2	2	1743.8	0.25	2.94	0.27	1.6	5.8	3.7	1.64	4.3	41	0.43	30.1	0.12	1622	1.81	0.043	7.6	0.04	27.89	0.09	0.87	0.9	0.2	135.4	< .02	5	0.009	0.16	2.2	4	0.2	60.4
RS-500 1200-1220	125	1.46	5	8	3	202.9	0.27	1.08	0.29	2.3	6.2	5.75	2.09	3.9	341	0.28	31.1	0.1	473	1.66	0.032	6.8	0.048	57.11	0.48	1.81	0.7	0.4	113.3	< .02	5	0.005	0.15	1.5	4	0.5	100.9
RS-500 1220-1240	83	1.5	1.5	3.9	< 1	207.5	0.12	2.46	0.16	2.1	3.6	3.07	2.04	4.4	21	0.38	28.9	0.13	1060	1.33	0.04	10.7	0.041	28.43	0.05	1.01	0.7	0.2	142	0.02	4.4	0.009	0.12	2.2	3	< .2	74.2
RS-500 1240-1260	79	1.15	0.9	2.2	2	109.1	0.04	1.35	0.19	3	5.1	3.8	2.31	4.8	24	0.25	24.8	0.2	877	1.77	0.053	6.9	0.049	17.2	0.03	0.66	0.7	0.2	83.2	< .02	4.7	0.029	0.07	2.8	4	< .2	86.1
RS-500 1260-1280	95	1.15	0.6	0.8	2	141.7	0.04	2.34	0.2	1.9	3.9	2.57	1.75	4	8	0.41	28.7	0.11	1253	1.26	0.045	7.2	0.046	23.69	0.01	0.91	0.7	< .1	116.9	< .02	5.3	0.011	0.09	4.3	5	< .2	77.2
RS-500 1280-1300	130	1.76	5	3	2	255	0.08	1.73	0.42	5.6	1	4.06	2.48	5.9	452	0.44	30.9	0.19	1912	1.82	0.046	3.4	0.06	40.87	0.6	2.39	0.6	0.4	121.1	< .02	5.5	0.002	0.17	3.8	3	< .2	146
RS-500 1300-1320	7621	1.22	173.3	917.6	2	34.2	0.08	0.29	1.93	14	15.4	7.08	6.07	3.6	5277	0.42	14.2	0.03	423	13.64	0.019	42.4	0.035	33.75	5.97	36.34	0.7	14.4	46.3	< .02	3.9	0.001	1.76	2.9	4	0.6	281.7
STANDARD DS2	254	1.69	57.7	193.6	4	151.3	10.7	0.52	10.01	11.2	156.3	127.6	3	5.8	220	0.16	16.3	0.58	809	13.85	0.03	34.5	0.088	34.62	0.02	8.63	3	2.2	28.6	1.84	3.4	0.093	1.75	18.8	73	6.8	153.3
RS-500 1320-1340	664	1.11	28.6	40.6	< 1	109	0.16	0.87	0.2	4.5	7.6	5.76	2.88	3.3	1082	0.45	18.8	0.06	557	5.44	0.031	14.7	0.052	42.53	2.08	7.82	0.7	1.7	82.3	< .02	5.1	0.006	0.34	1	3	0.9	82.2
RS-500 1340-1360	102	1.14	4.6	3.5	2	129.2	0.1	1.18	0.19	2.3	10.9	3.72	3.01	5.1	44	0.53	20.6	0.11	1392	2.55	0.092	42.1	0.043	15.71	0.06	2.24	1.4	0.2	64.2	< .02	9	0.042	0.18	0.8	6	0.7	65.8

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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-500 1360-1380	87	0.9	8	2.3	2	381.4	0.04	0.91	0.21	2.3	7.8	3.46	2.77	4.7	28	0.43	19.2	0.12	1079	2.08	0.103	22.9	0.044	12.43	0.07	0.84	1.3	0.2	58	< .02	9	0.048	0.14	0.7	6	0.7	63
RS-500 1380-1400	84	0.79	12.2	2.2	3	126.5	0.03	0.59	0.18	2.2	8.8	4.98	2.83	4.4	28	0.36	17.4	0.13	785	2.32	0.108	24	0.044	26.29	0.06	0.66	1.3	0.1	50.3	< .02	8.6	0.051	0.12	0.6	6	0.5	74.9
RS-500 1400-1420	209	0.59	9.5	1	6	162.9	0.07	0.47	0.12	3	10.2	3.56	2.74	3.4	18	0.29	16.2	0.12	779	2.54	0.092	27	0.041	9.98	0.02	0.51	1.2	< .1	40.9	< .02	8.1	0.059	0.08	0.6	6	0.5	71.8
RS-500 1420-1440	48	0.66	12.4	1	4	106.4	0.03	0.65	0.11	2	8.4	2.92	2.66	3.7	20	0.29	16.1	0.11	780	1.95	0.087	20.2	0.045	9.97	0.03	0.48	1.3	< .1	53.8	< .02	8.5	0.055	0.1	0.7	7	0.5	54.4
RS-500 1440-1450	91	0.59	8.2	1.2	3	83.9	0.04	0.65	0.16	1.9	8.9	3.79	2.64	3.2	21	0.26	16.1	0.1	823	2.19	0.082	20.1	0.045	10.41	0.02	0.47	1.2	0.1	52	< .02	8.9	0.059	0.1	0.8	7	0.7	53.1
89742	62286	2.27	126.8	4881.7	1	81.4	0.18	0.92	1.63	4	6.7	23.22	2.66	7.6	329	0.84	16.7	0.14	333	6.18	0.07	4.3	0.057	28.94	2.72	19.24	1.1	24	68.4	< .02	3.9	0.002	0.42	1.4	9	0.3	88.6
STANDARD DS2	264	1.69	63.1	189.4	3	152.9	10.33	0.53	10.18	11	158.8	128.51	3.09	5.9	240	0.15	16.1	0.61	842	14	0.03	35.5	0.089	31.31	0.03	8.55	3	2.1	28.4	1.89	3.9	0.095	1.75	19.2	74	6.8	150.9

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: SP57762
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-500 0000-0020	40	1.63	6.1	3.2	9	82.80	0.87	0.41	0.11	2.50	8.4	34.18	2.63	6.3	19	0.17	42.6	0.13	408	1.94	0.097	5.5	0.02	20.02	0.01	0.71	4	0.4	38.9	< .02	14	0.016	0.16	2.6	26	0.5	60
RS-500 0020-0040	34	1.49	5	2.7	9	85.60	0.39	0.35	0.07	2.30	11.7	32.83	2.71	6.5	12	0.16	36.1	0.12	448	1.63	0.053	4.8	0.021	25.49	< .01	0.89	3.9	0.2	30	0.02	13.5	0.016	0.37	2.5	27	0.4	144.2
RS-500 0040-0060	47	1.16	4.9	1.5	7	48.60	0.24	0.37	0.08	1.90	11.5	15.94	2.59	4.9	31	0.14	30.7	0.12	268	2.09	0.056	6	0.038	14.13	< .01	3.14	2.4	0.2	29.5	< .02	11.9	0.015	0.12	2.5	14	0.5	84.9
RS-500 0060-0080	53	0.87	3.4	1.4	5	199.00	0.1	0.62	0.23	1.90	14.3	12.65	2.75	4.3	47	0.18	25.5	0.11	980	2.8	0.062	10.5	0.032	10.93	0.04	3.61	2	0.4	27.4	< .02	10.7	0.025	0.17	2.2	10	1.2	77.6
RS-500 0080-0100	55	0.79	12.0	1	3	115.70	0.03	0.91	0.26	2.00	9.1	8.94	2.36	3.9	74	0.18	21.3	0.1	838	2.04	0.048	7.6	0.03	9.86	0.17	2.22	1.8	< .1	39.4	< .02	9.4	0.022	0.19	1.8	5	0.9	87.2
RS-500 0100-0120	43	0.95	32	2.7	3	90.70	0.04	0.55	0.21	2.40	8.3	8.84	2.29	4.3	4743	0.16	25.5	0.08	641	2.15	0.03	7	0.029	12.47	0.33	20.44	1.6	0.8	43.9	< .02	9.1	0.024	0.49	2.8	4	1.1	95.8
RS-500 0120-0140	43	0.82	36.6	19.9	3	84.80	0.05	0.47	0.19	2.50	8.7	9.71	2.1	3.9	6844	0.15	28.3	0.06	508	2.53	0.032	7	0.027	12.2	0.19	33.94	1.4	2.2	76	< .02	9.7	0.02	0.61	4.1	7	0.9	78.9
RS-500 0140-0160	37	0.77	2.4	1.2	5.0	57.00	0.08	1.42	0.16	1.90	5.7	6.38	2.05	3.9	102	0.13	25.5	0.09	794	1.22	0.039	3.4	0.024	9.88	< .01	1.64	2	0.1	48.7	0.02	10.3	0.036	0.08	1.1	5	0.8	92.7
RS-500 0160-0180	29	0.67	3.9	3.3	2	97.10	0.08	1.09	0.13	1.80	3.9	5.1	1.82	3.5	80	0.1	21.5	0.09	887	1.04	0.041	2.7	0.02	8.41	< .01	0.55	1.8	0.2	50.9	< .02	9.3	0.03	0.05	0.9	4	0.5	80.7
RS-500 0180-0200	37	0.7	2.9	3.4	5	119.00	0.23	0.6	0.12	1.70	7.1	8.45	2.21	3.7	44	0.12	19.7	0.12	486	1.72	0.047	5.1	0.018	7.82	< .01	1.24	1.7	< .1	48.9	< .02	8.7	0.039	0.06	1.1	4	0.7	84.4
RS-500 0200-0220	47	0.83	3.7	2	3	125.80	0.19	0.87	0.25	2.00	8.7	9.56	2.51	4.5	27	0.15	19.7	0.12	831	2.27	0.069	8.3	0.02	7.35	< .01	0.58	1.8	0.3	57.7	< .02	8.5	0.049	0.05	1.3	3	0.6	88.7
RS-500 0220-0240	51	1.02	4.6	1.2	7	129.10	0.16	1.46	0.32	2.00	5.6	8.67	2.45	4.9	24	0.17	21.5	0.1	1034	2.17	0.075	6.6	0.027	9.08	< .01	0.49	1.9	< .1	58.2	< .02	9	0.053	0.05	1.6	4	0.7	105.2
RS-500 0240-0260	66	1.07	4.6	1.1	6	127.00	0.2	1.6	0.22	1.60	6.7	8.39	2.26	4.7	22	0.14	18.1	0.1	1121	1.91	0.061	4.5	0.03	9.19	< .01	0.49	1.9	< .1	63.4	< .02	8	0.045	0.03	1.7	3	0.7	113.3
RS-500 0260-0280	57	0.77	4.1	0.8	5	105.10	0.08	1.02	0.17	1.70	7.4	9.05	2.41	3.8	31	0.13	20.2	0.08	930	2.27	0.07	8.8	0.023	7.81	0.01	0.5	1.6	< .1	57	< .02	9.5	0.045	0.03	1.2	3	0.8	77.6
RS-500 0280-0300	43	0.62	2.7	1.2	1	113.10	0.06	0.72	0.09	1.30	3.9	6.07	2.09	3.1	16	0.09	20.2	0.05	726	1.45	0.045	4.5	0.022	8.27	0.01	0.35	1.3	< .1	59.8	< .02	10.1	0.031	< .02	1.2	2	0.7	58.4
RS-500 0300-0320	49	0.53	6.4	1.1	5	48.80	0.09	0.46	0.08	1.20	11	11.08	2.68	2.7	28	0.09	15.6	0.06	555	3.66	0.057	15.2	0.016	17.61	0.01	0.51	1.4	< .1	62.7	< .02	10.5	0.029	0.02	1.5	6	1.3	77.6
RS-500 0320-0340	65	0.54	6.4	1	4	93.70	0.07	0.49	0.11	1.30	13.1	7.09	2.56	2.9	9	0.1	16.5	0.08	646	3.71	0.057	12.8	0.022	8	0.01	0.51	1.3	< .1	54.2	< .02	9.8	0.026	0.02	1.3	5	1.3	60.4
RS-500 0340-0360	68	0.61	6.9	1.2	7	62.50	0.11	0.41	0.15	1.60	7.1	6.65	2.55	2.9	45	0.12	16.9	0.1	465	2.73	0.069	10.1	0.023	7.02	0.01	1.23	1.4	< .1	55.8	< .02	10.4	0.029	0.04	1.7	6	1.7	54.2
RS-500 0360-0380	42	0.79	5.2	1.6	4	83.10	0.13	0.88	0.15	1.70	9.9	8.9	2.43	3.5	326	0.12	15.4	0.11	750	2.63	0.06	11.4	0.024	9.26	0.28	2.69	1.3	0.1	72.9	< .02	8.7	0.016	0.06	1.5	6	1.2	73.4
RS-500 0380-0400	58	0.86	34.3	2	4	128.50	0.14	1.38	0.29	3.30	5.9	4.94	2.23	3.8	930	0.13	19.3	0.09	760	2.18	0.039	12.3	0.025	11.33	0.38	6.68	1.4	0.3	60.7	< .02	8.6	0.018	0.17	1.7	6	1.6	110
RS-500 0400-0420	59	0.77	50.0	11.1	3	47.90	0.1	0.87	0.17	2.00	5.6	5.6	2.5	3.7	854	0.14	17.7	0.07	480	1.83	0.031	22.3	0.025	10.51	1.31	12.39	1.2	1.1	37.1	< .02	7	0.016	0.29	2.3	3	1.2	78
RS-500 0420-0440	53	0.67	31.8	8.7	3	60.10	0.05	0.89	0.21	2.10	6.4	8.15	2.86	3.6	1036	0.13	16	0.11	703	2.33	0.04	83.1	0.03	16.01	0.66	8.51	1.4	1	39.1	0.02	7.5	0.021	0.25	1.4	5	1.3	100.2
RS-500 0440-0460	44	0.87	12.8	9.4	3	69.80	0.02	0.8	0.16	1.70	7.6	9.64	2.91	4.2	242	0.16	16.3	0.14	700	2.27	0.049	83	0.03	13.13	0.34	5.53	1.6	0.6	43	< .02	8.1	0.024	0.15	1.5	6	1	94.6
RS-500 0460-0480	43	0.75	10	8.7	2	153.30	0.02	0.8	0.15	2.30	9.1	8.67	2.97	3.7	292	0.14	16.7	0.11	677	2.22	0.041	76.5	0.03	14.87	0.5	9.44	1.5	0.7	42.2	< .02	8.4	0.028	0.14	1.7	8	1.1	107.4
RS-500 0480-0500	57	0.63	30.5	34.1	1	60.10	0.02	0.23	0.17	2.30	5.2	6.6	2.98	3.4	2139	0.13	19.4	0.08	334	2.67	0.028	78.6	0.03	11.46	1.86	19.29	1.2	2.8	19.1	< .02	7.7	0.016	0.41	1.8	7	1	75.7
RS-500 0500-0520	37	0.75	2.4	2.5	4	75.70	0.02	1.41	0.17	2.20	5.9	8.28	2.55	4.1	46	0.14	21.2	0.13	863	1.78	0.036	47.8	0.034	8.42	0.02	4.2	1.9	0.2	53.9	< .02	10.1	0.031	0.07	1.8	6	1.1	71.2
RS-500 0520-0540	42	0.78	1.7	2.2	2	49.70	< .02	1.09	0.18	1.30	8.4	9.21	2.6	4.2	72	0.15	23.3	0.1	683	1.95	0.036	36.6	0.036	9.12	0.01	4.58	1.8	0.1	43.6	< .02	10.5	0.037	0.05	1.6	6	1.4	55.2
RS-500 0540-0560	44	0.78	5.0	4.6	2	60.20	< .02	1.12	0.19	1.50	6.2	7.23	2.44	4.3	558	0.13	21.1	0.07	783	1.57	0.035	27.3	0.031	9.97	0.16	5.92	1.7	0.2	41.6	< .02	9.1	0.032	0.09	1.5	8	1.3	59
RS-500 0560-0580	56	0.78	16.7	11.7	3	59.10	< .02	0.83	0.2	1.90	8.3	8.86	2.54	4	1691	0.14	19	0.08	707	1.87	0.032	36.4	0.031	11.61	0.65	11.74	1.6	1	33.5	< .02	7.8	0.032	0.23	1.4	9	1.8	71.4
RS-500 0580-0600	69	0.82	23.8	8.1	4.0	49.60	0.0	0.16	0.26	3.30	6.6	8.4	2.66	3.9	4321	0.13	20.2	0.06	1568	2.07	0.021	52.2	0.031	13.22	0.94	16.12	1.5	1.1	10.1	< .02	7.8	0.026	0.33	1.5	11	2.1	83.6
RS-500 0600-0620	68	0.64	64.1	63.6	1	101.4	< .02	0.67	0.25	2.2	3.4	4.12	3.11	3.4	2125	0.12	15.1	0.06	1134	2.91	0.027	36.9	0.029	10.16	1.75	26.32	1.4	5	26.9	< .02	6.1	0.026	0.65	1.2	10	1.3	66.5
RS-500 0620-0640	59	0.75	21.2	13.1	2	45.5	0.03	0.75	0.16	2	3	5.14	2.72	3.7	1606	0.12	16.9	0.06	890	1.78	0.027	48.3	0.026	8.83	1	8.56	1.4	1.3	27.3	< .02	7.1	0.026	0.2	1.3	6	1	64.8
RS-500 0640-0660	49	0.91	22.4	14.4	3	106.2	0.04	0.29	0.08	1.7	2.7	3.82	2.44	4	1343	0.14	20.5	0.05	485	2.04	0.024	32.6	0.028	9.94	0.78	9.52	1.2	1.5	16	< .02	8.4	0.031	0.2	1.5	5	1	56.9
STANDARD DS2	261	1.78	59.6	196.5	2	157	10.82	0.55	10.22	11.8	167.6	131.97	3.11	6.2	240	0.17	17.1	0.61	837	14.34	0.032	35.4	0.091	34.07	0.02	9.11	3.2	2.2	30.1	1.82	3.8	0.096	1.84	18.8	75	6.8	161.7
RS-500 0660-0680	54	0.72	40.3	23	< 1	61.8	0.02	0.26	0.2	2	2.5	4.33	2.32	3.2	761	0.12	16.9	0.07	529	2.68	0.027	36	0.032	16.57	0.96	7.84	1.1	1.8	18	< .02	6.8	0.019	0.27	3.1	6	1	99.3

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CLIENT:	HECLA MINING CO.
CLIENT REF:	KURT ALLEN
AAL REF:	SP57762
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-500 0680-0700	42	0.66	7.1	7.5	4	41.9	0.05	0.77	0.15	1.4	1.5	3.19	1.97	3	336	0.11	18	0.08	692	1.22	0.028	21.3	0.027	15.71	0.32	3.19	1.2	0.5	31.5	< .02	8.1	0.021	0.09	1.1	3	0.7	49.6
RS-500 0700-0720	32	0.79	5	3.8	3	40.3	0.19	0.68	0.13	1.3	3	1.9	1.8	3.3	138	0.12	17.1	0.11	573	0.82	0.029	18.8	0.024	8.47	0.18	1.41	1.1	0.4	35.9	< .02	8.1	0.017	0.05	0.8	2	0.3	38.4
RS-500 0720-0740	50	0.87	4.7	3.2	3	50.8	0.16	0.83	0.13	1.4	1.3	1.64	2.02	3.9	110	0.15	17.7	0.12	578	0.75	0.029	11.9	0.027	9.81	0.08	1.32	1.4	0.2	41	< .02	7.9	0.025	0.05	0.7	2	0.4	41.3
RS-500 0740-0760	71	1.24	4	2.2	2	48.2	0.08	1.58	0.09	1.7	1.4	1.44	2.06	5	45	0.14	21.1	0.16	685	0.65	0.035	5.2	0.033	12.52	0.02	0.73	1.2	0.2	60.6	< .02	8.3	0.011	0.03	0.7	< 2	0.4	39.3
RS-500 0760-0780	75	0.94	1.3	2.5	2	39.9	0.07	2.36	0.09	1.2	< .5	1.35	2.17	4.1	10	0.12	27.1	0.09	739	0.4	0.029	3.1	0.031	17.45	0.01	0.65	1.1	< .1	54.1	< .02	9	0.017	0.02	1.4	2	1.3	40.5
RS-500 0780-0800	59	0.77	1.1	1.2	1	52	0.09	1.75	0.13	1.1	1.6	2.57	2.24	3.3	15	0.13	19.2	0.09	659	1.04	0.048	22.3	0.033	10.26	0.01	0.66	1	0.1	50.1	< .02	7	0.017	0.05	2.1	4	0.6	40.3
RS-500 0800-0820	95	1.83	1	2.2	2	85.3	0.22	2.23	0.28	3	< .5	3.23	1.68	5.5	12	0.21	27.4	0.17	1059	0.39	0.069	3.5	0.066	17.3	0.01	0.23	1.9	< .1	131.6	< .02	5.4	0.006	0.07	1.1	11	< .2	64.2
RS-500 0820-0840	80	1.7	1	2.2	2	328.4	0.23	1.89	0.34	2.3	4.9	3.2	1.42	4.8	32	0.16	26.7	0.18	933	0.68	0.091	3.8	0.037	16.95	0.02	0.24	1.6	0.3	360.4	0.03	5.8	0.005	0.05	1.1	6	< .2	61.3
RS-500 0840-0860	85	1.91	1.2	1.4	1	764	0.19	2.11	0.27	3.9	7.4	3.95	1.96	5.7	28	0.24	23.6	0.26	1042	1.44	0.084	5.5	0.043	17.87	0.03	0.35	2.6	0.3	272.3	0.03	5.8	0.011	0.1	1.1	12	< .2	70.1
RS-500 0860-0880	70	1.21	2.2	2.1	3	183.1	0.13	0.87	0.14	2.2	13.9	4.34	2.5	4.7	12	0.36	27.1	0.17	532	3.74	0.073	15.8	0.046	10.63	0.01	0.47	1.5	0.1	61.2	0.02	7.7	0.016	0.15	1.5	11	0.5	72.6
RS-500 0880-0900	70	2.11	2.9	1.8	2	1579.8	0.08	1.46	0.21	2.2	12.5	4.05	2.27	5.8	17	0.36	29.2	0.23	676	2.92	0.181	12.2	0.052	12.71	0.01	0.38	1.9	0.2	1085.8	0.07	6.3	0.011	0.15	1.4	12	0.2	71
RS-500 0900-0920	62	1.41	2.8	2.3	3	1071.6	0.09	1.12	0.18	2.1	15.3	4.37	2.34	4.5	10	0.37	27.5	0.16	742	3.74	0.133	16	0.05	14.26	0.01	0.43	1.6	< .1	581.4	0.05	6.4	0.017	0.16	1.5	13	0.3	68.4
RS-500 0920-0940	83	2.62	2.7	1.2	3	2462.4	0.11	1.46	0.12	2.1	6.1	3.2	2.15	6.1	8	0.37	29.6	0.24	503	1.62	0.292	14.2	0.041	12.8	< .01	0.27	1.5	0.1	1945.7	0.12	6.4	0.008	0.15	1.2	6	< .2	62.6
RS-500 0940-0960	92	1.57	1.9	2.6	5	409.1	0.15	1.17	0.14	2.8	7	3.95	2.6	5.3	22	0.35	24.7	0.25	835	1.87	0.108	56.1	0.045	12.26	0.03	0.52	1.8	0.2	183.1	0.03	6.6	0.023	0.15	1.4	12	0.3	71.2
RS-500 0960-0980	83	1.43	3	3.7	5	471	0.15	1.16	0.22	3.1	13.7	4.43	2.6	5.2	49	0.34	23.5	0.21	803	3.51	0.084	23.8	0.043	12.86	0.06	0.85	1.8	0.2	80.6	< .02	7.1	0.021	0.17	1.6	11	0.8	67.2
RS-500 0980-1000	81	1.35	2.2	1.8	2	362.9	0.16	1.16	0.18	2.8	10.8	3.94	2.49	4.9	26	0.32	23.8	0.26	772	2.6	0.076	28.2	0.049	11.22	0.03	0.48	1.6	0.1	88.8	< .02	7	0.012	0.14	1.8	9	0.2	64.1
RS-500 1000-1020	222	1.22	3.9	2.9	3	109.9	0.17	1.52	0.23	2.1	6.3	4.82	2.46	4.8	50	0.32	26.9	0.15	851	2.54	0.089	37.9	0.032	12	0.04	0.85	1.7	0.2	66.5	< .02	9.5	0.023	0.11	2	6	0.5	66.2
RS-500 1020-1040	85	0.69	1.4	2.5	4	84.8	0.15	0.88	0.15	1.3	4.6	3.05	2.1	3.6	< 5	0.33	30.8	0.07	440	2.54	0.079	6.5	0.024	12.88	0.01	0.55	1.5	0.3	37.2	< .02	11.5	0.031	0.11	1.9	5	0.4	39.6
RS-500 1040-1060	208	0.73	1.4	2.2	5	102.2	0.15	0.86	0.15	1.1	4.5	2.8	2.11	3.9	16	0.36	33.1	0.06	488	2.4	0.086	23	0.028	14.7	0.02	0.55	1.4	0.3	40.6	< .02	11.9	0.024	0.11	2.9	4	0.4	38.8
RS-500 1060-1080	88	1	2.7	2.4	3	98.9	0.16	0.87	0.13	1.7	6.9	4.11	2.61	3.7	30	0.31	24.2	0.12	577	2.44	0.074	82.4	0.028	17.55	0.03	0.79	1.3	0.1	58.6	< .02	9.4	0.018	0.1	2.3	6	0.7	44.8
RS-500 1080-1100	80	0.8	2.4	1.2	2	120	0.17	1.18	0.16	1.6	5	3.95	2.7	3.2	8	0.33	25	0.11	701	2.32	0.067	117.5	0.047	13.01	0.02	0.53	1.3	0.2	56.6	< .02	9.2	0.024	0.11	3.8	9	0.5	30.6
RS-500 1100-1120	99	1.48	5.6	2	4	285.5	0.27	1.33	0.19	2	7.9	4.13	2.3	5	16	0.53	28.9	0.19	675	2.17	0.061	8.6	0.051	27.32	0.02	0.6	1.5	0.2	93.5	< .02	7.8	0.02	0.17	2.2	8	0.2	41.1
RS-500 1120-1140	330	1.63	6.6	0.8	3	192.5	0.22	1.34	0.13	1.9	9.3	3.71	2.13	5.2	27	0.43	31.8	0.26	630	2.41	0.062	10.5	0.045	23.22	0.02	0.56	1.4	< .1	142.6	< .02	7.7	0.009	0.15	1.9	5	0.3	41.2
RS-500 1140-1160	111	2.1	3.6	1.9	4	286	0.21	1.52	0.26	1.8	8.7	3.7	2.16	6.8	39	0.62	31.5	0.3	776	2.21	0.072	11.2	0.04	25.41	0.05	0.79	1.6	< .1	126.8	< .02	7.3	0.012	0.21	1.8	4	0.3	58.9
RS-500 1160-1180	129	1.8	3.5	3.2	2	1089.1	0.19	1.83	0.29	1.7	5.5	2.68	1.5	5.5	60	0.45	29.8	0.3	1002	1.52	0.05	7	0.035	18.78	0.1	0.74	1.2	0.1	137.6	< .02	5.9	0.004	0.17	1.2	2	< .2	58.3
RS-500 1180-1200	193	1.49	2.1	2	2	1743.8	0.25	2.94	0.27	1.6	5.8	3.7	1.64	4.3	41	0.43	30.1	0.12	1622	1.81	0.043	7.6	0.04	27.89	0.09	0.87	0.9	0.2	135.4	< .02	5	0.009	0.16	2.2	4	0.2	60.4
RS-500 1200-1220	125	1.46	5	8	3	202.9	0.27	1.08	0.29	2.3	6.2	5.75	2.09	3.9	341	0.28	31.1	0.1	473	1.66	0.032	6.8	0.048	57.11	0.48	1.81	0.7	0.4	113.3	< .02	5	0.005	0.15	1.5	4	0.5	100.9
RS-500 1220-1240	83	1.5	1.5	3.9	< 1	207.5	0.12	2.46	0.16	2.1	3.6	3.07	2.04	4.4	21	0.38	28.9	0.13	1060	1.33	0.04	10.7	0.041	28.43	0.05	1.01	0.7	0.2	142	0.02	4.4	0.009	0.12	2.2	3	< .2	74.2
RS-500 1240-1260	79	1.15	0.9	2.2	2	109.1	0.04	1.35	0.19	3	5.1	3.8	2.31	4.8	24	0.25	24.8	0.2	877	1.77	0.053	6.9	0.049	17.2	0.03	0.66	0.7	0.2	83.2	< .02	4.7	0.029	0.07	2.8	4	< .2	86.1
RS-500 1260-1280	95	1.15	0.6	0.8	2	141.7	0.04	2.34	0.2	1.9	3.9	2.57	1.75	4	8	0.41	28.7	0.11	1253	1.26	0.045	7.2	0.046	23.69	0.01	0.91	0.7	< .1	116.9	< .02	5.3	0.011	0.09	4.3	5	< .2	77.2
RS-500 1280-1300	130	1.76	5	3	2	255	0.08	1.73	0.42	5.6	1	4.06	2.48	5.9	452	0.44	30.9	0.19	1912	1.82	0.046	3.4	0.06	40.87	0.6	2.39	0.6	0.4	121.1	< .02	5.5	0.002	0.17	3.8	3	< .2	146
RS-500 1300-1320	7621	1.22	173.3	917.6	2	34.2	0.08	0.29	1.93	14	15.4	7.08	6.07	3.6	5277	0.42	14.2	0.03	423	13.64	0.019	42.4	0.035	33.75	5.97	36.34	0.7	14.4	46.3	< .02	3.9	0.001	1.76	2.9	4	0.6	281.7
STANDARD DS2	254	1.69	57.7	193.6	4	151.3	10.7	0.52	10.01	11.2	156.3	127.6	3	5.8	220	0.16	16.3	0.58	809	13.85	0.03	34.5	0.088	34.62	0.02	8.63	3	2.2	28.6	1.84	3.4	0.093	1.75	18.8	73	6.8	153.3
RS-500 1320-1340	664	1.11	28.6	40.6	< 1	109	0.16	0.87	0.2	4.5	7.6	5.76	2.88	3.3	1082	0.45	18.8	0.06	557	5.44	0.031	14.7	0.052	42.53	2.08	7.82	0.7	1.7	82.3	< .02	5.1	0.006	0.34	1	3	0.9	82.2
RS-500 1340-1360	102	1.14	4.6	3.5	2	129.2	0.1	1.18	0.19	2.3	10.9	3.72	3.01	5.1	44	0.53	20.6	0.11	1392	2.55	0.092	42.1	0.043	15.71	0.06	2.24	1.4	0.2	64.2	< .02	9	0.042	0.18	0.8	6	0.7	65.8

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:	SP57762
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-500 1360-1380	87	0.9	8	2.3	2	381.4	0.04	0.91	0.21	2.3	7.8	3.46	2.77	4.7	28	0.43	19.2	0.12	1079	2.08	0.103	22.9	0.044	12.43	0.07	0.84	1.3	0.2	58	< .02	9	0.048	0.14	0.7	6	0.7	63
RS-500 1380-1400	84	0.79	12.2	2.2	3	126.5	0.03	0.59	0.18	2.2	8.8	4.98	2.83	4.4	28	0.36	17.4	0.13	785	2.32	0.108	24	0.044	26.29	0.06	0.66	1.3	0.1	50.3	< .02	8.6	0.051	0.12	0.6	6	0.5	74.9
RS-500 1400-1420	209	0.59	9.5	1	6	162.9	0.07	0.47	0.12	3	10.2	3.56	2.74	3.4	18	0.29	16.2	0.12	779	2.54	0.092	27	0.041	9.98	0.02	0.51	1.2	< .1	40.9	< .02	8.1	0.059	0.08	0.6	6	0.5	71.8
RS-500 1420-1440	48	0.66	12.4	1	4	106.4	0.03	0.65	0.11	2	8.4	2.92	2.66	3.7	20	0.29	16.1	0.11	780	1.95	0.087	20.2	0.045	9.97	0.03	0.48	1.3	< .1	53.8	< .02	8.5	0.055	0.1	0.7	7	0.5	54.4
RS-500 1440-1450	91	0.59	8.2	1.2	3	83.9	0.04	0.65	0.16	1.9	8.9	3.79	2.64	3.2	21	0.26	16.1	0.1	823	2.19	0.082	20.1	0.045	10.41	0.02	0.47	1.2	0.1	52	< .02	8.9	0.059	0.1	0.8	7	0.7	53.1
89742	62286	2.27	126.8	4881.7	1	81.4	0.18	0.92	1.63	4	6.7	23.22	2.66	7.6	329	0.84	16.7	0.14	333	6.18	0.07	4.3	0.057	28.94	2.72	19.24	1.1	24	68.4	< .02	3.9	0.002	0.42	1.4	9	0.3	88.6
STANDARD DS2	264	1.69	63.1	189.4	3	152.9	10.33	0.53	10.18	11	158.8	128.51	3.09	5.9	240	0.15	16.1	0.61	842	14	0.03	35.5	0.089	31.31	0.03	8.55	3	2.1	28.4	1.89	3.9	0.095	1.75	19.2	74	6.8	150.9

WELLBORE NAVIGATION.INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

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

JOB NUMBER: 29-0588-311

WELL NAME: RS-500

LOCATION: GATOR

SURVEY DATE: 06/09/2000

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: 000.00
WATER CONTACT= 191'

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

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

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

WELNAV

2,219,519-N
480 000-E
5725 El

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311

WELL NAME: RS-500

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	TEMP. DEG F
0.0	0.00	0.00	0.000	-89.45	275.22	0.00 N	0.00 E	0.00		0.00	AT 000.00	
50.0	49.99	-0.58	-0.532	-88.46	205.83	0.58 S	0.53 W	2.88	1.44	0.79	AT 222.37	081.27
100.0	99.97	-1.86	-1.525	-87.77	226.07	1.86 S	1.53 W	1.90	0.95	2.41	AT 219.31	080.48
150.0	149.91	-3.45	-3.336	-86.71	230.67	3.45 S	3.34 W	2.16	1.08	4.80	AT 224.06	079.71
200.0	199.83	-5.18	-5.602	-86.75	234.67	5.18 S	5.60 W	0.46	0.23	7.63	AT 227.26	069.41
250.0	249.74	-6.94	-7.912	-86.58	230.73	6.94 S	7.91 W	0.57	0.29	10.52	AT 228.75	069.62
300.0	299.67	-8.53	-10.074	-87.25	237.12	8.53 S	10.07 W	1.50	0.75	13.20	AT 229.73	070.27
350.0	349.62	-9.88	-11.818	-87.68	226.71	9.88 S	11.82 W	1.26	0.63	15.40	AT 230.11	070.67
400.0	399.59	-10.81	-13.102	-88.63	246.23	10.81 S	13.10 W	2.25	1.13	16.99	AT 230.46	070.93
450.0	449.58	-11.55	-13.981	-88.64	214.07	11.55 S	13.98 W	1.51	0.76	18.13	AT 230.45	071.11
500.0	499.57	-12.33	-14.642	-88.99	228.15	12.33 S	14.64 W	0.91	0.45	19.14	AT 229.89	071.03
550.0	549.56	-12.99	-15.333	-88.82	224.79	12.99 S	15.33 W	0.36	0.18	20.10	AT 229.72	071.14
600.0	599.55	-13.41	-15.935	-89.44	258.74	13.41 S	15.94 W	1.56	0.78	20.82	AT 229.93	071.09
650.0	649.55	-13.08	-16.399	-89.00	329.12	13.08 S	16.40 W	1.94	0.97	20.98	AT 231.43	071.21
700.0	699.53	-11.92	-16.934	-88.07	338.29	11.92 S	16.93 W	1.91	0.96	20.71	AT 234.86	071.32
750.0	749.50	-10.38	-17.712	-87.96	328.38	10.38 S	17.71 W	0.72	0.36	20.53	AT 239.62	071.47
800.0	799.48	-9.28	-18.975	-88.01	293.52	9.28 S	18.98 W	2.42	1.21	21.12	AT 243.95	071.47
850.0	849.44	-9.00	-20.728	-87.80	265.59	9.00 S	20.73 W	2.06	1.03	22.60	AT 246.52	071.65
900.0	899.41	-9.62	-22.447	-87.86	234.74	9.62 S	22.45 W	2.31	1.16	24.42	AT 246.81	071.68
950.0	949.37	-10.59	-24.188	-87.55	246.25	10.59 S	24.19 W	1.11	0.55	26.40	AT 246.36	071.91
1000.0	999.31	-11.78	-26.382	-86.71	237.96	11.78 S	26.38 W	1.87	0.93	28.89	AT 245.94	072.92
1025.0	1024.26	-12.57	-27.583	-86.70	235.43	12.57 S	27.58 W	0.58	0.15	30.31	AT 245.51	074.07

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*************************************************************
*                          ********                         *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*  1025.0 FEET EQUALS    30.31   FEET AT   245.51           *
*                          ********                         *
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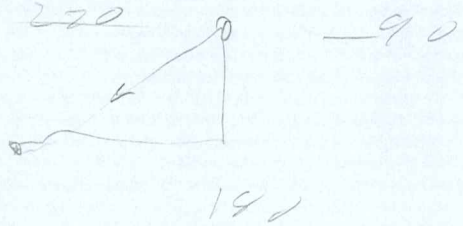

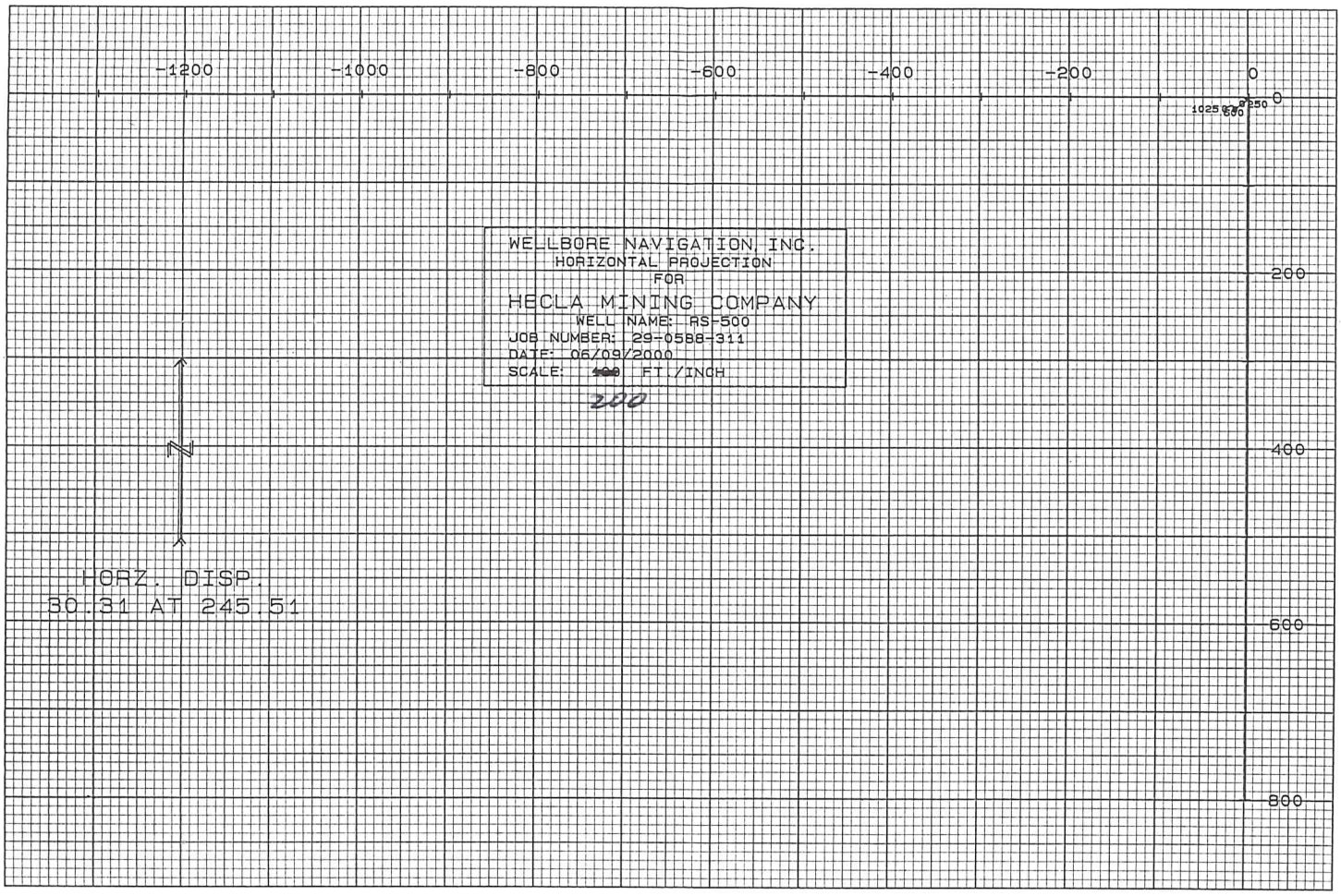

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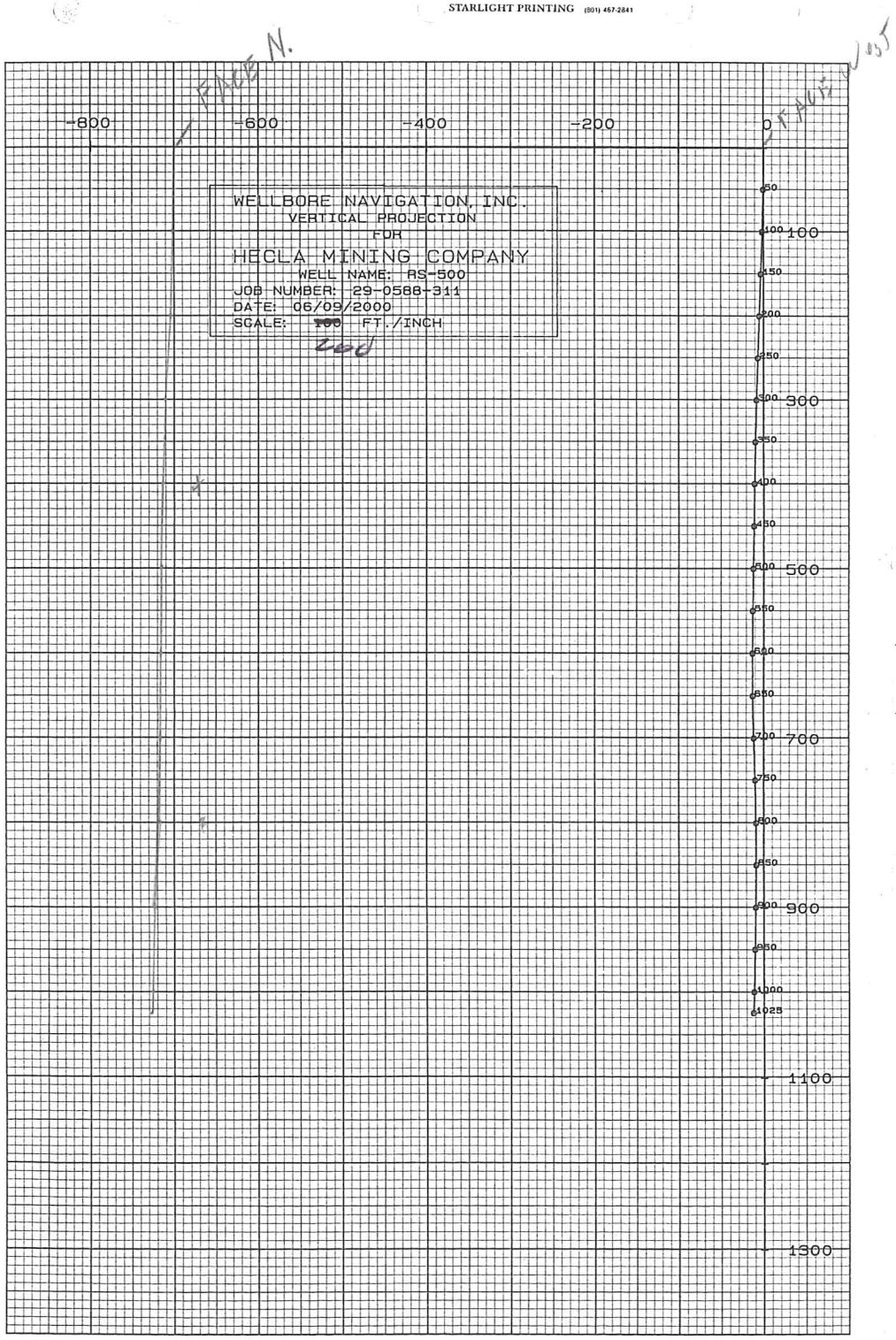

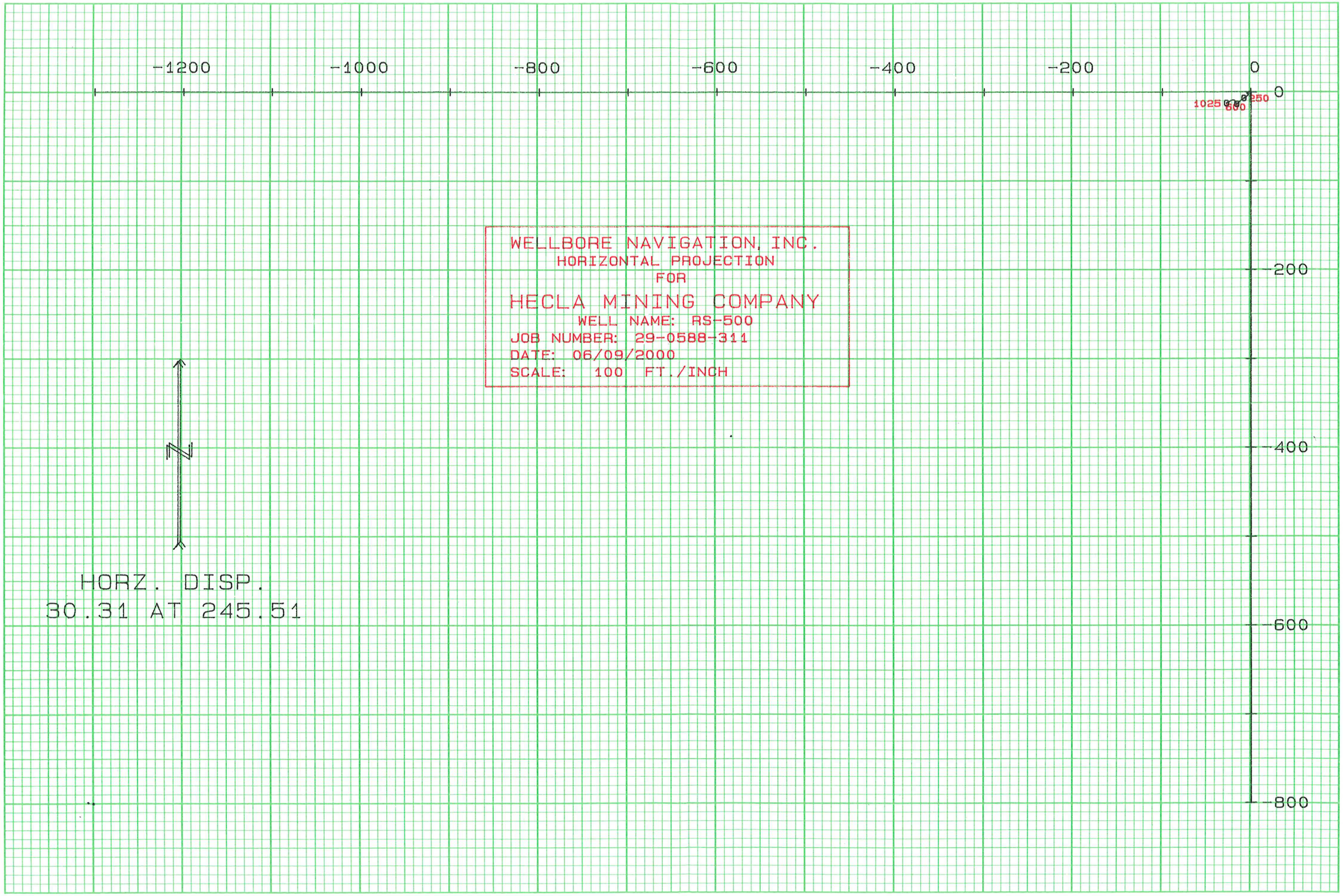

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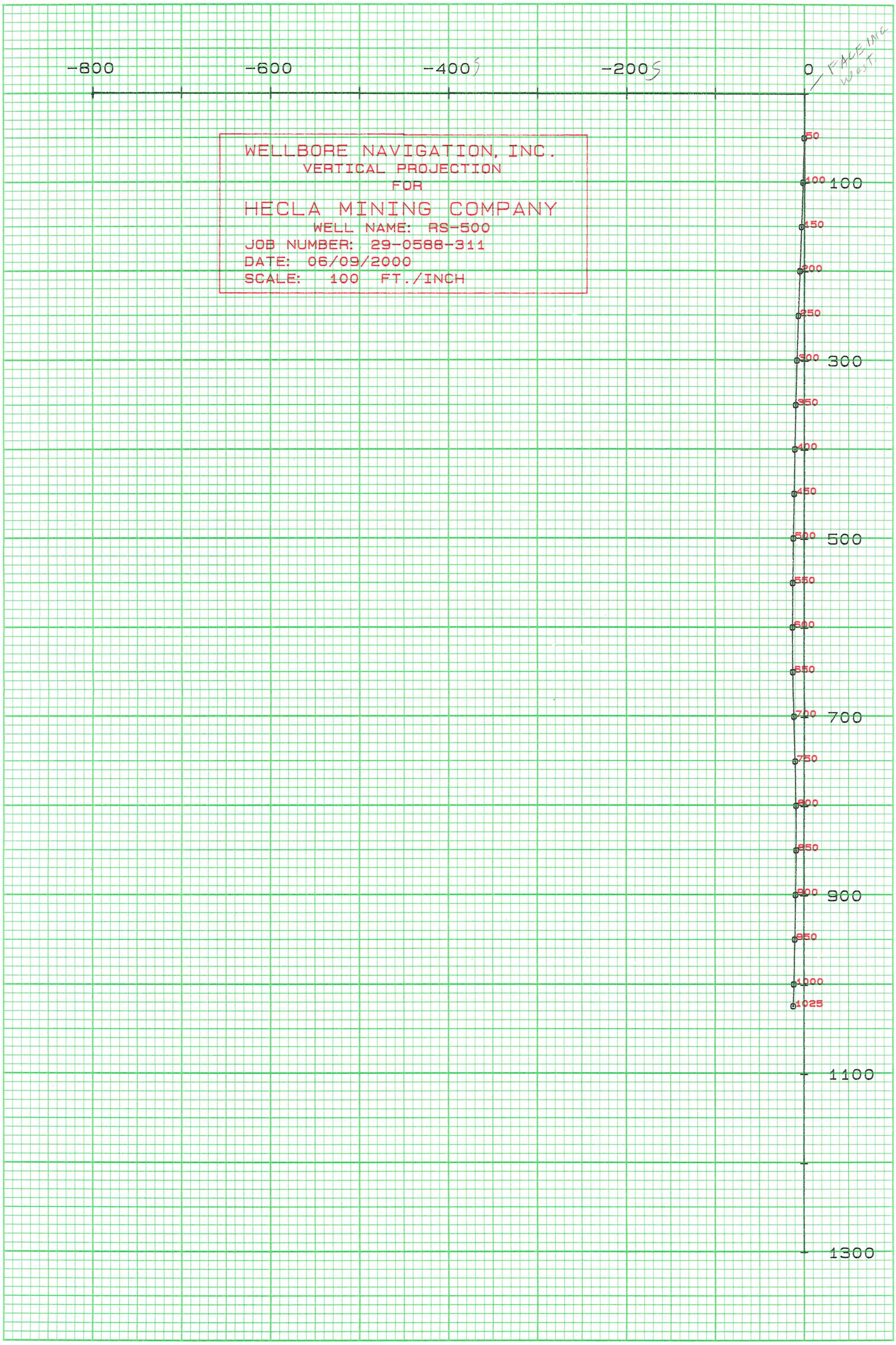
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