60000613

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-492
AUTHOR	D. Schoorl; P.G. Rogowski; K Allen; L.E. Mackedon; V. Reid; P. Schoorl
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; North Equinox; Hecla Mining Co.; Rosebud Project.
COMMODITY If not obvious	gold; silver
NOTES	drill logs; geology; assay; total depth 2055'; geochemistry; invoice 103 p.

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

SS: DD 3/20/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

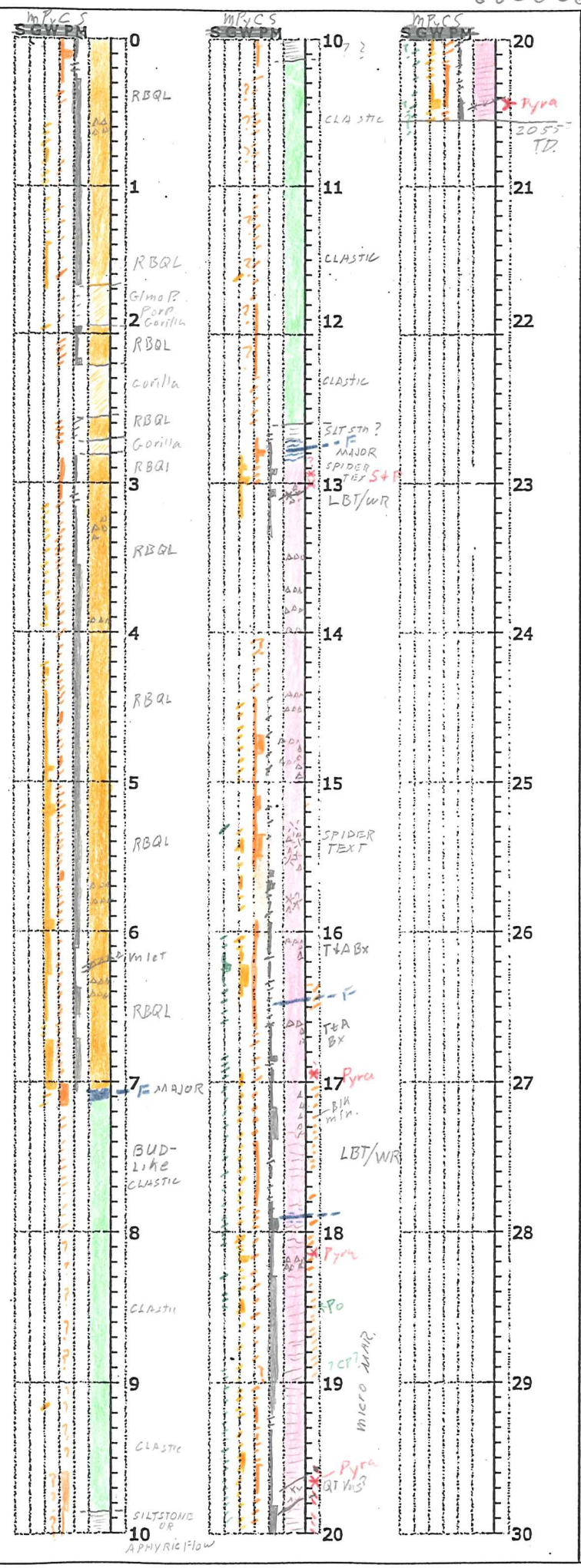
RS-492 yr 2000
S. side N. Equinox

6000 0613
4010

6000613

ROSEBUD MINING COMPANY, LLC.	
HOLE #	RS-492
FINISH HOLE	1 Mar 2000
START HOLE	22 Feb 2000
LOGGED BY	Rogowski
HOLE TYPE	RC - 6"
T.D	2055
ANGLE	-90
BEARING	—
SURVEYED TO	Wel-Nav ± 1800
PAGE 1 OF	22
COLLAR COORDINATES	
NORTH	2,212,822
EAST	478,452
ELEV	6025
DRILLING CO.	Ekland
DRILLER	Don Schoerl

S. Side N. Equinox @ site of RL-87 to get near 212 + 22 intersection



ALTERATION INTENSITY

CLAY

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
	GRAY MIN. STIB. OR PYRA.

CHOC FM. PORPHYRYS

BUD-LIKE CLASTICS

LBT/WR RHYOLITE

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

CLIENT REFERENCE No: RS-492 RECEIVED : 6 MAR 2000

No. SAMPLES : 438 REPORTED : 22 MAR 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.

03/22/2000 15:50 7753561413 AMERICAN ASSAY LABS PAGE 01
7753561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0000-0005	86	122	0.003	0.004	1.9	0.06
RS-492 0005-0010	26		<0.001		<0.5	<0.02
RS-492 0010-0015	13		<0.001		<0.5	<0.02
RS-492 0015-0020	<5		<0.001		<0.5	<0.02
RS-492 0020-0025	<5		<0.001		<0.5	<0.02
RS-492 0025-0030	<5		<0.001		<0.5	<0.02
RS-492 0030-0035	5		<0.001		<0.5	<0.02
RS-492 0035-0040	6		<0.001		<0.5	<0.02
RS-492 0040-0045	21		<0.001		0.5	<0.02
RS-492 0045-0050	65	68	0.002	0.002	0.5	<0.02
RS-492 0050-0055	53		0.002		<0.5	<0.02
RS-492 0055-0060	57		0.002		<0.5	<0.02
RS-492 0060-0065	63		0.002		0.5	<0.02
RS-492 0065-0070	43		0.001		<0.5	<0.02
RS-492 0070-0075	40		0.001		<0.5	<0.02
RS-492 0075-0080	95	100	0.003	0.003	0.8	0.02
RS-492 0080-0085	64		0.002		0.6	<0.02
RS-492 0085-0090	17	10	<0.001	<0.001	<0.5	<0.02
RS-492 0090-0095	<5		<0.001		<0.5	<0.02
RS-492 0095-0100	27		<0.001		<0.5	<0.02
RS-492 0100-0105	65		0.002		0.6	<0.02
RS-492 0105-0110	88		0.003		1.6	0.05
RS-492 0110-0115	29	34	<0.001	<0.001	0.5	<0.02
RS-492 0115-0120	65		0.002		0.5	<0.02
RS-492 0120-0125	34		<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-492 0125-0130	7		<0.001		<0.5	<0.02
RS-492 0130-0135	12		<0.001		<0.5	<0.02
RS-492 0135-0140	58		0.002		<0.5	<0.02
RS-492 0140-0145	62		0.002		<0.5	<0.02
RS-492 0145-0150	46		0.001		<0.5	<0.02
RS-492 0150-0155	6		<0.001		<0.5	<0.02
RS-492 0155-0160	37		0.001		<0.5	<0.02
RS-492 0160-0165	26		<0.001		<0.5	<0.02
RS-492 0165-0170	<5		<0.001		<0.5	<0.02
RS-492 0170-0175	<5		<0.001		<0.5	<0.02
RS-492 0175-0180	<5		<0.001		<0.5	<0.02
RS-492 0180-0185	<5		<0.001		<0.5	<0.02
RS-492 0185-0190	<5		<0.001		<0.5	<0.02
RS-492 0190-0195	<5		<0.001		<0.5	<0.02
RS-492 0195-0200	<5		<0.001		<0.5	<0.02
RS-492 0200-0205	13		<0.001		<0.5	<0.02
RS-492 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-492 0210-0215	<5		<0.001		<0.5	<0.02
RS-492 0215-0220	<5		<0.001		<0.5	<0.02
RS-492 0220-0225	6		<0.001		<0.5	<0.02
RS-492 0225-0230	5		<0.001		<0.5	<0.02
RS-492 0230-0235	5		<0.001		<0.5	<0.02
RS-492 0235-0240	6	12	<0.001	<0.001	<0.5	<0.02
RS-492 0240-0245	<5		<0.001		<0.5	<0.02
RS-492 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0250-0255	<5		<0.001		<0.5	<0.02
RS-492 0255-0260	9		<0.001		<0.5	<0.02
RS-492 0260-0265	52	56	0.002	0.002	<0.5	<0.02
RS-492 0265-0270	9		<0.001		<0.5	<0.02
RS-492 0270-0275	18		<0.001		<0.5	<0.02
RS-492 0275-0280	6		<0.001		<0.5	<0.02
RS-492 0280-0285	10	10	<0.001	<0.001	<0.5	<0.02
RS-492 0285-0290	75	96	0.002	0.003	<0.5	<0.02
RS-492 0290-0295	63		0.002		<0.5	<0.02
RS-492 0295-0300	25		<0.001		<0.5	<0.02
RS-492 0300-0305	15		<0.001		0.7	0.02
RS-492 0305-0310	8		<0.001		<0.5	<0.02
RS-492 0310-0315	10		<0.001		<0.5	<0.02
RS-492 0315-0320	31		<0.001		<0.5	<0.02
RS-492 0320-0325	8		<0.001		<0.5	<0.02
RS-492 0325-0330	72		0.002		0.8	0.02
RS-492 0330-0335	89		0.003		1.0	0.03
RS-492 0335-0340	59		0.002		0.5	<0.02
RS-492 0340-0345	153	166	0.004	0.005	0.5	<0.02
RS-492 0345-0350	63	64	0.002	0.002	<0.5	<0.02
RS-492 0350-0355	16		<0.001		<0.5	<0.02
RS-492 0355-0360	30		<0.001		<0.5	<0.02
RS-492 0360-0365	54		0.002		<0.5	<0.02
RS-492 0365-0370	63		0.002		0.6	<0.02
RS-492 0370-0375	81		0.002		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0375-0380	92		0.003		<0.5	<0.02
RS-492 0380-0385	52		0.002		<0.5	<0.02
RS-492 0385-0390	64		0.002		0.5	<0.02
RS-492 0390-0395	90	102	0.003	0.003	0.9	0.03
RS-492 0395-0400	63		0.002		0.6	<0.02
RS-492 0400-0405	32		<0.001		<0.5	<0.02
RS-492 0405-0410	14		<0.001		<0.5	<0.02
RS-492 0410-0415	94		0.003		<0.5	<0.02
RS-492 0415-0420	91		0.003		0.5	<0.02
RS-492 0420-0425	76		0.002		0.5	<0.02
RS-492 0425-0430	65		0.002		<0.5	<0.02
RS-492 0430-0435	96		0.003		0.6	<0.02
RS-492 0435-0440	106	104	0.003	0.003	<0.5	<0.02
RS-492 0440-0445	89	82	0.003	0.002	0.7	0.02
RS-492 0445-0450	98		0.003		0.5	<0.02
RS-492 0450-0455	87		0.003		<0.5	<0.02
RS-492 0455-0460	46		0.001		0.7	0.02
RS-492 0460-0465	40		0.001		0.8	0.02
RS-492 0465-0470	76		0.002		0.5	<0.02
RS-492 0470-0475	96		0.003		0.7	0.02
RS-492 0475-0480	105	134	0.003	0.004	0.6	<0.02
RS-492 0480-0485	140		0.004		0.6	<0.02
RS-492 0485-0490	30		<0.001		<0.5	<0.02
RS-492 0490-0495	47		0.001		0.5	<0.02
RS-492 0495-0500	75	94	0.002	0.003	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0500-0505	<5		<0.001		<0.5	<0.02
RS-492 0505-0510	<5		<0.001		<0.5	<0.02
RS-492 0510-0515	8		<0.001		<0.5	<0.02
RS-492 0515-0520	<5		<0.001		<0.5	<0.02
RS-492 0520-0525	60		0.002		0.5	<0.02
RS-492 0525-0530	121	148	0.004	0.004	1.0	0.03
RS-492 0530-0535	81		0.002		<0.5	<0.02
RS-492 0535-0540	51		0.001		0.8	0.02
RS-492 0540-0545	56	56	0.002	0.002	0.5	<0.02
RS-492 0545-0550	57		0.002		<0.5	<0.02
RS-492 0550-0555	54		0.002		<0.5	<0.02
RS-492 0555-0560	44		0.001		<0.5	<0.02
RS-492 0560-0565	21		<0.001		<0.5	<0.02
RS-492 0565-0570	43		0.001		0.6	<0.02
RS-492 0570-0575	88		0.003		0.7	0.02
RS-492 0575-0580	93		0.003		0.7	0.02
RS-492 0580-0585	107	122	0.003	0.004	1.8	0.05
RS-492 0585-0590	30		<0.001		<0.5	<0.02
RS-492 0590-0595	28		<0.001		0.5	<0.02
RS-492 0595-0600	32		<0.001		<0.5	<0.02
RS-492 0600-0605			INSUFFICIENT SAMPLE			
RS-492 0605-0610	68		0.002		1.2	0.04
RS-492 0610-0615	20		<0.001		<0.5	<0.02
RS-492 0615-0620	7		<0.001		<0.5	<0.02
RS-492 0620-0625	31		<0.001		0.7	0.02

AMERICAN ASSAY LABORATORIES

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REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0625-0630	77		0.002		0.6	<0.02
RS-492 0630-0635	70		0.002		<0.5	<0.02
RS-492 0635-0640	45		0.001		<0.5	<0.02
RS-492 0640-0645	17		<0.001		<0.5	<0.02
RS-492 0645-0650	73		0.002		1.1	0.03
RS-492 0650-0655	80	90	0.002	0.003	0.7	0.02
RS-492 0655-0660	<5		<0.001		<0.5	<0.02
RS-492 0660-0665	6		<0.001		<0.5	<0.02
RS-492 0665-0670	94	116	0.003	0.003	1.1	0.03
RS-492 0670-0675	18	24	<0.001	<0.001	<0.5	<0.02
RS-492 0675-0680	96		0.003		1.8	0.05
RS-492 0680-0685	79		0.002		0.8	0.02
RS-492 0685-0690	146	156	0.004	0.005	1.6	0.05
RS-492 0690-0695	115		0.003		1.1	0.03
RS-492 0695-0700	105		0.003		0.7	0.02
RS-492 0700-0705	165	186	0.005	0.005	1.6	0.05
RS-492 0705-0710	70		0.002		1.1	0.03
RS-492 0710-0715	15		<0.001		<0.5	<0.02
RS-492 0715-0720	11		<0.001		<0.5	<0.02
RS-492 0720-0725	8		<0.001		<0.5	<0.02
RS-492 0725-0730	23		<0.001		0.5	<0.02
RS-492 0730-0735	<5		<0.001		<0.5	<0.02
RS-492 0735-0740	6	6	<0.001	<0.001	<0.5	<0.02
RS-492 0740-0745	<5		<0.001		<0.5	<0.02
RS-492 0745-0750	8		<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-492 0750-0755	5		<0.001		<0.5	<0.02
RS-492 0755-0760	5		<0.001		<0.5	<0.02
RS-492 0760-0765	<5		<0.001		<0.5	<0.02
RS-492 0765-0770	<5		<0.001		<0.5	<0.02
RS-492 0770-0775	6		<0.001		<0.5	<0.02
RS-492 0775-0780	<5		<0.001		<0.5	<0.02
RS-492 0780-0785	6		<0.001		<0.5	<0.02
RS-492 0785-0790	5		<0.001		<0.5	<0.02
RS-492 0790-0795	5		<0.001		<0.5	<0.02
RS-492 0795-0800	<5		<0.001		<0.5	<0.02
RS-492 0800-0805	<5		<0.001		<0.5	<0.02
RS-492 0805-0810	5		<0.001		<0.5	<0.02
RS-492 0810-0815	<5		<0.001		<0.5	<0.02
RS-492 0815-0820	6		<0.001		<0.5	<0.02
RS-492 0820-0825	<5	8	<0.001	<0.001	<0.5	<0.02
RS-492 0825-0830	5		<0.001		<0.5	<0.02
RS-492 0830-0835	<5		<0.001		<0.5	<0.02
RS-492 0835-0840	7	8	<0.001	<0.001	<0.5	<0.02
RS-492 0840-0845	9		<0.001		<0.5	<0.02
RS-492 0845-0850	6		<0.001		<0.5	<0.02
RS-492 0850-0855	<5		<0.001		<0.5	<0.02
RS-492 0855-0860	<5		<0.001		<0.5	<0.02
RS-492 0860-0865	<5		<0.001		<0.5	<0.02
RS-492 0865-0870	<5		<0.001		<0.5	<0.02
RS-492 0870-0875	<5		<0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 0875-0880	5		<0.001		<0.5	<0.02
RS-492 0880-0885	14	12	<0.001	<0.001	<0.5	<0.02
RS-492 0885-0890	6		<0.001		<0.5	<0.02
RS-492 0890-0895	8		<0.001		<0.5	<0.02
RS-492 0895-0900	13		<0.001		<0.5	<0.02
RS-492 0900-0905	16	10	<0.001	<0.001	<0.5	<0.02
RS-492 0905-0910	9		<0.001		<0.5	<0.02
RS-492 0910-0915	9		<0.001		<0.5	<0.02
RS-492 0915-0920	8		<0.001		<0.5	<0.02
RS-492 0920-0925	13		<0.001		<0.5	<0.02
RS-492 0925-0930	6		<0.001		<0.5	<0.02
RS-492 0930-0935	6		<0.001		<0.5	<0.02
RS-492 0935-0940	12		<0.001		<0.5	<0.02
RS-492 0940-0945	16		<0.001		<0.5	<0.02
RS-492 0945-0950	5		<0.001		<0.5	<0.02
RS-492 0950-0955	8		<0.001		<0.5	<0.02
RS-492 0955-0960	14		<0.001		<0.5	<0.02
RS-492 0960-0965	11		<0.001		<0.5	<0.02
RS-492 0965-0970	6		<0.001		<0.5	<0.02
RS-492 0970-0975	10		<0.001		<0.5	<0.02
RS-492 0975-0980	17	18	<0.001	<0.001	<0.5	<0.02
RS-492 0980-0985	14		<0.001		<0.5	<0.02
RS-492 0985-0990	8		<0.001		<0.5	<0.02
RS-492 0990-0995	5		<0.001		<0.5	<0.02
RS-492 0995-1000	9		<0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1000-1005	16		<0.001		<0.5	<0.02
RS-492 1005-1010	7		<0.001		<0.5	<0.02
RS-492 1010-1015	12	18	<0.001	<0.001	<0.5	<0.02
RS-492 1015-1020	20	26	<0.001	<0.001	<0.5	<0.02
RS-492 1020-1025	13	20	<0.001	<0.001	<0.5	<0.02
RS-492 1025-1030	7		<0.001		<0.5	<0.02
RS-492 1030-1035	6		<0.001		<0.5	<0.02
RS-492 1035-1040	10		<0.001		<0.5	<0.02
RS-492 1040-1045	10		<0.001		<0.5	<0.02
RS-492 1045-1050	<5		<0.001		<0.5	<0.02
RS-492 1050-1055	5		<0.001		<0.5	<0.02
RS-492 1055-1060	<5		<0.001		<0.5	<0.02
RS-492 1060-1065	<5		<0.001		<0.5	<0.02
RS-492 1065-1070	<5		<0.001		<0.5	<0.02
RS-492 1070-1075	<5		<0.001		<0.5	<0.02
RS-492 1075-1080	6		<0.001		<0.5	<0.02
RS-492 1080-1085	<5		<0.001		<0.5	<0.02
RS-492 1085-1090	8		<0.001		<0.5	<0.02
RS-492 1090-1095	6		<0.001		<0.5	<0.02
RS-492 1095-1100	5		<0.001		<0.5	<0.02
RS-492 1100-1105	8		<0.001		<0.5	<0.02
RS-492 1105-1110	5		<0.001		<0.5	<0.02
RS-492 1110-1115	10		<0.001		<0.5	<0.02
RS-492 1115-1120	8		<0.001		<0.5	<0.02
RS-492 1120-1125	10		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1125-1130	17	22	<0.001	<0.001	<0.5	<0.02
RS-492 1130-1135	7		<0.001		<0.5	<0.02
RS-492 1135-1140	6		<0.001		<0.5	<0.02
RS-492 1140-1145	8		<0.001		<0.5	<0.02
RS-492 1145-1150	13	16	<0.001	<0.001	<0.5	<0.02
RS-492 1150-1155	10		<0.001		<0.5	<0.02
RS-492 1155-1160	9		<0.001		<0.5	<0.02
RS-492 1160-1165	8		<0.001		<0.5	<0.02
RS-492 1165-1170	11		<0.001		<0.5	<0.02
RS-492 1170-1175	6		<0.001		<0.5	<0.02
RS-492 1175-1180	<5		<0.001		<0.5	<0.02
RS-492 1180-1185	<5		<0.001		<0.5	<0.02
RS-492 1185-1190	8		<0.001		1.0	0.03
RS-492 1190-1195	<5		<0.001		<0.5	<0.02
RS-492 1195-1200	8		<0.001		<0.5	<0.02
RS-492 1200-1205	<5		<0.001		0.9	0.03
RS-492 1205-1210	8		<0.001		<0.5	<0.02
RS-492 1210-1215	10		<0.001		<0.5	<0.02
RS-492 1215-1220	<5		<0.001		<0.5	<0.02
RS-492 1220-1225	<5		<0.001		<0.5	<0.02
RS-492 1225-1230	8		<0.001		<0.5	<0.02
RS-492 1230-1235	5		<0.001		<0.5	<0.02
RS-492 1235-1240	<5		<0.001		<0.5	<0.02
RS-492 1240-1245	<5		<0.001		<0.5	<0.02
RS-492 1245-1250	6		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1250-1255	<5		<0.001		<0.5	<0.02
RS-492 1255-1260	<5		<0.001		<0.5	<0.02
RS-492 1260-1265	<5		<0.001		<0.5	<0.02
RS-492 1265-1270	6		<0.001		<0.5	<0.02
RS-492 1270-1275	8		<0.001		<0.5	<0.02
RS-492 1275-1280	20	28	<0.001	<0.001	0.6	<0.02
RS-492 1280-1285	192	239	0.006	0.007	3.0	0.09
RS-492 1285-1290	282		0.008		2.9	0.08
RS-492 1290-1295	580	592	0.017	0.017	14.1	0.41
RS-492 1295-1300	212		0.006		5.3	0.15
RS-492 1300-1305	53		0.002		0.9	0.03
RS-492 1305-1310	18		<0.001		0.6	<0.02
RS-492 1310-1315	24		<0.001		0.7	0.02
RS-492 1315-1320	53		0.002		0.7	0.02
RS-492 1320-1325	21		<0.001		<0.5	<0.02
RS-492 1325-1330	14		<0.001		<0.5	<0.02
RS-492 1330-1335	9		<0.001		2.5	0.07
RS-492 1335-1340	6		<0.001		<0.5	<0.02
RS-492 1340-1345	<5		<0.001		<0.5	<0.02
RS-492 1345-1350	7		<0.001		<0.5	<0.02
RS-492 1350-1355	<5		<0.001		<0.5	<0.02
RS-492 1355-1360	8		<0.001		<0.5	<0.02
RS-492 1360-1365	6		<0.001		<0.5	<0.02
RS-492 1365-1370	9		<0.001		<0.5	<0.02
RS-492 1370-1375	5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1375-1380	<5		<0.001		<0.5	<0.02
RS-492 1380-1385	6		<0.001		<0.5	<0.02
RS-492 1385-1390	8		<0.001		<0.5	<0.02
RS-492 1390-1395	<5		<0.001		<0.5	<0.02
RS-492 1395-1400	<5		<0.001		<0.5	<0.02
RS-492 1400-1405	12	14	<0.001	<0.001	<0.5	<0.02
RS-492 1405-1410	6		<0.001		<0.5	<0.02
RS-492 1410-1415	5		<0.001		<0.5	<0.02
RS-492 1415-1420	6		<0.001		<0.5	<0.02
RS-492 1420-1425	8		<0.001		<0.5	<0.02
RS-492 1425-1430	9		<0.001		<0.5	<0.02
RS-492 1430-1435	6		<0.001		<0.5	<0.02
RS-492 1435-1440	<5		<0.001		<0.5	<0.02
RS-492 1440-1445	<5		<0.001		<0.5	<0.02
RS-492 1445-1450	10		<0.001		<0.5	<0.02
RS-492 1450-1455	5		<0.001		<0.5	<0.02
RS-492 1455-1460	<5		<0.001		<0.5	<0.02
RS-492 1460-1465	20		<0.001		<0.5	<0.02
RS-492 1465-1470	133		0.004		3.6	0.11
RS-492 1470-1475	150		0.004		2.9	0.08
RS-492 1475-1480	180	216	0.005	0.006	3.4	0.10
RS-492 1480-1485	21		<0.001		<0.5	<0.02
RS-492 1485-1490	14		<0.001		0.8	0.02
RS-492 1490-1495	7		<0.001		<0.5	<0.02
RS-492 1495-1500	12		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1500-1505	9		<0.001		<0.5	<0.02
RS-492 1505-1510	7		<0.001		<0.5	<0.02
RS-492 1510-1515	7		<0.001		<0.5	<0.02
RS-492 1515-1520	8		<0.001		<0.5	<0.02
RS-492 1520-1525	12		<0.001		<0.5	<0.02
RS-492 1525-1530	55	42	0.002	0.001	<0.5	<0.02
RS-492 1530-1535	24		<0.001		<0.5	<0.02
RS-492 1535-1540	22		<0.001		<0.5	<0.02
RS-492 1540-1545	6		<0.001		<0.5	<0.02
RS-492 1545-1550	5		<0.001		<0.5	<0.02
RS-492 1550-1555	22		<0.001		<0.5	<0.02
RS-492 1555-1560	11		<0.001		<0.5	<0.02
RS-492 1560-1565	14		<0.001		<0.5	<0.02
RS-492 1565-1570	38		0.001		<0.5	<0.02
RS-492 1570-1575	39		0.001		<0.5	<0.02
RS-492 1575-1580	9	10	<0.001	<0.001	<0.5	<0.02
RS-492 1580-1585	6		<0.001		<0.5	<0.02
RS-492 1585-1590	9		<0.001		<0.5	<0.02
RS-492 1590-1595	<5		<0.001		<0.5	<0.02
RS-492 1595-1600	<5		<0.001		<0.5	<0.02
RS-492 1600-1605	12		<0.001		<0.5	<0.02
RS-492 1605-1610	25		<0.001		<0.5	<0.02
RS-492 1610-1615	78		0.002		0.9	0.03
RS-492 1615-1620	73		0.002		0.9	0.03
RS-492 1620-1625	80	70	0.002	0.002	3.6	0.11

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1625-1630	93		0.003		3.3	0.10
RS-492 1630-1635	54		0.002		1.3	0.04
RS-492 1635-1640	31		<0.001		0.6	<0.02
RS-492 1640-1645	18		<0.001		<0.5	<0.02
RS-492 1645-1650	9		<0.001		<0.5	<0.02
RS-492 1650-1655	7		<0.001		<0.5	<0.02
RS-492 1655-1660	8		<0.001		<0.5	<0.02
RS-492 1660-1665	<5		<0.001		<0.5	<0.02
RS-492 1665-1670	6		<0.001		<0.5	<0.02
RS-492 1670-1675	5		<0.001		<0.5	<0.02
RS-492 1675-1680	<5		<0.001		<0.5	<0.02
RS-492 1680-1685	<5		<0.001		<0.5	<0.02
RS-492 1685-1690	16		<0.001		<0.5	<0.02
RS-492 1690-1695	14		<0.001		<0.5	<0.02
RS-492 1695-1700	80		0.002		1.2	0.04
RS-492 1700-1705	40		0.001		1.1	0.03
RS-492 1705-1710	20		<0.001		0.5	<0.02
RS-492 1710-1715	73		0.002		2.3	0.07
RS-492 1715-1720	157		0.005		6.6	0.19
RS-492 1720-1725	231	274	0.007	0.008	3.7	0.11
RS-492 1725-1730	56		0.002		2.1	0.06
RS-492 1730-1735	160		0.005		2.9	0.08
RS-492 1735-1740	118		0.003		5.7	0.17
RS-492 1740-1745	40		0.001		1.7	0.05
RS-492 1745-1750	11		<0.001		0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1750-1755	44		0.001		0.9	0.03
RS-492 1755-1760	15		<0.001		0.7	0.02
RS-492 1760-1765	52		0.002		1.2	0.04
RS-492 1765-1770	16		<0.001		<0.5	<0.02
RS-492 1770-1775	17		<0.001		<0.5	<0.02
RS-492 1775-1780	16		<0.001		0.6	<0.02
RS-492 1780-1785	25		<0.001		1.0	0.03
RS-492 1785-1790	16		<0.001		0.6	<0.02
RS-492 1790-1795	76		0.002		0.6	<0.02
RS-492 1795-1800	8		<0.001		<0.5	<0.02
RS-492 1800-1805	59		0.002		0.9	0.03
RS-492 1805-1810	81		0.002		1.0	0.03
RS-492 1810-1815	253	212	0.007	0.006	1.2	0.04
RS-492 1815-1820	15		<0.001		0.7	0.02
RS-492 1820-1825	6		<0.001		<0.5	<0.02
RS-492 1825-1830	14	10	<0.001	<0.001	<0.5	<0.02
RS-492 1830-1835	15		<0.001		<0.5	<0.02
RS-492 1835-1840	6		<0.001		<0.5	<0.02
RS-492 1840-1845	7		<0.001		<0.5	<0.02
RS-492 1845-1850	<5		<0.001		<0.5	<0.02
RS-492 1850-1855	<5		<0.001		<0.5	<0.02
RS-492 1855-1860	<5		<0.001		<0.5	<0.02
RS-492 1860-1865	17		<0.001		0.6	<0.02
RS-492 1865-1870	7		<0.001		0.5	<0.02
RS-492 1870-1875	19		<0.001		1.0	0.03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 1875-1880	6		<0.001		<0.5	<0.02
RS-492 1880-1885	<5		<0.001		<0.5	<0.02
RS-492 1885-1890	6		<0.001		<0.5	<0.02
RS-492 1890-1895	16		<0.001		0.7	0.02
RS-492 1895-1900	17		<0.001		0.6	<0.02
RS-492 1900-1905	5		<0.001		0.6	<0.02
RS-492 1905-1910	42		0.001		0.8	0.02
RS-492 1910-1915	235		0.007		1.4	0.04
RS-492 1915-1920	32		<0.001		0.6	<0.02
RS-492 1920-1925	128	166	0.004	0.005	2.1	0.06
RS-492 1925-1930	14		<0.001		<0.5	<0.02
RS-492 1930-1935	62		0.002		0.6	<0.02
RS-492 1935-1940	20		<0.001		0.9	0.03
RS-492 1940-1945	17		<0.001		1.1	0.03
RS-492 1945-1950	76		0.002		1.3	0.04
RS-492 1950-1955	50		0.001		1.1	0.03
RS-492 1955-1960	27		<0.001		0.6	<0.02
RS-492 1960-1965	26		<0.001		0.7	0.02
RS-492 1965-1970	84		0.002		31.5	0.92
RS-492 1970-1975	77		0.002		13.8	0.40
RS-492 1975-1980	20		<0.001		0.6	<0.02
RS-492 1980-1985	<5		<0.001		<0.5	<0.02
RS-492 1985-1990	6		<0.001		0.7	0.02
RS-492 1990-1995	9		<0.001		0.6	<0.02
RS-492 1995-2000	10		<0.001		0.9	0.03

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

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REFERENCE : RS-492

REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 2000-2005	12		<0.001		0.9	0.03
RS-492 2005-2010	11		<0.001		0.5	<0.02
RS-492 2010-2015	<5		<0.001		0.6	<0.02
RS-492 2015-2020	13		<0.001		1.0	0.03
RS-492 2020-2025	46	50	0.001	0.001	1.5	0.04
RS-492 2025-2030	13		<0.001		1.2	0.04
RS-492 2030-2035	46		0.001		1.5	0.04
RS-492 2035-2040	38		0.001		1.6	0.05
RS-492 2040-2045	12		<0.001		0.9	0.03
RS-492 2045-2050	<5		<0.001		0.5	<0.02
RS-492 2050-2055	<5		<0.001		0.7	0.02
89553	4900		0.143		63.1	1.84
RS-492 400-405A	80		0.002		0.7	0.02
RS-492 405-410A	75		0.002		0.8	0.02
RS-492 410-415A	80		0.002		0.6	<0.02
RS-492 415-420A	68		0.002		<0.5	<0.02
RS-492 420-425A	14		<0.001		<0.5	<0.02
RS-492 425-430A	66		0.002		<0.5	<0.02
RS-492 430-435A	80		0.002		<0.5	<0.02
RS-492 435-440A	49		0.001		<0.5	<0.02
RS-492 440-445A	52		0.002		<0.5	<0.02
RS-492 445-450A	76		0.002		<0.5	<0.02
RS-492 450-455A	66		0.002		<0.5	<0.02
RS-492 455-460A	17		<0.001		<0.5	<0.02
RS-492 460-465A	12		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 465-470A	60		0.002		<0.5	<0.02
RS-492 470-475A	33		<0.001		<0.5	<0.02
RS-492 475-480A	49		0.001		<0.5	<0.02
RS-492 480-485A	80		0.002		0.5	<0.02
RS-492 485-490A	32		<0.001		<0.5	<0.02
RS-492 490-495A	139		0.004		0.7	0.02
RS-492 495-500A	63		0.002		<0.5	<0.02
RS-492 500-505A	64		0.002		<0.5	<0.02
RS-492 505-510A	95		0.003		<0.5	<0.02
RS-492 510-515A	132		0.004		<0.5	<0.02
RS-492 515-520A	193		0.006		<0.5	<0.02
RS-492 520-525A	110		0.003		<0.5	<0.02
RS-492 525-530A	108		0.003		<0.5	<0.02
RS-492 530-535A	89		0.003		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056474

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REPORTED : 22 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-492 465-470A	60		0.002		<0.5	<0.02
RS-492 470-475A	33		<0.001		<0.5	<0.02
RS-492 475-480A	49		0.001		<0.5	<0.02
RS-492 480-485A	80		0.002		0.5	<0.02
RS-492 485-490A	32		<0.001		<0.5	<0.02
RS-492 490-495A	139		0.004		0.7	0.02
RS-492 495-500A	63		0.002		<0.5	<0.02
RS-492 500-505A	64		0.002		<0.5	<0.02
RS-492 505-510A	95		0.003		<0.5	<0.02
RS-492 510-515A	132		0.004		<0.5	<0.02
RS-492 515-520A	193		0.006		<0.5	<0.02
RS-492 520-525A	110		0.003		<0.5	<0.02
RS-492 525-530A	108		0.003		<0.5	<0.02
RS-492 530-535A	89		0.003		<0.5	<0.02

AMERICAN ASSAY LABORATORIES
AAL 03-0 ICP PACKAGE DETECTION LIMITS

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

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

AMERICAN ASSAY LABORATORIES
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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 0000-0020	502	0.67	19.7	28.9	9	102.20	0.04	0.2	0.02	0.70	5.8	13.72	2.11	3	491	0.1	20.8	0.06	172	3.22	0.053	2.8	0.012	15.57	0.12	22.58	1.3	37	0.02	12	0.008	0.19	2.1	9	0.6	27.4
RS-492 0020-0040	103	0.69	11.1	5.5	< 1	208.70	< .02	0.07	< .01	0.40	7.1	12.86	1.32	2.8	1578	0.15	23.5	0.02	63	2.68	0.032	2.5	0.009	7.83	0.11	7.07	0.8	30.9	< .02	12.9	0.003	0.08	1.9	5	0.3	16.2
RS-492 0040-0060	324	0.58	59.8	38.4	1	130.10	< .02	0.02	< .01	1.10	9.3	24.33	2.6	3.6	2067	0.16	18.8	0.01	89	4.14	0.019	4.8	0.007	10.49	0.46	23.43	2.1	14.2	< .02	10.3	0.002	0.14	2.2	5	1.1	13.6
RS-492 0060-0080	317	0.61	57.1	41.3	< 1	137.40	0.02	0.02	0.01	0.70	6.6	22.89	2.45	3.4	2512	0.19	19.2	0.01	89	4.17	0.016	4.3	0.007	8.81	0.3	23.88	2.7	12	< .02	10.3	0.002	0.11	1.6	5	1.1	10.3
RS-492 0080-0100	286	1.19	53.2	24.8	< 1	141.80	0.02	0.03	< .01	0.90	6.7	19.69	2.47	6	2306	0.23	20.7	0.01	75	5.23	0.02	4.3	0.011	11.95	0.35	26.64	2.2	15.5	< .02	11.5	0.003	0.13	1.9	5	1.4	14.6
RS-492 0100-0120	604	0.86	56.9	47.6	< 1	94.60	< .02	0.02	0.01	1.20	9.7	21.3	2.24	4	2434	0.13	15.9	0.01	95	4.52	0.009	5	0.007	8.82	0.29	33.83	1.6	17.7	< .02	7.7	0.002	0.11	12.1	6	1.7	12.3
RS-492 0120-0140	119	0.8	31.0	21.6	< 1	152.20	< .02	0.02	< .01	0.40	5.3	15.13	2.28	4	1181	0.26	21.2	< .01	60	3.32	0.016	3.4	0.008	9.03	0.23	14.51	1.8	16.2	< .02	11.4	0.002	0.11	1.3	4	0.7	11.7
RS-492 0140-0160	154	0.57	23.0	27.6	< 1	104.10	0.03	0.01	0.02	1.90	6.6	20.21	2.53	2.9	1153	0.26	16.7	< .01	65	2.98	0.014	3.9	0.004	16.11	1.31	12.83	3.7	7	< .02	8.1	0.002	0.33	0.8	3	1.5	17.1
RS-492 0160-0180	67	0.63	13.3	7.2	1	97.90	0.02	0.01	0.01	0.50	4.1	13.26	2.19	3.3	181	0.26	26.4	0.01	86	3.21	0.017	2.6	0.012	12.14	0.35	5.72	1	7.6	< .02	13.3	0.01	0.15	1.1	4	1	13.8
RS-492 0180-0200	35	0.67	5.4	3.9	1	82.60	< .02	0.01	< .01	0.20	3.3	9.6	2.47	3.4	47	0.23	30.4	0.01	97	2.97	0.015	1.8	0.019	13.29	0.17	5.75	0.3	13.8	< .02	14.1	0.011	0.09	1.4	5	1.1	18.9
RS-492 0200-0220	27	0.66	7.6	5.2	< 1	91.80	< .02	0.01	< .01	0.20	3.7	10.58	2.44	3.9	48	0.28	27.7	0.01	84	2.87	0.014	1.9	0.02	14.99	0.3	8.84	0.7	11.8	< .02	14.1	0.005	0.1	1.2	4	0.9	20.9
RS-492 0220-0240	95	0.93	4.5	2.4	3	73.00	0.02	0.03	0.26	6.70	3.9	13.58	2.6	3.9	52	0.21	29	0.03	3793	2.91	0.021	3.2	0.016	15.09	0.04	3.23	0.2	11.9	< .02	13.8	0.014	0.87	1.8	4	2	173.4
RS-492 0240-0260	146	0.98	3.6	2.3	2	234.40	< .02	0.02	0.16	2.40	4.3	7.13	2.37	4.7	130	0.19	32.4	0.01	2102	2.44	0.015	2	0.021	20.08	0.01	6.42	0.2	17.7	< .02	14.8	0.022	0.77	2.3	5	1.9	134
RS-492 0260-0280	77	1.07	7.6	23.2	< 1	160.40	< .02	0.01	< .01	0.30	3.3	8.02	2.3	6	157	0.27	27.7	0.01	136	2.6	0.013	2.2	0.018	15.57	0.17	10.29	1.4	19	< .02	13.1	0.013	0.1	1.1	4	1.3	21.7
RS-492 0280-0300	104	1.04	20.7	80	< 1	189.70	< .02	0.01	< .01	0.10	5.5	8.15	2.98	6.3	272	0.27	26.3	< .01	57	2.92	0.011	2.1	0.012	12.6	0.23	21.92	6.6	6.5	< .02	12.6	0.003	0.07	1.2	4	0.8	20.6
RS-492 0300-0320	200	1	13.3	14	1	91.60	< .02	0.01	< .01	0.40	5.3	11.24	2.98	4.9	819	0.12	21.7	< .01	53	2.81	0.004	2.8	0.017	12.11	0.35	12.95	2.6	16.7	< .02	10.8	0.002	0.05	1.1	4	1.4	10.7
RS-492 0320-0340	425	1.05	28.4	51.8	< 1	273.50	< .02	0.01	0.03	1.60	7	20.61	2.96	4.3	1117	0.15	20.3	< .01	110	4.17	0.008	4.8	0.009	10.8	0.78	27.35	3	15.8	< .02	9.9	0.002	0.22	2.3	4	3	16.8
RS-492 0340-0360	174	1.06	24.5	62.3	< 1	106.20	0.02	0.01	< .01	0.40	8.7	14.75	3.2	4.5	547	0.15	18.3	< .01	85	3.67	0.004	4	0.012	9.56	0.2	28.25	5.9	9.1	0.02	10.4	0.002	0.05	0.9	4	2.5	17.8
RS-492 0360-0380	300	1.13	45.9	63.6	< 1	129.30	0.07	< .01	0.01	0.70	8.3	20.73	3.24	3.8	772	0.18	15.8	< .01	118	4.94	0.006	4.8	0.008	10.48	0.34	29.9	3.4	23.3	< .02	8.5	0.002	0.06	0.8	4	3.1	22.4
RS-492 0380-0400	394	1.14	39.9	52.9	< 1	127.80	0.02	0.01	0.07	1.40	9.6	26.08	3.07	3.9	962	0.21	16.1	< .01	891	6.12	0.012	5.7	0.007	21.4	0.73	25.33	3.5	19.1	< .02	9	0.002	2.41	0.9	5	3.1	48.2
RS-492 0400-0420	271	1.01	29.0	60.3	< 1	56.30	< .02	0.02	0.03	1.10	8.4	24.52	3.29	4	1338	0.07	15.6	< .01	530	5.01	0.006	6	0.01	12.53	0.4	20.4	4.8	23.5	< .02	8.7	0.002	0.65	1	5	1.4	26.2
RS-492 0420-0440	451	0.9	36.2	92.3	< 1	101.60	0.02	0.02	0.01	1.00	6.8	23.1	3.01	3.6	1457	0.04	13.8	< .01	496	5.17	0.005	5	0.01	26.56	0.34	29.81	6.4	19.6	< .02	8	0.002	0.7	0.8	4	2	37.6
RS-492 0440-0460	446	1.36	50.6	85.5	< 1	196.50	0.02	0.02	0.02	0.90	8.1	21.25	3.45	6.6	1714	0.16	18.8	0.01	158	5.15	0.019	6.2	0.015	20.25	0.32	46.12	7.2	19.5	< .02	10.7	0.002	0.16	1.5	5	3.1	48.1
RS-492 0460-0480	443	1.18	33.2	79.2	< 1	113.60	< .02	0.02	0.01	1.20	5.5	20.31	2.53	4.4	4972	0.11	18.7	0.01	93	3.65	0.01	4.2	0.006	16.07	1	19.4	8.2	9.5	< .02	9.9	0.002	0.22	3.7	4	1.1	13.4
RS-492 0480-0500	339	1.03	33.0	80	< 1	103.60	< .02	0.01	0.02	1.90	4.5	22.91	2.81	3.8	5191	0.09	17.7	0.01	85	3.62	0.009	3.9	0.006	15.91	1.5	17.94	10.5	5.1	< .02	9.1	0.002	0.26	3.5	4	1	14.3
RS-492 0500-0520	97	0.80	5.0	7.3	< 1	89.10	< .02	0.02	0.02	2.90	3	8.82	1.63	3.2	327	0.15	24	< .01	39	2.71	0.015	2.1	0.005	15.53	1.36	6.44	1.5	8.3	< .02	12.3	0.002	0.24	2.1	2	0.6	15.7
RS-492 0520-0540	570	0.69	37.8	80.2	< 1	75.90	< .02	0.02	0.46	3.80	8	17.47	3.05	2.5	1540	0.14	17.4	< .01	89	4.26	0.012	5	0.004	17.5	2.28	20.07	6.5	6.6	< .02	9	0.002	0.74	6.2	4	1	41.6
RS-492 0540-0560	260	0.83	28.1	58.9	< 1	90.90	< .02	0.01	0.12	4.00	5.6	15.74	2.85	3.1	1178	0.13	17.4	< .01	83	3.91	0.014	4.2	0.004	15.51	2.13	17.47	5.2	5.1	< .02	9.6	0.002	0.52	4.8	4	1	48.6
RS-492 0560-0580	398	1.07	28.4	76.8	< 1	84.10	< .02	0.02	1.14	10.60	9.8	20.57	2.92	4.2	1423	0.13	20.8	0.01	93	5.3	0.014	6.8	0.005	20.92	2.18	17.95	5.6	9.1	< .02	10.6	0.002	0.71	6.2	4	1.1	78.4
RS-492 0580-0600	554	0.81	40.5	55.1	< 1	78.80	< .02	0.01	0.79	8.90	8.4	19.02	3.29	3.2	2288	0.14	18.5	< .01	100	4.63	0.015	5.8	0.004	16	2.3	28.2	4.2	7.2	< .02	8.7	0.002	1.16	5.4	5	1	84.5
RS-492 0600-0620	415	0.71	36.9	41.5	< 1	72.6	< .02	0.02	0.85	8.5	4.6	13.11	2.6	3.1	1388	0.11	21.5	< .01	62	4.15	0.013	4.1	0.004	19.31	2.28	24.02	4.9	6	< .02	8.8	0.002	0.93	5.1	3	1	70.2
RS-492 0620-0640	390	0.91	40.4	61.4	< 1	80.9	< .02	0.02	2.48	9.6	5.9	11.85	2.58	3.7	1054	0.12	20.9	0.01	59	3.57	0.013	4	0.006	17.74	2.3	22.23	6.6	9.8	< .02	8.2	0.002	0.77	6.5	3	0.9	78.3
RS-492 0640-0660	425	0.76	35.5	44.9	< 1	82.6	< .02	0.03	0.32	4.5	4.7	15.4	2.9	3	1798	0.11	20.4	0.01	87	3.57	0.014	4.6	0.006	28.87	2.16	20.64	3.4	13.2	< .02	9.2	0.005	0.76	4.2	3	1.6	83.4
STANDARD DS2	234	1.75	59.3	192	2	153.6	10.87	0.54	10.76	11.9	159.7	126.73	3.09	6.1	240	0.17	15.5	0.61	832	14.12	0.031	36.4	0.085	34.07	0.02	9.74	2.3	27.2	1.9	3.7	0.092	1.77	19.7	75	6.7	165
RS-492 0660-0680	541	0.67	34.5	48.3	5	68.2	0.02	0.03	0.22	3.5	5.4	12.66	3.22	2.5	431	0.13	19.6	0.01	112	3.55	0.015	3.3	0.009	36.45	2.1	20.15	4.1	27.3	< .02	8.3	0.013	1.18	2.7	3	1.7	75.1

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AAL REF: SP56474
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	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
RS-492 0680-0700	835	0.66	28.6	99.2	4	48.9	< .02	0.02	0.29	2.6	7.7	17.92	3.17	2.9	491	0.14	18.5	0.01	113	4.55	0.015	4.4	0.005	16.24	1.9	21.03	7.3	14.8	< .02	7.6	0.002	0.93	1.8	4	0.7	86.5
RS-492 0700-0720	617	1.25	29.8	63.2	< 1	179.1	0.23	0.99	0.66	2.8	4.5	13.66	2.74	4.8	521	0.19	30.7	0.13	1535	2.67	0.03	3.4	0.036	35.99	1.26	10.2	3.8	132.3	0.02	6.4	0.002	0.53	2.7	4	0.5	264.9
RS-492 0720-0740	201	2.24	3.7	8.3	< 1	414.2	0.22	2.37	0.66	2.5	3.3	6.58	1.91	6.2	106	0.24	28.6	0.31	1425	0.93	0.052	1	0.039	23.57	0.13	1.32	0.4	175.1	< .02	6	0.002	0.29	2.2	4	< .2	92.6
RS-492 0740-0760	108	1.62	1.4	2.7	1	80.7	0.25	2.34	0.4	1.7	11.5	10.83	1.98	5.2	34	0.23	28.4	0.18	1132	1.79	0.052	6.8	0.042	48.59	0.04	0.6	0.2	136.4	< .02	5.9	0.002	0.16	1.7	4	0.2	56.3
RS-492 0760-0780	75	1.83	1.9	1	< 1	52.4	0.23	2.01	0.11	1.2	4.3	8.7	2.03	5.1	14	0.24	28.6	0.24	822	1.53	0.055	1.7	0.034	26.93	0.02	0.28	< .1	181.7	0.02	6	0.002	0.11	1.5	3	< .2	39.3
RS-492 0780-0800	90	1.47	2.4	1.5	< 1	176.1	0.22	2.08	0.29	1.2	4.7	9.11	1.88	4.3	18	0.26	27.5	0.19	832	1.82	0.053	1.5	0.036	15.55	0.04	0.3	0.1	154.5	< .02	6.3	0.002	0.11	1.4	4	0.2	38.4
RS-492 0800-0820	113	1.47	2.2	2.6	< 1	127.7	0.24	2.11	0.28	1.1	3.7	5.4	1.32	4.4	37	0.27	28.4	0.2	737	0.98	0.052	0.5	0.041	19.65	0.06	0.44	0.2	181.2	0.02	6	0.001	0.11	1.3	2	< .2	46.2
RS-492 0820-0840	116	1.47	2.5	3	< 1	1744.1	0.21	2.13	0.25	1.6	4	9.69	1.82	4.6	37	0.28	27	0.21	853	1.84	0.05	1.9	0.044	17.99	0.09	0.65	0.2	187.1	0.02	6.5	0.002	0.13	1.1	5	< .2	56.2
RS-492 0840-0860	126	0.92	3	2.8	< 1	746.8	0.13	2.12	0.22	1.5	3.1	5.91	2.25	4.2	54	0.3	28.5	0.11	1019	2.18	0.054	0.8	0.034	15.12	0.07	1.13	0.2	101.3	< .02	9	0.011	0.15	1.7	9	0.4	65.3
RS-492 0860-0880	106	0.9	3.1	3.4	2	103.7	0.16	1.18	0.15	2	5.9	10.88	2.85	4	40	0.28	25.3	0.12	976	2.96	0.056	2.4	0.038	10.8	0.06	1.16	0.3	90.4	0.02	8.4	0.012	0.16	1.8	10	0.4	73
RS-492 0880-0900	145	1.08	4.5	5	2	505.2	0.16	1.49	0.27	1.9	7	15.62	2.79	3.7	70	0.25	28.6	0.14	1053	3.44	0.048	3.3	0.037	18.21	0.07	1.98	0.4	152.3	0.02	7.8	0.005	0.25	1.8	8	0.3	59.2
RS-492 0900-0920	122	1.4	8.3	4.7	3	452.7	0.2	1.43	0.16	2.1	6.4	13.28	2.81	4.7	89	0.28	24	0.2	916	2.7	0.044	2.8	0.045	16.04	0.06	1.24	0.4	189.1	< .02	6.5	0.005	0.22	1.9	8	0.2	55
RS-492 0920-0940	120	0.96	5.2	4.7	2	279.8	0.21	0.92	0.19	2.1	7	16.1	3.34	3.9	75	0.28	23.1	0.13	745	3.52	0.049	3.5	0.04	16.9	0.08	1.83	0.3	115.1	< .02	7.4	0.01	0.19	2	9	0.5	58.8
RS-492 0940-0960	159	0.91	4.4	5.1	< 1	301.2	0.19	1.4	0.22	2	12.7	9.67	2.49	4.2	93	0.27	30.3	0.1	955	2.18	0.076	5.8	0.051	17.17	0.12	2.24	0.4	137.3	< .02	6.6	0.01	0.26	2.1	8	0.5	67.9
RS-492 0960-0980	154	1.42	3.1	4.3	< 1	371.8	0.26	1.96	0.28	1.6	7.2	11.48	1.87	4.2	72	0.23	29.2	0.17	860	2.05	0.054	2.4	0.04	21.77	0.11	1.09	0.4	302.4	0.03	5	0.002	0.16	1.3	3	< .2	66.3
RS-492 0980-1000	161	0.95	4.4	5.9	< 1	509.8	0.16	1.19	0.2	2.2	4.5	5.92	1.86	4.3	101	0.19	30.7	0.1	731	1.4	0.048	1.1	0.051	21.46	0.1	1.6	0.4	195.6	0.02	6.1	0.011	0.18	2.4	4	0.4	82.1
RS-492 1000-1020	218	1.03	5.7	10.7	< 1	492.2	0.13	2.49	0.24	3.3	2.4	5.16	1.81	4.9	172	0.21	28.5	0.1	987	1.32	0.05	0.4	0.054	20.87	0.17	2.14	0.7	234.6	0.02	5.3	0.011	0.22	2.1	5	0.3	108.6
RS-492 1020-1040	166	1.34	3.5	6.1	< 1	362.8	0.18	1.44	0.26	3.2	2.9	6.75	2.2	5.5	96	0.3	29.1	0.16	999	1.61	0.063	1.6	0.051	18.94	0.13	1.76	0.4	185.3	< .02	5.5	0.01	0.2	1.3	7	0.2	103.9
RS-492 1040-1060	104	0.98	2.6	2.5	< 1	1768.9	0.2	1.57	0.26	2.2	13.3	5.96	1.67	3.4	33	0.31	27.7	0.11	849	1.61	0.055	5.7	0.055	19.37	0.08	0.82	0.2	173.5	0.02	5.3	0.005	0.14	0.8	6	0.2	62.3
RS-492 1060-1080	78	0.88	1.8	1.3	< 1	1074.9	0.18	1.5	0.19	2.2	4.9	8.28	1.83	3.3	23	0.35	28.6	0.11	798	1.89	0.057	2.6	0.061	22.06	0.06	0.54	0.2	168.3	0.04	4.8	0.006	0.13	0.6	9	0.3	65
RS-492 1080-1100	94	0.95	2.4	2.1	2	839.3	0.1	1.32	0.23	2.3	7.1	10.06	2.21	3.8	24	0.37	29.8	0.12	819	2.27	0.056	2.9	0.059	18.19	0.09	0.86	0.3	127.3	0.02	5.7	0.011	0.17	0.9	12	0.2	71.9
RS-492 1100-1120	89	0.89	3.9	4.3	2	661.3	0.25	1.28	0.23	2.4	8.8	13.47	2.5	3.3	31	0.3	25.1	0.13	778	2.84	0.127	4.8	0.044	18.94	0.11	1.39	0.4	305.9	0.03	5.2	0.012	0.15	0.9	8	0.4	77.8
RS-492 1120-1140	114	1.31	4.4	5	< 1	858.4	0.28	1.52	0.28	1.8	8	7.51	1.88	3.9	42	0.35	27.9	0.16	821	1.66	0.12	2.5	0.041	15.77	0.23	1.79	0.7	392.2	0.04	4.5	0.005	0.19	0.8	3	< .2	77.1
RS-492 1140-1160	134	1	3.4	9.6	< 1	567.8	0.38	1.29	0.29	1.6	5.8	7.66	1.78	4	53	0.41	30.5	0.12	732	1.57	0.057	2.5	0.044	21.86	0.17	1.63	0.6	145.6	0.02	5.2	0.008	0.22	0.9	3	0.2	82.5
RS-492 1160-1180	115	0.9	2.2	5.1	< 1	383.7	0.35	2.09	0.39	1.8	6.4	7.84	1.76	3.7	23	0.35	29.3	0.1	1037	1.46	0.048	2.5	0.043	21.74	0.09	1.12	0.3	192.5	< .02	4.5	0.007	0.15	0.8	4	0.3	80
RS-492 1180-1200	389	0.86	6	3.7	< 1	206	0.39	0.7	0.22	1.7	1.6	5.38	1.68	3.9	61	0.28	32	0.08	558	1.09	0.051	1.2	0.041	29.28	0.49	3.33	0.7	146.4	0.03	3.8	0.001	0.18	1	< 2	0.3	86.6
RS-492 1200-1220	314	0.93	7.2	4.1	< 1	383.7	0.3	1.28	0.18	1.2	5.2	4.52	1.61	3.4	78	0.3	29.1	0.1	732	0.85	0.036	0.7	0.037	29.26	0.52	2.18	1.2	161.7	< .02	2.3	< .001	0.15	0.6	< 2	0.2	89
RS-492 1220-1240	111	0.76	1.9	6.5	< 1	200.7	0.15	1.9	0.22	1.6	5.9	9.63	2.11	3.5	33	0.35	29.5	0.08	978	1.89	0.047	2	0.047	22.62	0.06	1.07	0.3	152.1	0.02	5	0.011	0.14	1.4	8	0.8	86.5
RS-492 1240-1260	90	1.01	1.6	2.6	< 1	520.5	0.18	2.51	0.3	3.2	7.6	7.87	1.94	3.9	16	0.33	34.3	0.13	1277	1.92	0.041	1.7	0.05	15.92	0.06	0.78	0.3	246.3	0.02	4.4	0.006	0.12	1.1	5	0.4	82.3
RS-492 1260-1280	210	0.67	6.7	10.9	1	174.4	0.36	1.1	0.13	1.3	3.7	8.73	2.1	2.4	87	0.29	22.4	0.05	509	1.9	0.029	1.5	0.038	32.77	1.27	3.86	1.2	152.5	0.03	3.9	0.003	0.29	1.1	2	0.7	64.4
RS-492 1280-1300	6680	0.51	53.3	273.5	< 1	60.2	0.29	0.22	0.12	1.8	3.8	12.1	3.29	1.8	278	0.22	16.6	0.01	124	3.76	0.012	2.1	0.025	30.18	3.43	706.53	163	72.5	< .02	4	< .001	0.89	0.6	2	0.8	84.8
RS-492 1300-1320	512	0.7	16.7	40.7	< 1	77	0.07	0.71	0.16	1.9	4.8	9.24	2.86	2.8	199	0.27	21	0.03	469	2.64	0.02	1.7	0.037	24.43	2.6	69.54	17.2	107.1	< .02	5.6	0.001	0.51	1	2	0.5	100.7
STANDARD DS2	236	1.8	61.1	207.3	6	156.2	11.95	0.55	10.94	12.2	162.1	131.32	3.15	6.6	237	0.16	17.3	0.63	853	15.47	0.036	37.2	0.093	34.89	0.03	9.97	2.4	29.9	1.97	4.1	0.094	2.03	20.1	74	6.4	165.5
RS-492 1320-1340	244	0.87	10.4	12.2	2	127.7	0.07	1.81	0.15	1.7	8.4	12.28	2.45	3.2	104	0.31	18.6	0.06	1063	2.19	0.029	1.7	0.028	28.96	0.95	22.79	5.4	124.7	0.02	6	0.005	0.2	0.8	3	0.6	86.4
RS-492 1340-1360	96	0.71	2.2	3.4	< 1	179.7	0.04	2.41	0.18	0.9	5.5	7.8	2.43	2.7	119	0.38	27.3	0.06	1125	1.8	0.032	0.9	0.088	21.41	0.1	9.64	1.6	159.7	0.02	9.6	0.022	0.11	1.6	3	1.4	78.5

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CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 1360-1380	87	0.54	3	3.6	< 1	216.6	0.04	2.33	0.14	1.1	5.1	7.83	2.64	2.4	40	0.27	28.8	0.07	1043	1.6	0.045	1	0.021	17.1	0.09	4.14	0.8	155.8	0.02	10.5	0.028	0.08	1.3	3	1.3	71.6
RS-492 1380-1400	110	0.58	3	2.8	3	192.3	0.04	1.85	0.13	0.9	7.6	9.72	2.84	2.6	39	0.27	27.6	0.06	1139	1.69	0.049	1.7	0.021	20.4	0.08	3.97	0.8	133.3	< .02	10.5	0.028	0.09	1.2	4	1.4	71.5
RS-492 1400-1420	102	0.6	3.9	4.4	< 1	410.5	0.05	1.94	0.19	0.9	6.2	7.73	2.78	2.4	50	0.31	25.2	0.07	1139	1.41	0.044	1.4	0.019	21.75	0.19	2.43	0.5	146.4	< .02	9	0.025	0.13	1.1	3	1.5	72.7
RS-492 1420-1440	109	0.59	4.3	4.4	2	364.3	0.06	2.02	0.26	1.1	5.8	10.4	2.76	2.4	118	0.29	23.3	0.07	1207	1.62	0.041	2	0.025	18.34	0.22	2.98	0.5	133.1	< .02	8	0.027	0.16	1	3	1.4	73.4
RS-492 1440-1460	108	0.72	5.8	2.4	< 1	216.2	0.02	1.88	0.14	1.7	7.1	12.14	2.42	2.6	125	0.39	21.1	0.06	2512	1.95	0.033	3	0.025	17.91	0.73	2.97	0.2	134.5	< .02	5.5	0.002	0.2	0.6	3	0.4	70.8
RS-492 1460-1480	1775	1	56.7	106.4	< 1	87.3	0.05	0.56	0.12	2.9	7.6	6.7	2.27	2.8	214	0.42	19.3	0.04	257	2.26	0.022	1.7	0.038	39.21	2.55	10.23	8.2	136.3	< .02	4.5	< .001	0.34	0.5	< 2	1.2	91.9
RS-492 1480-1500	173	0.83	6.7	11	< 1	140.3	0.12	3.07	0.14	1.5	5.3	4.94	1.55	2.4	62	0.4	23.8	0.06	1291	0.88	0.03	< .1	0.037	46.09	0.95	4.18	1.2	212	< .02	2.9	0.001	0.26	0.7	< 2	0.3	74.6
RS-492 1500-1520	157	0.93	4.5	4.7	< 1	218.4	0.19	2.76	0.11	1.5	4.2	3.5	1.67	2.6	112	0.41	29.1	0.06	1245	0.73	0.031	< .1	0.038	30.13	0.65	3.61	0.8	230.2	0.03	4	0.002	0.22	1	< 2	0.5	68.7
RS-492 1520-1540	261	1.25	12.3	15.5	< 1	200.3	0.17	0.73	0.1	2.9	8.3	8.78	2.36	3.7	269	0.37	26.2	0.07	441	3.42	0.02	2.4	0.035	30.67	1.22	4.99	2.6	147.9	< .02	3.8	0.001	0.24	0.7	2	0.9	97.9
RS-492 1540-1560	164	1.15	5.5	7.4	< 1	385.7	0.13	2.1	0.12	2.4	6.6	10.05	2.27	3.9	80	0.47	30.8	0.09	1235	1.73	0.025	1.7	0.04	30.21	0.58	4.29	1.1	162.6	< .02	3.9	0.001	0.26	0.8	2	0.2	79.6
RS-492 1560-1580	277	1.14	14.5	21.4	< 1	132.4	0.21	0.98	0.11	2	8	11.62	3.14	3.6	504	0.43	22.6	0.06	856	2.25	0.018	2.9	0.033	29.61	2.12	12.34	3.2	137	< .02	3.8	0.001	0.37	0.8	2	0.6	89.5
RS-492 1580-1600	131	0.89	3.1	7.3	< 1	138	0.56	2.78	0.13	1	5.8	9.02	2.09	2.7	80	0.47	28.2	0.05	1958	1.59	0.019	1.2	0.043	22.37	0.3	3.62	0.5	161.9	< .02	5.3	0.003	0.17	1.5	2	0.5	56.3
RS-492 1600-1620	517	0.96	24.9	40.8	< 1	123.5	0.46	0.66	0.09	1.5	5.9	10.08	2.4	2.9	437	0.43	20.3	0.03	406	2.5	0.017	2.1	0.051	27.02	2.05	12.1	3.8	118	< .02	4.4	< .001	0.57	1.4	2	0.9	87
RS-492 1620-1640	1703	0.86	42.8	62.3	< 1	84.1	0.03	0.41	0.17	1.3	5	6.85	2.49	2.4	122	0.4	17.5	0.03	176	1.46	0.015	1.7	0.035	45.23	2.84	13.71	9.8	115.2	< .02	4.4	< .001	0.36	1.8	< 2	1.7	99.1
RS-492 1640-1660	204	0.68	6.1	9	1	130	< .02	1.89	0.11	1.2	4.4	10.42	2.08	2.3	57	0.4	20.2	0.03	976	2.45	0.016	1.8	0.034	23.7	1.34	6.87	1.4	127.6	< .02	5.5	0.001	0.27	0.9	< 2	0.5	87.3
RS-492 1660-1680	118	0.87	2.5	3.7	< 1	218.9	0.02	2.44	0.12	1.2	8	11.64	2.43	3.1	49	0.45	26.3	0.05	939	2.31	0.019	1.9	0.04	21.98	0.37	3.31	0.8	138.9	< .02	7.8	0.005	0.16	1.9	2	0.6	67.2
RS-492 1680-1700	357	1.03	19.4	25.9	< 1	156.6	0.03	1.29	0.05	1.4	4.9	11.26	2.42	3.2	381	0.45	18	0.04	863	2.5	0.015	2.2	0.025	29.46	1.57	13.43	1.9	123.1	< .02	4.9	< .001	0.35	0.7	2	0.4	88.7
RS-492 1700-1720	1853	0.88	28.3	73	< 1	77.6	< .02	0.53	0.03	1.3	7	12.64	2.6	2.4	487	0.39	19.7	0.02	853	43.98	0.012	3	0.028	33.87	2.25	14.69	4.2	104.8	< .02	6.1	< .001	1.09	0.6	2	0.9	89.6
RS-492 1720-1740	2414	0.5	61	82.6	< 1	78.4	0.02	0.19	0.09	1	15	21.69	2.59	1.9	190	0.3	34.3	0.02	213	18.49	0.008	5.1	0.008	35.83	1.43	13.65	11	49.8	< .02	9.2	< .001	0.48	0.9	3	1.6	71.2
RS-492 1740-1760	521	0.6	14.6	20.7	< 1	164.4	0.04	0.95	0.18	1.2	14.7	14.97	2.11	2.3	90	0.38	33.2	0.02	646	5.86	0.013	4.2	0.008	28.69	1.17	10.28	4.8	76.1	< .02	12.4	< .001	0.28	1.7	3	1.2	81.5
RS-492 1760-1780	453	0.68	18.9	21.5	< 1	158.9	0.09	0.76	0.14	1.4	16.3	15.93	2.5	2.7	160	0.36	35.5	0.03	481	4.69	0.024	4.7	0.013	27.43	1.17	8	3.7	86.2	0.02	11.5	0.001	0.26	1.6	4	1.1	81.2
RS-492 1780-1800	515	0.69	14	40.4	< 1	70	0.04	0.64	0.23	1.3	14.9	11.94	2	2.5	134	0.39	41.2	0.02	487	3.89	0.022	3.7	0.013	33.86	1.35	5.69	4	89	< .02	13.8	< .001	0.25	2	2	1.1	98.7
RS-492 1800-1820	792	0.98	21.9	54.5	< 1	130.4	0.11	0.78	0.32	2.1	17.6	12.79	2.48	3.7	225	0.39	34.4	0.07	581	4.57	0.036	4.1	0.018	30.58	1.97	12.42	6.9	119.9	< .02	10.7	0.001	0.39	2.2	2	0.3	127.2
RS-492 1820-1840	383	0.87	11.5	10.6	< 1	152	0.07	0.79	0.19	1.6	12.1	14.78	2.14	4.3	79	0.4	42	0.05	807	3.68	0.063	3.8	0.012	28.16	0.71	4.01	1.7	85.1	< .02	15.7	0.001	0.22	1.8	3	0.6	96.5
RS-492 1840-1860	181	0.89	3.6	3.7	< 1	55	0.02	0.65	0.14	1.7	13.4	17.07	2.36	6.1	27	0.43	44.5	0.03	783	4.14	0.08	4.7	0.007	25.91	0.17	1.81	0.6	60.4	< .02	15.7	0.001	0.12	1.6	4	1.3	88.3
RS-492 1860-1880	581	0.77	7.3	10	< 1	27.9	0.03	0.64	0.19	1.8	18.1	16.73	2.43	4.3	39	0.44	42.4	0.02	720	5.48	0.07	5.7	0.008	29.92	0.76	2.89	2.4	73.3	< .02	14.8	0.001	0.18	1.6	4	1.7	85.1
RS-492 1880-1900	531	0.54	6.7	8.4	< 1	23.8	< .02	0.53	0.15	1.6	17.1	18.2	2.5	3.2	29	0.34	43.4	0.01	608	4.21	0.056	6	0.007	28.5	0.74	2.32	2.1	60	< .02	14.3	0.001	0.16	1.4	3	1.3	79.1
RS-492 1900-1920	790	0.5	14.2	18.5	< 1	36.1	< .02	0.48	0.15	1.5	13.8	14.17	2.15	2.3	21	0.37	42	0.01	492	3.64	0.057	4.8	0.007	28.87	1.22	3.46	3.5	70.8	< .02	15	< .001	0.21	1.3	3	1.1	88
RS-492 1920-1940	1043	1.03	9.2	56.5	< 1	48.2	0.04	0.69	0.12	2.7	29.1	17.29	2.54	4.9	33	0.59	38.6	0.02	600	7.07	0.083	7	0.007	30.45	1.12	3.52	2.2	74.5	< .02	14.1	0.001	0.29	1.6	4	2.7	86.8
RS-492 1940-1960	923	0.74	10.1	37.2	< 1	70.5	0.03	0.74	0.14	2.6	37	16.84	2.33	3.3	46	0.44	37.5	0.02	528	8.31	0.066	6.3	0.008	29.98	1.36	4.23	3.7	83.6	< .02	12.7	0.001	0.24	1.3	2	3	90.8
RS-492 1960-1980	11331	1.06	19	48.6	< 1	120.3	0.06	0.52	0.18	1.7	11.7	11.82	2.14	3.7	171	0.43	34.5	0.07	391	4.44	0.051	3.3	0.013	29.72	1.5	15.15	6.9	78.8	< .02	11.2	0.001	0.35	1.3	3	0.5	86.7
STANDARD DS2	235	1.81	61.2	218.6	1	163.5	11.71	0.55	11.08	13.2	176	132.16	3.24	6.5	249	0.17	17.3	0.63	877	14.72	0.032	36.8	0.091	34.4	0.01	9.78	2.4	30.4	1.95	4	0.098	1.95	19.8	78	6.8	166.7
RS-492 1980-2000	371	0.7	3.4	5	3	27.7	< .02	0.66	0.13	1.6	12.2	13.84	1.96	4	19	0.41	39.5	0.02	687	3.74	0.077	3.1	0.006	29.33	0.64	2.4	1.3	48.2	< .02	13.2	0.001	0.13	1.1	2	1.6	81
RS-492 2000-2020	362	0.75	4.3	5.9	1	28.8	< .02	0.65	0.1	2.2	16.8	13.1	1.95	4.2	16	0.44	39.1	0.02	752	4.52	0.083	3.6	0.006	29.29	0.74	2.1	1.4	52.1	< .02	12.9	0.001	0.13	1.2	2	2.7	78.2
RS-492 2020-2040	731	0.67	8.4	26.1	2	19.5	< .02	0.29	0.11	1.3	10.8	7.8	1.73	2.5	24	0.41	35	0.01	252	2.94	0.045	2.5	0.006	32.21	1.37	3.79	4.3	67.5	< .02	12	< .001	0.19	1.3	< 2	1.5	77.9

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AAL REF:	SP56474
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	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
RS-492 2040-2055	357	0.74	3.9	6.3	3	26.9	0.02	0.57	0.13	2.6	16.2	16.35	2.07	4.7	12	0.43	39.7	0.02	636	5.15	0.089	4.7	0.006	29.06	0.54	2.75	1	52.1	< .02	14.8	0.001	0.13	1.7	3	3	85.2
89553	58053	2.25	120.3	5995.8	6	101.8	0.18	0.9	1.7	3.8	7.2	22.33	2.58	7.5	404	0.89	15.8	0.13	321	6.45	0.084	3.4	0.055	31.17	2.56	22.29	23.6	66.1	< .02	3.9	0.004	0.45	1.6	8	0.4	87.9
STANDARD DS2	250	1.7	58.8	189.4	6	154	11.2	0.52	10.03	11.7	164.8	131.49	3.06	6.3	234	0.16	16.1	0.59	812	14.48	0.033	35	0.089	34.09	0.01	9.65	2.2	27.9	1.83	3.8	0.091	1.76	19.4	73	7.3	157.7

AMERICAN ASSAY LABORATORIES
AAL 03-0 ICP PACKAGE DETECTION LIMITS

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

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

AMERICAN ASSAY LABORATORIES
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CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 0000-0020	502	0.67	19.7	28.9	9	102.20	0.04	0.2	0.02	0.70	5.8	13.72	2.11	3	491	0.1	20.8	0.06	172	3.22	0.053	2.8	0.012	15.57	0.12	22.58	1.3	37	0.02	12	0.008	0.19	2.1	9	0.6	27.4
RS-492 0020-0040	103	0.69	11.1	5.5	< 1	208.70	< .02	0.07	< .01	0.40	7.1	12.86	1.32	2.8	1578	0.15	23.5	0.02	63	2.68	0.032	2.5	0.009	7.83	0.11	7.07	0.8	30.9	< .02	12.9	0.003	0.08	1.9	5	0.3	16.2
RS-492 0040-0060	324	0.58	59.8	38.4	1	130.10	< .02	0.02	< .01	1.10	9.3	24.33	2.6	3.6	2067	0.16	18.8	0.01	89	4.14	0.019	4.8	0.007	10.49	0.46	23.43	2.1	14.2	< .02	10.3	0.002	0.14	2.2	5	1.1	13.6
RS-492 0060-0080	317	0.61	57.1	41.3	< 1	137.40	0.02	0.02	0.01	0.70	6.6	22.89	2.45	3.4	2512	0.19	19.2	0.01	89	4.17	0.016	4.3	0.007	8.81	0.3	23.88	2.7	12	< .02	10.3	0.002	0.11	1.6	5	1.1	10.3
RS-492 0080-0100	286	1.19	53.2	24.8	< 1	141.80	0.02	0.03	< .01	0.90	6.7	19.69	2.47	6	2306	0.23	20.7	0.01	75	5.23	0.02	4.3	0.011	11.95	0.35	26.64	2.2	15.5	< .02	11.5	0.003	0.13	1.9	5	1.4	14.6
RS-492 0100-0120	604	0.86	56.9	47.6	< 1	94.60	< .02	0.02	0.01	1.20	9.7	21.3	2.24	4	2434	0.13	15.9	0.01	95	4.52	0.009	5	0.007	8.82	0.29	33.83	1.6	17.7	< .02	7.7	0.002	0.11	12.1	6	1.7	12.3
RS-492 0120-0140	119	0.8	31.0	21.6	< 1	152.20	< .02	0.02	< .01	0.40	5.3	15.13	2.28	4	1181	0.26	21.2	< .01	60	3.32	0.016	3.4	0.008	9.03	0.23	14.51	1.8	16.2	< .02	11.4	0.002	0.11	1.3	4	0.7	11.7
RS-492 0140-0160	154	0.57	23.0	27.6	< 1	104.10	0.03	0.01	0.02	1.90	6.6	20.21	2.53	2.9	1153	0.26	16.7	< .01	65	2.98	0.014	3.9	0.004	16.11	1.31	12.83	3.7	7	< .02	8.1	0.002	0.33	0.8	3	1.5	17.1
RS-492 0160-0180	67	0.63	13.3	7.2	1	97.90	0.02	0.01	0.01	0.50	4.1	13.26	2.19	3.3	181	0.26	26.4	0.01	86	3.21	0.017	2.6	0.012	12.14	0.35	5.72	1	7.6	< .02	13.3	0.01	0.15	1.1	4	1	13.8
RS-492 0180-0200	35	0.67	5.4	3.9	1	82.60	< .02	0.01	< .01	0.20	3.3	9.6	2.47	3.4	47	0.23	30.4	0.01	97	2.97	0.015	1.8	0.019	13.29	0.17	5.75	0.3	13.8	< .02	14.1	0.011	0.09	1.4	5	1.1	18.9
RS-492 0200-0220	27	0.66	7.6	5.2	< 1	91.80	< .02	0.01	< .01	0.20	3.7	10.58	2.44	3.9	48	0.28	27.7	0.01	84	2.87	0.014	1.9	0.02	14.99	0.3	8.84	0.7	11.8	< .02	14.1	0.005	0.1	1.2	4	0.9	20.9
RS-492 0220-0240	95	0.93	4.5	2.4	3	73.00	0.02	0.03	0.26	6.70	3.9	13.58	2.6	3.9	52	0.21	29	0.03	3793	2.91	0.021	3.2	0.016	15.09	0.04	3.23	0.2	11.9	< .02	13.8	0.014	0.87	1.8	4	2	173.4
RS-492 0240-0260	146	0.98	3.6	2.3	2	234.40	< .02	0.02	0.16	2.40	4.3	7.13	2.37	4.7	130	0.19	32.4	0.01	2102	2.44	0.015	2	0.021	20.08	0.01	6.42	0.2	17.7	< .02	14.8	0.022	0.77	2.3	5	1.9	134
RS-492 0260-0280	77	1.07	7.6	23.2	< 1	160.40	< .02	0.01	< .01	0.30	3.3	8.02	2.3	6	157	0.27	27.7	0.01	136	2.6	0.013	2.2	0.018	15.57	0.17	10.29	1.4	19	< .02	13.1	0.013	0.1	1.1	4	1.3	21.7
RS-492 0280-0300	104	1.04	20.7	80	< 1	189.70	< .02	0.01	< .01	0.10	5.5	8.15	2.98	6.3	272	0.27	26.3	< .01	57	2.92	0.011	2.1	0.012	12.6	0.23	21.92	6.6	6.5	< .02	12.6	0.003	0.07	1.2	4	0.8	20.6
RS-492 0300-0320	200	1	13.3	14	1	91.60	< .02	0.01	< .01	0.40	5.3	11.24	2.98	4.9	819	0.12	21.7	< .01	53	2.81	0.004	2.8	0.017	12.11	0.35	12.95	2.6	16.7	< .02	10.8	0.002	0.05	1.1	4	1.4	10.7
RS-492 0320-0340	425	1.05	28.4	51.8	< 1	273.50	< .02	0.01	0.03	1.60	7	20.61	2.96	4.3	1117	0.15	20.3	< .01	110	4.17	0.008	4.8	0.009	10.8	0.78	27.35	3	15.8	< .02	9.9	0.002	0.22	2.3	4	3	16.8
RS-492 0340-0360	174	1.06	24.5	62.3	< 1	106.20	0.02	0.01	< .01	0.40	8.7	14.75	3.2	4.5	547	0.15	18.3	< .01	85	3.67	0.004	4	0.012	9.56	0.2	28.25	5.9	9.1	0.02	10.4	0.002	0.05	0.9	4	2.5	17.8
RS-492 0360-0380	300	1.13	45.9	63.6	< 1	129.30	0.07	< .01	0.01	0.70	8.3	20.73	3.24	3.8	772	0.18	15.8	< .01	118	4.94	0.006	4.8	0.008	10.48	0.34	29.9	3.4	23.3	< .02	8.5	0.002	0.06	0.8	4	3.1	22.4
RS-492 0380-0400	394	1.14	39.9	52.9	< 1	127.80	0.02	0.01	0.07	1.40	9.6	26.08	3.07	3.9	962	0.21	16.1	< .01	891	6.12	0.012	5.7	0.007	21.4	0.73	25.33	3.5	19.1	< .02	9	0.002	2.41	0.9	5	3.1	48.2
RS-492 0400-0420	271	1.01	29.0	60.3	< 1	56.30	< .02	0.02	0.03	1.10	8.4	24.52	3.29	4	1338	0.07	15.6	< .01	530	5.01	0.006	6	0.01	12.53	0.4	20.4	4.8	23.5	< .02	8.7	0.002	0.65	1	5	1.4	26.2
RS-492 0420-0440	451	0.9	36.2	92.3	< 1	101.60	0.02	0.02	0.01	1.00	6.8	23.1	3.01	3.6	1457	0.04	13.8	< .01	496	5.17	0.005	5	0.01	26.56	0.34	29.81	6.4	19.6	< .02	8	0.002	0.7	0.8	4	2	37.6
RS-492 0440-0460	446	1.36	50.6	85.5	< 1	196.50	0.02	0.02	0.02	0.90	8.1	21.25	3.45	6.6	1714	0.16	18.8	0.01	158	5.15	0.019	6.2	0.015	20.25	0.32	46.12	7.2	19.5	< .02	10.7	0.002	0.16	1.5	5	3.1	48.1
RS-492 0460-0480	443	1.18	33.2	79.2	< 1	113.60	< .02	0.02	0.01	1.20	5.5	20.31	2.53	4.4	4972	0.11	18.7	0.01	93	3.65	0.01	4.2	0.006	16.07	1	19.4	8.2	9.5	< .02	9.9	0.002	0.22	3.7	4	1.1	13.4
RS-492 0480-0500	339	1.03	33.0	80	< 1	103.60	< .02	0.01	0.02	1.90	4.5	22.91	2.81	3.8	5191	0.09	17.7	0.01	85	3.62	0.009	3.9	0.006	15.91	1.5	17.94	10.5	5.1	< .02	9.1	0.002	0.26	3.5	4	1	14.3
RS-492 0500-0520	97	0.80	5.0	7.3	< 1	89.10	< .02	0.02	0.02	2.90	3	8.82	1.63	3.2	327	0.15	24	< .01	39	2.71	0.015	2.1	0.005	15.53	1.36	6.44	1.5	8.3	< .02	12.3	0.002	0.24	2.1	2	0.6	15.7
RS-492 0520-0540	570	0.69	37.8	80.2	< 1	75.90	< .02	0.02	0.46	3.80	8	17.47	3.05	2.5	1540	0.14	17.4	< .01	89	4.26	0.012	5	0.004	17.5	2.28	20.07	6.5	6.6	< .02	9	0.002	0.74	6.2	4	1	41.6
RS-492 0540-0560	260	0.83	28.1	58.9	< 1	90.90	< .02	0.01	0.12	4.00	5.6	15.74	2.85	3.1	1178	0.13	17.4	< .01	83	3.91	0.014	4.2	0.004	15.51	2.13	17.47	5.2	5.1	< .02	9.6	0.002	0.52	4.8	4	1	48.6
RS-492 0560-0580	398	1.07	28.4	76.8	< 1	84.10	< .02	0.02	1.14	10.60	9.8	20.57	2.92	4.2	1423	0.13	20.8	0.01	93	5.3	0.014	6.8	0.005	20.92	2.18	17.95	5.6	9.1	< .02	10.6	0.002	0.71	6.2	4	1.1	78.4
RS-492 0580-0600	554	0.81	40.5	55.1	< 1	78.80	< .02	0.01	0.79	8.90	8.4	19.02	3.29	3.2	2288	0.14	18.5	< .01	100	4.63	0.015	5.8	0.004	16	2.3	28.2	4.2	7.2	< .02	8.7	0.002	1.16	5.4	5	1	84.5
RS-492 0600-0620	415	0.71	36.9	41.5	< 1	72.6	< .02	0.02	0.85	8.5	4.6	13.11	2.6	3.1	1388	0.11	21.5	< .01	62	4.15	0.013	4.1	0.004	19.31	2.28	24.02	4.9	6	< .02	8.8	0.002	0.93	5.1	3	1	70.2
RS-492 0620-0640	390	0.91	40.4	61.4	< 1	80.9	< .02	0.02	2.48	9.6	5.9	11.85	2.58	3.7	1054	0.12	20.9	0.01	59	3.57	0.013	4	0.006	17.74	2.3	22.23	6.6	9.8	< .02	8.2	0.002	0.77	6.5	3	0.9	78.3
RS-492 0640-0660	425	0.76	35.5	44.9	< 1	82.6	< .02	0.03	0.32	4.5	4.7	15.4	2.9	3	1798	0.11	20.4	0.01	87	3.57	0.014	4.6	0.006	28.87	2.16	20.64	3.4	13.2	< .02	9.2	0.005	0.76	4.2	3	1.6	83.4
STANDARD DS2	234	1.75	59.3	192	2	153.6	10.87	0.54	10.76	11.9	159.7	126.73	3.09	6.1	240	0.17	15.5	0.61	832	14.12	0.031	36.4	0.085	34.07	0.02	9.74	2.3	27.2	1.9	3.7	0.092	1.77	19.7	75	6.7	165
RS-492 0660-0680	541	0.67	34.5	48.3	5	68.2	0.02	0.03	0.22	3.5	5.4	12.66	3.22	2.5	431	0.13	19.6	0.01	112	3.55	0.015	3.3	0.009	36.45	2.1	20.15	4.1	27.3	< .02	8.3	0.013	1.18	2.7	3	1.7	75.1

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AAL REF: SP56474
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	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
RS-492 0680-0700	835	0.66	28.6	99.2	4	48.9	< .02	0.02	0.29	2.6	7.7	17.92	3.17	2.9	491	0.14	18.5	0.01	113	4.55	0.015	4.4	0.005	16.24	1.9	21.03	7.3	14.8	< .02	7.6	0.002	0.93	1.8	4	0.7	86.5
RS-492 0700-0720	617	1.25	29.8	63.2	< 1	179.1	0.23	0.99	0.66	2.8	4.5	13.66	2.74	4.8	521	0.19	30.7	0.13	1535	2.67	0.03	3.4	0.036	35.99	1.26	10.2	3.8	132.3	0.02	6.4	0.002	0.53	2.7	4	0.5	264.9
RS-492 0720-0740	201	2.24	3.7	8.3	< 1	414.2	0.22	2.37	0.66	2.5	3.3	6.58	1.91	6.2	106	0.24	28.6	0.31	1425	0.93	0.052	1	0.039	23.57	0.13	1.32	0.4	175.1	< .02	6	0.002	0.29	2.2	4	< .2	92.6
RS-492 0740-0760	108	1.62	1.4	2.7	1	80.7	0.25	2.34	0.4	1.7	11.5	10.83	1.98	5.2	34	0.23	28.4	0.18	1132	1.79	0.052	6.8	0.042	48.59	0.04	0.6	0.2	136.4	< .02	5.9	0.002	0.16	1.7	4	0.2	56.3
RS-492 0760-0780	75	1.83	1.9	1	< 1	52.4	0.23	2.01	0.11	1.2	4.3	8.7	2.03	5.1	14	0.24	28.6	0.24	822	1.53	0.055	1.7	0.034	26.93	0.02	0.28	< .1	181.7	0.02	6	0.002	0.11	1.5	3	< .2	39.3
RS-492 0780-0800	90	1.47	2.4	1.5	< 1	176.1	0.22	2.08	0.29	1.2	4.7	9.11	1.88	4.3	18	0.26	27.5	0.19	832	1.82	0.053	1.5	0.036	15.55	0.04	0.3	0.1	154.5	< .02	6.3	0.002	0.11	1.4	4	0.2	38.4
RS-492 0800-0820	113	1.47	2.2	2.6	< 1	127.7	0.24	2.11	0.28	1.1	3.7	5.4	1.32	4.4	37	0.27	28.4	0.2	737	0.98	0.052	0.5	0.041	19.65	0.06	0.44	0.2	181.2	0.02	6	0.001	0.11	1.3	2	< .2	46.2
RS-492 0820-0840	116	1.47	2.5	3	< 1	1744.1	0.21	2.13	0.25	1.6	4	9.69	1.82	4.6	37	0.28	27	0.21	853	1.84	0.05	1.9	0.044	17.99	0.09	0.65	0.2	187.1	0.02	6.5	0.002	0.13	1.1	5	< .2	56.2
RS-492 0840-0860	126	0.92	3	2.8	< 1	746.8	0.13	2.12	0.22	1.5	3.1	5.91	2.25	4.2	54	0.3	28.5	0.11	1019	2.18	0.054	0.8	0.034	15.12	0.07	1.13	0.2	101.3	< .02	9	0.011	0.15	1.7	9	0.4	65.3
RS-492 0860-0880	106	0.9	3.1	3.4	2	103.7	0.16	1.18	0.15	2	5.9	10.88	2.85	4	40	0.28	25.3	0.12	976	2.96	0.056	2.4	0.038	10.8	0.06	1.16	0.3	90.4	0.02	8.4	0.012	0.16	1.8	10	0.4	73
RS-492 0880-0900	145	1.08	4.5	5	2	505.2	0.16	1.49	0.27	1.9	7	15.62	2.79	3.7	70	0.25	28.6	0.14	1053	3.44	0.048	3.3	0.037	18.21	0.07	1.98	0.4	152.3	0.02	7.8	0.005	0.25	1.8	8	0.3	59.2
RS-492 0900-0920	122	1.4	8.3	4.7	3	452.7	0.2	1.43	0.16	2.1	6.4	13.28	2.81	4.7	89	0.28	24	0.2	916	2.7	0.044	2.8	0.045	16.04	0.06	1.24	0.4	189.1	< .02	6.5	0.005	0.22	1.9	8	0.2	55
RS-492 0920-0940	120	0.96	5.2	4.7	2	279.8	0.21	0.92	0.19	2.1	7	16.1	3.34	3.9	75	0.28	23.1	0.13	745	3.52	0.049	3.5	0.04	16.9	0.08	1.83	0.3	115.1	< .02	7.4	0.01	0.19	2	9	0.5	58.8
RS-492 0940-0960	159	0.91	4.4	5.1	< 1	301.2	0.19	1.4	0.22	2	12.7	9.67	2.49	4.2	93	0.27	30.3	0.1	955	2.18	0.076	5.8	0.051	17.17	0.12	2.24	0.4	137.3	< .02	6.6	0.01	0.26	2.1	8	0.5	67.9
RS-492 0960-0980	154	1.42	3.1	4.3	< 1	371.8	0.26	1.96	0.28	1.6	7.2	11.48	1.87	4.2	72	0.23	29.2	0.17	860	2.05	0.054	2.4	0.04	21.77	0.11	1.09	0.4	302.4	0.03	5	0.002	0.16	1.3	3	< .2	66.3
RS-492 0980-1000	161	0.95	4.4	5.9	< 1	509.8	0.16	1.19	0.2	2.2	4.5	5.92	1.86	4.3	101	0.19	30.7	0.1	731	1.4	0.048	1.1	0.051	21.46	0.1	1.6	0.4	195.6	0.02	6.1	0.011	0.18	2.4	4	0.4	82.1
RS-492 1000-1020	218	1.03	5.7	10.7	< 1	492.2	0.13	2.49	0.24	3.3	2.4	5.16	1.81	4.9	172	0.21	28.5	0.1	987	1.32	0.05	0.4	0.054	20.87	0.17	2.14	0.7	234.6	0.02	5.3	0.011	0.22	2.1	5	0.3	108.6
RS-492 1020-1040	166	1.34	3.5	6.1	< 1	362.8	0.18	1.44	0.26	3.2	2.9	6.75	2.2	5.5	96	0.3	29.1	0.16	999	1.61	0.063	1.6	0.051	18.94	0.13	1.76	0.4	185.3	< .02	5.5	0.01	0.2	1.3	7	0.2	103.9
RS-492 1040-1060	104	0.98	2.6	2.5	< 1	1768.9	0.2	1.57	0.26	2.2	13.3	5.96	1.67	3.4	33	0.31	27.7	0.11	849	1.61	0.055	5.7	0.055	19.37	0.08	0.82	0.2	173.5	0.02	5.3	0.005	0.14	0.8	6	0.2	62.3
RS-492 1060-1080	78	0.88	1.8	1.3	< 1	1074.9	0.18	1.5	0.19	2.2	4.9	8.28	1.83	3.3	23	0.35	28.6	0.11	798	1.89	0.057	2.6	0.061	22.06	0.06	0.54	0.2	168.3	0.04	4.8	0.006	0.13	0.6	9	0.3	65
RS-492 1080-1100	94	0.95	2.4	2.1	2	839.3	0.1	1.32	0.23	2.3	7.1	10.06	2.21	3.8	24	0.37	29.8	0.12	819	2.27	0.056	2.9	0.059	18.19	0.09	0.86	0.3	127.3	0.02	5.7	0.011	0.17	0.9	12	0.2	71.9
RS-492 1100-1120	89	0.89	3.9	4.3	2	661.3	0.25	1.28	0.23	2.4	8.8	13.47	2.5	3.3	31	0.3	25.1	0.13	778	2.84	0.127	4.8	0.044	18.94	0.11	1.39	0.4	305.9	0.03	5.2	0.012	0.15	0.9	8	0.4	77.8
RS-492 1120-1140	114	1.31	4.4	5	< 1	858.4	0.28	1.52	0.28	1.8	8	7.51	1.88	3.9	42	0.35	27.9	0.16	821	1.66	0.12	2.5	0.041	15.77	0.23	1.79	0.7	392.2	0.04	4.5	0.005	0.19	0.8	3	< .2	77.1
RS-492 1140-1160	134	1	3.4	9.6	< 1	567.8	0.38	1.29	0.29	1.6	5.8	7.66	1.78	4	53	0.41	30.5	0.12	732	1.57	0.057	2.5	0.044	21.86	0.17	1.63	0.6	145.6	0.02	5.2	0.008	0.22	0.9	3	0.2	82.5
RS-492 1160-1180	115	0.9	2.2	5.1	< 1	383.7	0.35	2.09	0.39	1.8	6.4	7.84	1.76	3.7	23	0.35	29.3	0.1	1037	1.46	0.048	2.5	0.043	21.74	0.09	1.12	0.3	192.5	< .02	4.5	0.007	0.15	0.8	4	0.3	80
RS-492 1180-1200	389	0.86	6	3.7	< 1	206	0.39	0.7	0.22	1.7	1.6	5.38	1.68	3.9	61	0.28	32	0.08	558	1.09	0.051	1.2	0.041	29.28	0.49	3.33	0.7	146.4	0.03	3.8	0.001	0.18	1	< 2	0.3	86.6
RS-492 1200-1220	314	0.93	7.2	4.1	< 1	383.7	0.3	1.28	0.18	1.2	5.2	4.52	1.61	3.4	78	0.3	29.1	0.1	732	0.85	0.036	0.7	0.037	29.26	0.52	2.18	1.2	161.7	< .02	2.3	< .001	0.15	0.6	< 2	0.2	89
RS-492 1220-1240	111	0.76	1.9	6.5	< 1	200.7	0.15	1.9	0.22	1.6	5.9	9.63	2.11	3.5	33	0.35	29.5	0.08	978	1.89	0.047	2	0.047	22.62	0.06	1.07	0.3	152.1	0.02	5	0.011	0.14	1.4	8	0.8	86.5
RS-492 1240-1260	90	1.01	1.6	2.6	< 1	520.5	0.18	2.51	0.3	3.2	7.6	7.87	1.94	3.9	16	0.33	34.3	0.13	1277	1.92	0.041	1.7	0.05	15.92	0.06	0.78	0.3	246.3	0.02	4.4	0.006	0.12	1.1	5	0.4	82.3
RS-492 1260-1280	210	0.67	6.7	10.9	1	174.4	0.36	1.1	0.13	1.3	3.7	8.73	2.1	2.4	87	0.29	22.4	0.05	509	1.9	0.029	1.5	0.038	32.77	1.27	3.86	1.2	152.5	0.03	3.9	0.003	0.29	1.1	2	0.7	64.4
RS-492 1280-1300	6680	0.51	53.3	273.5	< 1	60.2	0.29	0.22	0.12	1.8	3.8	12.1	3.29	1.8	278	0.22	16.6	0.01	124	3.76	0.012	2.1	0.025	30.18	3.43	706.53	163	72.5	< .02	4	< .001	0.89	0.6	2	0.8	84.8
RS-492 1300-1320	512	0.7	16.7	40.7	< 1	77	0.07	0.71	0.16	1.9	4.8	9.24	2.86	2.8	199	0.27	21	0.03	469	2.64	0.02	1.7	0.037	24.43	2.6	69.54	17.2	107.1	< .02	5.6	0.001	0.51	1	2	0.5	100.7
STANDARD DS2	236	1.8	61.1	207.3	6	156.2	11.95	0.55	10.94	12.2	162.1	131.32	3.15	6.6	237	0.16	17.3	0.63	853	15.47	0.036	37.2	0.093	34.89	0.03	9.97	2.4	29.9	1.97	4.1	0.094	2.03	20.1	74	6.4	165.5
RS-492 1320-1340	244	0.87	10.4	12.2	2	127.7	0.07	1.81	0.15	1.7	8.4	12.28	2.45	3.2	104	0.31	18.6	0.06	1063	2.19	0.029	1.7	0.028	28.96	0.95	22.79	5.4	124.7	0.02	6	0.005	0.2	0.8	3	0.6	86.4
RS-492 1340-1360	96	0.71	2.2	3.4	< 1	179.7	0.04	2.41	0.18	0.9	5.5	7.8	2.43	2.7	119	0.38	27.3	0.06	1125	1.8	0.032	0.9	0.088	21.41	0.1	9.64	1.6	159.7	0.02	9.6	0.022	0.11	1.6	3	1.4	78.5

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CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 1360-1380	87	0.54	3	3.6	< 1	216.6	0.04	2.33	0.14	1.1	5.1	7.83	2.64	2.4	40	0.27	28.8	0.07	1043	1.6	0.045	1	0.021	17.1	0.09	4.14	0.8	155.8	0.02	10.5	0.028	0.08	1.3	3	1.3	71.6
RS-492 1380-1400	110	0.58	3	2.8	3	192.3	0.04	1.85	0.13	0.9	7.6	9.72	2.84	2.6	39	0.27	27.6	0.06	1139	1.69	0.049	1.7	0.021	20.4	0.08	3.97	0.8	133.3	< .02	10.5	0.028	0.09	1.2	4	1.4	71.5
RS-492 1400-1420	102	0.6	3.9	4.4	< 1	410.5	0.05	1.94	0.19	0.9	6.2	7.73	2.78	2.4	50	0.31	25.2	0.07	1139	1.41	0.044	1.4	0.019	21.75	0.19	2.43	0.5	146.4	< .02	9	0.025	0.13	1.1	3	1.5	72.7
RS-492 1420-1440	109	0.59	4.3	4.4	2	364.3	0.06	2.02	0.26	1.1	5.8	10.4	2.76	2.4	118	0.29	23.3	0.07	1207	1.62	0.041	2	0.025	18.34	0.22	2.98	0.5	133.1	< .02	8	0.027	0.16	1	3	1.4	73.4
RS-492 1440-1460	108	0.72	5.8	2.4	< 1	216.2	0.02	1.88	0.14	1.7	7.1	12.14	2.42	2.6	125	0.39	21.1	0.06	2512	1.95	0.033	3	0.025	17.91	0.73	2.97	0.2	134.5	< .02	5.5	0.002	0.2	0.6	3	0.4	70.8
RS-492 1460-1480	1775	1	56.7	106.4	< 1	87.3	0.05	0.56	0.12	2.9	7.6	6.7	2.27	2.8	214	0.42	19.3	0.04	257	2.26	0.022	1.7	0.038	39.21	2.55	10.23	8.2	136.3	< .02	4.5	< .001	0.34	0.5	< 2	1.2	91.9
RS-492 1480-1500	173	0.83	6.7	11	< 1	140.3	0.12	3.07	0.14	1.5	5.3	4.94	1.55	2.4	62	0.4	23.8	0.06	1291	0.88	0.03	< .1	0.037	46.09	0.95	4.18	1.2	212	< .02	2.9	0.001	0.26	0.7	< 2	0.3	74.6
RS-492 1500-1520	157	0.93	4.5	4.7	< 1	218.4	0.19	2.76	0.11	1.5	4.2	3.5	1.67	2.6	112	0.41	29.1	0.06	1245	0.73	0.031	< .1	0.038	30.13	0.65	3.61	0.8	230.2	0.03	4	0.002	0.22	1	< 2	0.5	68.7
RS-492 1520-1540	261	1.25	12.3	15.5	< 1	200.3	0.17	0.73	0.1	2.9	8.3	8.78	2.36	3.7	269	0.37	26.2	0.07	441	3.42	0.02	2.4	0.035	30.67	1.22	4.99	2.6	147.9	< .02	3.8	0.001	0.24	0.7	2	0.9	97.9
RS-492 1540-1560	164	1.15	5.5	7.4	< 1	385.7	0.13	2.1	0.12	2.4	6.6	10.05	2.27	3.9	80	0.47	30.8	0.09	1235	1.73	0.025	1.7	0.04	30.21	0.58	4.29	1.1	162.6	< .02	3.9	0.001	0.26	0.8	2	0.2	79.6
RS-492 1560-1580	277	1.14	14.5	21.4	< 1	132.4	0.21	0.98	0.11	2	8	11.62	3.14	3.6	504	0.43	22.6	0.06	856	2.25	0.018	2.9	0.033	29.61	2.12	12.34	3.2	137	< .02	3.8	0.001	0.37	0.8	2	0.6	89.5
RS-492 1580-1600	131	0.89	3.1	7.3	< 1	138	0.56	2.78	0.13	1	5.8	9.02	2.09	2.7	80	0.47	28.2	0.05	1958	1.59	0.019	1.2	0.043	22.37	0.3	3.62	0.5	161.9	< .02	5.3	0.003	0.17	1.5	2	0.5	56.3
RS-492 1600-1620	517	0.96	24.9	40.8	< 1	123.5	0.46	0.66	0.09	1.5	5.9	10.08	2.4	2.9	437	0.43	20.3	0.03	406	2.5	0.017	2.1	0.051	27.02	2.05	12.1	3.8	118	< .02	4.4	< .001	0.57	1.4	2	0.9	87
RS-492 1620-1640	1703	0.86	42.8	62.3	< 1	84.1	0.03	0.41	0.17	1.3	5	6.85	2.49	2.4	122	0.4	17.5	0.03	176	1.46	0.015	1.7	0.035	45.23	2.84	13.71	9.8	115.2	< .02	4.4	< .001	0.36	1.8	< 2	1.7	99.1
RS-492 1640-1660	204	0.68	6.1	9	1	130	< .02	1.89	0.11	1.2	4.4	10.42	2.08	2.3	57	0.4	20.2	0.03	976	2.45	0.016	1.8	0.034	23.7	1.34	6.87	1.4	127.6	< .02	5.5	0.001	0.27	0.9	< 2	0.5	87.3
RS-492 1660-1680	118	0.87	2.5	3.7	< 1	218.9	0.02	2.44	0.12	1.2	8	11.64	2.43	3.1	49	0.45	26.3	0.05	939	2.31	0.019	1.9	0.04	21.98	0.37	3.31	0.8	138.9	< .02	7.8	0.005	0.16	1.9	2	0.6	67.2
RS-492 1680-1700	357	1.03	19.4	25.9	< 1	156.6	0.03	1.29	0.05	1.4	4.9	11.26	2.42	3.2	381	0.45	18	0.04	863	2.5	0.015	2.2	0.025	29.46	1.57	13.43	1.9	123.1	< .02	4.9	< .001	0.35	0.7	2	0.4	88.7
RS-492 1700-1720	1853	0.88	28.3	73	< 1	77.6	< .02	0.53	0.03	1.3	7	12.64	2.6	2.4	487	0.39	19.7	0.02	853	43.98	0.012	3	0.028	33.87	2.25	14.69	4.2	104.8	< .02	6.1	< .001	1.09	0.6	2	0.9	89.6
RS-492 1720-1740	2414	0.5	61	82.6	< 1	78.4	0.02	0.19	0.09	1	15	21.69	2.59	1.9	190	0.3	34.3	0.02	213	18.49	0.008	5.1	0.008	35.83	1.43	13.65	11	49.8	< .02	9.2	< .001	0.48	0.9	3	1.6	71.2
RS-492 1740-1760	521	0.6	14.6	20.7	< 1	164.4	0.04	0.95	0.18	1.2	14.7	14.97	2.11	2.3	90	0.38	33.2	0.02	646	5.86	0.013	4.2	0.008	28.69	1.17	10.28	4.8	76.1	< .02	12.4	< .001	0.28	1.7	3	1.2	81.5
RS-492 1760-1780	453	0.68	18.9	21.5	< 1	158.9	0.09	0.76	0.14	1.4	16.3	15.93	2.5	2.7	160	0.36	35.5	0.03	481	4.69	0.024	4.7	0.013	27.43	1.17	8	3.7	86.2	0.02	11.5	0.001	0.26	1.6	4	1.1	81.2
RS-492 1780-1800	515	0.69	14	40.4	< 1	70	0.04	0.64	0.23	1.3	14.9	11.94	2	2.5	134	0.39	41.2	0.02	487	3.89	0.022	3.7	0.013	33.86	1.35	5.69	4	89	< .02	13.8	< .001	0.25	2	2	1.1	98.7
RS-492 1800-1820	792	0.98	21.9	54.5	< 1	130.4	0.11	0.78	0.32	2.1	17.6	12.79	2.48	3.7	225	0.39	34.4	0.07	581	4.57	0.036	4.1	0.018	30.58	1.97	12.42	6.9	119.9	< .02	10.7	0.001	0.39	2.2	2	0.3	127.2
RS-492 1820-1840	383	0.87	11.5	10.6	< 1	152	0.07	0.79	0.19	1.6	12.1	14.78	2.14	4.3	79	0.4	42	0.05	807	3.68	0.063	3.8	0.012	28.16	0.71	4.01	1.7	85.1	< .02	15.7	0.001	0.22	1.8	3	0.6	96.5
RS-492 1840-1860	181	0.89	3.6	3.7	< 1	55	0.02	0.65	0.14	1.7	13.4	17.07	2.36	6.1	27	0.43	44.5	0.03	783	4.14	0.08	4.7	0.007	25.91	0.17	1.81	0.6	60.4	< .02	15.7	0.001	0.12	1.6	4	1.3	88.3
RS-492 1860-1880	581	0.77	7.3	10	< 1	27.9	0.03	0.64	0.19	1.8	18.1	16.73	2.43	4.3	39	0.44	42.4	0.02	720	5.48	0.07	5.7	0.008	29.92	0.76	2.89	2.4	73.3	< .02	14.8	0.001	0.18	1.6	4	1.7	85.1
RS-492 1880-1900	531	0.54	6.7	8.4	< 1	23.8	< .02	0.53	0.15	1.6	17.1	18.2	2.5	3.2	29	0.34	43.4	0.01	608	4.21	0.056	6	0.007	28.5	0.74	2.32	2.1	60	< .02	14.3	0.001	0.16	1.4	3	1.3	79.1
RS-492 1900-1920	790	0.5	14.2	18.5	< 1	36.1	< .02	0.48	0.15	1.5	13.8	14.17	2.15	2.3	21	0.37	42	0.01	492	3.64	0.057	4.8	0.007	28.87	1.22	3.46	3.5	70.8	< .02	15	< .001	0.21	1.3	3	1.1	88
RS-492 1920-1940	1043	1.03	9.2	56.5	< 1	48.2	0.04	0.69	0.12	2.7	29.1	17.29	2.54	4.9	33	0.59	38.6	0.02	600	7.07	0.083	7	0.007	30.45	1.12	3.52	2.2	74.5	< .02	14.1	0.001	0.29	1.6	4	2.7	86.8
RS-492 1940-1960	923	0.74	10.1	37.2	< 1	70.5	0.03	0.74	0.14	2.6	37	16.84	2.33	3.3	46	0.44	37.5	0.02	528	8.31	0.066	6.3	0.008	29.98	1.36	4.23	3.7	83.6	< .02	12.7	0.001	0.24	1.3	2	3	90.8
RS-492 1960-1980	11331	1.06	19	48.6	< 1	120.3	0.06	0.52	0.18	1.7	11.7	11.82	2.14	3.7	171	0.43	34.5	0.07	391	4.44	0.051	3.3	0.013	29.72	1.5	15.15	6.9	78.8	< .02	11.2	0.001	0.35	1.3	3	0.5	86.7
STANDARD DS2	235	1.81	61.2	218.6	1	163.5	11.71	0.55	11.08	13.2	176	132.16	3.24	6.5	249	0.17	17.3	0.63	877	14.72	0.032	36.8	0.091	34.4	0.01	9.78	2.4	30.4	1.95	4	0.098	1.95	19.8	78	6.8	166.7
RS-492 1980-2000	371	0.7	3.4	5	3	27.7	< .02	0.66	0.13	1.6	12.2	13.84	1.96	4	19	0.41	39.5	0.02	687	3.74	0.077	3.1	0.006	29.33	0.64	2.4	1.3	48.2	< .02	13.2	0.001	0.13	1.1	2	1.6	81
RS-492 2000-2020	362	0.75	4.3	5.9	1	28.8	< .02	0.65	0.1	2.2	16.8	13.1	1.95	4.2	16	0.44	39.1	0.02	752	4.52	0.083	3.6	0.006	29.29	0.74	2.1	1.4	52.1	< .02	12.9	0.001	0.13	1.2	2	2.7	78.2
RS-492 2020-2040	731	0.67	8.4	26.1	2	19.5	< .02	0.29	0.11	1.3	10.8	7.8	1.73	2.5	24	0.41	35	0.01	252	2.94	0.045	2.5	0.006	32.21	1.37	3.79	4.3	67.5	< .02	12	< .001	0.19	1.3	< 2	1.5	77.9

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: SP56474
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	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
RS-492 2040-2055	357	0.74	3.9	6.3	3	26.9	0.02	0.57	0.13	2.6	16.2	16.35	2.07	4.7	12	0.43	39.7	0.02	636	5.15	0.089	4.7	0.006	29.06	0.54	2.75	1	52.1	< .02	14.8	0.001	0.13	1.7	3	3	85.2
89553	58053	2.25	120.3	5995.8	6	101.8	0.18	0.9	1.7	3.8	7.2	22.33	2.58	7.5	404	0.89	15.8	0.13	321	6.45	0.084	3.4	0.055	31.17	2.56	22.29	23.6	66.1	< .02	3.9	0.004	0.45	1.6	8	0.4	87.9
STANDARD DS2	250	1.7	58.8	189.4	6	154	11.2	0.52	10.03	11.7	164.8	131.49	3.06	6.3	234	0.16	16.1	0.59	812	14.48	0.033	35	0.089	34.09	0.01	9.65	2.2	27.9	1.83	3.8	0.091	1.76	19.4	73	7.3	157.7

American Assay Laboratories

INVOICE

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

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

(775) 356-0606

INVOICE NO: SP 0056474-IN
INVOICE DATE: 04/07/00

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-492	WILDROSE EAST	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
438	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
437	DRY/JAW CRUSH ENTIRE SAMPLE	2.30	1,005.10
437	"JONES" RIFFLE SPLIT	2.40	1,048.80
437	RING/PUCK MILL	2.00	874.00
438	Au (1 A.T. FIRE ASSAY)	8.00	3,504.00
438	HYDROCHLORIC/NITRIC DIGESTION	2.00	876.00
438	Ag ANALYSES	1.00	438.00
410	COMPOSITE CHARGE	1.25	512.50
104	MULTI-ELEMENT ICP PACKAGE	13.75	1,430.00

86-2510-477
KAA

NET INVOICE:	9,688.40
LESS DISCOUNT:	3,390.94
FREIGHT:	.00
INVOICE TOTAL:	6,297.46

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ANALYSIS REPORT SP056474

American Assay Laboratories

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: RS-492 RECEIVED : 6 MAR 2000

No. SAMPLES : 438 REPORTED : 9 APR 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 SP056474

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 9 APR 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-492 0000-0005	86	122	0.003	0.004	1.9	0.06
RS-492 0005-0010	26		<0.001		<0.5	<0.02
RS-492 0010-0015	13		<0.001		<0.5	<0.02
RS-492 0015-0020	<5		<0.001		<0.5	<0.02
RS-492 0020-0025	<5		<0.001		<0.5	<0.02
RS-492 0025-0030	<5		<0.001		<0.5	<0.02
RS-492 0030-0035	5		<0.001		<0.5	<0.02
RS-492 0035-0040	6		<0.001		<0.5	<0.02
RS-492 0040-0045	21		<0.001		0.5	<0.02
RS-492 0045-0050	65	68	0.002	0.002	0.5	<0.02
RS-492 0050-0055	53		0.002		<0.5	<0.02
RS-492 0055-0060	57		0.002		<0.5	<0.02
RS-492 0060-0065	63		0.002		0.5	<0.02
RS-492 0065-0070	43		0.001		<0.5	<0.02
RS-492 0070-0075	40		0.001		<0.5	<0.02
RS-492 0075-0080	95	100	0.003	0.003	0.8	0.02
RS-492 0080-0085	64		0.002		0.6	<0.02
RS-492 0085-0090	17	10	<0.001	<0.001	<0.5	<0.02
RS-492 0090-0095	<5		<0.001		<0.5	<0.02
RS-492 0095-0100	27		<0.001		<0.5	<0.02
RS-492 0100-0105	65		0.002		0.6	<0.02
RS-492 0105-0110	88		0.003		1.6	0.05
RS-492 0110-0115	29	34	<0.001	<0.001	0.5	<0.02
RS-492 0115-0120	65		0.002		0.5	<0.02
RS-492 0120-0125	34		<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-492 0125-0130	7		<0.001		<0.5	<0.02
RS-492 0130-0135	12		<0.001		<0.5	<0.02
RS-492 0135-0140	58		0.002		<0.5	<0.02
RS-492 0140-0145	62		0.002		<0.5	<0.02
RS-492 0145-0150	46		0.001		<0.5	<0.02
RS-492 0150-0155	6		<0.001		<0.5	<0.02
RS-492 0155-0160	37		0.001		<0.5	<0.02
RS-492 0160-0165	26		<0.001		<0.5	<0.02
RS-492 0165-0170	<5		<0.001		<0.5	<0.02
RS-492 0170-0175	<5		<0.001		<0.5	<0.02
RS-492 0175-0180	<5		<0.001		<0.5	<0.02
RS-492 0180-0185	<5		<0.001		<0.5	<0.02
RS-492 0185-0190	<5		<0.001		<0.5	<0.02
RS-492 0190-0195	<5		<0.001		<0.5	<0.02
RS-492 0195-0200	<5		<0.001		<0.5	<0.02
RS-492 0200-0205	13		<0.001		<0.5	<0.02
RS-492 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-492 0210-0215	<5		<0.001		<0.5	<0.02
RS-492 0215-0220	<5		<0.001		<0.5	<0.02
RS-492 0220-0225	6		<0.001		<0.5	<0.02
RS-492 0225-0230	5		<0.001		<0.5	<0.02
RS-492 0230-0235	5		<0.001		<0.5	<0.02
RS-492 0235-0240	6	12	<0.001	<0.001	<0.5	<0.02
RS-492 0240-0245	<5		<0.001		<0.5	<0.02
RS-492 0245-0250	<5		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056474

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REFERENCE : RS-492

REPORTED : 9 APR 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-492 0250-0255	<5		<0.001		<0.5	<0.02
RS-492 0255-0260	9		<0.001		<0.5	<0.02
RS-492 0260-0265	52	56	0.002	0.002	<0.5	<0.02
RS-492 0265-0270	9		<0.001		<0.5	<0.02
RS-492 0270-0275	18		<0.001		<0.5	<0.02
RS-492 0275-0280	6		<0.001		<0.5	<0.02
RS-492 0280-0285	10	10	<0.001	<0.001	<0.5	<0.02
RS-492 0285-0290	75	96	0.002	0.003	<0.5	<0.02
RS-492 0290-0295	63		0.002		<0.5	<0.02
RS-492 0295-0300	25		<0.001		<0.5	<0.02
RS-492 0300-0305	15		<0.001		0.7	0.02
RS-492 0305-0310	8		<0.001		<0.5	<0.02
RS-492 0310-0315	10		<0.001		<0.5	<0.02
RS-492 0315-0320	31		<0.001		<0.5	<0.02
RS-492 0320-0325	8		<0.001		<0.5	<0.02
RS-492 0325-0330	72		0.002		0.8	0.02
RS-492 0330-0335	89		0.003		1.0	0.03
RS-492 0335-0340	59		0.002		0.5	<0.02
RS-492 0340-0345	153	166	0.004	0.005	0.5	<0.02
RS-492 0345-0350	63	64	0.002	0.002	<0.5	<0.02
RS-492 0350-0355	16		<0.001		<0.5	<0.02
RS-492 0355-0360	30		<0.001		<0.5	<0.02
RS-492 0360-0365	54		0.002		<0.5	<0.02
RS-492 0365-0370	63		0.002		0.6	<0.02
RS-492 0370-0375	81		0.002		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056474

American Assay Laboratories

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PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 9 APR 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-492 0375-0380	92		0.003		<0.5	<0.02
RS-492 0380-0385	52		0.002		<0.5	<0.02
RS-492 0385-0390	64		0.002		0.5	<0.02
RS-492 0390-0395	90	102	0.003	0.003	0.9	0.03
RS-492 0395-0400	63		0.002		0.6	<0.02
RS-492 0400-0405	32		<0.001		<0.5	<0.02
RS-492 0405-0410	14		<0.001		<0.5	<0.02
RS-492 0410-0415	94		0.003		<0.5	<0.02
RS-492 0415-0420	91		0.003		0.5	<0.02
RS-492 0420-0425	76		0.002		0.5	<0.02
RS-492 0425-0430	65		0.002		<0.5	<0.02
RS-492 0430-0435	96		0.003		0.6	<0.02
RS-492 0435-0440	106	104	0.003	0.003	<0.5	<0.02
RS-492 0440-0445	89	82	0.003	0.002	0.7	0.02
RS-492 0445-0450	98		0.003		0.5	<0.02
RS-492 0450-0455	87		0.003		<0.5	<0.02
RS-492 0455-0460	46		0.001		0.7	0.02
RS-492 0460-0465	40		0.001		0.8	0.02
RS-492 0465-0470	76		0.002		0.5	<0.02
RS-492 0470-0475	96		0.003		0.7	0.02
RS-492 0475-0480	105	134	0.003	0.004	0.6	<0.02
RS-492 0480-0485	140		0.004		0.6	<0.02
RS-492 0485-0490	30		<0.001		<0.5	<0.02
RS-492 0490-0495	47		0.001		0.5	<0.02
RS-492 0495-0500	75	94	0.002	0.003	<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-492 0500-0505	<5		<0.001		<0.5	<0.02
RS-492 0505-0510	<5		<0.001		<0.5	<0.02
RS-492 0510-0515	8		<0.001		<0.5	<0.02
RS-492 0515-0520	<5		<0.001		<0.5	<0.02
RS-492 0520-0525	60		0.002		0.5	<0.02
RS-492 0525-0530	121	148	0.004	0.004	1.0	0.03
RS-492 0530-0535	81		0.002		<0.5	<0.02
RS-492 0535-0540	51		0.001		0.8	0.02
RS-492 0540-0545	56	56	0.002	0.002	0.5	<0.02
RS-492 0545-0550	57		0.002		<0.5	<0.02
RS-492 0550-0555	54		0.002		<0.5	<0.02
RS-492 0555-0560	44		0.001		<0.5	<0.02
RS-492 0560-0565	21		<0.001		<0.5	<0.02
RS-492 0565-0570	43		0.001		0.6	<0.02
RS-492 0570-0575	88		0.003		0.7	0.02
RS-492 0575-0580	93		0.003		0.7	0.02
RS-492 0580-0585	107	122	0.003	0.004	1.8	0.05
RS-492 0585-0590	30		<0.001		<0.5	<0.02
RS-492 0590-0595	28		<0.001		0.5	<0.02
RS-492 0595-0600	32		<0.001		<0.5	<0.02
RS-492 0600-0605			INSUFFICIENT SAMPLE			
RS-492 0605-0610	68		0.002		1.2	0.04
RS-492 0610-0615	20		<0.001		<0.5	<0.02
RS-492 0615-0620	7		<0.001		<0.5	<0.02
RS-492 0620-0625	31		<0.001		0.7	0.02

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REFERENCE : RS-492

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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-492 0625-0630	77		0.002		0.6	<0.02
RS-492 0630-0635	70		0.002		<0.5	<0.02
RS-492 0635-0640	45		0.001		<0.5	<0.02
RS-492 0640-0645	17		<0.001		<0.5	<0.02
RS-492 0645-0650	73		0.002		1.1	0.03
RS-492 0650-0655	60	90	0.002	0.003	0.7	0.02
RS-492 0655-0660	<5		<0.001		<0.5	<0.02
RS-492 0660-0665	6		<0.001		<0.5	<0.02
RS-492 0665-0670	94	116	0.003	0.003	1.1	0.03
RS-492 0670-0675	18	24	<0.001	<0.001	<0.5	<0.02
RS-492 0675-0680	96		0.003		1.8	0.05
RS-492 0680-0685	79		0.002		0.8	0.02
RS-492 0685-0690	146	156	0.004	0.005	1.6	0.05
RS-492 0690-0695	115		0.003		1.1	0.03
RS-492 0695-0700	105		0.003		0.7	0.02
RS-492 0700-0705	165	186	0.005	0.005	1.6	0.05
RS-492 0705-0710	70		0.002		1.1	0.03
RS-492 0710-0715	15		<0.001		<0.5	<0.02
RS-492 0715-0720	11		<0.001		<0.5	<0.02
RS-492 0720-0725	8		<0.001		<0.5	<0.02
RS-492 0725-0730	23		<0.001		0.5	<0.02
RS-492 0730-0735	<5		<0.001		<0.5	<0.02
RS-492 0735-0740	6	6	<0.001	<0.001	<0.5	<0.02
RS-492 0740-0745	<5		<0.001		<0.5	<0.02
RS-492 0745-0750	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-492 0750-0755	5		<0.001		<0.5	<0.02
RS-492 0755-0760	5		<0.001		<0.5	<0.02
RS-492 0760-0765	<5		<0.001		<0.5	<0.02
RS-492 0765-0770	<5		<0.001		<0.5	<0.02
RS-492 0770-0775	6		<0.001		<0.5	<0.02
RS-492 0775-0780	<5		<0.001		<0.5	<0.02
RS-492 0780-0785	6		<0.001		<0.5	<0.02
RS-492 0785-0790	5		<0.001		<0.5	<0.02
RS-492 0790-0795	5		<0.001		<0.5	<0.02
RS-492 0795-0800	<5		<0.001		<0.5	<0.02
RS-492 0800-0805	<5		<0.001		<0.5	<0.02
RS-492 0805-0810	5		<0.001		<0.5	<0.02
RS-492 0810-0815	<5		<0.001		<0.5	<0.02
RS-492 0815-0820	6		<0.001		<0.5	<0.02
RS-492 0820-0825	<5	8	<0.001	<0.001	<0.5	<0.02
RS-492 0825-0830	5		<0.001		<0.5	<0.02
RS-492 0830-0835	<5		<0.001		<0.5	<0.02
RS-492 0835-0840	7	8	<0.001	<0.001	<0.5	<0.02
RS-492 0840-0845	9		<0.001		<0.5	<0.02
RS-492 0845-0850	6		<0.001		<0.5	<0.02
RS-492 0850-0855	<5		<0.001		<0.5	<0.02
RS-492 0855-0860	<5		<0.001		<0.5	<0.02
RS-492 0860-0865	<5		<0.001		<0.5	<0.02
RS-492 0865-0870	<5		<0.001		<0.5	<0.02
RS-492 0870-0875	<5		<0.001		<0.5	<0.02

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CLIENT : HECLA MINING COMPANY
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-492 0875-0880	5		<0.001		<0.5	<0.02
RS-492 0880-0885	14	12	<0.001	<0.001	<0.5	<0.02
RS-492 0885-0890	6		<0.001		<0.5	<0.02
RS-492 0890-0895	8		<0.001		<0.5	<0.02
RS-492 0895-0900	13		<0.001		<0.5	<0.02
RS-492 0900-0905	16	10	<0.001	<0.001	<0.5	<0.02
RS-492 0905-0910	9		<0.001		<0.5	<0.02
RS-492 0910-0915	9		<0.001		<0.5	<0.02
RS-492 0915-0920	8		<0.001		<0.5	<0.02
RS-492 0920-0925	13		<0.001		<0.5	<0.02
RS-492 0925-0930	6		<0.001		<0.5	<0.02
RS-492 0930-0935	6		<0.001		<0.5	<0.02
RS-492 0935-0940	12		<0.001		<0.5	<0.02
RS-492 0940-0945	16		<0.001		<0.5	<0.02
RS-492 0945-0950	5		<0.001		<0.5	<0.02
RS-492 0950-0955	8		<0.001		<0.5	<0.02
RS-492 0955-0960	14		<0.001		<0.5	<0.02
RS-492 0960-0965	11		<0.001		<0.5	<0.02
RS-492 0965-0970	6		<0.001		<0.5	<0.02
RS-492 0970-0975	10		<0.001		<0.5	<0.02
RS-492 0975-0980	17	18	<0.001	<0.001	<0.5	<0.02
RS-492 0980-0985	14		<0.001		<0.5	<0.02
RS-492 0985-0990	8		<0.001		<0.5	<0.02
RS-492 0990-0995	5		<0.001		<0.5	<0.02
RS-492 0995-1000	9		<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-492 1000-1005	16		<0.001		<0.5	<0.02
RS-492 1005-1010	7		<0.001		<0.5	<0.02
RS-492 1010-1015	12	18	<0.001	<0.001	<0.5	<0.02
RS-492 1015-1020	20	26	<0.001	<0.001	<0.5	<0.02
RS-492 1020-1025	13	20	<0.001	<0.001	<0.5	<0.02
RS-492 1025-1030	7		<0.001		<0.5	<0.02
RS-492 1030-1035	6		<0.001		<0.5	<0.02
RS-492 1035-1040	10		<0.001		<0.5	<0.02
RS-492 1040-1045	10		<0.001		<0.5	<0.02
RS-492 1045-1050	<5		<0.001		<0.5	<0.02
RS-492 1050-1055	5		<0.001		<0.5	<0.02
RS-492 1055-1060	<5		<0.001		<0.5	<0.02
RS-492 1060-1065	<5		<0.001		<0.5	<0.02
RS-492 1065-1070	<5		<0.001		<0.5	<0.02
RS-492 1070-1075	<5		<0.001		<0.5	<0.02
RS-492 1075-1080	6		<0.001		<0.5	<0.02
RS-492 1080-1085	<5		<0.001		<0.5	<0.02
RS-492 1085-1090	8		<0.001		<0.5	<0.02
RS-492 1090-1095	6		<0.001		<0.5	<0.02
RS-492 1095-1100	5		<0.001		<0.5	<0.02
RS-492 1100-1105	8		<0.001		<0.5	<0.02
RS-492 1105-1110	5		<0.001		<0.5	<0.02
RS-492 1110-1115	10		<0.001		<0.5	<0.02
RS-492 1115-1120	8		<0.001		<0.5	<0.02
RS-492 1120-1125	10		<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-492 1125-1130	17	22	<0.001	<0.001	<0.5	<0.02
RS-492 1130-1135	7		<0.001		<0.5	<0.02
RS-492 1135-1140	6		<0.001		<0.5	<0.02
RS-492 1140-1145	8		<0.001		<0.5	<0.02
RS-492 1145-1150	13	16	<0.001	<0.001	<0.5	<0.02
RS-492 1150-1155	10		<0.001		<0.5	<0.02
RS-492 1155-1160	9		<0.001		<0.5	<0.02
RS-492 1160-1165	8		<0.001		<0.5	<0.02
RS-492 1165-1170	11		<0.001		<0.5	<0.02
RS-492 1170-1175	6		<0.001		<0.5	<0.02
RS-492 1175-1180	<5		<0.001		<0.5	<0.02
RS-492 1180-1185	<5		<0.001		<0.5	<0.02
RS-492 1185-1190	8		<0.001		1.0	0.03
RS-492 1190-1195	<5		<0.001		<0.5	<0.02
RS-492 1195-1200	8		<0.001		<0.5	<0.02
RS-492 1200-1205	<5		<0.001		0.9	0.03
RS-492 1205-1210	8		<0.001		<0.5	<0.02
RS-492 1210-1215	10		<0.001		<0.5	<0.02
RS-492 1215-1220	<5		<0.001		<0.5	<0.02
RS-492 1220-1225	<5		<0.001		<0.5	<0.02
RS-492 1225-1230	8		<0.001		<0.5	<0.02
RS-492 1230-1235	5		<0.001		<0.5	<0.02
RS-492 1235-1240	<5		<0.001		<0.5	<0.02
RS-492 1240-1245	<5		<0.001		<0.5	<0.02
RS-492 1245-1250	6		<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-492 1250-1255	<5		<0.001		<0.5	<0.02
RS-492 1255-1260	<5		<0.001		<0.5	<0.02
RS-492 1260-1265	<5		<0.001		<0.5	<0.02
RS-492 1265-1270	6		<0.001		<0.5	<0.02
RS-492 1270-1275	8		<0.001		<0.5	<0.02
RS-492 1275-1280	20	28	<0.001	<0.001	0.6	<0.02
RS-492 1280-1285	192	239	0.006	0.007	3.0	0.09
RS-492 1285-1290	282		0.008		2.9	0.08
RS-492 1290-1295	580	592	0.017	0.017	14.1	0.41
RS-492 1295-1300	212		0.006		5.3	0.15
RS-492 1300-1305	53		0.002		0.9	0.03
RS-492 1305-1310	18		<0.001		0.6	<0.02
RS-492 1310-1315	24		<0.001		0.7	0.02
RS-492 1315-1320	53		0.002		0.7	0.02
RS-492 1320-1325	21		<0.001		<0.5	<0.02
RS-492 1325-1330	14		<0.001		<0.5	<0.02
RS-492 1330-1335	9		<0.001		2.5	0.07
RS-492 1335-1340	6		<0.001		<0.5	<0.02
RS-492 1340-1345	<5		<0.001		<0.5	<0.02
RS-492 1345-1350	7		<0.001		<0.5	<0.02
RS-492 1350-1355	<5		<0.001		<0.5	<0.02
RS-492 1355-1360	8		<0.001		<0.5	<0.02
RS-492 1360-1365	6		<0.001		<0.5	<0.02
RS-492 1365-1370	9		<0.001		<0.5	<0.02
RS-492 1370-1375	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-492 1375-1380	<5		<0.001		<0.5	<0.02
RS-492 1380-1385	6		<0.001		<0.5	<0.02
RS-492 1385-1390	8		<0.001		<0.5	<0.02
RS-492 1390-1395	<5		<0.001		<0.5	<0.02
RS-492 1395-1400	<5		<0.001		<0.5	<0.02
RS-492 1400-1405	12	14	<0.001	<0.001	<0.5	<0.02
RS-492 1405-1410	6		<0.001		<0.5	<0.02
RS-492 1410-1415	5		<0.001		<0.5	<0.02
RS-492 1415-1420	6		<0.001		<0.5	<0.02
RS-492 1420-1425	8		<0.001		<0.5	<0.02
RS-492 1425-1430	9		<0.001		<0.5	<0.02
RS-492 1430-1435	6		<0.001		<0.5	<0.02
RS-492 1435-1440	<5		<0.001		<0.5	<0.02
RS-492 1440-1445	<5		<0.001		<0.5	<0.02
RS-492 1445-1450	10		<0.001		<0.5	<0.02
RS-492 1450-1455	5		<0.001		<0.5	<0.02
RS-492 1455-1460	<5		<0.001		<0.5	<0.02
RS-492 1460-1465	20		<0.001		<0.5	<0.02
RS-492 1465-1470	133		0.004		3.6	0.11
RS-492 1470-1475	150		0.004		2.9	0.08
RS-492 1475-1480	180	216	0.005	0.006	3.4	0.10
RS-492 1480-1485	21		<0.001		<0.5	<0.02
RS-492 1485-1490	14		<0.001		0.8	0.02
RS-492 1490-1495	7		<0.001		<0.5	<0.02
RS-492 1495-1500	12		<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-492 1500-1505	9		<0.001		<0.5	<0.02
RS-492 1505-1510	7		<0.001		<0.5	<0.02
RS-492 1510-1515	7		<0.001		<0.5	<0.02
RS-492 1515-1520	8		<0.001		<0.5	<0.02
RS-492 1520-1525	12		<0.001		<0.5	<0.02
RS-492 1525-1530	55	42	0.002	0.001	<0.5	<0.02
RS-492 1530-1535	24		<0.001		<0.5	<0.02
RS-492 1535-1540	22		<0.001		<0.5	<0.02
RS-492 1540-1545	6		<0.001		<0.5	<0.02
RS-492 1545-1550	5		<0.001		<0.5	<0.02
RS-492 1550-1555	22		<0.001		<0.5	<0.02
RS-492 1555-1560	11		<0.001		<0.5	<0.02
RS-492 1560-1565	14		<0.001		<0.5	<0.02
RS-492 1565-1570	38		0.001		<0.5	<0.02
RS-492 1570-1575	39		0.001		<0.5	<0.02
RS-492 1575-1580	9	10	<0.001	<0.001	<0.5	<0.02
RS-492 1580-1585	6		<0.001		<0.5	<0.02
RS-492 1585-1590	9		<0.001		<0.5	<0.02
RS-492 1590-1595	<5		<0.001		<0.5	<0.02
RS-492 1595-1600	<5		<0.001		<0.5	<0.02
RS-492 1600-1605	12		<0.001		<0.5	<0.02
RS-492 1605-1610	25		<0.001		<0.5	<0.02
RS-492 1610-1615	78		0.002		0.9	0.03
RS-492 1615-1620	73		0.002		0.9	0.03
RS-492 1620-1625	80	70	0.002	0.002	3.6	0.11

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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-492 1625-1630	93		0.003		3.3	0.10
RS-492 1630-1635	54		0.002		1.3	0.04
RS-492 1635-1640	31		<0.001		0.6	<0.02
RS-492 1640-1645	18		<0.001		<0.5	<0.02
RS-492 1645-1650	9		<0.001		<0.5	<0.02
RS-492 1650-1655	7		<0.001		<0.5	<0.02
RS-492 1655-1660	8		<0.001		<0.5	<0.02
RS-492 1660-1665	<5		<0.001		<0.5	<0.02
RS-492 1665-1670	6		<0.001		<0.5	<0.02
RS-492 1670-1675	5		<0.001		<0.5	<0.02
RS-492 1675-1680	<5		<0.001		<0.5	<0.02
RS-492 1680-1685	<5		<0.001		<0.5	<0.02
RS-492 1685-1690	16		<0.001		<0.5	<0.02
RS-492 1690-1695	14		<0.001		<0.5	<0.02
RS-492 1695-1700	80		0.002		1.2	0.04
RS-492 1700-1705	40		0.001		1.1	0.03
RS-492 1705-1710	20		<0.001		0.5	<0.02
RS-492 1710-1715	73		0.002		2.3	0.07
RS-492 1715-1720	157		0.005		6.6	0.19
RS-492 1720-1725	231	274	0.007	0.008	3.7	0.11
RS-492 1725-1730	56		0.002		2.1	0.06
RS-492 1730-1735	160		0.005		2.9	0.08
RS-492 1735-1740	118		0.003		5.7	0.17
RS-492 1740-1745	40		0.001		1.7	0.05
RS-492 1745-1750	11		<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-492 1750-1755	44		0.001		0.9	0.03
RS-492 1755-1760	15		<0.001		0.7	0.02
RS-492 1760-1765	52		0.002		1.2	0.04
RS-492 1765-1770	16		<0.001		<0.5	<0.02
RS-492 1770-1775	17		<0.001		<0.5	<0.02
RS-492 1775-1780	16		<0.001		0.6	<0.02
RS-492 1780-1785	25		<0.001		1.0	0.03
RS-492 1785-1790	16		<0.001		0.6	<0.02
RS-492 1790-1795	76		0.002		0.6	<0.02
RS-492 1795-1800	8		<0.001		<0.5	<0.02
RS-492 1800-1805	59		0.002		0.9	0.03
RS-492 1805-1810	81		0.002		1.0	0.03
RS-492 1810-1815	253	212	0.007	0.006	1.2	0.04
RS-492 1815-1820	15		<0.001		0.7	0.02
RS-492 1820-1825	6		<0.001		<0.5	<0.02
RS-492 1825-1830	14	10	<0.001	<0.001	<0.5	<0.02
RS-492 1830-1835	15		<0.001		<0.5	<0.02
RS-492 1835-1840	6		<0.001		<0.5	<0.02
RS-492 1840-1845	7		<0.001		<0.5	<0.02
RS-492 1845-1850	<5		<0.001		<0.5	<0.02
RS-492 1850-1855	<5		<0.001		<0.5	<0.02
RS-492 1855-1860	<5		<0.001		<0.5	<0.02
RS-492 1860-1865	17		<0.001		0.6	<0.02
RS-492 1865-1870	7		<0.001		0.5	<0.02
RS-492 1870-1875	19		<0.001		1.0	0.03

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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-492 1875-1880	6		<0.001		<0.5	<0.02
RS-492 1880-1885	<5		<0.001		<0.5	<0.02
RS-492 1885-1890	6		<0.001		<0.5	<0.02
RS-492 1890-1895	16		<0.001		0.7	0.02
RS-492 1895-1900	17		<0.001		0.6	<0.02
RS-492 1900-1905	5		<0.001		0.6	<0.02
RS-492 1905-1910	42		0.001		0.8	0.02
RS-492 1910-1915	235		0.007		1.4	0.04
RS-492 1915-1920	32		<0.001		0.6	<0.02
RS-492 1920-1925	128	166	0.004	0.005	2.1	0.06
RS-492 1925-1930	14		<0.001		<0.5	<0.02
RS-492 1930-1935	62		0.002		0.6	<0.02
RS-492 1935-1940	20		<0.001		0.9	0.03
RS-492 1940-1945	17		<0.001		1.1	0.03
RS-492 1945-1950	76		0.002		1.3	0.04
RS-492 1950-1955	50		0.001		1.1	0.03
RS-492 1955-1960	27		<0.001		0.6	<0.02
RS-492 1960-1965	26		<0.001		0.7	0.02
RS-492 1965-1970	84		0.002		31.5	0.92
RS-492 1970-1975	77		0.002		13.8	0.40
RS-492 1975-1980	20		<0.001		0.6	<0.02
RS-492 1980-1985	<5		<0.001		<0.5	<0.02
RS-492 1985-1990	6		<0.001		0.7	0.02
RS-492 1990-1995	9		<0.001		0.6	<0.02
RS-492 1995-2000	10		<0.001		0.9	0.03

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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-492 2000-2005	12		<0.001		0.9	0.03
RS-492 2005-2010	11		<0.001		0.5	<0.02
RS-492 2010-2015	<5		<0.001		0.6	<0.02
RS-492 2015-2020	13		<0.001		1.0	0.03
RS-492 2020-2025	46	50	0.001	0.001	1.5	0.04
RS-492 2025-2030	13		<0.001		1.2	0.04
RS-492 2030-2035	46		0.001		1.5	0.04
RS-492 2035-2040	38		0.001		1.6	0.05
RS-492 2040-2045	12		<0.001		0.9	0.03
RS-492 2045-2050	<5		<0.001		0.5	<0.02
RS-492 2050-2055	<5		<0.001		0.7	0.02
89553	4900		0.143		63.1	1.84
RS-492 400-405A	80		0.002		0.7	0.02
RS-492 405-410A	75		0.002		0.8	0.02
RS-492 410-415A	80		0.002		0.6	<0.02
RS-492 415-420A	68		0.002		<0.5	<0.02
RS-492 420-425A	14		<0.001		<0.5	<0.02
RS-492 425-430A	66		0.002		<0.5	<0.02
RS-492 430-435A	80		0.002		<0.5	<0.02
RS-492 435-440A	49		0.001		<0.5	<0.02
RS-492 440-445A	52		0.002		<0.5	<0.02
RS-492 445-450A	76		0.002		<0.5	<0.02
RS-492 450-455A	66		0.002		<0.5	<0.02
RS-492 455-460A	17		<0.001		<0.5	<0.02
RS-492 460-465A	12		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

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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-492 465-470A	60		0.002		<0.5	<0.02
RS-492 470-475A	33		<0.001		<0.5	<0.02
RS-492 475-480A	49		0.001		<0.5	<0.02
RS-492 480-485A	80		0.002		0.5	<0.02
RS-492 485-490A	32		<0.001		<0.5	<0.02
RS-492 490-495A	139		0.004		0.7	0.02
RS-492 495-500A	63		0.002		<0.5	<0.02
RS-492 500-505A	64		0.002		<0.5	<0.02
RS-492 505-510A	95		0.003		<0.5	<0.02
RS-492 510-515A	132		0.004		<0.5	<0.02
RS-492 515-520A	193		0.006		<0.5	<0.02
RS-492 520-525A	110		0.003		<0.5	<0.02
RS-492 525-530A	108		0.003		<0.5	<0.02
RS-492 530-535A	89		0.003		<0.5	<0.02

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American Assay Laboratories

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Ph.(775) 356-0606, Fax.(775) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

CLIENT REFERENCE No: RS-492
No. SAMPLES : 438
MAIN SAMPLE TYPE : DRILL CUTTINGS

RECEIVED : 6 MAR 2000
REPORTED : 9 APR 2000

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

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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-492 0000-0005	86	122	0.003	0.004	1.9	0.06
RS-492 0005-0010	26		<0.001		<0.5	<0.02
RS-492 0010-0015	13		<0.001		<0.5	<0.02
RS-492 0015-0020	<5		<0.001		<0.5	<0.02
RS-492 0020-0025	<5		<0.001		<0.5	<0.02
RS-492 0025-0030	<5		<0.001		<0.5	<0.02
RS-492 0030-0035	5		<0.001		<0.5	<0.02
RS-492 0035-0040	6		<0.001		<0.5	<0.02
RS-492 0040-0045	21		<0.001		0.5	<0.02
RS-492 0045-0050	65	68	0.002	0.002	0.5	<0.02
RS-492 0050-0055	53		0.002		<0.5	<0.02
RS-492 0055-0060	57		0.002		<0.5	<0.02
RS-492 0060-0065	63		0.002		0.5	<0.02
RS-492 0065-0070	43		0.001		<0.5	<0.02
RS-492 0070-0075	40		0.001		<0.5	<0.02
RS-492 0075-0080	95	100	0.003	0.003	0.8	0.02
RS-492 0080-0085	64		0.002		0.6	<0.02
RS-492 0085-0090	17	10	<0.001	<0.001	<0.5	<0.02
RS-492 0090-0095	<5		<0.001		<0.5	<0.02
RS-492 0095-0100	27		<0.001		<0.5	<0.02
RS-492 0100-0105	65		0.002		0.6	<0.02
RS-492 0105-0110	88		0.003		1.6	0.05
RS-492 0110-0115	29	34	<0.001	<0.001	0.5	<0.02
RS-492 0115-0120	65		0.002		0.5	<0.02
RS-492 0120-0125	34		<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-492 0125-0130	7		<0.001		<0.5	<0.02
RS-492 0130-0135	12		<0.001		<0.5	<0.02
RS-492 0135-0140	58		0.002		<0.5	<0.02
RS-492 0140-0145	62		0.002		<0.5	<0.02
RS-492 0145-0150	46		0.001		<0.5	<0.02
RS-492 0150-0155	6		<0.001		<0.5	<0.02
RS-492 0155-0160	37		0.001		<0.5	<0.02
RS-492 0160-0165	26		<0.001		<0.5	<0.02
RS-492 0165-0170	<5		<0.001		<0.5	<0.02
RS-492 0170-0175	<5		<0.001		<0.5	<0.02
RS-492 0175-0180	<5		<0.001		<0.5	<0.02
RS-492 0180-0185	<5		<0.001		<0.5	<0.02
RS-492 0185-0190	<5		<0.001		<0.5	<0.02
RS-492 0190-0195	<5		<0.001		<0.5	<0.02
RS-492 0195-0200	<5		<0.001		<0.5	<0.02
RS-492 0200-0205	13		<0.001		<0.5	<0.02
RS-492 0205-0210	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-492 0210-0215	<5		<0.001		<0.5	<0.02
RS-492 0215-0220	<5		<0.001		<0.5	<0.02
RS-492 0220-0225	6		<0.001		<0.5	<0.02
RS-492 0225-0230	5		<0.001		<0.5	<0.02
RS-492 0230-0235	5		<0.001		<0.5	<0.02
RS-492 0235-0240	6	12	<0.001	<0.001	<0.5	<0.02
RS-492 0240-0245	<5		<0.001		<0.5	<0.02
RS-492 0245-0250	<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-492 0250-0255	<5		<0.001		<0.5	<0.02
RS-492 0255-0260	9		<0.001		<0.5	<0.02
RS-492 0260-0265	52	56	0.002	0.002	<0.5	<0.02
RS-492 0265-0270	9		<0.001		<0.5	<0.02
RS-492 0270-0275	18		<0.001		<0.5	<0.02
RS-492 0275-0280	6		<0.001		<0.5	<0.02
RS-492 0280-0285	10	10	<0.001	<0.001	<0.5	<0.02
RS-492 0285-0290	75	96	0.002	0.003	<0.5	<0.02
RS-492 0290-0295	63		0.002		<0.5	<0.02
RS-492 0295-0300	25		<0.001		<0.5	<0.02
RS-492 0300-0305	15		<0.001		0.7	0.02
RS-492 0305-0310	8		<0.001		<0.5	<0.02
RS-492 0310-0315	10		<0.001		<0.5	<0.02
RS-492 0315-0320	31		<0.001		<0.5	<0.02
RS-492 0320-0325	8		<0.001		<0.5	<0.02
RS-492 0325-0330	72		0.002		0.8	0.02
RS-492 0330-0335	89		0.003		1.0	0.03
RS-492 0335-0340	59		0.002		0.5	<0.02
RS-492 0340-0345	153	166	0.004	0.005	0.5	<0.02
RS-492 0345-0350	63	64	0.002	0.002	<0.5	<0.02
RS-492 0350-0355	16		<0.001		<0.5	<0.02
RS-492 0355-0360	30		<0.001		<0.5	<0.02
RS-492 0360-0365	54		0.002		<0.5	<0.02
RS-492 0365-0370	63		0.002		0.6	<0.02
RS-492 0370-0375	81		0.002		<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-492 0375-0380	92		0.003		<0.5	<0.02
RS-492 0380-0385	52		0.002		<0.5	<0.02
RS-492 0385-0390	64		0.002		0.5	<0.02
RS-492 0390-0395	90	102	0.003	0.003	0.9	0.03
RS-492 0395-0400	63		0.002		0.6	<0.02
RS-492 0400-0405	32		<0.001		<0.5	<0.02
RS-492 0405-0410	14		<0.001		<0.5	<0.02
RS-492 0410-0415	94		0.003		<0.5	<0.02
RS-492 0415-0420	91		0.003		0.5	<0.02
RS-492 0420-0425	76		0.002		0.5	<0.02
RS-492 0425-0430	65		0.002		<0.5	<0.02
RS-492 0430-0435	96		0.003		0.6	<0.02
RS-492 0435-0440	106	104	0.003	0.003	<0.5	<0.02
RS-492 0440-0445	89	82	0.003	0.002	0.7	0.02
RS-492 0445-0450	98		0.003		0.5	<0.02
RS-492 0450-0455	87		0.003		<0.5	<0.02
RS-492 0455-0460	46		0.001		0.7	0.02
RS-492 0460-0465	40		0.001		0.8	0.02
RS-492 0465-0470	76		0.002		0.5	<0.02
RS-492 0470-0475	96		0.003		0.7	0.02
RS-492 0475-0480	105	134	0.003	0.004	0.6	<0.02
RS-492 0480-0485	140		0.004		0.6	<0.02
RS-492 0485-0490	30		<0.001		<0.5	<0.02
RS-492 0490-0495	47		0.001		0.5	<0.02
RS-492 0495-0500	75	94	0.002	0.003	<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-492 0500-0505	<5		<0.001		<0.5	<0.02
RS-492 0505-0510	<5		<0.001		<0.5	<0.02
RS-492 0510-0515	8		<0.001		<0.5	<0.02
RS-492 0515-0520	<5		<0.001		<0.5	<0.02
RS-492 0520-0525	60		0.002		0.5	<0.02
RS-492 0525-0530	121	148	0.004	0.004	1.0	0.03
RS-492 0530-0535	81		0.002		<0.5	<0.02
RS-492 0535-0540	51		0.001		0.8	0.02
RS-492 0540-0545	56	56	0.002	0.002	0.5	<0.02
RS-492 0545-0550	57		0.002		<0.5	<0.02
RS-492 0550-0555	54		0.002		<0.5	<0.02
RS-492 0555-0560	44		0.001		<0.5	<0.02
RS-492 0560-0565	21		<0.001		<0.5	<0.02
RS-492 0565-0570	43		0.001		0.6	<0.02
RS-492 0570-0575	88		0.003		0.7	0.02
RS-492 0575-0580	93		0.003		0.7	0.02
RS-492 0580-0585	107	122	0.003	0.004	1.8	0.05
RS-492 0585-0590	30		<0.001		<0.5	<0.02
RS-492 0590-0595	28		<0.001		0.5	<0.02
RS-492 0595-0600	32		<0.001		<0.5	<0.02
RS-492 0600-0605			INSUFFICIENT SAMPLE			
RS-492 0605-0610	68		0.002		1.2	0.04
RS-492 0610-0615	20		<0.001		<0.5	<0.02
RS-492 0615-0620	7		<0.001		<0.5	<0.02
RS-492 0620-0625	31		<0.001		0.7	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-492 0625-0630	77		0.002		0.6	<0.02
RS-492 0630-0635	70		0.002		<0.5	<0.02
RS-492 0635-0640	45		0.001		<0.5	<0.02
RS-492 0640-0645	17		<0.001		<0.5	<0.02
RS-492 0645-0650	73		0.002		1.1	0.03
RS-492 0650-0655	60	90	0.002	0.003	0.7	0.02
RS-492 0655-0660	<5		<0.001		<0.5	<0.02
RS-492 0660-0665	6		<0.001		<0.5	<0.02
RS-492 0665-0670	94	116	0.003	0.003	1.1	0.03
RS-492 0670-0675	18	24	<0.001	<0.001	<0.5	<0.02
RS-492 0675-0680	96		0.003		1.8	0.05
RS-492 0680-0685	79		0.002		0.8	0.02
RS-492 0685-0690	146	156	0.004	0.005	1.6	0.05
RS-492 0690-0695	115		0.003		1.1	0.03
RS-492 0695-0700	105		0.003		0.7	0.02
RS-492 0700-0705	165	186	0.005	0.005	1.6	0.05
RS-492 0705-0710	70		0.002		1.1	0.03
RS-492 0710-0715	15		<0.001		<0.5	<0.02
RS-492 0715-0720	11		<0.001		<0.5	<0.02
RS-492 0720-0725	8		<0.001		<0.5	<0.02
RS-492 0725-0730	23		<0.001		0.5	<0.02
RS-492 0730-0735	<5		<0.001		<0.5	<0.02
RS-492 0735-0740	6	6	<0.001	<0.001	<0.5	<0.02
RS-492 0740-0745	<5		<0.001		<0.5	<0.02
RS-492 0745-0750	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-492 0750-0755	5		<0.001		<0.5	<0.02
RS-492 0755-0760	5		<0.001		<0.5	<0.02
RS-492 0760-0765	<5		<0.001		<0.5	<0.02
RS-492 0765-0770	<5		<0.001		<0.5	<0.02
RS-492 0770-0775	6		<0.001		<0.5	<0.02
RS-492 0775-0780	<5		<0.001		<0.5	<0.02
RS-492 0780-0785	6		<0.001		<0.5	<0.02
RS-492 0785-0790	5		<0.001		<0.5	<0.02
RS-492 0790-0795	5		<0.001		<0.5	<0.02
RS-492 0795-0800	<5		<0.001		<0.5	<0.02
RS-492 0800-0805	<5		<0.001		<0.5	<0.02
RS-492 0805-0810	5		<0.001		<0.5	<0.02
RS-492 0810-0815	<5		<0.001		<0.5	<0.02
RS-492 0815-0820	6		<0.001		<0.5	<0.02
RS-492 0820-0825	<5	8	<0.001	<0.001	<0.5	<0.02
RS-492 0825-0830	5		<0.001		<0.5	<0.02
RS-492 0830-0835	<5		<0.001		<0.5	<0.02
RS-492 0835-0840	7	8	<0.001	<0.001	<0.5	<0.02
RS-492 0840-0845	9		<0.001		<0.5	<0.02
RS-492 0845-0850	6		<0.001		<0.5	<0.02
RS-492 0850-0855	<5		<0.001		<0.5	<0.02
RS-492 0855-0860	<5		<0.001		<0.5	<0.02
RS-492 0860-0865	<5		<0.001		<0.5	<0.02
RS-492 0865-0870	<5		<0.001		<0.5	<0.02
RS-492 0870-0875	<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-492 0875-0880	5		<0.001		<0.5	<0.02
RS-492 0880-0885	14	12	<0.001	<0.001	<0.5	<0.02
RS-492 0885-0890	6		<0.001		<0.5	<0.02
RS-492 0890-0895	8		<0.001		<0.5	<0.02
RS-492 0895-0900	13		<0.001		<0.5	<0.02
RS-492 0900-0905	16	10	<0.001	<0.001	<0.5	<0.02
RS-492 0905-0910	9		<0.001		<0.5	<0.02
RS-492 0910-0915	9		<0.001		<0.5	<0.02
RS-492 0915-0920	8		<0.001		<0.5	<0.02
RS-492 0920-0925	13		<0.001		<0.5	<0.02
RS-492 0925-0930	6		<0.001		<0.5	<0.02
RS-492 0930-0935	6		<0.001		<0.5	<0.02
RS-492 0935-0940	12		<0.001		<0.5	<0.02
RS-492 0940-0945	16		<0.001		<0.5	<0.02
RS-492 0945-0950	5		<0.001		<0.5	<0.02
RS-492 0950-0955	8		<0.001		<0.5	<0.02
RS-492 0955-0960	14		<0.001		<0.5	<0.02
RS-492 0960-0965	11		<0.001		<0.5	<0.02
RS-492 0965-0970	6		<0.001		<0.5	<0.02
RS-492 0970-0975	10		<0.001		<0.5	<0.02
RS-492 0975-0980	17	18	<0.001	<0.001	<0.5	<0.02
RS-492 0980-0985	14		<0.001		<0.5	<0.02
RS-492 0985-0990	8		<0.001		<0.5	<0.02
RS-492 0990-0995	5		<0.001		<0.5	<0.02
RS-492 0995-1000	9		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056474

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : WILDROSE EAST
REFERENCE : RS-492

REPORTED : 9 APR 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-492 1000-1005	16		<0.001		<0.5	<0.02
RS-492 1005-1010	7		<0.001		<0.5	<0.02
RS-492 1010-1015	12	18	<0.001	<0.001	<0.5	<0.02
RS-492 1015-1020	20	26	<0.001	<0.001	<0.5	<0.02
RS-492 1020-1025	13	20	<0.001	<0.001	<0.5	<0.02
RS-492 1025-1030	7		<0.001		<0.5	<0.02
RS-492 1030-1035	6		<0.001		<0.5	<0.02
RS-492 1035-1040	10		<0.001		<0.5	<0.02
RS-492 1040-1045	10		<0.001		<0.5	<0.02
RS-492 1045-1050	<5		<0.001		<0.5	<0.02
RS-492 1050-1055	5		<0.001		<0.5	<0.02
RS-492 1055-1060	<5		<0.001		<0.5	<0.02
RS-492 1060-1065	<5		<0.001		<0.5	<0.02
RS-492 1065-1070	<5		<0.001		<0.5	<0.02
RS-492 1070-1075	<5		<0.001		<0.5	<0.02
RS-492 1075-1080	6		<0.001		<0.5	<0.02
RS-492 1080-1085	<5		<0.001		<0.5	<0.02
RS-492 1085-1090	8		<0.001		<0.5	<0.02
RS-492 1090-1095	6		<0.001		<0.5	<0.02
RS-492 1095-1100	5		<0.001		<0.5	<0.02
RS-492 1100-1105	8		<0.001		<0.5	<0.02
RS-492 1105-1110	5		<0.001		<0.5	<0.02
RS-492 1110-1115	10		<0.001		<0.5	<0.02
RS-492 1115-1120	8		<0.001		<0.5	<0.02
RS-492 1120-1125	10		<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-492 1125-1130	17	22	<0.001	<0.001	<0.5	<0.02
RS-492 1130-1135	7		<0.001		<0.5	<0.02
RS-492 1135-1140	6		<0.001		<0.5	<0.02
RS-492 1140-1145	8		<0.001		<0.5	<0.02
RS-492 1145-1150	13	16	<0.001	<0.001	<0.5	<0.02
RS-492 1150-1155	10		<0.001		<0.5	<0.02
RS-492 1155-1160	9		<0.001		<0.5	<0.02
RS-492 1160-1165	8		<0.001		<0.5	<0.02
RS-492 1165-1170	11		<0.001		<0.5	<0.02
RS-492 1170-1175	6		<0.001		<0.5	<0.02
RS-492 1175-1180	<5		<0.001		<0.5	<0.02
RS-492 1180-1185	<5		<0.001		<0.5	<0.02
RS-492 1185-1190	8		<0.001		1.0	0.03
RS-492 1190-1195	<5		<0.001		<0.5	<0.02
RS-492 1195-1200	8		<0.001		<0.5	<0.02
RS-492 1200-1205	<5		<0.001		0.9	0.03
RS-492 1205-1210	8		<0.001		<0.5	<0.02
RS-492 1210-1215	10		<0.001		<0.5	<0.02
RS-492 1215-1220	<5		<0.001		<0.5	<0.02
RS-492 1220-1225	<5		<0.001		<0.5	<0.02
RS-492 1225-1230	8		<0.001		<0.5	<0.02
RS-492 1230-1235	5		<0.001		<0.5	<0.02
RS-492 1235-1240	<5		<0.001		<0.5	<0.02
RS-492 1240-1245	<5		<0.001		<0.5	<0.02
RS-492 1245-1250	6		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056474

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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-492 1250-1255	<5		<0.001		<0.5	<0.02
RS-492 1255-1260	<5		<0.001		<0.5	<0.02
RS-492 1260-1265	<5		<0.001		<0.5	<0.02
RS-492 1265-1270	6		<0.001		<0.5	<0.02
RS-492 1270-1275	8		<0.001		<0.5	<0.02
RS-492 1275-1280	20	28	<0.001	<0.001	0.6	<0.02
RS-492 1280-1285	192	239	0.006	0.007	3.0	0.09
RS-492 1285-1290	282		0.008		2.9	0.08
RS-492 1290-1295	580	592	0.017	0.017	14.1	0.41
RS-492 1295-1300	212		0.006		5.3	0.15
RS-492 1300-1305	53		0.002		0.9	0.03
RS-492 1305-1310	18		<0.001		0.6	<0.02
RS-492 1310-1315	24		<0.001		0.7	0.02
RS-492 1315-1320	53		0.002		0.7	0.02
RS-492 1320-1325	21		<0.001		<0.5	<0.02
RS-492 1325-1330	14		<0.001		<0.5	<0.02
RS-492 1330-1335	9		<0.001		2.5	0.07
RS-492 1335-1340	6		<0.001		<0.5	<0.02
RS-492 1340-1345	<5		<0.001		<0.5	<0.02
RS-492 1345-1350	7		<0.001		<0.5	<0.02
RS-492 1350-1355	<5		<0.001		<0.5	<0.02
RS-492 1355-1360	8		<0.001		<0.5	<0.02
RS-492 1360-1365	6		<0.001		<0.5	<0.02
RS-492 1365-1370	9		<0.001		<0.5	<0.02
RS-492 1370-1375	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-492 1375-1380	<5		<0.001		<0.5	<0.02
RS-492 1380-1385	6		<0.001		<0.5	<0.02
RS-492 1385-1390	8		<0.001		<0.5	<0.02
RS-492 1390-1395	<5		<0.001		<0.5	<0.02
RS-492 1395-1400	<5		<0.001		<0.5	<0.02
RS-492 1400-1405	12	14	<0.001	<0.001	<0.5	<0.02
RS-492 1405-1410	6		<0.001		<0.5	<0.02
RS-492 1410-1415	5		<0.001		<0.5	<0.02
RS-492 1415-1420	6		<0.001		<0.5	<0.02
RS-492 1420-1425	8		<0.001		<0.5	<0.02
RS-492 1425-1430	9		<0.001		<0.5	<0.02
RS-492 1430-1435	6		<0.001		<0.5	<0.02
RS-492 1435-1440	<5		<0.001		<0.5	<0.02
RS-492 1440-1445	<5		<0.001		<0.5	<0.02
RS-492 1445-1450	10		<0.001		<0.5	<0.02
RS-492 1450-1455	5		<0.001		<0.5	<0.02
RS-492 1455-1460	<5		<0.001		<0.5	<0.02
RS-492 1460-1465	20		<0.001		<0.5	<0.02
RS-492 1465-1470	133		0.004		3.6	0.11
RS-492 1470-1475	150		0.004		2.9	0.08
RS-492 1475-1480	180	216	0.005	0.006	3.4	0.10
RS-492 1480-1485	21		<0.001		<0.5	<0.02
RS-492 1485-1490	14		<0.001		0.8	0.02
RS-492 1490-1495	7		<0.001		<0.5	<0.02
RS-492 1495-1500	12		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT
RS-492 1500-1505	9		<0.001		<0.5	<0.02
RS-492 1505-1510	7		<0.001		<0.5	<0.02
RS-492 1510-1515	7		<0.001		<0.5	<0.02
RS-492 1515-1520	8		<0.001		<0.5	<0.02
RS-492 1520-1525	12		<0.001		<0.5	<0.02
RS-492 1525-1530	55	42	0.002	0.001	<0.5	<0.02
RS-492 1530-1535	24		<0.001		<0.5	<0.02
RS-492 1535-1540	22		<0.001		<0.5	<0.02
RS-492 1540-1545	6		<0.001		<0.5	<0.02
RS-492 1545-1550	5		<0.001		<0.5	<0.02
RS-492 1550-1555	22		<0.001		<0.5	<0.02
RS-492 1555-1560	11		<0.001		<0.5	<0.02
RS-492 1560-1565	14		<0.001		<0.5	<0.02
RS-492 1565-1570	38		0.001		<0.5	<0.02
RS-492 1570-1575	39		0.001		<0.5	<0.02
RS-492 1575-1580	9	10	<0.001	<0.001	<0.5	<0.02
RS-492 1580-1585	6		<0.001		<0.5	<0.02
RS-492 1585-1590	9		<0.001		<0.5	<0.02
RS-492 1590-1595	<5		<0.001		<0.5	<0.02
RS-492 1595-1600	<5		<0.001		<0.5	<0.02
RS-492 1600-1605	12		<0.001		<0.5	<0.02
RS-492 1605-1610	25		<0.001		<0.5	<0.02
RS-492 1610-1615	78		0.002		0.9	0.03
RS-492 1615-1620	73		0.002		0.9	0.03
RS-492 1620-1625	80	70	0.002	0.002	3.6	0.11

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-492 1625-1630	93		0.003		3.3	0.10
RS-492 1630-1635	54		0.002		1.3	0.04
RS-492 1635-1640	31		<0.001		0.6	<0.02
RS-492 1640-1645	18		<0.001		<0.5	<0.02
RS-492 1645-1650	9		<0.001		<0.5	<0.02
RS-492 1650-1655	7		<0.001		<0.5	<0.02
RS-492 1655-1660	8		<0.001		<0.5	<0.02
RS-492 1660-1665	<5		<0.001		<0.5	<0.02
RS-492 1665-1670	6		<0.001		<0.5	<0.02
RS-492 1670-1675	5		<0.001		<0.5	<0.02
RS-492 1675-1680	<5		<0.001		<0.5	<0.02
RS-492 1680-1685	<5		<0.001		<0.5	<0.02
RS-492 1685-1690	16		<0.001		<0.5	<0.02
RS-492 1690-1695	14		<0.001		<0.5	<0.02
RS-492 1695-1700	80		0.002		1.2	0.04
RS-492 1700-1705	40		0.001		1.1	0.03
RS-492 1705-1710	20		<0.001		0.5	<0.02
RS-492 1710-1715	73		0.002		2.3	0.07
RS-492 1715-1720	157		0.005		6.6	0.19
RS-492 1720-1725	231	274	0.007	0.008	3.7	0.11
RS-492 1725-1730	56		0.002		2.1	0.06
RS-492 1730-1735	160		0.005		2.9	0.08
RS-492 1735-1740	118		0.003		5.7	0.17
RS-492 1740-1745	40		0.001		1.7	0.05
RS-492 1745-1750	11		<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-492 1750-1755	44		0.001		0.9	0.03
RS-492 1755-1760	15		<0.001		0.7	0.02
RS-492 1760-1765	52		0.002		1.2	0.04
RS-492 1765-1770	16		<0.001		<0.5	<0.02
RS-492 1770-1775	17		<0.001		<0.5	<0.02
RS-492 1775-1780	16		<0.001		0.6	<0.02
RS-492 1780-1785	25		<0.001		1.0	0.03
RS-492 1785-1790	16		<0.001		0.6	<0.02
RS-492 1790-1795	76		0.002		0.6	<0.02
RS-492 1795-1800	8		<0.001		<0.5	<0.02
RS-492 1800-1805	59		0.002		0.9	0.03
RS-492 1805-1810	81		0.002		1.0	0.03
RS-492 1810-1815	253	212	0.007	0.006	1.2	0.04
RS-492 1815-1820	15		<0.001		0.7	0.02
RS-492 1820-1825	6		<0.001		<0.5	<0.02
RS-492 1825-1830	14	10	<0.001	<0.001	<0.5	<0.02
RS-492 1830-1835	15		<0.001		<0.5	<0.02
RS-492 1835-1840	6		<0.001		<0.5	<0.02
RS-492 1840-1845	7		<0.001		<0.5	<0.02
RS-492 1845-1850	<5		<0.001		<0.5	<0.02
RS-492 1850-1855	<5		<0.001		<0.5	<0.02
RS-492 1855-1860	<5		<0.001		<0.5	<0.02
RS-492 1860-1865	17		<0.001		0.6	<0.02
RS-492 1865-1870	7		<0.001		0.5	<0.02
RS-492 1870-1875	19		<0.001		1.0	0.03

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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-492 1875-1880	6		<0.001		<0.5	<0.02
RS-492 1880-1885	<5		<0.001		<0.5	<0.02
RS-492 1885-1890	6		<0.001		<0.5	<0.02
RS-492 1890-1895	16		<0.001		0.7	0.02
RS-492 1895-1900	17		<0.001		0.6	<0.02
RS-492 1900-1905	5		<0.001		0.6	<0.02
RS-492 1905-1910	42		0.001		0.8	0.02
RS-492 1910-1915	235		0.007		1.4	0.04
RS-492 1915-1920	32		<0.001		0.6	<0.02
RS-492 1920-1925	128	166	0.004	0.005	2.1	0.06
RS-492 1925-1930	14		<0.001		<0.5	<0.02
RS-492 1930-1935	62		0.002		0.6	<0.02
RS-492 1935-1940	20		<0.001		0.9	0.03
RS-492 1940-1945	17		<0.001		1.1	0.03
RS-492 1945-1950	76		0.002		1.3	0.04
RS-492 1950-1955	50		0.001		1.1	0.03
RS-492 1955-1960	27		<0.001		0.6	<0.02
RS-492 1960-1965	26		<0.001		0.7	0.02
RS-492 1965-1970	84		0.002		31.5	0.92
RS-492 1970-1975	77		0.002		13.8	0.40
RS-492 1975-1980	20		<0.001		0.6	<0.02
RS-492 1980-1985	<5		<0.001		<0.5	<0.02
RS-492 1985-1990	6		<0.001		0.7	0.02
RS-492 1990-1995	9		<0.001		0.6	<0.02
RS-492 1995-2000	10		<0.001		0.9	0.03

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-492 2000-2005	12		<0.001		0.9	0.03
RS-492 2005-2010	11		<0.001		0.5	<0.02
RS-492 2010-2015	<5		<0.001		0.6	<0.02
RS-492 2015-2020	13		<0.001		1.0	0.03
RS-492 2020-2025	46	50	0.001	0.001	1.5	0.04
RS-492 2025-2030	13		<0.001		1.2	0.04
RS-492 2030-2035	46		0.001		1.5	0.04
RS-492 2035-2040	38		0.001		1.6	0.05
RS-492 2040-2045	12		<0.001		0.9	0.03
RS-492 2045-2050	<5		<0.001		0.5	<0.02
RS-492 2050-2055	<5		<0.001		0.7	0.02
89553	4900		0.143		63.1	1.84
RS-492 400-405A	80		0.002		0.7	0.02
RS-492 405-410A	75		0.002		0.8	0.02
RS-492 410-415A	80		0.002		0.6	<0.02
RS-492 415-420A	68		0.002		<0.5	<0.02
RS-492 420-425A	14		<0.001		<0.5	<0.02
RS-492 425-430A	66		0.002		<0.5	<0.02
RS-492 430-435A	80		0.002		<0.5	<0.02
RS-492 435-440A	49		0.001		<0.5	<0.02
RS-492 440-445A	52		0.002		<0.5	<0.02
RS-492 445-450A	76		0.002		<0.5	<0.02
RS-492 450-455A	66		0.002		<0.5	<0.02
RS-492 455-460A	17		<0.001		<0.5	<0.02
RS-492 460-465A	12		<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-492 465-470A	60		0.002		<0.5	<0.02
RS-492 470-475A	33		<0.001		<0.5	<0.02
RS-492 475-480A	49		0.001		<0.5	<0.02
RS-492 480-485A	80		0.002		0.5	<0.02
RS-492 485-490A	32		<0.001		<0.5	<0.02
RS-492 490-495A	139		0.004		0.7	0.02
RS-492 495-500A	63		0.002		<0.5	<0.02
RS-492 500-505A	64		0.002		<0.5	<0.02
RS-492 505-510A	95		0.003		<0.5	<0.02
RS-492 510-515A	132		0.004		<0.5	<0.02
RS-492 515-520A	193		0.006		<0.5	<0.02
RS-492 520-525A	110		0.003		<0.5	<0.02
RS-492 525-530A	108		0.003		<0.5	<0.02
RS-492 530-535A	89		0.003		<0.5	<0.02

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-492
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DATE 22 Feb to 1 May 2000
LOGGED BY Rogowski
TOTAL DEPTH 205.5

LOCATION ROSEBUD, NV
NORTHING 2,212,822
EASTING 478,452
ELEVATION 6025
AZIMUTH —
INCLINATION −90°

AREA S. Side - N. Equinox
DRILLING CO. Eklund - Don Schoonl
RIG TYPE RC - 75E
HOLE SIZE 6"
DOWN HOLE SURVEY BY Wel-Nav to 1800'

0-100

2/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
0			0-165 (RBQL)	VH		2					2				3												0													
10			Porphyry, has			2					2				2																									
			phenos of Qtz			1					3				Tr																									
20			K-Feld, Sanidine			Tr					2				0																									
		QT phen	& some plag.			1					2																													
30			well silicified			2					2																													
			& oxidized			3					1																													
40			Some Py &			3					1																													
			most of it is			3					1																													
50			encap. in silica			3					1																Tr													
			Feld phenos			3					1																1													
60		A Bx	are soft & white.			3					1																0													
		Pa3x	Some flow			3					1																Tr													
70			banding -			3					1																Tr													
			Matrix varies			3					1																1													
80			from m to v.f. xln.			3					Tr																1													
						3					Tr																2													
90						3					Tr																Tr													
						3					1																Tr													
100				VH		3					1				0												Tr													

Fx in matrix is porphyritic & oxidized well

Most Py is oxidized out

Most Py is encap in silica

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-492
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LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

1 TO 200

3/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
100		(P)23 QD Phyo. Porphyry	0 to 165 (RBQL)	VH	Porphyritic & Rudaceous Brecc
110			Quartz phenos		
			bearing, Kspar		
120			sanidine & plag		
			same as 0-100		
130			well silicified		
140			140-160		
			Poss. pyritized		
150			Struct.		
160					
				VH	
170		Phyo Porp.	165-195	H	Porphyritic Crazy-Purple
			coarse to m. xln		
180			matrix. Has		
			Glmo P. plag. but		
190			would not call Gorilla		
			Porphyry. Just another		
200			Choc Porphyry. No Qz	H	

+ some bio.

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	3					tr					0							
110																		
120																		
130																		
	3	Fine disp Py																
140	3	w/ silica																
	3	gray silica																
150	3	"																
	3	gray & LT Brown				tr												
160	3					1												
	3					tr												
170	tr																	
180																		
190	tr																	
200	3					tr					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %
100				tr					
				ox					
110				tr					
				tr					
120				1					
				tr					
130				0					
				ox					
				Py					
140				tr					
				3					
150				4					
				4					
160				tr					
				3	Py	H			
170				0					
				0					
180				0					
				0					
190				0					
				0					
200				tr					

FEET	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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NORTHING
EASTING
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INCLINATION

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

2-300 4/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAJOR	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 %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
200			195-220	V.H	with yellow	3					1					0											tr													
210		ABY	(RBQL?) - similar			1					2																0														
			to 0 to 165			2					1																0														
220				VH		3					tr																0														
			220-255																																						
			Dru. Red-Brn.	MH		0					Tr																														
230			Fxln matrix,																																						
			porphyritic. Poss.																																						
240			Gorilla type. Phenos																																						
			very small																																						
250					Porphyritic Hem-Red																																				
				MH		0					Tr																0														
260			RBQL? coarse	H		1					2																0														
			porphyry	H		1					2																														
270				H	Yell-Brn	2					1																														
			Gorilla type porphyry																																						
				MH	Red	0					tr																														
280				MH		0					tr																														
			RBQL coarse	H		2					1																														
290			porphyry		Porphyry Yell-Brn	2					1																														
						2					1																														
300				H		1					2					0											0														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
300			300 to 400 — entire	H	Porphyritic & gray silicification & Hem Qal stain
310			100' has a RBQL		
			Look to it. Fine		
320			x'ln. silicification		
			is colored either		
330		Jcl Bx	+ ox sulfides in Bx & on fracs.	Hem Red or Lt. Brn.	
			Some chance there		
340			are 2 porphyry		
			here but prob.		
350			only one. Has		
			equant & long		
360			K-spar. Too alt		
			to see any bio		
370			& Qt is very rare		
			Traces of		
380			flow banding		
			throughout		
390		F Bx	Flow Bx or AutoBr. + micro Qt veinlets		
400				H	

FEET	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
300	Tr					2					0							
310	1					1				Tr								
	1					1												
320	2					1												
	2					1												
330	2					1												
	2+3					1												
340	2					1												
	2+3					1												
350	2					1												
	2					1												
360	2+3					1												
	3					1												
370	3					1												
	3					tr												
380	3					tr												
	2+3					1												
390	3					1												
	3					tr												
400	3					tr					0							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
300				Tr														
310				0	Py 1.3													
				Tr	cubic &													
320				1	& anhedral													
				1	on fract													
330				1	some SiO2													
				1	encap.					← gray	main							
340				0	- oxidized													
				tr	"													
350				Tr														
				0	ex													
360				tr														
				tr														
370				Tr														
				/														
380				0	- oxidized													
				tr														
390				2														
				2														
400				1														
				0	- Py oxidized													

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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INCLINATION

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

4-500A 6/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MATRIX %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
400			Blk, Bot, Lime coat	H to VH		2+3					1	phenos to wt clay				0											0						X — ox Py							
410		vn-qtz stwk	fractures			2+3					1																0						X ox Py on	veinlets						
			400 to 500			2+3					1																0						X Poss	vn. struct.						
420		A Bx	Porphyry, Prob			3					1																tr													
			same as 3-400			2+3					1																2	Py C	&	X			gray mineral							
430			Has rare Qtz phenos			3					tr																tr													
			Lime fill & num. K spar			3					tr																2						← ox on fract.							
440			K-spar gone to			3					tr																1													
			wt clay, and carb			3					tr																3													
450			tell how much sani.			3					tr																						1 ← ox Py							
			Py is disz. &			2+3					1																3	← Both as oxide & sulfide						also	veinlets				
460			on fract. much			2					1+2																3													
		silic vein w/ Jaro	of the Py			3					1																1	ox & sulfide												
470			is encap. in			2+3					tr																3	ox & sul												
			SiO2			3					tr																3							ox						
480			Note: 400 to 410			2					2																2													
			may be open struct			3					1																2							no ox						
490			see "dirt"			2+3					1+2																2													
						2+3					1																4													
500				H to VH		2+3					1					0											3													

Rhyolitic Flow Dome Porphyry

Porphyritic

Hecla MINING COMPANY
ROSEBUD PROJECT DRILL LOG

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

5-600 "B" 7/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
500		Rhyolitic Porphyry K-spar phyric - neo-clasmatic		H	Granular Porphyritic white phenos & Tan matrix
510					
520					
530			500 to 600 - very similar to 300 to 500 @ 525 & below the matrix appears more silicified Py is PyH & in veinlets throughout, often encap in silica Still suspect RBQL but Q+ is very rare		
540					
550					
560					
570	ADAL	ABX			
580	APLY	ABX			
590					
600				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGNEX %	QUARTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
500	2					1					0							
510	3					1												
	3					1												
520	2					1												
	2					1												
530	3					Tr												
	3					Tr												
540	3					1												
	3					1												
550	3					1												
	3					1												
560	2					1												
	2 & 3					2												
570	3					1												
	3					1												
580	3					1												
	3					1												
590	3					1												
	3					1												
600	3					1					0							

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
500				5														
510				Tr														
				2														
520				6	PyC PyH													
				3	& in vn lets													
530				5														
				4														
540				4														
				3														
550				5														
				4														
560				4														
				3														
570				4														
				4														
580				4														
				4														
590				4														
				3														
600				6														

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

6-700

8/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAGNA %	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
600			600 to 700	H		3					1					0											4	Py	H	+										
610			Same Porphyry			3					1																5	vnlets													
			as 3 to 600			2					1																5														
620		ox vnlet	mottled wt &			2					1																4														
			tan matrix is			2					1																4														
630			very fine xln			2					1																4														
			some autoor			2					1																3														
640			flow Bx			3					1																3														
						3					1																4														
650						3					1																5														
						3					1																3														
660						2					1																2														
			some Bio			0					tr																0														
670						2					1																2														
						3					1																6														
680						3					1																5														
						3					1																3														
690						3					1																4														
						3					1																4														
700				H		3					1					0											4														

Porphyritic
wt & lt brown

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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TOTAL DEPTH

LOCATION ROSEBUD, NV
NORTHING
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ELEVATION
AZIMUTH
INCLINATION

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

9/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAJOR %	CLASTS %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
700		F	Poss. major	VS	green + wt + gray	2					3					0											7													
710			700 to 705 clast			tr					3					0											1													
			are the above	soft		0					1					0											tr													
720		red.	porphyry mixed w/								1					1											tr													
			w/ clay gouge		Red											tr											0													
730			705 to 710 clasts													1																									
			are typical green													1																									
740			bud like material													1																									
			710 - 725 - Red													tr																									
750		BUD-LIKE CLASTIC Gray + Red	Bud-Like													1																									
																1																									
760			705 to 800													1																									
			BUD-Like clastic													1																									
770			matrix very soft													1																									
			most clasts are													1	← calc veinlets																								
780			Rhyo + fairly Hard													1																									
			Has broken bio													1																									
790			in matrix													1																									
			← 1st soft green		CLASTIC - BUD-LIKE Red + gray																																			
800			matrix			0					1					1											0													

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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AZIMUTH
INCLINATION

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

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
800		BUD LIKE CLASTIC	800 to 900	Soft	Pale green / Red
810			BUD-Like clastic		
			Generally soft		
820			matrix similar		
			to a red mud-		
830			stone or green		
			wax - matrix		
840			has numerous		
			broken boxls		
850			At 845 see		CLASTIC
			a single blk frag		
860			that could be		
			silicified ALS		
870			It is very small +		Red & mudstone
			Hard to tell		
880					
890					
900					

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
800	0					?	Hard to				1							
810						?	say, the											
							very soft											
820							matrix											
							could be											
830							Just unalt											
							soft mudstone											
840																		
850																		
860																		
870																		
880																		
890																		
900	0										1							

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
800				0														
900				0														

Hecla MINING COMPANY

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

9-1000 11/22

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-SILF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
900		Clastic	900-915 very soft Bud like - Red-Brn Broken Bio in matrix		Red to maroon	0				soft in part but not sure if Due to alteration	?					1										0														
910																										0														
			915-930 Hard matrix																							T.														
920																										0														
930																																								
			Very soft, red mud stone-like matrix some clasts have the gray ignimbrite appearance																																					
940																																								
950																																								
960		Clastic	960 to 985 Pale green, wax Like matrix w/ Broken black Bio. clasts are hard Rhyolite gray to blk		Pale-green						?																													
											3	?			?																									
970															?																									
															?																									
980															?																									
											3	?			?																									
990		Rhyolite	985-1000 ? silt stone? Aphyric Rhyo. Flow from the Choc Fm. soft		gray						2	?																												
											2	?																												
1000			Prob clay alt			0					v	?				1										0														

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3 = STRONG
or % by Vol

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

10-1100

12/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	15%	+25%	MAJ-PER	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 %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1000		Clastic	985 to 1012 gray, soft poss Rhyo flow. looks Aphyric tc but is silt like sed.	VS VS	1 = Kih 1 gray	0 0					2? 2?					0 1											0 0														
1010			1012 to 1100 BUD-LIKE usual Bio xls in matrix some of matrix is mudstone or wax like		CLASTIC gray Clasts Pale green matrix	0					1	?			Pale green clay linear Bost chlorite												1														
1020																																									
1030																																									
1040																																									
1050																																									
1060																																									
1070																																									
1080					CLASTIC gray																																				
1090																																									
1100						0					1	?				1																									

Num Calc XLs Probs veinlets

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ROSEBUD PROJECT DRILL LOG

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RIG TYPE
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DOWN HOLE SURVEY BY

11-1200 13/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1100		Epi andesite Volcanic	1100 to 1200	VS	Clastic green & gray
1110			Bud-Like Clastic		
1120			as above		
1130					
1140					
1150					
1160					
1170					
1180					Clastic Pale green
1190					
1200				VS	

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

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1100				0														
1110																		
1120																		
1130																		
1140																		
1150																		
1160				tr														
1170				0														
1180																		
1190																		
1200				0														

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AREA 12-1300
DRILLING CO.
RIG TYPE
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DOWN HOLE SURVEY BY

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	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%	OXIDATION %	VIENING TYPE	MINERALIZATION: SULFIDES 5%	SULFIDES 15%	SULFIDES +25%	PY %	CPY %	MAR %	AS-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1200		Clastic	1175 to 1225 Pale green waxy look w/ Bio. p. lenses. Lower part is more granular	VS	CLASTIC Pale green	0					2					1 1 1 2 2											0														
1230		Clastic	1225 to 1260 Bud-like Heam on the clasts of Rhyo.		CLASTIC Pale green & gray						1					1 2 2																										
1240																																									
1250																																									
1260						0					1																														
		?	1260-1270 Can't tell if siltstone clastic or Rhyo flow		CLASTIC ? I=10m-?	Tr					1					2											0														
1270		?	Red. Brown & granular micro flow or clasts	VS	Red Brn	Tr					1					1											tr															
1280		F	Flow Banding Probable large wt clay gouge	VS	Flow	2					2					0											1	Rx	Ag?					← gray								
				VS		2					3					0											2	Rx	Ag Etched					← gray								
		?	1280-1300 micro Dxed spider text LBT/WR	SIO2	Flow & Lt Brn	2					2																2		1				← gray								
1290		*	STIB	VH		2					1																3		2				trace	stibnite							
		*	STIBNITE coating on +12 frags ? Larg frag vn strict ?	VH	Micro 13x and Lt gray white & Lt Brn	3					1																1		1				1/2	STIBNITE on frac coatings							
1300		*	Pyrargyrite on Hairline	VH		2					1					0											4		1				Pyra	on Hairline							

Rhyolitic

3% banded Py & Mar

Py some stib

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RIG TYPE
HOLE SIZE
DOWN HOLE SURVEY BY

13-1400

15/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1300		Rhyolite	1300 to 1335 Bleached LBT/WR	VH to	
1310			Strong silicification in part - spider text micro Bx + micro fract.	H	
1320				H	
1330				MS	
				MS	
1340		Rhyo	1335 to 1345 LBT/WR micro Fract.	MS	Brn & Gray
				MS	
1350		ABx	1345 to 1400 Hem & gray Reddish brown LBT/WR	H	Rhyo Aphanitic Flow Hem. Red-Brown
1360		Rhyolite	trace of flow banding		
1370		ABx	ABx - Auto Bx in part. Not well alt.		
1380		ABx			
1390					
1400		ABx		H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MAJOR	QUARTZ %	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
1300	H	2				2					Tr							
1310	3					Tr					2							
	2					1					1							
1320	Tr					2					0							
	2					1					1							
1330	1					1					2							
	Tr					2?					2							
1340	0					1					2							
	0					1					2							
1350	0					Tr					1							
											2							
1360											1							
											2							
1370											2							
											2							
1380											1							
											2							
1390											2							
											2							
1400	0					Tr					2							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1300					Py 2	C	Tr											
1310					2		1											
					3		1											
1320					3		?			on vnlets & fldts. Py C								
					3		1											
1330					Tr													
					Tr													
1340					0													
1350																		
1360					0													
					Tr													
1370					0													
1380																		
1390																		
1400					0													

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14-1500 16/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1400			1400 to 1440 –	H	Fine Grained Rhyolite Red-Brn to Brn & brn-maroon
1410			LBt/WR, Red-Brn		
			to maroon, a few		
1420			traces of flow		
			banding & rare Bio		
1430			& K-spar (prob sani)		
			Prob some clay alt		
1440			because bio is indistinct		
	APL	ABx	alt. contact		Rhyolite Lt Brown, with Lt Brown & pale green
	APD	ABx	1440 to 1500 –		
1450			Some, but alt.		
1460			some Bx has brown Qt cement or matrix		
		*	*some spider text Bx w/ Tr Pyrite Drk. silica matrix		
1470			Qt cement		
			monolit Bx		
1480		ABx + Tec	NOTE: I think the BUD Lime frags are contam from up hole		Rhyo Q
		BX			mottled
1490			almost looks like BUD		
1500				H	

FEET	ALTERATION: SILICIFICATION 5%	15%	+25%	MASSIVE	QUARTZ	ARGILLIC 5%	15%	+25%	TYPE	PROPYLITIC % CHLORITE	CALCITE	POTASSIC % K-SPAR	ALUNITE	OXIDATION 5%	15%	+25%	VIENING %	TYPE
1400	0					1?					1							
1410						?					1							
1420											2							
											2							
1430											2							
											1							
1440											1							
	0					1?					1							
	Tr					1				Tr+	1							
1450	1 & 2					2					1							
	1					2					1							
1460	1					2					1							
	1					2 & 3					0							
1470	Tr					3					Tr							
	Tr					2 & 3					Tr							
1480	Tr					2					1							
	Tr					2					2							
1490	Tr					2					2							
	Tr					2					2							
1500	1					2				Tr+	2							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AS-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1400				0														
1410																		
1420																		
1430																		
1440																		
				0														
1450				1	most is Py C but some is Py H													
				3														
1460				2														
				1														
1470				2														
				1														
1480				2														
				1														
1490				Tr														
				Tr														
1500				Tr														

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DOWN HOLE SURVEY BY

15-1600 17/22

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 %	K-SLF %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1500			1500 to 1600	MH		0					2?				tr	1											0														
1510			LBt/wR? — Granular			0					2					2											0														
			flow Bx (spider text			0					2+	3				1											0														
1520			Bx) alt. Pale green			tr					2+	3				1											1														
			& wt, also Reddish			tr					2					0											tr														
1530		wt clay stgrs	Brn. traces of			1					2					0											tr		tr												
			flow banding.			tr					2+	3			tr	Tr											tr	PyH													
		←	spider Bx w/ brk matrix																																					
1540						tr					2				1	1											3														
			?chlorite? is on			0					3				1												1														
1550			fract & poss colors			0					3				1												tr														
			the pale green clay			1					2				tr												tr														
1560		RHYOLITE Prod LBt/wR	Note: some BUD			2					1				tr												tr														
			frags that I think			tr					2				0	1											1														
1570			are contam from			2					1					0											2														
			above.			tr					2					0											2														
1580						1					1+	2				2											tr														
						tr					2					1											tr														
1590						1					1					1											tr														
						tr					1					1											0														
1600				MH		1+2					1+	2			0	1											0														

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DOWN HOLE SURVEY BY

16-1700

18/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1600			1600 to 1700	MH	Lt. Brown + Lt. Gray, mottled, mottled wt + Brn. Pryo
1610			LBT/WR? - well alt., very little flow banding most of it is mottled from 1600 to 1640, less so as you go deeper.		
1620					
1630					
1640			?wr clay gray min		
1650			one slick		wt. Lt. Gray
1660		ABX TBX			
1670				wt. Lt. gray, LTBr, gray	Fxln, granular
1680					
1690					
1700			X Pyra? one frag	MH	

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
1600	1+	2				2					1							
1610	2					2					0							
1620	2					1												
1630	1					2												
1640	2					2												
1650	2	wt silica				2												
1660	1					2												
1670	1					2												
1680	1+	2				1+2					0							
1690	1					2					1							
1700	1					2					1							
	2					1					2							
	1					2					1							
	2					1					1							
	2					1					1							
	1					2					1							
	2					1					1							
	3					1					1							
	1					2					1							
	2+3					1					Tr							
	2+3					1					Tr							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	STIBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOLYBDE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1600				2	PyH	1												
1610				2		Tr												
1620				4	PyH													
1630				7		1					Coarse Marcasite							
1640				8		2												
1650				5	PyC	1												
1660				6														
1670				4	PyC & H	1					micro mar							
1680				3		1				X	Gray min on hairline fract.							
1690				1		1						"						
1700				3		1												
				Tr														
				0														
				0														
				Tr														
				Tr														
				Tr		Tr mar												
				Tr		Tr Po					Bronze Py magnetic							
				Tr		1					Dk gray min							
				Z		Tr?					Dk gray ag hairline vnlet							

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DOWN HOLE SURVEY BY

17-1800

19/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1700		*	1700-1800		Rhyo Lt Brn & wt
1710		*	LBt/wR		
		Lt Brn *	To 1720 has brownish matrix Like adularia but not sure. High silicification		
1720		*	*NOTE: A BIK to micro Bx Gray min. encap		
1730		*	in clay alt LBt		
		*	Lt gray-clear frags. Poss Ag min. could not get a rel-brn streak, only gray.		Rhyolitic
1740		*			
1750		*	Flow bands increase w/depth. ← contam w/BUD		
1760		*			Flow Band Rhyo Lt gray - some has a hint of green
1770		*			
1780		*			
1790		*	F? wt clay		
1800					

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
1700	2					1					1							
1710	1+	2				1+	2				1							
	2					1					1							
1720	3					tr					Tr							
	2+	3			Granular w/ tr P.grn.	1?					tr							
1730	3					tr					0							
	2+	3				tr					1							
1740	2					1					1							
	2?					1+	2				tr							
1750	1					2					2							
	2+	3				1?					2							
1760	2					1					2							
	1					2					1							
1770	1					2					2							
	tr					2					2							
1780	1					2					0							
	1+	2				1					0							
1790	2+	3				1					Tr							
	2+	3				1					2							
1800	2+	3				1					2							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SUL %	SULFATE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1700				1		1						←		Tr	gray green			
1710				2		1							←		"			
				1		1							←		"			
1720				1		1						←	most		Dk min			
				2		Tr									"			
1730				1		1									"			
				1		Tr									"			
1740				tr		tr									"			
				1	Vn Lot	tr									"			
1750				tr		tr									"			
				2		1									"			
1760				1		tr									"			
				tr		tr												
1770				tr		tr												
				tr											"			
1780				1		tr												
				1		tr									"			
1790				tr		tr									"			
				tr		1												
1800				1		1												

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18-1900 20/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1800		?	1805 contam from above	V H	Lt gray
1810		X	1800 – 1900		
1820		ABX	LBT/WR – strongly flow banded. w/ tolt gray. Often silic. & clay. Alternate ~~separated~~ by flow bands		
1830		X			
1840			some good looking		
1850			Py veinlets & some pyrargyrite		
1860			in very minor amts asso w/ Py.		Rhyolitic flow Pale green to Lt gray
1870			Note: Has jet black specks that		
1880			appear silver gray when scratched. Poss +1%		
1890		?	Some of the pale green material is very hard.		
1900				V H	Lt gray

Rhyo J = low well bedded phyllic

FEET	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
1800	1+2					1+2					0							
						2					1							
1810	1+2																	
	2					1					1							
1820	2&3					1				tr	0							
	2					1+2				tr	0							
1830	1+2					2				tr	1							
	2&3					1				tr	1							
1840	2&3					1					1							
	3					1					1							
1850	3?					1					1							
	3					1					1							
1860	3					1					1							
	3					1					1							
1870	3					1					2							
	3					1					1							
1880	2&3					1					1							
	3					1					1							
1890	2+3					1					1							
	3					1?					1							
1900	3					1?					2							

Pale green color – Poss Not chlorite

Note: Numerous micro Jet Black specks 2% poss or looks gray are metallic gray when scratched.

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	K-SLF %	~~SPHERE %~~	BARITE %
1800				1	Fine dis & on	tr		Po	
1810				1					
				1	Frag &				
1820				3	BP				
				2					
1830				1		tr			
				2					
1840				2					
				1		1			
1850				tr		tr			
				tr					
1860				tr					
				tr					
1870				tr					
				1					
1880				1					
				tr					
1890				tr					
				2	Poss trace				
1900				1					

FEET	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1800	?	Drk gray coats on Py							
1810		Drk gray min micro Lath			Mar				
	X	Prob Pyra on fract + coating Pyrite							
1820		Drk min in Vnlet			next to Py				
1830	X								
1890		Poss gray min coating Py							

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-492
PAGE 21 OF
DATE
LOGGED BY
TOTAL DEPTH

LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

19-2000 21/

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE
1900		Qtz Oil Flow	1900 to 2000	VA	Trace of Pale green Rhyolite
1910			LBt/wR. Very strong flow bands. Some separations of silica & clay along flow bands. Some Py along flow bands. more traces of Qt. filled lithophysie Like spots.		
1920					
1930					
1940		Hair line Qt			
1950					
1960					
1970		Rhyolite	Pyra - mixed w/Py + silo also w/ wtclay alt Prob silicizone poss along struct or layer Good looking gray silicification		
1980		Rhyolite			
1990					
2000			Blk specks may be Coating on Pyra	VA	

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
1900	2+3					1				?	1							
						1					1							
1910	2					1					1							
						1					1							
1920						2					1							
						2					1							
1930						1					1							
						1					2							
1940						2					2							
						1					1							
1950						2					2							
						1					1							
1960	1+2					2					2							
						2					Tr							
1970	2+3					2+1				Pale green may be chlorite or clay	1							
						2					1							
1980						1					1							
	2+3					1					1							
1990	3					1					1							
	3					1					2							
2000	3					Tr				?	2							

FEET	MINERALIZATION: SULFIDES 5%	15%	+25%	PY %	CPY %	MAR %	AC-SUL %	SILBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOCURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
1900				1		? Tr	micro laths			alt 1%				Black specks				
1910				1		Tr/												
				1	Pyr + A	Tr												
1920				2		Tr												
				1		Tr												
1930				1		Tr												
				1		Tr												
1940				1		Tr												
				2		Tr												
1950				3		1												
				2		Tr												
1960				2		Tr												
				2		Tr				some				Pyra				
1970				1		Tr	Poss Cp							* Pyrargyrite				
				Tr		Tr								several specs				
1980				1		1												
				Tr		Tr												
1990				1		Tr								? Blk coat on Py				
				1		Tr								Pyr ?				
2000				1		Tr												

Hecla MINING COMPANY

ROSEBUD PROJECT DRILL LOG

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

HOLE NUMBER RS-492
PAGE 22 OF
DATE
LOGGED BY
TOTAL DEPTH 2055

LOCATION ROSEBUD, NV
NORTHING
EASTING
ELEVATION
AZIMUTH
INCLINATION

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

20-2100 22/22

FEET	GRAPHIC	ROCK TYPE	LITHOLOGY	HARDNESS	TEXTURE	ALTERATION: SILICIFICATION 5%	SILICIFICATION 15%	SILICIFICATION +25%	SILICIFICATION MATRIX %	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 %	AC-SUL %	SILBNITE %	BARITE %	METALLURGY: OXIDE	SULF	CARBON	MOISTURE	ANALYTICAL DATA: FROM	TO	W	Au	Ag
2000		Lt gray	2000-2055 TD	V H	Pl. low bounded Rhyolite Lt gray w/ trace of Pale green																																				
			LBT/WR			1					1					1											2		tr?												
2010		Pale green	still has black			1+	2				1					1											tr														
			specks that streak			1+	2				1					1											tr														
2020			gray			1?					1+	2				1											1														
		Hairline Lt gray				tr					2					tr											1														
2030						tr					2					tr											2														
						1					2					1											3		tr												
2040						tr					2					tr											3		tr												
		X	Poss narrow silicia zone w/ heavy Py + one speck of pyrargyrite			1+	2				1					1											5		tr					X One speck of Py argyrite							
2050		Pale green				2					1					2											tr		tr?												
				V H		2					1					2											tr		tr?												
2060			2055 TD																																						
			would like to																																						
2070			continue. But Bit																																						
			has 75 hrs - 15 over																																						
2080			recommended &																																						
			is showing signs																																						
2090			of coming apart.																																						
			At this depth we																																						
2100			should think of Casing	+ Core																																					

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311

WELL NAME: RS-492

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R CLOS.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISPLACEMENT DISP.	STATION DISPLACEMENT DIRECTION	TEMP. DEG F
50.0	50.00	-0.06	-0.090	-89.75	150.67	0.10 S	0.05 E	0.50	0.25	0.11	AT 150.67	055.78
100.0	100.00	0.14	-0.082	-89.36	295.68	0.07 S	0.14 W	1.71	0.86	0.16	AT 244.46	056.18
150.0	149.99	1.02	0.192	-88.53	291.40	0.29 N	0.99 W	1.67	0.83	1.03	AT 286.05	056.77
200.0	199.97	2.23	0.491	-88.61	287.01	0.70 N	2.17 W	0.27	0.14	2.28	AT 287.81	057.30
250.0	249.96	3.30	0.805	-88.81	296.97	1.11 N	3.21 W	0.60	0.30	3.40	AT 289.06	057.79
300.0	299.95	4.37	1.375	-88.41	308.44	1.78 N	4.22 W	0.97	0.49	4.58	AT 292.84	058.30
350.0	349.92	5.93	2.166	-87.55	298.08	2.71 N	5.71 W	1.86	0.93	6.32	AT 295.42	058.66
400.0	399.87	7.70	3.278	-87.60	317.27	3.98 N	7.36 W	1.62	0.81	8.37	AT 298.43	059.09
450.0	449.83	9.27	4.746	-87.47	319.45	5.59 N	8.79 W	0.32	0.16	10.41	AT 302.47	059.18
500.0	499.78	10.85	6.113	-87.74	312.84	7.10 N	10.23 W	0.77	0.39	12.45	AT 304.77	060.01
550.0	549.76	12.22	6.886	-88.59	291.71	8.00 N	11.52 W	2.15	1.07	14.03	AT 304.77	061.25
600.0	599.74	13.34	7.298	-88.66	299.45	8.51 N	12.60 W	0.40	0.20	15.21	AT 304.04	061.94
650.0	649.73	14.53	7.815	-88.38	298.57	9.14 N	13.73 W	0.56	0.28	16.49	AT 303.64	062.67
700.0	699.71	15.79	7.877	-88.50	255.98	9.32 N	14.99 W	2.28	1.14	17.65	AT 301.87	064.49
750.0	749.69	17.20	7.643	-88.19	274.15	9.22 N	16.41 W	1.21	0.61	18.82	AT 299.32	064.80
800.0	799.66	18.85	7.625	-88.02	275.27	9.35 N	18.06 W	0.35	0.17	20.34	AT 297.38	065.36
850.0	849.63	20.58	7.269	-87.86	253.04	9.16 N	19.81 W	1.62	0.81	21.83	AT 294.81	065.82
900.0	899.59	22.29	6.509	-87.85	249.77	8.56 N	21.58 W	0.25	0.12	23.22	AT 291.64	066.64
950.0	949.56	24.01	5.754	-87.84	253.55	7.97 N	23.37 W	0.28	0.14	24.69	AT 288.84	067.15
1000.0	999.52	25.87	5.232	-87.70	265.47	7.63 N	25.27 W	0.97	0.48	26.40	AT 286.79	068.07
1050.0	1049.47	27.95	4.627	-87.32	253.64	7.22 N	27.39 W	1.27	0.64	28.33	AT 284.76	069.00
1100.0	1099.41	30.16	3.496	-86.97	243.49	6.30 N	29.70 W	1.23	0.61	30.36	AT 281.97	070.19
1150.0	1149.34	32.78	2.639	-86.54	269.27	5.69 N	32.39 W	3.01	1.51	32.88	AT 279.96	071.32
1200.0	1199.24	35.88	2.354	-86.32	270.91	5.70 N	35.50 W	0.49	0.24	35.96	AT 279.11	072.14
1250.0	1249.14	38.93	2.242	-86.67	275.85	5.87 N	38.55 W	0.92	0.46	38.99	AT 278.66	073.53
1300.0	1299.06	41.63	1.489	-86.65	243.79	5.37 N	41.31 W	3.69	1.84	41.65	AT 277.41	075.07
1350.0	1348.97	44.41	0.352	-86.38	261.70	4.50 N	44.18 W	2.23	1.12	44.41	AT 275.81	076.65
1400.0	1398.89	47.13	-0.565	-87.01	250.70	3.84 N	46.97 W	1.78	0.89	47.13	AT 274.67	078.17
1450.0	1448.83	49.51	-1.364	-87.18	263.38	3.27 N	49.42 W	1.33	0.66	49.53	AT 273.78	079.64
1500.0	1498.77	51.92	-1.437	-87.20	283.95	3.42 N	51.83 W	2.01	1.00	51.94	AT 273.77	088.85
1550.0	1548.71	54.28	-1.042	-87.32	285.84	4.03 N	54.14 W	0.30	0.15	54.29	AT 274.26	092.03
1600.0	1598.66	56.57	-0.723	-87.38	280.70	4.56 N	56.39 W	0.49	0.25	56.57	AT 274.63	094.70
1650.0	1648.62	58.56	-0.859	-87.96	259.59	4.62 N	58.39 W	2.05	1.03	58.57	AT 274.52	095.08
1700.0	1698.59	60.01	-1.282	-88.59	258.23	4.33 N	59.86 W	1.26	0.63	60.02	AT 274.14	096.89
1750.0	1748.57	61.36	-1.245	-88.18	291.27	4.49 N	61.21 W	2.00	1.00	61.37	AT 274.20	097.48
1800.0	1798.55	62.88	-0.913	-88.24	283.92	4.96 N	62.69 W	0.47	0.24	62.89	AT 274.53	097.58

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-492

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R CLOS.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION	TEMP. DEG F
1850.0	1848.53	64.41	-0.700	-88.23	282.73	5.32 N	64.19 W	0.08	0.04	64.41	AT 274.74	097.51
1900.0	1898.50	65.92	-0.470	-88.26	285.31	5.69 N	65.68 W	0.17	0.08	65.92	AT 274.95	097.50
1950.0	1948.48	67.42	-0.222	-88.26	284.17	6.08 N	67.14 W	0.07	0.03	67.42	AT 275.17	097.48
2000.0	1998.46	68.91	0.004	-88.28	283.79	6.44 N	68.61 W	0.05	0.02	68.91	AT 275.36	097.51

```
*************************************************************
*                          ********                         *
*       THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF         *
*                          ********                         *
*  2000.0 FEET EQUALS     68.91   FEET AT  275.36           *
*                          ********                         *
*************************************************************
```

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

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

JOB NUMBER: 29-0588-311

WELL NAME: RS-492

LOCATION: GENERATOR HILL

SURVEY DATE: 02/27/2000

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: TRUE NORTH

WATER CONTACT= 1486'

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

COMMENTS: ***** EKLUND *****
** PETE SCHOORL **

PROJECTED F/1760' T/2000'.

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

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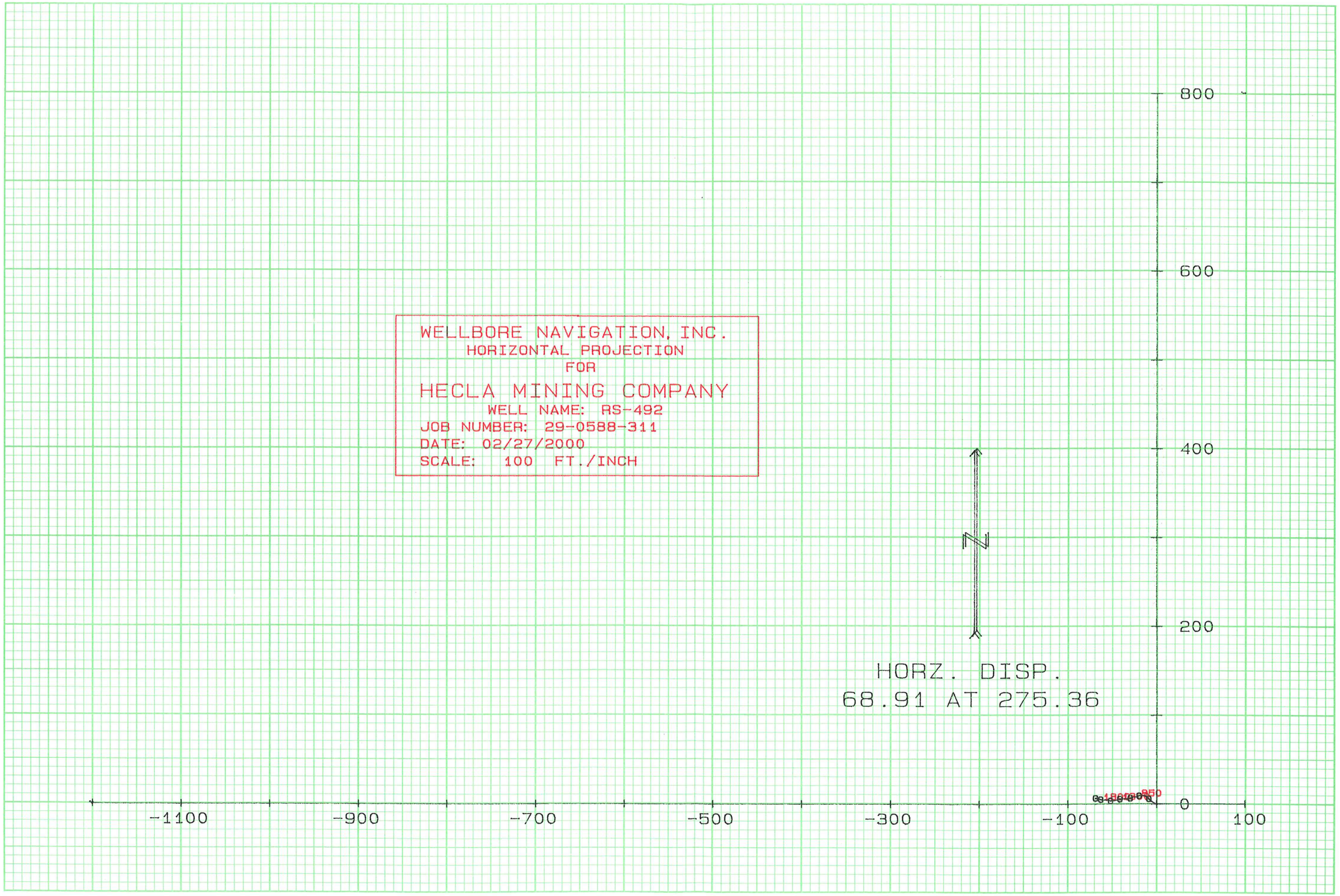

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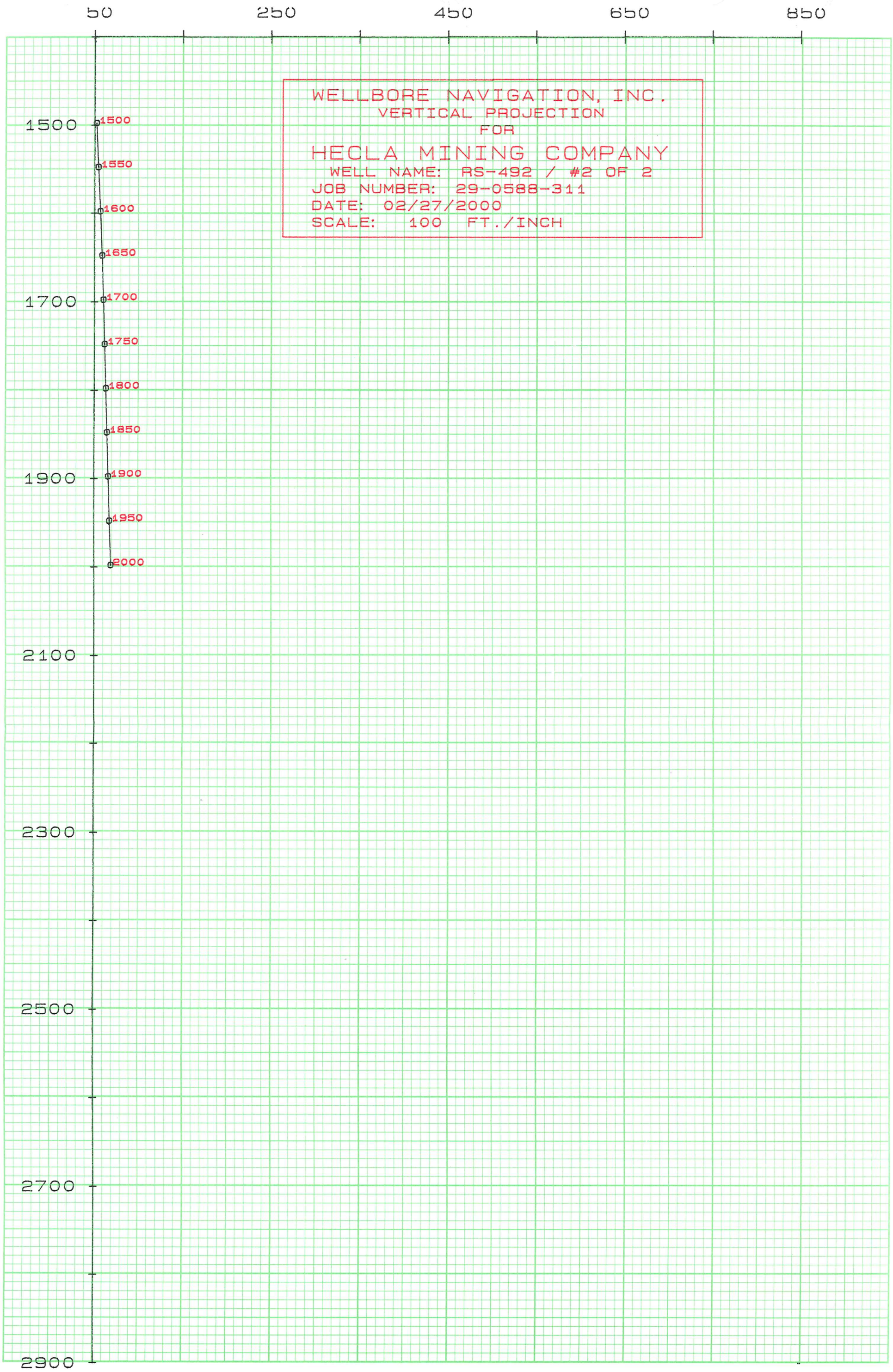

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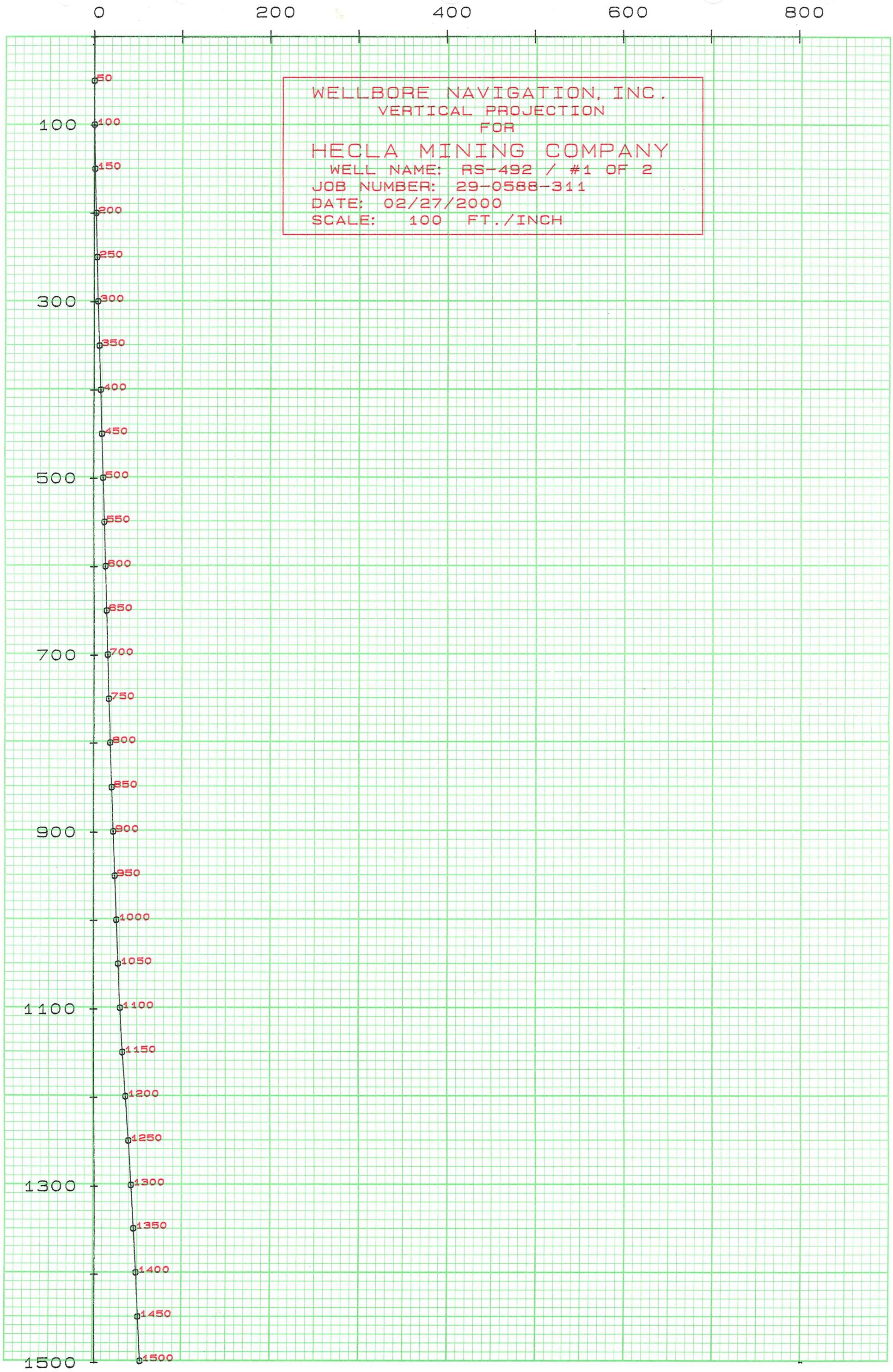

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

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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: 2 mar 2000 Number of Samples: 411

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

SAMPLE IDENTIFICATION	TYPE	ELEMENTS REQUIRED
Drill Hole RS 492	RC	Au+Ag - Use Rosebud Exploration
0 to 2055		Protocol sample prep +
		assays
Note: Please make up 20ft composits of		
the pulps for	ICP + Se	trace elements
1 (one) Pulp - Rosebud		
Production Standard		
@ 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

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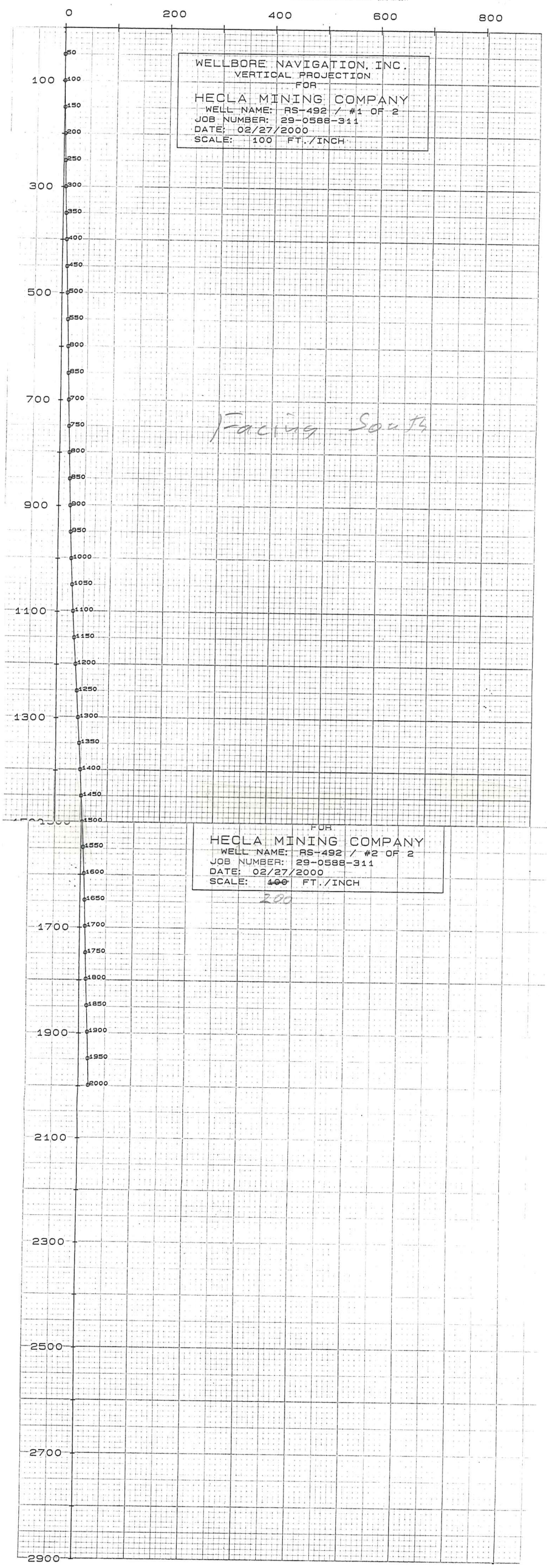

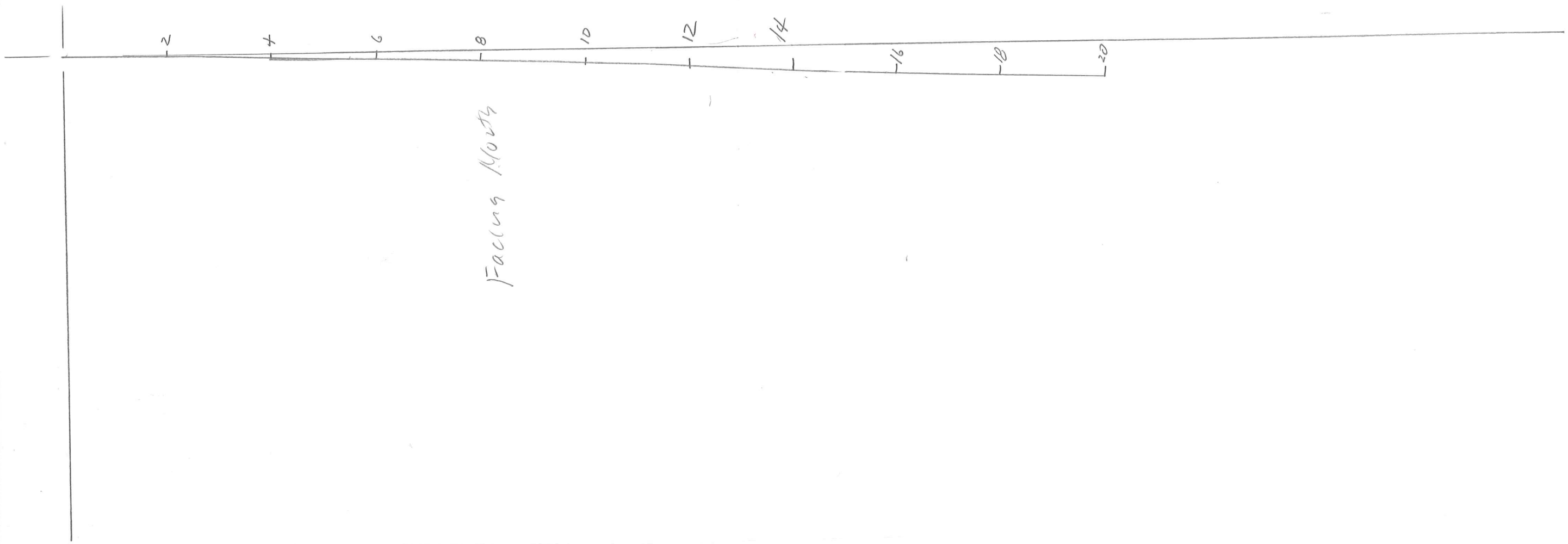
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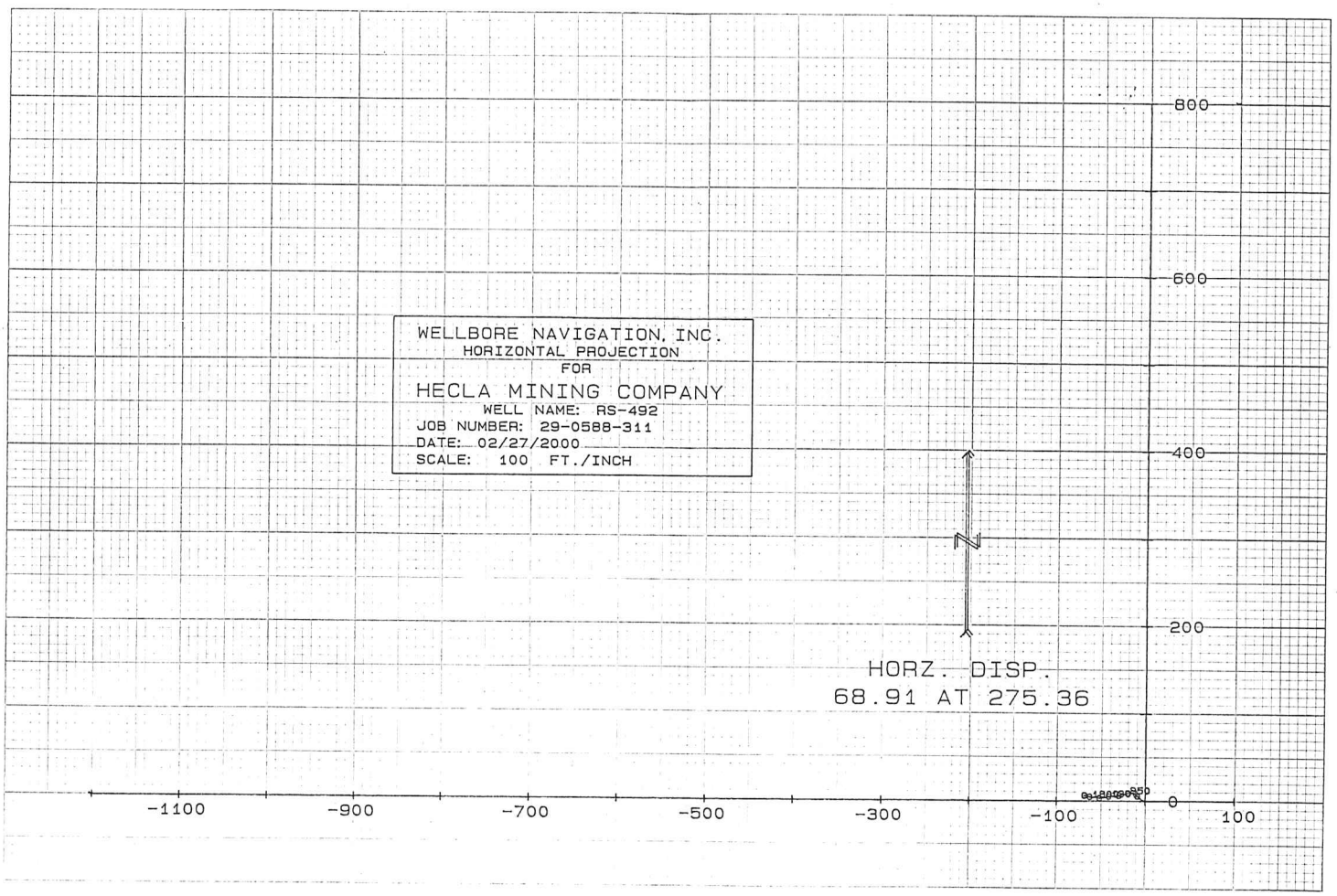
Facing North



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AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
PHONE: (775) 356-0606
FAX: (775) 358-1413

CLIENT: HECLA MINING CO.
CLIENT REF: KURT ALLEN
AAL REF: SP56474
METHOD: AAL03-0

ELEMENT SAMPLES	Ag ppb	Al %	As ppm	Au ppb	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
RS-492 0000-0020	502	0.67	19.7	28.9	9	102.20	0.04	0.2	0.02	0.70	5.8	13.72	2.11	3	491	0.1	20.8	0.06	172	3.22	0.053	2.8	0.012	15.57	0.12	22.58	1.3	37	0.02	12	0.009	0.19	2.1	9	0.6	27.4
RS-492 0020-0040	103	0.68	11.1	5.5	< 1	208.70	< .02	0.07	< .01	0.40	7.1	12.86	1.32	2.8	1578	0.15	23.5	0.02	63	2.68	0.032	2.5	0.009	7.83	0.11	7.07	0.8	30.9	< .02	12.9	0.003	0.88	1.9	6	0.3	16.2
RS-492 0040-0060	324	0.58	59.8	38.4	1	130.10	< .02	0.02	< .01	1.10	9.3	24.33	2.6	3.6	2067	0.16	18.8	0.01	89	4.14	0.019	4.8	0.007	10.49	0.46	23.43	2.1	14.2	< .02	10.3	0.002	0.14	2.2	5	1.1	13.6
RS-492 0060-0080	317	0.61	57.1	41.3	< 1	137.40	0.02	0.02	0.01	0.70	6.6	22.89	2.46	3.4	2512	0.19	19.2	0.01	89	4.17	0.016	4.3	0.007	8.81	0.3	23.88	2.7	12	< .02	10.3	0.002	0.11	1.6	6	1.1	10.3
RS-492 0080-0100	285	1.19	53.2	24.8	< 1	141.80	0.02	0.03	< .01	0.80	6.7	19.69	2.47	6	2306	0.23	20.7	0.01	75	5.23	0.02	4.3	0.011	11.95	0.36	26.64	2.2	16.6	< .02	11.6	0.003	0.13	1.9	5	1.4	14.6
RS-492 0100-0120	604	0.86	58.9	47.8	< 1	94.60	< .02	0.02	0.01	1.20	9.7	21.3	2.24	4	2434	0.13	16.9	0.01	95	4.62	0.009	5	0.007	8.82	0.29	33.83	1.6	17.7	< .02	7.7	0.002	0.11	12.1	6	1.7	12.3
RS-492 0120-0140	119	0.8	31.0	21.8	< 1	152.20	< .02	0.02	< .01	0.40	5.3	15.13	2.29	4	1181	0.26	21.2	< .01	60	3.32	0.016	3.4	0.009	9.03	0.23	14.51	1.8	16.2	< .02	11.4	0.002	0.11	1.3	4	0.7	11.7
RS-492 0140-0160	154	0.57	23.0	27.6	< 1	104.10	0.03	0.01	0.02	1.90	6.6	28.21	2.53	2.9	1153	0.28	16.7	< .01	65	2.98	0.014	3.9	0.004	16.11	1.31	12.83	3.7	7	< .02	8.1	0.002	0.33	0.8	3	1.5	17.1
RS-492 0160-0180	67	0.83	13.3	7.2	1	97.90	0.02	0.01	0.01	0.50	4.1	13.28	2.19	3.3	181	0.26	26.4	0.01	86	3.21	0.017	2.6	0.012	12.14	0.35	5.72	1	7.6	< .02	13.3	0.01	0.15	1.1	4	1	13.8
RS-492 0180-0200	35	0.67	5.4	3.9	1	82.60	< .02	0.01	< .01	0.20	3.3	9.6	2.47	3.4	47	0.23	30.4	0.01	97	2.97	0.015	1.8	0.019	13.29	0.17	5.76	0.3	13.8	< .02	14.1	0.011	0.09	1.4	5	1.1	18.9
RS-492 0200-0220	27	0.66	7.6	5.2	< 1	91.80	< .02	0.01	< .01	0.20	3.7	10.58	2.44	3.9	48	0.28	27.7	0.01	84	2.87	0.014	1.9	0.02	14.89	0.3	8.84	0.7	11.8	< .02	14.1	0.005	0.1	1.2	4	0.9	20.9
RS-492 0220-0240	95	0.83	4.5	2.4	3	73.00	0.02	0.03	0.26	6.70	3.9	13.68	2.6	3.9	52	0.21	29	0.03	3783	2.81	0.021	3.2	0.016	15.09	0.04	3.23	0.2	11.9	< .02	13.8	0.016	0.87	1.8	4	2	173.4
RS-492 0240-0260	146	0.88	3.6	2.3	2	234.40	< .02	0.02	0.16	2.40	4.3	7.13	2.37	4.7	130	0.19	32.4	0.01	2162	2.44	0.016	2	0.021	20.08	0.01	8.42	0.2	17.7	< .02	14.8	0.022	0.77	2.3	5	1.9	134
RS-492 0260-0280	77	1.07	7.6	23.2	< 1	160.40	< .02	0.01	< .01	0.30	3.3	8.02	2.3	6	167	0.27	27.7	0.01	136	2.6	0.013	2.2	0.018	15.57	0.17	19.29	1.4	19	< .02	13.1	0.013	0.1	1.1	4	1.3	21.7
RS-492 0280-0300	104	1.04	20.7	89	< 1	189.70	< .02	0.01	< .01	0.10	5.5	8.16	2.88	6.3	272	0.27	26.3	< .01	57	2.92	0.011	2.1	0.012	12.6	0.23	21.92	6.6	6.5	< .02	12.6	0.003	0.07	1.2	4	0.8	20.6
RS-492 0300-0320	208	1	13.3	14	1	91.60	< .02	0.01	< .01	0.40	5.3	11.24	2.88	4.9	819	0.12	21.7	< .01	53	2.61	0.004	2.8	0.017	12.11	0.35	12.95	2.6	16.7	< .02	10.8	0.002	0.05	1.1	4	1.4	10.7
RS-492 0320-0340	425	1.06	28.4	61.8	< 1	273.50	< .02	0.01	0.03	1.60	7	20.61	2.96	4.3	1117	0.15	20.3	< .01	110	4.17	0.008	4.8	0.009	10.8	0.78	27.35	3	15.8	< .02	9.9	0.002	0.22	2.3	4	3	16.8
RS-492 0340-0360	174	1.06	24.5	62.3	< 1	106.20	0.02	0.01	< .01	0.40	8.7	14.75	3.2	4.5	547	0.15	18.3	< .01	85	3.67	0.004	4	0.012	9.58	0.2	28.25	5.8	9.1	0.02	10.4	0.002	0.05	0.9	4	2.5	17.8
RS-492 0360-0380	300	1.13	45.9	63.6	< 1	129.30	0.07	< .01	0.01	0.70	8.3	20.73	3.24	3.8	772	0.18	16.8	< .01	118	4.94	0.005	4.8	0.008	10.48	0.34	29.8	3.4	23.3	< .02	8.5	0.002	0.05	0.8	4	3.1	22.4
RS-492 0380-0400	394	1.14	39.9	62.8	< 1	127.80	0.02	0.01	0.07	1.40	9.6	26.08	3.07	3.9	962	0.21	16.1	< .01	881	6.12	0.012	5.7	0.007	21.4	0.73	25.33	3.5	18.1	< .02	9	0.002	2.41	0.9	5	3.1	48.2
RS-492 0400-0420	271	1.01	29.0	66.3	< 1	56.30	< .02	0.02	0.03	1.10	8.4	24.52	3.29	4	1338	0.07	15.6	< .01	530	5.01	0.006	6	0.01	12.53	0.4	28.4	4.8	23.5	< .02	8.7	0.002	0.65	1	5	1.4	26.2
RS-492 0420-0440	451	0.9	36.2	92.3	< 1	101.60	0.02	0.02	0.01	1.00	6.8	23.1	3.01	3.6	1457	0.04	13.8	< .01	486	5.17	0.005	5	0.01	26.56	0.34	29.81	6.4	19.6	< .02	8	0.002	0.7	0.8	4	2	37.6
RS-492 0440-0460	446	1.36	60.6	85.5	< 1	196.50	0.02	0.02	0.02	0.90	8.1	21.25	3.45	6.6	1714	0.16	18.8	0.01	158	5.16	0.019	6.2	0.015	20.25	0.32	48.12	7.2	19.5	< .02	10.7	0.002	0.16	1.5	5	3.1	48.1
RS-492 0460-0480	443	1.18	33.2	79.2	< 1	113.60	< .02	0.02	0.01	1.20	5.5	20.31	2.53	4.4	4972	0.11	18.7	0.01	93	3.65	0.01	4.2	0.008	16.07	1	19.4	8.2	9.5	< .02	9.9	0.002	0.22	3.7	4	1.1	13.4
RS-492 0480-0500	339	1.03	33.0	60	< 1	103.60	< .02	0.01	0.02	1.80	4.5	22.91	2.81	3.8	5191	0.09	17.7	0.01	86	3.62	0.009	3.9	0.008	15.91	1.5	17.94	10.5	5.1	< .02	9.1	0.002	0.26	3.5	4	1	14.3
RS-492 0500-0520	97	0.80	5.0	7.3	< 1	89.10	< .02	0.02	0.02	2.90	3	8.82	1.63	3.2	327	0.15	24	< .01	39	2.71	0.015	2.1	0.005	15.53	1.38	6.44	1.5	8.3	< .02	12.3	0.002	0.24	2.1	2	0.6	15.7
RS-492 0520-0540	570	0.69	37.8	80.2	< 1	75.90	< .02	0.02	0.46	3.80	8	17.47	3.06	2.5	1640	0.14	17.4	< .01	89	4.26	0.012	5	0.004	17.5	2.28	20.07	6.5	6.6	< .02	9	0.002	0.74	6.2	4	1	41.6
RS-492 0540-0560	269	0.83	28.1	58.9	< 1	90.90	< .02	0.01	0.12	4.60	5.6	15.74	2.85	3.1	1178	0.13	17.4	< .01	83	3.91	0.014	4.2	0.004	15.51	2.13	17.47	5.2	5.1	< .02	9.6	0.002	0.52	4.8	4	1	48.6
RS-492 0560-0580	398	1.07	28.4	76.8	< 1	84.10	< .02	0.02	1.14	10.60	9.8	20.67	2.92	4.2	1423	0.13	20.8	0.01	93	5.3	0.014	6.8	0.005	20.92	2.18	17.95	5.6	9.1	< .02	10.6	0.002	0.71	6.2	4	1.1	78.4
RS-492 0580-0600	554	0.81	40.5	55.1	< 1	78.80	< .02	0.01	0.79	8.90	8.4	19.02	3.29	3.2	2288	0.14	18.5	< .01	160	4.63	0.015	5.8	0.004	16	2.3	28.2	4.2	7.2	< .02	8.7	0.002	1.16	5.4	5	1	84.5
RS-492 0600-0620	415	0.71	36.9	41.5	< 1	72.6	< .02	0.02	0.85	8.5	4.6	13.11	2.6	3.1	1388	0.11	21.5	< .01	62	4.16	0.013	4.1	0.004	19.31	2.28	24.02	4.9	6	< .02	8.8	0.002	0.93	5.1	3	1	70.2
RS-492 0620-0640	390	0.91	40.4	61.4	< 1	80.9	< .02	0.02	2.48	9.6	5.9	11.85	2.58	3.7	1054	0.12	20.9	0.01	69	3.57	0.013	4	0.006	17.74	2.3	22.23	6.6	9.8	< .02	8.2	0.002	0.77	6.5	3	0.9	78.3
RS-492 0640-0660	425	0.76	35.5	44.9	< 1	82.6	< .02	0.03	0.32	4.5	4.7	15.4	2.9	3	1798	0.11	20.4	0.01	87	3.57	0.016	4.6	0.008	28.87	2.18	20.64	3.4	13.2	< .02	9.2	0.006	0.76	4.2	3	1.6	83.4
STANDARD DS2	234	1.76	59.3	192	2	153.6	10.87	0.54	10.76	11.9	159.7	126.73	3.09	6.1	240	0.17	15.5	0.61	832	14.12	0.031	36.4	0.086	34.07	0.02	9.74	2.3	27.2	1.9	3.7	0.092	1.77	19.7	75	6.7	165
RS-492 0660-0680	541	0.67	34.5	48.3	5	68.2	0.02	0.03	0.22	3.5	5.4	12.66	3.22	2.5	431	0.13	19.6	0.01	112	3.55	0.015	3.3	0.009	36.45	2.1	20.15	4.1	27.3	< .02	8.3	0.013	1.18	2.7	3	1.7	76.1

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CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 0680-0700	835	0.66	28.6	99.2	4	48.9	< .02	0.02	0.29	2.6	7.7	17.92	3.17	2.9	491	0.14	18.5	0.01	113	4.55	0.015	4.4	0.066	16.24	1.9	21.03	7.3	14.8	< .02	7.6	0.002	0.93	1.8	4	0.7	86.5
RS-492 0700-0720	617	1.26	29.8	63.2	< 1	179.1	0.23	0.99	0.66	2.8	4.5	13.66	2.74	4.8	621	0.19	30.7	0.13	1535	2.67	0.03	3.4	0.036	35.99	1.26	10.2	3.8	132.3	0.02	6.4	0.002	0.53	2.7	4	0.5	264.9
RS-492 0720-0740	201	2.24	3.7	8.3	< 1	414.2	0.22	2.37	0.66	2.5	3.3	6.58	1.91	6.2	106	0.24	28.6	0.31	1425	0.93	0.052	1	0.039	23.67	0.13	1.32	0.4	176.1	< .02	6	0.002	0.29	2.2	4	< .2	92.6
RS-492 0740-0760	106	1.62	1.4	2.7	1	80.7	0.25	2.34	0.4	1.7	11.5	10.83	1.98	5.2	34	0.23	28.4	0.18	1132	1.79	0.052	6.8	0.042	48.59	0.04	0.6	0.2	136.4	< .02	5.9	0.002	0.16	1.7	4	0.2	56.3
RS-492 0760-0780	75	1.83	1.9	1	< 1	52.4	0.23	2.01	0.11	1.2	4.3	8.7	2.03	5.1	14	0.24	28.6	0.24	822	1.63	0.055	1.7	0.034	26.93	0.02	0.28	< .1	181.7	0.02	6	0.002	0.11	1.5	3	< .2	39.3
RS-492 0780-0800	96	1.47	2.4	1.6	< 1	176.1	0.22	2.06	0.29	1.2	4.7	9.11	1.88	4.3	18	0.26	27.5	0.19	832	1.92	0.053	1.5	0.036	15.55	0.04	0.3	0.1	154.5	< .02	6.3	0.002	0.11	1.4	4	0.2	38.4
RS-492 0800-0820	113	1.47	2.2	2.6	< 1	127.7	0.24	2.11	0.28	1.1	3.7	6.4	1.32	4.4	37	0.27	28.4	0.2	737	0.98	0.052	0.5	0.041	19.66	0.06	0.44	0.2	181.2	0.02	6	0.001	0.11	1.3	2	< .2	46.2
RS-492 0820-0840	116	1.47	2.6	3	< 1	1744.1	0.21	2.13	0.25	1.6	4	9.69	1.82	4.6	37	0.28	27	0.21	863	1.84	0.05	1.9	0.044	17.99	0.09	0.65	0.2	187.1	0.02	6.5	0.002	0.13	1.1	6	< .2	58.2
RS-492 0840-0860	126	0.92	3	2.8	< 1	746.8	0.13	2.12	0.22	1.5	3.1	5.91	2.25	4.2	54	0.3	28.5	0.11	1019	2.18	0.054	0.8	0.034	15.12	0.07	1.13	0.2	101.3	< .02	9	0.011	0.15	1.7	9	0.4	65.3
RS-492 0860-0880	106	0.9	3.1	3.4	2	193.7	0.16	1.18	0.15	2	5.9	10.88	2.85	4	40	0.28	25.3	0.12	976	2.96	0.056	2.4	0.038	10.8	0.06	1.16	0.3	90.4	0.02	8.4	0.012	0.16	1.8	10	0.4	73
RS-492 0880-0900	145	1.08	4.5	5	2	505.2	0.16	1.49	0.27	1.9	7	15.62	2.79	3.7	70	0.25	28.6	0.14	1063	3.44	0.048	3.3	0.037	18.21	0.07	1.98	0.4	162.3	0.02	7.8	0.005	0.25	1.8	8	0.3	59.2
RS-492 0900-0920	122	1.4	8.3	4.7	3	452.7	0.2	1.43	0.16	2.1	6.4	13.28	2.81	4.7	89	0.28	24	0.2	916	2.7	0.044	2.8	0.045	16.04	0.06	1.24	0.4	189.1	< .02	6.5	0.006	0.22	1.9	8	0.2	65
RS-492 0920-0940	120	0.86	6.2	4.7	2	279.8	0.21	0.92	0.19	2.1	7	16.1	3.34	3.9	75	0.28	23.1	0.13	748	3.52	0.049	3.5	0.04	16.9	0.08	1.83	0.3	116.1	< .02	7.4	0.01	0.19	2	9	0.5	58.8
RS-492 0940-0960	159	0.91	4.4	5.1	< 1	301.2	0.19	1.4	0.22	2	12.7	9.57	2.49	4.2	93	0.27	30.3	0.1	956	2.18	0.078	5.8	0.051	17.17	0.12	2.24	0.4	137.3	< .02	8.6	0.01	0.28	2.1	8	0.5	67.9
RS-492 0960-0980	164	1.42	3.1	4.3	< 1	371.8	0.28	1.96	0.28	1.6	7.2	11.48	1.87	4.2	72	0.23	29.2	0.17	860	2.05	0.054	2.4	0.04	21.77	0.11	1.09	0.4	302.4	0.03	5	0.002	0.16	1.3	3	< .2	66.3
RS-492 0980-1000	161	0.96	4.4	5.9	< 1	509.8	0.16	1.19	0.2	2.2	4.6	5.92	1.86	4.3	101	0.19	30.7	0.1	731	1.4	0.048	1.1	0.051	21.46	0.1	1.8	0.4	195.6	0.02	6.1	0.011	0.18	2.4	4	0.4	92.1
RS-492 1000-1020	218	1.03	5.7	10.7	< 1	492.2	0.13	2.49	0.24	3.3	2.4	5.16	1.81	4.9	172	0.21	28.6	0.1	987	1.32	0.05	0.4	0.054	20.87	0.17	2.14	0.7	234.6	0.02	5.3	0.011	0.22	2.1	5	0.3	108.6
RS-492 1020-1040	166	1.34	3.5	6.1	< 1	362.8	0.18	1.44	0.26	3.2	2.9	6.75	2.2	5.5	96	0.3	29.1	0.16	999	1.61	0.063	1.6	0.051	18.94	0.13	1.76	0.4	185.3	< .02	5.5	0.01	0.2	1.3	7	0.2	103.9
RS-492 1040-1060	104	0.98	2.6	2.5	< 1	1768.9	0.2	1.67	0.26	2.2	13.3	5.96	1.67	3.4	33	0.31	27.7	0.11	849	1.61	0.055	5.7	0.055	19.37	0.08	0.82	0.2	173.5	0.02	5.3	0.005	0.14	0.8	6	0.2	62.3
RS-492 1060-1080	78	0.88	1.8	1.3	< 1	1074.9	0.18	1.6	0.19	2.2	4.9	8.28	1.83	3.3	23	0.35	28.6	0.11	798	1.89	0.057	2.6	0.061	22.06	0.06	0.54	0.2	168.3	0.04	4.8	0.006	0.13	0.6	9	0.3	65
RS-492 1080-1100	94	0.95	2.4	2.1	2	839.3	0.1	1.32	0.23	2.3	7.1	10.06	2.21	3.8	24	0.37	29.8	0.12	819	2.27	0.056	2.9	0.059	18.19	0.09	0.86	0.3	127.3	0.02	5.7	0.011	0.17	0.9	12	0.2	71.9
RS-492 1100-1120	89	0.89	3.9	4.3	2	661.3	0.25	1.28	0.23	2.4	8.8	13.47	2.5	3.3	31	0.3	25.1	0.13	778	2.84	0.127	4.8	0.044	18.94	0.11	1.39	0.4	305.9	0.03	5.2	0.012	0.15	0.9	8	0.4	77.8
RS-492 1120-1140	114	1.31	4.4	5	< 1	858.4	0.28	1.52	0.28	1.8	8	7.61	1.88	3.9	42	0.35	27.9	0.16	821	1.66	0.12	2.5	0.041	15.77	0.23	1.79	0.7	392.2	0.04	4.5	0.005	0.19	0.8	3	< .2	77.1
RS-492 1140-1160	134	1	3.4	9.6	< 1	567.8	0.38	1.29	0.29	1.6	5.8	7.66	1.78	4	53	0.41	30.5	0.12	732	1.57	0.057	2.5	0.044	21.96	0.17	1.63	0.6	145.8	0.02	5.2	0.008	0.22	0.9	3	0.2	82.5
RS-492 1160-1180	116	0.9	2.2	5.1	< 1	383.7	0.35	2.09	0.39	1.8	6.4	7.84	1.76	3.7	23	0.35	29.3	0.1	1037	1.46	0.048	2.5	0.043	21.74	0.09	1.12	0.3	192.5	< .02	4.6	0.007	0.16	0.8	4	0.3	80
RS-492 1180-1200	389	0.86	6	3.7	< 1	206	0.39	0.7	0.22	1.7	1.6	5.38	1.68	3.9	61	0.28	32	0.08	658	1.09	0.051	1.2	0.041	29.28	0.49	3.33	0.7	146.4	0.03	3.8	0.001	0.18	1	< 2	0.3	86.6
RS-492 1200-1220	314	0.93	7.2	4.1	< 1	383.7	0.3	1.28	0.18	1.2	5.2	4.52	1.61	3.4	78	0.3	29.1	0.1	732	0.85	0.036	0.7	0.037	29.28	0.52	2.18	1.2	161.7	< .02	2.3	< .001	0.15	0.6	< 2	0.2	89
RS-492 1220-1240	111	0.78	1.9	6.5	< 1	200.7	0.15	1.9	0.22	1.6	5.9	9.63	2.11	3.5	33	0.35	29.5	0.08	978	1.89	0.047	2	0.047	22.62	0.06	1.07	0.3	162.1	0.02	5	0.011	0.14	1.4	8	0.8	86.5
RS-492 1240-1260	90	1.01	1.6	2.6	< 1	620.5	0.18	2.61	0.3	3.2	7.6	7.87	1.94	3.9	16	0.33	34.3	0.13	1277	1.92	0.041	1.7	0.05	15.92	0.06	0.78	0.3	248.3	0.02	4.4	0.006	0.12	1.1	5	0.4	82.3
RS-492 1260-1280	210	0.67	6.7	10.9	1	174.4	0.36	1.1	0.13	1.3	3.7	8.73	2.1	2.4	87	0.29	22.4	0.05	609	1.9	0.029	1.6	0.038	32.77	1.27	3.86	1.2	152.6	0.03	3.9	0.003	0.29	1.1	2	0.7	64.4
RS-492 1280-1300	6680	0.51	53.3	273.6	< 1	60.2	0.29	0.22	0.12	1.8	3.8	12.1	3.29	1.8	278	0.22	16.6	0.01	124	3.76	0.012	2.1	0.025	30.18	3.43	708.53	163	72.5	< .02	4	< .001	0.89	0.6	2	0.8	84.8
RS-492 1300-1320	512	0.7	16.7	40.7	< 1	77	0.07	0.71	0.16	1.9	4.8	9.24	2.86	2.8	189	0.27	21	0.03	469	2.64	0.02	1.7	0.037	24.43	2.6	69.54	17.2	107.1	< .02	5.6	0.001	0.61	1	2	0.5	100.7
STANDARD BS2	236	1.8	61.1	297.3	6	156.2	11.96	0.56	10.94	12.2	162.1	131.32	3.15	5.6	237	0.16	17.3	0.63	853	16.47	0.036	37.2	0.053	34.89	0.03	9.97	2.4	29.9	1.97	4.1	0.094	2.03	20.1	74	6.4	165.5
RS-492 1320-1340	244	0.87	10.4	12.2	2	127.7	0.07	1.81	0.15	1.7	8.4	12.28	2.45	3.2	104	0.31	18.6	0.06	1063	2.19	0.029	1.7	0.028	28.96	0.95	22.79	5.4	124.7	0.02	6	0.005	0.2	0.8	3	0.6	86.4
RS-492 1340-1360	96	0.71	2.2	3.4	< 1	179.7	0.04	2.41	0.18	0.9	5.6	7.8	2.43	2.7	119	0.38	27.3	0.06	1125	1.8	0.032	0.9	0.088	21.41	0.1	9.64	1.6	169.7	0.02	9.6	0.022	0.11	1.8	3	1.4	78.6

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CLIENT REF: KURT ALLEN
AAL REF: SP56474
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	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
RS-492 1360-1380	87	0.64	3	3.6	< 1	216.6	0.04	2.33	0.14	1.1	6.1	7.83	2.64	2.4	40	0.27	28.8	0.07	1043	1.6	0.045	1	0.021	17.1	0.09	4.14	0.8	165.8	0.02	10.5	0.028	0.08	1.3	3	1.3	71.6
RS-492 1380-1400	110	0.58	3	2.8	3	192.3	0.04	1.85	0.13	0.9	7.6	9.72	2.64	2.6	39	0.27	27.6	0.06	1139	1.59	0.049	1.7	0.021	20.4	0.08	3.97	0.8	133.3	< .02	10.5	0.028	0.09	1.2	4	1.4	71.5
RS-492 1400-1420	102	0.6	3.9	4.4	< 1	410.5	0.05	1.94	0.19	0.9	6.2	7.73	2.78	2.4	50	0.31	25.2	0.07	1139	1.41	0.044	1.4	0.019	21.75	0.19	2.43	0.5	148.4	< .02	9	0.025	0.13	1.1	3	1.5	72.7
RS-492 1420-1440	109	0.59	4.3	4.4	2	364.3	0.06	2.02	0.26	1.1	5.8	10.4	2.76	2.4	118	0.29	23.3	0.07	1207	1.62	0.041	2	0.025	18.34	0.22	2.98	0.5	133.1	< .02	8	0.027	0.16	1	3	1.4	73.4
RS-492 1440-1460	108	0.72	5.8	2.4	< 1	216.2	0.02	1.88	0.14	1.7	7.1	12.14	2.42	2.6	125	0.39	21.1	0.06	2512	1.95	0.033	3	0.025	17.91	0.73	2.97	0.2	134.5	< .02	6.5	0.002	0.2	0.6	3	0.4	70.8
RS-492 1460-1480	1776	1	56.7	106.4	< 1	87.3	0.05	0.56	0.12	2.9	7.6	6.7	2.27	2.8	214	0.42	19.3	0.04	257	2.26	0.022	1.7	0.038	39.21	2.55	10.23	8.2	136.3	< .02	4.5	< .001	0.34	0.5	< 2	1.2	91.9
RS-492 1480-1500	173	0.83	6.7	11	< 1	140.3	0.12	3.07	0.14	1.5	5.3	4.94	1.55	2.4	62	0.4	23.8	0.06	1291	0.88	0.03	< .1	0.037	46.69	0.95	4.18	1.2	212	< .02	2.9	0.001	0.26	0.7	< 2	0.3	74.6
RS-492 1500-1520	157	0.93	4.5	4.7	< 1	218.4	0.19	2.76	0.11	1.5	4.2	3.5	1.67	2.6	112	0.41	29.1	0.06	1248	0.73	0.031	< .1	0.038	30.13	0.85	3.61	0.8	230.2	0.03	4	0.002	0.22	1	< 2	0.5	68.7
RS-492 1520-1540	261	1.25	12.3	15.5	< 1	200.3	0.17	0.73	0.1	2.9	8.3	8.78	2.35	3.7	269	0.37	26.2	0.07	441	3.42	0.02	2.4	0.035	30.67	1.22	4.99	2.6	147.9	< .02	3.8	0.001	0.24	0.7	2	0.9	97.9
RS-492 1540-1560	164	1.15	5.5	7.4	< 1	385.7	0.13	2.1	0.12	2.4	6.6	10.05	2.27	3.9	80	0.47	30.8	0.09	1236	1.73	0.025	1.7	0.04	30.21	0.58	4.29	1.1	162.6	< .02	3.9	0.001	0.26	0.8	2	0.2	79.8
RS-492 1560-1580	277	1.14	14.5	21.4	< 1	132.4	0.21	0.98	0.11	2	8	11.62	3.14	3.6	504	0.43	22.6	0.06	866	2.25	0.018	2.9	0.033	29.61	2.12	12.34	3.2	137	< .02	3.8	0.001	0.37	0.8	2	0.6	89.5
RS-492 1580-1600	131	0.89	3.1	7.3	< 1	138	0.56	2.78	0.13	1	5.8	9.92	2.09	2.7	80	0.47	28.2	0.05	1958	1.59	0.019	1.2	0.043	22.37	0.3	3.62	0.5	161.9	< .02	5.3	0.003	0.17	1.5	2	0.5	66.3
RS-492 1600-1620	517	0.96	24.9	40.8	< 1	123.5	0.46	0.66	0.09	1.5	5.9	10.08	2.4	2.9	437	0.43	20.3	0.03	496	2.5	0.017	2.1	0.061	27.02	2.05	12.1	3.8	118	< .02	4.4	< .001	0.57	1.4	2	0.9	87
RS-492 1620-1640	1703	0.86	42.8	62.3	< 1	84.1	0.03	0.41	0.17	1.3	5	6.85	2.49	2.4	122	0.4	17.5	0.03	176	1.46	0.015	1.7	0.035	45.23	2.84	13.71	9.8	115.2	< .02	4.4	< .001	0.36	1.8	< 2	1.7	99.1
RS-492 1640-1660	204	0.68	6.1	9	1	130	< .02	1.89	0.11	1.2	4.4	10.42	2.08	2.3	67	0.4	28.2	0.03	976	2.46	0.016	1.8	0.034	23.7	1.34	6.87	1.4	127.6	< .02	5.5	0.001	0.27	0.9	< 2	0.5	87.3
RS-492 1660-1680	118	0.87	2.5	3.7	< 1	218.9	0.02	2.44	0.12	1.2	8	11.64	2.43	3.1	49	0.46	26.3	0.05	939	2.31	0.019	1.9	0.04	21.98	0.37	3.31	0.8	138.9	< .02	7.8	0.005	0.16	1.9	2	0.6	67.2
RS-492 1680-1700	357	1.03	19.4	26.9	< 1	156.6	0.03	1.29	0.06	1.4	4.9	11.26	2.42	3.2	381	0.46	18	0.04	863	2.5	0.015	2.2	0.025	29.46	1.57	13.43	1.9	123.1	< .02	4.9	< .001	0.35	0.7	2	0.4	89.7
RS-492 1700-1720	1963	0.88	28.3	73	< 1	77.6	< .02	0.53	0.03	1.3	7	12.64	2.6	2.4	487	0.39	19.7	0.02	853	43.98	0.012	3	0.028	33.87	2.25	14.69	4.2	104.8	< .02	6.1	< .001	1.09	0.6	2	0.9	89.6
RS-492 1720-1740	2414	0.5	61	82.6	< 1	78.4	0.02	0.19	0.09	1	15	21.69	2.59	1.9	198	0.3	34.3	0.02	213	18.49	0.008	5.1	0.008	35.83	1.43	13.85	11	49.8	< .02	9.2	< .001	0.48	0.9	3	1.6	71.2
RS-492 1740-1760	521	0.6	14.8	20.7	< 1	164.4	0.04	0.95	0.18	1.2	14.7	14.97	2.11	2.3	90	0.38	33.2	0.02	646	5.86	0.013	4.2	0.008	28.69	1.17	10.28	4.8	76.1	< .02	12.4	< .001	0.28	1.7	3	1.2	81.5
RS-492 1760-1780	453	0.68	18.9	21.6	< 1	158.9	0.09	0.76	0.14	1.4	16.3	15.93	2.5	2.7	160	0.36	35.6	0.03	491	4.69	0.024	4.7	0.013	27.43	1.17	8	3.7	86.2	0.02	11.5	0.001	0.26	1.6	4	1.1	81.2
RS-492 1780-1800	515	0.69	14	40.4	< 1	70	0.04	0.64	0.23	1.3	14.9	11.94	2	2.6	134	0.39	41.2	0.02	487	3.89	0.022	3.7	0.013	33.66	1.36	5.69	4	89	< .02	13.8	< .001	0.25	2	2	1.1	98.7
RS-492 1800-1820	792	0.98	21.9	54.5	< 1	130.4	0.11	0.78	0.32	2.1	17.6	12.79	2.48	3.7	226	0.39	34.4	0.07	581	4.57	0.036	4.1	0.018	30.58	1.97	12.42	6.9	119.9	< .02	18.7	0.001	0.39	2.2	2	0.3	127.2
RS-492 1820-1840	383	0.87	11.5	10.6	< 1	152	0.07	0.79	0.19	1.6	12.1	14.78	2.14	4.3	79	0.4	42	0.05	807	3.68	0.063	3.8	0.012	28.16	0.71	4.01	1.7	85.1	< .02	15.7	0.001	0.22	1.8	3	0.6	96.5
RS-492 1840-1860	181	0.89	3.6	3.7	< 1	55	0.02	0.65	0.14	1.7	13.4	17.07	2.36	6.1	27	0.43	44.6	0.03	783	4.14	0.08	4.7	0.007	25.91	0.17	1.81	0.6	60.4	< .02	15.7	0.001	0.12	1.6	4	1.3	88.3
RS-492 1860-1880	581	0.77	7.3	10	< 1	27.9	0.03	0.64	0.19	1.8	18.1	16.73	2.43	4.3	39	0.44	42.4	0.02	720	6.48	0.07	5.7	0.008	29.92	0.76	2.89	2.4	73.3	< .02	14.8	0.001	0.18	1.6	4	1.7	86.1
RS-492 1880-1900	531	0.54	6.7	8.4	< 1	23.8	< .02	0.53	0.16	1.6	17.1	18.2	2.6	3.2	29	0.34	43.4	0.01	608	4.21	0.066	6	0.007	28.6	0.74	2.32	2.1	60	< .02	14.3	0.001	0.16	1.4	3	1.3	79.1
RS-492 1900-1920	790	0.5	14.2	18.5	< 1	36.1	< .02	0.48	0.16	1.5	13.8	14.17	2.15	2.3	21	0.37	42	0.01	492	3.64	0.057	4.8	0.007	28.87	1.22	3.46	3.5	70.8	< .02	15	< .001	0.21	1.3	3	1.1	88
RS-492 1920-1940	1043	1.03	9.2	56.5	< 1	48.2	0.04	0.69	0.12	2.7	29.1	17.29	2.64	4.9	33	0.59	38.6	0.02	600	7.07	0.083	7	0.007	30.45	1.12	3.52	2.2	74.5	< .02	14.1	0.001	0.29	1.6	4	2.7	86.8
RS-492 1940-1960	923	0.74	10.1	37.2	< 1	70.5	0.03	0.74	0.14	2.6	37	16.84	2.33	3.3	46	0.44	37.6	0.02	628	8.31	0.066	6.3	0.008	29.98	1.36	4.23	3.7	83.6	< .02	12.7	0.001	0.24	1.3	2	3	90.8
RS-492 1960-1980	11331	1.06	19	48.6	< 1	120.3	0.06	0.52	0.18	1.7	11.7	11.82	2.14	3.7	171	0.43	34.5	0.07	391	4.44	0.061	3.3	0.013	29.72	1.5	15.15	6.9	78.8	< .02	11.2	0.001	0.35	1.3	3	0.5	86.7
STANDARD DS2	236	1.81	61.2	218.6	1	163.6	11.71	0.56	11.08	13.2	176	132.16	3.24	6.6	249	0.17	17.3	0.63	877	14.72	0.032	36.8	0.081	34.4	0.01	9.78	2.4	30.4	1.95	4	0.098	1.95	19.8	78	8.8	186.7
RS-492 1980-2000	371	0.7	3.4	5	3	27.7	< .02	0.66	0.13	1.6	12.2	13.84	1.98	4	19	0.41	39.5	0.02	687	3.74	0.077	3.1	0.008	29.33	0.64	2.4	1.3	49.2	< .02	13.2	0.001	0.13	1.1	2	1.6	81
RS-492 2000-2020	362	0.75	4.3	5.9	1	28.8	< .02	0.65	0.1	2.2	16.8	13.1	1.95	4.2	16	0.44	39.1	0.02	752	4.52	0.083	3.6	0.006	29.29	0.74	2.1	1.4	52.1	< .02	12.9	0.001	0.13	1.2	2	2.7	78.2
RS-492 2020-2040	731	0.67	9.4	26.1	2	19.5	< .02	0.29	0.11	1.3	10.8	7.8	1.73	2.5	24	0.41	35	0.01	262	2.94	0.045	2.5	0.006	32.21	1.37	3.79	4.3	67.5	< .02	12	< .001	0.19	1.3	< 2	1.5	77.9

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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	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
RS-492 2040-2065	357	0.74	3.9	6.3	3	26.9	0.02	0.57	0.13	2.6	16.2	16.35	2.07	4.7	12	0.43	39.7	0.02	636	5.15	0.089	4.7	0.006	29.06	0.54	2.75	1	52.1	< .02	14.8	0.001	0.13	1.7	3	3	85.2
89653	58053	2.25	120.3	5995.8	6	101.8	0.18	0.9	1.7	3.8	7.2	22.33	2.58	7.5	404	0.89	15.8	0.13	321	6.45	0.084	3.4	0.056	31.17	2.56	22.29	23.6	66.1	< .02	3.9	0.004	0.45	1.6	8	0.4	87.9
STANDARD DS2	260	1.7	58.8	169.4	6	164	11.2	0.52	10.03	11.7	164.8	131.49	3.06	6.3	234	0.16	16.1	0.59	812	14.48	0.033	35	0.089	34.09	0.01	9.65	2.2	27.9	1.83	3.8	0.091	1.76	19.4	73	7.3	157.7