6000 0716

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-489-99
AUTHOR	K. Allen; L. Macedon; D. Schoell
DATE OF DOC(S)	2000
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Mining Co. LLC; Hecla Mining Co.
COMMODITY If not obvious	gold; silver
NOTES	Geochemistry; receipts; assay; total depth 1915'; directional survey 81p.

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 4/24/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

RS-489

60000716
4010

American Assay Laboratories

INVOICE

6000 0716

Remit To: P.O. Box1153
Reno, Nevada 8951
Phone NO.: 702-356-060
Fax No.: 702-356-141

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

(775) 356-0606

INVOICE NO: SP 0056013-IN
INVOICE DATE: 03/03/00

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 NO.	TERMS
RS-489	EQUINOX	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
384	SAMPLES RECEIVED	.00	.00
1	NO PREPARATION REQUIRED	.00	.00
383	DRY/JAW CRUSH ENTIRE SAMPLE	4.60	1,761.80
383	SPLITTING CHARGE	3.00	1,149.00
383	RING/PUCK MILL	2.00	766.00
384	Au (1 A.T. FIRE ASSAY)	8.00	3,072.00
53	Au (1 A.T. FIRE ASSAY) RE-RUN	8.00	424.00
384	HYDROCHLORIC/NITRIC DIGESTION	2.00	768.00
384	Ag ANALYSES	1.00	384.00
10	Au ANALYSES/GRAVIMETRIC	8.75	87.50
383	COMPOSITE CHARGE	1.25	478.75
97	MULTI-ELEMENT ICP PACKAGE	13.75	1,333.75

86-2510-477

KDA

NET INVOICE:	10,224.80
LESS DISCOUNT:	3,578.68
FREIGHT:	.00
INVOICE TOTAL:	6,646.12

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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-489 RECEIVED : 10 FEB 2000

No. SAMPLES : 384 REPORTED : 6 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
AgGRAV	GRAV	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0000-0005	9	7	<0.001	<0.001	<0.5	<0.02	
RS-489 0005-0010	8		<0.001		<0.5	<0.02	
RS-489 0010-0015	10		<0.001		<0.5	<0.02	
RS-489 0015-0020	11		<0.001		<0.5	<0.02	
RS-489 0020-0025	5		<0.001		<0.5	<0.02	
RS-489 0025-0030	<5		<0.001		<0.5	<0.02	
RS-489 0030-0035	<5		<0.001		<0.5	<0.02	
RS-489 0035-0040	<5		<0.001		<0.5	<0.02	
RS-489 0040-0045	<5		<0.001		<0.5	<0.02	
RS-489 0045-0050	<5		<0.001		<0.5	<0.02	
RS-489 0050-0055	<5		<0.001		<0.5	<0.02	
RS-489 0055-0060	<5		<0.001		<0.5	<0.02	
RS-489 0060-0065	<5		<0.001		<0.5	<0.02	
RS-489 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0070-0075	<5		<0.001		<0.5	<0.02	
RS-489 0075-0080	<5		<0.001		<0.5	<0.02	
RS-489 0080-0085	<5		<0.001		<0.5	<0.02	
RS-489 0085-0090	<5		<0.001		<0.5	<0.02	
RS-489 0090-0095	<5		<0.001		<0.5	<0.02	
RS-489 0095-0100	7		<0.001		<0.5	<0.02	
RS-489 0100-0105	<5		<0.001		<0.5	<0.02	
RS-489 0105-0110	8		<0.001		<0.5	<0.02	
RS-489 0110-0115	18		<0.001		0.6	<0.02	
RS-489 0115-0120	7		<0.001		<0.5	<0.02	
RS-489 0120-0125	8		<0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0125-0130	<5		<0.001		<0.5	<0.02	
RS-489 0130-0135	<5		<0.001		<0.5	<0.02	
RS-489 0135-0140	<5		<0.001		<0.5	<0.02	
RS-489 0140-0145	10		<0.001		<0.5	<0.02	
RS-489 0145-0150	9		<0.001		<0.5	<0.02	
RS-489 0150-0155	<5		<0.001		<0.5	<0.02	
RS-489 0155-0160	<5		<0.001		<0.5	<0.02	
RS-489 0160-0165	<5		<0.001		<0.5	<0.02	
RS-489 0165-0170	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0170-0175	<5		<0.001		<0.5	<0.02	
RS-489 0175-0180	<5		<0.001		<0.5	<0.02	
RS-489 0180-0185	18		<0.001		<0.5	<0.02	
RS-489 0185-0190	37		0.001		<0.5	<0.02	
RS-489 0190-0195	8		<0.001		<0.5	<0.02	
RS-489 0195-0200	10		<0.001		<0.5	<0.02	
RS-489 0200-0205	75		0.002		<0.5	<0.02	
RS-489 0205-0210	71		0.002		<0.5	<0.02	
RS-489 0210-0215	39		0.001		<0.5	<0.02	
RS-489 0215-0220	35		0.001		<0.5	<0.02	
RS-489 0220-0225	29		<0.001		<0.5	<0.02	
RS-489 0225-0230	60		0.002		0.8	0.02	
RS-489 0230-0235	68	72	0.002	0.002	0.7	0.02	
RS-489 0235-0240	39		0.001		<0.5	<0.02	
RS-489 0240-0245	60		0.002		0.8	0.02	
RS-489 0245-0250	61		0.002		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0250-0255	13		<0.001		<0.5	<0.02	
RS-489 0255-0260	112	87	0.003	0.003	0.7	0.02	
RS-489 0260-0265	53		0.002		<0.5	<0.02	
RS-489 0265-0270	14		<0.001		<0.5	<0.02	
RS-489 0270-0275	7		<0.001		<0.5	<0.02	
RS-489 0275-0280	10		<0.001		<0.5	<0.02	
RS-489 0280-0285	40		0.001		<0.5	<0.02	
RS-489 0285-0290	44	64	0.001	0.002	<0.5	<0.02	
RS-489 0290-0295	63		0.002		<0.5	<0.02	
RS-489 0295-0300	110	121	0.003	0.004	1.0	0.03	
RS-489 0300-0305	75		0.002		<0.5	<0.02	
RS-489 0305-0310	96		0.003		0.7	0.02	
RS-489 0310-0315	62		0.002		0.5	<0.02	
RS-489 0315-0320	63		0.002		0.5	<0.02	
RS-489 0320-0325	65		0.002		1.1	0.03	
RS-489 0325-0330	38		0.001		<0.5	<0.02	
RS-489 0330-0335	37		0.001		<0.5	<0.02	
RS-489 0335-0340	69		0.002		<0.5	<0.02	
RS-489 0340-0345	41		0.001		<0.5	<0.02	
RS-489 0345-0350	170	163	0.005	0.005	0.6	<0.02	
RS-489 0350-0355	154	170	0.004	0.005	0.5	<0.02	
RS-489 0355-0360	5	5	<0.001	<0.001	<0.5	<0.02	
RS-489 0360-0365	142	142	0.004	0.004	<0.5	<0.02	
RS-489 0365-0370	27		<0.001		<0.5	<0.02	
RS-489 0370-0375	35		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0375-0380	106	39	0.003	0.001	0.8	0.02	
RS-489 0380-0385	40		0.001		1.2	0.04	
RS-489 0385-0390	35		0.001		0.5	<0.02	
RS-489 0390-0395	37		0.001		0.7	0.02	
RS-489 0395-0400	44		0.001		1.0	0.03	
RS-489 0400-0405	30		<0.001		0.5	<0.02	
RS-489 0405-0410	35		0.001		<0.5	<0.02	
RS-489 0410-0415	15		<0.001		<0.5	<0.02	
RS-489 0415-0420	<5		<0.001		<0.5	<0.02	
RS-489 0420-0425	7		<0.001		<0.5	<0.02	
RS-489 0425-0430	14	20	<0.001	<0.001	<0.5	<0.02	
RS-489 0430-0435	50		0.001		<0.5	<0.02	
RS-489 0435-0440	100	93	0.003	0.003	<0.5	<0.02	
RS-489 0440-0445	25		<0.001		<0.5	<0.02	
RS-489 0445-0450	43		0.001		<0.5	<0.02	
RS-489 0450-0455	75		0.002		<0.5	<0.02	
RS-489 0455-0460	88		0.003		<0.5	<0.02	
RS-489 0460-0465	62		0.002		1.0	0.03	
RS-489 0465-0470	45		0.001		<0.5	<0.02	
RS-489 0470-0475	95	98	0.003	0.003	<0.5	<0.02	
RS-489 0475-0480	67		0.002		0.5	<0.02	
RS-489 0480-0485	10		<0.001		<0.5	<0.02	
RS-489 0485-0490	15		<0.001		<0.5	<0.02	
RS-489 0490-0495	33		<0.001		0.5	<0.02	
RS-489 0495-0500	64		0.002		0.8	0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0500-0505	16		<0.001		<0.5	<0.02	
RS-489 0505-0510	<5		<0.001		<0.5	<0.02	
RS-489 0510-0515	27	36	<0.001	0.001	<0.5	<0.02	
RS-489 0515-0520	26		<0.001		<0.5	<0.02	
RS-489 0520-0525	20		<0.001		<0.5	<0.02	
RS-489 0525-0530	23		<0.001		<0.5	<0.02	
RS-489 0530-0535	17		<0.001		<0.5	<0.02	
RS-489 0535-0540	35		0.001		<0.5	<0.02	
RS-489 0540-0545	68		0.002		<0.5	<0.02	
RS-489 0545-0550	74		0.002		<0.5	<0.02	
RS-489 0550-0555	64		0.002		<0.5	<0.02	
RS-489 0555-0560	52		0.002		0.5	<0.02	
RS-489 0560-0565	72		0.002		<0.5	<0.02	
RS-489 0565-0570	83		0.002		<0.5	<0.02	
RS-489 0570-0575	22		<0.001		<0.5	<0.02	
RS-489 0575-0580	26		<0.001		<0.5	<0.02	
RS-489 0580-0585	5	9	<0.001	<0.001	<0.5	<0.02	
RS-489 0585-0590	17		<0.001		<0.5	<0.02	
RS-489 0590-0595	14		<0.001		<0.5	<0.02	
RS-489 0595-0600	11		<0.001		<0.5	<0.02	
RS-489 0600-0605	10		<0.001		<0.5	<0.02	
RS-489 0605-0610	28		<0.001		<0.5	<0.02	
RS-489 0610-0615	27		<0.001		<0.5	<0.02	
RS-489 0615-0620	135	101	0.004	0.003	<0.5	<0.02	
RS-489 0620-0625	290	298	0.008	0.009	1.4	0.04	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0625-0630	108	132	0.003	0.004	0.5	<0.02	
RS-489 0630-0635	132	120	0.004	0.004	0.7	0.02	
RS-489 0635-0640	43		0.001		<0.5	<0.02	
RS-489 0640-0645	22		<0.001		<0.5	<0.02	
RS-489 0645-0650	38		0.001		<0.5	<0.02	
RS-489 0650-0655	27		<0.001		<0.5	<0.02	
RS-489 0655-0660	<5		<0.001		<0.5	<0.02	
RS-489 0660-0665	16		<0.001		<0.5	<0.02	
RS-489 0665-0670	23		<0.001		<0.5	<0.02	
RS-489 0670-0675	8		<0.001		<0.5	<0.02	
RS-489 0675-0680	6		<0.001		<0.5	<0.02	
RS-489 0680-0685	8	10	<0.001	<0.001	<0.5	<0.02	
RS-489 0685-0690	7		<0.001		<0.5	<0.02	
RS-489 0690-0695	43		0.001		<0.5	<0.02	
RS-489 0695-0700	119	204	0.003	0.006	1.2	0.04	
RS-489 0700-0705	90		0.003		0.8	0.02	
RS-489 0705-0710	60		0.002		<0.5	<0.02	
RS-489 0710-0715	74		0.002		0.5	<0.02	
RS-489 0715-0720	42		0.001		<0.5	<0.02	
RS-489 0720-0725	38		0.001		<0.5	<0.02	
RS-489 0725-0730	34		<0.001		<0.5	<0.02	
RS-489 0730-0735	36		0.001		<0.5	<0.02	
RS-489 0735-0740	73		0.002		<0.5	<0.02	
RS-489 0740-0745	61	70	0.002	0.002	<0.5	<0.02	
RS-489 0745-0750	48		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	AgGRAV GRAV OPT
RS-489 0750-0755	13		<0.001		<0.5	<0.02	
RS-489 0755-0760	28		<0.001		<0.5	<0.02	
RS-489 0760-0765	13		<0.001		<0.5	<0.02	
RS-489 0765-0770	36		0.001		<0.5	<0.02	
RS-489 0770-0775	42		0.001		<0.5	<0.02	
RS-489 0775-0780	40		0.001		<0.5	<0.02	
RS-489 0780-0785	30		<0.001		<0.5	<0.02	
RS-489 0785-0790	42		0.001		<0.5	<0.02	
RS-489 0790-0795	180	188	0.005	0.005	<0.5	<0.02	
RS-489 0795-0800	73	76	0.002	0.002	<0.5	<0.02	
RS-489 0800-0805	81		0.002		<0.5	<0.02	
RS-489 0805-0810	34		<0.001		<0.5	<0.02	
RS-489 0810-0815	38		0.001		<0.5	<0.02	
RS-489 0815-0820	43		0.001		<0.5	<0.02	
RS-489 0820-0825	85		0.002		<0.5	<0.02	
RS-489 0825-0830	103	100	0.003	0.003	1.0	0.03	
RS-489 0830-0835	110	112	0.003	0.003	1.4	0.04	
RS-489 0835-0840	117	106	0.003	0.003	0.6	<0.02	
RS-489 0840-0845	40		0.001		<0.5	<0.02	
RS-489 0845-0850	39		0.001		0.6	<0.02	
RS-489 0850-0855	104	81	0.003	0.002	1.3	0.04	
RS-489 0855-0860	58		0.002		<0.5	<0.02	
RS-489 0860-0865	113	131	0.003	0.004	1.3	0.04	
RS-489 0865-0870	99	99	0.003	0.003	1.3	0.04	
RS-489 0870-0875	90		0.003		0.8	0.02	

AMERICAN ASSAY LABORATORIES

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REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0875-0880	72		0.002		<0.5	<0.02	
RS-489 0880-0885	62		0.002		0.8	0.02	
RS-489 0885-0890	72		0.002		1.7	0.05	
RS-489 0890-0895	36		0.001		1.5	0.04	
RS-489 0895-0900	32		<0.001		1.5	0.04	
RS-489 0900-0905	11		<0.001		1.5	0.04	
RS-489 0905-0910	5		<0.001		1.2	0.04	
RS-489 0910-0915	<5		<0.001		3.0	0.09	
RS-489 0915-0920	<5		<0.001		14.2	0.41	
RS-489 0920-0925	<5		<0.001		<0.5	<0.02	
RS-489 0925-0930	<5		<0.001		<0.5	<0.02	
RS-489 0930-0935	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0935-0940	<5		<0.001		<0.5	<0.02	
RS-489 0940-0945	<5		<0.001		<0.5	<0.02	
RS-489 0945-0950	<5		<0.001		<0.5	<0.02	
RS-489 0950-0955	<5		<0.001		<0.5	<0.02	
RS-489 0955-0960	<5		<0.001		<0.5	<0.02	
RS-489 0960-0965	<5		<0.001		<0.5	<0.02	
RS-489 0965-0970	<5		<0.001		<0.5	<0.02	
RS-489 0970-0975	<5		<0.001		<0.5	<0.02	
RS-489 0975-0980	<5		<0.001		<0.5	<0.02	
RS-489 0980-0985	<5		<0.001		<0.5	<0.02	
RS-489 0985-0990	<5		<0.001		<0.5	<0.02	
RS-489 0990-0995	<5		<0.001		<0.5	<0.02	
RS-489 0995-1000	<5		<0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 1000-1005	<5		<0.001		<0.5	<0.02	
RS-489 1005-1010	<5		<0.001		<0.5	<0.02	
RS-489 1010-1015	<5		<0.001		<0.5	<0.02	
RS-489 1015-1020	<5		<0.001		<0.5	<0.02	
RS-489 1020-1025	<5		<0.001		<0.5	<0.02	
RS-489 1025-1030	<5		<0.001		<0.5	<0.02	
RS-489 1030-1035	7		<0.001		2.2	0.06	
RS-489 1035-1040	<5		<0.001		0.5	<0.02	
RS-489 1040-1045	<5		<0.001		0.5	<0.02	
RS-489 1045-1050	6		<0.001		1.7	0.05	
RS-489 1050-1055	<5		<0.001		1.0	0.03	
RS-489 1055-1060	11		<0.001		0.8	0.02	
RS-489 1060-1065	92		0.003		2.2	0.06	
RS-489 1065-1070	208	184	0.006	0.005	32.7	0.95	0.79
RS-489 1070-1075	188	144	0.005	0.004	7.2	0.21	
RS-489 1075-1080	173	140	0.005	0.004	8.4	0.25	
RS-489 1080-1085	155	153	0.005	0.004	6.2	0.18	
RS-489 1085-1090	143	91	0.004	0.003	2.7	0.08	
RS-489 1090-1095	63		0.002		1.0	0.03	
RS-489 1095-1100	66		0.002		2.3	0.07	
RS-489 1100-1105	77		0.002		2.4	0.07	
RS-489 1105-1110	52		0.002		1.4	0.04	
RS-489 1110-1115	26		<0.001		0.5	<0.02	
RS-489 1115-1120	16		<0.001		<0.5	<0.02	
RS-489 1120-1125	6		<0.001		5.6	0.16	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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REFERENCE : RS-489

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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	AgGRAV GRAV OPT
RS-489 1125-1130	<5		<0.001		<0.5	<0.02	
RS-489 1130-1135	<5		<0.001		<0.5	<0.02	
RS-489 1135-1140	<5		<0.001		<0.5	<0.02	
RS-489 1140-1145	<5		<0.001		<0.5	<0.02	
RS-489 1145-1150	<5		<0.001		<0.5	<0.02	
RS-489 1150-1155	<5		<0.001		<0.5	<0.02	
RS-489 1155-1160	<5		<0.001		<0.5	<0.02	
RS-489 1160-1165	<5		<0.001		<0.5	<0.02	
RS-489 1165-1170	<5		<0.001		<0.5	<0.02	
RS-489 1170-1175	<5		<0.001		<0.5	<0.02	
RS-489 1175-1180	<5		<0.001		<0.5	<0.02	
RS-489 1180-1185	<5		<0.001		<0.5	<0.02	
RS-489 1185-1190	<5		<0.001		0.7	0.02	
RS-489 1190-1195	<5		<0.001		<0.5	<0.02	
RS-489 1195-1200	<5		<0.001		<0.5	<0.02	
RS-489 1200-1205	6		<0.001		<0.5	<0.02	
RS-489 1205-1210	7		<0.001		<0.5	<0.02	
RS-489 1210-1215	5		<0.001		<0.5	<0.02	
RS-489 1215-1220	<5		<0.001		<0.5	<0.02	
RS-489 1220-1225	5		<0.001		<0.5	<0.02	
RS-489 1225-1230	<5		<0.001		0.5	<0.02	
RS-489 1230-1235	<5		<0.001		<0.5	<0.02	
RS-489 1235-1240	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1240-1245	<5		<0.001		<0.5	<0.02	
RS-489 1245-1250	<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	AgGRAV GRAV OPT
RS-489 1250-1255	<5		<0.001		<0.5	<0.02	
RS-489 1255-1260	<5		<0.001		<0.5	<0.02	
RS-489 1260-1265	<5		<0.001		<0.5	<0.02	
RS-489 1265-1270	7		<0.001		<0.5	<0.02	
RS-489 1270-1275	11		<0.001		<0.5	<0.02	
RS-489 1275-1280	8		<0.001		<0.5	<0.02	
RS-489 1280-1285	6		<0.001		<0.5	<0.02	
RS-489 1285-1290	<5		<0.001		<0.5	<0.02	
RS-489 1290-1295	<5		<0.001		<0.5	<0.02	
RS-489 1295-1300	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1300-1305	<5		<0.001		<0.5	<0.02	
RS-489 1305-1310	<5		<0.001		<0.5	<0.02	
RS-489 1310-1315	<5		<0.001		<0.5	<0.02	
RS-489 1315-1320	6		<0.001		0.5	<0.02	
RS-489 1320-1325	10		<0.001		<0.5	<0.02	
RS-489 1325-1330	164	178	0.005	0.005	2.2	0.06	
RS-489 1330-1335	211	202	0.006	0.006	4.1	0.12	
RS-489 1335-1340	160	194	0.005	0.006	2.7	0.08	
RS-489 1340-1345	80		0.002		1.4	0.04	
RS-489 1345-1350	21		<0.001		0.7	0.02	
RS-489 1350-1355	30		<0.001		<0.5	<0.02	
RS-489 1355-1360	34		<0.001		<0.5	<0.02	
RS-489 1360-1365	17		<0.001		<0.5	<0.02	
RS-489 1365-1370	24		<0.001		<0.5	<0.02	
RS-489 1370-1375	45		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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REFERENCE : RS-489

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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	AgGRAV GRAV OPT
RS-489 1375-1380	18		<0.001		<0.5	<0.02	
RS-489 1380-1385	66		0.002		1.5	0.04	
RS-489 1385-1390	118	146	0.003	0.004	4.0	0.12	
RS-489 1390-1395	50		0.001		0.5	<0.02	
RS-489 1395-1400	44		0.001		<0.5	<0.02	
RS-489 1400-1405	29	30	<0.001	<0.001	<0.5	<0.02	
RS-489 1405-1410	71		0.002		<0.5	<0.02	
RS-489 1410-1415	52		0.002		0.6	<0.02	
RS-489 1415-1420	61		0.002		0.7	0.02	
RS-489 1420-1425	21		<0.001		0.9	0.03	
RS-489 1425-1430	80		0.002		0.8	0.02	
RS-489 1430-1435	63		0.002		1.1	0.03	
RS-489 1435-1440	60		0.002		0.9	0.03	
RS-489 1440-1445	21		<0.001		<0.5	<0.02	
RS-489 1445-1450	55		0.002		1.0	0.03	
RS-489 1450-1455	70		0.002		1.7	0.05	
RS-489 1455-1460	135	120	0.004	0.004	3.1	0.09	
RS-489 1460-1465	62		0.002		1.8	0.05	
RS-489 1465-1470	59		0.002		1.0	0.03	
RS-489 1470-1475	84		0.002		1.7	0.05	
RS-489 1475-1480	238	156	0.007	0.005	5.0	0.15	
RS-489 1480-1485	130	138	0.004	0.004	3.6	0.11	
RS-489 1485-1490	62		0.002		1.2	0.04	
RS-489 1490-1495	51	44	0.001	0.001	6.0	0.18	
RS-489 1495-1500	297	462	0.009	0.013	1858.0	54.20	59.14

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	AgGRAV GRAV OPT
RS-489 1500-1505	90		0.003		109.1	3.18	2.52
RS-489 1505-1510	49		0.001		30.6	0.89	1.25
RS-489 1510-1515	63		0.002		49.9	1.46	1.34
RS-489 1515-1520	68		0.002		20.0	0.58	
RS-489 1520-1525	50		0.001		11.7	0.34	
RS-489 1525-1530	23		<0.001		19.2	0.56	
RS-489 1530-1535	9		<0.001		13.8	0.40	
RS-489 1535-1540	16		<0.001		11.9	0.35	
RS-489 1540-1545	<5		<0.001		15.5	0.45	
RS-489 1545-1550	11		<0.001		3.1	0.09	
RS-489 1550-1555	73		0.002		5.7	0.17	
RS-489 1555-1560	96		0.003		1.7	0.05	
RS-489 1560-1565	78		0.002		6.8	0.20	
RS-489 1565-1570	77		0.002		4.5	0.13	
RS-489 1570-1575	164	184	0.005	0.005	8.2	0.24	
RS-489 1575-1580	94	76	0.003	0.002	3.0	0.09	
RS-489 1580-1585	137	160	0.004	0.005	3.3	0.10	
RS-489 1585-1590	140	144	0.004	0.004	3.6	0.11	
RS-489 1590-1595	250	256	0.007	0.007	6.0	0.18	
RS-489 1595-1600	234	260	0.007	0.008	13.9	0.41	
RS-489 1600-1605	200	204	0.006	0.006	13.4	0.39	
RS-489 1605-1610	202	168	0.006	0.005	13.0	0.38	
RS-489 1610-1615	560	582	0.016	0.017	26.6	0.78	
RS-489 1615-1620	270	282	0.008	0.008	32.9	0.96	0.50
RS-489 1620-1625	134	138	0.004	0.004	18.0	0.53	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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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	AgGRAV GRAV OPT
RS-489 1625-1630	121	124	0.004	0.004	2.7	0.08	
RS-489 1630-1635	307	412	0.009	0.012	6.3	0.18	
RS-489 1635-1640	135	174	0.004	0.005	1.8	0.05	
RS-489 1640-1645	20		<0.001		3.3	0.10	
RS-489 1645-1650	23		<0.001		0.9	0.03	
RS-489 1650-1655	69		0.002		0.9	0.03	
RS-489 1655-1660	14		<0.001		1.6	0.05	
RS-489 1660-1665	20		<0.001		10.9	0.32	
RS-489 1665-1670	21		<0.001		3.6	0.11	
RS-489 1670-1675	29		<0.001		2.3	0.07	
RS-489 1675-1680	66		0.002		1.2	0.04	
RS-489 1680-1685	16		<0.001		4.0	0.12	
RS-489 1685-1690	12		<0.001		1.0	0.03	
RS-489 1690-1695	6		<0.001		0.8	0.02	
RS-489 1695-1700	7		<0.001		0.6	<0.02	
RS-489 1700-1705	15	16	<0.001	<0.001	0.9	0.03	
RS-489 1705-1710	16		<0.001		0.8	0.02	
RS-489 1710-1715	14		<0.001		0.6	<0.02	
RS-489 1715-1720	21		<0.001		1.0	0.03	
RS-489 1720-1725	141	168	0.004	0.005	5.8	0.17	
RS-489 1725-1730	90		0.003		4.1	0.12	
RS-489 1730-1735	58	48	0.002	0.001	2.7	0.08	
RS-489 1735-1740	160	92	0.005	0.003	4.4	0.13	
RS-489 1740-1745	27		<0.001		3.4	0.10	
RS-489 1745-1750	20		<0.001		0.8	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	AgGRAV GRAV OPT
RS-489 1750-1755	14		<0.001		0.9	0.03	
RS-489 1755-1760	51		0.001		1.8	0.05	
RS-489 1760-1765	24		<0.001		1.1	0.03	
RS-489 1765-1770	25		<0.001		1.4	0.04	
RS-489 1770-1775	20		<0.001		0.7	0.02	
RS-489 1775-1780	26		<0.001		<0.5	<0.02	
RS-489 1780-1785	97	98	0.003	0.003	29.6	0.86	0.96
RS-489 1785-1790	35		0.001		1.8	0.05	
RS-489 1790-1795	32		<0.001		0.9	0.03	
RS-489 1795-1800	23		<0.001		<0.5	<0.02	
RS-489 1800-1805	27		<0.001		2.9	0.08	
RS-489 1805-1810	20		<0.001		1.1	0.03	
RS-489 1810-1815	11		<0.001		<0.5	<0.02	
RS-489 1815-1820	31		<0.001		2.0	0.06	
RS-489 1820-1825	23		<0.001		0.9	0.03	
RS-489 1825-1830	53		0.002		2.0	0.06	
RS-489 1830-1835	67		0.002		1.1	0.03	
RS-489 1835-1840	35		0.001		0.8	0.02	
RS-489 1840-1845	137	124	0.004	0.004	74.2	2.16	1.62
RS-489 1845-1850	176	180	0.005	0.005	123.9	3.61	2.80
RS-489 1850-1855	246	198	0.007	0.006	32.2	0.94	0.22
RS-489 1855-1860	321	344	0.009	0.010	16.3	0.48	
RS-489 1860-1865	72		0.002		13.9	0.41	
RS-489 1865-1870	86		0.003		2.9	0.08	
RS-489 1870-1875	65		0.002		2.0	0.06	

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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	AgGRAV GRAV OPT
RS-489 1875-1880	83		0.002		5.0	0.15	
RS-489 1880-1885	75		0.002		2.8	0.08	
RS-489 1885-1890	76		0.002		15.4	0.45	
RS-489 1890-1895	76		0.002		3.7	0.11	
RS-489 1895-1900	102	30	0.003	<0.001	0.7	0.02	
RS-489 1900-1905	28		<0.001		1.8	0.05	
RS-489 1905-1910	15		<0.001		0.5	<0.02	
RS-489 1910-1915	8		<0.001		<0.5	<0.02	
89577	1943		0.057		35.3	1.03	

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ANALYSIS REPORT SP056013

American Assay Laboratories

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HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: RS-489 RECEIVED : 10 FEB 2000

No. SAMPLES : 384 REPORTED : 6 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
AgGRAV	GRAV	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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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	AgGRAV GRAV OPT
RS-489 0000-0005	9	7	<0.001	<0.001	<0.5	<0.02	
RS-489 0005-0010	8		<0.001		<0.5	<0.02	
RS-489 0010-0015	10		<0.001		<0.5	<0.02	
RS-489 0015-0020	11		<0.001		<0.5	<0.02	
RS-489 0020-0025	5		<0.001		<0.5	<0.02	
RS-489 0025-0030	<5		<0.001		<0.5	<0.02	
RS-489 0030-0035	<5		<0.001		<0.5	<0.02	
RS-489 0035-0040	<5		<0.001		<0.5	<0.02	
RS-489 0040-0045	<5		<0.001		<0.5	<0.02	
RS-489 0045-0050	<5		<0.001		<0.5	<0.02	
RS-489 0050-0055	<5		<0.001		<0.5	<0.02	
RS-489 0055-0060	<5		<0.001		<0.5	<0.02	
RS-489 0060-0065	<5		<0.001		<0.5	<0.02	
RS-489 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0070-0075	<5		<0.001		<0.5	<0.02	
RS-489 0075-0080	<5		<0.001		<0.5	<0.02	
RS-489 0080-0085	<5		<0.001		<0.5	<0.02	
RS-489 0085-0090	<5		<0.001		<0.5	<0.02	
RS-489 0090-0095	<5		<0.001		<0.5	<0.02	
RS-489 0095-0100	7		<0.001		<0.5	<0.02	
RS-489 0100-0105	<5		<0.001		<0.5	<0.02	
RS-489 0105-0110	8		<0.001		<0.5	<0.02	
RS-489 0110-0115	18		<0.001		0.6	<0.02	
RS-489 0115-0120	7		<0.001		<0.5	<0.02	
RS-489 0120-0125	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	AgGRAV GRAV OPT
RS-489 0125-0130	<5		<0.001		<0.5	<0.02	
RS-489 0130-0135	<5		<0.001		<0.5	<0.02	
RS-489 0135-0140	<5		<0.001		<0.5	<0.02	
RS-489 0140-0145	10		<0.001		<0.5	<0.02	
RS-489 0145-0150	9		<0.001		<0.5	<0.02	
RS-489 0150-0155	<5		<0.001		<0.5	<0.02	
RS-489 0155-0160	<5		<0.001		<0.5	<0.02	
RS-489 0160-0165	<5		<0.001		<0.5	<0.02	
RS-489 0165-0170	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0170-0175	<5		<0.001		<0.5	<0.02	
RS-489 0175-0180	<5		<0.001		<0.5	<0.02	
RS-489 0180-0185	18		<0.001		<0.5	<0.02	
RS-489 0185-0190	37		0.001		<0.5	<0.02	
RS-489 0190-0195	8		<0.001		<0.5	<0.02	
RS-489 0195-0200	10		<0.001		<0.5	<0.02	
RS-489 0200-0205	75		0.002		<0.5	<0.02	
RS-489 0205-0210	71		0.002		<0.5	<0.02	
RS-489 0210-0215	39		0.001		<0.5	<0.02	
RS-489 0215-0220	35		0.001		<0.5	<0.02	
RS-489 0220-0225	29		<0.001		<0.5	<0.02	
RS-489 0225-0230	60		0.002		0.8	0.02	
RS-489 0230-0235	68	72	0.002	0.002	0.7	0.02	
RS-489 0235-0240	39		0.001		<0.5	<0.02	
RS-489 0240-0245	60		0.002		0.8	0.02	
RS-489 0245-0250	61		0.002		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0250-0255	13		<0.001		<0.5	<0.02	
RS-489 0255-0260	112	87	0.003	0.003	0.7	0.02	
RS-489 0260-0265	53		0.002		<0.5	<0.02	
RS-489 0265-0270	14		<0.001		<0.5	<0.02	
RS-489 0270-0275	7		<0.001		<0.5	<0.02	
RS-489 0275-0280	10		<0.001		<0.5	<0.02	
RS-489 0280-0285	40		0.001		<0.5	<0.02	
RS-489 0285-0290	44	64	0.001	0.002	<0.5	<0.02	
RS-489 0290-0295	63		0.002		<0.5	<0.02	
RS-489 0295-0300	110	121	0.003	0.004	1.0	0.03	
RS-489 0300-0305	75		0.002		<0.5	<0.02	
RS-489 0305-0310	96		0.003		0.7	0.02	
RS-489 0310-0315	62		0.002		0.5	<0.02	
RS-489 0315-0320	63		0.002		0.5	<0.02	
RS-489 0320-0325	65		0.002		1.1	0.03	
RS-489 0325-0330	38		0.001		<0.5	<0.02	
RS-489 0330-0335	37		0.001		<0.5	<0.02	
RS-489 0335-0340	69		0.002		<0.5	<0.02	
RS-489 0340-0345	41		0.001		<0.5	<0.02	
RS-489 0345-0350	170	163	0.005	0.005	0.6	<0.02	
RS-489 0350-0355	154	170	0.004	0.005	0.5	<0.02	
RS-489 0355-0360	5	5	<0.001	<0.001	<0.5	<0.02	
RS-489 0360-0365	142	142	0.004	0.004	<0.5	<0.02	
RS-489 0365-0370	27		<0.001		<0.5	<0.02	
RS-489 0370-0375	35		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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REFERENCE : RS-489

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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	AgGRAV GRAV OPT
RS-489 0375-0380	106	39	0.003	0.001	0.8	0.02	
RS-489 0380-0385	40		0.001		1.2	0.04	
RS-489 0385-0390	35		0.001		0.5	<0.02	
RS-489 0390-0395	37		0.001		0.7	0.02	
RS-489 0395-0400	44		0.001		1.0	0.03	
RS-489 0400-0405	30		<0.001		0.5	<0.02	
RS-489 0405-0410	35		0.001		<0.5	<0.02	
RS-489 0410-0415	15		<0.001		<0.5	<0.02	
RS-489 0415-0420	<5		<0.001		<0.5	<0.02	
RS-489 0420-0425	7		<0.001		<0.5	<0.02	
RS-489 0425-0430	14	20	<0.001	<0.001	<0.5	<0.02	
RS-489 0430-0435	50		0.001		<0.5	<0.02	
RS-489 0435-0440	100	93	0.003	0.003	<0.5	<0.02	
RS-489 0440-0445	25		<0.001		<0.5	<0.02	
RS-489 0445-0450	43		0.001		<0.5	<0.02	
RS-489 0450-0455	75		0.002		<0.5	<0.02	
RS-489 0455-0460	88		0.003		<0.5	<0.02	
RS-489 0460-0465	62		0.002		1.0	0.03	
RS-489 0465-0470	45		0.001		<0.5	<0.02	
RS-489 0470-0475	95	98	0.003	0.003	<0.5	<0.02	
RS-489 0475-0480	67		0.002		0.5	<0.02	
RS-489 0480-0485	10		<0.001		<0.5	<0.02	
RS-489 0485-0490	15		<0.001		<0.5	<0.02	
RS-489 0490-0495	33		<0.001		0.5	<0.02	
RS-489 0495-0500	64		0.002		0.8	0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0500-0505	16		<0.001		<0.5	<0.02	
RS-489 0505-0510	<5		<0.001		<0.5	<0.02	
RS-489 0510-0515	27	36	<0.001	0.001	<0.5	<0.02	
RS-489 0515-0520	26		<0.001		<0.5	<0.02	
RS-489 0520-0525	20		<0.001		<0.5	<0.02	
RS-489 0525-0530	23		<0.001		<0.5	<0.02	
RS-489 0530-0535	17		<0.001		<0.5	<0.02	
RS-489 0535-0540	35		0.001		<0.5	<0.02	
RS-489 0540-0545	68		0.002		<0.5	<0.02	
RS-489 0545-0550	74		0.002		<0.5	<0.02	
RS-489 0550-0555	64		0.002		<0.5	<0.02	
RS-489 0555-0560	52		0.002		0.5	<0.02	
RS-489 0560-0565	72		0.002		<0.5	<0.02	
RS-489 0565-0570	83		0.002		<0.5	<0.02	
RS-489 0570-0575	22		<0.001		<0.5	<0.02	
RS-489 0575-0580	26		<0.001		<0.5	<0.02	
RS-489 0580-0585	5	9	<0.001	<0.001	<0.5	<0.02	
RS-489 0585-0590	17		<0.001		<0.5	<0.02	
RS-489 0590-0595	14		<0.001		<0.5	<0.02	
RS-489 0595-0600	11		<0.001		<0.5	<0.02	
RS-489 0600-0605	10		<0.001		<0.5	<0.02	
RS-489 0605-0610	28		<0.001		<0.5	<0.02	
RS-489 0610-0615	27		<0.001		<0.5	<0.02	
RS-489 0615-0620	135	101	0.004	0.003	<0.5	<0.02	
RS-489 0620-0625	290	298	0.008	0.009	1.4	0.04	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0625-0630	108	132	0.003	0.004	0.5	<0.02	
RS-489 0630-0635	132	120	0.004	0.004	0.7	0.02	
RS-489 0635-0640	43		0.001		<0.5	<0.02	
RS-489 0640-0645	22		<0.001		<0.5	<0.02	
RS-489 0645-0650	38		0.001		<0.5	<0.02	
RS-489 0650-0655	27		<0.001		<0.5	<0.02	
RS-489 0655-0660	<5		<0.001		<0.5	<0.02	
RS-489 0660-0665	16		<0.001		<0.5	<0.02	
RS-489 0665-0670	23		<0.001		<0.5	<0.02	
RS-489 0670-0675	8		<0.001		<0.5	<0.02	
RS-489 0675-0680	6		<0.001		<0.5	<0.02	
RS-489 0680-0685	8	10	<0.001	<0.001	<0.5	<0.02	
RS-489 0685-0690	7		<0.001		<0.5	<0.02	
RS-489 0690-0695	43		0.001		<0.5	<0.02	
RS-489 0695-0700	119	204	0.003	0.006	1.2	0.04	
RS-489 0700-0705	90		0.003		0.8	0.02	
RS-489 0705-0710	60		0.002		<0.5	<0.02	
RS-489 0710-0715	74		0.002		0.5	<0.02	
RS-489 0715-0720	42		0.001		<0.5	<0.02	
RS-489 0720-0725	38		0.001		<0.5	<0.02	
RS-489 0725-0730	34		<0.001		<0.5	<0.02	
RS-489 0730-0735	36		0.001		<0.5	<0.02	
RS-489 0735-0740	73		0.002		<0.5	<0.02	
RS-489 0740-0745	61	70	0.002	0.002	<0.5	<0.02	
RS-489 0745-0750	48		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0750-0755	13		<0.001		<0.5	<0.02	
RS-489 0755-0760	28		<0.001		<0.5	<0.02	
RS-489 0760-0765	13		<0.001		<0.5	<0.02	
RS-489 0765-0770	36		0.001		<0.5	<0.02	
RS-489 0770-0775	42		0.001		<0.5	<0.02	
RS-489 0775-0780	40		0.001		<0.5	<0.02	
RS-489 0780-0785	30		<0.001		<0.5	<0.02	
RS-489 0785-0790	42		0.001		<0.5	<0.02	
RS-489 0790-0795	180	188	0.005	0.005	<0.5	<0.02	
RS-489 0795-0800	73	76	0.002	0.002	<0.5	<0.02	
RS-489 0800-0805	81		0.002		<0.5	<0.02	
RS-489 0805-0810	34		<0.001		<0.5	<0.02	
RS-489 0810-0815	38		0.001		<0.5	<0.02	
RS-489 0815-0820	43		0.001		<0.5	<0.02	
RS-489 0820-0825	85		0.002		<0.5	<0.02	
RS-489 0825-0830	103	100	0.003	0.003	1.0	0.03	
RS-489 0830-0835	110	112	0.003	0.003	1.4	0.04	
RS-489 0835-0840	117	106	0.003	0.003	0.6	<0.02	
RS-489 0840-0845	40		0.001		<0.5	<0.02	
RS-489 0845-0850	39		0.001		0.6	<0.02	
RS-489 0850-0855	104	81	0.003	0.002	1.3	0.04	
RS-489 0855-0860	58		0.002		<0.5	<0.02	
RS-489 0860-0865	113	131	0.003	0.004	1.3	0.04	
RS-489 0865-0870	99	99	0.003	0.003	1.3	0.04	
RS-489 0870-0875	90		0.003		0.8	0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
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REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 0875-0880	72		0.002		<0.5	<0.02	
RS-489 0880-0885	62		0.002		0.8	0.02	
RS-489 0885-0890	72		0.002		1.7	0.05	
RS-489 0890-0895	36		0.001		1.5	0.04	
RS-489 0895-0900	32		<0.001		1.5	0.04	
RS-489 0900-0905	11		<0.001		1.5	0.04	
RS-489 0905-0910	5		<0.001		1.2	0.04	
RS-489 0910-0915	<5		<0.001		3.0	0.09	
RS-489 0915-0920	<5		<0.001		14.2	0.41	
RS-489 0920-0925	<5		<0.001		<0.5	<0.02	
RS-489 0925-0930	<5		<0.001		<0.5	<0.02	
RS-489 0930-0935	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0935-0940	<5		<0.001		<0.5	<0.02	
RS-489 0940-0945	<5		<0.001		<0.5	<0.02	
RS-489 0945-0950	<5		<0.001		<0.5	<0.02	
RS-489 0950-0955	<5		<0.001		<0.5	<0.02	
RS-489 0955-0960	<5		<0.001		<0.5	<0.02	
RS-489 0960-0965	<5		<0.001		<0.5	<0.02	
RS-489 0965-0970	<5		<0.001		<0.5	<0.02	
RS-489 0970-0975	<5		<0.001		<0.5	<0.02	
RS-489 0975-0980	<5		<0.001		<0.5	<0.02	
RS-489 0980-0985	<5		<0.001		<0.5	<0.02	
RS-489 0985-0990	<5		<0.001		<0.5	<0.02	
RS-489 0990-0995	<5		<0.001		<0.5	<0.02	
RS-489 0995-1000	<5		<0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

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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	AgGRAV GRAV OPT
RS-489 1000-1005	<5		<0.001		<0.5	<0.02	
RS-489 1005-1010	<5		<0.001		<0.5	<0.02	
RS-489 1010-1015	<5		<0.001		<0.5	<0.02	
RS-489 1015-1020	<5		<0.001		<0.5	<0.02	
RS-489 1020-1025	<5		<0.001		<0.5	<0.02	
RS-489 1025-1030	<5		<0.001		<0.5	<0.02	
RS-489 1030-1035	7		<0.001		2.2	0.06	
RS-489 1035-1040	<5		<0.001		0.5	<0.02	
RS-489 1040-1045	<5		<0.001		0.5	<0.02	
RS-489 1045-1050	6		<0.001		1.7	0.05	
RS-489 1050-1055	<5		<0.001		1.0	0.03	
RS-489 1055-1060	11		<0.001		0.8	0.02	
RS-489 1060-1065	92		0.003		2.2	0.06	
RS-489 1065-1070	208	184	0.006	0.005	32.7	0.95	0.79
RS-489 1070-1075	188	144	0.005	0.004	7.2	0.21	
RS-489 1075-1080	173	140	0.005	0.004	8.4	0.25	
RS-489 1080-1085	155	153	0.005	0.004	6.2	0.18	
RS-489 1085-1090	143	91	0.004	0.003	2.7	0.08	
RS-489 1090-1095	63		0.002		1.0	0.03	
RS-489 1095-1100	66		0.002		2.3	0.07	
RS-489 1100-1105	77		0.002		2.4	0.07	
RS-489 1105-1110	52		0.002		1.4	0.04	
RS-489 1110-1115	26		<0.001		0.5	<0.02	
RS-489 1115-1120	16		<0.001		<0.5	<0.02	
RS-489 1120-1125	6		<0.001		5.6	0.16	

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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	AgGRAV GRAV OPT
RS-489 1125-1130	<5		<0.001		<0.5	<0.02	
RS-489 1130-1135	<5		<0.001		<0.5	<0.02	
RS-489 1135-1140	<5		<0.001		<0.5	<0.02	
RS-489 1140-1145	<5		<0.001		<0.5	<0.02	
RS-489 1145-1150	<5		<0.001		<0.5	<0.02	
RS-489 1150-1155	<5		<0.001		<0.5	<0.02	
RS-489 1155-1160	<5		<0.001		<0.5	<0.02	
RS-489 1160-1165	<5		<0.001		<0.5	<0.02	
RS-489 1165-1170	<5		<0.001		<0.5	<0.02	
RS-489 1170-1175	<5		<0.001		<0.5	<0.02	
RS-489 1175-1180	<5		<0.001		<0.5	<0.02	
RS-489 1180-1185	<5		<0.001		<0.5	<0.02	
RS-489 1185-1190	<5		<0.001		0.7	0.02	
RS-489 1190-1195	<5		<0.001		<0.5	<0.02	
RS-489 1195-1200	<5		<0.001		<0.5	<0.02	
RS-489 1200-1205	6		<0.001		<0.5	<0.02	
RS-489 1205-1210	7		<0.001		<0.5	<0.02	
RS-489 1210-1215	5		<0.001		<0.5	<0.02	
RS-489 1215-1220	<5		<0.001		<0.5	<0.02	
RS-489 1220-1225	5		<0.001		<0.5	<0.02	
RS-489 1225-1230	<5		<0.001		0.5	<0.02	
RS-489 1230-1235	<5		<0.001		<0.5	<0.02	
RS-489 1235-1240	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1240-1245	<5		<0.001		<0.5	<0.02	
RS-489 1245-1250	<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	AgGRAV GRAV OPT
RS-489 1250-1255	<5		<0.001		<0.5	<0.02	
RS-489 1255-1260	<5		<0.001		<0.5	<0.02	
RS-489 1260-1265	<5		<0.001		<0.5	<0.02	
RS-489 1265-1270	7		<0.001		<0.5	<0.02	
RS-489 1270-1275	11		<0.001		<0.5	<0.02	
RS-489 1275-1280	8		<0.001		<0.5	<0.02	
RS-489 1280-1285	6		<0.001		<0.5	<0.02	
RS-489 1285-1290	<5		<0.001		<0.5	<0.02	
RS-489 1290-1295	<5		<0.001		<0.5	<0.02	
RS-489 1295-1300	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1300-1305	<5		<0.001		<0.5	<0.02	
RS-489 1305-1310	<5		<0.001		<0.5	<0.02	
RS-489 1310-1315	<5		<0.001		<0.5	<0.02	
RS-489 1315-1320	6		<0.001		0.5	<0.02	
RS-489 1320-1325	10		<0.001		<0.5	<0.02	
RS-489 1325-1330	164	178	0.005	0.005	2.2	0.06	
RS-489 1330-1335	211	202	0.006	0.006	4.1	0.12	
RS-489 1335-1340	160	194	0.005	0.006	2.7	0.08	
RS-489 1340-1345	80		0.002		1.4	0.04	
RS-489 1345-1350	21		<0.001		0.7	0.02	
RS-489 1350-1355	30		<0.001		<0.5	<0.02	
RS-489 1355-1360	34		<0.001		<0.5	<0.02	
RS-489 1360-1365	17		<0.001		<0.5	<0.02	
RS-489 1365-1370	24		<0.001		<0.5	<0.02	
RS-489 1370-1375	45		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP056013

American Assay Laboratories

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PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 6 MAR 2000

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag D210 ppm	Ag(OZ) D210 OPT	AgGRAV GRAV OPT
RS-489 1375-1380	18		<0.001		<0.5	<0.02	
RS-489 1380-1385	66		0.002		1.5	0.04	
RS-489 1385-1390	118	146	0.003	0.004	4.0	0.12	
RS-489 1390-1395	50		0.001		0.5	<0.02	
RS-489 1395-1400	44		0.001		<0.5	<0.02	
RS-489 1400-1405	29	30	<0.001	<0.001	<0.5	<0.02	
RS-489 1405-1410	71		0.002		<0.5	<0.02	
RS-489 1410-1415	52		0.002		0.6	<0.02	
RS-489 1415-1420	61		0.002		0.7	0.02	
RS-489 1420-1425	21		<0.001		0.9	0.03	
RS-489 1425-1430	80		0.002		0.8	0.02	
RS-489 1430-1435	63		0.002		1.1	0.03	
RS-489 1435-1440	60		0.002		0.9	0.03	
RS-489 1440-1445	21		<0.001		<0.5	<0.02	
RS-489 1445-1450	55		0.002		1.0	0.03	
RS-489 1450-1455	70		0.002		1.7	0.05	
RS-489 1455-1460	135	120	0.004	0.004	3.1	0.09	
RS-489 1460-1465	62		0.002		1.8	0.05	
RS-489 1465-1470	59		0.002		1.0	0.03	
RS-489 1470-1475	84		0.002		1.7	0.05	
RS-489 1475-1480	238	156	0.007	0.005	5.0	0.15	
RS-489 1480-1485	130	138	0.004	0.004	3.6	0.11	
RS-489 1485-1490	62		0.002		1.2	0.04	
RS-489 1490-1495	51	44	0.001	0.001	6.0	0.18	
RS-489 1495-1500	297	462	0.009	0.013	1858.0	54.20	59.14

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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	AgGRAV GRAV OPT
RS-489 1500-1505	90		0.003		109.1	3.18	2.52
RS-489 1505-1510	49		0.001		30.6	0.89	1.25
RS-489 1510-1515	63		0.002		49.9	1.46	1.34
RS-489 1515-1520	68		0.002		20.0	0.58	
RS-489 1520-1525	50		0.001		11.7	0.34	
RS-489 1525-1530	23		<0.001		19.2	0.56	
RS-489 1530-1535	9		<0.001		13.8	0.40	
RS-489 1535-1540	16		<0.001		11.9	0.35	
RS-489 1540-1545	<5		<0.001		15.5	0.45	
RS-489 1545-1550	11		<0.001		3.1	0.09	
RS-489 1550-1555	73		0.002		5.7	0.17	
RS-489 1555-1560	96		0.003		1.7	0.05	
RS-489 1560-1565	78		0.002		6.8	0.20	
RS-489 1565-1570	77		0.002		4.5	0.13	
RS-489 1570-1575	164	184	0.005	0.005	8.2	0.24	
RS-489 1575-1580	94	76	0.003	0.002	3.0	0.09	
RS-489 1580-1585	137	160	0.004	0.005	3.3	0.10	
RS-489 1585-1590	140	144	0.004	0.004	3.6	0.11	
RS-489 1590-1595	250	256	0.007	0.007	6.0	0.18	
RS-489 1595-1600	234	260	0.007	0.008	13.9	0.41	
RS-489 1600-1605	200	204	0.006	0.006	13.4	0.39	
RS-489 1605-1610	202	168	0.006	0.005	13.0	0.38	
RS-489 1610-1615	560	582	0.016	0.017	26.6	0.78	
RS-489 1615-1620	270	282	0.008	0.008	32.9	0.96	0.50
RS-489 1620-1625	134	138	0.004	0.004	18.0	0.53	

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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	AgGRAV GRAV OPT
RS-489 1625-1630	121	124	0.004	0.004	2.7	0.08	
RS-489 1630-1635	307	412	0.009	0.012	6.3	0.18	
RS-489 1635-1640	135	174	0.004	0.005	1.8	0.05	
RS-489 1640-1645	20		<0.001		3.3	0.10	
RS-489 1645-1650	23		<0.001		0.9	0.03	
RS-489 1650-1655	69		0.002		0.9	0.03	
RS-489 1655-1660	14		<0.001		1.6	0.05	
RS-489 1660-1665	20		<0.001		10.9	0.32	
RS-489 1665-1670	21		<0.001		3.6	0.11	
RS-489 1670-1675	29		<0.001		2.3	0.07	
RS-489 1675-1680	66		0.002		1.2	0.04	
RS-489 1680-1685	16		<0.001		4.0	0.12	
RS-489 1685-1690	12		<0.001		1.0	0.03	
RS-489 1690-1695	6		<0.001		0.8	0.02	
RS-489 1695-1700	7		<0.001		0.6	<0.02	
RS-489 1700-1705	15	16	<0.001	<0.001	0.9	0.03	
RS-489 1705-1710	16		<0.001		0.8	0.02	
RS-489 1710-1715	14		<0.001		0.6	<0.02	
RS-489 1715-1720	21		<0.001		1.0	0.03	
RS-489 1720-1725	141	168	0.004	0.005	5.8	0.17	
RS-489 1725-1730	90		0.003		4.1	0.12	
RS-489 1730-1735	58	48	0.002	0.001	2.7	0.08	
RS-489 1735-1740	160	92	0.005	0.003	4.4	0.13	
RS-489 1740-1745	27		<0.001		3.4	0.10	
RS-489 1745-1750	20		<0.001		0.8	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	AgGRAV GRAV OPT
RS-489 1750-1755	14		<0.001		0.9	0.03	
RS-489 1755-1760	51		0.001		1.8	0.05	
RS-489 1760-1765	24		<0.001		1.1	0.03	
RS-489 1765-1770	25		<0.001		1.4	0.04	
RS-489 1770-1775	20		<0.001		0.7	0.02	
RS-489 1775-1780	26		<0.001		<0.5	<0.02	
RS-489 1780-1785	97	98	0.003	0.003	29.6	0.86	0.96
RS-489 1785-1790	35		0.001		1.8	0.05	
RS-489 1790-1795	32		<0.001		0.9	0.03	
RS-489 1795-1800	23		<0.001		<0.5	<0.02	
RS-489 1800-1805	27		<0.001		2.9	0.08	
RS-489 1805-1810	20		<0.001		1.1	0.03	
RS-489 1810-1815	11		<0.001		<0.5	<0.02	
RS-489 1815-1820	31		<0.001		2.0	0.06	
RS-489 1820-1825	23		<0.001		0.9	0.03	
RS-489 1825-1830	53		0.002		2.0	0.06	
RS-489 1830-1835	67		0.002		1.1	0.03	
RS-489 1835-1840	35		0.001		0.8	0.02	
RS-489 1840-1845	137	124	0.004	0.004	74.2	2.16	1.62
RS-489 1845-1850	176	180	0.005	0.005	123.9	3.61	2.80
RS-489 1850-1855	246	198	0.007	0.006	32.2	0.94	0.22
RS-489 1855-1860	321	344	0.009	0.010	16.3	0.48	
RS-489 1860-1865	72		0.002		13.9	0.41	
RS-489 1865-1870	86		0.003		2.9	0.08	
RS-489 1870-1875	65		0.002		2.0	0.06	

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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	AgGRAV GRAV OPT
RS-489 1875-1880	83		0.002		5.0	0.15	
RS-489 1880-1885	75		0.002		2.8	0.08	
RS-489 1885-1890	76		0.002		15.4	0.45	
RS-489 1890-1895	76		0.002		3.7	0.11	
RS-489 1895-1900	102	30	0.003	<0.001	0.7	0.02	
RS-489 1900-1905	28		<0.001		1.8	0.05	
RS-489 1905-1910	15		<0.001		0.5	<0.02	
RS-489 1910-1915	8		<0.001		<0.5	<0.02	
89577	1943		0.057		35.3	1.03	

CLIENT:	*HECLA MINING CO.*
CLIENT REF:	KURT ALLEN
AAL REF:	Sp56013
METHOD:	AAL03-0

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
PHONE: (775) 356-0606
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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-489 0000-0020	58	0.6	15	3.3	9	41.1	0.23	0.17	0.3	0.5	7.2	17.05	1.91	3.4	464	0.07	22.1	0.05	127	2.03	0.077	3.6	0.008	20.23	0.08	7.94	0.5	29.8	< .02	10.6	0.008	0.03	2.1	25	0.6	28.1
RS-489 0020-0040	51	0.4	7.3	1.8	< 1	53.8	0.07	0.43	0.21	0.8	6.5	14.11	1.76	2.6	325	0.05	23.6	0.02	138	2.07	0.017	4.1	0.016	22.07	0.05	8.17	0.3	22.4	< .02	13.4	0.013	0.03	4.6	26	1.3	49.3
RS-489 0040-0060	54	0.45	5.2	0.9	< 1	100.5	0.06	0.88	0.36	1	9.6	11.86	1.95	3.1	184	0.13	27.3	0.03	319	2.34	0.02	4.9	0.02	25.31	0.06	6.19	0.4	24.9	< .02	13.4	0.018	0.08	3.6	18	1.5	88.9
RS-489 0060-0080	171	0.59	7.7	1.3	< 1	69.8	0.05	0.37	0.26	1.3	6.2	17.35	1.88	3.9	614	0.17	30.8	0.02	312	2.03	0.019	3.9	0.015	62.39	0.02	6.03	0.3	13.9	< .02	14.5	0.015	0.09	3.3	10	1.3	147.8
RS-489 0080-0100	73	0.61	12.8	1.1	< 1	49.9	1.06	0.11	0.14	0.3	5.7	10.6	1.76	3.4	577	0.15	26.8	0.01	151	1.47	0.015	3.5	0.013	22.29	0.01	6.34	0.5	28.2	< .02	13.9	0.004	0.08	3	10	0.5	73.8
RS-489 0100-0120	171	0.57	29.1	7.8	< 1	143.5	0.13	0.07	0.09	0.1	6.8	10.98	1.61	2.9	1068	0.12	18.1	0.01	122	2.08	0.008	3.8	0.014	15.39	0.1	16.06	1	59.6	< .02	10	0.002	0.02	1.9	8	2.6	33.4
RS-489 0120-0140	72	0.61	12.4	2.3	< 1	71.7	0.03	0.08	0.02	< .1	3.7	8.13	1.46	3.2	429	0.23	24.3	0.01	63	1.28	0.009	2.1	0.017	18.65	0.24	9	0.7	50.6	< .02	14.3	0.001	0.06	2.8	8	0.3	22.8
RS-489 0140-0160	85	0.6	22.8	11.1	< 1	107.4	0.04	0.18	0.03	< .1	5.9	9.58	2.17	3.4	540	0.24	21.5	0.01	69	1.97	0.012	2.7	0.012	17.81	0.26	14.12	2.2	35.5	< .02	13.8	0.001	0.07	4.1	7	0.4	23.6
RS-489 0160-0180	78	0.36	9.9	4.2	< 1	64.7	0.05	0.05	0.1	< .1	4.9	7.33	1.87	3.8	538	0.11	26.9	0.01	38	1.21	0.008	2	0.007	17.89	0.05	9.48	0.9	16	< .02	14.2	0.001	0.07	2.8	7	0.3	9.4
RS-489 0180-0200	60	0.48	25.2	17.3	< 1	141.3	0.04	0.05	0.18	1.7	7.5	14.32	1.72	3.3	972	0.07	20.4	0.01	69	2.4	0.006	3	0.008	24.65	0.07	14.07	2.6	34.7	< .02	10.6	0.001	0.18	15.9	9	0.6	31.9
RS-489 0200-0220	139	0.74	107.9	48.8	< 1	118	0.03	0.06	0.03	0.2	10.8	21.32	2.46	5.8	1316	0.15	18.4	0.01	133	6.2	0.016	4.9	0.007	20.73	0.06	23.28	2.4	19.8	< .02	12.1	0.002	0.18	3.3	6	0.4	13.1
RS-489 0220-0240	391	1.3	84.1	40.2	< 1	115	0.04	0.05	0.07	0.2	10.8	26.89	2.62	6.5	1745	0.21	20.6	0.01	134	6.61	0.016	5.4	0.019	17.75	0.2	27.8	2.9	41.6	< .02	11.5	0.002	0.22	3	7	0.5	20.5
RS-489 0240-0260	385	1.09	33.1	52.9	< 1	122.2	0.04	0.02	0.06	0.1	8	26.14	2.4	6.9	944	0.22	20.5	0.01	128	4.23	0.018	4.6	0.01	16.56	0.14	22.41	3.9	22	< .02	11	0.002	0.15	2	5	0.6	17.1
RS-489 0260-0280	131	0.93	14.3	13.7	< 1	99.8	0.04	0.01	0.05	< .1	5.1	17.91	1.94	5.4	111	0.14	23	0.01	51	2.49	0.005	2.3	0.013	19.56	0.17	16.6	1.4	14.9	< .02	11.8	0.001	0.06	1.5	3	0.3	15.3
RS-489 0280-0300	330	0.93	28.2	55.4	< 1	165	0.03	0.01	0.08	< .1	6.7	28.65	2.35	6.2	3893	0.31	23.1	0.01	89	2.73	0.015	3.4	0.013	32.54	0.36	16.5	4	15.9	< .02	11.9	0.001	0.13	1.3	4	0.3	29.7
RS-489 0300-0320	516	0.98	72.1	56.6	< 1	90.3	0.04	0.02	0.13	1.1	9.9	41.99	2.6	6.3	1815	0.2	19.6	0.01	144	4.07	0.01	5.5	0.013	19.41	1.12	21.27	2.7	15.7	< .02	9.7	0.002	0.31	1.8	6	0.9	37.1
RS-489 0320-0340	462	1.29	26.4	35.9	< 1	29.8	0.03	0.02	0.05	0.4	10	35.62	2.16	6.2	1702	0.16	18	< .01	130	3.01	0.004	5.1	0.01	18.13	0.43	14.6	2.6	12.3	< .02	8.7	0.002	0.13	1.1	6	0.7	23
RS-489 0340-0360	285	0.9	21.1	79.6	< 1	100.2	< .02	0.01	0.04	0.4	8.6	30.46	2.1	4.3	1244	0.25	20.7	< .01	130	2.74	0.007	4.5	0.013	13.59	0.73	14.41	7.2	10.2	< .02	10.2	0.001	0.22	1.3	6	0.7	20.4
RS-489 0360-0380	287	0.78	24.9	65.1	< 1	153.2	0.02	0.01	0.03	0.2	6.9	13.17	2.12	3.8	536	0.18	21.3	< .01	107	2.43	0.005	3.4	0.011	12.91	0.46	23.38	5.6	7	< .02	10.8	0.001	0.13	1.1	5	0.7	13.9
RS-489 0380-0400	673	1.2	36.6	40.1	< 1	72.5	0.02	0.01	0.1	2.4	13.1	50.26	2.77	4.7	2067	0.12	18.1	< .01	161	4.45	0.005	6.5	0.009	15.29	1.48	19.65	3.3	6.7	< .02	9	0.002	0.27	6.8	6	1.7	41.4
RS-489 0400-0420	255	1.6	26.6	18.5	< 1	105.6	< .02	0.01	0.04	0.8	12.5	46.11	3.31	6	733	0.25	19.4	< .01	166	4.69	0.005	6	0.011	14.43	0.8	12.78	1.5	7.8	< .02	10.1	0.002	0.11	1.6	6	1.6	33.3
RS-489 0420-0440	214	1.17	23.1	55.5	< 1	274.8	0.02	0.01	0.08	< .1	7.3	37.64	4.6	6.2	92	0.26	21.9	0.01	112	3.87	0.009	3.4	0.019	17.35	0.28	11.14	3.6	23.3	< .02	12.9	0.002	0.13	1.2	5	0.5	42.7
RS-489 0440-0460	253	1	69	48.1	< 1	167.6	0.02	0.02	0.02	0.1	9.4	41.45	2.92	5.8	685	0.23	20.7	0.01	1073	4.46	0.02	4.9	0.019	11.6	0.25	44.36	3.1	24.6	< .02	12.5	0.002	2.03	1.4	5	3.7	88.8
RS-489 0460-0480	456	0.93	69.3	66.6	1	127.3	0.03	0.02	0.09	0.7	10.1	43.37	3.06	5.3	2301	0.19	19.4	0.01	628	4.46	0.016	5.8	0.015	14.2	0.65	42.11	4.4	17.2	< .02	11	0.002	1.04	1.2	6	3.3	71.3
RS-489 0480-0500	348	1.23	42	34.6	3	130.7	0.04	0.02	0.17	1	8.8	44.17	2.48	6.4	7014	0.19	22.3	0.01	136	2.76	0.018	4.4	0.012	26.16	1.49	18.14	5.6	14.9	< .02	11.8	0.002	0.3	1.5	5	1	42.1
RS-489 0500-0520	131	1.31	11.9	23.1	1	96.1	0.03	0.01	0.24	4	5.9	43.14	1.93	5.3	793	0.16	23.2	0.01	68	2.31	0.011	3.8	0.007	16.47	2.28	12.19	3.7	10.5	< .02	11.7	0.001	0.49	4.7	3	0.5	81
RS-489 0520-0540	129	1.29	13	24.6	1	89.4	0.03	0.02	0.31	2.3	5.6	46.59	1.78	4.7	1015	0.16	21.5	0.01	84	2.18	0.016	4.1	0.007	16.9	1.74	10.99	3.2	9.5	< .02	10.9	0.002	0.36	5.4	4	0.7	115.6
RS-489 0540-0560	348	1.15	42	65.5	1	67.7	0.04	0.03	0.4	2.7	24.5	52.29	2.35	5.2	1980	0.17	20.6	0.01	113	3.72	0.018	6.1	0.007	18.61	2.06	15.9	2.1	15.4	< .02	10.2	0.002	0.41	9.1	5	1.6	97.9
RS-489 0560-0580	244	1.05	25	45	< 1	70.7	0.03	0.04	0.23	2.8	11.5	50.1	2.46	4.5	1345	0.17	23.3	0.01	152	3.89	0.02	6.4	0.007	30.79	1.84	14.64	3.6	9.5	< .02	11.6	0.003	0.47	4.4	6	1	89
RS-489 0580-0600	96	0.88	8.1	8.9	1	67.7	< .02	0.02	0.1	2.1	4.2	9.83	1.79	3.1	379	0.16	22.2	0.01	71	1.97	0.019	2.6	0.006	26.85	1.66	7.82	2.2	6.3	< .02	10.7	0.001	0.26	3.1	3	0.5	69.9
RS-489 0600-0620	135	1.09	20.2	46.3	< 1	74.5	0.03	0.01	0.26	3.1	7	16.03	2.49	3.6	358	0.17	20.7	0.01	93	3.3	0.018	3.9	0.006	27.13	2.31	13.21	7	11.6	< .02	10.1	0.002	0.57	3.7	4	0.9	73
RS-489 0620-0640	531	1.56	30.5	145.3	1	62.7	0.02	0.02	1.35	3.1	11.2	21	2.38	4.8	893	0.07	17.7	0.01	123	3.73	0.008	4.8	0.007	27.31	1.89	17.21	7.9	14.8	< .02	8.6	0.001	0.71	4.5	5	1.1	86.2
RS-489 0640-0660	174	1.15	11.8	24.7	< 1	82	0.03	0.01	0.36	2.4	5.8	11.97	1.65	3.4	500	0.13	20.4	0.01	106	2.31	0.012	2.8	0.008	32.9	1.44	10.41	2.1	11.5	< .02	10	0.002	0.36	2.5	3	0.5	53.4
STANDARD DS2	227	1.8	58.2	201.3	< 1	155.5	11.17	0.56	10.9	12.1	163.1	132.58	3.14	6.5	238	0.17	17.3	0.63	871	14.84	0.032	36.7	0.096	32.5	0.03	9.8	2.3	29.1	1.9	3.9	0.097	1.84	19.5	77	6.5	169.4
RS-489 0660-0680	97	1.08	4.6	5.9	5	110.3	0.02	0.02	0.08	0.7	5.6	9.68	1.53	3.9	185	0.18	24	0.01	118	2.58	0.019	2	0.01	20.43	0.21	5.36	0.7	11.3	< .02	11.8	0.022	0.13	1.6	5	1.3	28.6

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CLIENT:	*HECLA MINING CO.*
CLIENT REF:	KURT ALLEN
AAL REF:	Sp56013
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-489 0680-0700	228	1.28	12.8	37.6	4	76.7	0.02	0.02	0.41	2.8	5.9	10.28	1.7	4	497	0.17	18.9	0.01	90	2.31	0.016	2.5	0.005	14.31	0.85	9.62	3.5	6.2	< .02	9.1	0.012	0.39	2.3	4	1	95.1
RS-489 0700-0720	333	1.04	39.4	54	3	73.3	0.03	0.01	0.45	3.1	15.5	34.29	3.25	3.7	1882	0.16	16.3	< .01	187	5.87	0.019	7.3	0.005	32.98	1.81	17.41	5.9	7.3	< .02	8.5	0.003	0.56	3.2	6	1	97.6
RS-489 0720-0740	165	0.6	20.7	27.6	1	67.7	0.02	0.01	0.26	3.1	10.3	23.64	2.43	2.1	998	0.11	18	< .01	158	4.01	0.014	6.3	0.004	13.63	1.63	10.24	5.2	4.8	< .02	9	0.002	0.3	2.4	6	0.8	67.5
RS-489 0740-0760	161	0.86	25.7	27.9	2	52.5	< .02	0.01	0.18	1.7	9.2	17.24	2.41	2.8	1022	0.11	20.7	< .01	120	3.36	0.01	4.5	0.005	16.79	1.72	12.84	4.2	6.6	< .02	9.2	0.002	0.35	2	5	0.7	47.4
RS-489 0760-0780	179	0.82	32.7	26.3	1	53.6	< .02	0.01	0.18	2.1	10.1	21.14	2.59	2.5	2271	0.11	17.6	< .01	135	4.2	0.01	5.1	0.004	15.7	1.7	14.92	3.3	5.3	< .02	8.2	0.002	0.38	2.7	5	0.8	85.5
RS-489 0780-0800	196	0.96	8.7	68.9	1	62.4	< .02	0.01	0.28	3.6	6.8	12.22	2.23	2.6	682	0.13	18.1	< .01	83	2.6	0.008	3.2	0.005	11.97	1.97	14.22	5.8	8.9	< .02	8.1	0.002	0.56	3.1	3	0.3	73.7
RS-489 0800-0820	118	1.04	17.2	34.7	< 1	49.4	< .02	0.01	0.27	2.9	7.9	15.9	2.46	2.9	1226	0.13	14.6	< .01	135	3.16	0.011	4.6	0.004	12.44	1.77	14.52	4.7	8.3	< .02	7.4	0.002	0.68	2.7	5	0.4	52.9
RS-489 0820-0840	555	0.72	39.1	95.9	< 1	57.3	< .02	0.01	1.1	3.8	16	23.29	2.83	2.2	1301	0.17	18.6	< .01	137	4.47	0.012	5.9	0.005	19.37	2.06	21.18	5.3	12.3	< .02	8.6	0.002	0.59	4.4	5	0.6	52.5
RS-489 0840-0860	334	0.55	26	45.2	< 1	36.8	0.03	0.01	0.36	3.6	11.3	31.51	2.76	1.8	1311	0.1	15.4	< .01	168	5.28	0.007	6.8	0.004	15.96	1.7	19.9	3.4	9.6	< .02	7.7	0.002	0.54	1.5	6	0.5	76.4
RS-489 0860-0880	608	0.67	37.3	77	< 1	32.3	0.02	0.01	0.46	3.9	13.7	28.9	3.42	2.1	1570	0.08	15.6	< .01	191	5.2	0.005	8.7	0.008	15.3	2.22	27.11	5.8	26.5	< .02	6.9	0.002	0.84	1.1	7	0.6	84
RS-489 0880-0900	492	0.65	68.4	32.1	1	111.6	0.05	0.03	0.24	1.9	13.9	33.33	2.96	2.3	2128	0.13	16.7	0.01	181	6.47	0.011	7	0.007	16.22	1.63	26.07	2.6	23.7	< .02	7.1	0.002	0.74	1.2	6	0.6	83.8
RS-489 0900-0920	154	1.71	4.3	4.9	< 1	577.2	0.24	2.54	1.09	2.6	5.3	5.27	1.73	4.5	261	0.23	29.1	0.23	1525	0.56	0.056	1.5	0.047	21.84	0.11	1.43	0.6	583.1	0.05	4.7	0.002	0.14	1	6	< .2	126.5
RS-489 0920-0940	109	1.68	1.4	0.7	< 1	117.1	0.19	2.7	0.8	6.1	5.3	8.02	2.13	5	109	0.25	20.3	0.27	1635	0.96	0.036	2.5	0.046	14.22	0.04	0.36	0.3	211.9	0.03	4.4	0.002	0.11	0.8	9	< .2	77
RS-489 0940-0960	89	1.41	2.9	1.5	< 1	196.5	0.22	1.81	0.44	1.5	7.2	15.47	2.58	4.5	115	0.26	27.7	0.21	970	2.69	0.038	3.8	0.042	15.6	0.02	0.51	0.4	186	0.02	6.5	0.003	0.09	1.7	6	0.2	46.5
RS-489 0960-0980	80	1.42	3	1.2	1	178.6	0.22	1.76	0.29	1.1	7.5	13.46	2.15	4.1	120	0.29	30.2	0.18	839	2.28	0.036	3.3	0.04	15.21	0.02	0.75	0.3	200.9	0.02	7.2	0.002	0.1	1.7	4	< .2	36.2
RS-489 0980-1000	70	1.6	1.6	1.1	1	135.3	0.19	1.64	0.24	1.4	6.5	7.63	2.14	4.6	68	0.35	26.8	0.23	798	1.49	0.031	1.8	0.041	15.2	0.01	0.51	0.1	169.5	0.02	6.9	0.004	0.11	1.3	7	< .2	49
RS-489 1000-1020	79	1.6	1.5	1.1	1	234	0.24	2.12	0.28	1.6	3.4	5.83	1.8	5	56	0.33	29	0.21	932	1.11	0.027	1.6	0.04	22.06	0.03	0.49	0.2	155.8	0.02	6.7	0.003	0.1	1	5	< .2	61.9
RS-489 1020-1040	92	1.39	2.2	1.4	< 1	259.8	0.17	3.85	0.36	1.9	4.4	6.45	1.71	4.7	82	0.25	28.6	0.15	1424	0.95	0.022	2.1	0.052	24.38	0.04	0.94	0.2	205.9	0.02	4.7	0.013	0.08	1.2	8	< .2	84.6
RS-489 1040-1060	105	0.89	4.4	3.1	1	212.8	0.23	2.69	0.26	2.3	5.2	5.62	1.65	3.6	242	0.23	26.8	0.09	1425	1.12	0.019	1.6	0.054	19.03	0.82	2.15	0.7	156.4	0.02	4.5	0.005	0.19	1	5	< .2	77.6
RS-489 1060-1080	11902	0.98	61.7	131.2	1	54.4	0.21	0.28	0.18	2.2	7.4	23.41	3.88	3.6	495	0.21	18.1	0.03	220	4.4	0.01	4.2	0.049	21.03	4.04	29.15	17.1	37.6	< .02	4.5	0.002	1.07	0.9	4	0.3	73.3
RS-489 1080-1100	2000	1.11	41	89	1	49.8	0.08	0.31	0.18	2.3	7.6	13.23	3.47	4.1	459	0.27	21.3	0.04	358	3.2	0.017	2.6	0.048	20.73	4.22	20.41	10.2	46.2	< .02	6.3	0.001	0.72	1	3	0.4	83.1
RS-489 1100-1120	803	1.37	21.5	50	1	67	0.04	0.49	0.2	2.9	5.4	12.56	3.37	5	684	0.32	21	0.05	1572	3.31	0.017	2.3	0.059	22.76	3.11	16.93	4.9	47.7	< .02	6.7	0.002	0.59	0.9	4	0.4	98.3
RS-489 1120-1140	215	1.47	3.2	2.1	< 1	424.6	0.36	1.86	0.24	1.8	7.7	6.96	2.3	5	104	0.3	29.2	0.09	993	1.25	0.021	1.7	0.055	19.55	0.23	1.81	0.2	164.1	< .02	7.3	0.008	0.09	2.3	5	0.3	59.4
RS-489 1140-1160	86	1.64	1.2	3	< 1	54.7	0.19	2.12	0.14	2.2	4.4	2.48	1.89	5.9	29	0.17	26.6	0.26	940	0.59	0.043	1	0.053	14.42	< .01	0.27	< .1	243.5	0.02	4.2	0.002	0.03	1	2	< .2	72.2
RS-489 1160-1180	73	1.44	1	1.4	< 1	63.6	0.27	1.66	0.22	2.1	4	2.99	1.93	5.6	30	0.22	30.2	0.19	645	0.6	0.052	1.1	0.055	16.34	< .01	0.27	< .1	189.6	< .02	4.1	0.005	0.05	0.8	3	< .2	71.9
RS-489 1180-1200	129	1.51	2.3	2	1	660.6	0.17	1.85	0.43	2.6	6.2	6.56	2.04	5.4	52	0.3	27.8	0.23	1037	1.54	0.046	2.2	0.053	14.21	0.08	0.51	0.2	194.1	0.02	5.5	0.004	0.1	1.5	6	< .2	87.3
RS-489 1200-1220	154	1.31	1	0.8	1	115.6	0.32	1.73	0.3	2.9	6.3	7.84	2.01	4.7	31	0.32	31.2	0.24	962	1.58	0.049	3.3	0.056	12.04	< .01	0.26	0.1	181.6	0.02	5.5	0.003	0.08	0.6	8	< .2	72
RS-489 1220-1240	72	0.86	1.2	0.7	1	187.4	0.16	0.96	0.15	1.8	5.6	8.23	1.71	3.2	20	0.36	29.8	0.12	526	1.72	0.042	2.8	0.056	9.86	0.01	0.52	< .1	125.5	< .02	5.1	0.005	0.1	0.7	8	< .2	57.6
RS-489 1240-1260	90	0.89	1.6	0.6	1	93.6	0.22	1.18	0.21	1.6	6.2	9.89	1.8	3.4	26	0.38	30	0.11	544	1.85	0.043	3.4	0.05	14.57	0.01	0.4	< .1	125	< .02	5	0.004	0.11	0.7	6	< .2	51.7
RS-489 1260-1280	194	1.25	3.2	3.2	1	679.4	0.28	1.74	0.3	2.2	5.8	6.09	1.57	3.9	82	0.32	31	0.15	846	1.24	0.036	2.6	0.047	15.46	0.14	0.93	0.4	196	0.02	5.4	0.003	0.14	1.4	4	< .2	98.4
RS-489 1280-1300	179	1.32	3.4	1.1	1	684.3	0.32	1.65	0.29	2.1	4.7	6.98	1.5	3.9	56	0.33	31.4	0.14	1036	1.1	0.025	2.1	0.043	20.04	0.16	0.73	0.3	217.9	0.02	4.4	0.001	0.13	1.3	3	< .2	98.9
RS-489 1300-1320	96	0.85	2.9	0.7	1	429.3	0.21	2.28	0.21	1.6	5.2	7.6	1.61	2.7	158	0.36	27.7	0.07	1622	1.66	0.019	2.2	0.045	15.85	0.33	1.48	0.2	151.6	< .02	5.1	0.003	0.2	1.6	4	0.4	84.5
STANDARD DS2	228	1.74	57.6	212	2	148.8	11.71	0.54	11.01	11.1	163.5	127.72	3.05	6	258	0.16	16.6	0.61	848	14.71	0.033	35.8	0.091	32.52	0.03	9.15	2.2	28.5	1.92	3.8	0.092	1.87	19.1	74	6.7	161.5
RS-489 1320-1340	2186	0.61	45.3	119.1	1	62.2	0.27	0.44	0.27	1.1	4.3	10.55	2.38	2	428	0.28	16.9	0.04	237	2.06	0.012	2.7	0.033	21.65	2.68	14.22	9.5	79.8	< .02	4.5	0.001	0.65	2	2	0.3	66.5
RS-489 1340-1360	657	0.71	16.4	36.4	1	69	0.11	0.58	0.6	2	3.3	9.68	2.1	2.2	1219	0.25	19.7	0.06	254	2.38	0.013	2.3	0.029	20.36	2.22	8.71	3.9	112.7	< .02	4.3	0.001	0.44	1.5	2	0.4	134.4

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AAL REF: Sp56013
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-489 1360-1380	250	0.73	17.2	28.4	< 1	61.2	0.16	0.92	0.22	1.2	4.3	7.01	2.36	2.4	203	0.26	18.8	0.05	593	1.63	0.014	2.7	0.03	22.16	2.67	7.42	1.6	109.8	< .02	4.6	0.001	0.33	1.3	< 2	0.5	53.7
RS-489 1380-1400	1748	1	20.2	63.4	< 1	43.3	0.06	0.45	0.28	1.6	4.6	9.78	3.27	3.5	246	0.36	20.3	0.04	193	1.63	0.013	2.5	0.047	21.37	4.16	17.91	11.5	93.7	< .02	5.7	0.001	0.92	0.9	2	0.5	81
RS-489 1400-1420	445	0.75	11.7	43.7	< 1	44.2	0.05	0.46	0.24	1	5.6	8.81	2.89	2.6	314	0.3	18.1	0.04	207	1.77	0.011	2.5	0.031	21.08	3.69	12.86	6.8	86.1	< .02	4.9	0.001	1.02	0.8	2	0.5	77.6
RS-489 1420-1440	1005	0.98	24.5	50.4	< 1	57.4	0.08	0.61	0.36	2.4	7.2	12.75	2.87	3.3	304	0.3	18.7	0.08	263	3.13	0.012	4	0.037	24.06	2.65	9.05	11.4	103.4	< .02	4.6	0.001	0.57	1.6	4	0.5	92.5
RS-489 1440-1460	1661	0.88	46.1	62.2	< 1	30.7	0.06	0.49	0.32	2.1	6.2	10.14	2.99	2.9	270	0.33	15.2	0.06	200	2.41	0.011	2.5	0.04	26.19	4	15.13	11.8	81.9	< .02	4.1	0.001	0.78	1.7	3	0.4	96.4
RS-489 1460-1480	2991	0.93	104.1	87.8	< 1	31.3	0.12	0.56	0.34	2.5	6.5	11.88	3.16	3	170	0.32	16.2	0.07	278	2.59	0.012	3.3	0.037	24.4	3.34	13.39	17.3	93.3	< .02	3.8	0.001	0.49	2.2	3	0.3	106.2
RS-489 1480-1500	99999	0.78	103	165.9	< 1	48.6	0.08	0.45	0.7	2.3	5	73.96	2.29	2.5	1069	0.33	15.4	0.05	184	1.64	0.01	1.8	0.038	23.33	2.52	286.16	130.5	76.1	0.02	4.4	0.001	0.52	1.6	2	0.3	105.3
RS-489 1500-1520	44037	0.82	22.2	66	< 1	66.7	0.08	0.52	0.35	1.9	5	12.19	2.12	2.8	475	0.31	18.7	0.06	226	1.53	0.011	2.2	0.039	21.67	2.33	37.11	19.9	89.8	< .02	4.8	0.001	0.65	1.4	2	0.4	91.9
RS-489 1520-1540	18202	0.77	3.8	27.7	< 1	94.2	0.04	0.48	0.29	2	4.9	7.6	1.63	2.7	310	0.36	21	0.05	773	1.41	0.013	1.9	0.042	14.73	1.65	18.15	5.9	74.4	< .02	5.4	0.001	0.5	1.7	2	0.3	75.9
RS-489 1540-1560	9604	0.89	25.8	41	< 1	72.6	0.06	0.51	0.36	2	6.3	10.78	2.15	3	226	0.33	22.4	0.07	547	1.98	0.014	2.8	0.04	19.08	2.09	12.54	6.6	85.6	< .02	5.8	0.001	0.55	1.6	3	0.3	88.3
RS-489 1560-1580	6211	0.56	110.9	89.4	< 1	77.2	0.05	0.29	0.15	1.3	8	10.41	1.95	1.8	163	0.27	18.6	0.03	155	2.69	0.007	2.8	0.024	21.49	2.24	12.8	11.2	49.9	< .02	4.4	< .001	0.34	0.8	2	0.5	59.9
RS-489 1580-1600	6831	0.58	155.8	179.9	< 1	66.5	0.02	0.29	0.09	0.9	8	11.17	2.18	2.3	737	0.26	15.3	0.02	178	2.88	0.006	2.9	0.024	21.93	2.6	16.73	15.2	42.5	< .02	3.7	< .001	0.4	0.6	2	0.4	59.2
RS-489 1600-1620	21326	0.45	291.6	283.3	< 1	85.5	0.03	0.28	0.17	0.8	7.7	19.87	2.17	2	921	0.24	17.5	0.02	263	3.68	0.005	4.7	0.016	21.27	2.01	35.2	23.5	32.5	< .02	4.6	< .001	0.48	0.6	3	0.9	56.8
RS-489 1620-1640	6735	0.47	71.3	104.7	< 1	86	0.03	0.27	0.11	0.3	8	13.95	2.06	1.8	128	0.31	41.1	0.02	309	3.33	0.008	3.8	0.01	29.14	2.1	16.13	14.3	36.3	< .02	9.7	< .001	0.26	0.9	3	0.4	82.9
RS-489 1640-1660	1799	0.61	7.2	9	< 1	96.6	< .02	0.98	0.16	0.2	6.1	10.03	1.67	2.4	85	0.45	44.2	0.02	835	2.09	0.023	2.6	0.008	28.13	1.56	4.04	2.8	74.3	< .02	10.4	< .001	0.21	0.8	2	0.2	80.6
RS-489 1660-1680	5150	0.45	45.9	24.6	< 1	109.1	< .02	1.34	0.12	0.6	7.5	10.01	1.68	1.7	106	0.33	36.9	0.02	1028	3.42	0.02	3.3	0.008	27.51	1.5	8.56	6	83.5	< .02	8.7	< .001	0.17	0.8	2	0.4	91.5
RS-489 1680-1700	1453	0.56	6.8	5.5	< 1	127.4	0.05	1.13	0.11	0.4	8.2	12.13	1.68	2.3	57	0.42	46.9	0.02	946	3.03	0.012	3.6	0.008	23.93	0.86	4.3	1.8	73.2	< .02	11.6	< .001	0.21	1	3	0.3	75.1
RS-489 1700-1720	905	0.42	6.9	4.7	< 1	50.3	0.07	0.89	0.06	0.4	8.9	15.08	1.98	2	50	0.34	41.5	0.01	644	3.92	0.029	4.9	0.007	19.83	1.03	3.51	1.8	60.6	< .02	11	< .001	0.14	0.7	3	0.4	67.9
RS-489 1720-1740	4712	0.45	77.8	119.4	< 1	35.7	< .02	0.83	0.11	0.2	8.4	12.73	2.48	1.7	90	0.3	25.7	0.01	616	6.16	0.008	4.2	0.006	43.49	2.72	14.74	26.9	62.1	< .02	7	< .001	0.23	0.6	2	0.8	88.9
RS-489 1740-1760	1587	0.53	14.8	16.4	< 1	59.9	0.02	0.66	0.13	0.2	7.8	10.46	1.83	2.1	64	0.39	39.4	0.01	636	3.12	0.032	4.1	0.007	24.54	1.85	5.9	4.9	57.7	< .02	10.7	< .001	0.19	0.9	2	0.4	76.7
RS-489 1760-1780	1107	0.53	15.9	21.6	< 1	89.3	< .02	0.72	0.07	0.2	5.9	8.21	1.54	2	51	0.37	40	0.02	533	3.05	0.022	2.4	0.008	22.32	1.62	5.28	4.8	62	< .02	10.3	< .001	0.18	1	2	< .2	76
RS-489 1780-1800	7206	0.59	25.1	24.5	1	120.8	0.04	0.31	0.21	0.7	8.9	14.28	1.89	2.1	201	0.33	37.9	0.04	341	2.9	0.01	4.4	0.012	24.95	1.33	12.2	6.6	53.5	< .02	9.2	0.001	0.36	0.8	4	0.3	79
RS-489 1800-1820	2662	0.37	13.4	10.9	< 1	93	0.03	1.31	0.04	0.3	10.3	15.21	2.02	1.5	96	0.37	36.9	0.01	1435	4.15	0.011	4.8	0.007	22.27	1.37	8.13	2.3	68.6	< .02	9.3	< .001	0.27	0.5	3	0.6	70.9
RS-489 1820-1840	1574	0.51	20	19	< 1	81.7	0.03	0.88	0.06	0.3	10.3	17.8	2.42	2	97	0.36	33	0.01	1034	4.7	0.008	5.2	0.006	32.95	2.25	9.12	7.7	54.5	< .02	8.4	< .001	0.27	0.5	3	0.5	86.7
RS-489 1840-1860	49986	0.37	67.9	159.1	< 1	80.1	0.03	0.15	0.32	0.3	8.3	18.11	1.95	1.4	187	0.24	34.4	0.01	209	5.63	0.005	3.9	0.005	28.4	1.77	645.86	143.5	29.9	< .02	8.7	< .001	0.35	0.8	3	0.5	70.8
RS-489 1860-1880	5420	0.39	29.8	54.6	< 1	15.4	0.03	0.14	0.23	0.2	7.6	11.35	1.67	1.3	52	0.28	44.4	0.01	147	3.75	0.005	3.3	0.006	26.22	1.86	141.23	36.8	35.1	< .02	11.4	< .001	0.33	0.9	2	0.5	64.3
RS-489 1880-1900	5268	0.36	23.1	33.2	< 1	36.5	0.04	0.34	0.24	0.2	8.4	12.17	1.83	1.3	74	0.3	36.7	0.01	377	5.55	0.007	3.8	0.006	30.65	1.84	66.75	20	48.3	< .02	10.5	< .001	0.23	2.2	2	0.5	87
RS-489 1900-1915	702	0.65	4.4	2.7	1	35.9	0.02	1.29	0.11	0.3	10	13.77	1.97	3	45	0.44	57.9	0.01	734	3.07	0.037	4.3	0.008	21.88	0.2	9.92	2.2	73.8	< .02	15.6	0.001	0.09	1.2	3	0.3	59
89577	34381	0.86	70.9	2134.6	1	84.1	0.62	0.91	0.27	2.7	23.8	11.37	1.8	2.7	234	0.4	16.6	0.08	276	9.29	0.029	11.8	0.058	21.66	1.92	12.22	18.1	84.5	0.04	3.2	0.001	0.3	0.7	3	0.4	79.6
STANDARD DS2	255	1.69	57.5	190.1	< 1	143.4	10.4	0.52	9.93	11.6	154.4	121.14	2.93	6.2	232	0.15	15.4	0.59	808	13.95	0.03	35.3	0.084	31.63	0.03	8.77	2.2	28.2	1.75	3.7	0.089	1.71	19.7	72	6.3	157.3

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CLIENT:	*HECLA MINING CO.*
CLIENT REF:	KURT ALLEN
AAL REF:	Sp56013
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-489 0000-0020	58	0.6	15	3.3	9	41.1	0.23	0.17	0.3	0.5	7.2	17.05	1.91	3.4	464	0.07	22.1	0.05	127	2.03	0.077	3.6	0.008	20.23	0.08	7.94	0.5	29.8	< .02	10.6	0.008	0.03	2.1	25	0.6	28.1
RS-489 0020-0040	51	0.4	7.3	1.8	< 1	53.8	0.07	0.43	0.21	0.8	6.5	14.11	1.76	2.6	325	0.05	23.6	0.02	138	2.07	0.017	4.1	0.016	22.07	0.05	8.17	0.3	22.4	< .02	13.4	0.013	0.03	4.6	26	1.3	49.3
RS-489 0040-0060	54	0.45	5.2	0.9	< 1	100.5	0.06	0.88	0.36	1	9.6	11.86	1.95	3.1	184	0.13	27.3	0.03	319	2.34	0.02	4.9	0.02	25.31	0.06	6.19	0.4	24.9	< .02	13.4	0.018	0.08	3.6	18	1.5	88.9
RS-489 0060-0080	171	0.59	7.7	1.3	< 1	69.8	0.05	0.37	0.26	1.3	6.2	17.35	1.88	3.9	614	0.17	30.8	0.02	312	2.03	0.019	3.9	0.015	62.39	0.02	6.03	0.3	13.9	< .02	14.5	0.015	0.09	3.3	10	1.3	147.8
RS-489 0080-0100	73	0.61	12.8	1.1	< 1	49.9	1.06	0.11	0.14	0.3	5.7	10.6	1.76	3.4	577	0.15	26.8	0.01	151	1.47	0.015	3.5	0.013	22.29	0.01	6.34	0.5	28.2	< .02	13.9	0.004	0.08	3	10	0.5	73.8
RS-489 0100-0120	171	0.57	29.1	7.8	< 1	143.5	0.13	0.07	0.09	0.1	6.8	10.98	1.61	2.9	1068	0.12	18.1	0.01	122	2.08	0.008	3.8	0.014	15.39	0.1	16.06	1	59.6	< .02	10	0.002	0.02	1.9	8	2.6	33.4
RS-489 0120-0140	72	0.61	12.4	2.3	< 1	71.7	0.03	0.08	0.02	< .1	3.7	8.13	1.46	3.2	429	0.23	24.3	0.01	63	1.28	0.009	2.1	0.017	18.65	0.24	9	0.7	50.6	< .02	14.3	0.001	0.06	2.8	8	0.3	22.8
RS-489 0140-0160	85	0.6	22.8	11.1	< 1	107.4	0.04	0.18	0.03	< .1	5.9	9.58	2.17	3.4	540	0.24	21.5	0.01	69	1.97	0.012	2.7	0.012	17.81	0.26	14.12	2.2	35.5	< .02	13.8	0.001	0.07	4.1	7	0.4	23.6
RS-489 0160-0180	78	0.36	9.9	4.2	< 1	64.7	0.05	0.05	0.1	< .1	4.9	7.33	1.87	3.8	538	0.11	26.9	0.01	38	1.21	0.008	2	0.007	17.89	0.05	9.48	0.9	16	< .02	14.2	0.001	0.07	2.8	7	0.3	9.4
RS-489 0180-0200	60	0.48	25.2	17.3	< 1	141.3	0.04	0.05	0.18	1.7	7.5	14.32	1.72	3.3	972	0.07	20.4	0.01	69	2.4	0.006	3	0.008	24.65	0.07	14.07	2.6	34.7	< .02	10.6	0.001	0.18	15.9	9	0.6	31.9
RS-489 0200-0220	139	0.74	107.9	48.8	< 1	118	0.03	0.06	0.03	0.2	10.8	21.32	2.46	5.8	1316	0.15	18.4	0.01	133	6.2	0.016	4.9	0.007	20.73	0.06	23.28	2.4	19.8	< .02	12.1	0.002	0.18	3.3	6	0.4	13.1
RS-489 0220-0240	391	1.3	84.1	40.2	< 1	115	0.04	0.05	0.07	0.2	10.8	26.89	2.62	6.5	1745	0.21	20.6	0.01	134	6.61	0.016	5.4	0.019	17.75	0.2	27.8	2.9	41.6	< .02	11.5	0.002	0.22	3	7	0.5	20.5
RS-489 0240-0260	385	1.09	33.1	52.9	< 1	122.2	0.04	0.02	0.06	0.1	8	26.14	2.4	6.9	944	0.22	20.5	0.01	128	4.23	0.018	4.6	0.01	16.56	0.14	22.41	3.9	22	< .02	11	0.002	0.15	2	5	0.6	17.1
RS-489 0260-0280	131	0.93	14.3	13.7	< 1	99.8	0.04	0.01	0.05	< .1	5.1	17.91	1.94	5.4	111	0.14	23	0.01	51	2.49	0.005	2.3	0.013	19.56	0.17	16.6	1.4	14.9	< .02	11.8	0.001	0.06	1.5	3	0.3	15.3
RS-489 0280-0300	330	0.93	28.2	55.4	< 1	165	0.03	0.01	0.08	< .1	6.7	28.65	2.35	6.2	3893	0.31	23.1	0.01	89	2.73	0.015	3.4	0.013	32.54	0.36	16.5	4	15.9	< .02	11.9	0.001	0.13	1.3	4	0.3	29.7
RS-489 0300-0320	516	0.98	72.1	56.6	< 1	90.3	0.04	0.02	0.13	1.1	9.9	41.99	2.6	6.3	1815	0.2	19.6	0.01	144	4.07	0.01	5.5	0.013	19.41	1.12	21.27	2.7	15.7	< .02	9.7	0.002	0.31	1.8	6	0.9	37.1
RS-489 0320-0340	462	1.29	26.4	35.9	< 1	29.8	0.03	0.02	0.05	0.4	10	35.62	2.16	6.2	1702	0.16	18	< .01	130	3.01	0.004	5.1	0.01	18.13	0.43	14.6	2.6	12.3	< .02	8.7	0.002	0.13	1.1	6	0.7	23
RS-489 0340-0360	285	0.9	21.1	79.6	< 1	100.2	< .02	0.01	0.04	0.4	8.6	30.46	2.1	4.3	1244	0.25	20.7	< .01	130	2.74	0.007	4.5	0.013	13.59	0.73	14.41	7.2	10.2	< .02	10.2	0.001	0.22	1.3	6	0.7	20.4
RS-489 0360-0380	287	0.78	24.9	65.1	< 1	153.2	0.02	0.01	0.03	0.2	6.9	13.17	2.12	3.8	536	0.18	21.3	< .01	107	2.43	0.005	3.4	0.011	12.91	0.46	23.38	5.6	7	< .02	10.8	0.001	0.13	1.1	5	0.7	13.9
RS-489 0380-0400	673	1.2	36.6	40.1	< 1	72.5	0.02	0.01	0.1	2.4	13.1	50.26	2.77	4.7	2067	0.12	18.1	< .01	161	4.45	0.005	6.5	0.009	15.29	1.48	19.65	3.3	6.7	< .02	9	0.002	0.27	6.8	6	1.7	41.4
RS-489 0400-0420	255	1.6	26.6	18.5	< 1	105.6	< .02	0.01	0.04	0.8	12.5	46.11	3.31	6	733	0.25	19.4	< .01	166	4.69	0.005	6	0.011	14.43	0.8	12.78	1.5	7.8	< .02	10.1	0.002	0.11	1.6	6	1.6	33.3
RS-489 0420-0440	214	1.17	23.1	55.5	< 1	274.8	0.02	0.01	0.08	< .1	7.3	37.64	4.6	6.2	92	0.26	21.9	0.01	112	3.87	0.009	3.4	0.019	17.35	0.28	11.14	3.6	23.3	< .02	12.9	0.002	0.13	1.2	5	0.5	42.7
RS-489 0440-0460	253	1	69	48.1	< 1	167.6	0.02	0.02	0.02	0.1	9.4	41.45	2.92	5.8	685	0.23	20.7	0.01	1073	4.46	0.02	4.9	0.019	11.6	0.25	44.36	3.1	24.6	< .02	12.5	0.002	2.03	1.4	5	3.7	88.8
RS-489 0460-0480	456	0.93	69.3	66.6	1	127.3	0.03	0.02	0.09	0.7	10.1	43.37	3.06	5.3	2301	0.19	19.4	0.01	628	4.46	0.016	5.8	0.015	14.2	0.65	42.11	4.4	17.2	< .02	11	0.002	1.04	1.2	6	3.3	71.3
RS-489 0480-0500	348	1.23	42	34.6	3	130.7	0.04	0.02	0.17	1	8.8	44.17	2.48	6.4	7014	0.19	22.3	0.01	136	2.76	0.018	4.4	0.012	26.16	1.49	18.14	5.6	14.9	< .02	11.8	0.002	0.3	1.5	5	1	42.1
RS-489 0500-0520	131	1.31	11.9	23.1	1	96.1	0.03	0.01	0.24	4	5.9	43.14	1.93	5.3	793	0.16	23.2	0.01	68	2.31	0.011	3.8	0.007	16.47	2.28	12.19	3.7	10.5	< .02	11.7	0.001	0.49	4.7	3	0.5	81
RS-489 0520-0540	129	1.29	13	24.6	1	89.4	0.03	0.02	0.31	2.3	5.6	46.59	1.78	4.7	1015	0.16	21.5	0.01	84	2.18	0.016	4.1	0.007	16.9	1.74	10.99	3.2	9.5	< .02	10.9	0.002	0.36	5.4	4	0.7	115.6
RS-489 0540-0560	348	1.15	42	65.5	1	67.7	0.04	0.03	0.4	2.7	24.5	52.29	2.35	5.2	1980	0.17	20.6	0.01	113	3.72	0.018	6.1	0.007	18.61	2.06	15.9	2.1	15.4	< .02	10.2	0.002	0.41	9.1	5	1.6	97.9
RS-489 0560-0580	244	1.05	25	45	< 1	70.7	0.03	0.04	0.23	2.8	11.5	50.1	2.46	4.5	1345	0.17	23.3	0.01	152	3.89	0.02	6.4	0.007	30.79	1.84	14.64	3.6	9.5	< .02	11.6	0.003	0.47	4.4	6	1	89
RS-489 0580-0600	96	0.88	8.1	8.9	1	67.7	< .02	0.02	0.1	2.1	4.2	9.83	1.79	3.1	379	0.16	22.2	0.01	71	1.97	0.019	2.6	0.006	26.85	1.66	7.82	2.2	6.3	< .02	10.7	0.001	0.26	3.1	3	0.5	69.9
RS-489 0600-0620	135	1.09	20.2	46.3	< 1	74.5	0.03	0.01	0.26	3.1	7	16.03	2.49	3.6	358	0.17	20.7	0.01	93	3.3	0.018	3.9	0.006	27.13	2.31	13.21	7	11.6	< .02	10.1	0.002	0.57	3.7	4	0.9	73
RS-489 0620-0640	531	1.56	30.5	145.3	1	62.7	0.02	0.02	1.35	3.1	11.2	21	2.38	4.8	893	0.07	17.7	0.01	123	3.73	0.008	4.8	0.007	27.31	1.89	17.21	7.9	14.8	< .02	8.6	0.001	0.71	4.5	5	1.1	86.2
RS-489 0640-0660	174	1.15	11.8	24.7	< 1	82	0.03	0.01	0.36	2.4	5.8	11.97	1.65	3.4	500	0.13	20.4	0.01	106	2.31	0.012	2.8	0.008	32.9	1.44	10.41	2.1	11.5	< .02	10	0.002	0.36	2.5	3	0.5	53.4
STANDARD DS2	227	1.8	58.2	201.3	< 1	155.5	11.17	0.56	10.9	12.1	163.1	132.58	3.14	6.5	238	0.17	17.3	0.63	871	14.84	0.032	36.7	0.096	32.5	0.03	9.8	2.3	29.1	1.9	3.9	0.097	1.84	19.5	77	6.5	169.4
RS-489 0660-0680	97	1.08	4.6	5.9	5	110.3	0.02	0.02	0.08	0.7	5.6	9.68	1.53	3.9	185	0.18	24	0.01	118	2.58	0.019	2	0.01	20.43	0.21	5.36	0.7	11.3	< .02	11.8	0.022	0.13	1.6	5	1.3	28.6

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CLIENT REF: KURT ALLEN
AAL REF: Sp56013
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-489 0680-0700	228	1.28	12.8	37.6	4	76.7	0.02	0.02	0.41	2.8	5.9	10.28	1.7	4	497	0.17	18.9	0.01	90	2.31	0.016	2.5	0.005	14.31	0.85	9.62	3.5	6.2	< .02	9.1	0.012	0.39	2.3	4	1	95.1
RS-489 0700-0720	333	1.04	39.4	54	3	73.3	0.03	0.01	0.45	3.1	15.5	34.29	3.25	3.7	1882	0.16	16.3	< .01	187	5.87	0.019	7.3	0.005	32.98	1.81	17.41	5.9	7.3	< .02	8.5	0.003	0.56	3.2	6	1	97.6
RS-489 0720-0740	165	0.6	20.7	27.6	1	67.7	0.02	0.01	0.26	3.1	10.3	23.64	2.43	2.1	998	0.11	18	< .01	158	4.01	0.014	6.3	0.004	13.63	1.63	10.24	5.2	4.8	< .02	9	0.002	0.3	2.4	6	0.8	67.5
RS-489 0740-0760	161	0.86	25.7	27.9	2	52.5	< .02	0.01	0.18	1.7	9.2	17.24	2.41	2.8	1022	0.11	20.7	< .01	120	3.36	0.01	4.5	0.005	16.79	1.72	12.84	4.2	6.6	< .02	9.2	0.002	0.35	2	5	0.7	47.4
RS-489 0760-0780	179	0.82	32.7	26.3	1	53.6	< .02	0.01	0.18	2.1	10.1	21.14	2.59	2.5	2271	0.11	17.6	< .01	135	4.2	0.01	5.1	0.004	15.7	1.7	14.92	3.3	5.3	< .02	8.2	0.002	0.38	2.7	5	0.8	85.5
RS-489 0780-0800	196	0.96	8.7	68.9	1	62.4	< .02	0.01	0.28	3.6	6.8	12.22	2.23	2.6	682	0.13	18.1	< .01	83	2.6	0.008	3.2	0.005	11.97	1.97	14.22	5.8	8.9	< .02	8.1	0.002	0.56	3.1	3	0.3	73.7
RS-489 0800-0820	118	1.04	17.2	34.7	< 1	49.4	< .02	0.01	0.27	2.9	7.9	15.9	2.46	2.9	1226	0.13	14.6	< .01	135	3.16	0.011	4.6	0.004	12.44	1.77	14.52	4.7	8.3	< .02	7.4	0.002	0.68	2.7	5	0.4	52.9
RS-489 0820-0840	555	0.72	39.1	95.9	< 1	57.3	< .02	0.01	1.1	3.8	16	23.29	2.83	2.2	1301	0.17	18.6	< .01	137	4.47	0.012	5.9	0.005	19.37	2.06	21.18	5.3	12.3	< .02	8.6	0.002	0.59	4.4	5	0.6	52.5
RS-489 0840-0860	334	0.55	26	45.2	< 1	36.8	0.03	0.01	0.36	3.6	11.3	31.51	2.76	1.8	1311	0.1	15.4	< .01	168	5.28	0.007	6.8	0.004	15.96	1.7	19.9	3.4	9.6	< .02	7.7	0.002	0.54	1.5	6	0.5	76.4
RS-489 0860-0880	608	0.67	37.3	77	< 1	32.3	0.02	0.01	0.46	3.9	13.7	28.9	3.42	2.1	1570	0.08	15.6	< .01	191	5.2	0.005	8.7	0.008	15.3	2.22	27.11	5.8	26.5	< .02	6.9	0.002	0.84	1.1	7	0.6	84
RS-489 0880-0900	492	0.65	68.4	32.1	1	111.6	0.05	0.03	0.24	1.9	13.9	33.33	2.96	2.3	2128	0.13	16.7	0.01	181	6.47	0.011	7	0.007	16.22	1.63	26.07	2.6	23.7	< .02	7.1	0.002	0.74	1.2	6	0.6	83.8
RS-489 0900-0920	154	1.71	4.3	4.9	< 1	577.2	0.24	2.54	1.09	2.6	5.3	5.27	1.73	4.5	261	0.23	29.1	0.23	1525	0.56	0.056	1.5	0.047	21.84	0.11	1.43	0.6	583.1	0.05	4.7	0.002	0.14	1	6	< .2	126.5
RS-489 0920-0940	109	1.68	1.4	0.7	< 1	117.1	0.19	2.7	0.8	6.1	5.3	8.02	2.13	5	109	0.25	20.3	0.27	1635	0.96	0.036	2.5	0.046	14.22	0.04	0.36	0.3	211.9	0.03	4.4	0.002	0.11	0.8	9	< .2	77
RS-489 0940-0960	89	1.41	2.9	1.5	< 1	196.5	0.22	1.81	0.44	1.5	7.2	15.47	2.58	4.5	115	0.26	27.7	0.21	970	2.69	0.038	3.8	0.042	15.6	0.02	0.51	0.4	186	0.02	6.5	0.003	0.09	1.7	6	0.2	46.5
RS-489 0960-0980	80	1.42	3	1.2	1	178.6	0.22	1.76	0.29	1.1	7.5	13.46	2.15	4.1	120	0.29	30.2	0.18	839	2.28	0.036	3.3	0.04	15.21	0.02	0.75	0.3	200.9	0.02	7.2	0.002	0.1	1.7	4	< .2	36.2
RS-489 0980-1000	70	1.6	1.6	1.1	1	135.3	0.19	1.64	0.24	1.4	6.5	7.63	2.14	4.6	68	0.35	26.8	0.23	798	1.49	0.031	1.8	0.041	15.2	0.01	0.51	0.1	169.5	0.02	6.9	0.004	0.11	1.3	7	< .2	49
RS-489 1000-1020	79	1.6	1.5	1.1	1	234	0.24	2.12	0.28	1.6	3.4	5.83	1.8	5	56	0.33	29	0.21	932	1.11	0.027	1.6	0.04	22.06	0.03	0.49	0.2	155.8	0.02	6.7	0.003	0.1	1	5	< .2	61.9
RS-489 1020-1040	92	1.39	2.2	1.4	< 1	259.8	0.17	3.85	0.36	1.9	4.4	6.45	1.71	4.7	82	0.25	28.6	0.15	1424	0.95	0.022	2.1	0.052	24.38	0.04	0.94	0.2	205.9	0.02	4.7	0.013	0.08	1.2	8	< .2	84.6
RS-489 1040-1060	105	0.89	4.4	3.1	1	212.8	0.23	2.69	0.26	2.3	5.2	5.62	1.65	3.6	242	0.23	26.8	0.09	1425	1.12	0.019	1.6	0.054	19.03	0.82	2.15	0.7	156.4	0.02	4.5	0.005	0.19	1	5	< .2	77.6
RS-489 1060-1080	11902	0.98	61.7	131.2	1	54.4	0.21	0.28	0.18	2.2	7.4	23.41	3.88	3.6	495	0.21	18.1	0.03	220	4.4	0.01	4.2	0.049	21.03	4.04	29.15	17.1	37.6	< .02	4.5	0.002	1.07	0.9	4	0.3	73.3
RS-489 1080-1100	2000	1.11	41	89	1	49.8	0.08	0.31	0.18	2.3	7.6	13.23	3.47	4.1	459	0.27	21.3	0.04	358	3.2	0.017	2.6	0.048	20.73	4.22	20.41	10.2	46.2	< .02	6.3	0.001	0.72	1	3	0.4	83.1
RS-489 1100-1120	803	1.37	21.5	50	1	67	0.04	0.49	0.2	2.9	5.4	12.56	3.37	5	684	0.32	21	0.05	1572	3.31	0.017	2.3	0.059	22.76	3.11	16.93	4.9	47.7	< .02	6.7	0.002	0.59	0.9	4	0.4	98.3
RS-489 1120-1140	215	1.47	3.2	2.1	< 1	424.6	0.36	1.86	0.24	1.8	7.7	6.96	2.3	5	104	0.3	29.2	0.09	993	1.25	0.021	1.7	0.055	19.55	0.23	1.81	0.2	164.1	< .02	7.3	0.008	0.09	2.3	5	0.3	59.4
RS-489 1140-1160	86	1.64	1.2	3	< 1	54.7	0.19	2.12	0.14	2.2	4.4	2.48	1.89	5.9	29	0.17	26.6	0.26	940	0.59	0.043	1	0.053	14.42	< .01	0.27	< .1	243.5	0.02	4.2	0.002	0.03	1	2	< .2	72.2
RS-489 1160-1180	73	1.44	1	1.4	< 1	63.6	0.27	1.66	0.22	2.1	4	2.99	1.93	5.6	30	0.22	30.2	0.19	645	0.6	0.052	1.1	0.055	16.34	< .01	0.27	< .1	189.6	< .02	4.1	0.005	0.05	0.8	3	< .2	71.9
RS-489 1180-1200	129	1.51	2.3	2	1	660.6	0.17	1.85	0.43	2.6	6.2	6.56	2.04	5.4	52	0.3	27.8	0.23	1037	1.54	0.046	2.2	0.053	14.21	0.08	0.51	0.2	194.1	0.02	5.5	0.004	0.1	1.5	6	< .2	87.3
RS-489 1200-1220	154	1.31	1	0.8	1	115.6	0.32	1.73	0.3	2.9	6.3	7.84	2.01	4.7	31	0.32	31.2	0.24	962	1.58	0.049	3.3	0.056	12.04	< .01	0.26	0.1	181.6	0.02	5.5	0.003	0.08	0.6	8	< .2	72
RS-489 1220-1240	72	0.86	1.2	0.7	1	187.4	0.16	0.96	0.15	1.8	5.6	8.23	1.71	3.2	20	0.36	29.8	0.12	526	1.72	0.042	2.8	0.056	9.86	0.01	0.52	< .1	125.5	< .02	5.1	0.005	0.1	0.7	8	< .2	57.6
RS-489 1240-1260	90	0.89	1.6	0.6	1	93.6	0.22	1.18	0.21	1.6	6.2	9.89	1.8	3.4	26	0.38	30	0.11	544	1.85	0.043	3.4	0.05	14.57	0.01	0.4	< .1	125	< .02	5	0.004	0.11	0.7	6	< .2	51.7
RS-489 1260-1280	194	1.25	3.2	3.2	1	679.4	0.28	1.74	0.3	2.2	5.8	6.09	1.57	3.9	82	0.32	31	0.15	846	1.24	0.036	2.6	0.047	15.46	0.14	0.93	0.4	196	0.02	5.4	0.003	0.14	1.4	4	< .2	98.4
RS-489 1280-1300	179	1.32	3.4	1.1	1	684.3	0.32	1.65	0.29	2.1	4.7	6.98	1.5	3.9	56	0.33	31.4	0.14	1036	1.1	0.025	2.1	0.043	20.04	0.16	0.73	0.3	217.9	0.02	4.4	0.001	0.13	1.3	3	< .2	98.9
RS-489 1300-1320	96	0.85	2.9	0.7	1	429.3	0.21	2.28	0.21	1.6	5.2	7.6	1.61	2.7	158	0.36	27.7	0.07	1622	1.66	0.019	2.2	0.045	15.85	0.33	1.48	0.2	151.6	< .02	5.1	0.003	0.2	1.6	4	0.4	84.5
STANDARD DS2	228	1.74	57.6	212	2	148.8	11.71	0.54	11.01	11.1	163.5	127.72	3.05	6	258	0.16	16.6	0.61	848	14.71	0.033	35.8	0.091	32.52	0.03	9.15	2.2	28.5	1.92	3.8	0.092	1.87	19.1	74	6.7	161.5
RS-489 1320-1340	2186	0.61	45.3	119.1	1	62.2	0.27	0.44	0.27	1.1	4.3	10.55	2.38	2	428	0.28	16.9	0.04	237	2.06	0.012	2.7	0.033	21.65	2.68	14.22	9.5	79.8	< .02	4.5	0.001	0.65	2	2	0.3	66.5
RS-489 1340-1360	657	0.71	16.4	36.4	1	69	0.11	0.58	0.6	2	3.3	9.68	2.1	2.2	1219	0.25	19.7	0.06	254	2.38	0.013	2.3	0.029	20.36	2.22	8.71	3.9	112.7	< .02	4.3	0.001	0.44	1.5	2	0.4	134.4

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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-489 1360-1380	250	0.73	17.2	28.4	< 1	61.2	0.16	0.92	0.22	1.2	4.3	7.01	2.36	2.4	203	0.26	18.8	0.05	593	1.63	0.014	2.7	0.03	22.16	2.67	7.42	1.6	109.8	< .02	4.6	0.001	0.33	1.3	< 2	0.5	53.7
RS-489 1380-1400	1748	1	20.2	63.4	< 1	43.3	0.06	0.45	0.28	1.6	4.6	9.78	3.27	3.5	246	0.36	20.3	0.04	193	1.63	0.013	2.5	0.047	21.37	4.16	17.91	11.5	93.7	< .02	5.7	0.001	0.92	0.9	2	0.5	81
RS-489 1400-1420	445	0.75	11.7	43.7	< 1	44.2	0.05	0.46	0.24	1	5.6	8.81	2.89	2.6	314	0.3	18.1	0.04	207	1.77	0.011	2.5	0.031	21.08	3.69	12.86	6.8	86.1	< .02	4.9	0.001	1.02	0.8	2	0.5	77.6
RS-489 1420-1440	1005	0.98	24.5	50.4	< 1	57.4	0.08	0.61	0.36	2.4	7.2	12.75	2.87	3.3	304	0.3	18.7	0.08	263	3.13	0.012	4	0.037	24.06	2.65	9.05	11.4	103.4	< .02	4.6	0.001	0.57	1.6	4	0.5	92.5
RS-489 1440-1460	1661	0.88	46.1	62.2	< 1	30.7	0.06	0.49	0.32	2.1	6.2	10.14	2.99	2.9	270	0.33	15.2	0.06	200	2.41	0.011	2.5	0.04	26.19	4	15.13	11.8	81.9	< .02	4.1	0.001	0.78	1.7	3	0.4	96.4
RS-489 1460-1480	2991	0.93	104.1	87.8	< 1	31.3	0.12	0.56	0.34	2.5	6.5	11.88	3.16	3	170	0.32	16.2	0.07	278	2.59	0.012	3.3	0.037	24.4	3.34	13.39	17.3	93.3	< .02	3.8	0.001	0.49	2.2	3	0.3	106.2
RS-489 1480-1500	99999	0.78	103	165.9	< 1	48.6	0.08	0.45	0.7	2.3	5	73.96	2.29	2.5	1069	0.33	15.4	0.05	184	1.64	0.01	1.8	0.038	23.33	2.52	286.16	130.5	76.1	0.02	4.4	0.001	0.52	1.6	2	0.3	105.3
RS-489 1500-1520	44037	0.82	22.2	66	< 1	66.7	0.08	0.52	0.35	1.9	5	12.19	2.12	2.8	475	0.31	18.7	0.06	226	1.53	0.011	2.2	0.039	21.67	2.33	37.11	19.9	89.8	< .02	4.8	0.001	0.65	1.4	2	0.4	91.9
RS-489 1520-1540	18202	0.77	3.8	27.7	< 1	94.2	0.04	0.48	0.29	2	4.9	7.6	1.63	2.7	310	0.36	21	0.05	773	1.41	0.013	1.9	0.042	14.73	1.65	18.15	5.9	74.4	< .02	5.4	0.001	0.5	1.7	2	0.3	75.9
RS-489 1540-1560	9604	0.89	25.8	41	< 1	72.6	0.06	0.51	0.36	2	6.3	10.78	2.15	3	226	0.33	22.4	0.07	547	1.98	0.014	2.8	0.04	19.08	2.09	12.54	6.6	85.6	< .02	5.8	0.001	0.55	1.6	3	0.3	88.3
RS-489 1560-1580	6211	0.56	110.9	89.4	< 1	77.2	0.05	0.29	0.15	1.3	8	10.41	1.95	1.8	163	0.27	18.6	0.03	155	2.69	0.007	2.8	0.024	21.49	2.24	12.8	11.2	49.9	< .02	4.4	< .001	0.34	0.8	2	0.5	59.9
RS-489 1580-1600	6831	0.58	155.8	179.9	< 1	66.5	0.02	0.29	0.09	0.9	8	11.17	2.18	2.3	737	0.26	15.3	0.02	178	2.88	0.006	2.9	0.024	21.93	2.6	16.73	15.2	42.5	< .02	3.7	< .001	0.4	0.6	2	0.4	59.2
RS-489 1600-1620	21326	0.45	291.6	283.3	< 1	85.5	0.03	0.28	0.17	0.8	7.7	19.87	2.17	2	921	0.24	17.5	0.02	263	3.68	0.005	4.7	0.016	21.27	2.01	35.2	23.5	32.5	< .02	4.6	< .001	0.48	0.6	3	0.9	56.8
RS-489 1620-1640	6735	0.47	71.3	104.7	< 1	86	0.03	0.27	0.11	0.3	8	13.95	2.06	1.8	128	0.31	41.1	0.02	309	3.33	0.008	3.8	0.01	29.14	2.1	16.13	14.3	36.3	< .02	9.7	< .001	0.26	0.9	3	0.4	82.9
RS-489 1640-1660	1799	0.61	7.2	9	< 1	96.6	< .02	0.98	0.16	0.2	6.1	10.03	1.67	2.4	85	0.45	44.2	0.02	835	2.09	0.023	2.6	0.008	28.13	1.56	4.04	2.8	74.3	< .02	10.4	< .001	0.21	0.8	2	0.2	80.6
RS-489 1660-1680	5150	0.45	45.9	24.6	< 1	109.1	< .02	1.34	0.12	0.6	7.5	10.01	1.68	1.7	106	0.33	36.9	0.02	1028	3.42	0.02	3.3	0.008	27.51	1.5	8.56	6	83.5	< .02	8.7	< .001	0.17	0.8	2	0.4	91.5
RS-489 1680-1700	1453	0.56	6.8	5.5	< 1	127.4	0.05	1.13	0.11	0.4	8.2	12.13	1.68	2.3	57	0.42	46.9	0.02	946	3.03	0.012	3.6	0.008	23.93	0.86	4.3	1.8	73.2	< .02	11.6	< .001	0.21	1	3	0.3	75.1
RS-489 1700-1720	905	0.42	6.9	4.7	< 1	50.3	0.07	0.89	0.06	0.4	8.9	15.08	1.98	2	50	0.34	41.5	0.01	644	3.92	0.029	4.9	0.007	19.83	1.03	3.51	1.8	60.6	< .02	11	< .001	0.14	0.7	3	0.4	67.9
RS-489 1720-1740	4712	0.45	77.8	119.4	< 1	35.7	< .02	0.83	0.11	0.2	8.4	12.73	2.48	1.7	90	0.3	25.7	0.01	616	6.16	0.008	4.2	0.006	43.49	2.72	14.74	26.9	62.1	< .02	7	< .001	0.23	0.6	2	0.8	88.9
RS-489 1740-1760	1587	0.53	14.8	16.4	< 1	59.9	0.02	0.66	0.13	0.2	7.8	10.46	1.83	2.1	64	0.39	39.4	0.01	636	3.12	0.032	4.1	0.007	24.54	1.85	5.9	4.9	57.7	< .02	10.7	< .001	0.19	0.9	2	0.4	76.7
RS-489 1760-1780	1107	0.53	15.9	21.6	< 1	89.3	< .02	0.72	0.07	0.2	5.9	8.21	1.54	2	51	0.37	40	0.02	533	3.05	0.022	2.4	0.008	22.32	1.62	5.28	4.8	62	< .02	10.3	< .001	0.18	1	2	< .2	76
RS-489 1780-1800	7206	0.59	25.1	24.5	1	120.8	0.04	0.31	0.21	0.7	8.9	14.28	1.89	2.1	201	0.33	37.9	0.04	341	2.9	0.01	4.4	0.012	24.95	1.33	12.2	6.6	53.5	< .02	9.2	0.001	0.36	0.8	4	0.3	79
RS-489 1800-1820	2662	0.37	13.4	10.9	< 1	93	0.03	1.31	0.04	0.3	10.3	15.21	2.02	1.5	96	0.37	36.9	0.01	1435	4.15	0.011	4.8	0.007	22.27	1.37	8.13	2.3	68.6	< .02	9.3	< .001	0.27	0.5	3	0.6	70.9
RS-489 1820-1840	1574	0.51	20	19	< 1	81.7	0.03	0.88	0.06	0.3	10.3	17.8	2.42	2	97	0.36	33	0.01	1034	4.7	0.008	5.2	0.006	32.95	2.25	9.12	7.7	54.5	< .02	8.4	< .001	0.27	0.5	3	0.5	86.7
RS-489 1840-1860	49986	0.37	67.9	159.1	< 1	80.1	0.03	0.15	0.32	0.3	8.3	18.11	1.95	1.4	187	0.24	34.4	0.01	209	5.63	0.005	3.9	0.005	28.4	1.77	645.86	143.5	29.9	< .02	8.7	< .001	0.35	0.8	3	0.5	70.8
RS-489 1860-1880	5420	0.39	29.8	54.6	< 1	15.4	0.03	0.14	0.23	0.2	7.6	11.35	1.67	1.3	52	0.28	44.4	0.01	147	3.75	0.005	3.3	0.006	26.22	1.86	141.23	36.8	35.1	< .02	11.4	< .001	0.33	0.9	2	0.5	64.3
RS-489 1880-1900	5268	0.36	23.1	33.2	< 1	36.5	0.04	0.34	0.24	0.2	8.4	12.17	1.83	1.3	74	0.3	36.7	0.01	377	5.55	0.007	3.8	0.006	30.65	1.84	66.75	20	48.3	< .02	10.5	< .001	0.23	2.2	2	0.5	87
RS-489 1900-1915	702	0.65	4.4	2.7	1	35.9	0.02	1.29	0.11	0.3	10	13.77	1.97	3	45	0.44	57.9	0.01	734	3.07	0.037	4.3	0.008	21.88	0.2	9.92	2.2	73.8	< .02	15.6	0.001	0.09	1.2	3	0.3	59
89577	34381	0.86	70.9	2134.6	1	84.1	0.62	0.91	0.27	2.7	23.8	11.37	1.8	2.7	234	0.4	16.6	0.08	276	9.29	0.029	11.8	0.058	21.66	1.92	12.22	18.1	84.5	0.04	3.2	0.001	0.3	0.7	3	0.4	79.6
STANDARD DS2	255	1.69	57.5	190.1	< 1	143.4	10.4	0.52	9.93	11.6	154.4	121.14	2.93	6.2	232	0.15	15.4	0.59	808	13.95	0.03	35.3	0.084	31.63	0.03	8.77	2.2	28.2	1.75	3.7	0.089	1.71	19.7	72	6.3	157.3

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

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

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: RS-489 RECEIVED : 10 FEB 2000

No. SAMPLES : 384 REPORTED : 3 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
AgGRAV	GRAV	10%	OPT	0.02

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 3 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0000-0005	9	7	<0.001	<0.001	<0.5	<0.02	
RS-489 0005-0010	8		<0.001		<0.5	<0.02	
RS-489 0010-0015	10		<0.001		<0.5	<0.02	
RS-489 0015-0020	11		<0.001		<0.5	<0.02	
RS-489 0020-0025	5		<0.001		<0.5	<0.02	
RS-489 0025-0030	<5		<0.001		<0.5	<0.02	
RS-489 0030-0035	<5		<0.001		<0.5	<0.02	
RS-489 0035-0040	<5		<0.001		<0.5	<0.02	
RS-489 0040-0045	<5		<0.001		<0.5	<0.02	
RS-489 0045-0050	<5		<0.001		<0.5	<0.02	
RS-489 0050-0055	<5		<0.001		<0.5	<0.02	
RS-489 0055-0060	<5		<0.001		<0.5	<0.02	
RS-489 0060-0065	<5		<0.001		<0.5	<0.02	
RS-489 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0070-0075	<5		<0.001		<0.5	<0.02	
RS-489 0075-0080	<5		<0.001		<0.5	<0.02	
RS-489 0080-0085	<5		<0.001		<0.5	<0.02	
RS-489 0085-0090	<5		<0.001		<0.5	<0.02	
RS-489 0090-0095	<5		<0.001		<0.5	<0.02	
RS-489 0095-0100	7		<0.001		<0.5	<0.02	
RS-489 0100-0105	<5		<0.001		<0.5	<0.02	
RS-489 0105-0110	8		<0.001		<0.5	<0.02	
RS-489 0110-0115	18		<0.001		0.6	<0.02	
RS-489 0115-0120	7		<0.001		<0.5	<0.02	
RS-489 0120-0125	8		<0.001		<0.5	<0.02	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0125-0130	<5		<0.001		<0.5	<0.02	
RS-489 0130-0135	<5		<0.001		<0.5	<0.02	
RS-489 0135-0140	<5		<0.001		<0.5	<0.02	
RS-489 0140-0145	10		<0.001		<0.5	<0.02	
RS-489 0145-0150	9		<0.001		<0.5	<0.02	
RS-489 0150-0155	<5		<0.001		<0.5	<0.02	
RS-489 0155-0160	<5		<0.001		<0.5	<0.02	
RS-489 0160-0165	<5		<0.001		<0.5	<0.02	
RS-489 0165-0170	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0170-0175	<5		<0.001		<0.5	<0.02	
RS-489 0175-0180	<5		<0.001		<0.5	<0.02	
RS-489 0180-0185	18		<0.001		<0.5	<0.02	
RS-489 0185-0190	37		0.001		<0.5	<0.02	
RS-489 0190-0195	8		<0.001		<0.5	<0.02	
RS-489 0195-0200	10		<0.001		<0.5	<0.02	
RS-489 0200-0205	75		0.002		<0.5	<0.02	
RS-489 0205-0210	71		0.002		<0.5	<0.02	
RS-489 0210-0215	39		0.001		<0.5	<0.02	
RS-489 0215-0220	35		0.001		<0.5	<0.02	
RS-489 0220-0225	29		<0.001		<0.5	<0.02	
RS-489 0225-0230	60		0.002		0.8	0.02	
RS-489 0230-0235	68	72	0.002	0.002	0.7	0.02	
RS-489 0235-0240	39		0.001		<0.5	<0.02	
RS-489 0240-0245	60		0.002		0.8	0.02	
RS-489 0245-0250	61		0.002		<0.5	<0.02	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0250-0255	13		<0.001		<0.5	<0.02	
RS-489 0255-0260	112	87	0.003	0.003	0.7	0.02	
RS-489 0260-0265	53		0.002		<0.5	<0.02	
RS-489 0265-0270	14		<0.001		<0.5	<0.02	
RS-489 0270-0275	7		<0.001		<0.5	<0.02	
RS-489 0275-0280	10		<0.001		<0.5	<0.02	
RS-489 0280-0285	40		0.001		<0.5	<0.02	
RS-489 0285-0290	44	64	0.001	0.002	<0.5	<0.02	
RS-489 0290-0295	63		0.002		<0.5	<0.02	
RS-489 0295-0300	110	121	0.003	0.004	1.0	0.03	
RS-489 0300-0305	75		0.002		<0.5	<0.02	
RS-489 0305-0310	96		0.003		0.7	0.02	
RS-489 0310-0315	62		0.002		0.5	<0.02	
RS-489 0315-0320	63		0.002		0.5	<0.02	
RS-489 0320-0325	65		0.002		1.1	0.03	
RS-489 0325-0330	38		0.001		<0.5	<0.02	
RS-489 0330-0335	37		0.001		<0.5	<0.02	
RS-489 0335-0340	69		0.002		<0.5	<0.02	
RS-489 0340-0345	41		0.001		<0.5	<0.02	
RS-489 0345-0350	170	163	0.005	0.005	0.6	<0.02	
RS-489 0350-0355	154	170	0.004	0.005	0.5	<0.02	
RS-489 0355-0360	5	5	<0.001	<0.001	<0.5	<0.02	
RS-489 0360-0365	142	142	0.004	0.004	<0.5	<0.02	
RS-489 0365-0370	27		<0.001		<0.5	<0.02	
RS-489 0370-0375	35		0.001		<0.5	<0.02	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0375-0380	106	39	0.003	0.001	0.8	0.02	
RS-489 0380-0385	40		0.001		1.2	0.04	
RS-489 0385-0390	35		0.001		0.5	<0.02	
RS-489 0390-0395	37		0.001		0.7	0.02	
RS-489 0395-0400	44		0.001		1.0	0.03	
RS-489 0400-0405	30		<0.001		0.5	<0.02	
RS-489 0405-0410	35		0.001		<0.5	<0.02	
RS-489 0410-0415	15		<0.001		<0.5	<0.02	
RS-489 0415-0420	<5		<0.001		<0.5	<0.02	
RS-489 0420-0425	7		<0.001		<0.5	<0.02	
RS-489 0425-0430	14	20	<0.001	<0.001	<0.5	<0.02	
RS-489 0430-0435	50		0.001		<0.5	<0.02	
RS-489 0435-0440	100	93	0.003	0.003	<0.5	<0.02	
RS-489 0440-0445	25		<0.001		<0.5	<0.02	
RS-489 0445-0450	43		0.001		<0.5	<0.02	
RS-489 0450-0455	75		0.002		<0.5	<0.02	
RS-489 0455-0460	88		0.003		<0.5	<0.02	
RS-489 0460-0465	62		0.002		1.0	0.03	
RS-489 0465-0470	46		0.001		<0.5	<0.02	
RS-489 0470-0475	95	98	0.003	0.003	<0.5	<0.02	
RS-489 0475-0480	67		0.002		0.5	<0.02	
RS-489 0480-0485	10		<0.001		<0.5	<0.02	
RS-489 0485-0490	15		<0.001		<0.5	<0.02	
RS-489 0490-0495	33		<0.001		0.5	<0.02	
RS-489 0495-0500	64		0.002		0.8	0.02	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0500-0505	16		<0.001		<0.5	<0.02	
RS-489 0505-0510	<5		<0.001		<0.5	<0.02	
RS-489 0510-0515	27	36	<0.001	0.001	<0.5	<0.02	
RS-489 0515-0520	26		<0.001		<0.5	<0.02	
RS-489 0520-0525	20		<0.001		<0.5	<0.02	
RS-489 0525-0530	23		<0.001		<0.5	<0.02	
RS-489 0530-0535	17		<0.001		<0.5	<0.02	
RS-489 0535-0540	35		0.001		<0.5	<0.02	
RS-489 0540-0545	68		0.002		<0.5	<0.02	
RS-489 0545-0550	74		0.002		<0.5	<0.02	
RS-489 0550-0555	64		0.002		<0.5	<0.02	
RS-489 0555-0560	52		0.002		0.5	<0.02	
RS-489 0560-0565	72		0.002		<0.5	<0.02	
RS-489 0565-0570	83		0.002		<0.5	<0.02	
RS-489 0570-0575	22		<0.001		<0.5	<0.02	
RS-489 0575-0580	26		<0.001		<0.5	<0.02	
RS-489 0580-0585	5	9	<0.001	<0.001	<0.5	<0.02	
RS-489 0585-0590	17		<0.001		<0.5	<0.02	
RS-489 0590-0595	14		<0.001		<0.5	<0.02	
RS-489 0595-0600	11		<0.001		<0.5	<0.02	
RS-489 0600-0605	10		<0.001		<0.5	<0.02	
RS-489 0605-0610	28		<0.001		<0.5	<0.02	
RS-489 0610-0615	27		<0.001		<0.5	<0.02	
RS-489 0615-0620	135	101	0.004	0.003	<0.5	<0.02	
RS-489 0620-0625	290	298	0.008	0.009	1.4	0.04	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0625-0630	108	132	0.003	0.004	0.5	<0.02	
RS-489 0630-0635	132	120	0.004	0.004	0.7	0.02	
RS-489 0635-0640	43		0.001		<0.5	<0.02	
RS-489 0640-0645	22		<0.001		<0.5	<0.02	
RS-489 0645-0650	38		0.001		<0.5	<0.02	
RS-489 0650-0655	27		<0.001		<0.5	<0.02	
RS-489 0655-0660	<5		<0.001		<0.5	<0.02	
RS-489 0660-0665	16		<0.001		<0.5	<0.02	
RS-489 0665-0670	23		<0.001		<0.5	<0.02	
RS-489 0670-0675	8		<0.001		<0.5	<0.02	
RS-489 0675-0680	6		<0.001		<0.5	<0.02	
RS-489 0680-0685	8	10	<0.001	<0.001	<0.5	<0.02	
RS-489 0685-0690	7		<0.001		<0.5	<0.02	
RS-489 0690-0695	43		0.001		<0.5	<0.02	
RS-489 0695-0700	119	204	0.003	0.006	1.2	0.04	
RS-489 0700-0705	90		0.003		0.8	0.02	
RS-489 0705-0710	60		0.002		<0.5	<0.02	
RS-489 0710-0715	74		0.002		0.5	<0.02	
RS-489 0715-0720	42		0.001		<0.5	<0.02	
RS-489 0720-0725	38		0.001		<0.5	<0.02	
RS-489 0725-0730	34		<0.001		<0.5	<0.02	
RS-489 0730-0735	36		0.001		<0.5	<0.02	
RS-489 0735-0740	73		0.002		<0.5	<0.02	
RS-489 0740-0745	61	70	0.002	0.002	<0.5	<0.02	
RS-489 0745-0750	48		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 3 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0750-0755	13		<0.001		<0.5	<0.02	
RS-489 0755-0760	28		<0.001		<0.5	<0.02	
RS-489 0760-0765	13		<0.001		<0.5	<0.02	
RS-489 0765-0770	36		0.001		<0.5	<0.02	
RS-489 0770-0775	42		0.001		<0.5	<0.02	
RS-489 0775-0780	40		0.001		<0.5	<0.02	
RS-489 0780-0785	30		<0.001		<0.5	<0.02	
RS-489 0785-0790	42		0.001		<0.5	<0.02	
RS-489 0790-0795	180	188	0.005	0.005	<0.5	<0.02	
RS-489 0795-0800	73	76	0.002	0.002	<0.5	<0.02	
RS-489 0800-0805	81		0.002		<0.5	<0.02	
RS-489 0805-0810	34		<0.001		<0.5	<0.02	
RS-489 0810-0815	38		0.001		<0.5	<0.02	
RS-489 0815-0820	43		0.001		<0.5	<0.02	
RS-489 0820-0825	85		0.002		<0.5	<0.02	
RS-489 0825-0830	103	100	0.003	0.003	1.0	0.03	
RS-489 0830-0835	110	112	0.003	0.003	1.4	0.04	
RS-489 0835-0840	117	106	0.003	0.003	0.6	<0.02	
RS-489 0840-0845	40		0.001		<0.5	<0.02	
RS-489 0845-0850	39		0.001		0.6	<0.02	
RS-489 0850-0855	104	81	0.003	0.002	1.3	0.04	
RS-489 0855-0860	58		0.002		<0.5	<0.02	
RS-489 0860-0865	113	131	0.003	0.004	1.3	0.04	
RS-489 0865-0870	99	99	0.003	0.003	1.3	0.04	
RS-489 0870-0875	90		0.003		0.8	0.02	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 3 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 0875-0880	72		0.002		<0.5	<0.02	
RS-489 0880-0885	62		0.002		0.8	0.02	
RS-489 0885-0890	72		0.002		1.7	0.05	
RS-489 0890-0895	36		0.001		1.5	0.04	
RS-489 0895-0900	32		<0.001		1.5	0.04	
RS-489 0900-0905	11		<0.001		1.5	0.04	
RS-489 0905-0910	5		<0.001		1.2	0.04	
RS-489 0910-0915	<5		<0.001		3.0	0.09	
RS-489 0915-0920	<5		<0.001		14.2	0.41	
RS-489 0920-0925	<5		<0.001		<0.5	<0.02	
RS-489 0925-0930	<5		<0.001		<0.5	<0.02	
RS-489 0930-0935	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 0935-0940	<5		<0.001		<0.5	<0.02	
RS-489 0940-0945	<5		<0.001		<0.5	<0.02	
RS-489 0945-0950	<5		<0.001		<0.5	<0.02	
RS-489 0950-0955	<5		<0.001		<0.5	<0.02	
RS-489 0955-0960	<5		<0.001		<0.5	<0.02	
RS-489 0960-0965	<5		<0.001		<0.5	<0.02	
RS-489 0965-0970	<5		<0.001		<0.5	<0.02	
RS-489 0970-0975	<5		<0.001		<0.5	<0.02	
RS-489 0975-0980	<5		<0.001		<0.5	<0.02	
RS-489 0980-0985	<5		<0.001		<0.5	<0.02	
RS-489 0985-0990	<5		<0.001		<0.5	<0.02	
RS-489 0990-0995	<5		<0.001		<0.5	<0.02	
RS-489 0995-1000	<5		<0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
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REPORTED : 3 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1000-1005	<5		<0.001		<0.5	<0.02	
RS-489 1005-1010	<5		<0.001		<0.5	<0.02	
RS-489 1010-1015	<5		<0.001		<0.5	<0.02	
RS-489 1015-1020	<5		<0.001		<0.5	<0.02	
RS-489 1020-1025	<5		<0.001		<0.5	<0.02	
RS-489 1025-1030	<5		<0.001		<0.5	<0.02	
RS-489 1030-1035	7		<0.001		2.2	0.06	
RS-489 1035-1040	<5		<0.001		0.5	<0.02	
RS-489 1040-1045	<5		<0.001		0.5	<0.02	
RS-489 1045-1050	6		<0.001		1.7	0.05	
RS-489 1050-1055	<5		<0.001		1.0	0.03	
RS-489 1055-1060	11		<0.001		0.8	0.02	
RS-489 1060-1065	92		0.003		2.2	0.06	
RS-489 1065-1070	208	184	0.006	0.005	32.7	0.95	0.79
RS-489 1070-1075	188	144	0.005	0.004	7.2	0.21	
RS-489 1075-1080	173	140	0.005	0.004	8.4	0.25	
RS-489 1080-1085	155	153	0.005	0.004	6.2	0.18	
RS-489 1085-1090	143	91	0.004	0.003	2.7	0.08	
RS-489 1090-1095	63		0.002		1.0	0.03	
RS-489 1095-1100	66		0.002		2.3	0.07	
RS-489 1100-1105	77		0.002		2.4	0.07	
RS-489 1105-1110	52		0.002		1.4	0.04	
RS-489 1110-1115	26		<0.001		0.5	<0.02	
RS-489 1115-1120	16		<0.001		<0.5	<0.02	
RS-489 1120-1125	6		<0.001		5.6	0.16	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1125-1130	<5		<0.001		<0.5	<0.02	
RS-489 1130-1135	<5		<0.001		<0.5	<0.02	
RS-489 1135-1140	<5		<0.001		<0.5	<0.02	
RS-489 1140-1145	<5		<0.001		<0.5	<0.02	
RS-489 1145-1150	<5		<0.001		<0.5	<0.02	
RS-489 1150-1155	<5		<0.001		<0.5	<0.02	
RS-489 1155-1160	<5		<0.001		<0.5	<0.02	
RS-489 1160-1165	<5		<0.001		<0.5	<0.02	
RS-489 1165-1170	<5		<0.001		<0.5	<0.02	
RS-489 1170-1175	<5		<0.001		<0.5	<0.02	
RS-489 1175-1180	<5		<0.001		<0.5	<0.02	
RS-489 1180-1185	<5		<0.001		<0.5	<0.02	
RS-489 1185-1190	<5		<0.001		0.7	0.02	
RS-489 1190-1195	<5		<0.001		<0.5	<0.02	
RS-489 1195-1200	<5		<0.001		<0.5	<0.02	
RS-489 1200-1205	6		<0.001		<0.5	<0.02	
RS-489 1205-1210	7		<0.001		<0.5	<0.02	
RS-489 1210-1215	5		<0.001		<0.5	<0.02	
RS-489 1215-1220	<5		<0.001		<0.5	<0.02	
RS-489 1220-1225	5		<0.001		<0.5	<0.02	
RS-489 1225-1230	<5		<0.001		0.5	<0.02	
RS-489 1230-1235	<5		<0.001		<0.5	<0.02	
RS-489 1235-1240	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1240-1245	<5		<0.001		<0.5	<0.02	
RS-489 1245-1250	<5		<0.001		<0.5	<0.02	

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CLIENT : HECLA MINING COMPANY
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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1250-1255	<5		<0.001		<0.5	<0.02	
RS-489 1255-1260	<5		<0.001		<0.5	<0.02	
RS-489 1260-1265	<5		<0.001		<0.5	<0.02	
RS-489 1265-1270	7		<0.001		<0.5	<0.02	
RS-489 1270-1275	11		<0.001		<0.5	<0.02	
RS-489 1275-1280	8		<0.001		<0.5	<0.02	
RS-489 1280-1285	6		<0.001		<0.5	<0.02	
RS-489 1285-1290	<5		<0.001		<0.5	<0.02	
RS-489 1290-1295	<5		<0.001		<0.5	<0.02	
RS-489 1295-1300	<5	<5	<0.001	<0.001	<0.5	<0.02	
RS-489 1300-1305	<5		<0.001		<0.5	<0.02	
RS-489 1305-1310	<5		<0.001		<0.5	<0.02	
RS-489 1310-1315	<5		<0.001		<0.5	<0.02	
RS-489 1315-1320	6		<0.001		0.5	<0.02	
RS-489 1320-1325	10		<0.001		<0.5	<0.02	
RS-489 1325-1330	164	178	0.005	0.005	2.2	0.06	
RS-489 1330-1335	211	202	0.006	0.006	4.1	0.12	
RS-489 1335-1340	160	194	0.005	0.006	2.7	0.08	
RS-489 1340-1345	80		0.002		1.4	0.04	
RS-489 1345-1350	21		<0.001		0.7	0.02	
RS-489 1350-1355	30		<0.001		<0.5	<0.02	
RS-489 1355-1360	34		<0.001		<0.5	<0.02	
RS-489 1360-1365	17		<0.001		<0.5	<0.02	
RS-489 1365-1370	24		<0.001		<0.5	<0.02	
RS-489 1370-1375	45		0.001		<0.5	<0.02	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

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REFERENCE : RS-489

REPORTED : 3 MAR 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1375-1380	18		<0.001		<0.5	<0.02	
RS-489 1380-1385	66		0.002		1.5	0.04	
RS-489 1385-1390	118	146	0.003	0.004	4.0	0.12	
RS-489 1390-1395	50		0.001		0.5	<0.02	
RS-489 1395-1400	44		0.001		<0.5	<0.02	
RS-489 1400-1405	29	30	<0.001	<0.001	<0.5	<0.02	
RS-489 1405-1410	71		0.002		<0.5	<0.02	
RS-489 1410-1415	52		0.002		0.6	<0.02	
RS-489 1415-1420	61		0.002		0.7	0.02	
RS-489 1420-1425	21		<0.001		0.9	0.03	
RS-489 1425-1430	80		0.002		0.8	0.02	
RS-489 1430-1435	63		0.002		1.1	0.03	
RS-489 1435-1440	60		0.002		0.9	0.03	
RS-489 1440-1445	21		<0.001		<0.5	<0.02	
RS-489 1445-1450	55		0.002		1.0	0.03	
RS-489 1450-1455	70		0.002		1.7	0.05	
RS-489 1455-1460	135	120	0.004	0.004	3.1	0.09	
RS-489 1460-1465	62		0.002		1.8	0.05	
RS-489 1465-1470	59		0.002		1.0	0.03	
RS-489 1470-1475	84		0.002		1.7	0.05	
RS-489 1475-1480	238	156	0.007	0.005	5.0	0.15	
RS-489 1480-1485	130	138	0.004	0.004	3.6	0.11	
RS-489 1485-1490	62		0.002		1.2	0.04	
RS-489 1490-1495	51	44	0.001	0.001	6.0	0.18	
RS-489 1495-1500	297	462	0.009	0.013	1858.0	54.20	59.14

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1500-1505	90		0.003		109.1	3.18	2.52
RS-489 1505-1510	49		0.001		30.6	0.89	1.25
RS-489 1510-1515	63		0.002		49.9	1.46	1.34
RS-489 1515-1520	68		0.002		20.0	0.58	
RS-489 1520-1525	50		0.001		11.7	0.34	
RS-489 1525-1530	23		<0.001		19.2	0.56	
RS-489 1530-1535	9		<0.001		13.8	0.40	
RS-489 1535-1540	16		<0.001		11.9	0.35	
RS-489 1540-1545	<5		<0.001		15.5	0.45	
RS-489 1545-1550	11		<0.001		3.1	0.09	
RS-489 1550-1555	73		0.002		5.7	0.17	
RS-489 1555-1560	96		0.003		1.7	0.05	
RS-489 1560-1565	78		0.002		6.8	0.20	
RS-489 1565-1570	77		0.002		4.5	0.13	
RS-489 1570-1575	164	184	0.005	0.005	8.2	0.24	
RS-489 1575-1580	94	76	0.003	0.002	3.0	0.09	
RS-489 1580-1585	137	160	0.004	0.005	3.3	0.10	
RS-489 1585-1590	140	144	0.004	0.004	3.6	0.11	
RS-489 1590-1595	250	256	0.007	0.007	6.0	0.18	
RS-489 1595-1600	234	260	0.007	0.008	13.9	0.41	
RS-489 1600-1605	200	204	0.006	0.006	13.4	0.39	
RS-489 1605-1610	202	168	0.006	0.005	13.0	0.38	
RS-489 1610-1615	560	582	0.016	0.017	26.6	0.78	
RS-489 1615-1620	270	282	0.008	0.008	32.9	0.96	0.50
RS-489 1620-1625	134	138	0.004	0.004	18.0	0.53	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1625-1630	121	124	0.004	0.004	2.7	0.08	
RS-489 1630-1635	307	412	0.009	0.012	6.3	0.18	
RS-489 1635-1640	135	174	0.004	0.005	1.8	0.05	
RS-489 1640-1645	20		<0.001		3.3	0.10	
RS-489 1645-1650	23		<0.001		0.9	0.03	
RS-489 1650-1655	69		0.002		0.9	0.03	
RS-489 1655-1660	14		<0.001		1.6	0.05	
RS-489 1660-1665	20		<0.001		10.9	0.32	
RS-489 1665-1670	21		<0.001		3.6	0.11	
RS-489 1670-1675	29		<0.001		2.3	0.07	
RS-489 1675-1680	66		0.002		1.2	0.04	
RS-489 1680-1685	16		<0.001		4.0	0.12	
RS-489 1685-1690	12		<0.001		1.0	0.03	
RS-489 1690-1695	6		<0.001		0.8	0.02	
RS-489 1695-1700	7		<0.001		0.6	<0.02	
RS-489 1700-1705	15	16	<0.001	<0.001	0.9	0.03	
RS-489 1705-1710	16		<0.001		0.8	0.02	
RS-489 1710-1715	14		<0.001		0.6	<0.02	
RS-489 1715-1720	21		<0.001		1.0	0.03	
RS-489 1720-1725	141	168	0.004	0.005	5.8	0.17	
RS-489 1725-1730	90		0.003		4.1	0.12	
RS-489 1730-1735	58	48	0.002	0.001	2.7	0.08	
RS-489 1735-1740	160	92	0.005	0.003	4.4	0.13	
RS-489 1740-1745	27		<0.001		3.4	0.10	
RS-489 1745-1750	20		<0.001		0.8	0.02	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1750-1755	14		<0.001		0.9	0.03	
RS-489 1755-1760	51		0.001		1.8	0.05	
RS-489 1760-1765	24		<0.001		1.1	0.03	
RS-489 1765-1770	25		<0.001		1.4	0.04	
RS-489 1770-1775	20		<0.001		0.7	0.02	
RS-489 1775-1780	26		<0.001		<0.5	<0.02	
RS-489 1780-1785	97	98	0.003	0.003	29.6	0.86	0.96
RS-489 1785-1790	35		0.001		1.8	0.05	
RS-489 1790-1795	32		<0.001		0.9	0.03	
RS-489 1795-1800	23		<0.001		<0.5	<0.02	
RS-489 1800-1805	27		<0.001		2.9	0.08	
RS-489 1805-1810	20		<0.001		1.1	0.03	
RS-489 1810-1815	11		<0.001		<0.5	<0.02	
RS-489 1815-1820	31		<0.001		2.0	0.06	
RS-489 1820-1825	23		<0.001		0.9	0.03	
RS-489 1825-1830	53		0.002		2.0	0.06	
RS-489 1830-1835	67		0.002		1.1	0.03	
RS-489 1835-1840	35		0.001		0.8	0.02	
RS-489 1840-1845	137	124	0.004	0.004	74.2	2.16	1.62
RS-489 1845-1850	176	180	0.005	0.005	123.9	3.61	2.80
RS-489 1850-1855	246	198	0.007	0.006	32.2	0.94	0.22
RS-489 1855-1860	321	344	0.009	0.010	16.3	0.48	
RS-489 1860-1865	72		0.002		13.9	0.41	
RS-489 1865-1870	86		0.003		2.9	0.08	
RS-489 1870-1875	65		0.002		2.0	0.06	

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)	AgGRAV
RS-489 1875-1880	83		0.002		5.0	0.15	
RS-489 1880-1885	75		0.002		2.8	0.08	
RS-489 1885-1890	76		0.002		15.4	0.45	
RS-489 1890-1895	76		0.002		3.7	0.11	
RS-489 1895-1900	102	30	0.003	<0.001	0.7	0.02	
RS-489 1900-1905	28		<0.001		1.8	0.05	
RS-489 1905-1910	15		<0.001		0.5	<0.02	
RS-489 1910-1915	8		<0.001		<0.5	<0.02	
89577	1943		0.057		35.3	1.03	

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431
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CLIENT: *HECLA MINING CO.*
CLIENT REF: KURT ALLEN
AAL REF: Sp96013
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-489 0000-0020	58	0.6	16	3.3	9	41.1	0.23	0.17	0.3	0.5	7.2	17.05	1.91	3.4	464	0.07	22.1	0.06	127	2.03	0.077	3.6	0.008	20.23	0.08	7.94	0.5	29.8	<.02	19.6	0.008	0.03	2.1	25	0.6	28.1
RS-489 0020-0040	51	0.4	7.3	1.8	<1	53.8	0.07	0.43	0.21	0.8	6.5	14.11	1.76	2.8	325	0.05	23.6	0.02	138	2.07	0.017	4.1	0.016	22.07	0.05	8.17	0.3	22.4	<.02	13.4	0.013	0.03	4.6	26	1.3	49.3
RS-489 0040-0060	54	0.46	5.2	0.9	<1	100.5	0.06	0.88	0.36	1	9.6	11.86	1.95	3.1	184	0.13	27.3	0.03	319	2.34	0.02	4.9	0.02	25.31	0.06	6.19	0.4	24.9	<.02	13.4	0.018	0.08	3.6	18	1.5	88.9
RS-489 0060-0080	171	0.59	7.7	1.3	<1	69.8	0.05	0.37	0.26	1.3	6.2	17.36	1.88	3.9	614	0.17	30.8	0.02	312	2.03	0.019	3.9	0.015	62.38	0.02	6.03	0.3	13.9	<.02	14.5	0.015	0.09	3.3	18	1.3	147.8
RS-489 0080-0100	73	0.61	12.8	1.1	<1	49.9	1.06	0.11	0.14	0.3	5.7	16.6	1.76	3.4	577	0.15	26.8	0.01	151	1.47	0.016	3.5	0.013	22.29	0.01	6.34	0.6	28.2	<.02	13.9	0.004	0.08	3	10	0.5	73.8
RS-489 0100-0120	171	0.57	29.1	7.8	<1	143.5	0.13	0.07	0.09	0.1	6.8	10.98	1.61	2.9	1068	0.12	18.1	0.01	122	2.06	0.008	3.8	0.014	15.39	0.1	16.06	1	59.6	<.02	10	0.002	0.02	1.9	8	2.6	33.4
RS-489 0120-0140	72	0.61	12.4	2.3	<1	71.7	0.03	0.08	0.02	<.1	3.7	8.13	1.46	3.2	429	0.23	24.3	0.01	63	1.28	0.009	2.1	0.017	18.65	0.24	9	0.7	50.6	<.02	14.3	0.001	0.06	2.8	8	0.3	22.8
RS-489 0140-0160	86	0.6	22.8	11.1	<1	107.4	0.04	0.18	0.03	<.1	5.9	9.58	2.17	3.4	540	0.24	21.5	0.01	69	1.97	0.012	2.7	0.012	17.81	0.26	14.12	2.2	36.6	<.02	13.8	0.001	0.07	4.1	7	0.4	23.6
RS-489 0160-0180	78	0.36	9.9	4.2	<1	64.7	0.05	0.05	0.1	<.1	4.9	7.33	1.87	3.8	638	0.11	26.9	0.01	38	1.21	0.008	2	0.007	17.89	0.05	9.48	0.9	16	<.02	14.2	0.001	0.07	2.8	7	0.3	9.4
RS-489 0180-0200	60	0.48	25.2	17.3	<1	141.3	0.04	0.05	0.18	1.7	7.5	14.32	1.72	3.3	972	0.07	20.4	0.01	69	2.4	0.006	3	0.008	24.65	0.07	14.07	2.6	34.7	<.02	10.6	0.001	0.18	15.9	9	0.6	31.9
RS-489 0200-0220	139	0.74	107.9	48.8	<1	118	0.03	0.06	0.03	0.2	10.8	21.32	2.46	5.8	1316	0.16	18.4	0.01	133	6.2	0.016	4.9	0.007	20.73	0.06	23.28	2.4	19.8	<.02	12.1	0.002	0.18	3.3	6	0.4	13.1
RS-489 0220-0240	391	1.3	84.1	40.2	<1	116	0.04	0.06	0.07	0.2	10.8	26.89	2.62	6.6	1746	0.21	20.6	0.01	134	6.61	0.016	5.4	0.019	17.75	0.2	27.8	2.9	41.8	<.02	11.5	0.002	0.22	3	7	0.6	20.5
RS-489 0240-0260	385	1.09	33.1	52.9	<1	122.2	0.04	0.02	0.06	0.1	8	26.14	2.4	6.9	944	0.22	20.5	0.01	128	4.23	0.018	4.6	0.01	16.56	0.14	22.41	3.9	22	<.02	11	0.002	0.15	2	5	0.6	17.1
RS-489 0260-0280	131	0.93	14.3	13.7	<1	99.8	0.04	0.01	0.05	<.1	5.1	17.91	1.94	5.4	111	0.14	23	0.01	51	2.49	0.005	2.3	0.013	19.56	0.17	16.6	1.4	14.9	<.02	11.8	0.001	0.06	1.5	3	0.3	15.3
RS-489 0280-0300	330	0.93	28.2	55.4	<1	165	0.03	0.01	0.08	<.1	6.7	28.86	2.35	6.2	3893	0.31	23.1	0.01	89	2.73	0.015	3.4	0.013	32.54	0.36	16.5	4	15.9	<.02	11.9	0.001	0.13	1.3	4	0.3	29.7
RS-489 0300-0320	516	0.98	72.1	56.6	<1	90.3	0.04	0.02	0.13	1.1	9.9	41.99	2.6	6.3	1815	0.2	19.6	0.01	144	4.87	0.01	5.5	0.013	19.41	1.12	21.27	2.7	16.7	<.02	9.7	0.002	0.31	1.8	6	0.9	37.1
RS-489 0320-0340	462	1.29	26.4	35.9	<1	29.8	0.03	0.02	0.05	0.4	10	35.52	2.16	6.2	1702	0.16	18	<.01	130	3.61	0.004	5.1	0.01	18.13	0.43	14.6	2.6	12.3	<.02	8.7	0.002	0.13	1.1	6	0.7	23
RS-489 0340-0360	285	0.9	21.1	79.6	<1	100.2	<.02	0.01	0.04	0.4	8.6	30.46	2.1	4.3	1244	0.25	20.7	<.01	130	2.74	0.007	4.5	0.013	13.59	0.73	14.41	7.2	10.2	<.02	10.2	0.001	0.22	1.3	6	0.7	20.4
RS-489 0360-0380	287	0.78	24.9	65.1	<1	163.2	0.02	0.01	0.03	0.2	6.9	13.17	2.12	3.8	536	0.18	21.3	<.01	107	2.43	0.005	3.4	0.011	12.91	0.46	23.38	5.6	7	<.02	10.8	0.001	0.13	1.1	5	0.7	13.9
RS-489 0380-0400	673	1.2	36.6	40.1	<1	72.5	0.02	0.01	0.1	2.4	13.1	50.26	2.77	4.7	2067	0.12	18.1	<.01	161	4.45	0.005	6.5	0.009	15.29	1.48	19.65	3.3	6.7	<.02	9	0.002	0.27	6.8	6	1.7	41.4
RS-489 0400-0420	256	1.6	26.6	18.5	<1	105.6	<.02	0.01	0.04	0.8	12.5	46.11	3.31	6	733	0.25	19.4	<.01	166	4.69	0.005	6	0.011	14.43	0.8	12.78	1.5	7.8	<.02	10.1	0.002	0.11	1.6	6	1.6	33.3
RS-489 0420-0440	214	1.17	23.1	55.5	<1	274.8	0.02	0.01	0.08	<.1	7.3	37.84	4.6	6.2	92	0.28	21.9	0.01	112	3.87	0.009	3.4	0.019	17.35	0.28	11.14	3.6	23.3	<.02	12.9	0.002	0.13	1.2	5	0.5	42.7
RS-489 0440-0460	253	1	69	48.1	<1	167.6	0.02	0.02	0.02	0.1	9.4	41.45	2.92	5.8	686	0.23	20.7	0.01	1073	4.46	0.02	4.9	0.019	11.6	0.25	44.36	3.1	24.6	<.02	12.5	0.002	2.03	1.4	5	3.7	88.8
RS-489 0460-0480	456	0.93	69.3	66.6	1	127.3	0.03	0.02	0.09	0.7	10.1	43.37	3.06	5.3	2301	0.19	19.4	0.01	628	4.46	0.016	5.8	0.015	14.2	0.65	42.11	4.4	17.2	<.02	11	0.002	1.04	1.2	6	3.3	71.3
RS-489 0480-0500	348	1.23	42	34.6	3	130.7	0.04	0.02	0.17	1	8.8	44.17	2.48	6.4	7014	0.19	22.3	0.01	136	2.76	0.018	4.4	0.012	26.16	1.49	18.14	5.6	14.9	<.02	11.8	0.002	0.3	1.5	5	1	42.1
RS-489 0500-0520	131	1.31	11.9	23.1	1	96.1	0.03	0.01	0.24	4	5.9	43.14	1.93	5.3	793	0.16	23.2	0.01	68	2.31	0.011	3.8	0.007	16.47	2.28	12.19	3.7	10.5	<.02	11.7	0.001	0.49	4.7	3	0.5	81
RS-489 0520-0540	129	1.29	13	24.5	1	89.4	0.03	0.02	0.31	2.3	5.6	46.59	1.78	4.7	1016	0.16	21.5	0.01	84	2.18	0.016	4.1	0.007	16.9	1.74	10.99	3.2	9.5	<.02	10.9	0.002	0.36	5.4	4	0.7	115.6
RS-489 0540-0560	348	1.15	42	65.5	1	67.7	0.04	0.03	0.4	2.7	24.5	52.29	2.35	5.2	1980	0.17	29.6	0.01	113	3.72	0.018	6.1	0.007	18.61	2.06	15.9	2.1	15.4	<.02	10.2	0.002	0.41	9.1	6	1.6	97.9
RS-489 0560-0580	244	1.05	25	45	<1	70.7	0.03	0.04	0.23	2.8	11.5	50.1	2.46	4.5	1345	0.17	23.3	0.01	152	3.29	0.02	6.4	0.007	30.79	1.84	14.64	3.6	9.6	<.02	11.6	0.003	0.47	4.4	6	1	89
RS-489 0580-0600	96	0.88	8.1	8.9	1	67.7	<.02	0.02	0.1	2.1	4.2	9.83	1.78	3.1	379	0.16	22.2	0.01	71	1.97	0.018	2.6	0.006	26.85	1.66	7.82	2.2	6.3	<.02	10.7	0.001	0.26	3.1	3	0.5	69.9
RS-489 0600-0620	136	1.09	20.2	46.3	<1	74.5	0.03	0.01	0.26	3.1	7	16.03	2.49	3.6	368	0.17	20.7	0.01	93	3.3	0.018	3.9	0.006	27.13	2.31	13.21	7	11.6	<.02	10.1	0.002	0.57	3.7	4	0.8	73
RS-489 0620-0640	531	1.56	30.5	145.3	1	62.7	0.02	0.02	1.36	3.1	11.2	21	2.38	4.8	893	0.07	17.7	0.01	123	3.73	0.008	4.8	0.007	27.31	1.88	17.21	7.9	14.8	<.02	8.6	0.001	0.71	4.5	5	1.1	86.2
RS-489 0640-0660	174	1.15	11.8	24.7	<1	82	0.03	0.01	0.36	2.4	5.8	11.97	1.65	3.4	509	0.13	20.4	0.01	106	2.31	0.012	2.8	0.008	32.9	1.44	10.41	2.1	11.5	<.02	10	0.002	0.36	2.5	3	0.6	53.4
STANDARD DS2	227	1.8	58.2	201.3	<1	165.5	11.17	0.56	10.9	12.1	163.1	132.68	3.14	6.5	238	0.17	17.3	0.63	871	14.84	0.032	36.7	0.096	32.5	0.03	9.8	2.3	29.1	1.9	3.9	0.097	1.84	19.5	77	6.6	169.4
RS-489 0660-0680	97	1.08	4.6	5.9	5	110.3	0.02	0.02	0.08	0.7	5.6	9.68	1.53	3.9	185	0.18	24	0.01	118	2.58	0.019	2	0.01	20.43	0.21	5.36	0.7	11.3	<.02	11.8	0.022	0.13	1.6	5	1.3	28.6

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CLIENT: *HECLA MINING CO.*
CLIENT REF: KURT ALLEN
AAL REF: Sp56013
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-489 0680-0700	228	1.28	12.8	37.6	4	76.7	0.02	0.02	0.41	2.8	5.9	10.28	1.7	4	497	0.17	18.9	0.01	90	2.31	0.016	2.6	0.005	14.31	0.85	9.62	3.5	6.2	< .02	9.1	0.012	0.39	2.3	4	1	95.1
RS-489 0700-0720	333	1.04	39.4	54	3	73.3	0.03	0.01	0.45	3.1	15.5	34.29	3.25	3.7	1882	0.16	16.3	< .01	187	5.87	0.019	7.3	0.005	32.98	1.81	17.41	5.9	7.3	< .02	8.5	0.003	0.56	3.2	6	1	97.6
RS-489 0720-0740	165	0.6	20.7	27.6	1	67.7	0.02	0.01	0.26	3.1	10.3	23.64	2.43	2.1	998	0.11	18	< .01	158	4.01	0.014	6.3	0.004	13.63	1.63	10.24	5.2	4.8	< .02	9	0.002	0.3	2.4	6	0.8	67.5
RS-489 0740-0760	161	0.86	25.7	27.9	2	52.6	< .02	0.01	0.18	1.7	9.2	17.24	2.41	2.8	1022	0.11	20.7	< .01	120	3.36	0.01	4.5	0.005	16.79	1.72	12.84	4.2	6.6	< .02	9.2	0.002	0.35	2	5	0.7	47.4
RS-489 0760-0780	179	0.82	32.7	26.3	1	63.6	< .02	0.01	0.18	2.1	10.1	21.14	2.59	2.5	2271	0.11	17.6	< .01	135	4.2	0.01	5.1	0.004	16.7	1.7	14.92	3.3	5.3	< .02	8.2	0.002	0.38	2.7	5	0.8	85.5
RS-489 0780-0800	196	0.96	8.7	68.9	1	62.4	< .02	0.01	0.28	3.6	6.8	12.22	2.23	2.6	682	0.13	18.1	< .01	83	2.6	0.008	3.2	0.005	11.97	1.97	14.22	5.8	8.9	< .02	8.1	0.002	0.56	3.1	3	0.3	73.7
RS-489 0800-0820	118	1.04	17.2	34.7	< 1	49.4	< .02	0.01	0.27	2.9	7.9	16.9	2.46	2.9	1226	0.13	14.6	< .01	135	3.16	0.011	4.6	0.004	12.44	1.77	14.52	4.7	8.3	< .02	7.4	0.002	0.68	2.7	5	0.4	52.9
RS-489 0820-0840	556	0.72	39.1	95.9	< 1	67.3	< .02	0.01	1.1	3.8	16	23.29	2.83	2.2	1301	0.17	18.6	< .01	137	4.47	0.012	5.9	0.005	19.37	2.06	21.18	5.3	12.3	< .02	8.6	0.002	0.59	4.4	5	0.8	52.5
RS-489 0840-0860	334	0.55	26	45.2	< 1	36.8	0.03	0.01	0.36	3.6	11.3	31.51	2.76	1.8	1311	0.1	15.4	< .01	168	5.28	0.007	6.8	0.004	15.96	1.7	19.9	3.4	9.6	< .02	7.7	0.002	0.54	1.5	6	0.5	76.4
RS-489 0860-0880	608	0.67	37.3	77	< 1	32.3	0.02	0.01	0.46	3.9	13.7	28.9	3.42	2.1	1670	0.08	15.6	< .01	191	5.2	0.005	8.7	0.008	16.3	2.22	27.11	5.8	26.5	< .02	6.9	0.002	0.84	1.1	7	0.6	84
RS-489 0880-0900	492	0.65	68.4	32.1	1	111.6	0.05	0.03	0.24	1.9	13.9	33.33	2.96	2.3	2128	0.13	16.7	0.01	181	6.47	0.011	7	0.007	16.22	1.63	26.07	2.6	23.7	< .02	7.1	0.002	0.74	1.2	6	0.6	83.8
RS-489 0900-0920	154	1.71	4.3	4.9	< 1	577.2	0.24	2.54	1.09	2.6	5.3	5.27	1.73	4.5	261	0.23	29.1	0.23	1525	0.56	0.056	1.6	0.047	21.84	0.11	1.43	0.6	583.1	0.05	4.7	0.002	0.14	1	6	< .2	126.5
RS-489 0920-0940	109	1.68	1.4	0.7	< 1	117.1	0.19	2.7	0.8	6.1	5.3	8.02	2.13	5	109	0.26	20.3	0.27	1635	0.96	0.036	2.5	0.046	14.22	0.04	0.36	0.3	211.9	0.03	4.4	0.002	0.11	0.8	9	< .2	77
RS-489 0940-0960	89	1.41	2.9	1.5	< 1	196.5	0.22	1.81	0.44	1.5	7.2	15.47	2.68	4.6	116	0.26	27.7	0.21	970	2.69	0.038	3.8	0.042	15.6	0.02	0.61	0.4	196	0.02	6.6	0.003	0.09	1.7	6	0.2	46.5
RS-489 0960-0980	80	1.42	3	1.2	1	178.6	0.22	1.76	0.29	1.1	7.5	13.46	2.15	4.1	120	0.29	30.2	0.18	839	2.28	0.036	3.3	0.04	15.21	0.02	0.76	0.3	200.9	0.02	7.2	0.002	0.1	1.7	4	< .2	36.2
RS-489 0980-1000	70	1.6	1.6	1.1	1	135.3	0.19	1.84	0.24	1.4	6.6	7.63	2.14	4.6	68	0.36	26.8	0.23	798	1.49	0.031	1.8	0.041	16.2	0.01	0.51	0.1	169.6	0.02	6.9	0.004	0.11	1.3	7	< .2	49
RS-489 1000-1020	79	1.6	1.6	1.1	1	234	0.24	2.12	0.28	1.6	3.4	5.83	1.8	5	56	0.33	29	0.21	932	1.11	0.027	1.6	0.04	22.06	0.03	0.49	0.2	156.8	0.02	6.7	0.003	0.1	1	5	< .2	61.9
RS-489 1020-1040	92	1.39	2.2	1.4	< 1	259.8	0.17	3.85	0.36	1.9	4.4	6.45	1.71	4.7	82	0.25	28.6	0.16	1424	0.95	0.022	2.1	0.052	24.38	0.04	0.94	0.2	205.9	0.02	4.7	0.013	0.08	1.2	8	< .2	84.6
RS-489 1040-1060	106	0.89	4.4	3.1	1	212.8	0.23	2.69	0.26	2.3	5.2	5.62	1.65	3.6	242	0.23	26.8	0.09	1425	1.12	0.019	1.6	0.054	19.03	0.02	2.16	0.7	156.4	0.02	4.6	0.005	0.19	1	5	< .2	77.6
RS-489 1060-1080	11902	0.98	61.7	131.2	1	54.4	0.21	0.28	0.18	2.2	7.4	23.41	3.88	3.6	495	0.21	18.1	0.03	220	4.4	0.01	4.2	0.049	21.03	4.04	29.16	17.1	37.6	< .02	4.5	0.002	1.07	0.9	4	0.3	73.3
RS-489 1080-1100	2000	1.11	41	89	1	49.8	0.08	0.31	0.18	2.3	7.6	13.23	3.47	4.1	459	0.27	21.3	0.04	368	3.2	0.017	2.6	0.048	20.73	4.22	29.41	10.2	46.2	< .02	6.3	0.001	0.72	1	3	0.4	83.1
RS-489 1100-1120	803	1.37	21.5	50	1	67	0.04	0.49	0.2	2.9	5.4	12.66	3.37	5	684	0.32	21	0.05	1672	3.31	0.017	2.3	0.059	22.76	3.11	16.93	4.9	47.7	< .02	6.7	0.002	0.59	0.9	4	0.4	98.3
RS-489 1120-1140	215	1.47	3.2	2.1	< 1	424.6	0.36	1.86	0.24	1.8	7.7	6.96	2.3	5	104	0.3	29.2	0.09	993	1.25	0.021	1.7	0.055	19.56	0.23	1.81	0.2	164.1	< .02	7.3	0.008	0.09	2.3	5	0.3	59.4
RS-489 1140-1160	86	1.64	1.2	3	< 1	54.7	0.19	2.12	0.14	2.2	4.4	2.48	1.89	5.9	29	0.17	26.8	0.26	940	0.89	0.043	1	0.053	14.42	< .01	0.27	< .1	243.5	0.02	4.2	0.002	0.03	1	2	< .2	72.2
RS-489 1160-1180	73	1.44	1	1.4	< 1	63.6	0.27	1.66	0.22	2.1	4	2.99	1.93	5.6	30	0.22	30.2	0.19	645	0.6	0.052	1.1	0.055	16.34	< .01	0.27	< .1	189.6	< .02	4.1	0.005	0.05	0.8	3	< .2	71.9
RS-489 1180-1200	129	1.51	2.3	2	1	660.6	0.17	1.85	0.43	2.6	6.2	6.56	2.04	5.4	52	0.3	27.8	0.23	1037	1.54	0.046	2.2	0.053	14.21	0.08	0.51	0.2	194.1	0.02	5.5	0.004	0.1	1.5	6	< .2	87.3
RS-489 1200-1220	154	1.31	1	0.8	1	116.8	0.32	1.73	0.3	2.9	6.3	7.84	2.01	4.7	31	0.32	31.2	0.24	962	1.58	0.049	3.3	0.056	12.04	< .01	0.26	0.1	181.6	0.02	5.5	0.003	0.08	0.6	8	< .2	72
RS-489 1220-1240	72	0.86	1.2	0.7	1	187.4	0.16	0.96	0.15	1.8	5.6	8.23	1.71	3.2	20	0.36	29.8	0.12	526	1.72	0.042	2.8	0.056	9.86	0.01	0.52	< .1	125.5	< .02	6.1	0.005	0.1	0.7	8	< .2	57.6
RS-489 1240-1260	90	0.89	1.6	0.6	1	93.6	0.22	1.18	0.21	1.6	6.2	9.89	1.8	3.4	26	0.38	30	0.11	544	1.85	0.043	3.4	0.05	14.57	0.01	0.4	< .1	126	< .02	5	0.004	0.11	0.7	6	< .2	51.7
RS-489 1260-1280	194	1.25	3.2	3.2	1	679.4	0.28	1.74	0.3	2.2	5.8	6.09	1.57	3.9	82	0.32	31	0.15	846	1.24	0.036	2.6	0.047	15.46	0.14	0.93	0.4	196	0.02	5.4	0.003	0.14	1.4	4	< .2	98.4
RS-489 1280-1300	179	1.32	3.4	1.1	1	684.3	0.32	1.86	0.29	2.1	4.7	6.98	1.8	3.9	66	0.33	31.4	0.14	1036	1.1	0.025	2.1	0.043	20.04	0.16	0.73	0.3	217.9	0.02	4.4	0.001	0.13	1.3	3	< .2	98.9
RS-489 1300-1320	96	0.85	2.9	0.7	1	429.3	0.21	2.28	0.21	1.6	5.2	7.6	1.61	2.7	168	0.36	27.7	0.07	1622	1.86	0.019	2.2	0.045	16.86	0.33	1.48	0.2	151.6	< .02	5.1	0.003	0.2	1.6	4	0.4	84.5
STANDARD DS2	228	1.74	57.6	212	2	148.8	11.71	0.54	11.01	11.1	163.6	127.72	3.05	6	258	0.16	16.6	0.61	848	14.71	0.033	36.8	0.091	32.52	0.03	9.15	2.2	28.6	1.92	3.8	0.092	1.87	19.1	74	6.7	161.5
RS-489 1320-1340	2186	0.61	45.3	119.1	1	62.2	0.27	0.44	0.27	1.1	4.3	18.66	2.38	2	428	0.28	16.9	0.04	237	2.06	0.012	2.7	0.033	21.65	2.68	14.22	9.5	79.8	< .02	4.5	0.001	0.66	2	2	0.3	68.5
RS-489 1340-1360	657	0.71	16.4	36.4	1	69	0.11	0.58	0.6	2	3.3	9.68	2.1	2.2	1218	0.25	18.7	0.06	254	2.38	0.013	2.3	0.029	20.36	2.22	8.71	3.9	112.7	< .02	4.3	0.001	0.44	1.6	2	0.4	134.4

AMERICAN ASSAY LABORATORIES
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CLIENT: *HECLA MINING CO.*
CLIENT REF: KURT ALLEN
AAL REF: Sp56013
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-489 1360-1380	250	0.73	17.2	28.4	< 1	61.2	0.16	0.92	0.22	1.2	4.3	7.01	2.36	2.4	203	0.26	18.8	0.05	593	1.63	0.014	2.7	0.03	22.16	2.67	7.42	1.6	109.8	< .02	4.6	0.001	0.33	1.3	< 2	0.5	53.7
RS-489 1380-1400	1748	1	20.2	63.4	< 1	43.3	0.06	0.45	0.28	1.6	4.6	9.78	3.27	3.5	246	0.36	20.3	0.04	193	1.63	0.013	2.6	0.047	21.37	4.16	17.91	11.6	93.7	< .02	5.7	0.001	0.92	0.9	2	0.5	81
RS-489 1400-1420	446	0.75	11.7	43.7	< 1	44.2	0.05	0.46	0.24	1	5.6	8.81	2.89	2.6	314	0.3	18.1	0.04	207	1.77	0.011	2.5	0.031	21.08	3.69	12.86	6.8	86.1	< .02	4.9	0.001	1.02	0.8	2	0.5	77.6
RS-489 1420-1440	1005	0.98	24.5	50.4	< 1	57.4	0.08	0.61	0.36	2.4	7.2	12.76	2.87	3.3	304	0.3	18.7	0.08	263	3.13	0.012	4	0.037	24.86	2.65	9.06	11.4	103.4	< .02	4.6	0.001	0.57	1.6	4	0.5	92.5
RS-489 1440-1460	1661	0.88	46.1	62.2	< 1	30.7	0.06	0.49	0.32	2.1	6.2	10.14	2.98	2.9	270	0.33	15.2	0.06	290	2.41	0.011	2.5	0.04	26.19	4	16.13	11.8	81.9	< .02	4.1	0.001	0.78	1.7	3	0.4	96.4
RS-489 1460-1480	2991	0.93	104.1	87.8	< 1	31.3	0.12	0.56	0.34	2.5	6.5	11.88	3.16	3	170	0.32	16.2	0.07	278	2.69	0.012	3.3	0.037	24.4	3.34	13.39	17.3	93.3	< .02	3.8	0.001	0.49	2.2	3	0.3	106.2
RS-489 1480-1500	99999	0.78	103	165.9	< 1	48.6	0.08	0.45	0.7	2.3	5	73.96	2.29	2.6	1069	0.33	16.4	0.05	184	1.64	0.01	1.8	0.038	23.33	2.62	286.16	136.6	76.1	0.02	4.4	0.001	0.52	1.6	2	0.3	106.3
RS-489 1500-1520	44037	0.82	22.2	66	< 1	66.7	0.08	0.52	0.35	1.9	5	12.19	2.12	2.8	476	0.31	18.7	0.06	226	1.53	0.011	2.2	0.039	21.67	2.33	37.11	19.9	89.8	< .02	4.8	0.001	0.66	1.4	2	0.4	91.9
RS-489 1520-1540	18202	0.77	3.8	27.7	< 1	94.2	0.04	0.48	0.29	2	4.9	7.6	1.63	2.7	310	0.36	21	0.06	773	1.41	0.013	1.9	0.042	14.73	1.66	18.15	6.9	74.4	< .02	5.4	0.001	0.6	1.7	2	0.3	75.9
RS-489 1540-1560	9604	0.89	25.8	41	< 1	72.6	0.06	0.51	0.36	2	6.3	10.78	2.16	3	226	0.33	22.4	0.07	547	1.98	0.014	2.8	0.04	19.08	2.09	12.54	6.6	85.6	< .02	5.8	0.001	0.55	1.6	3	0.3	88.3
RS-489 1560-1580	6211	0.56	110.9	89.4	< 1	77.2	0.05	0.29	0.15	1.3	8	10.41	1.96	1.8	163	0.27	18.6	0.03	155	2.69	0.007	2.8	0.024	21.49	2.24	12.8	11.2	49.9	< .02	4.4	< .001	0.34	0.8	2	0.5	69.9
RS-489 1580-1600	6831	0.58	155.8	179.9	< 1	66.5	0.02	0.29	0.09	0.9	8	11.17	2.18	2.3	737	0.26	15.3	0.02	178	2.88	0.006	2.9	0.024	21.93	2.8	16.73	16.2	42.5	< .02	3.7	< .001	0.4	0.6	2	0.4	69.2
RS-489 1600-1620	21326	0.45	291.6	283.3	< 1	86.5	0.03	0.28	0.17	0.8	7.7	19.87	2.17	2	921	0.24	17.5	0.02	263	3.68	0.006	4.7	0.016	21.27	2.01	35.2	23.5	32.5	< .02	4.6	< .001	0.48	0.6	3	0.9	56.8
RS-489 1620-1640	6735	0.47	71.3	104.7	< 1	86	0.03	0.27	0.11	0.3	8	13.95	2.06	1.8	128	0.31	41.1	0.02	309	3.33	0.008	3.8	0.01	29.14	2.1	16.13	14.3	36.3	< .02	9.7	< .001	0.28	0.9	3	0.4	82.9
RS-489 1640-1660	1799	0.61	7.2	9	< 1	96.6	< .02	0.98	0.16	0.2	6.1	10.03	1.67	2.4	85	0.45	44.2	0.02	835	2.09	0.023	2.6	0.008	28.13	1.56	4.04	2.8	74.3	< .02	10.4	< .001	0.21	0.8	2	0.2	80.6
RS-489 1660-1680	5160	0.45	45.9	24.6	< 1	109.1	< .02	1.34	0.12	0.6	7.5	10.01	1.68	1.7	106	0.33	36.9	0.02	1028	3.42	0.02	3.3	0.008	27.51	1.5	8.56	6	83.5	< .02	8.7	< .001	0.17	0.8	2	0.4	91.5
RS-489 1680-1700	1453	0.56	6.8	5.5	< 1	127.4	0.05	1.13	0.11	0.4	8.2	12.13	1.68	2.3	57	0.42	46.9	0.02	948	3.03	0.012	3.6	0.008	23.93	0.86	4.3	1.8	73.2	< .02	11.6	< .001	0.21	1	3	0.3	75.1
RS-489 1700-1720	906	0.42	6.9	4.7	< 1	50.3	0.07	0.89	0.08	0.4	8.9	15.08	1.98	2	50	0.34	41.5	0.01	644	3.92	0.029	4.9	0.007	19.83	1.03	3.51	1.8	60.6	< .02	11	< .001	0.14	0.7	3	0.4	87.9
RS-489 1720-1740	4712	0.46	77.8	119.4	< 1	35.7	< .02	0.83	0.11	0.2	8.4	12.73	2.48	1.7	90	0.3	25.7	0.01	616	6.16	0.008	4.2	0.006	43.49	2.72	14.74	26.9	62.1	< .02	7	< .001	0.23	0.6	2	0.8	88.9
RS-489 1740-1760	1587	0.63	14.8	16.4	< 1	59.9	0.02	0.66	0.13	0.2	7.8	10.46	1.83	2.1	64	0.39	39.4	0.01	636	3.12	0.032	4.1	0.007	24.54	1.85	5.9	4.9	57.7	< .02	10.7	< .001	0.19	0.9	2	0.4	76.7
RS-489 1760-1780	1107	0.63	15.9	21.6	< 1	89.3	< .02	0.72	0.07	0.2	5.9	8.21	1.54	2	51	0.37	40	0.02	533	3.05	0.022	2.4	0.008	22.32	1.62	5.28	4.8	62	< .02	10.3	< .001	0.18	1	2	< .2	76
RS-489 1780-1800	7206	0.59	25.1	24.5	1	129.8	0.04	0.31	0.21	0.7	8.9	14.28	1.89	2.1	201	0.33	37.9	0.04	341	2.9	0.01	4.4	0.012	24.95	1.33	12.2	6.6	53.5	< .02	9.2	0.001	0.36	0.8	4	0.3	79
RS-489 1800-1820	2662	0.37	13.4	10.9	< 1	93	0.03	1.31	0.04	0.3	10.3	16.21	2.02	1.5	98	0.37	36.9	0.01	1435	4.15	0.011	4.8	0.007	22.27	1.37	8.13	2.3	68.6	< .02	9.3	< .001	0.27	0.5	3	0.6	70.9
RS-489 1820-1840	1574	0.51	20	19	< 1	81.7	0.03	0.88	0.06	0.3	10.3	17.8	2.42	2	97	0.36	33	0.01	1034	4.7	0.008	5.2	0.006	32.95	2.26	9.12	7.7	64.5	< .02	8.4	< .001	0.27	0.5	3	0.5	86.7
RS-489 1840-1860	49986	0.37	67.9	158.1	< 1	80.1	0.03	0.15	0.32	0.3	8.3	18.11	1.95	1.4	187	0.24	34.4	0.01	209	5.63	0.005	3.9	0.006	28.4	1.77	645.86	143.5	29.9	< .02	8.7	< .001	0.36	0.8	3	0.5	70.8
RS-489 1860-1880	5420	0.39	29.8	64.6	< 1	16.4	0.03	0.14	0.23	0.2	7.6	11.35	1.67	1.3	52	0.28	44.4	0.01	147	3.75	0.005	3.3	0.006	26.22	1.86	141.23	36.8	36.1	< .02	11.4	< .001	0.33	0.9	2	0.5	64.3
RS-489 1880-1900	5268	0.36	23.1	33.2	< 1	36.5	0.04	0.34	0.24	0.2	8.4	12.17	1.83	1.3	74	0.3	36.7	0.01	377	5.56	0.007	3.8	0.006	30.66	1.84	66.76	20	48.3	< .02	10.5	< .001	0.23	2.2	2	0.5	87
RS-489 1900-1915	702	0.65	4.4	2.7	1	35.9	0.02	1.29	0.11	0.3	10	13.77	1.97	3	45	0.44	67.9	0.01	734	3.07	0.037	4.3	0.008	21.88	0.2	9.92	2.2	73.8	< .02	15.6	0.001	0.08	1.2	3	0.3	59
89577	34381	0.86	70.9	2134.6	1	84.1	0.62	0.91	0.27	2.7	23.8	11.37	1.8	2.7	234	0.4	16.6	0.08	276	9.29	0.029	11.8	0.058	21.66	1.92	12.22	18.1	84.5	0.04	3.2	0.001	0.3	0.7	3	0.4	79.6
STANDARD DS2	255	1.69	57.5	190.1	< 1	143.4	10.4	0.52	9.83	11.6	154.4	121.14	2.93	6.2	232	0.15	15.4	0.59	808	13.95	0.03	35.3	0.084	31.63	0.03	8.77	2.2	28.2	1.75	3.7	0.089	1.71	19.7	72	6.3	157.3

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

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HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

CLIENT REFERENCE No: RS-489 RECEIVED : 10 FEB 2000

No. SAMPLES : 384 REPORTED : 18 FEB 2000

MAIN SAMPLE TYPE : DRILL CUTTINGS

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

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

SIGNATORY : Leonard E. Mackedon B.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0000-0005	9	7	<0.001	<0.001	<0.5	<0.02
RS-489 0005-0010	8		<0.001		<0.5	<0.02
RS-489 0010-0015	10		<0.001		<0.5	<0.02
RS-489 0015-0020	11		<0.001		<0.5	<0.02
RS-489 0020-0025	5		<0.001		<0.5	<0.02
RS-489 0025-0030	<5		<0.001		<0.5	<0.02
RS-489 0030-0035	<5		<0.001		<0.5	<0.02
RS-489 0035-0040	<5		<0.001		<0.5	<0.02
RS-489 0040-0045	<5		<0.001		<0.5	<0.02
RS-489 0045-0050	<5		<0.001		<0.5	<0.02
RS-489 0050-0055	<5		<0.001		<0.5	<0.02
RS-489 0055-0060	<5		<0.001		<0.5	<0.02
RS-489 0060-0065	<5		<0.001		<0.5	<0.02
RS-489 0065-0070	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-489 0070-0075	<5		<0.001		<0.5	<0.02
RS-489 0075-0080	<5		<0.001		<0.5	<0.02
RS-489 0080-0085	<5		<0.001		<0.5	<0.02
RS-489 0085-0090	<5		<0.001		<0.5	<0.02
RS-489 0090-0095	<5		<0.001		<0.5	<0.02
RS-489 0095-0100	7		<0.001		<0.5	<0.02
RS-489 0100-0105	<5		<0.001		<0.5	<0.02
RS-489 0105-0110	8		<0.001		<0.5	<0.02
RS-489 0110-0115	18		<0.001		0.6	<0.02
RS-489 0115-0120	7		<0.001		<0.5	<0.02
RS-489 0120-0125	8		<0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0125-0130	<5		<0.001		<0.5	<0.02
RS-489 0130-0135	<5		<0.001		<0.5	<0.02
RS-489 0135-0140	<5		<0.001		<0.5	<0.02
RS-489 0140-0145	10		<0.001		<0.5	<0.02
RS-489 0145-0150	9		<0.001		<0.5	<0.02
RS-489 0150-0155	<5		<0.001		<0.5	<0.02
RS-489 0155-0160	<5		<0.001		<0.5	<0.02
RS-489 0160-0165	<5		<0.001		<0.5	<0.02
RS-489 0165-0170	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-489 0170-0175	<5		<0.001		<0.5	<0.02
RS-489 0175-0180	<5		<0.001		<0.5	<0.02
RS-489 0180-0185	18		<0.001		<0.5	<0.02
RS-489 0185-0190	37		0.001		<0.5	<0.02
RS-489 0190-0195	8		<0.001		<0.5	<0.02
RS-489 0195-0200	10		<0.001		<0.5	<0.02
RS-489 0200-0205	75		0.002		<0.5	<0.02
RS-489 0205-0210	71		0.002		<0.5	<0.02
RS-489 0210-0215	39		0.001		<0.5	<0.02
RS-489 0215-0220	35		0.001		<0.5	<0.02
RS-489 0220-0225	29		<0.001		<0.5	<0.02
RS-489 0225-0230	60		0.002		0.8	0.02
RS-489 0230-0235	68	72	0.002	0.002	0.7	0.02
RS-489 0235-0240	39		0.001		<0.5	<0.02
RS-489 0240-0245	60		0.002		0.8	0.02
RS-489 0245-0250	61		0.002		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0250-0255	13		<0.001		<0.5	<0.02
RS-489 0255-0260	112		0.003		0.7	0.02
RS-489 0260-0265	53		0.002		<0.5	<0.02
RS-489 0265-0270	14		<0.001		<0.5	<0.02
RS-489 0270-0275	7		<0.001		<0.5	<0.02
RS-489 0275-0280	10		<0.001		<0.5	<0.02
RS-489 0280-0285	40		0.001		<0.5	<0.02
RS-489 0285-0290	44	64	0.001	0.002	<0.5	<0.02
RS-489 0290-0295	63		0.002		<0.5	<0.02
RS-489 0295-0300	110		0.003		1.0	0.03
RS-489 0300-0305	75		0.002		<0.5	<0.02
RS-489 0305-0310	96		0.003		0.7	0.02
RS-489 0310-0315	62		0.002		0.5	<0.02
RS-489 0315-0320	63		0.002		0.5	<0.02
RS-489 0320-0325	65		0.002		1.1	0.03
RS-489 0325-0330	38		0.001		<0.5	<0.02
RS-489 0330-0335	37		0.001		<0.5	<0.02
RS-489 0335-0340	69		0.002		<0.5	<0.02
RS-489 0340-0345	41		0.001		<0.5	<0.02
RS-489 0345-0350	170		0.005		0.6	<0.02
RS-489 0350-0355	154		0.004		0.5	<0.02
RS-489 0355-0360	DTF		DTF		<0.5	<0.02
RS-489 0360-0365	142		0.004		<0.5	<0.02
RS-489 0365-0370	27		<0.001		<0.5	<0.02
RS-489 0370-0375	35		0.001		<0.5	<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0375-0380	106		0.003		0.8	0.02
RS-489 0380-0385	40		0.001		1.2	0.04
RS-489 0385-0390	35		0.001		0.5	<0.02
RS-489 0390-0395	37		0.001		0.7	0.02
RS-489 0395-0400	44		0.001		1.0	0.03
RS-489 0400-0405	30		<0.001		0.5	<0.02
RS-489 0405-0410	35		0.001		<0.5	<0.02
RS-489 0410-0415	15		<0.001		<0.5	<0.02
RS-489 0415-0420	<5		<0.001		<0.5	<0.02
RS-489 0420-0425	7		<0.001		<0.5	<0.02
RS-489 0425-0430	14	20	<0.001	<0.001	<0.5	<0.02
RS-489 0430-0435	50		0.001		<0.5	<0.02
RS-489 0435-0440	100		0.003		<0.5	<0.02
RS-489 0440-0445	25		<0.001		<0.5	<0.02
RS-489 0445-0450	43		0.001		<0.5	<0.02
RS-489 0450-0455	75		0.002		<0.5	<0.02
RS-489 0455-0460	88		0.003		<0.5	<0.02
RS-489 0460-0465	62		0.002		1.0	0.03
RS-489 0465-0470	45		0.001		<0.5	<0.02
RS-489 0470-0475	95		0.003		<0.5	<0.02
RS-489 0475-0480	67		0.002		0.5	<0.02
RS-489 0480-0485	10		<0.001		<0.5	<0.02
RS-489 0485-0490	15		<0.001		<0.5	<0.02
RS-489 0490-0495	33		<0.001		0.5	<0.02
RS-489 0495-0500	64		0.002		0.8	0.02

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PROVISIONAL REPORT 8P056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0500-0505	16		<0.001		<0.5	<0.02
RS-489 0505-0510	<5		<0.001		<0.5	<0.02
RS-489 0510-0515	27	36	<0.001	0.001	<0.5	<0.02
RS-489 0515-0520	26		<0.001		<0.5	<0.02
RS-489 0520-0525	20		<0.001		<0.5	<0.02
RS-489 0525-0530	23		<0.001		<0.5	<0.02
RS-489 0530-0535	17		<0.001		<0.5	<0.02
RS-489 0535-0540	35		0.001		<0.5	<0.02
RS-489 0540-0545	68		0.002		<0.5	<0.02
RS-489 0545-0550	74		0.002		<0.5	<0.02
RS-489 0550-0555	64		0.002		<0.5	<0.02
RS-489 0555-0560	52		0.002		0.5	<0.02
RS-489 0560-0565	72		0.002		<0.5	<0.02
RS-489 0565-0570	83		0.002		<0.5	<0.02
RS-489 0570-0575	22		<0.001		<0.5	<0.02
RS-489 0575-0580	26		<0.001		<0.5	<0.02
RS-489 0580-0585	5	9	<0.001	<0.001	<0.5	<0.02
RS-489 0585-0590	17		<0.001		<0.5	<0.02
RS-489 0590-0595	14		<0.001		<0.5	<0.02
RS-489 0595-0600	11		<0.001		<0.5	<0.02
RS-489 0600-0605	10		<0.001		<0.5	<0.02
RS-489 0605-0610	28		<0.001		<0.5	<0.02
RS-489 0610-0615	27		<0.001		<0.5	<0.02
RS-489 0615-0620	135		0.004		<0.5	<0.02
RS-489 0620-0625	290		0.008		1.4	0.04

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CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0625-0630	108	132	0.003	0.004	0.5	<0.02
RS-489 0630-0635	132		0.004		0.7	0.02
RS-489 0635-0640	43		0.001		<0.5	<0.02
RS-489 0640-0645	22		<0.001		<0.5	<0.02
RS-489 0645-0650	38		0.001		<0.5	<0.02
RS-489 0650-0655	27		<0.001		<0.5	<0.02
RS-489 0655-0660	<5		<0.001		<0.5	<0.02
RS-489 0660-0665	16		<0.001		<0.5	<0.02
RS-489 0665-0670	23		<0.001		<0.5	<0.02
RS-489 0670-0675	8		<0.001		<0.5	<0.02
RS-489 0675-0680	6		<0.001		<0.5	<0.02
RS-489 0680-0685	8	10	<0.001	<0.001	<0.5	<0.02
RS-489 0685-0690	7		<0.001		<0.5	<0.02
RS-489 0690-0695	43		0.001		<0.5	<0.02
RS-489 0695-0700	119		0.003		1.2	0.04
RS-489 0700-0705	90		0.003		0.8	0.02
RS-489 0705-0710	60		0.002		<0.5	<0.02
RS-489 0710-0715	74		0.002		0.5	<0.02
RS-489 0715-0720	42		0.001		<0.5	<0.02
RS-489 0720-0725	38		0.001		<0.5	<0.02
RS-489 0725-0730	34		<0.001		<0.5	<0.02
RS-489 0730-0735	36		0.001		<0.5	<0.02
RS-489 0735-0740	73		0.002		<0.5	<0.02
RS-489 0740-0745	61	70	0.002	0.002	<0.5	<0.02
RS-489 0745-0750	48		0.001		<0.5	<0.02

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PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0750-0755	13		<0.001		<0.5	<0.02
RS-489 0755-0760	28		<0.001		<0.5	<0.02
RS-489 0760-0765	13		<0.001		<0.5	<0.02
RS-489 0765-0770	36		0.001		<0.5	<0.02
RS-489 0770-0775	42		0.001		<0.5	<0.02
RS-489 0775-0780	40		0.001		<0.5	<0.02
RS-489 0780-0785	30		<0.001		<0.5	<0.02
RS-489 0785-0790	42		0.001		<0.5	<0.02
RS-489 0790-0795	180		0.005		<0.5	<0.02
RS-489 0795-0800	73	76	0.002	0.002	<0.5	<0.02
RS-489 0800-0805	81		0.002		<0.5	<0.02
RS-489 0805-0810	34		<0.001		<0.5	<0.02
RS-489 0810-0815	38		0.001		<0.5	<0.02
RS-489 0815-0820	43		0.001		<0.5	<0.02
RS-489 0820-0825	85		0.002		<0.5	<0.02
RS-489 0825-0830	103	100	0.003	0.003	1.0	0.03
RS-489 0830-0835	110		0.003		1.4	0.04
RS-489 0835-0840	117		0.003		0.6	<0.02
RS-489 0840-0845	40		0.001		<0.5	<0.02
RS-489 0845-0850	39		0.001		0.6	<0.02
RS-489 0850-0855	104		0.003		1.3	0.04
RS-489 0855-0860	58		0.002		<0.5	<0.02
RS-489 0860-0865	113		0.003		1.3	0.04
RS-489 0865-0870	99		0.003		1.3	0.04
RS-489 0870-0875	90		0.003		0.8	0.02

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PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 0875-0880	72		0.002		<0.5	<0.02
RS-489 0880-0885	62		0.002		0.8	0.02
RS-489 0885-0890	72		0.002		1.7	0.05
RS-489 0890-0895	36		0.001		1.5	0.04
RS-489 0895-0900	32		<0.001		1.5	0.04
RS-489 0900-0905	11		<0.001		1.5	0.04
RS-489 0905-0910	5		<0.001		1.2	0.04
RS-489 0910-0915	<5		<0.001		3.0	0.09
RS-489 0915-0920	<5		<0.001		14.2	0.41
RS-489 0920-0925	<5		<0.001		<0.5	<0.02
RS-489 0925-0930	<5		<0.001		<0.5	<0.02
RS-489 0930-0935	<5	<5	<0.001	<0.001	<0.5	<0.02
RS-489 0935-0940	<5		<0.001		<0.5	<0.02
RS-489 0940-0945	<5		<0.001		<0.5	<0.02
RS-489 0945-0950	<5		<0.001		<0.5	<0.02
RS-489 0950-0955	<5		<0.001		<0.5	<0.02
RS-489 0955-0960	<5		<0.001		<0.5	<0.02
RS-489 0960-0965	<5		<0.001		<0.5	<0.02
RS-489 0965-0970	<5		<0.001		<0.5	<0.02
RS-489 0970-0975	<5		<0.001		<0.5	<0.02
RS-489 0975-0980	<5		<0.001		<0.5	<0.02
RS-489 0980-0985	<5		<0.001		<0.5	<0.02
RS-489 0985-0990	<5		<0.001		<0.5	<0.02
RS-489 0990-0995	<5		<0.001		<0.5	<0.02
RS-489 0995-1000	<5		<0.001		<0.5	<0.02

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PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1000-1005	<5		<0.001		<0.5	<0.02
RS-489 1005-1010	<5		<0.001		<0.5	<0.02
RS-489 1010-1015	<5		<0.001		<0.5	<0.02
RS-489 1015-1020	<5		<0.001		<0.5	<0.02
RS-489 1020-1025	<5		<0.001		<0.5	<0.02
RS-489 1025-1030	<5		<0.001		<0.5	<0.02
RS-489 1030-1035	7		<0.001		2.2	0.06
RS-489 1035-1040	<5		<0.001		0.5	<0.02
RS-489 1040-1045	<5		<0.001		0.5	<0.02
RS-489 1045-1050	6		<0.001		1.7	0.05
RS-489 1050-1055	<5		<0.001		1.0	0.03
RS-489 1055-1060	11		<0.001		0.8	0.02
RS-489 1060-1065	92		0.003		2.2	0.06
RS-489 1065-1070	208		0.006		32.7	0.95
RS-489 1070-1075	188		0.005		7.2	0.21
RS-489 1075-1080	173		0.005		8.4	0.25
RS-489 1080-1085	155		0.005		6.2	0.18
RS-489 1085-1090	143		0.004		2.7	0.08
RS-489 1090-1095	63		0.002		1.0	0.03
RS-489 1095-1100	66		0.002		2.3	0.07
RS-489 1100-1105	77		0.002		2.4	0.07
RS-489 1105-1110	52		0.002		1.4	0.04
RS-489 1110-1115	26		<0.001		0.5	<0.02
RS-489 1115-1120	16		<0.001		<0.5	<0.02
RS-489 1120-1125	6		<0.001		5.6	0.16

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1125-1130	<5		<0.001		<0.5	<0.02
RS-489 1130-1135	<5		<0.001		<0.5	<0.02
RS-489 1135-1140	<5		<0.001		<0.5	<0.02
RS-489 1140-1145	<5		<0.001		<0.5	<0.02
RS-489 1145-1150	<5		<0.001		<0.5	<0.02
RS-489 1150-1155	<5		<0.001		<0.5	<0.02
RS-489 1155-1160	<5		<0.001		<0.5	<0.02
RS-489 1160-1165	<5		<0.001		<0.5	<0.02
RS-489 1165-1170	<5		<0.001		<0.5	<0.02
RS-489 1170-1175	<5		<0.001		<0.5	<0.02
RS-489 1175-1180	<5		<0.001		<0.5	<0.02
RS-489 1180-1185	<5		<0.001		<0.5	<0.02
RS-489 1185-1190	<5		<0.001		0.7	0.02
RS-489 1190-1195	<5		<0.001		<0.5	<0.02
RS-489 1195-1200	<5		<0.001		<0.5	<0.02
RS-489 1200-1205	6		<0.001		<0.5	<0.02
RS-489 1205-1210	7		<0.001		<0.5	<0.02
RS-489 1210-1215	5		<0.001		<0.5	<0.02
RS-489 1215-1220	<5		<0.001		<0.5	<0.02
RS-489 1220-1225	5		<0.001		<0.5	<0.02
RS-489 1225-1230	<5		<0.001		0.5	<0.02
RS-489 1230-1235	<5		<0.001		<0.5	<0.02
RS-489 1235-1240	<5		<0.001		<0.5	<0.02
RS-489 1240-1245	<5		<0.001		<0.5	<0.02
RS-489 1245-1250	<5		<0.001		<0.5	<0.02

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CLIENT : HECLA MINING COMPANY
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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1250-1255	<5		<0.001		<0.5	<0.02
RS-489 1255-1260	<5		<0.001		<0.5	<0.02
RS-489 1260-1265	<5		<0.001		<0.5	<0.02
RS-489 1265-1270	7		<0.001		<0.5	<0.02
RS-489 1270-1275	11		<0.001		<0.5	<0.02
RS-489 1275-1280	8		<0.001		<0.5	<0.02
RS-489 1280-1285	6		<0.001		<0.5	<0.02
RS-489 1285-1290	<5		<0.001		<0.5	<0.02
RS-489 1290-1295	<5		<0.001		<0.5	<0.02
RS-489 1295-1300	<5		<0.001		<0.5	<0.02
RS-489 1300-1305	<5		<0.001		<0.5	<0.02
RS-489 1305-1310	<5		<0.001		<0.5	<0.02
RS-489 1310-1315	<5		<0.001		<0.5	<0.02
RS-489 1315-1320	6		<0.001		0.5	<0.02
RS-489 1320-1325	10		<0.001		<0.5	<0.02
RS-489 1325-1330	164		0.005		2.2	0.06
RS-489 1330-1335	211		0.006		4.1	0.12
RS-489 1335-1340	160		0.005		2.7	0.08
RS-489 1340-1345	80		0.002		1.4	0.04
RS-489 1345-1350	21		<0.001		0.7	0.02
RS-489 1350-1355	30		<0.001		<0.5	<0.02
RS-489 1355-1360	34		<0.001		<0.5	<0.02
RS-489 1360-1365	17		<0.001		<0.5	<0.02
RS-489 1365-1370	24		<0.001		<0.5	<0.02
RS-489 1370-1375	45		0.001		<0.5	<0.02

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SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1375-1380	18		<0.001		<0.5	<0.02
RS-489 1380-1385	66		0.002		1.5	0.04
RS-489 1385-1390	118		0.003		4.0	0.12
RS-489 1390-1395	50		0.001		0.5	<0.02
RS-489 1395-1400	44		0.001		<0.5	<0.02
RS-489 1400-1405	29	30	<0.001	<0.001	<0.5	<0.02
RS-489 1405-1410	71		0.002		<0.5	<0.02
RS-489 1410-1415	52		0.002		0.6	<0.02
RS-489 1415-1420	61		0.002		0.7	0.02
RS-489 1420-1425	21		<0.001		0.9	0.03
RS-489 1425-1430	80		0.002		0.8	0.02
RS-489 1430-1435	63		0.002		1.1	0.03
RS-489 1435-1440	60		0.002		0.9	0.03
RS-489 1440-1445	21		<0.001		<0.5	<0.02
RS-489 1445-1450	55		0.002		1.0	0.03
RS-489 1450-1455	70		0.002		1.7	0.05
RS-489 1455-1460	135		0.004		3.1	0.09
RS-489 1460-1465	62		0.002		1.8	0.05
RS-489 1465-1470	59		0.002		1.0	0.03
RS-489 1470-1475	84		0.002		1.7	0.05
RS-489 1475-1480	238		0.007		5.0	0.15
RS-489 1480-1485	130	138	0.004	0.004	3.6	0.11
RS-489 1485-1490	62		0.002		1.2	0.04
RS-489 1490-1495	51	44	0.001	0.001	6.0	0.18
RS-489 1495-1500	297		0.009		1858.0	54.20

14.95

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1500-1505	90		0.003		109.1	3.18
RS-489 1505-1510	49		0.001		30.6	0.89
RS-489 1510-1515	63		0.002		49.9	1.46
RS-489 1515-1520	68		0.002		20.0	0.58
RS-489 1520-1525	50		0.001		11.7	0.34
RS-489 1525-1530	23		<0.001		19.2	0.56
RS-489 1530-1535	9		<0.001		13.8	0.40
RS-489 1535-1540	16		<0.001		11.9	0.35
RS-489 1540-1545	DTF		DTF		15.5	0.45
RS-489 1545-1550	11		<0.001		3.1	0.09
RS-489 1550-1555	73		0.002		5.7	0.17
RS-489 1555-1560	96		0.003		1.7	0.05
RS-489 1560-1565	78		0.002		6.8	0.20
RS-489 1565-1570	77		0.002		4.5	0.13
RS-489 1570-1575	164	184	0.005	0.005	8.2	0.24
RS-489 1575-1580	94		0.003		3.0	0.09
RS-489 1580-1585	137		0.004		3.3	0.10
RS-489 1585-1590	140		0.004		3.6	0.11
RS-489 1590-1595	250		0.007		6.0	0.18
RS-489 1595-1600	234		0.007		13.9	0.41
RS-489 1600-1605	200		0.006		13.4	0.39
RS-489 1605-1610	202	168	0.006	0.005	13.0	0.38
RS-489 1610-1615	560		0.016		26.6	0.78
RS-489 1615-1620	270		0.008		32.9	0.96
RS-489 1620-1625	134		0.004		18.0	0.53

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1625-1630	121		0.004		2.7	0.08
RS-489 1630-1635	307		0.009		6.3	0.18
RS-489 1635-1640	135		0.004		1.8	0.05
RS-489 1640-1645	20		<0.001		3.3	0.10
RS-489 1645-1650	23		<0.001		0.9	0.03
RS-489 1650-1655	69		0.002		0.9	0.03
RS-489 1655-1660	14		<0.001		1.6	0.05
RS-489 1660-1665	20		<0.001		10.9	0.32
RS-489 1665-1670	21		<0.001		3.6	0.11
RS-489 1670-1675	29		<0.001		2.3	0.07
RS-489 1675-1680	66		0.002		1.2	0.04
RS-489 1680-1685	16		<0.001		4.0	0.12
RS-489 1685-1690	12		<0.001		1.0	0.03
RS-489 1690-1695	6		<0.001		0.8	0.02
RS-489 1695-1700	7		<0.001		0.6	<0.02
RS-489 1700-1705	15	16	<0.001	<0.001	0.9	0.03
RS-489 1705-1710	16		<0.001		0.8	0.02
RS-489 1710-1715	14		<0.001		0.6	<0.02
RS-489 1715-1720	21		<0.001		1.0	0.03
RS-489 1720-1725	141		0.004		5.8	0.17
RS-489 1725-1730	90		0.003		4.1	0.12
RS-489 1730-1735	58	48	0.002	0.001	2.7	0.08
RS-489 1735-1740	160		0.005		4.4	0.13
RS-489 1740-1745	27		<0.001		3.4	0.10
RS-489 1745-1750	20		<0.001		0.8	0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1750-1755	14		<0.001		0.9	0.03
RS-489 1755-1760	51		0.001		1.8	0.05
RS-489 1760-1765	24		<0.001		1.1	0.03
RS-489 1765-1770	25		<0.001		1.4	0.04
RS-489 1770-1775	20		<0.001		0.7	0.02
RS-489 1775-1780	26		<0.001		<0.5	<0.02
RS-489 1780-1785	97		0.003		29.6	0.86
RS-489 1785-1790	35		0.001		1.8	0.05
RS-489 1790-1795	32		<0.001		0.9	0.03
RS-489 1795-1800	23		<0.001		<0.5	<0.02
RS-489 1800-1805	27		<0.001		2.9	0.08
RS-489 1805-1810	20		<0.001		1.1	0.03
RS-489 1810-1815	11		<0.001		<0.5	<0.02
RS-489 1815-1820	31		<0.001		2.0	0.06
RS-489 1820-1825	23		<0.001		0.9	0.03
RS-489 1825-1830	53		0.002		2.0	0.06
RS-489 1830-1835	67		0.002		1.1	0.03
RS-489 1835-1840	35		0.001		0.8	0.02
RS-489 1840-1845	137		0.004		74.2	2.16
RS-489 1845-1850	176		0.005		123.9	3.61
RS-489 1850-1855	246		0.007		32.2	0.94
RS-489 1855-1860	321	344	0.009	0.010	16.3	0.48
RS-489 1860-1865	72		0.002		13.9	0.41
RS-489 1865-1870	86		0.003		2.9	0.08
RS-489 1870-1875	65		0.002		2.0	0.06

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP056013

CLIENT : HECLA MINING COMPANY
PROJECT : NORTH EQUINOX
REFERENCE : RS-489

REPORTED : 18 FEB 2000

SAMPLES	Au	Au(R)	Au(OZ)	Au(RZ)	Ag	Ag(OZ)
RS-489 1875-1880	83		0.002		5.0	0.15
RS-489 1880-1885	75		0.002		2.8	0.08
RS-489 1885-1890	76		0.002		15.4	0.45
RS-489 1890-1895	76		0.002		3.7	0.11
RS-489 1895-1900	102		0.003		0.7	0.02
RS-489 1900-1905	28		<0.001		1.8	0.05
RS-489 1905-1910	15		<0.001		0.5	<0.02
RS-489 1910-1915	8		<0.001		<0.5	<0.02
89577	1943		0.057		35.3	1.03

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

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

JOB NUMBER: 29-0588-311

WELL NAME: RS-489 / VS 290.00

LOCATION: ROSEBUD MINE

SURVEY DATE: 02/03/2000

SURVEY ENGINEER: VERN ERID

GYRO REFERENCE BEARING: TRUE NORTH

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

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 020.00
WATER CONTACT= 497'

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

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

****
****
*** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
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WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-489 / VS 290.00

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION	TEMP. DEG F
0.0	0.00	0.00	0.000	-69.48	019.88	0.00 N	0.00 E	0.00		0.00	AT 000.00	
50.0	46.82	17.55	0.129	-69.43	020.96	16.44 N	6.12 E	0.76	0.38	17.55	AT 020.42	054.41
100.0	93.68	34.98	0.593	-69.74	022.10	32.67 N	12.52 E	1.01	0.50	34.98	AT 020.97	055.04
150.0	140.54	52.41	1.323	-69.43	022.69	48.79 N	19.17 E	0.74	0.37	52.42	AT 021.45	055.70
200.0	187.34	69.98	2.167	-69.37	022.81	65.02 N	25.97 E	0.15	0.07	70.01	AT 021.77	056.26
250.0	234.15	87.53	2.907	-69.49	022.02	81.26 N	32.67 E	0.60	0.30	87.58	AT 021.90	056.84
300.0	280.94	105.16	3.556	-69.18	022.19	97.60 N	39.31 E	0.63	0.32	105.22	AT 021.94	057.57
350.0	327.66	122.96	4.219	-69.09	022.08	114.10 N	46.02 E	0.20	0.10	123.03	AT 021.97	058.51
400.0	374.36	140.80	4.911	-69.06	022.36	130.63 N	52.77 E	0.21	0.10	140.89	AT 022.00	059.01
450.0	421.08	158.61	5.632	-69.17	022.28	147.12 N	59.54 E	0.23	0.11	158.71	AT 022.03	059.55
500.0	467.79	176.43	6.303	-69.05	022.03	163.63 N	66.26 E	0.30	0.15	176.54	AT 022.05	062.93
550.0	514.42	194.47	6.999	-68.62	022.39	180.35 N	73.09 E	0.90	0.45	194.59	AT 022.06	063.74
600.0	561.00	212.62	7.787	-68.77	022.58	197.13 N	80.04 E	0.33	0.17	212.76	AT 022.10	064.05
650.0	607.63	230.65	8.666	-68.89	023.00	213.78 N	87.03 E	0.39	0.19	230.81	AT 022.15	064.31
700.0	654.30	248.54	9.627	-69.11	023.15	230.26 N	94.05 E	0.45	0.23	248.73	AT 022.22	064.75
750.0	700.97	266.48	10.671	-68.78	023.51	246.76 N	101.17 E	0.71	0.35	266.69	AT 022.29	065.25
800.0	747.56	284.59	11.707	-68.68	023.04	263.42 N	108.33 E	0.40	0.20	284.83	AT 022.36	066.20
850.0	794.08	302.88	12.673	-68.34	023.01	280.28 N	115.50 E	0.68	0.34	303.14	AT 022.40	066.53
900.0	840.52	321.39	13.666	-68.12	023.13	297.34 N	122.77 E	0.45	0.22	321.68	AT 022.43	066.92
950.0	886.86	340.13	14.607	-67.80	022.62	314.62 N	130.06 E	0.75	0.37	340.45	AT 022.46	067.05
1000.0	933.21	358.89	15.455	-68.09	022.56	331.96 N	137.27 E	0.58	0.29	359.22	AT 022.47	067.45
1050.0	979.56	377.60	16.409	-67.89	023.27	349.22 N	144.57 E	0.67	0.33	377.96	AT 022.49	067.87
1100.0	1025.92	396.31	17.336	-68.11	022.40	366.48 N	151.84 E	0.79	0.39	396.69	AT 022.50	071.01
1150.0	1072.23	415.16	18.134	-67.56	022.45	383.92 N	159.03 E	1.10	0.55	415.55	AT 022.50	072.79
1200.0	1118.42	434.28	18.837	-67.43	021.76	401.65 N	166.23 E	0.59	0.29	434.69	AT 022.48	073.86
1250.0	1164.59	453.45	19.279	-67.46	020.88	419.51 N	173.21 E	0.68	0.34	453.86	AT 022.43	075.70
1260.0	1173.83	457.29	19.337	-67.40	020.85	423.10 N	174.57 E	0.61	0.06	457.70	AT 022.42	076.44

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*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*  1260.0 FEET EQUALS    457.70    FEET AT   022.42         *
*                          ********                         *
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WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

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

JOB NUMBER: 29-0588-311

WELL NAME: RS-489 / VS 290.00

LOCATION: ROSEBUD MINE

SURVEY DATE: 02/06/2000

SURVEY ENGINEER: VERN REID

GYRO REFERENCE BEARING: TRUE NORTH

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

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 020.00

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

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

****
****
*** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
**
**
** ********** **
** COMPANY REPRESENTATIVE **
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WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-489 / VS 290.00

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
0.0	0.00	0.00	0.000	-69.48	019.88	0.00 N	0.00 E	0.00		0.00	AT 000.00
50.0	46.82	17.55	0.129	-69.43	020.96	16.44 N	6.12 E	0.76	0.38	17.55	AT 020.42
100.0	93.68	34.98	0.593	-69.74	022.10	32.67 N	12.52 E	1.01	0.50	34.98	AT 020.97
150.0	140.54	52.41	1.323	-69.43	022.69	48.79 N	19.17 E	0.74	0.37	52.42	AT 021.45
200.0	187.34	69.98	2.167	-69.37	022.81	65.02 N	25.97 E	0.15	0.07	70.01	AT 021.77
250.0	234.15	87.53	2.907	-69.49	022.02	81.26 N	32.67 E	0.60	0.30	87.58	AT 021.90
300.0	280.94	105.16	3.556	-69.18	022.19	97.60 N	39.31 E	0.63	0.32	105.22	AT 021.94
350.0	327.66	122.96	4.219	-69.09	022.08	114.10 N	46.02 E	0.20	0.10	123.03	AT 021.97
400.0	374.36	140.80	4.911	-69.06	022.36	130.63 N	52.77 E	0.21	0.10	140.89	AT 022.00
450.0	421.08	158.61	5.632	-69.17	022.28	147.12 N	59.54 E	0.23	0.11	158.71	AT 022.03
500.0	467.79	176.43	6.303	-69.05	022.03	163.63 N	66.26 E	0.30	0.15	176.54	AT 022.05
550.0	514.42	194.47	6.999	-68.62	022.39	180.35 N	73.09 E	0.90	0.45	194.59	AT 022.06
600.0	561.00	212.62	7.787	-68.77	022.58	197.13 N	80.04 E	0.33	0.17	212.76	AT 022.10
650.0	607.63	230.65	8.666	-68.89	023.00	213.78 N	87.03 E	0.39	0.19	230.81	AT 022.15
700.0	654.30	248.54	9.627	-69.11	023.15	230.26 N	94.05 E	0.45	0.23	248.73	AT 022.22
750.0	700.97	266.48	10.671	-68.78	023.51	246.76 N	101.17 E	0.71	0.35	266.69	AT 022.29
800.0	747.56	284.59	11.707	-68.68	023.04	263.42 N	108.33 E	0.40	0.20	284.83	AT 022.36
850.0	794.08	302.88	12.673	-68.34	023.01	280.28 N	115.50 E	0.68	0.34	303.14	AT 022.40
900.0	840.52	321.39	13.666	-68.12	023.13	297.34 N	122.77 E	0.45	0.22	321.68	AT 022.43
950.0	886.86	340.13	14.607	-67.80	022.62	314.62 N	130.06 E	0.75	0.37	340.45	AT 022.46
1000.0	933.21	358.89	15.455	-68.09	022.56	331.96 N	137.27 E	0.58	0.29	359.22	AT 022.47
1050.0	979.56	377.60	16.409	-67.89	023.27	349.22 N	144.57 E	0.67	0.33	377.96	AT 022.49
1100.0	1025.92	396.31	17.336	-68.11	022.40	366.48 N	151.84 E	0.79	0.39	396.69	AT 022.50
1150.0	1072.23	415.16	18.134	-67.56	022.45	383.92 N	159.03 E	1.10	0.55	415.55	AT 022.50
1200.0	1118.42	434.28	18.837	-67.43	021.76	401.65 N	166.23 E	0.59	0.29	434.69	AT 022.48
1250.0	1164.59	453.45	19.279	-67.46	020.88	419.51 N	173.21 E	0.68	0.34	453.86	AT 022.43
1300.0	1210.87	472.39	19.761	-68.01	022.05	437.14 N	180.14 E	1.41	0.71	472.80	AT 022.40
1350.0	1257.31	490.88	20.768	-68.52	024.21	454.17 N	187.40 E	1.90	0.95	491.32	AT 022.42
1400.0	1304.03	508.62	22.269	-69.76	025.50	470.33 N	194.88 E	2.64	1.32	509.10	AT 022.51
1450.0	1351.02	525.59	24.164	-70.28	027.26	485.63 N	202.47 E	1.59	0.79	526.15	AT 022.63
1500.0	1398.02	542.51	26.471	-69.79	028.26	500.74 N	210.42 E	1.19	0.60	543.15	AT 022.79
1550.0	1444.98	559.43	29.313	-70.06	030.83	515.67 N	218.88 E	1.84	0.92	560.20	AT 023.00
1600.0	1492.01	576.05	32.774	-70.24	032.70	530.10 N	227.82 E	1.32	0.66	576.98	AT 023.26
1650.0	1539.06	592.48	36.837	-70.18	035.08	544.15 N	237.26 E	1.62	0.81	593.62	AT 023.56
1700.0	1586.11	608.64	41.852	-70.23	039.40	557.62 N	247.50 E	2.93	1.46	610.08	AT 023.93
1750.0	1633.15	624.51	47.795	-70.14	041.66	570.50 N	258.51 E	1.54	0.77	626.34	AT 024.38

WELLBORE NAVIGATION, INC.
WINNEMUCCA, NEVADA

JOB NUMBER: 29-0588-311 WELL NAME: RS-489 / VS 290.00

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL HORZ	BEARING AZIMUTH	COORDINATES LATITUDE	COORDINATES DEPARTURE	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
1760.0	1642.55	627.69	49.043	-69.97	041.24	573.06 N	260.77 E	2.22	0.22	629.60	AT 024.47

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*                          ********                         *
*       THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF         *
*                          ********                         *
*  1760.0 FEET EQUALS      629.60    FEET AT   024.47       *
*                          ********                         *
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WELNAV

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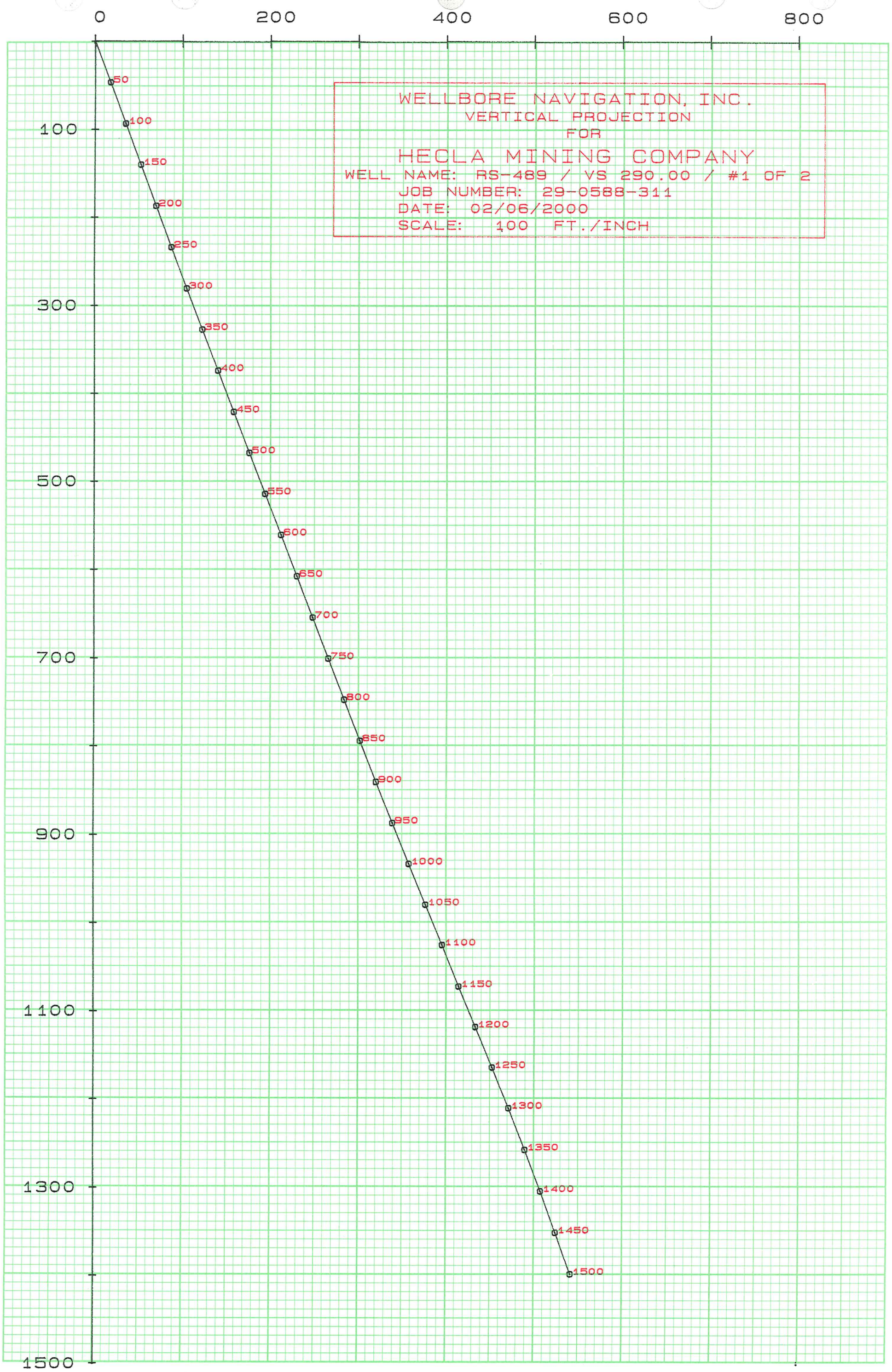

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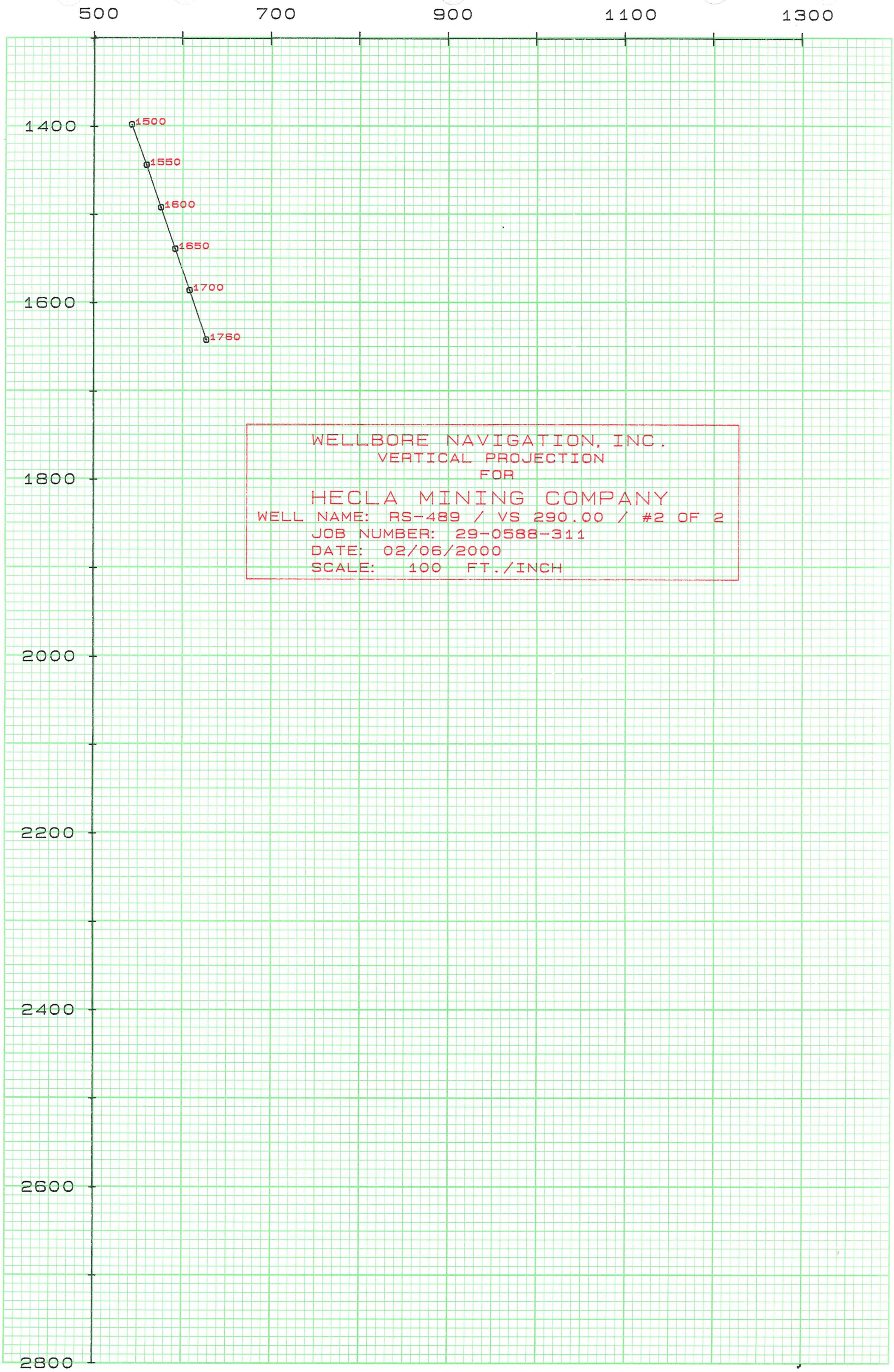
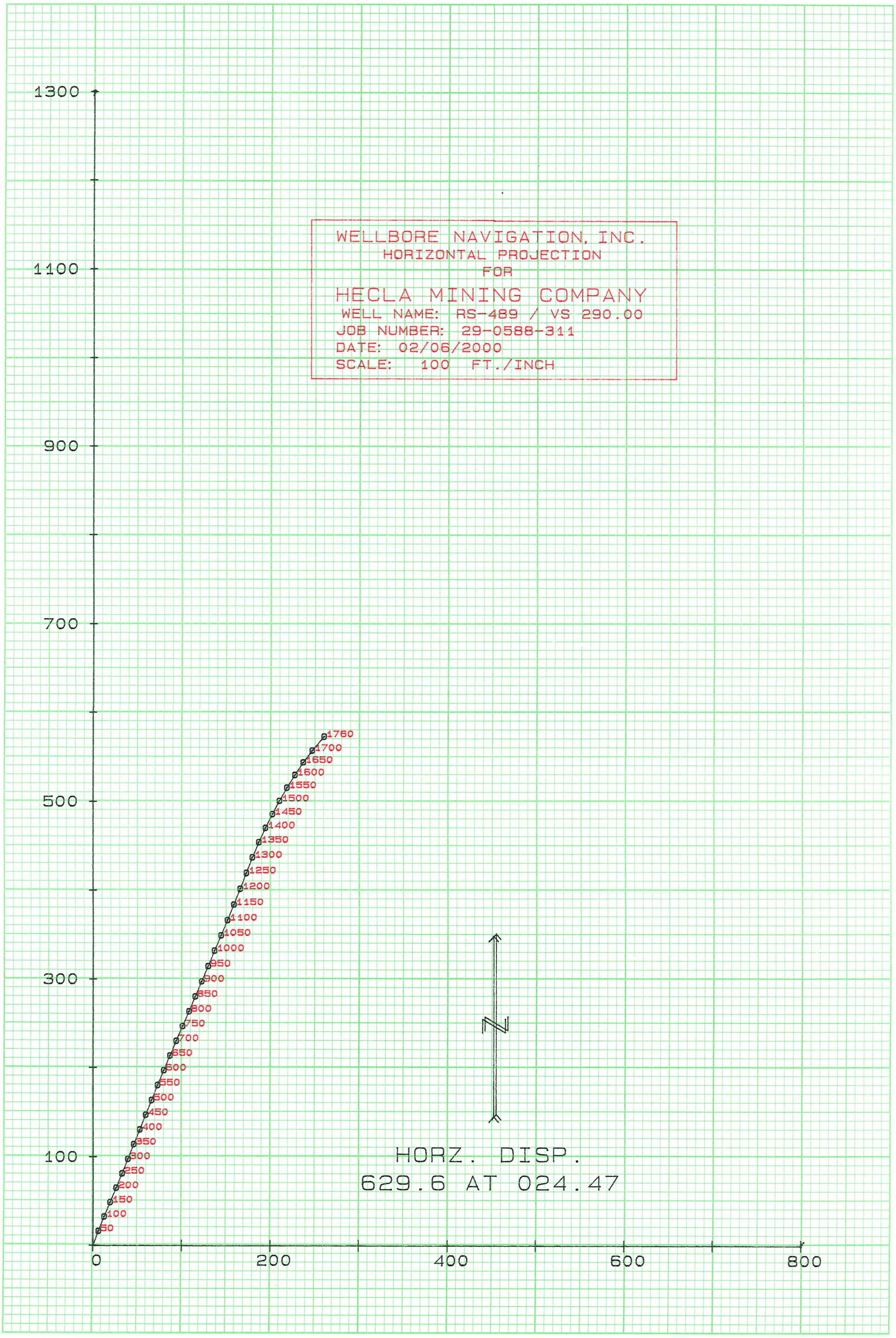
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