600017009

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 - Gator and Wildrose/ Juniper Canyon Target Areas
AUTHOR	C. Muerhoff; R. Clayton; J. Nyrehn D. Cameron; S. King
DATE OF DOC(S)	1995
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Hecla Mining Co.; Lac Minerals; Gator; Wildrose; Juniper Canyon
COMMODITY If not obvious	gold; silver
NOTES	correspondence; handwritten notes; target summary; assays; geochemistry; element ratio tables; soil grid map VLF\EM data; receipt. ~~222p~~ 224

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: DP 6/5/08 (Initials / Date)
DB: Mah 7/08 (Initials / Date)
SCANNED: NV Blue (Initials / Date)

Revised: 1/22/08

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HECLA MINING COMPANY
ROSEBUD PROJECT
October 3, 1995

Turned in 10/11/95
C.M.

Memorandum to: Charlie Muerhoff
Ron Clayton

From: Jimmy Nyrehn

Subject: Gator and Wildrose/Juniper Canyon Target Areas

Gator Target Area

September operations included field tours for Charlie Muerhoff and Don Cameron. Don cameron was shown the Wildrose / Juniper Canyon Area (WJCA) as well.

Approximately 13 line miles of VLF\EM were surveyed on the Gator area. Measurements were taken on 200'X 50' centers. Extensive problems with both hardware and software have resulted in a longer than estimated duration for this survey. Barring any further complications, the survey should be plotted and contoured by 10/6/95.

Geochemical interpretations are awaiting return of final Analysis Reports from American Assay. Plots of the preliminary data indicate the presence of two moderate (<300ppb) anomalies. These are coexistent with mapped structures and evidence of faulting and with correlation of VLF and final assays may provide one or more targets for drilling.

Wildrose/Juniper Canyon Target Area

A four sample anomaly on the north flank of Wildrose Canyon detected by Lac Minerals was followed up with a 25 sample program to determine the extent, if any, of this anomaly. LAC's 4550E line was bracketed to the east and west 125' from 17300N to 18000N (map WR1), 4 of the 25 samples were anomalous (>5ppb) and indicate the anomaly trends to the NE into an area of silicification and alteration of the volcaniclastics and flowrocks.

Evaluation of LAC's soil sampling program in the WJCA was undertaken with the purpose to determine the quality of the sampling and the viability of using the existing grid as control for the Hecla soil geochem sampling program.

This evaluation revealed that the soil sites had been sampled with varying degrees of success and the data obtained should be usable in conjunction with current, well controlled sampling methods. The use of the LAC grid as control will not be feasible as it appears the lines were established with little regard to slope distance corrections or a northerly heading.

sept. report cont'd.

As the LAC lines are not usable as controls, the data they provided is and therefore the Hecla soil lines will straddle the LAC lines by splitting the distance (250') between them. The Hecla lines will have a real separation of 250' and be sampled on 100' stations.

The Hecla lines will be run on the same base as that used by LAC (Gator Grid) to simplify the merging of the two data bases. The Hecla lines will be utilized also to control a VLF survey over the eastern and northern portions of the target area where the bedrock is obscured by alluvium. The VLF survey is to be run on 50' centers on the lines spaced 125' apart, including LAC's.

Evaluation of existing geochem data for the WJCA was evaluated by examining the available data for the area(LAC) and choosing those samples which exhibited gold values. These samples were then sorted by Au content from highest to lowest and Au values were compared to values of 8 elements common to hydrothermal deposits hosted by volcanic rocks.

LAC geochem data indicates two Au anomalous trends in the WJCA and one prominent Ag anomaly.

The first trends from the SW to the NE from the mouth of Juniper Canyon to the saddle area at the north boundary of the target area. This trend coincides with the mapped and inferred location of the Wildrose Fault in Juniper Canyon (map 2)and along Gnarly Gulch.

The second trends along the south side and through the bottom of Juniper Canyon along the mapped and projected Juniper Canyon Fault.There exists a strong Ag anomaly in the same trend as the Au anomaly along the Juniper Canyon Fault(map 3).

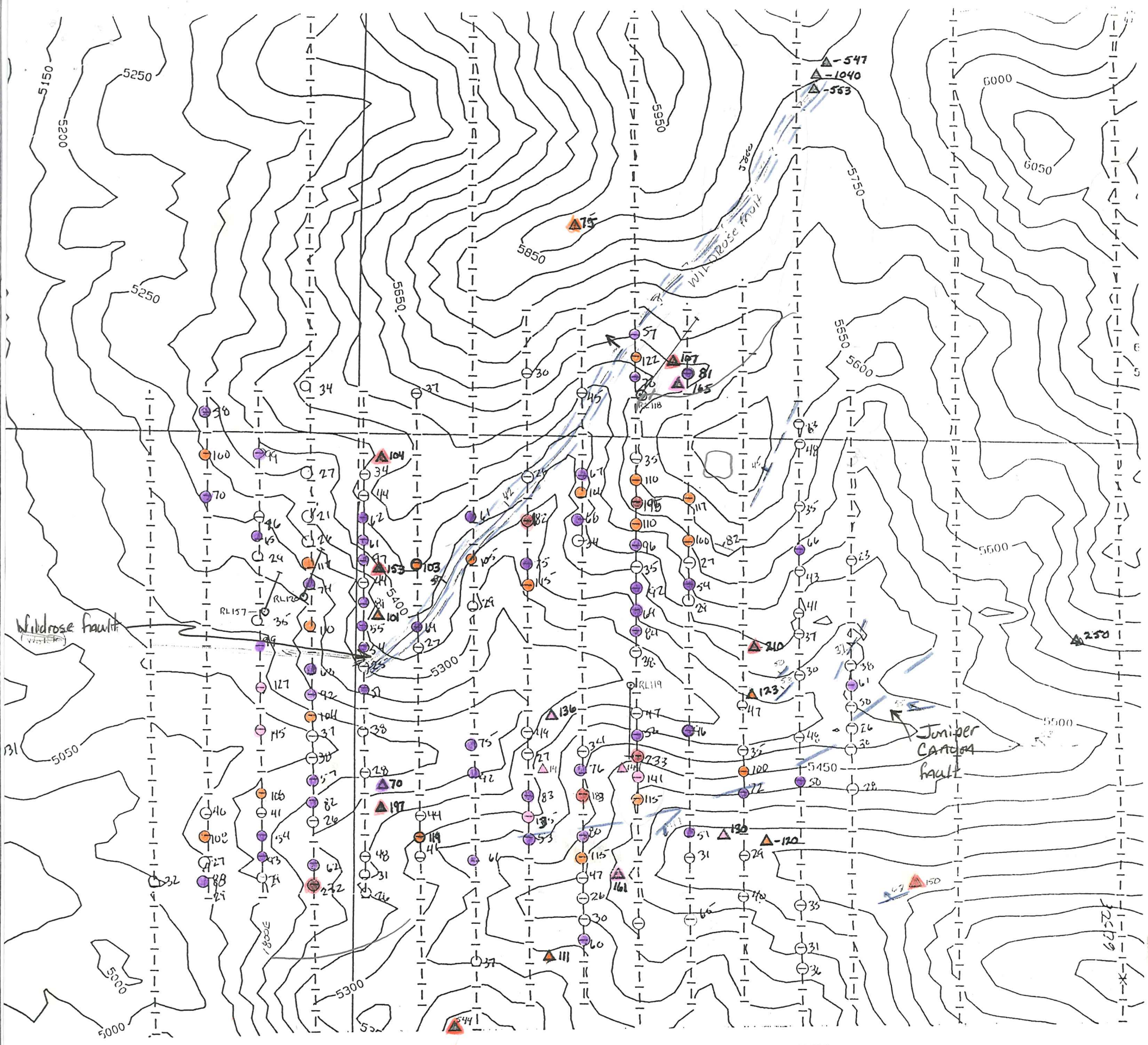
GeoChem Analysis

Ratios of Au:elements were determined by dividing the Au value for a sample into the value of the element to be compared; This process was repeated for the elements of each sample in the group.Comparison of the Au:element ratios indicates that an elements content in any given sample, whether high or low, may show relative depletion or enrichment compared to the Au content of that sample. Table WR-2 shows that relationship exists for many of the elements examined.
Ag,As,Cu,Pb,Sb and Zn appear, in this group, to be depleted relative to Au over the population of this study. Hg and Se appear to not show as strong a trend for either enrichment or depletion. Hg indicates weakly, by an order of magnitude a depletion in relation to Au but so sporadically does it do so that a much larger sample population broken down by rock types would be needed to determine with certainty the relationship between Au and Hg.

sept. report cont'd.

When LAC data becomes available on compatible electronic media, (ongoing) a study of the geochem anomaly over the Rosebud deposit compared with the exploration data now being generated will probably contribute greatly to the understanding of the deposit geochem model and the relationship, if any, to exploration targets on the property.

Mapping of the geology and structure has commenced and much of the previous geological mapping in the area as done by C. Walck et. al. appears to be useful as a base. This will enable more time to be allocated directing operations and mapping the structure of the area.



WILDROSE/JUNIPER CANYON PROPOSED TARGET AREA

△ ROCK CHIP SAMPLES

⊖ SOIL SAMPLES

● > 150 ppb Au
● > 125 ppb ↓
● > 100 ppb
● > 50 ppb

▲ > 150 ppb
▲ > 100 ppb
▲ > 50 ppb

SOIL AND ROCK GEOCHEM (values in ppb)

MAP-2

TABLE OF ELEMENT/AU RATIOS – Wildrose Target Area

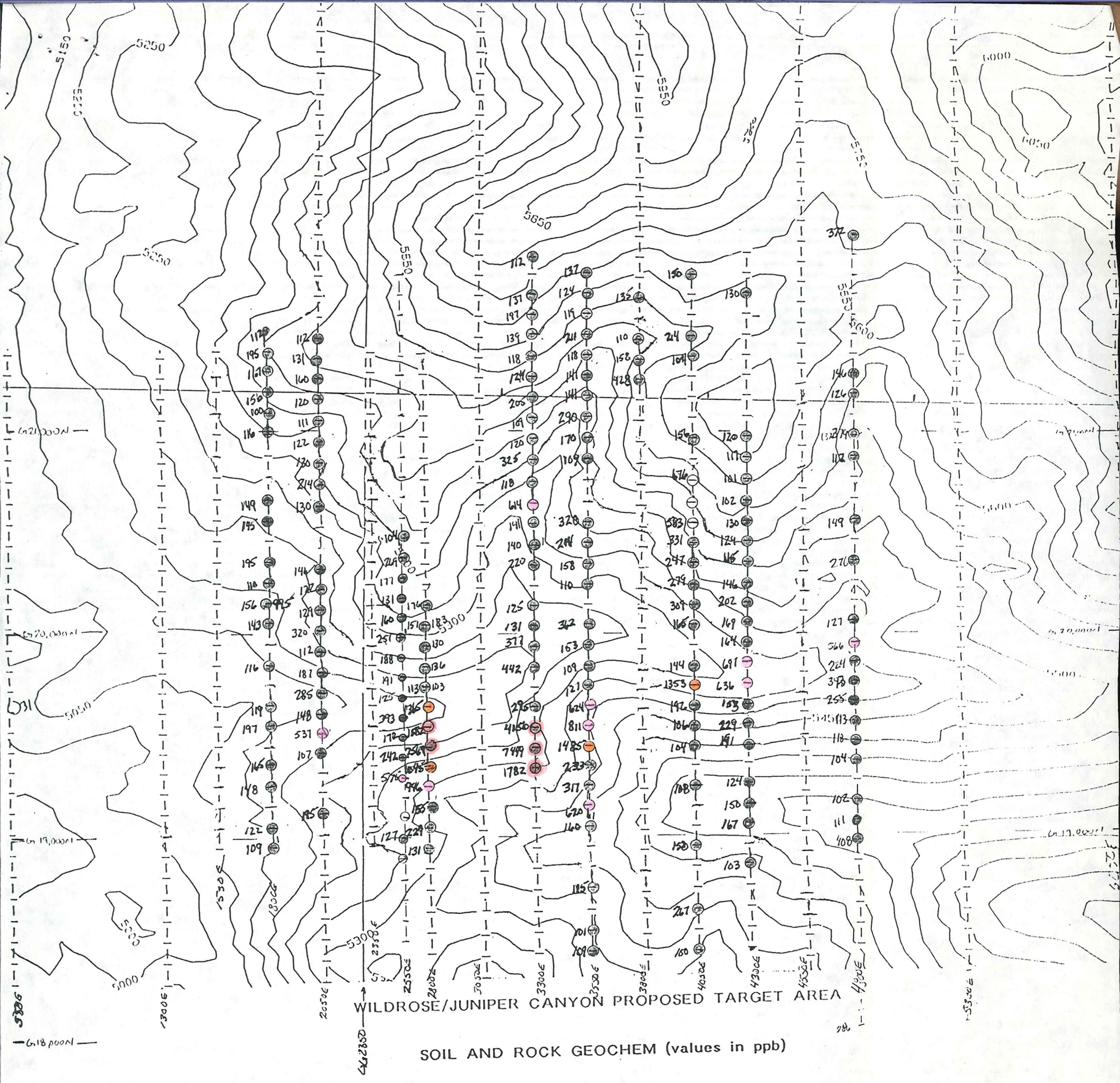
TABLE WR-1

EASTING	NORTHING	Au ppb	Ag/Au	As/Au	Cu/Au	Hg/Au	Pb/Au	Sb/Au	Se/Au	Zn/Au
3550	19500	183.0	8.11	249.18	72.68	2.01	63.39	50.60	21.20	164.48
3300	20800	182.0	1.79	170.33	103.30	0.79	54.01	50.88	6.21	530.77
2050	19800	145.0	1.29	60.76	138.62	0.90	64.76	25.03	0.85	468.97
3300	19400	135.0	55.18	293.33	130.37	2.79	100.00	86.67	14.52	271.85
2050	20000	127.0	2.52	75.59	203.15	1.03	81.10	29.29	0.96	385.83
4050	20900	117.0	1.33	223.93	223.93	12.14	68.29	56.32	6.98	615.38
3550	19200	115.0	5.39	317.39	151.30	2.40	113.91	102.61	29.83	348.70
2050	19500	108.0	4.97	100.93	212.04	12.78	78.06	61.76	1.13	371.30
1800	19300	108.0	1.37	70.74	218.52	1.89	52.59	35.37	4.00	342.59
3550	20900	106.0	1.01	254.72	118.87	6.27	74.72	94.34	4.83	278.30
4050	20700	100.0	6.76	785.00	214.00	6.84	178.00	333.00	14.60	589.00
4300	19600	99.6	2.30	271.08	182.73	2.94	117.47	121.49	10.64	455.82
1800	21100	99.5	1.57	71.36	197.99	0.53	82.21	68.94	6.38	486.43
2550	20600	97.3	0.99	105.86	218.91	1.13	101.13	34.64	2.68	513.87
2050	19200	92.8	0.74	86.21	176.72	1.10	67.24	66.59	4.58	428.88
4300	19000	90.4	1.85	313.05	232.30	7.43	131.64	201.33	12.50	568.58
1800	19100	88.5	1.38	247.46	112.88	2.42	59.21	80.79	5.55	337.85
3300	19500	82.7	50.18	343.41	136.64	17.41	151.15	153.57	64.81	292.62
2550	20400	81.3	3.31	125.46	265.68	0.84	103.44	39.61	1.50	546.13
4050	21500	81.0	2.64	267.90	280.25	11.17	172.84	65.93	9.38	785.19
3550	19300	80.2	3.95	194.51	245.64	4.40	115.84	111.85	9.33	458.85
2050	19100	79.2	2.46	137.63	224.75	1.06	160.35	68.18	8.19	555.56
2050	20800	75.8	1.72	154.35	232.19	1.42	149.08	81.40	5.92	670.18
3550	19600	75.5	10.74	348.34	239.74	1.21	166.89	104.11	20.26	652.98
4300	19500	71.8	2.66	377.44	281.34	7.26	161.56	169.92	9.71	688.02
1800	20900	70.2	1.65	106.27	252.14	5.67	76.78	105.27	17.81	541.31
2800	20300	69.4	2.54	191.64	240.63	2.09	181.56	70.03	5.58	628.24
3550	21000	66.7	2.55	496.25	284.86	3.52	137.18	160.42	22.34	689.66
3550	20800	65.7	1.05	477.93	249.62	9.50	145.05	158.30	12.91	581.43
2050	20700	65.3	3.28	179.17	353.75	8.30	134.61	53.91	10.02	725.88
4050	18900	64.7	2.32	301.39	375.58	7.43	150.54	315.30	15.04	732.61
2550	20800	61.9	1.34	161.55	329.56	1.29	156.06	110.34	11.62	806.14
4800	20000	61.1	2.49	1296.24	304.42	3.86	270.05	491.00	17.02	1080.20
2550	20700	61.1	1.50	165.30	382.98	4.50	159.08	100.82	9.90	775.78
3550	18800	59.7	1.93	192.63	222.78	2.91	125.46	159.97	19.43	554.44
1800	21300	58.1	3.36	287.44	373.49	9.90	152.67	113.94	8.16	783.13
4050	19300	57.4	1.51	435.54	315.33	4.49	210.80	177.70	14.93	752.61
2550	20300	55.3	3.20	218.81	399.64	0.94	198.92	69.80	4.74	866.18
2550	20200	54.1	2.42	169.13	414.05	3.70	216.27	54.71	2.29	1051.76
2050	19300	53.6	1.77	161.01	414.18	0.19	192.16	81.72	2.30	1087.69
4050	20500	53.6	10.88	916.04	367.54	7.63	402.99	244.40	25.56	1660.45
3300	19300	53.1	33.56	499.06	301.32	2.45	192.09	185.50	11.43	685.50
2550	20000	51.0	4.92	161.76	382.35	1.57	215.69	48.43	2.42	1513.73
3300	19800	48.8	9.06	213.11	331.97	3.18	233.61	70.90	12.73	1088.11
3300	20700	46.7	2.53	256.96	379.01	4.30	193.15	94.22	5.59	965.74
3550	21400	45.3	4.66	437.09	344.37	4.48	364.24	101.10	5.87	1311.26
2550	20900	43.6	1.74	174.31	495.41	1.26	205.73	58.94	2.84	1172.02
2800	19200	41.1	23.02	364.96	615.57	3.70	248.18	136.01	12.34	1406.33
2050	19400	40.5	2.64	168.89	483.95	1.70	218.52	94.57	3.05	1125.93
2550	19800	38.3	4.99	212.01	506.53	3.11	326.37	62.40	3.20	1665.80
3550	19700	35.7	17.48	585.43	484.59	2.02	344.54	180.39	27.48	1302.52
2050	20300	34.9	4.18	241.55	487.11	1.60	238.97	90.26	3.55	1226.36
4300	19700	34.7	4.41	435.16	541.79	9.37	280.98	204.32	9.57	1518.73
4050	19200	31.2	3.46	753.21	717.95	13.97	365.38	413.46	20.51	1679.49
3550	18900	29.7	2.85	257.91	56.23	3.87	263.30	286.53	10.98	1235.69
1800	19200	27.2	3.13	254.04	580.88	1.29	273.53	125.74	4.52	1408.09
2800	20200	26.9	5.61	329.74	784.39	2.19	438.66	119.70	4.61	2308.55
2550	19000	25.5	4.98	276.47	768.63	7.76	470.59	124.71	10.71	2407.84
4050	21800	23.2	6.47	422.41	784.48	4.91	577.59	163.79	14.01	840.52
3300	19600	22.9	12.88	292.58	281.22	2.97	392.14	106.99	5.35	1803.49
4800	21100	21.5	4.54	502.33	600.00	6.88	511.63	128.37	5.65	4697.67
2800	21400	21.5	7.35	479.07	730.23	17.77	319.53	182.79	5.63	2111.63
4300	20100	20.2	8.37	608.91	881.19	3.56	594.06	202.97	6.14	3440.59
1800	19500	19.3	3.25	469.95	943.01	3.94	380.83	197.41	12.64	2046.63
3550	19400	19.1	12.20	685.86	1146.60	4.71	534.03	299.48	41.73	2523.56
4800	20500	16.8	5.43	815.48	964.29	2.74	648.81	291.67	23.99	3785.71
2800	19300	16.1	64.29	1142.86	1086.96	2.67	670.81	383.85	30.06	2875.78
4300	21000	16.0	7.50	2575.00	1637.50	15.44	937.50	463.13	24.44	8562.50
3300	21200	15.0	8.27	655.33	1266.67	16.00	573.33	174.00	8.17	4373.33
4300	21900	14.9	6.42	744.97	1107.38	6.04	704.70	244.97	21.74	3295.30
4050	21400	13.7	7.59	1350.36	1620.44	10.07	722.63	385.40	29.27	4233.58
2550	19300	12.0	47.92	831.67	1408.33	3.83	740.00	348.33	10.13	3966.67
3550	21700	11.6	11.81	733.62	1844.83	23.53	670.69	218.10	25.09	4534.48
3300	20000	10.7	12.24	1420.56	1570.09	15.79	919.63	517.76	11.54	4411.21
1800	20800	9.8	9.08	677.22	1828.40	3.47	845.76	430.03	12.72	4402.45
4300	21100	9.0	10.46	2630.41	2741.40	20.98	1487.24	538.29	13.71	7402.89
4050	20000	8.4	19.64	1026.19	2738.10	6.90	1392.86	429.76	14.58	8083.33
3550	20100	7.9	45.88	1723.70	2167.30	18.88	1202.79	771.86	59.95	7059.57
4300	20400	7.7	14.88	1655.89	2522.64	14.36	1604.14	509.70	15.91	11435.96
3300	18600	6.7	12.54	1305.64	2507.42	11.57	1281.90	482.20	18.03	7373.89
1800	19600	5.9	33.22	1335.58	2833.05	6.24	1467.12	510.96	20.57	7605.40
3300	21800	5.3	21.25	1743.83	3111.95	19.73	1846.30	717.27	23.43	10721.06
4800	21000	4.1	22.21	2315.53	5121.36	33.74	2276.70	577.67	29.61	16043.69
3550	20500	3.6	59.44	1361.11	3750.00	86.11	3583.33	1030.56	182.50	23527.78
2800	18600	3.2	22.56	1952.53	4968.35	22.15	3322.78	544.30	38.92	17373.42
2550	19900	2.8	67.63	2726.62	7338.13	17.63	3812.95	866.91	44.24	25791.37
2800	19800	2.0	52.82	2784.62	10205.13	11.79	5087.18	825.64	62.82	33282.05
2550	19700	1.4	89.93	4496.40	12158.27	17.27	6920.86	1287.77	88.13	39712.23
2800	18800	0.9	76.55	6720.96	24321.39	655.81	10477.74	1400.65	133.55	61997.83
	MIN	0.921	0.742457	60.75862	56.22896	0.186567	52.59259	25.03448	0.851724	164.4809
	MAX	183	89.92806	6720.955	24321.39	655.8089	10477.74	1400.651	182.5	61997.83
	MEAN	51.76271	12.78423	732.7097	1399.362	15.07223	752.3608	251.5908	18.67238	4364.752
	STD DEV.	41.09955	18.89489	998.4315	3129.218	69.11555	1506.176	267.8948	26.18212	9159.047

TABLE OF ELEMENT/AU RATIOS – Wildrose Target Area

TABLE WR-2

EASTING	NORTHING	Au ppb	Ag ppb	Ag/Au	As ppb	As/Au	Cu ppb	Cu/Au	Hg ppb	Hg/Au	Pb ppb	Pb/Au	Sb ppb	Sb/Au	Se ppb	Se/Au	Zn ppb	Zn/Au
3550	19500	183.0	1485.0	8.11	45600.00	249.18	13300.00	72.68	368.00	2.01	11600.00	63.39	9260.00	50.60	3880.00	21.20	30100.00	164.48
3300	20800	182.0	325.0	1.79	31000.00	170.33	18800.00	103.30	144.00	0.79	9830.00	54.01	9260.00	50.88	1130.00	6.21	96600.00	530.77
2050	19800	145.0	187.0	1.29	8810.00	60.76	20100.00	138.62	130.00	0.90	9390.00	64.76	3630.00	25.03	123.50	0.85	68000.00	468.97
3300	19400	135.0	7449.0	55.18	39600.00	293.33	17600.00	130.37	376.00	2.79	13500.00	100.00	11700.00	86.67	1960.00	14.52	36700.00	271.85
2050	20000	127.0	320.0	2.52	9600.00	75.59	25800.00	203.15	131.00	1.03	10300.00	81.10	3720.00	29.29	122.50	0.96	49000.00	385.83
4050	20900	117.0	156.0	1.33	26200.00	223.93	26200.00	223.93	1420.00	12.14	7990.00	68.29	6590.00	56.32	817.00	6.98	72000.00	615.38
3550	19200	115.0	620.0	5.39	36500.00	317.39	17400.00	151.30	276.00	2.40	13100.00	113.91	11800.00	102.61	3430.00	29.83	40100.00	348.70
2050	19500	108.0	537.0	4.97	10900.00	100.93	22900.00	212.04	1380.00	12.78	8430.00	78.06	6670.00	61.76	122.00	1.13	40100.00	371.30
1800	19300	108.0	148.0	1.37	7640.00	70.74	23600.00	218.52	204.00	1.89	5680.00	52.59	3820.00	35.37	432.00	4.00	37000.00	342.59
3550	20900	106.0	107.0	1.01	27000.00	254.72	12600.00	118.87	665.00	6.27	7920.00	74.72	10000.00	94.34	512.00	4.83	29500.00	278.30
4050	20700	100.0	676.0	6.76	78500.00	785.00	21400.00	214.00	684.00	6.84	17800.00	178.00	33300.00	333.00	1460.00	14.60	58900.00	589.00
4300	19600	99.6	229.0	2.30	27000.00	271.08	18200.00	182.73	293.00	2.94	11700.00	117.47	12100.00	121.49	1060.00	10.64	45400.00	455.82
1800	21100	99.5	156.0	1.57	7100.00	71.36	19700.00	197.99	53.00	0.53	8180.00	82.21	6860.00	68.94	635.00	6.38	48400.00	486.43
2550	20600	97.3	96.0	0.99	10300.00	105.86	21300.00	218.91	110.00	1.13	9840.00	101.13	3370.00	34.64	261.00	2.68	50000.00	513.87
2050	19200	92.8	68.9	0.74	8000.00	86.21	16400.00	176.72	102.00	1.10	6240.00	67.24	6180.00	66.59	425.00	4.58	39800.00	428.88
4300	19000	90.4	167.0	1.85	28300.00	313.05	21000.00	232.30	672.00	7.43	11900.00	131.64	18200.00	201.33	1130.00	12.50	51400.00	568.58
1800	19100	88.5	122.0	1.38	21900.00	247.46	9990.00	112.88	214.00	2.42	5240.00	59.21	7150.00	80.79	491.00	5.55	29900.00	337.85
3300	19500	82.7	4150.0	50.18	28400.00	343.41	11300.00	136.64	1440.00	17.41	12500.00	151.15	12700.00	153.57	5360.00	64.81	24200.00	292.62
2550	20400	81.3	269.0	3.31	10200.00	125.46	21600.00	265.68	68.00	0.84	8410.00	103.44	3220.00	39.61	122.00	1.50	44400.00	546.13
4050	21500	81.0	214.0	2.64	21700.00	267.90	22700.00	280.25	905.00	11.17	14000.00	172.84	5340.00	65.93	760.00	9.38	63600.00	785.19
3550	19300	80.2	317.0	3.95	15600.00	194.51	19700.00	245.64	353.00	4.40	9290.00	115.84	8970.00	111.85	748.00	9.33	36800.00	458.85
2050	19100	79.2	195.0	2.46	10900.00	137.63	17800.00	224.75	84.00	1.06	12700.00	160.35	5400.00	68.18	649.00	8.19	44000.00	555.56
2050	20800	75.8	130.0	1.72	11700.00	154.35	17600.00	232.19	108.00	1.42	11300.00	149.08	6170.00	81.40	449.00	5.92	50800.00	670.18
3550	19600	75.5	811.0	10.74	26300.00	348.34	18100.00	239.74	91.00	1.21	12600.00	166.89	7860.00	104.11	1530.00	20.26	49300.00	652.98
4300	19500	71.8	191.0	2.66	27100.00	377.44	20200.00	281.34	521.00	7.26	11600.00	161.56	12200.00	169.92	697.00	9.71	49400.00	688.02
1800	20900	70.2	116.0	1.65	7460.00	106.27	17700.00	252.14	398.00	5.67	5390.00	76.78	7390.00	105.27	1250.00	17.81	38000.00	541.31
2800	20300	69.4	176.0	2.54	13300.00	191.64	16700.00	240.63	145.00	2.09	12600.00	181.56	4860.00	70.03	387.00	5.58	43600.00	628.24
3550	21000	66.7	170.0	2.55	33100.00	496.25	19000.00	284.86	235.00	3.52	9150.00	137.18	10700.00	160.42	1490.00	22.34	46000.00	689.66
3550	20800	65.7	68.7	1.05	31400.00	477.93	16400.00	249.62	624.00	9.50	9530.00	145.05	10400.00	158.30	848.00	12.91	38200.00	581.43
2050	20700	65.3	214.0	3.28	11700.00	179.17	23100.00	353.75	542.00	8.30	8790.00	134.61	3520.00	53.91	654.00	10.02	47400.00	725.88
4050	18900	64.7	150.0	2.32	19500.00	301.39	24300.00	375.58	481.00	7.43	9740.00	150.54	20400.00	315.30	973.00	15.04	47400.00	732.61
2550	20800	61.9	82.7	1.34	10000.00	161.55	20400.00	329.56	80.00	1.29	9660.00	156.06	6830.00	110.34	719.00	11.62	49900.00	806.14
4800	20000	61.1	152.0	2.49	79200.00	1296.24	18600.00	304.42	236.00	3.86	16500.00	270.05	30000.00	491.00	1040.00	17.02	66000.00	1080.20
2550	20700	61.1	91.9	1.50	10100.00	165.30	23400.00	382.98	275.00	4.50	9720.00	159.08	6160.00	100.82	605.00	9.90	47400.00	775.78
3550	18800	59.7	115.0	1.93	11500.00	192.63	13300.00	222.78	174.00	2.91	7490.00	125.46	9550.00	159.97	1160.00	19.43	33100.00	554.44
1800	21300	58.1	195.0	3.36	16700.00	287.44	21700.00	373.49	575.00	9.90	8870.00	152.67	6620.00	113.94	474.00	8.16	45500.00	783.13
4050	19300	57.4	86.7	1.51	25000.00	435.54	18100.00	315.33	258.00	4.49	12100.00	210.80	10200.00	177.70	857.00	14.93	43200.00	752.61
2550	20300	55.3	177.0	3.20	12100.00	218.81	22100.00	399.64	52.00	0.94	11000.00	198.92	3860.00	69.80	262.00	4.74	47900.00	866.18
2550	20200	54.1	131.0	2.42	9150.00	169.13	22400.00	414.05	200.00	3.70	11700.00	216.27	2960.00	54.71	124.00	2.29	56900.00	1051.76
2050	19300	53.6	95.1	1.77	8630.00	161.01	22200.00	414.18	10.00	0.19	10300.00	192.16	4380.00	81.72	123.50	2.30	58300.00	1087.69
4050	20500	53.6	583.0	10.88	49100.00	916.04	19700.00	367.54	409.00	7.63	21600.00	402.99	13100.00	244.40	1370.00	25.56	89000.00	1660.45
3300	19300	53.1	1782.0	33.56	26500.00	499.06	16000.00	301.32	130.00	2.45	10200.00	192.09	9850.00	185.50	607.00	11.43	36400.00	685.50
2550	20000	51.0	251.0	4.92	8250.00	161.76	19500.00	382.35	80.00	1.57	11000.00	215.69	2470.00	48.43	123.50	2.42	77200.00	1513.73
3300	19800	48.8	442.0	9.06	10400.00	213.11	16200.00	331.97	155.00	3.18	11400.00	233.61	3460.00	70.90	621.00	12.73	53100.00	1088.11
3300	20700	46.7	118.0	2.53	12000.00	256.96	17700.00	379.01	201.00	4.30	9020.00	193.15	4400.00	94.22	261.00	5.59	45100.00	965.74
3550	21400	45.3	211.0	4.66	19800.00	437.09	15600.00	344.37	203.00	4.48	16500.00	364.24	4580.00	101.10	266.00	5.87	59400.00	1311.26
2550	20900	43.6	75.8	1.74	7600.00	174.31	21600.00	495.41	55.00	1.26	8970.00	205.73	2570.00	58.94	124.00	2.84	51100.00	1172.02
2800	19200	41.1	946.0	23.02	15000.00	364.96	25300.00	615.57	152.00	3.70	10200.00	248.18	5590.00	136.01	507.00	12.34	57800.00	1406.33
2050	19400	40.5	107.0	2.64	6840.00	168.89	19600.00	483.95	69.00	1.70	8850.00	218.52	3830.00	94.57	123.50	3.05	45600.00	1125.93
2550	19800	38.3	191.0	4.99	8120.00	212.01	19400.00	506.53	119.00	3.11	12500.00	326.37	2390.00	62.40	122.50	3.20	63800.00	1665.80
3550	19700	35.7	624.0	17.48	20900.00	585.43	17300.00	484.59	72.00	2.02	12300.00	344.54	6440.00	180.39	981.00	27.48	46500.00	1302.52
2050	20300	34.9	146.0	4.18	8430.00	241.55	17000.00	487.11	56.00	1.60	8340.00	238.97	3150.00	90.26	124.00	3.55	42800.00	1226.36
4300	19700	34.7	153.0	4.41	15100.00	435.16	18800.00	541.79	325.00	9.37	9750.00	280.98	7090.00	204.32	332.00	9.57	52700.00	1518.73
4050	19200	31.2	108.0	3.46	23500.00	753.21	22400.00	717.95	436.00	13.97	11400.00	365.38	12900.00	413.46	640.00	20.51	52400.00	1679.49
3550	18900	29.7	84.5	2.85	7660.00	257.91	1670.00	56.23	115.00	3.87	7820.00	263.30	8510.00	286.53	326.00	10.98	36700.00	1235.69
1800	19200	27.2	85.1	3.13	6910.00	254.04	15800.00	580.88	35.00	1.29	7440.00	273.53	3420.00	125.74	123.00	4.52	38300.00	1408.09
2800	20200	26.9	151.0	5.61	8870.00	329.74	21100.00	784.39	59.00	2.19	11800.00	438.66	3220.00	119.70	124.00	4.61	62100.00	2308.55
2550	19000	25.5	127.0	4.98	7050.00	276.47	19600.00	768.63	198.00	7.76	12000.00	470.59	3180.00	124.71	273.00	10.71	61400.00	2407.84
4050	21800	23.2	150.0	6.47	9800.00	422.41	18200.00	784.48	114.00	4.91	13400.00	577.59	3800.00	163.79	325.00	14.01	19500.00	840.52
3300	19600	22.9	295.0	12.88	6700.00	292.58	6440.00	281.22	68.00	2.97	8980.00	392.14	2450.00	106.99	122.50	5.35	41300.00	1803.49
4800	21100	21.5	97.6	4.54	10800.00	502.33	12900.00	600.00	148.00	6.88	11000.00	511.63	2760.00	128.37	121.50	5.65	101000.00	4697.67
2800	21400	21.5	158.0	7.35	10300.00	479.07	15700.00	730.23	382.00	17.77	6870.00	319.53	3930.00	182.79	121.00	5.63	45400.00	2111.63
4300	20100	20.2	169.0	8.37	12300.00	608.91	17800.00	881.19	72.00	3.56	12000.00	594.06	4100.00	202.97	124.00	6.14	69500.00	3440.59
1800	19500	19.3	62.7	3.25	9070.00	469.95	18200.00	943.01	76.00	3.94	7350.00	380.83	3810.00	197.41	244.00	12.64	39500.00	2046.63
3550	19400	19.1	233.0	12.20	13100.00	685.86	21900.00	1146.60	90.00	4.71	10200.00	534.03	5720.00	299.48	797.00	41.73	48200.00	2523.56
4800	20500	16.8	91.3	5.43	13700.00	815.48	16200.00	964.29	46.00	2.74	10900.00	648.81	4900.00	291.67	403.00	23.99	63600.00	3785.71
2800	19300	16.1	1035.0	64.29	18400.00	1142.86	17500.00	1086.96	43.00	2.67	10800.00	670.81	6180.00	383.85	484.00	30.06	46300.00	2875.78
4300	21000	16.0	120.0	7.50	41200.00	2575.00	26200.00	1637.50	247.00	15.44	15000.00	937.50	7410.00	463.13	391.00	24.44	137000.00	8562.50
3300	21200	15.0	124.0	8.27	9830.00	655.33	19000.00	1266.67	240.00	16.00	8600.00	573.33	2610.00	174.00	122.50	8.17	65600.00	4373.33
4300	21900	14.9	95.7	6.42	11100.00	744.97	16500.00	1107.38	90.00	6.04	10500.00	704.70	3650.00	244.97	324.00	21.74	49100.00	3295.30
4050	21400	13.7	104.0	7.59	18500.00	1350.36	22200.00	1620.44	138.00	10.07	9900.00	722.63	5280.00	385.40	401.00	29.27	58000.00	4233.58
2550	19300	12.0	575.0	47.92	9980.00	831.67	16900.00	1408.33	46.00	3.83	8880.00	740.00	4180.00	348.33	121.50	10.13	47600.00	3966.67
3550	21700	11.6	137.0	11.81	8510.00	733.62	21400.00	1844.83	273.00	23.53	7780.00	670.69	2530.00	218.10	291.00	25.09	52600.00	4534.48
3300	20000	10.7	131.0	12.24	15200.00	1420.56	16800.00	1570.09	169.00	15.79	9840.00	919.63	5540.00	517.76	123.50	11.54	47200.00	4411.21
1800	20800	9.8	88.9	9.08	6630.00	677.22	17900.00	1828.40	34.00	3.47	8280.00	845.76	4210.00	430.03	124.50	12.72	43100.00	4402.45
4300	21100	9.0	94.2	10.46	23700.00	2630.41	24700.00	2741.40	189.00	20.98	13400.00	1487.24	4850.00	538.29	123.50	13.71	66700.00	7402.89
4050	20000	8.4	165.0	19.64	8620.00	1026.19	23000.00	2738.10	58.00	6.90	11700.00	1392.86	3610.00	429.76	122.50	14.58	67900.00	8083.33
3550	20100	7.9	362.0	45.88	13600.00	1723.70	17100.00	2167.30	149.00	18.88	9490.00	1202.79	6090.00	771.86	473.00	59.95	55700.00	7059.57
4300	20400	7.7	115.0	14.88	12800.00	1655.89	19500.00	2522.64	111.00	14.36	12400.00	1604.14	3940.00	509.70	123.00	15.91	88400.00	11435.96
3300	18600	6.7	84.5	12.54	8800.00	1305.64	16900.00	2507.42	78.00	11.57	8640.00	1281.90	3250.00	482.20	121.50	18.03	49700.00	7373.89
1800	19600	5.9	197.0	33.22	7920.00	1335.58	16800.00	2833.05	37.00	6.24	8700.00	1467.12	3030.00	510.96	122.00	20.57	45100.00	7605.40
3300	21800	5.3	112.0	21.25	9190.00	1743.83	16400.00	3111.95	104.00	19.73	9730.00	1846.30	3780.00	717.27	123.50	23.43	56500.00	10721.06
4800	21000	4.1	91.5	22.21	9540.00	2315.53	21100.00	5121.36	139.00	33.74	9380.00	2276.70	2380.00	577.67	122.00	29.61	66100.00	16043.69
3550	20500	3.6	214.0	59.44	4900.00	1361.11	13500.00	3750.00	310.00	86.11	12900.00	3583.33	3710.00	1030.56	657.00	182.50	84700.00	23527.78
2800	18600	3.2	71.3	22.56	6170.00	1952.53	15700.00	4968.35	70.00	22.15	10500.00	3322.78	1720.00	544.30	123.00	38.92	54900.00	17373.42
2550	19900	2.8	188.0	67.63	7580.00	2726.62	20400.00	7338.13	49.00	17.63	10600.00	3812.95	2410.00	866.91	123.00	44.24	71700.00	25791.37
2800	19800	2.0	103.0	52.82	5430.00	2784.62	19900.00	10205.13	23.00	11.79	9920.00	5087.18	1610.00	825.64	122.50	62.82	64900.00	33282.05
2550	19700	1.4	125.0	89.93	6250.00	4496.40	16900.00	12158.27	24.00	17.27	9620.00	6920.86	1790.00	1287.77	122.50	88.13	55200.00	39712.23
2800	18800	0.9	70.5	76.55	6190.00	6720.96	22400.00	24321.39	604.00	655.81	9650.00	10477.74	1290.00	1400.65	123.00	133.55	57100.00	61997.83
MIN		0.921	62.7	0.742457	4900	60.75862	1670	56.22896	10	0.186567	5240	52.59259	1290	25.03448	121	0.851724	19500	164.4809
MAX		183	7449	89.92806	79200	6720.955	26200	24321.39	1440	655.8089	21600	10477.74	33300	1400.651	5360	182.5	137000	61997.83
MEAN		51.76271	370.7034	12.78423	16770	732.7097	18707.87	1399.362	249.0674	15.07223	10467.19	752.3608	6516.517	251.5908	601.8427	18.67238	53086.52	4364.752
STD DEV.		41.09955	905.0217	18.89489	13529.48	998.4315	3971.948	3129.218	284.2046	69.11555	2594.392	1506.176	5244.817	267.8948	803.5466	26.18212	17252.23	9159.047


WILDROSE/JUNIPER CANYON PROPOSED TARGET AREA
SOIL AND ROCK GEOCHEM (values in ppb)
> 1500 ppb Ag
> 1000 ppb Ag
> 500 ppb Ag
> 100 ppb Ag

MAP-3

TABLE OF ELEMENT/AG RATIOS - Wildrose Target Area
(ASSAYS OBTAINED FROM LAC GEOCHEM. RESULTS)

TABLE WR-3

EASTING	NORTHING	Au ppb	Ag ppb	As/Ag	Cu/Ag	Hg/Ag	Pb/Ag	Sb/Ag	Se/Ag	Zn/Ag
3300	19400	135.0	7449.0	5.32	2.36	0.05	1.81	1.57	0.26	4.93
3300	19500	82.7	4150.0	6.84	2.72	0.35	3.01	3.06	1.29	5.83
3300	19300	53.1	1782.0	14.87	8.98	0.07	5.72	5.53	0.34	20.43
3550	19500	183.0	1485.0	30.71	8.96	0.25	7.81	6.24	2.61	20.27
2800	19300	16.1	1035.0	17.78	16.91	0.04	10.43	5.97	0.47	44.73
2800	19200	41.1	946.0	15.86	26.74	0.16	10.78	5.91	0.54	61.10
3550	19600	75.5	811.0	32.43	22.32	0.11	15.54	9.69	1.89	60.79
4050	20700	100.0	676.0	116.12	31.66	1.01	26.33	49.26	2.16	87.13
3550	19700	35.7	624.0	33.49	27.72	0.12	19.71	10.32	1.57	74.52
3550	19200	115.0	620.0	58.87	28.06	0.45	21.13	19.03	5.53	64.68
4050	20500	53.6	583.0	84.22	33.79	0.70	37.05	22.47	2.35	152.66
2550	19300	12.0	575.0	17.36	29.39	0.08	15.44	7.27	0.21	82.78
2050	19500	108.0	537.0	20.30	42.64	2.57	15.70	12.42	0.23	74.67
3300	19800	48.8	442.0	23.53	36.65	0.35	25.79	7.83	1.40	120.14
3550	20100	7.9	362.0	37.57	47.24	0.41	26.22	16.82	1.31	153.87
3300	20800	182.0	325.0	95.38	57.85	0.44	30.25	28.49	3.48	297.23
2050	20000	127.0	320.0	30.00	80.63	0.41	32.19	11.63	0.38	153.13
3550	19300	80.2	317.0	49.21	62.15	1.11	29.31	28.30	2.36	116.09
3300	19600	22.9	295.0	22.71	21.83	0.23	30.44	8.31	0.42	140.00
2550	20400	81.3	269.0	37.92	80.30	0.25	31.26	11.97	0.45	165.06
2550	20000	51.0	251.0	32.87	77.69	0.32	43.82	9.84	0.49	307.57
3550	19400	19.1	233.0	56.22	93.99	0.39	43.78	24.55	3.42	206.87
4300	19600	99.6	229.0	117.90	79.48	1.28	51.09	52.84	4.63	198.25
4050	21500	81.0	214.0	101.40	106.07	4.23	65.42	24.95	3.55	297.20
3550	20500	3.6	214.0	22.90	63.08	1.45	60.28	17.34	3.07	395.79
2050	20700	65.3	214.0	54.67	107.94	2.53	41.07	16.45	3.06	221.50
3550	21400	45.3	211.0	93.84	73.93	0.96	78.20	21.71	1.26	281.52
1800	19600	5.9	197.0	40.20	85.28	0.19	44.16	15.38	0.62	228.93
1800	21300	58.1	195.0	85.64	111.28	2.95	45.49	33.95	2.43	233.33
2050	19100	79.2	195.0	55.90	91.28	0.43	65.13	27.69	3.33	225.64
2550	19800	38.3	191.0	42.51	101.57	0.62	65.45	12.51	0.64	334.03
4300	19500	71.8	191.0	141.88	105.76	2.73	60.73	63.87	3.65	258.64
2550	19900	2.8	188.0	40.32	108.51	0.26	56.38	12.82	0.65	381.38
2050	19800	145.0	187.0	47.11	107.49	0.70	50.21	19.41	0.66	363.64
2550	20300	55.3	177.0	68.36	124.86	0.29	62.15	21.81	1.48	270.62
2800	20300	69.4	176.0	75.57	94.89	0.82	71.59	27.61	2.20	247.73
3550	21000	66.7	170.0	194.71	111.76	1.38	53.82	62.94	8.76	270.59
4300	20100	20.2	169.0	72.78	105.33	0.43	71.01	24.26	0.73	411.24
4300	19000	90.4	167.0	169.46	125.75	4.02	71.26	108.98	6.77	307.78
4050	20000	8.4	165.0	52.24	139.39	0.35	70.91	21.88	0.74	411.52
2800	21400	21.5	158.0	65.19	99.37	2.42	43.48	24.87	0.77	287.34
4050	20900	117.0	156.0	167.95	167.95	9.10	51.22	42.24	5.24	461.54
1800	21100	99.5	156.0	45.51	126.28	0.34	52.44	43.97	4.07	310.26
4300	19700	34.7	153.0	98.69	122.88	2.12	63.73	46.34	2.17	344.44
4800	20000	61.1	152.0	521.05	122.37	1.55	108.55	197.37	6.84	434.21
2800	20200	26.9	151.0	58.74	139.74	0.39	78.15	21.32	0.82	411.26
4050	18900	64.7	150.0	130.00	162.00	3.21	64.93	136.00	6.49	316.00
4050	21800	23.2	150.0	65.33	121.33	0.76	89.33	25.33	2.17	130.00
1800	19300	108.0	148.0	51.62	159.46	1.38	38.38	25.81	2.92	250.00
2050	20300	34.9	146.0	57.74	116.44	0.38	57.12	21.58	0.85	293.15
3550	21700	11.6	137.0	62.12	156.20	1.99	56.79	18.47	2.12	383.94
2550	20200	54.1	131.0	69.85	170.99	1.53	89.31	22.60	0.95	434.35
3300	20000	10.7	131.0	116.03	128.24	1.29	75.11	42.29	0.94	360.31
2050	20800	75.8	130.0	90.00	135.38	0.83	86.92	47.46	3.45	390.77
2550	19000	25.5	127.0	55.51	154.33	1.56	94.49	25.04	2.15	483.46
2550	19700	1.4	125.0	50.00	135.20	0.19	76.96	14.32	0.98	441.60
3300	21200	15.0	124.0	79.27	153.23	1.94	69.35	21.05	0.99	529.03
1800	19100	88.5	122.0	179.51	81.89	1.75	42.95	58.61	4.02	245.08
4300	21000	16.0	120.0	343.33	218.33	2.06	125.00	61.75	3.26	1141.67
3300	20700	46.7	118.0	101.69	150.00	1.70	76.44	37.29	2.21	382.20
1800	20900	70.2	116.0	64.31	152.59	3.43	46.47	63.71	10.78	327.59
4300	20400	7.7	115.0	111.30	169.57	0.97	107.83	34.26	1.07	768.70
3550	18800	59.7	115.0	100.00	115.65	1.51	65.13	83.04	10.09	287.83
3300	21800	5.3	112.0	82.05	146.43	0.93	86.88	33.75	1.10	504.46
4050	19200	31.2	108.0	217.59	207.41	4.04	105.56	119.44	5.93	485.19
2050	19400	40.5	107.0	63.93	183.18	0.64	82.71	35.79	1.15	426.17
3550	20900	106.0	107.0	252.34	117.76	6.21	74.02	93.46	4.79	275.70
4050	21400	13.7	104.0	177.88	213.46	1.33	95.19	50.77	3.86	557.69
2800	19800	2.0	103.0	52.72	193.20	0.22	96.31	15.63	1.19	630.10
4800	21100	21.5	97.6	110.66	132.17	1.52	112.70	28.28	1.24	1034.84
2550	20600	97.3	96.0	107.29	221.88	1.15	102.50	35.10	2.72	520.83
4300	21900	14.9	95.7	115.99	172.41	0.94	109.72	38.14	3.39	513.06
2050	19300	53.6	95.1	90.75	233.44	0.11	108.31	46.06	1.30	613.04
4300	21100	9.0	94.2	251.59	262.21	2.01	142.25	51.49	1.31	708.07
2550	20700	61.1	91.9	109.90	254.62	2.99	105.77	67.03	6.58	515.78
4800	21000	4.1	91.5	104.26	230.60	1.52	102.51	26.01	1.33	722.40
4800	20500	16.8	91.3	150.05	177.44	0.50	119.39	53.67	4.41	696.60
1800	20800	9.8	88.9	74.58	201.35	0.38	93.14	47.36	1.40	484.81
4050	19300	57.4	86.7	288.35	208.77	2.98	139.56	117.65	9.88	498.27
1800	19200	27.2	85.1	81.20	185.66	0.41	87.43	40.19	1.45	450.06
3550	18900	29.7	84.5	90.65	19.76	1.36	92.54	100.71	3.86	434.32
3300	18600	6.7	84.5	104.14	200.00	0.92	102.25	38.46	1.44	588.17
2550	20800	61.9	82.7	120.92	246.67	0.97	116.81	82.59	8.69	603.39
2550	20900	43.6	75.8	100.26	284.96	0.73	118.34	33.91	1.64	674.14
2800	18600	3.2	71.3	86.54	220.20	0.98	147.27	24.12	1.73	769.99
2800	18800	0.9	70.5	87.80	317.73	8.57	136.88	18.30	1.74	809.93
2050	19200	92.8	68.9	116.11	238.03	1.48	90.57	89.70	6.17	577.65
3550	20800	65.7	68.7	457.06	238.72	9.08	138.72	151.38	12.34	556.04
1800	19500	19.3	62.7	144.66	290.27	1.21	117.22	60.77	3.89	629.98
MIN		0.921	62.7	5.31615	2.362733	0.041546	1.812324	1.570681	0.211304	4.926836
MAX		183	7449	521.0526	317.7305	9.102564	147.2651	197.3684	12.34352	1141.667
MEAN		51.76271	370.7034	97.09013	127.438	1.472861	68.00556	39.40833	2.823285	364.5977
STD DEV.		41.09955	905.0217	85.67582	74.1095	1.786318	36.36246	34.94523	2.595726	225.7984

* break out into Gator
Wildrose
Thematic mapping data
ArcView/ArcCAD
(review FE/SE AFE → can we cut costs?)

HECLA MINING COMPANY

July 7, 1995

MEMORANDUM TO: Rick Tschauder
Charlie Muerhoff

cc: Ron Clayton

FROM: Jimmy Nyrehn

SUBJECT: July-December Distal Exploration Plan for the Rosebud Project.

SUMMARY OF EXPLORATION PLAN

Funds are requested for the July-December, 1995 distal exploration program on Hecla's Rosebud Project, Pershing County, Nevada. This program is budgeted, subject to approval, with the objective to thoroughly investigate target areas in the Rosebud District via application of geologic, geochemical and geophysical exploration methods. Estimated cost of this program is $184,670.

Distal exploration of Hecla's Rosebud/Kamma Mountains claim block and adjacent ground will identify new targets and confirm or deny two of 16 targets identified primarily through the efforts of previous operators of the property. Targets to be examined during the latter half of 1995 are known as the Wildrose/Juniper Canyon and Gator respectively.

Geologic remapping, rock chip and soil grid geochem sampling will be carried out on the Wildrose/Juniper Canyon and Gator target areas to establish a workable level of confidence in the data generated by previous operators and to improve current understanding of the geological and geochemical character of the targets.

Prospecting activities on the Wildrose/Juniper Canyon and Gator targets will include detailed geologic mapping, rock chip, soil grid sampling and geochemistry and ground geophysical surveys. Provided results are favorable,approximately 3600 feet of RVC drilling will be completed in 1995.

CONTENTS

INTRODUCTION

The exploration plan for the Rosebud Project has a long range goal of adding to current mineable reserves. The exploration strategy is to generate and evaluate target areas simultaneous with the developement of the Rosebud Deposit.

Costs are summarized in Appendix I. The following discussions of the Rosebud Project are excerpted from the 1995 Exploration Plan prepared and written by Craig Wineteer, exploration geologist at Rosebud through June of 1995.

DISTAL TARGETS

Funds are requested for exploration of two targets that are outside of the existing plan of operation and are not within attractive drifting distance of planned developement for the Rosebud Deposit. The distal targets are in the prospect exploration stage (phase IV) and are being investigated now to allow for the lag time between discovery of a resource and advancing that resource through delineation, feasibility, and permitting. This exploration is budgeted, subject to approval. The total anticipated expenditures for distal target exploration is $ 184,670.

The distal targets were recognized by previous work conducted by Lac Minerals. The work proposed here is Hecla's first exploration on these targets and is designed to draw upon the geologic and geochemical model developed for the Rosebud Deposit.

Because of the distal nature of these targets, the minimum deposit size is larger than for the proximal targets. For a resource in these target areas to be economic, it will have to be of sufficient size and grade to be considered a "stand alone" deposit, although the Rosebud Project facilities and infrastructure may in part be utilized.

Activities planned for the distal targets include detailed geologic mapping, rock chip sampling, geologic cross-section work, soil geochemical grid surveys, and ground geophysical surveys. Provided results are favorable, roughly 4,000 feet of RC drilling will be completed on the distal targets in 1995.

Gator Target

The Gator Target is located on the north flank of Wild Rose Canyon. It is roughly 12,000 feet north-northwest of planned development on the Rosebud Deposit and is 8,000 feet southeast of Hycroft Resources recently developed Brimstone Pit. The target has no previous drilling and was identified by rock chip and subsequent soil geochemical sampling.

The target trends off of Hecla's current property position, so land status and claim staking is a priority. Other prospecting activities will include detailed 1" to 100' outcrop mapping, ground VLF and magnetic surveys, and infill-soil grid sampling and geochemistry. Provided results are favorable, roughly 2,000 feet of RC drilling will be completed on the Gator Target. Estimated cost of the proposed exploration is $39,500.

Existing Situation

Geology in the target area is dominated by east-southeast dipping Wildrose Rhyolite (Twr) and Chocolate Tuff. The Wildrose unit is equivalent to the LBT host rock unit in the Rosebud Deposit mine area. The Bud Volcanics unit is mapped as missing, and may have been displaced by a NE-trending structure.

Rock chip samples collected by Lac Minerals in the target area are elevated in gold, with 11 samples ranging from 0.107 to 0.514 ppm and averaging 0.170 ppm. The existing soil survey is comprised of north-south grid lines, with 250 foot line-spacing and 100 foot sample-spacing. Soil gold values were re-plotted at 1" to 500' and hand contoured.

The contoured soil data depicts a N25°E trending zone that is roughly 2,500 feet long and 400 to 600 feet wide. The zone terminates in Wild Rose Canyon to the southwest and trends off of Hecla's property to the northeast. The zone is coincident with the strike of the "Bud Horizon", which is interpreted to be a NE-trending structure.

geologic mapping
soils
rock chip
1' stream sediments

to the 28th give him three weeks.

Proposed Exploration

include office time

contact Wildrose

staake a couple of claims

Because the soil anomaly trends off of Hecla's property, the status of adjoining claims will be investigated. Provided it is open land, 4 additional claims will be staked on the east edge of Hecla' property to provide coverage of the soil anomaly.

Outcrop geology of the target will be mapped in detail at 1" to 100'. The existing soil survey will be infilled to 100 foot line- and sample-spacing. Soil samples will be collected from the "B" soil horizon at a depth of 2 to 3 feet using a soil auger, screened to minus 10 mesh, dried, and submitted for multi-element geochemical analysis. Ground VLF and magnetic surveys will be conducted on the soil survey grid.

Provided the result of the soil and geophysical survey and geologic investigations are encouraging, 2,000 feet of RC drilling are planned for the target in late summer or early fall. The number of drill holes and their total depth will depend on the type of target concept developed.

Estimated cost of the proposed exploration is $39,500, including drilling, analytical, labor, and surface work costs. If the Gator Target is drilled in 1995 and surface disturbance is less than 5 acres, the only permitting requirements are to file a notice of intent form with the BLM.

Juniper Canyon - Wild Rose Target

The Juniper Canyon-Wild Rose Target is located in Juniper Canyon. It is roughly 16,000 feet northwest of the Rosebud Deposit and is 3,000 feet southeast of Hycroft Resources recently developed Brimstone Pit. The target was identified by rock chip and subsequent soil geochemical sampling. Lac Minerals drilled 4 shallow RC holes on the target in 1990.

Prospecting activities will include detailed 1" to 100' outcrop mapping, ground VLF and magnetic surveys, and infill-soil grid sampling and geochemistry. Provided results are favorable, roughly 2,000 feet of RC drilling will be completed on the Juniper Canyon-Wild Rose Target. Estimated cost of the proposed exploration is $52,000.

Existing Situation

Geology in the target area is dominated by large breccia bodies within Dozer Tuff (Dt) and Wildrose Rhyolite (Twr) stratigraphic units. The breccia's are intrusive and tectonic in origin. The target area is structurally complex; bound to the south by a prominent E-W left-lateral fault (Juniper Canyon Fault) with

numerous NW- and NE-trending hanging wall structures.

Rock chip samples collected by Lac Minerals in the target area are elevated in gold, with over 40 samples > 0.100 and up to 1.68 ppm. The existing soil survey is comprised of north-south grid lines, with 250 foot line-spacing and 100 foot sample-spacing. Soil gold values were re-plotted at 1" to 500' and hand contoured.

Elevated soil gold values occur in an area that is roughly 3,000 feet by 3,000 feet, with values ranging from 20 to 233 ppb. The soil zone is bound on the south by the Juniper Canyon Fault and to the east by the surface expression of Bud Volcanics. Trends within the zone are predominately E-W to NE- and NW and are coincident with mapped structure.

Lac Minerals drilled 4 RC holes in the target area in 1990. The holes penetrated favorable alteration, including brecciation, silicification, sulfidation, and argillization. Two holes encountered no significant mineralization, while the 2 holes drilled in the western portion of the target encountered low-grade gold (0.010 to 0.042 opt) in intervals of 5 to 75 feet.

Proposed Exploration

Outcrop geology of the target will be mapped in detail at 1" to 100'. Structural trends will be systematically rock chip sampled. Ground VLF and magnetic surveys will be conducted over the target area. Provided the result of the rock chip sampling and geophysical survey are encouraging, approximately 2,000 feet of RC drilling are planned for the target in late summer or early fall. The number of drill holes and their total depth will depend on the type of target concept developed.

Estimated cost of the proposed exploration is $52,000, including drilling, analytical, labor, and surface work costs. If the Juniper Canyon-Wild Rose Target is drilled in 1995 and surface disturbance is less than 5 acres, the only permitting requirements are to file a notice of intent form with the BLM.

RESEARCH AND GENERATIVE EXPLORATION

SUMMARY

Funds are requested for research and generative exploration work on the Rosebud Project. The proposed work is designed to provide a geochemical baseline on the Rosebud Deposit and to generate new target areas through alteration/ structural interpretation of Thematic Mapper (TM) satellite imagery. Estimated cost of the research and generative exploration is $65,000.

Multi-element Geochemical Deposit Model

Funds are requested for a comprehensive multi-element analysis of Hecla's Rosebud Deposit. The proposed geochemical program was approved in February, 1995 and is in progress. The program is designed to fulfill two objectives: (1) provide a 3-dimensional model of the mineralization-alteration system, and (2) establish a geochemical baseline database for exploration of similar targets. The amount of funds requested for this program is $25,000.

Existing Situation

A geochemical study was conducted by Lac Minerals in 1991. This study is limited to 169 composite assay interval samples from 15 drill holes. Lac's composite samples were selected from 5 geologic cross-sections spaced at 400 feet, with 3 drill holes on each section. Composite samples are 15 feet in length and arbitrarily spaced at 50 foot intervals. Lac's geochemical drill holes are also limited to the South Zone, and are predominantly located along its NE-trending axis.

Proposed Exploration

The proposed program consists of multi-element analysis on drill hole pulp samples from the Rosebud Project. The analytical methods selected have the lowest possible detection limits, for most elements provide quantitative results, and are the least expensive available. The analytical suite consists of the majority of pathfinder elements that are typically associated with volcanic-hosted epithermal precious metal deposits, including but not limited to Au, Ag, As, Sb, Hg, Se, Te, Cu, Pb, and Zn.

A total of 1500 composite assay interval samples are recommended for multi-element geochemical analysis. Composite samples are 10

to 50 feet in thickness and represent logical groupings of Au-Ag assay results that are confined by lithologic, structural, and alteration boundaries. Eleven stratigraphic units are represented by the composite samples, with the majority of samples from the Chocolate Tuff (Ct), Bud Tuff (Bud), LBT or Wild Rose, and Dozer Tuff (Dt).

The selected intervals include drill hole samples from areas distal to mineralization as well as from the South, North, and East Zone ore bodies. Composite assay interval selected for this study represent 89 drill holes that project onto 12 geologic cross-sections spaced at roughly 150 feet. The 12 geologic cross-sections used for this study are between those chosen by Lac.

This program in not intended as a stand alone "cure all", but rather is intended to be incorporated with observations of lithology, structure, and mineralogy that were collected while logging drill core and with petrographic-SEM examination of selected representative hand specimens (study in progress by Eric Peterson, University of Utah).

Multi-element analysis will quantify our observations of alteration and mineralization and enable us to construct 3-dimensional maps of the principal geochemical regimes. It is equally important to delineate the distribution of ore-grade precious metal mineralization as it is to delineate the distribution of deleterious mineral assemblages, such as pyrrhotite, stibnite, chalcopyrite, and barite.

Statistical treatment of the geochemical database will determine background and anomalous values for indicator and pathfinder elements; specific to lithologic unit. Statistically determined anomaly values and correlation coefficients for the pathfinder elements are essential to critical evaluation of Rosebud district exploration targets.

Estimated Cost

Sample preparation will be contracted to American Assay Labs, Reno, Nevada. Pulp samples will be pulled from storage, composited, pulverized, and homogenized. There are no additional charges for shipping. The multi-element analysis contract will be awarded to Acme Analytical Labs., Vancouver, B.C. Chemical analysis will include 38 elements, by 3 different methods. Analytical costs listed below are lower than advertised costs, primarily because of the volume of samples and because both labs are currently experiencing "slow periods".

Provided the proposed program is approved, sample prep and chemical analysis can be initiated immediately. Return of analytical results will follow program start-up by approximately one month.

Estimated cost of the program (including a 5% contingency) is $25,000. Projected costs are detailed below:

Multi-element analysis (Acme Analytical Labs.)	
Group 1E 35 Element Total Digestion (ICP analysis 1500 samples @ $5.27 ea.)	$7,905
Group 1B Hydride Generation Volatile Elements (Volatile Elements 1500 samples @ $4.76 ea.)	7,140
Group 1C Cold Vapor AA-Mercury (1500 samples @ $2.25 ea.)	3,375
Sample preparation and shipping (American Assay) (1500 samples @ $2.40 ea.)	3,600
Data entry and compositing of assay results (Labor 12 days @ $72/ day)	864
Sample retrieval and storage (Labor 11 days @ $72/ day & materials of $74)	866
Contingency (+5%)	1,250
TOTAL	$25,000

Remote Sensing

Funds are requested for acquisition and interpretation of Landsat-5 thematic mapper data. The objective of this program is to identify new target areas in the Rosebud District and to have quantitative data for comparing new and existing targets. Acquisition and interpretation will be contracted to a commercial service company and will cost $15,000. Follow-up district reconnaissance geologic investigation will involve geologic mapping and sampling, with an estimated cost of $10,000.

Existing Situation

The Rosebud Project currently has topographic and air photo coverage of the property, but has no remote sensing data. Air photo coverage is limited to the claim block and does not allow comparison of the project area to mines and mineralized districts outside of the northern Kamma Mountains.

Proposed Exploration

The proposed program consists of acquiring Landsat-5 thematic mapper satellite data from EOSAT and processing, interpretation,

and imaging by Applied Geologic Studies, Inc. of Denver, Colorado. Estimated cost of the proposed exploration is $15,000, including data acquisition, processing, interpretation, and imaging.

The Rosebud Project is located at the junction of four Landsat-5 scenes, therefore to provide the desired coverage of northwest Nevada, all 4 scenes will be purchased. A quarter of each scene will be processed and interpreted at this time.

Thematic mapper (TM) has the capability to identify hydrothermally altered areas by detecting the presence of hydrous minerals such as kaolinite, sericite, montmorillonite, and alunite. Hydrous minerals are detected by a contrast between thematic mapper bands showing strong reflectance and strong absorption. Thematic mapper has the added features of high resolution (30-m pixels) and the ability to discriminate between differing rock types and geochemically affected vegetation.

Rosebud Project geologic staff will consult with Applied Geologic Studies to select the optimal combination of TM spectral bands and algorithm processing methods to accentuate desired geologic features such as structure and alteration. Final "hard copy" and digital imagery will be determined by the spectral bands and processing methods selected.

Anomalous structure and alteration areas detected by Landsat-5 will be investigated by the Rosebud geologic staff. This cursory investigation will involve geologic mapping and sampling, cross-section work, and interpretation.

SUMMARY AND CONCLUSIONS

The proposed exploration activities initiate Hecla's long-term plan to generate additional minable gold and silver reserves for the Rosebud Project. Target areas are being investigated through an integrated exploration approach, incorporating geologic, geochemical, and geophysical data. New target areas are being generated through remote sensing and district geology simultaneous with drill testing of more advanced stage targets, ensuring the systematic and comprehensive investigation of the Rosebud District.

As a result of Hecla's 1994 and early 1995 work, the exploration plan is based on a substantially increased understanding of the stratigraphy, structure, geochemistry, and styles of mineralization occurring in the Rosebud Deposit. The improved deposit model aided in prioritizing exploration targets and establishes guidelines for evaluating top priority targets. Collecting and integrating geologic, geochemical, and geophysical data prior to target drill testing optimizes drilling dollars and increases Hecla's chances for success.

APPENDIX I

AMMENDED COSTS FOR DISTAL EXPLORATION

GEOTECH @ $12.00/hr, 10 hrs./day @ 120 days	14,400
SOIL SAMPLING 400 @ $5.00 EA.....	2,000
geochem @ $8.00 ea.....	3,200
ROCK CHIP SAMPLING 250 @ $15.00 ea.	3,750
geochem @ $12.00 ea.	3,000
STREAM SEDIMENT SAMPLING 100 @ $5.00 ea.	500
geochem @ $8.00 ea.	800
RVC DRILLING 3,600 ft. @ $18.00/ft.	64,800
geochem @ $12.00/5 ft	8,640
CORE DRILLING 1,200 ft.@ $ 30.00/ft	36,000
geochem @$ 12.00/5 ft.	2,280
BULLDOZER @ $80.00/hr. X 30 hrs.	2,400
ROAD/PAD CONST.@ $2.00/ft. drilled X 4,800 ft.....	9,600
RECLAMATION @ $.25/ft. drilled	1,200
GEOPHYSICS,ACQUISITION AND CONSULTATION	25,000
SUPPLIES	1,000
EQUIPMENT, MISC. RENTAL	6,000

TOTAL PLANNED JULY-DECEMBER DISTAL EXPLORATION COSTS $184,670

HECLA MINING COMPANY

July 7, 1995

MEMORANDUM TO: Rick Tschauder
Charlie Muerhoff

cc: Ron Clayton

FROM: Jimmy Nyrehn

SUBJECT: July-December Distal Exploration Plan for the Rosebud Project.

SUMMARY OF EXPLORATION PLAN

Funds are requested for the July-December, 1995 distal exploration program on Hecla's Rosebud Project, Pershing County, Nevada. This program is budgeted, subject to approval, with the objective to thoroughly investigate target areas in the Rosebud District via application of geologic, geochemical and geophysical exploration methods. Estimated cost of this program is $184,670.

Distal exploration of Hecla's Rosebud/Kamma Mountains claim block and adjacent ground will identify new targets and confirm or deny two of 16 targets identified primarily through the efforts of previous operators of the property. Targets to be examined during the latter half of 1995 are known as the Wildrose/Juniper Canyon and Gator respectively.

Geologic remapping, rock chip and soil grid geochem sampling will be carried out on the Wildrose/Juniper Canyon and Gator target areas to establish a workable level of confidence in the data generated by previous operators and to improve current understanding of the geological and geochemical character of the targets.

Prospecting activities on the Wildrose/Juniper Canyon and Gator targets will include detailed geologic mapping, rock chip, soil grid sampling and geochemistry and ground geophysical surveys. Provided results are favorable,approximately 3600 feet of RVC drilling will be completed in 1995.

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Costs are summarized in Appendix I. The following discussions of the Rosebud Project are excerpted from the 1995 Exploration Plan prepared and written by Craig Wineteer, exploration geologist at Rosebud through June of 1995.

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Funds are requested for exploration of two targets that are outside of the existing plan of operation and are not within attractive drifting distance of planned developement for the Rosebud Deposit. The distal targets are in the prospect exploration stage (phase IV) and are being investigated now to allow for the lag time between discovery of a resource and advancing that resource through delineation, feasibility, and permitting. This exploration is budgeted, subject to approval. The total anticipated expenditures for distal target exploration is $ 184,670.

The distal targets were recognized by previous work conducted by Lac Minerals. The work proposed here is Hecla's first exploration on these targets and is designed to draw upon the geologic and geochemical model developed for the Rosebud Deposit.

Because of the distal nature of these targets, the minimum deposit size is larger than for the proximal targets. For a resource in these target areas to be economic, it will have to be of sufficient size and grade to be considered a "stand alone" deposit, although the Rosebud Project facilities and infrastructure may in part be utilized.

Activities planned for the distal targets include detailed geologic mapping, rock chip sampling, geologic cross-section work, soil geochemical grid surveys, and ground geophysical surveys. Provided results are favorable, roughly 4,000 feet of RC drilling will be completed on the distal targets in 1995.

Gator Target

The Gator Target is located on the north flank of Wild Rose Canyon. It is roughly 12,000 feet north-northwest of planned development on the Rosebud Deposit and is 8,000 feet southeast of Hycroft Resources recently developed Brimstone Pit. The target has no previous drilling and was identified by rock chip and subsequent soil geochemical sampling.

The target trends off of Hecla's current property position, so land status and claim staking is a priority. Other prospecting activities will include detailed 1" to 100' outcrop mapping, ground VLF and magnetic surveys, and infill-soil grid sampling and geochemistry. Provided results are favorable, roughly 2,000 feet of RC drilling will be completed on the Gator Target. Estimated cost of the proposed exploration is $39,500.

Existing Situation

Geology in the target area is dominated by east-southeast dipping Wildrose Rhyolite (Twr) and Chocolate Tuff. The Wildrose unit is equivalent to the LBT host rock unit in the Rosebud Deposit mine area. The Bud Volcanics unit is mapped as missing, and may have been displaced by a NE-trending structure.

Rock chip samples collected by Lac Minerals in the target area are elevated in gold, with 11 samples ranging from 0.107 to 0.514 ppm and averaging 0.170 ppm. The existing soil survey is comprised of north-south grid lines, with 250 foot line-spacing and 100 foot sample-spacing. Soil gold values were re-plotted at 1" to 500' and hand contoured.

The contoured soil data depicts a N25°E trending zone that is roughly 2,500 feet long and 400 to 600 feet wide. The zone terminates in Wild Rose Canyon to the southwest and trends off of Hecla's property to the northeast. The zone is coincident with the strike of the "Bud Horizon", which is interpreted to be a NE-trending structure.

Proposed Exploration

Because the soil anomaly trends off of Hecla's property, the status of adjoining claims will be investigated. Provided it is open land, 4 additional claims will be staked on the east edge of Hecla' property to provide coverage of the soil anomaly.

Outcrop geology of the target will be mapped in detail at 1" to 100'. The existing soil survey will be infilled to 100 foot line- and sample-spacing. Soil samples will be collected from the "B" soil horizon at a depth of 2 to 3 feet using a soil auger, screened to minus 10 mesh, dried, and submitted for multi-element geochemical analysis. Ground VLF and magnetic surveys will be conducted on the soil survey grid.

Provided the result of the soil and geophysical survey and geologic investigations are encouraging, 2,000 feet of RC drilling are planned for the target in late summer or early fall. The number of drill holes and their total depth will depend on the type of target concept developed.

Estimated cost of the proposed exploration is $39,500, including drilling, analytical, labor, and surface work costs. If the Gator Target is drilled in 1995 and surface disturbance is less than 5 acres, the only permitting requirements are to file a notice of intent form with the BLM.

Juniper Canyon - Wild Rose Target

The Juniper Canyon-Wild Rose Target is located in Juniper Canyon. It is roughly 16,000 feet northwest of the Rosebud Deposit and is 3,000 feet southeast of Hycroft Resources recently developed Brimstone Pit. The target was identified by rock chip and subsequent soil geochemical sampling. Lac Minerals drilled 4 shallow RC holes on the target in 1990.

Prospecting activities will include detailed 1" to 100' outcrop mapping, ground VLF and magnetic surveys, and infill-soil grid sampling and geochemistry. Provided results are favorable, roughly 2,000 feet of RC drilling will be completed on the Juniper Canyon-Wild Rose Target. Estimated cost of the proposed exploration is $52,000.

Existing Situation

Geology in the target area is dominated by large breccia bodies within Dozer Tuff (Dt) and Wildrose Rhyolite (Twr) stratigraphic units. The breccia's are intrusive and tectonic in origin. The target area is structurally complex; bound to the south by a prominent E-W left-lateral fault (Juniper Canyon Fault) with

numerous NW- and NE-trending hanging wall structures.

Rock chip samples collected by Lac Minerals in the target area are elevated in gold, with over 40 samples > 0.100 and up to 1.68 ppm. The existing soil survey is comprised of north-south grid lines, with 250 foot line-spacing and 100 foot sample-spacing. Soil gold values were re-plotted at 1" to 500' and hand contoured.

Elevated soil gold values occur in an area that is roughly 3,000 feet by 3,000 feet, with values ranging from 20 to 233 ppb. The soil zone is bound on the south by the Juniper Canyon Fault and to the east by the surface expression of Bud Volcanics. Trends within the zone are predominately E-W to NE- and NW and are coincident with mapped structure.

Lac Minerals drilled 4 RC holes in the target area in 1990. The holes penetrated favorable alteration, including brecciation, silicification, sulfidation, and argillization. Two holes encountered no significant mineralization, while the 2 holes drilled in the western portion of the target encountered low-grade gold (0.010 to 0.042 opt) in intervals of 5 to 75 feet.

Proposed Exploration

Outcrop geology of the target will be mapped in detail at 1" to 100'. Structural trends will be systematically rock chip sampled. Ground VLF and magnetic surveys will be conducted over the target area. Provided the result of the rock chip sampling and geophysical survey are encouraging, approximately 2,000 feet of RC drilling are planned for the target in late summer or early fall. The number of drill holes and their total depth will depend on the type of target concept developed.

Estimated cost of the proposed exploration is $52,000, including drilling, analytical, labor, and surface work costs. If the Juniper Canyon-Wild Rose Target is drilled in 1995 and surface disturbance is less than 5 acres, the only permitting requirements are to file a notice of intent form with the BLM.

RESEARCH AND GENERATIVE EXPLORATION

This has been done already.

SUMMARY

Funds are requested for research and generative exploration work on the Rosebud Project. The proposed work is designed to provide a geochemical baseline on the Rosebud Deposit and to generate new target areas through alteration/ structural interpretation of Thematic Mapper (TM) satellite imagery. Estimated cost of the research and generative exploration is $65,000.

Multi-element Geochemical Deposit Model

Funds are requested for a comprehensive multi-element analysis of Hecla's Rosebud Deposit. The proposed geochemical program was approved in February, 1995 and is in progress. The program is designed to fulfill two objectives: (1) provide a 3-dimensional model of the mineralization-alteration system, and (2) establish a geochemical baseline database for exploration of similar targets. The amount of funds requested for this program is $25,000.

Existing Situation

A geochemical study was conducted by Lac Minerals in 1991. This study is limited to 169 composite assay interval samples from 15 drill holes. Lac's composite samples were selected from 5 geologic cross-sections spaced at 400 feet, with 3 drill holes on each section. Composite samples are 15 feet in length and arbitrarily spaced at 50 foot intervals. Lac's geochemical drill holes are also limited to the South Zone, and are predominantly located along its NE-trending axis.

Proposed Exploration

The proposed program consists of multi-element analysis on drill hole pulp samples from the Rosebud Project. The analytical methods selected have the lowest possible detection limits, for most elements provide quantitative results, and are the least expensive available. The analytical suite consists of the majority of pathfinder elements that are typically associated with volcanic-hosted epithermal precious metal deposits, including but not limited to Au, Ag, As, Sb, Hg, Se, Te, Cu, Pb, and Zn.

A total of 1500 composite assay interval samples are recommended for multi-element geochemical analysis. Composite samples are 10

to 50 feet in thickness and represent logical groupings of Au-Ag assay results that are confined by lithologic, structural, and alteration boundaries. Eleven stratigraphic units are represented by the composite samples, with the majority of samples from the Chocolate Tuff (Ct), Bud Tuff (Bud), LBT or Wild Rose, and Dozer Tuff (Dt).

The selected intervals include drill hole samples from areas distal to mineralization as well as from the South, North, and East Zone ore bodies. Composite assay interval selected for this study represent 89 drill holes that project onto 12 geologic cross-sections spaced at roughly 150 feet. The 12 geologic cross-sections used for this study are between those chosen by Lac.

This program in not intended as a stand alone "cure all", but rather is intended to be incorporated with observations of lithology, structure, and mineralogy that were collected while logging drill core and with petrographic-SEM examination of selected representative hand specimens (study in progress by Eric Peterson, University of Utah).

Multi-element analysis will quantify our observations of alteration and mineralization and enable us to construct 3-dimensional maps of the principal geochemical regimes. It is equally important to delineate the distribution of ore-grade precious metal mineralization as it is to delineate the distribution of deleterious mineral assemblages, such as pyrrhotite, stibnite, chalcopyrite, and barite.

Statistical treatment of the geochemical database will determine background and anomalous values for indicator and pathfinder elements; specific to lithologic unit. Statistically determined anomaly values and correlation coefficients for the pathfinder elements are essential to critical evaluation of Rosebud district exploration targets.

Estimated Cost

Sample preparation will be contracted to American Assay Labs, Reno, Nevada. Pulp samples will be pulled from storage, composited, pulverized, and homogenized. There are no additional charges for shipping. The multi-element analysis contract will be awarded to Acme Analytical Labs., Vancouver, B.C. Chemical analysis will include 38 elements, by 3 different methods. Analytical costs listed below are lower than advertised costs, primarily because of the volume of samples and because both labs are currently experiencing "slow periods".

Provided the proposed program is approved, sample prep and chemical analysis can be initiated immediately. Return of analytical results will follow program start-up by approximately one month.

Estimated cost of the program (including a 5% contingency) is $25,000. Projected costs are detailed below:

Multi-element analysis (Acme Analytical Labs.)	
Group 1E 35 Element Total Digestion	$7,905
(ICP analysis 1500 samples @ $5.27 ea.)	
Group 1B Hydride Generation Volatile Elements	7,140
(Volatile Elements 1500 samples @ $4.76 ea.)	
Group 1C Cold Vapor AA-Mercury	3,375
(1500 samples @ $2.25 ea.)	
Sample preparation and shipping (American Assay)	3,600
(1500 samples @ $2.40 ea.)	
Data entry and compositing of assay results	864
(Labor 12 days @ $72/ day)	
Sample retrieval and storage	866
(Labor 11 days @ $72/ day & materials of $74)	
Contingency (+5%)	1,250
TOTAL	$25,000

Remote Sensing

Funds are requested for acquisition and interpretation of Landsat-5 thematic mapper data. The objective of this program is to identify new target areas in the Rosebud District and to have quantitative data for comparing new and existing targets. Acquisition and interpretation will be contracted to a commercial service company and will cost $15,000. Follow-up district reconnaissance geologic investigation will involve geologic mapping and sampling, with an estimated cost of $10,000.

Existing Situation

The Rosebud Project currently has topographic and air photo coverage of the property, but has no remote sensing data. Air photo coverage is limited to the claim block and does not allow comparison of the project area to mines and mineralized districts outside of the northern Kamma Mountains.

Proposed Exploration

The proposed program consists of acquiring Landsat-5 thematic mapper satellite data from EOSAT and processing, interpretation,

and imaging by Applied Geologic Studies, Inc. of Denver, Colorado. Estimated cost of the proposed exploration is $15,000, including data acquisition, processing, interpretation, and imaging.

The Rosebud Project is located at the junction of four Landsat-5 scenes, therefore to provide the desired coverage of northwest Nevada, all 4 scenes will be purchased. A quarter of each scene will be processed and interpreted at this time.

Thematic mapper (TM) has the capability to identify hydrothermally altered areas by detecting the presence of hydrous minerals such as kaolinite, sericite, montmorillonite, and alunite. Hydrous minerals are detected by a contrast between thematic mapper bands showing strong reflectance and strong absorption. Thematic mapper has the added features of high resolution (30-m pixels) and the ability to discriminate between differing rock types and geochemically affected vegetation.

Rosebud Project geologic staff will consult with Applied Geologic Studies to select the optimal combination of TM spectral bands and algorithm processing methods to accentuate desired geologic features such as structure and alteration. Final "hard copy" and digital imagery will be determined by the spectral bands and processing methods selected.

Anomalous structure and alteration areas detected by Landsat-5 will be investigated by the Rosebud geologic staff. This cursory investigation will involve geologic mapping and sampling, cross-section work, and interpretation.

SUMMARY AND CONCLUSIONS

The proposed exploration activities initiate Hecla's long-term plan to generate additional minable gold and silver reserves for the Rosebud Project. Target areas are being investigated through an integrated exploration approach, incorporating geologic, geochemical, and geophysical data. New target areas are being generated through remote sensing and district geology simultaneous with drill testing of more advanced stage targets, ensuring the systematic and comprehensive investigation of the Rosebud District.

As a result of Hecla's 1994 and early 1995 work, the exploration plan is based on a substantially increased understanding of the stratigraphy, structure, geochemistry, and styles of mineralization occurring in the Rosebud Deposit. The improved deposit model aided in prioritizing exploration targets and establishes guidelines for evaluating top priority targets. Collecting and integrating geologic, geochemical, and geophysical data prior to target drill testing optimizes drilling dollars and increases Hecla's chances for success.

APPENDIX I

AMMENDED COSTS FOR DISTAL EXPLORATION

GEOTECH @ $12.00/hr, 10 hrs./day @ 120 days	14,400
SOIL SAMPLING 400 @ $5.00 EA.....	2,000
150/WR rest/gator geochem @ $8.00 ea.....	3,200
ROCK CHIP SAMPLING 250 @ $15.00 ea.	3,750
200/WR geochem @ $12.00 ea.	3,000
STREAM SEDIMENT SAMPLING 100 @ $5.00 ea.	500
50/50 geochem @ $8.00 ea.	800
RVC DRILLING 3,600 ft. @ $18.00/ft.	64,800
geochem @ $12.00/5 ft	8,640
CORE DRILLING 1,200 ft.@ $ 30.00/ft	36,000
geochem @$ 12.00/5 ft.	2,280
BULLDOZER @ $80.00/hr. X 30 hrs.	2,400
ROAD/PAD CONST.@ $2.00/ft. drilled X 4,800 ft.....	9,600
RECLAMATION @ $.25/ft. drilled	1,200
GEOPHYSICS,ACQUISITION AND CONSULTATION	25,000
SUPPLIES	1,000
EQUIPMENT, MISC. RENTAL	6,000

TOTAL PLANNED JULY-DECEMBER DISTAL EXPLORATION COSTS $184,670

(outline of tasks)

ROSEBUD PROJECT EXPLORATION
HECLA MINING COMPANY
PERSHING COUNTY, NEVADA

TIME LINE CATEGORIES

I. Research and Generative Stage Exploration
- Data File Review and Organization
- Infrastructure Design
- Data Compilation
- Deposit Model
- Generative
- Orientation Surveys

} I

II. TARGET PROSPECTING
- Geologic Investigations
- Geochemical Surveys
- Ground Geophysics

} II

III. TARGET DRILL TEST
- Drill Target Selection & Prioritization
- Drill Plan
- Contracts
- Drilling
- Interpretation

IV. DELINEATION DRILLING
- Drill Plan
- Drilling
- Data Compilation
- Interpretation & Modelling
- Resource Calculation

} Lumped in time-line III

V. REPORTING
- Exploration Proposal
- Budget
- Resource Document
- Summary Report

} IV

VI. ADMINISTRATION
- Staff Employees
- Temporary Employees

I. Research and Generative Stage Exploration

Data File Review and Organization - segregation of Lac/ Equinox files into Mine Files and Exploration Files; inventory/ index summary of existing data files; investigation and evaluation of previous exploration work and results

Infrastructure Design - evaluation and recommendations for staffing, equipment, and supply requirements to accomplish set exploration goals

Data Compilation

Claim map - topographic map with location of individual claims and contiguous claim block outline 1:6,000 scale

Geological Mapping - field spot checks of existing geologic maps and prioritize areas slated for detailed geologic mapping by Hecla personnel; compile simplified district geologic map with principal stratigraphic and tectonic features of Kamma Mountains 1:100,000 scale

Rock Chip Geochemical Sampling - topographic map with location of rock chip samples with contouring and/ or highlighting of areas of elevated (anomalous) values (statistical determination of mean, standard deviation, and anomalous values if not already done); separate plots for precious metals and significant indicator elements; composite overlay with outline of anomalous area for each significant element; 1:6,000 scale

Soil Grid Geochemical Surveys - topographic map with location of soil survey lines, sample locations, and contouring and/ or highlighting of elevated/ anomalous values (statistical determination of mean, standard deviation, and anomalous values if not already done); separate plots for precious metals and significant indicator elements; composite overlay with outline of anomalous area for each significant element; 1:6,000 scale

Biogeochemical Studies - plot of soil and vegetation geochemical data at compriable scale and compare results in light of cost and speed of surveys

Structural Investigations - evaluation of existing structural study (S. Moore, 1991) through spot field checks, air photograph interpretation, and comparison to "known" mine area geology and structure

Geophysical Surveys

Airborne - Magnetics - types of structural/ stratigraphic/ alteration features recognized and resolution

Ground - Magnetics, IP, VLF - types of structural/ stratigraphic/ alteration features recognized and resolution

Cultural Resource Studies - location and distribution of previous studies, current cultural coverage for target areas

Drilling (reverse circulation and core)

Plan location and projection map; 1:6,000 scale topographic base map (excluding high density of drilling in mine area)

Results - lithologies/ stratigraphy penetrated, structural intercepts, alteration, mineralization, significant intercepts

Rosebud (Dozer Hill) Deposit Model

Stratigraphy - Age, type, host/ wall rocks

Structure - Tectonic setting, timing, trends

Alteration - Types, degree (extent) distribution, zonation patterns

Mineralization - Styles, assemblages, gangue minerals, grades, distribution, zonation patterns, source of fluids and conduits

Geochemical Zonation - Mineral/ chemical zones of enrichment/ depletion

Generative

Remote Sensing of Kamma Mountains

Aerial Photographic Imaging - distribution and location of bedrock exposure, Quaternary

alluvium/ colluvium fill, and structurally controlled topographic/ erosional features

Multi-spectral scanner - indirect measurement of biogeochemical variations in response to indicator element enrichment in soils)

Thematic Mapper - location, distribution and type of hydrous clay minerals at the surface as a result of hydrothermal alteration

Land Status - district claim map w/ ownership, discovery date, location, status

Orientation Surveys

Geochemical

Soils - multi-element analysis (chemical suite derived from deposit model results); samples to be bulk (2 to 3 pounds), sieved (-60 mesh), and collected from "B" soil horizon; orientation grids over Dozer Hill (South, East, and North Zones), Far East Target, and Far North Target

Drill holes - composite samples for previous drill holes in target areas of current interest (ie. previous drilling on White Alps, Wild Rose, North Equinox and Power Pole targets)

Geophysical

Ground radiometrics - gamma ray spectrometer traverses and grid surveys over deposit, and if warranted, over target areas

Airborne VLF - district coverage of Kamma Mountains to provide structural data in areas of thin alluvium/ colluvium cover

II. TARGET PROSPECTING

Geologic Mapping and Investigations

Lithology - rock type, including bedding/ foliation; induration/ welding; groundmass grain size and texture; crystal/ lithic fragment size, shape, sorting, support, and composition; fresh and

weathered color

Structure - description and graphic presentation of joints, fractures, slicks, fault surfaces and textures

Alteration/ mineralization - type and degree of wall rock alteration; replacement mineral assemblage; structure type and fracture-fill minerals

Geologic cross-sections and measured sections - description of lithologic units and measured thickness for unaltered stratigraphic sections exposed in Rosebud Canyon and Wild Rose Canyon

Rock Chip Sampling - selective (high-grade), channel and bulk representative samples of prospective lithologic/ alteration occurrences

Petrographic studies - collection of representative hand speciman and thin section samples for petrographic/ XRD, and SEM examination and characterization of principal stratigraphic units, wall rock replacement mineralogy, and mineralization assemblages and paragenesis

Whole Rock Geochemical Analysis - using representative unaltered hand specimans; chemical and petrographic determination of principal rock forming minerals, whole rock compositions, and classification of genetic origin and magma type

<u>Soil Geochemical Grid Sampling</u> - 100 X 100 foot survey grids over prospective target areas with bulk, dried, and sieved soil samples collected from the "B" soil horizon (at roughly 1 to 2 foot depth) and multi-element analysis; topographic overlay plots of precious and indicator element results; contour, stacked (composited), and vector maps; interpretation of results in conjunction with known geologic conditions

<u>Ground Geophysical Surveys</u>

VLF - using survey grid established for soil sampling, traverse grid with hand held Sabre Model 27 VLF-EM receiver (or compreble digital model) and record field strength and inclination of field measurements; plot of raw data on profiles and plan map; smooth data using Frazer filter technique and contour filtered data; interpretation of results in conjunction with known geologic conditions

Magnetics - using survey grid established for soil sampling, traverse grid with portable digital magnetometer; record magnetic field strenght; correct total field strength for diurnal fluctuation (second stationary magnetometer); download field and base station data into computer magnetic software program; plot total field contour map and corrected to pole contour map; interpretation of results in conjunction with known geologic conditions

Radiometrics - using survey grid established for soil sampling, traverse grid with portable gamma ray spectrometer; record total and potassium radiometeric response; plot of field data onto topographic base map; contour and interprete results in conjunction with known geologic conditions

III. TARGET DRILL TEST

Prioritization of targets - evaluation of targets based on quality and quantity of indicative data; lines of evidence that support interpretation; conceptualization of mineralization style; and type and size of potential mineable reserve; placement of top priority on targets that provide highest potential for resulting in additional reserves that are similar in grade, mineralogy, and mining and processing methods as planned for the Rosebud Deposit

Budgeting - calculation of total drilling cost per foot (including direct and indirect costs) and proporting drill dollars to highest priority targets

Drill Plan

Determination of drill location, inclination, bearing, projected target depth, and total depth

Drill sample collection and preparation procedure

Drill log form standards and logging procedure

Contracts

Drilling

RC - mob/ demob, cost per foot, hourly charges

Core - mob/ demob, cost per foot, hourly charges

Supplies - sample bags, core boxes, chip trays, photographic equipment and supplies, marking pens, screens, wooden footage blocks, etc.

Analytical

Fire assay - precious metal assay and sample preparation procedure assay

Multi-element - geochemical analysis

Surface work - access roads, drill pads and site preparation

IV. DELINEATION DRILLING

Compilation

Surface/ subcrop/ and subsurface geology

Drill hole geological cross-sections and plan maps

Geophysical data, maps and interpretation

Rock chip and soil geochemical data

Composite drill hole sample multi-element signitures and zonation pattern/ characteristics

Assay results and correlation of grade/ structure

Characterization of mineralization/ alteration and mode(s) of occurrence of precious metals

Drill Plan

Determination of drill location, inclination, bearing, projected target depth, and total depth

Drill sample collection and preparation procedure

Drill log form standards and logging procedure

Resourse Calculation

Geologic Modelling - stratigraphic and lithologic units, structure, alteration, mineralization, and

metallurgy; density measurements and estimated tonnage factors; RQD measurements and estimation of rock strength and ground conditions

Statistical Modelling - grade populations and grade domains; grade domain contours and modelling; variograms, anisotrophy, and grade extrapolation-interpolation limits;

Cross-Sectional Method - digitize and/ or planimeter of grade domain blocks on each section; convert area to tons using RQD derived tonnage factor; multiply tons by average weighted grade to calculated total ounces for each block on each section

Polygonal Method -

MEDS Model -

V. REPORTING

Weekly Staff Meetings - brief verbal discussion of exploration activities and findings to project staff

Monthly Reports - brief written discussion of exploration activities, findings, and expenditures for the month

Measured and Indicated Resource Document - formal written documentation of geologic and statistical models, input parameters, and reserve models

Summary Report - year end summary report of exploration activities, expenditures, results, and recommendations for future work

VI. ADMINISTRATION

Staff Employees - exploration program designed, implimented, and monitored by Senior Exploration Geologist (Craig Wineteer); shared geologic tech/ drafts-person for computer and technical assistence, possible soil survey, and claim staking assistence; executive authority over program by District ~~Project~~ Geologist (Charlie Muerhoff), ~~Mine~~ Project General Manager (Ron Clayton), and corporate Exploration Manager (Rick Tschauder)

Temporary Employees - one to two employees hired on for Target Prospecting and Target Drill Test phases of exploration; assist in geochemical/ geophysical surveys, hole sitting and RC chip logging, drill sample collection and distribution

HECLA MINING COMPANY
ROSEBUD PROJECT
October 16,1995

To: C.V.Muerhoff
From: J. L. Nyrehn
Subject: "Baby" Anomaly

Located on the North flank of Wildrose Canyon and along soil line 4550E (Gator Grid) between 17200N and 17600N. 4 samples, 17400N @ .010 ppm, 17600N @ .013 ppm, 17700N @ .062 ppm and 17800N @ .024 ppm comprised the anomaly as identified by LAC soil sampling. 25 additional samples collected by Hecla personnel in September of 1995, validated the anomaly and extended it to the west and east by sampling of the 4425E and 4675E lines between 17200N and 18000N. The 4450E line was resampled to verify the LAC data. The results of the Hecla survey are as follows:

Hecla/'95	LAC/'93
4425E X 17500N @ 22 ppb	4450E X 17300N @ 10 ppb
4450E X 17500N @ 32 ppb	4450E X 17500N @ 13 ppb
4675E X 17400N @ 30 ppb	4450E X 17600N @ 62 ppb
4675E X 17600N @ 60 ppb	4450E X 17750N @ 24 ppb (rock)

These results plot as a general trend to the NE roughly paralleling a structural breccia. This breccia is evident in a prospect pit approximately 700' NE of the soil anomaly. LAC rock chip samples from this pit yielded values of 3.34 ppm, 2.83 ppm and 1.79 ppm respectively.

A small, brief sampling program of 30 soil samples and 15 rock chip samples is warranted for this area based on the repeatability of the data and the existence of suitable structure and rock type for deposition of AU mineralization. A 1:2400 geologic map of the area should also be constructed to complete the data package.

Estimated time for this project is 4 days for gridding, soil and rock sampling and plotting of assay returns.

10/3/95 lots of structures dipping west do not seem to be mineralized

Gator ⊛ on Moore's map

WNW

- sample ID is not to site

on HW of structures the LBT7 unit below LBT8

Target → series of arcuate N/S structures in LBT7

- massive tuff w/ xtallin FeO_x MnO_x + jarosite

can't determine opport

silicified, brittle contact

LBT8 → volcanic conglomerate

T_b → badger

- JN doesn't think the sample lines are in the proper place. Need to be shifted to the east ~ 200-250 ft.

- prefer Gator over WR → WR denied for Hycroft's area.

- where's the 625 ppm Ag soil sample?

- map of rock chip sample locations on mylar.

lost in trail

transit open-face 8' w/ power tube
4th estwing crackbar w/ ± 18' handle
Box estwing

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 19 SEP 95
Operator: JN\HMC
Records: 300
Bat: 17.5 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/20 10:26:52

Line 0+00 E Date 19 SEP 95 24.8 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	71.9	0.2	3913.	7.0	10:52:13	99	0.0 !				

Line 0+00 E Date 19 SEP 95 24.8 #2

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	-1.8	-3.2	37.13	-1.0	10:54:12	79	62.7	(init. point)			

Line 81+50 E Date 19 SEP 95 24.8 #3

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
81+00 N	-7.4	7.2	27.05	-4.2	11:15:15	39	75.5				
80+50 N	9.7	-6.2	27.38	5.5	11:17:38	39	65.7				
80+00 N	14.9	-7.7	27.90	8.5	11:24:58	39	70.7				
79+50 N	18.6	-4.4	28.03	10.6	11:25:52	49	72.2	9.4			
79+00 N	19.7	-2.2	27.87	11.2	11:26:45	49	77.0	7.8	8.6		
78+50 N	18.6	1.2	29.19	10.5	11:28:39	39	82.4	2.6	5.2		
78+00 N	15.0	4.7	28.60	8.5	11:36:45	39	66.1	-2.8	-0.1		
77+50 N	14.6	5.0	30.06	8.3	11:37:39	39	70.9	-4.9	-3.9		
77+00 N	4.4	1.4	32.50	2.5	11:38:56	29	77.8	-8.2	-6.6		
76+50 N	12.6	5.2	33.64	7.2	11:40:05RAV	39	83.5	-7.1	-7.7		
76+00 N	16.6	7.7	32.61	9.5	11:41:23	17	85.8	5.9	-0.6		
75+50 N	10.4	5.3	29.36	5.9	11:42:15RAV	38	79.2	5.7	5.8		
75+00 N	0.4	-1.4	27.96	0.2	11:43:29	49	79.1	-10.6	-2.5		
74+50 N	-1.9	-4.2	28.81	-1.1	11:44:32	49	81.7	-16.3	-13.5		
74+00 N	-0.6	-3.3	28.83	-0.3	11:45:17	39	75.6	-7.5	-11.9		
73+50 N	6.0	-2.6	30.55	3.4	11:46:02	29	82.4	4.0	-1.8		
73+00 N	1.5	-5.3	29.31	0.8	11:46:51	19	77.0	5.6	4.8		
72+50 N	4.0	-3.2	29.79	2.3	11:47:36	19	78.4	0.0	2.8		
72+00 N	-0.4	-1.5	31.86	-0.2	11:48:22	39	78.2	-2.1	-1.1		
71+50 N	2.4	-1.2	33.11	1.3	11:49:21	39	86.6	-2.0	-2.1		
71+00 N	1.5	-2.6	31.64	0.8	11:51:04	39	83.5	0.0	-1.0		
70+50 N	-0.1	-3.5	32.66	-0.1	11:52:01	49	81.6	-0.4	-0.2		
70+00 N	15.3	-4.6	35.59	8.7	11:53:05	29	74.1	6.5	3.0		
69+50 N	30.7	-4.8	32.78	17.1	11:54:10	39	78.0	25.1	15.8		
69+00 N	25.2	-11.3	30.21	14.3	11:55:00	39	77.6	22.8	23.9		
68+50 N	15.9	-13.8	29.00	9.2	11:55:58	39	79.5	-2.3	10.2		
68+00 N	16.3	-11.2	28.51	9.3	11:56:48	49	77.5	-12.9	-7.6		
67+50 N	11.1	-9.8	27.56	6.4	11:57:36	9	76.7	-7.8	-10.4		
67+00 N	16.0	-8.6	27.15	9.1	11:58:22	28	85.8	-3.0	-5.4		
66+50 N	17.4	-5.4	26.78	9.9	11:59:07	39	76.4	3.3	0.1		
66+00 N	21.4	-1.5	26.69	12.1	11:59:52	49	79.2	6.5	4.9		
65+50 N	20.9	0.2	25.33	11.8	12:00:45	39	81.6	4.9	5.7		

65+00 N	20.0	1.7	25.03	11.3	12:01:31	39	87.9	1.1	3.0	
64+50 N	12.4	1.1	24.65	7.0	12:02:29	49	-89.5	-5.6	-2.3	
64+00 N	8.6	1.5	25.57	4.9	12:03:14	39	87.3	-11.2	-8.4	
63+50 N	8.3	0.8	26.01	4.7	12:04:00	39	89.8	-8.7	-10.0	
63+00 N	10.8	2.0	25.75	6.1	12:04:44	29	-85.8	-1.1	-4.9	
62+50 N	15.5	4.5	25.73	8.8	12:05:32	28	89.0	5.3	2.1	
62+00 N	15.7	2.0	27.08	8.9	12:06:17	49	-86.3	6.9	6.1	
61+50 N	6.4	-2.3	25.44	3.6	12:07:09	49	-86.7	-2.4	2.2	
61+00 N	0.8	-3.2	24.39	0.4	12:08:09	39	-85.4	-13.7	-8.1	
60+50 N	-3.8	-5.2	25.70	-2.1	12:08:56	29	81.9	-14.2	-14.0	
60+00 N	2.9	-2.7	25.24	1.7	12:09:41	39	84.5	-4.4	-9.3	

Line 83+50 E Date 19 SEP 95 24.8 #46

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+00 N	24.7	-1.4	25.71	13.9	12:20:38	39	-76.1					
60+50 N	24.8	0.3	23.82	13.9	12:22:36	29	-86.7					
61+00 N	29.6	3.1	25.98	16.5	12:23:55	29	-84.4					
61+50 N	24.0	1.7	27.68	13.5	12:24:50	29	-84.8	-2.2				
62+00 N	20.7	0.2	28.29	11.7	12:25:38	39	-82.4	5.2	1.5			
62+50 N	21.4	-2.5	29.92	12.1	12:26:29	39	-88.2	6.2	5.7			
63+00 N	19.0	-4.8	30.07	10.8	12:27:15	39	87.3	2.3	4.2			
63+50 N	19.5	-4.4	30.36	11.0	12:28:26	29	-83.9	2.0	2.1			
64+00 N	19.5	-7.4	31.68	11.1	12:29:13	29	-86.9	0.8	1.4			
64+50 N	20.5	-7.2	31.24	11.6	12:30:00	37	83.6	-0.9	-0.1			
65+00 N	17.0	-5.8	30.39	9.7	12:30:42	9	84.7	0.8	-0.1			
65+50 N	11.2	-4.5	30.52	6.4	12:31:25	9	-87.0	6.6	3.7			
66+00 N	12.3	-3.3	30.72	7.0	12:32:07	29	89.5	7.9	7.2			
66+50 N	14.7	-2.2	30.43	8.3	12:32:51	9	84.7	0.8	4.3			
67+00 N	15.8	-0.2	30.02	8.9	12:33:35	39	85.3	-3.8	-1.5			
67+50 N	17.3	0.7	30.85	9.8	12:34:17	39	86.0	-3.4	-3.6			
68+00 N	15.3	0.1	31.52	8.7	12:35:06	49	81.3	-1.3	-2.4			
68+50 N	15.1	1.9	32.19	8.6	12:35:52	29	82.3	1.4	0.0			
69+00 N	13.8	2.1	32.65	7.8	12:36:44	38	78.7	2.1	1.7			
69+50 N	12.7	3.1	34.59	7.2	12:37:31	29	80.8	2.3	2.2			
70+00 N	3.8	-0.3	37.03	2.2	12:38:13	29	75.1	7.0	4.6			
70+50 N	-5.5	-4.6	34.19	-3.2	12:38:56	39	80.8	16.0	11.5			
71+00 N	-0.9	-3.2	32.68	-0.5	12:39:42	29	81.4	13.1	14.5			
71+50 N	8.4	-2.9	33.47	4.8	12:40:24	9	79.1	-5.3	3.9			
72+00 N	6.3	-5.8	34.80	3.6	12:41:10	29	84.9	-12.1	-8.7			
72+50 N	7.6	-3.4	35.13	4.3	12:41:59	29	84.1	-3.6	-7.9			
73+00 N	2.7	-4.7	32.14	1.5	12:42:42	29	82.3	2.6	-0.5			
73+50 N	11.6	-3.3	31.65	6.6	12:43:26	29	84.2	-0.2	1.2			
74+00 N	11.7	-2.7	31.72	6.6	12:44:10	39	75.1	-7.4	-3.8			
74+50 N	4.1	-2.3	32.96	2.3	12:44:53	29	79.2	-0.8	-4.1			
75+00 N	1.0	-3.5	32.49	0.5	12:45:35	29	81.6	10.4	4.8			
75+50 N	4.8	-5.5	31.10	2.8	12:46:19	49	84.6	5.6	8.0			
76+00 N	16.1	-5.0	28.73	9.2	12:47:03	29	84.8	-9.2	-1.8			
76+50 N	26.6	-2.0	29.46	14.9	12:48:00	37	82.6	-20.8	-15.0			
77+00 N	21.8	-5.9	32.28	12.3	12:49:04	36	77.1	-15.2	-18.0			
77+50 N	20.2	-7.8	30.04	11.4	12:50:11	26	75.5	0.4	-7.4			
78+00 N	18.6	-9.2	29.59	10.6	12:51:03	36	74.4	5.2	2.8			
78+50 N	19.2	-9.3	28.99	10.9	12:52:18	26	74.4	2.2	3.7			
79+00 N	25.1	-5.4	30.09	14.1	12:53:02	25	73.7	-3.0	-0.4			
79+50 N	6.4	-5.3	32.41	3.7	12:54:00	39	76.8	3.7	0.3			
80+00 N	0.4	-2.6	31.68	0.2	12:54:42	49	77.9	21.1	12.4			
80+50 N	-7.6	-7.9	29.84	-4.3	12:55:30	19	80.3	21.9	21.5			

81+00 N	10.8	-6.7	28.61	6.2	12:56:28	49	83.5	2.0	11.9	
81+50 N	18.7	-5.9	34.55	10.6	12:57:13	39	84.1	-20.9	-9.5	
82+00 N	25.7	-4.7	34.45	14.4	12:57:56	15	72.2	-23.1	-22.0	
82+50 N	20.2	-5.0	32.15	11.4	12:58:41	25	72.1	-9.0	-16.1	
83+00 N	10.0	-5.0	31.28	5.7	12:59:25	37	71.9	7.9	-0.6	
83+50 N	1.8	-3.6	29.73	1.0	13:00:08	29	75.9	19.1	13.5	
84+00 N	0.5	-2.9	28.59	0.3	13:01:17	29	75.0	15.8	17.4	
84+50 N	7.4	-0.3	28.62	4.2	13:02:02	29	80.5	2.2	9.0	
85+00 N	17.7	1.2	28.71	10.0	13:02:46	16	74.0	-12.9	-5.4	
85+50 N	9.4	-2.3	29.23	5.3	13:03:29	27	71.9	-10.8	-11.9	
86+00 N	2.5	-4.2	29.23	1.4	13:04:30	39	72.8	7.5	-1.7	
86+50 N	-0.3	-4.8	28.18	-0.2	13:06:47	29	83.7	14.1	10.8	
87+00 N	2.5	-3.6	27.48	1.4	13:07:30	29	80.6	5.5	9.8	
87+50 N	8.3	-3.6	27.55	4.7	13:08:19	39	72.4	-4.9	0.3	
88+00 N	5.1	-5.5	26.89	2.9	13:09:03	29	76.6	-6.4	-5.7	
88+50 N	8.0	-5.2	27.96	4.5	13:10:02	39	78.7	-1.3	-3.9	
89+00 N	8.4	-4.4	29.04	4.8	13:10:46	39	79.6	-1.7	-1.5	
89+50 N	6.4	-3.5	30.48	3.6	13:11:32	39	74.7	-1.0	-1.4	
90+00 N	2.0	-4.8	31.54	1.1	13:12:16	29	75.9	4.6	1.8	
90+50 N	-0.5	-4.7	30.79	-0.3	13:12:59	39	77.4	7.6	6.1	
91+00 N	-1.3	-4.4	29.51	-0.7	13:13:42	39	77.1	5.7	6.6	
91+50 N	-6.2	-5.0	28.35	-3.5	13:14:48	29	81.3	5.0	5.3	
92+00 N	-4.0	-4.8	27.77	-2.3	13:15:34	19	82.5	4.8	4.9	
92+50 N	2.5	-3.6	28.48	1.4	13:16:18	29	76.7	-3.3	0.7	
93+00 N	10.4	-1.4	31.39	5.9	13:17:18	29	77.5	-13.1	-8.2	
93+50 N	-0.5	-2.8	34.37	-0.3	13:18:04	29	80.9	-6.5	-9.8	
94+00 N	-6.9	-3.4	32.88	-3.9	13:19:36	39	82.4	11.5	2.5	
94+50 N	-6.6	-3.2	32.05	-3.7	13:20:32	39	80.4	13.2	12.3	
95+00 N	4.0	-1.1	34.60	2.2	13:21:20	39	86.7	-2.7	5.2	
95+50 N	8.1	-0.9	37.62	4.6	13:22:08	29	83.3	-14.4	-8.6	
96+00 N	-1.8	-2.4	36.36	-1.0	13:22:50	29	85.6	-5.1	-9.8	
96+50 N	1.4	1.3	32.99	0.8	13:23:39	39	83.2	7.0	0.9	
97+00 N	3.6	1.1	34.62	2.0	13:24:19	29	79.7	0.8	3.9	
97+50 N	0.0	0.0	34.63	0.0	13:24:59	19	82.9	-2.2	-0.7	
98+00 N	0.5	1.1	35.00	0.3	13:26:39	29	77.2	2.5	0.1	
98+50 N	0.6	0.9	34.17	0.3	13:27:34	9	79.0	1.4	1.9	
99+00 N	4.2	1.5	35.18	2.4	13:28:16	29	82.4	-2.4	-0.5	
99+50 N	1.9	-0.4	36.33	1.1	13:29:43	39	75.8	-2.9	-2.7	

Line 87+50 E Date 19 SEP 95 24.8 #126

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	-9.9	-1.9	36.20	-5.6	13:38:14	39	72.3	(init. point)			
20000 N	-10.0	-0.4	34.51	-5.7	13:40:02	38	76.7				
99+50 N	-10.5	-2.2	34.85	-6.0	13:41:04	29	77.5	#			
99+00 S	-7.0	-0.1	35.25	-4.0	13:41:50	29	82.5				
98+50 S	-6.0	0.2	34.60	-3.4	13:42:56	38	78.2	#			
98+00 N	-5.1	0.4	35.25	-2.9	13:44:07	39	75.2	-4.4			
97+50 N	-7.8	-0.8	34.67	-4.5	13:45:08	39	79.4	#			
97+00 S	-6.7	-1.0	34.20	-3.8	13:46:42	29	83.0	-3.0	-3.7		
96+50 N	-5.1	-1.0	33.59	-2.9	13:47:47	29	79.1	-0.2	-1.6		
96+00 N	-5.3	-1.3	33.59	-3.0	13:48:48	39	78.0	#			
95+50 S	-5.9	-1.6	33.52	-3.4	13:49:25	39	83.1	-0.4	-0.3		
95+00 S	-6.0	0.4	33.42	-3.4	13:50:26	28	78.6	0.1	-0.2		
94+50 S	-7.3	-0.1	32.87	-4.1	13:52:21	39	75.5	1.2	0.6		
94+00 N	-7.3	0.7	30.07	-4.2	13:53:21	39	78.2	1.5	1.3		
93+50 S	-5.6	0.5	31.43	-3.2	13:54:21	39	81.5	-0.1	0.7		

93+00 S	-5.9	-0.8	31.90	-3.4	13:55:17	39	78.0	#		
92+50 S	-3.2	-0.3	32.75	-1.8	13:56:02	19	80.6	#		
92+00 N	-0.8	-0.8	33.22	-0.4	13:57:00	29	80.0	-4.7	-2.4	
91+50 N	-2.6	-1.7	32.29	-1.5	13:57:52	39	76.7	-5.5	-5.1	
91+00 N	1.9	-0.4	33.48	1.1	13:58:57	39	83.1	#		
90+50 S	-11.9	0.5	35.10	-6.7	14:00:09	39	74.7	4.6	-0.5	
90+00 S	-14.8	-0.4	32.37	-8.4	14:01:13	49	76.5	13.2	8.9	
89+50 N	-16.1	-4.6	33.17	-9.1	14:02:16	59	84.1	9.3	11.2	
89+00 N	-15.2	-4.7	34.00	-8.6	14:03:21	59	86.0	2.6	5.9	
88+50 N	-19.1	-8.5	34.62	-10.9	14:04:26	49	86.9	2.0	2.3	
88+00 N	-18.9	-7.9	33.35	-10.8	14:05:26	49	83.2	4.0	3.0	
87+50 N	-14.4	-7.3	31.91	-8.2	14:06:32	39	74.5	-0.5	1.7	
87+00 N	-12.7	-5.4	32.35	-7.2	14:07:44	59	87.7	-6.3	-3.4	
86+50 S	-9.8	-3.7	33.05	-5.6	14:08:47	49	80.3	-6.2	-6.3	
86+00 S	-13.8	-3.9	32.47	-7.8	14:09:45	59	79.2	-2.0	-4.1	
85+50 S	-14.4	-4.2	31.20	-8.2	14:10:45	59	89.4	3.2	0.6	
85+00 S	-9.8	-3.0	31.41	-5.6	14:11:44	59	81.2	0.4	1.8	
84+50 N	-15.0	-4.4	32.56	-8.5	14:13:02	49	87.8	-1.9	-0.8	
84+00 N	-7.7	-3.3	34.13	-4.4	14:14:02	49	82.4	-0.9	-1.4	
83+50 N	-22.7	-2.7	37.11	-12.8	14:15:05	59	81.9	3.1	1.1	
83+00 S	-25.6	-6.3	44.27	-14.4	14:16:16	49	82.6	14.3	8.7	
82+50 S	-15.6	-6.0	41.91	-8.9	14:17:19	59	-87.6	6.1	10.2	
82+00 N	-3.4	-10.3	40.85	-1.9	14:18:30	49	80.6	-16.4	-5.2	
81+50 N	-2.8	-10.1	40.74	-1.6	14:19:38	49	84.1	-19.8	-18.1	
81+00 N	-5.0	-9.1	37.48	-2.9	14:21:43	49	76.9	-6.3	-13.1	
80+50 N	-13.6	-3.8	34.30	-7.7	14:23:07	49	77.8	7.1	0.4	
80+00 N	-11.6	1.3	32.45	-6.6	14:24:08	49	79.9	9.8	8.4	
79+50 N	-7.3	2.6	32.50	-4.2	14:27:05	29	77.9	0.2	5.0	
79+00 N	7.0	-2.5	32.39	4.0	14:27:50	39	78.4	-6.1	-3.0	
78+50 N	12.4	4.5	32.22	7.1	14:47:19	49	76.9	0.3	-2.9	
78+00 N	12.4	6.7	31.00	7.1	14:48:18	49	74.8	6.0	3.1	
77+50 N	11.7	3.2	30.38	6.6	14:49:18	27	84.0	2.6	4.3	
77+00 N	24.1	10.3	30.38	13.7	14:50:11	37	83.9	6.1	4.3	
76+50 N	29.5	10.7	30.35	16.6	14:51:59	46	80.2	16.6	11.3	
76+00 N	22.9	8.4	32.31	13.0	14:52:49	56	-88.0	9.3	12.9	
75+50 N	9.7	6.7	34.59	5.5	14:53:44	19	84.6	-11.8	-1.3	
75+00 N	11.1	5.8	34.36	6.3	14:54:28	17	79.3	-17.8	-14.8	
74+50 N	10.9	2.4	31.68	6.2	14:55:31	39	88.1	-6.0	-11.9	
74+00 N	6.8	-0.2	31.62	3.9	14:56:36	49	78.2	-1.7	-3.9	
73+50 N	10.6	1.5	31.91	6.0	14:57:40	49	88.0	-2.6	-2.2	
73+00 N	10.1	1.7	31.39	5.7	14:59:44	49	83.6	1.6	-0.5	
72+50 N	6.2	0.2	31.85	3.5	15:00:46	59	88.3	-0.7	0.4	
72+00 N	0.4	-1.7	31.89	0.2	15:01:53	59	78.1	-8.0	-4.4	
71+50 N	-4.4	-2.9	32.89	-2.5	15:02:42	59	80.9	-11.5	-9.8	
71+00 N	-1.4	-0.6	34.47	-0.8	15:03:37	49	69.8	-7.0	-9.3	
70+50 N	6.1	3.5	34.18	3.5	15:04:51	59	80.9	5.0	-1.0	
70+00 N	8.6	4.4	33.88	4.9	15:05:50	59	74.7	11.7	8.3	
69+50 N	10.7	5.9	34.04	6.1	15:06:46	58	82.2	8.3	10.0	
69+00 N	11.9	7.6	34.27	6.8	15:07:34	49	-83.2	4.5	6.4	
68+50 N	9.4	8.3	35.45	5.4	15:08:51	39	82.7	1.2	2.8	
68+00 N	12.7	9.9	36.06	7.3	15:09:47	39	-86.6	-0.2	0.5	
67+50 N	25.1	13.4	34.94	14.3	15:12:32	49	-75.6	9.4	4.6	
67+00 N	30.8	12.2	34.16	17.3	15:13:23	5	-83.9	18.9	14.1	
66+50 N	22.7	4.8	33.92	12.8	15:14:26	59	86.3	8.5	13.7	
66+00 N	24.0	-1.1	33.01	13.5	15:15:40	48	89.6	-5.3	1.6	
65+50 N	21.3	-0.9	34.02	12.0	15:16:48	39	86.3	-4.6	-5.0	

65+00 N	21.6	-2.2	33.67	12.2	15:18:05		57	88.3	-2.1	-3.4
64+50 N	21.0	-1.0	31.26	11.9	15:18:54		49	86.5	-1.4	-1.8
64+00 N	17.0	-0.9	31.37	9.6	15:19:43		39	86.8	-2.7	-2.1
63+50 N	22.9	-0.2	31.58	12.9	15:20:31		37	83.6	-1.6	-2.2
63+00 N	21.8	-1.2	31.77	12.3	15:21:31		39	84.5	3.7	1.0
62+50 N	26.8	1.6	31.00	15.0	15:22:17		49	88.2	4.8	4.2
62+00 N	20.4	-1.1	32.42	11.5	15:23:05		39	89.6	1.3	3.0
61+50 N	19.0	-0.2	31.65	10.8	15:23:47		19	86.5	-5.0	-1.9
61+00 N	18.7	-1.0	31.16	10.6	15:24:36		39	-84.3	-5.1	-5.1
60+50 N	17.9	-0.6	31.26	10.1	15:25:21		49	-88.0	-1.6	-3.4
60+00 N	20.4	0.9	31.32	11.5	15:26:11		46	-86.1	0.2	-0.7

Line 85+50 E Date 19 SEP 95 24.8 #208

POSITION	I/P	QUAD	T.FLD	TILT	TIME		CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+00 S	-10.1	-5.5	27.38	-5.8	15:48:24		49	88.0	3.7	2.0		
60+50 S	-2.0	0.0	29.22	-1.1	15:49:01		29	-86.8	7.1	5.4		
61+00 S	-6.7	0.9	31.40	-3.8	15:49:26		29	-88.8	7.8	7.4		
61+50 S	-17.9	3.6	30.79	-10.1	15:49:53		37	86.8	-7.0	0.4		
62+00 S	-18.7	5.7	31.07	-10.6	15:50:17		38	-89.5	-15.8	-11.4		
62+50 S	-17.4	6.7	30.21	-9.9	15:50:42		39	88.1	-6.6	-11.2		
63+00 S	-14.7	6.0	30.49	-8.4	15:51:06		39	87.4	2.4	-2.1		
63+50 S	-15.8	4.7	30.75	-9.0	15:51:30	RAV	39	83.9	3.1	2.7		
64+00 S	-17.5	1.2	32.08	-9.9	15:52:07		47	81.8	-0.6	1.2		
64+50 S	-12.1	0.0	32.87	-6.9	15:52:36		38	80.8	0.6	0.0		
65+00 S	-12.2	-2.2	31.51	-7.0	15:53:08		39	81.8	5.0	2.8		
65+50 S	-15.8	-4.3	30.26	-9.0	15:53:34		49	87.8	0.8	2.9		
66+00 S	-19.0	-3.9	29.39	-10.8	15:53:59		49	84.6	-5.9	-2.6		
66+50 S	-23.0	-4.2	30.10	-13.0	15:54:27		35	82.2	-7.8	-6.9		
67+00 S	-21.3	-5.6	31.45	-12.1	15:54:52		46	78.7	-5.3	-6.6		
67+50 S	-12.0	-3.5	33.06	-6.8	15:55:18		38	75.5	4.9	-0.2		
68+00 S	-1.5	-1.6	31.32	-0.9	15:55:44		39	73.1	17.4	11.1		
68+50 S	-2.6	-7.7	28.38	-1.5	15:56:20		7	77.3	16.5	16.9		
69+00 S	-4.7	-9.1	28.37	-2.7	15:56:48		29	77.2	3.5	10.0		
69+50 S	-7.0	-11.8	28.67	-4.0	15:57:13		29	79.9	-4.3	-0.4		
70+00 S	-9.7	-13.6	29.02	-5.6	15:57:37		49	78.6	-5.4	-4.9		
70+50 S	-11.0	-14.4	29.29	-6.4	15:58:01		48	79.1	-5.3	-5.4		
71+00 S	-9.4	-12.2	29.84	-5.4	15:58:58		39	76.3	-2.2	-3.8		
71+50 S	-6.5	-10.6	28.92	-3.7	15:59:25		39	75.3	2.9	0.3		
72+00 S	-3.0	-8.9	28.42	-1.7	15:59:49		38	80.8	6.4	4.6		
72+50 S	-2.2	-9.4	28.14	-1.2	16:00:15		39	81.0	6.2	6.3		
73+00 S	-4.8	-10.9	27.63	-2.7	16:00:39		49	80.8	1.5	3.8		
73+50 S	-12.2	-16.2	27.86	-7.1	16:01:04		39	79.8	-6.9	-2.7		
74+00 S	-2.9	-5.6	28.61	-1.7	16:01:31		39	78.6	-4.9	-5.9		
74+50 S	6.1	-4.7	28.34	3.5	16:01:56		49	78.2	11.6	3.3		
75+00 S	10.5	-4.2	26.76	6.0	16:02:25		49	80.4	18.3	14.9		
75+50 S	7.9	-8.2	25.94	4.5	16:02:49	RAV	49	82.0	8.7	13.5		
76+00 S	8.9	-2.6	28.25	5.1	16:03:30		49	86.0	0.1	4.4		
76+50 S	8.9	-1.4	28.69	5.0	16:03:57		39	81.3	-0.4	-0.2		
77+00 S	3.4	-5.3	28.28	1.9	16:04:21		49	82.6	-2.7	-1.6		
77+50 S	6.1	-2.2	28.52	3.5	16:04:48		8	82.5	-4.7	-3.7		
78+00 S	-1.9	-5.6	29.19	-1.1	16:05:10		49	78.8	-4.5	-4.6		
78+50 S	2.2	0.0	28.18	1.2	16:05:36		39	77.1	-5.3	-4.9		
79+00 S	0.4	1.3	27.55	0.2	16:06:02		39	76.4	-1.0	-3.2		
79+50 S	-1.5	1.7	27.88	-0.9	16:06:28		39	80.1	-0.8	-0.9		
80+00 S	-1.7	1.9	28.38	-1.0	16:06:53		39	81.4	-3.3	-2.1		
80+50 S	-2.9	2.7	29.73	-1.7	16:07:19		49	79.3	-2.0	-2.7		

81+00 S	-4.2	1.6	29.10	-2.4	16:07:43		49	79.4	-2.2	-2.1	
81+50 S	-7.1	0.6	30.09	-4.0	16:08:11		49	76.7	-3.7	-3.0	
82+00 S	-5.8	3.2	31.47	-3.3	16:08:34		39	81.0	-3.2	-3.5	
82+50 S	-9.3	2.9	30.74	-5.3	16:08:59	RAV	49	79.7	-2.2	-2.7	
83+00 S	-1.4	2.2	30.85	-0.8	16:09:33		39	72.7	1.2	-0.5	
83+50 S	6.3	6.6	29.44	3.6	16:10:06	CLAY	49	83.1	11.4	6.3	
84+00 S	-2.8	1.6	29.51	-1.6	16:10:41	CLAY	49	82.6	8.1	9.7	
84+50 S	-9.3	0.5	31.24	-5.3	16:11:15	CLAY	29	86.6	-9.7	-0.8	
85+00 S	-9.6	1.6	29.50	-5.5	16:11:44	CLAY	39	81.5	-12.8	-11.3	
85+50 S	-16.6	1.0	28.67	-9.4	16:12:16	CLAY	47	72.1	-8.0	-10.4	
86+00 S	-10.3	0.0	28.50	-5.8	16:12:47	CLAY	49	75.3	-4.4	-6.2	
86+50 S	-3.2	-0.7	28.14	-1.8	16:13:16	CLAY	59	72.9	7.3	1.4	
87+00 S	3.2	0.3	27.92	1.8	16:13:44	CLAY	39	76.6	15.2	11.2	
87+50 S	-8.2	-4.2	30.36	-4.7	16:14:25		49	82.4	4.7	9.9	
88+00 S	-5.7	-1.6	28.29	-3.2	16:14:48		39	76.3	-7.9	-1.6	
88+50 S	2.6	-0.2	25.52	1.5	16:15:13	RAV	39	70.1	1.2	-3.4	
89+00 S	6.7	1.5	25.41	3.8	16:15:45	CLAY	49	73.2	13.2	7.2	
89+50 S	8.2	3.8	27.23	4.7	16:16:47	CLAY	39	78.5	10.2	11.7	
90+00 S	1.5	3.3	27.62	0.9	16:17:22	HILL	49	77.7	0.3	5.2	
90+50 S	-6.8	-0.6	28.10	-3.9	16:17:53	CLAY	49	73.2	-11.5	-5.6	
91+00 S	-1.4	-1.2	28.51	-0.8	16:18:24	CLAY	49	72.5	-10.3	-10.9	
91+50 S	4.2	-2.3	29.20	2.4	16:18:55		39	81.3	4.6	-2.9	
92+00 S	4.4	-2.9	29.87	2.5	16:19:23	CLAY	39	75.5	9.6	7.1	
92+50 S	3.9	-3.8	30.39	2.2	16:19:56	CLAY	39	79.0	3.1	6.3	
93+00 S	1.0	-3.5	32.12	0.6	16:20:24	CLAY	39	83.2	-2.1	0.5	
93+50 S	-1.8	0.0	31.26	-1.0	16:21:00		59	86.4	-5.1	-3.6	
94+00 S	0.0	0.4	30.44	0.0	16:21:30		49	82.4	-3.8	-4.5	
94+50 S	-0.9	0.9	30.83	-0.5	16:21:54	CLAY	39	77.2	-0.1	-2.0	
95+00 S	-4.1	-0.4	30.72	-2.3	16:22:26	CLAY	39	81.1	-1.8	-1.0	
95+50 S	-4.7	-1.0	30.73	-2.7	16:22:58	CLAY	49	79.6	-4.5	-3.2	
96+00 S	-2.1	-0.7	31.25	-1.2	16:23:30		39	82.5	-1.1	-2.8	
96+50 S	-0.1	-1.8	30.92	0.0	16:23:57	CLAY	49	82.4	3.8	1.3	
97+00 S	-6.4	-2.8	32.11	-3.6	16:24:33		39	86.6	0.3	2.0	
97+50 S	-7.8	-0.9	30.67	-4.4	16:25:00		59	82.4	-6.8	-3.3	
98+00 S	-15.7	-4.9	30.12	-8.9	16:25:26	CLAY	49	85.2	-9.7	-8.3	
98+50 S	-14.4	-2.4	30.90	-8.2	16:25:58	CLAY	59	70.3	-9.1	-9.4	
99+00 S	-5.4	-0.3	29.81	-3.1	16:26:35	RAV	49	78.3	2.0	-3.6	
99+50 S	-5.9	-2.0	30.16	-3.4	16:27:07	RAV	69	67.1	10.6	6.3	
20000 N	-0.9	0.0	29.02	-0.5	16:27:44	RAV	49	85.8	7.4	9.0	

Line 0+00 E Date 19 SEP 95 24.8 #300

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	0.0	3.0	37.74	0.0	16:31:00		49	68.7	(init. point)			

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242

VLF TOTAL FIELD DATA (uncorrected)
Date 19 SEP 95
Operator: JN\HMC
Records: 300
Bat: 17.5 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/20 10:27:38

Line 0+00 E Date 19 SEP 95 23.4 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	70.7	0.1	3732.	10.0	10:52:13		99	0.0 !				

Line 0+00 E Date 19 SEP 95 23.4 #2

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	-3.9	-0.1	10.46	-2.2	10:54:12		78	-4.9	(init. point)			

Line 81+50 E Date 19 SEP 95 23.4 #3

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
81+50 N	1.9	-1.7	7.34	1.1	11:15:15		39	-4.2				
80+50 N	-7.8	-1.7	8.07	-4.4	11:17:38		39	-15.1				
80+00 N	-15.5	-3.5	9.09	-8.8	11:24:58		35	-7.1				
79+50 N	-13.8	-1.0	9.64	-7.8	11:25:52		45	-7.6	-11.1			
79+00 N	-11.5	-0.4	9.78	-6.5	11:26:45		6	-8.9	-1.1	-6.1		
78+50 N	-12.1	1.8	10.24	-6.9	11:28:39		47	-10.8	3.2	1.0		
78+00 N	-11.9	4.4	10.23	-6.8	11:36:45		39	-22.6	0.6	1.9		
77+50 N	-10.5	2.9	10.47	-6.0	11:37:39		19	-21.0	0.6	0.6		
77+00 N	-5.4	4.0	10.02	-3.0	11:38:56		39	-15.8	4.7	2.6		
76+50 N	4.6	10.8	8.60	2.6	11:40:05	RAV	49	-14.5	12.4	8.5		
76+00 N	-14.0	0.6	9.24	-7.9	11:41:23		37	-8.9	3.7	8.0		
75+50 N	-12.9	0.3	10.11	-7.3	11:42:15	RAV	47	-15.2	-14.8	-5.6		
75+00 N	-15.0	1.5	9.95	-8.5	11:43:29		45	-14.3	-10.5	-12.7		
74+50 N	-14.6	-1.7	11.18	-8.3	11:44:32		45	-13.9	-1.6	-6.1		
74+00 N	-5.2	-1.2	10.10	-3.0	11:45:17		29	-12.6	4.5	1.4		
73+50 N	-14.2	0.2	9.89	-8.0	11:46:02		46	-9.0	5.8	5.1		
73+00 N	-26.2	0.1	10.37	-14.7	11:46:51		33	-15.7	-11.4	-2.8		
72+50 N	-27.7	3.6	11.57	-15.5	11:47:36		3	-14.0	-19.2	-15.3		
72+00 N	-17.0	1.5	13.77	-9.7	11:48:22		35	-13.1	-2.5	-10.9		
71+50 N	-0.2	-0.4	12.78	-0.1	11:49:21		39	-4.6	20.4	8.9		
71+00 N	-2.0	-1.7	12.20	-1.1	11:51:04		39	-4.8	24.0	22.2		
70+50 N	0.4	-1.5	12.41	0.2	11:52:01		49	-5.5	8.9	16.4		
70+00 N	10.8	-1.9	11.88	6.1	11:53:05		39	-5.7	7.5	8.2		
69+50 N	8.5	-1.8	10.97	4.9	11:54:10		39	-11.8	11.9	9.7		
69+00 N	-1.4	-4.0	11.44	-0.8	11:55:00		39	-16.4	-2.2	4.8		
68+50 N	11.4	1.8	11.75	6.5	11:55:58		39	-13.0	-5.3	-3.8		
68+00 N	12.2	4.6	10.88	7.0	11:56:48		49	-15.6	9.4	2.0		
67+50 N	6.5	4.2	10.60	3.7	11:57:36		49	-15.9	5.0	7.2		
67+00 N	2.7	3.3	10.94	1.5	11:58:22		39	-9.7	-8.3	-1.7		
66+50 N	4.5	4.5	11.11	2.6	11:59:07		39	-20.4	-6.6	-7.5		
66+00 N	2.7	6.5	10.20	1.5	11:59:52		39	-22.9	-1.1	-3.9		
65+50 N	-10.1	1.7	11.18	-5.7	12:00:45		49	-18.6	-8.3	-4.7		
65+00 N	-11.4	0.1	12.26	-6.5	12:01:31		39	-17.6	-16.3	-12.3		
64+50 N	3.0	6.4	11.32	1.7	12:02:29		49	-17.1	-0.6	-8.5		
64+00 N	2.3	7.5	11.23	1.3	12:03:14		39	-20.8	15.2	7.3		
63+50 N	-3.6	3.6	10.70	-2.0	12:04:00		39	-16.2	4.1	9.6		
63+00 N	-9.2	-0.3	10.79	-5.2	12:04:44		39	-15.0	-10.2	-3.1		

62+50 N	-14.4	-5.9	11.73	-8.2	12:05:32	39	-18.0	-12.7	-11.5	
62+00 N	-11.0	-5.4	12.79	-6.3	12:06:17	49	-18.2	-7.3	-10.0	
61+50 N	4.8	4.2	11.96	2.8	12:07:09	39	-26.6	9.9	1.3	
61+00 N	-18.7	-3.1	11.29	-10.6	12:08:09	44	-22.3	6.7	8.3	
60+50 N	-10.5	3.4	12.31	-6.0	12:08:56	39	-22.0	-13.1	-3.2	
60+00 N	-6.5	5.3	11.28	-3.7	12:09:41	39	-16.7	-1.9	-7.5	

Line 83+50 E Date 19 SEP 95 23.4 #46

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+00 N	-18.6	2.0	13.53	-10.5	12:20:38	49	-12.9				
60+50 N	-9.6	2.9	11.35	-5.5	12:22:36	49	-12.6				
61+00 N	-7.3	3.0	11.04	-4.2	12:23:55	9	-13.5				
61+50 N	7.2	1.8	11.19	4.1	12:24:50	29	-8.3	-15.9			
62+00 N	11.7	-1.1	12.33	6.6	12:25:38	39	-9.4	-20.4	-18.2		
62+50 N	0.0	-5.0	13.17	0.0	12:26:29	39	-11.7	-6.7	-13.6		
63+00 N	4.6	1.0	12.70	2.6	12:27:15	29	-14.4	8.1	0.7		
63+50 N	1.6	2.3	13.12	0.9	12:28:26	39	-13.2	3.1	5.6		
64+00 N	-0.7	2.0	12.17	-0.4	12:29:13	29	-11.6	2.1	2.6		
64+50 N	5.7	1.3	12.21	3.2	12:30:00	39	-14.0	0.7	1.4		
65+00 N	6.5	0.0	12.81	3.7	12:30:42	49	-12.3	-6.4	-2.9		
65+50 N	6.4	-1.6	13.26	3.7	12:31:25	39	-8.7	-4.6	-5.5		
66+00 N	2.5	-0.4	12.86	1.4	12:32:07	49	-12.5	1.8	-1.4		
66+50 N	5.2	0.7	12.63	3.0	12:32:51	39	-13.2	3.0	2.4		
67+00 N	6.6	0.4	12.71	3.8	12:33:35	39	-15.5	-1.7	0.6		
67+50 N	8.2	2.1	13.20	4.7	12:34:17	49	-8.8	-4.1	-2.9		
68+00 N	5.9	1.8	13.22	3.3	12:35:06	49	-9.7	-1.2	-2.7		
68+50 N	6.1	1.8	13.42	3.5	12:35:52	49	-10.4	1.7	0.2		
69+00 N	6.1	1.0	13.45	3.5	12:36:44	49	-11.5	1.0	1.3		
69+50 N	7.2	0.7	13.52	4.1	12:37:31	49	-7.9	-0.8	0.1		
70+00 N	6.3	-0.3	13.76	3.6	12:38:13	29	-9.8	-0.7	-0.8		
70+50 N	4.8	-2.1	13.96	2.7	12:38:56	39	-12.2	1.3	0.3		
71+00 N	4.7	2.2	15.27	2.7	12:39:42	39	-15.2	2.3	1.8		
71+50 N	-11.4	0.3	15.47	-6.5	12:40:24	49	-12.7	10.1	6.2		
72+00 N	-15.8	-2.8	13.87	-9.0	12:41:10	49	-13.7	20.9	15.5		
72+50 N	-12.4	0.4	13.34	-7.1	12:41:59	49	-10.4	12.3	16.6		
73+00 N	-15.1	0.2	13.38	-8.6	12:42:42	49	-16.2	0.2	6.2		
73+50 N	-20.7	-0.9	12.59	-11.7	12:43:26	39	-12.3	4.2	2.2		
74+00 N	-9.1	-0.7	11.92	-5.2	12:44:10	49	-15.0	1.2	2.7		
74+50 N	-5.0	-0.7	12.89	-2.8	12:44:53	59	-9.6	-12.3	-5.6		
75+00 N	-10.3	1.5	12.96	-5.8	12:45:35	49	-11.0	-8.3	-10.3		
75+50 N	-20.7	3.4	12.86	-11.7	12:46:19	49	-14.3	9.5	0.6		
76+00 N	-23.4	4.3	11.13	-13.2	12:47:03	49	-18.4	16.3	12.9		
76+50 N	0.5	10.7	10.89	0.3	12:48:00	49	-18.4	-4.6	5.8		
77+00 N	0.2	5.4	12.80	0.1	12:49:04	39	-12.1	-25.3	-15.0		
77+50 N	-0.9	4.8	12.27	-0.5	12:50:11	29	-12.6	-12.5	-18.9		
78+00 N	5.5	4.4	12.56	3.1	12:51:03	49	-7.8	-2.2	-7.4		
78+50 N	4.4	-2.0	11.82	2.5	12:52:18	39	-9.2	-6.0	-4.1		
79+00 N	20.5	-2.0	12.77	11.5	12:53:02	44	-8.8	-11.4	-8.7		
79+50 N	2.6	-4.3	14.89	1.5	12:54:00	49	-2.7	-7.4	-9.4		
80+00 N	-10.9	2.4	14.74	-6.2	12:54:42	49	-4.1	18.7	5.6		
80+50 N	-22.7	5.5	11.38	-12.8	12:55:30	39	-8.1	32.0	25.3		
81+00 N	-14.1	0.3	11.12	-8.0	12:56:28	49	-11.7	16.1	24.0		
81+50 N	8.4	3.5	12.33	4.8	12:57:13	39	-6.8	-15.8	0.1		
82+00 N	-2.7	-1.9	12.46	-1.5	12:57:56	49	-10.0	-24.1	-20.0		
82+50 N	-2.3	-3.0	12.32	-1.3	12:58:41	49	-5.6	-0.4	-12.3		
83+00 N	-1.0	-0.1	12.28	-0.6	12:59:25	49	-0.2	5.2	2.4		

83+50 N	2.4	0.0	11.52	1.3	13:00:08	39	0.0	-3.5	0.8	
84+00 N	17.3	4.1	11.89	9.8	13:01:17	45	-6.2	-13.0	-8.3	
84+50 N	4.9	-3.5	14.19	2.8	13:02:02	39	-8.9	-11.9	-12.5	
85+00 N	-6.5	-8.9	13.11	-3.7	13:02:46	49	-11.1	12.0	0.0	
85+50 N	9.0	-4.5	12.49	5.2	13:03:29	49	-2.0	11.1	11.5	
86+00 N	12.2	-2.4	12.71	6.9	13:04:30	39	-2.6	-13.0	-1.0	
86+50 N	8.3	-0.8	13.37	4.7	13:06:47	29	0.8	-10.1	-11.6	
87+00 N	4.9	-1.1	13.43	2.8	13:07:30	49	-1.6	4.6	-2.8	
87+50 N	4.5	0.5	13.24	2.6	13:08:19	49	-4.3	6.2	5.4	
88+00 N	5.2	0.4	13.11	3.0	13:09:03	49	-4.5	1.9	4.0	
88+50 N	9.6	1.3	13.08	5.4	13:10:02	49	-1.2	-3.0	-0.6	
89+00 N	11.1	1.1	13.22	6.3	13:10:46	39	-0.4	-6.1	-4.6	
89+50 N	8.0	0.0	13.53	4.6	13:11:32	49	-6.6	-2.5	-4.3	
90+00 N	9.7	1.8	13.65	5.5	13:12:16	49	-6.0	1.6	-0.5	
90+50 N	6.5	0.5	13.68	3.7	13:12:59	49	-5.4	1.7	1.6	
91+00 N	6.0	0.5	13.47	3.4	13:13:42	49	-2.6	3.0	2.3	
91+50 N	8.8	3.4	13.71	5.0	13:14:48	39	-3.5	0.8	1.9	
92+00 N	6.6	3.2	13.97	3.8	13:15:34	19	-5.3	-1.7	-0.5	
92+50 N	6.0	1.9	13.71	3.4	13:16:18	49	-13.3	1.2	-0.3	
93+00 N	7.9	1.9	13.19	4.5	13:17:18	39	-9.3	0.9	1.0	
93+50 N	11.4	1.7	12.99	6.5	13:18:04	39	-7.2	-3.8	-1.5	
94+00 N	13.7	1.2	13.35	7.8	13:19:36	39	-3.9	-6.4	-5.1	
94+50 N	16.2	2.5	13.49	9.2	13:20:32	46	-11.0	-6.0	-6.2	
95+00 N	16.5	1.6	14.35	9.4	13:21:20	46	-10.3	-4.3	-5.2	
95+50 N	17.0	-1.7	13.53	9.7	13:22:08	35	-5.7	-2.1	-3.2	
96+00 N	16.3	-0.7	14.90	9.2	13:22:50	36	-3.5	-0.3	-1.2	
96+50 N	9.9	1.4	14.02	5.6	13:23:39	39	-6.4	4.3	2.0	
97+00 N	15.2	2.9	13.98	8.7	13:24:19	37	-7.0	4.6	4.4	
97+50 N	14.5	1.7	14.44	8.2	13:24:59	46	-5.8	-2.1	1.2	
98+00 N	15.4	2.7	14.10	8.7	13:26:39	39	-9.8	-2.6	-2.4	
98+50 N	11.7	0.3	14.35	6.7	13:27:34	39	-9.0	1.5	-0.6	
99+00 N	17.1	1.4	14.18	9.7	13:28:16	36	-4.9	0.5	1.0	
99+50 N	14.2	-0.6	14.68	8.1	13:29:43	29	-8.3	-2.4	-1.0	

Line 87+50 E Date 19 SEP 95 23.4 #126

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
200+00 N	-7.2	-1.8	15.25	-4.1	13:41:04	39	-11.0	#				
99+50 N	-2.6	0.7	15.49	-3.2	13:34:23	29	-8.2					
99+00 S	-6.2	-0.7	15.71	-3.5	13:41:50	39	-5.4					
98+50 S	-6.3	-0.3	14.66	-3.6	13:42:56	29	-9.4	#				
98+00 N	-7.5	-0.9	15.21	-4.3	13:44:07	39	-10.7	3.2				
97+50 N	-11.3	-0.7	14.23	-6.4	13:45:08	39	-9.8	#				
97+00 S	-11.0	-1.4	14.12	-6.3	13:46:42	39	-8.7	3.9	3.5			
96+50 N	-9.3	-3.3	14.06	-5.3	13:47:47	39	-10.7	3.8	3.8			
96+00 N	-5.6	-1.7	13.99	-3.2	13:48:48	39	-9.1	#				
95+50 S	-6.1	-1.8	13.97	-3.5	13:49:25	39	-4.4	-1.8	1.0			
95+00 S	-7.6	1.4	14.34	-4.3	13:50:26	39	-7.2	-3.8	-2.8			
94+50 S	-17.7	1.8	14.52	-10.0	13:52:21	39	-3.3	5.5	0.8			
94+00 N	-32.4	1.1	11.32	-17.9	13:53:21	1	-18.5	20.1	12.8			
93+50 S	-8.6	-1.5	12.77	-4.9	13:54:21	39	-6.1	8.5	14.3			
93+00 S	-2.0	-4.5	12.34	-1.1	13:55:17	39	-7.4	#				
92+50 S	10.1	-3.8	13.00	5.8	13:56:02	49	-5.3	#				
92+00 N	6.3	-6.2	14.63	3.6	13:57:00	39	-4.6	-26.6	-9.1			
91+50 N	3.6	-1.8	13.73	2.0	13:57:52	39	-8.5	-28.4	-27.5			
91+00 N	2.2	-2.2	14.22	1.2	13:58:57	29	-2.6	#				
90+50 S	0.6	2.6	14.57	0.3	14:00:09	49	-3.8	-3.6	-16.0			

90+00 S	0.7	5.7	14.53	0.4	14:01:13	59	-8.9	4.9	0.6
80+50 N	-0.1	9.3	14.79	0.0	14:02:16	59	-3.3	1.9	3.4
89+00 N	-1.0	7.4	15.04	-0.6	14:03:21	59	-3.2	1.3	1.6
88+50 N	-8.3	0.6	13.34	-4.7	14:04:26	19	0.9	5.7	3.5
88+00 N	0.4	0.0	13.57	0.2	14:05:26	69	-3.3	3.9	4.8
87+50 N	4.7	-2.6	14.10	2.7	14:06:32	29	-11.0	-8.2	-2.2
87+00 N	7.5	-2.6	15.15	4.3	14:07:44	59	-1.0	-11.5	-9.9
86+50 S	0.2	-1.3	15.67	0.1	14:08:47	49	-6.1	-1.5	-6.5
86+00 S	-7.9	-0.4	15.09	-4.5	14:09:45	59	-5.8	11.4	4.9
85+50 S	-5.3	-3.1	13.08	-3.0	14:10:45	9	-5.5	11.9	11.6
85+00 S	12.1	-2.2	13.47	6.9	14:11:44	8	-4.3	-8.3	1.8
84+50 N	16.8	0.2	15.88	9.5	14:13:02	55	-7.8	-23.9	-16.1
84+00 N	-13.0	9.8	16.18	-7.4	14:14:02	49	-11.8	1.8	-11.1
83+50 N	-8.4	13.1	12.67	-4.9	14:15:05	59	-4.8	28.7	15.2
83+00 S	-2.5	2.6	11.52	-1.4	14:16:16	25	-15.9	8.4	18.5
82+50 S	23.9	-1.4	13.21	13.4	14:17:19	54	-17.4	-24.3	-8.0
82+00 N	13.9	-8.0	14.54	8.0	14:18:30	45	-12.1	-27.7	-26.0
81+50 N	12.0	-9.3	14.51	6.9	14:19:38	56	3.9	-2.9	-15.3
81+00 N	12.4	-8.1	15.65	7.1	14:21:43	6	1.1	7.4	2.2
80+50 N	3.9	-1.2	16.28	2.2	14:23:07	59	-1.7	5.6	6.5
80+00 N	4.8	3.0	16.02	2.7	14:24:08	49	-6.4	9.1	7.3
79+50 N	0.3	6.6	15.90	0.2	14:27:05	59	-10.3	6.4	7.7
79+00 N	-0.9	-6.1	15.85	-0.5	14:27:50	49	-11.4	4.2	5.3
78+50 N	-1.7	-5.6	15.76	-1.0	14:47:19	49	-12.5	1.4	2.8
78+00 N	-1.8	-8.1	15.71	-1.0	14:48:18	59	-12.8	-1.3	0.0
77+50 N	-7.3	-10.8	15.65	-4.2	14:49:18	39	-5.0	-3.7	-2.5
77+00 N	3.6	-0.4	15.96	2.0	14:50:11	9	0.1	-0.2	-2.0
76+50 N	-12.6	-7.4	14.47	-7.2	14:51:59	37	-15.7	0.0	-0.1
76+00 N	-15.0	-4.4	15.98	-8.5	14:52:49	46	-15.5	-13.5	-6.8
75+50 N	-7.9	-0.2	16.47	-4.5	14:53:44	9	-14.3	-7.8	-10.7
75+00 N	-5.7	-0.3	15.52	-3.2	14:54:28	9	-16.6	8.0	0.1
74+50 N	-10.8	-4.1	14.93	-6.1	14:55:31	46	-17.5	3.7	5.8
74+00 N	-12.5	-4.7	15.67	-7.1	14:56:36	47	-12.2	-5.5	-0.9
73+50 N	-11.6	-4.5	15.16	-6.6	14:57:40	36	-9.7	-4.4	-5.0
73+00 N	-12.0	-5.0	15.54	-6.9	14:59:44	55	-11.0	-0.3	-2.4
72+50 N	-11.4	-6.3	16.11	-6.5	15:00:46	55	-10.5	0.3	0.0
72+00 N	-9.3	-5.0	16.01	-5.3	15:01:53	68	-24.2	1.7	1.0
71+50 N	-15.0	-8.4	15.98	-8.5	15:02:42	54	-14.2	-0.4	0.6
71+00 N	-12.0	-5.5	17.84	-6.9	15:03:37	56	-15.9	-3.6	-2.0
70+50 N	-5.2	-1.9	16.53	-3.0	15:04:51	48	-5.8	3.9	0.1
70+00 N	-7.9	-2.9	16.34	-4.5	15:05:50	57	-13.8	7.9	5.9
69+50 N	-9.5	-2.4	16.49	-5.4	15:06:46	56	-6.6	0.0	3.9
69+00 N	-10.0	0.4	16.60	-5.7	15:07:34	64	4.0	-3.6	-1.8
68+50 N	-13.2	1.5	17.49	-7.5	15:08:51	35	-6.7	-3.3	-3.5
68+00 N	-11.1	3.9	18.12	-6.3	15:09:47	48	7.6	-2.7	-3.0
67+50 N	-1.9	11.0	17.86	-1.1	15:12:32	49	7.5	5.8	1.5
67+00 N	-7.1	8.5	17.21	-4.1	15:13:23	49	-8.0	8.6	7.2
66+50 N	-11.0	0.8	18.52	-6.3	15:14:26	6	-12.5	-3.0	2.8
66+00 N	0.5	1.8	20.01	0.3	15:15:40	9	-11.1	-0.8	-1.9
65+50 N	6.4	1.1	17.48	3.7	15:16:48	49	-15.3	14.4	6.8
65+00 N	9.7	2.4	17.07	5.5	15:18:05	59	-17.7	15.2	14.8
64+50 N	6.1	1.6	15.86	3.5	15:18:54	49	-16.2	5.0	10.1
64+00 N	8.2	4.0	15.84	4.6	15:19:43	39	-14.5	-1.1	1.9
63+50 N	-0.3	0.0	13.76	-0.2	15:20:31	54	-21.3	-4.6	-2.9
63+00 N	-7.8	-3.1	15.70	-4.5	15:21:31	49	-16.0	-12.8	-8.7
62+50 N	-10.8	-4.7	16.39	-6.1	15:22:17	47	-11.9	-15.0	-13.9

62+00 N	-6.2	-0.7	16.83	-3.5	15:23:05		38	-13.3	-4.9	-10.0
61+50 N	-3.8	1.1	17.33	-2.1	15:23:47		39	-17.0	5.0	0.0
61+00 N	0.2	3.4	16.83	0.1	15:24:36		39	-12.9	7.6	6.3
60+50 N	-1.9	2.6	16.73	-1.1	15:25:21		39	-13.9	4.6	6.1
60+00 N	-1.6	1.2	17.04	-0.9	15:26:11		49	-11.1	0.0	2.3

Line 85+50 E Date 19 SEP 95 23.4 #208

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT	S	DIR	4-FRA	5-FRA	RESIS	PHASE
59+50 S	3.1	-4.6	15.21	1.8	15:38:52		59	-13.3				
59+50 S	11.9	0.4	16.20	6.8	15:41:05		15	-12.7	#			
59+00 S	6.7	3.0	17.91	3.8	15:42:10		29	-18.3				
58+50 S	-3.2	3.4	16.89	-1.8	15:42:53		9	-12.8				
58+00 S	-1.5	3.0	16.49	-0.9	15:43:17		29	-15.6	8.3			
57+50 S	-2.0	-1.0	16.04	-1.1	15:43:48		9	-18.5	4.0	6.1		
57+00 S	-0.7	-2.8	15.93	-0.4	15:44:15		39	-15.2	-1.2	1.4		
56+50 S	1.0	-0.8	14.61	0.5	15:44:37		39	-14.1	-2.1	-1.7		
56+00 S	5.8	1.3	16.10	3.3	15:45:08		49	-16.3	-5.3	-3.7		
55+50 S	6.7	0.4	16.12	3.8	15:45:34		49	-12.3	-7.0	-6.2		
60+50 S	-6.3	3.7	15.42	-3.6	15:47:55		39	-16.9	-3.6	-5.3		
60+00 S	-6.1	3.8	15.44	-3.5	15:48:24		49	-12.4	0.0	-1.8		
60+50 S	-12.0	-0.9	16.43	-6.8	15:49:01		39	-14.1	-2.9	-1.5		
61+00 S	-7.6	-3.0	18.08	-4.3	15:49:26		29	-19.7	-4.0	-3.5		
61+50 S	3.2	-3.8	16.66	1.8	15:49:53		39	-20.3	7.8	1.9		
62+00 S	1.9	-2.9	16.39	1.0	15:50:17		39	-13.1	13.9	10.8		
62+50 S	2.4	2.0	15.92	1.3	15:50:42		39	-12.8	4.8	9.3		
63+00 S	0.8	3.2	15.96	0.4	15:51:06		49	-12.3	-1.1	1.8		
63+50 S	-1.0	0.3	14.60	-0.6	15:51:30	RAV	49	-16.9	-2.5	-1.8		
64+00 S	-4.9	-1.4	16.03	-2.8	15:52:07		38	-19.2	-5.1	-3.8		
64+50 S	-6.5	-0.8	16.13	-3.7	15:52:36		49	-18.9	-6.3	-5.7		
65+00 S	-4.6	-1.8	16.88	-2.6	15:53:08		39	-23.7	-2.9	-4.6		
65+50 S	0.0	0.1	17.01	0.0	15:53:34		49	-15.7	3.9	0.5		
66+00 S	-4.7	-2.9	16.58	-2.7	15:53:59		49	-15.0	3.6	3.7		
66+50 S	-4.6	-2.0	16.87	-2.6	15:54:27		39	-12.5	-2.7	0.4		
67+00 S	-4.2	-1.7	17.15	-2.4	15:54:52		49	-8.8	-2.3	-2.5		
67+50 S	-2.4	-1.7	16.77	-1.3	15:55:18		49	-6.7	1.6	-0.4		
68+00 S	3.5	0.3	16.99	2.0	15:55:44		39	-10.4	5.7	3.6		
68+50 S	3.4	-0.6	16.05	1.9	15:56:20		49	-17.8	7.6	6.6		
69+00 S	1.0	-1.8	15.95	0.5	15:56:48		39	-12.2	1.7	4.6		
69+50 S	-2.4	-2.2	15.96	-1.3	15:57:13		29	-10.8	-4.7	-1.5		
70+00 S	-4.7	-3.4	16.46	-2.7	15:57:37		49	-8.5	-6.4	-5.6		
70+50 S	-5.1	-2.6	17.68	-2.9	15:58:01		29	-7.3	-4.8	-5.6		
71+00 S	8.5	5.2	17.98	4.9	15:58:58		39	-5.0	6.0	0.6		
71+50 S	13.8	8.5	16.25	7.9	15:59:25		39	-6.5	18.4	12.2		
72+00 S	14.0	9.5	15.60	8.0	15:59:49		49	-3.5	13.9	16.1		
72+50 S	9.9	7.6	14.71	5.7	16:00:15		49	-7.5	0.9	7.4		
73+00 S	4.3	5.7	14.43	2.4	16:00:39		49	-10.0	-7.8	-3.5		
73+50 S	-9.1	-0.7	15.29	-5.2	16:01:04		44	-7.4	-16.5	-12.2		
74+00 S	8.0	8.5	17.28	4.6	16:01:31		49	-3.9	-8.7	-12.6		
74+50 S	25.6	12.0	16.91	14.5	16:01:56		49	-3.9	21.9	6.6		
75+00 S	18.1	11.7	12.38	10.4	16:02:25		49	-11.8	25.5	23.7		
75+50 S	0.7	2.6	12.24	0.4	16:02:49	RAV	49	-13.1	-8.3	8.6		
76+00 S	-2.7	7.1	12.92	-1.5	16:03:30		49	-5.7	-26.0	-17.2		
76+50 S	-13.5	1.6	13.98	-7.6	16:03:57		46	-13.5	-19.9	-23.0		
77+00 S	-15.9	0.8	15.68	-9.0	16:04:21		45	-11.9	-15.5	-17.7		
77+50 S	-3.2	5.1	16.24	-1.8	16:04:48		49	-6.7	-1.7	-8.6		
78+00 S	0.5	4.0	15.89	0.3	16:05:10		39	-9.1	15.1	6.7		

78+50 S	3.2	5.1	15.44	1.8	16:05:36		49	-10.0	12.9	14.0
79+00 S	0.1	2.0	15.05	0.0	16:06:02		49	-9.8	3.3	8.1
79+50 S	-2.5	2.9	14.79	-1.4	16:06:28		39	-5.5	-3.5	-0.1
80+00 S	-6.8	0.2	14.94	-3.8	16:06:53		49	-7.5	-7.0	-5.3
80+50 S	-6.4	0.6	16.93	-3.6	16:07:19		49	-9.2	-6.0	-6.5
81+00 S	7.6	5.7	15.62	4.3	16:07:43		49	-6.7	5.9	-0.1
81+50 S	0.8	0.3	14.83	0.4	16:08:11		39	-8.8	12.1	9.0
82+00 S	6.7	0.1	14.47	3.8	16:08:34		39	-4.0	3.5	7.8
82+50 S	0.3	-0.5	12.94	0.1	16:08:59	RAV	49	-3.2	-0.8	1.3
83+00 S	-5.2	-3.2	15.82	-2.9	16:09:33		19	-8.4	-7.0	-3.9
83+50 S	12.9	-1.5	14.12	7.3	16:10:06	CLAY	49	-6.1	0.5	-3.3
84+00 S	0.2	-9.8	13.31	0.1	16:10:41	CLAY	59	-9.3	10.2	5.3
84+50 S	-9.1	-7.0	15.16	-5.2	16:11:15	CLAY	37	1.5	-9.5	0.3
85+00 S	8.9	5.4	15.58	5.1	16:11:44	CLAY	49	-9.3	-7.5	-8.5
85+50 S	-3.6	3.1	14.57	-2.1	16:12:16	CLAY	49	-7.5	8.1	0.3
86+00 S	1.0	4.6	14.95	0.5	16:12:47	CLAY	49	-3.8	-1.5	3.3
86+50 S	1.9	1.7	14.22	1.1	16:13:16	CLAY	49	-5.2	-1.4	-1.5
87+00 S	-5.6	-0.2	13.58	-3.2	16:13:44	CLAY	39	-1.4	-0.5	-1.0
87+50 S	-5.8	4.7	15.66	-3.3	16:14:25		39	-6.1	-8.1	-4.3
88+00 S	2.4	6.5	15.51	1.4	16:14:48		49	-1.9	0.2	-4.0
88+50 S	3.1	1.9	14.86	1.8	16:15:13	RAV	49	-4.1	9.7	4.9
89+00 S	-2.4	-1.7	13.88	-1.3	16:15:45	CLAY	49	-5.0	2.4	6.0
89+50 S	-12.1	-1.8	14.09	-6.9	16:16:47	CLAY	46	-3.7	-11.4	-4.5
90+00 S	-17.0	-0.3	15.51	-9.6	16:17:22	HILL	44	-12.7	-17.0	-14.2
90+50 S	-6.2	1.4	15.98	-3.5	16:17:53	CLAY	49	-7.6	-4.9	-11.0
91+00 S	-5.7	-0.5	15.29	-3.2	16:18:24	CLAY	39	-6.0	9.8	2.4
91+50 S	-3.6	-3.4	14.69	-2.0	16:18:55		19	-3.5	7.9	8.8
92+00 S	-8.2	-4.1	13.98	-4.7	16:19:23	CLAY	49	-6.9	0.0	3.9
92+50 S	-13.7	-2.1	13.81	-7.8	16:19:56	CLAY	6	-10.5	-7.3	-3.7
93+00 S	-21.9	-4.4	15.31	-12.3	16:20:24	CLAY	34	-8.7	-13.4	-10.4
93+50 S	-7.9	4.0	15.09	-4.5	16:21:00		59	-2.7	-4.3	-8.9
94+00 S	-6.3	1.2	15.24	-3.6	16:21:30		59	-6.0	12.0	3.8
94+50 S	-9.5	-0.5	15.02	-5.4	16:21:54	CLAY	39	-9.2	7.8	9.9
95+00 S	-9.4	0.1	14.75	-5.4	16:22:26	CLAY	46	-8.3	-2.7	2.5
95+50 S	-11.8	0.6	14.73	-6.7	16:22:58	CLAY	56	-7.5	-3.1	-2.9
96+00 S	-13.9	-0.7	15.61	-7.9	16:23:30		46	-1.7	-3.8	-3.5
96+50 S	-10.9	-2.6	15.66	-6.2	16:23:57	CLAY	46	-9.0	-2.0	-2.9
97+00 S	-8.8	-2.7	15.98	-5.0	16:24:33		57	-6.6	3.4	0.7
97+50 S	-4.3	0.2	15.63	-2.5	16:25:00		59	-7.8	6.6	5.0
98+00 S	-8.3	-0.7	15.37	-4.7	16:25:26	CLAY	49	-1.3	4.0	5.3
98+50 S	-12.7	-1.7	15.52	-7.2	16:25:58	CLAY	54	-7.1	-4.4	-0.2
99+00 S	-13.7	-2.7	15.92	-7.8	16:26:35	RAV	46	-4.0	-7.8	-6.1
99+50 S	-5.9	1.1	15.96	-3.3	16:27:07	RAV	68	-7.9	0.8	-3.5
0+50 S	-11.7	-0.7	15.50	-6.6	16:27:44	RAV	45	5.3	5.1	2.9

Line 0+00 E Date 19 SEP 95 23.4 #300

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	2.5	1.5	17.00	1.4	16:31:00		49	1.7			

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 19 SEP 95
Operator: 3000
Records: 300
Bat: 17.5 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/20 10:28:25

Line 0+00 E Date 19 SEP 95 -10.0 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 1 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 1 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:29

Line 0+00 E Date 1 SEP 95 30.0 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	-136.2	-22.6	3.83	-54.2	11:26:30	50	66.2	!			
#2	85.6	0.5	2.55	40.5	11:29:03	50	-69.3	!			

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 12 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:29

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 17 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:29

Line 0+00 E Date 17 SEP 95 24.8 #4

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE

#4 71.9 0.2 3909. 9.0 13:31:34 99 0.0 !

Line 73+00 E Date 17 SEP 95 24.8 #5

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
19+50 N	-6.3	-3.8	43.42	-3.6	14:30:26	37	80.4				
19+30 N	11.1	-11.3	37.64	6.4	14:35:48	59	76.8				
19+25 N	10.7	-13.1	38.28	6.2	14:36:39	46	85.1				
19+15 N	3.9	-8.1	35.27	2.2	14:38:47	47	-87.0	5.6			
18+30 N	-16.8	-3.4	31.25	-9.5	15:01:14	37	71.4	-19.9	-7.2		
18+25 N	-12.4	-1.8	31.42	-7.1	15:02:24	37	74.3	-25.0	-22.5		
18+15 N	-17.2	-4.6	32.18	-9.7	15:04:59	36	72.3	-9.5	-17.3		
18+10 N	-18.6	-6.5	33.05	-10.5	15:06:05	35	76.2	-3.6	-6.6		
18+05 N	-15.4	-7.2	37.28	-8.8	15:07:08	46	70.6	-2.5	-3.1		

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 1 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:32

Line 0+00 E Date 1 SEP 95 -10.0 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 12 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:32

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 17 SEP 95

Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:32

Line 0+00 E Date 17 SEP 95 23.4 #4

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#4	70.7	0.1	3720.	7.0	13:31:34	99	0.0 !				

Line 73+00 E Date 17 SEP 95 23.4 #5

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
19+50 N	-16.8	-3.7	20.51	-9.5	14:30:26	5	-6.7				
19+30 N	0.0	7.2	18.31	0.0	14:35:48	59	-21.4				
19+25 N	-4.0	9.4	18.30	-2.3	14:36:39	49	-17.1				
19+15 N	7.9	15.1	20.39	4.6	14:38:47	59	-18.0	11.8			
18+30 N	25.3	-0.1	14.06	14.2	15:01:14	49	-8.3	21.1	16.4		
18+25 N	13.9	0.7	14.19	7.9	15:02:24	49	-8.9	19.8	20.4		
18+15 N	-3.4	1.4	14.31	-1.9	15:04:59	37	-13.1	-12.8	3.5		
18+10 N	-5.4	2.0	16.02	-3.0	15:06:05	45	-9.5	-27.0	-19.9		
18+05 N	3.5	1.4	18.83	2.0	15:07:08	49	-13.2	-7.0	-17.0		

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 1 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:35

Line 0+00 E Date 1 SEP 95 -10.0 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 12 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt

Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:35

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 17 SEP 95
Operator: 3000
Records: 13
Bat: 16.8 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/17 21:12:35

Line 0+00 E Date 17 SEP 95 24.0 #4

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#4	71.3	0.1	3762.	8.0	13:31:34	99	0.0 !				

Line 73+00 E Date 17 SEP 95 24.0 #5

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
19+50 N	-14.9	-4.3	10.45	-8.5	14:30:26	42	-11.7				
19+30 N	1.8	8.7	9.71	1.0	14:35:48	53	-26.0				
19+25 N	-3.2	12.3	9.63	-1.8	14:36:39	44	-23.5				
19+15 N	8.3	15.5	10.93	4.9	14:38:47	59	-22.2	10.6			
18+30 N	31.3	-1.9	7.90	17.4	15:01:14	34	-14.0	23.1	16.8		
18+25 N	18.6	0.0	7.36	10.5	15:02:24	44	-18.0	24.8	23.9		
18+15 N	-0.8	0.9	7.12	-0.5	15:04:59	45	-20.8	-12.3	6.2		
18+10 N	-3.4	2.1	8.16	-1.9	15:06:05	34	-16.2	-30.3	-21.3		
18+05 N	4.8	0.6	9.04	2.7	15:07:08	49	-16.7	-9.2	-19.8		

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 18 SEP 95
Operator: 3000
Records: 204
Bat: 18.0 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/18 17:41:19

Line 0+00 E Date 18 SEP 95 24.8 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	-71.9	-0.2	3909.	-7.0	10:47:57	99	0.0 !				

Line 75+50 E Date 18 SEP 95 24.8 #2

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	16.2	1.2	28.43	9.2	11:11:55	39	78.3				
1+00 S	10.8	-0.8	26.98	6.2	11:13:48	39	77.6				
99+50 S	-1.5	-3.2	26.20	-0.9	11:14:46	39	77.7				
99+00 S	-6.7	-4.1	27.71	-3.8	11:15:47	29	79.7	-20.1			
98+50 S	-10.7	-2.0	29.32	-6.1	11:17:02	37	68.6	-15.2	-17.7		
98+00 S	-7.1	1.0	29.85	-4.0	11:18:27	39	76.6	-5.4	-10.3		
99+00 S	-11.4	-2.1	30.28	-6.5	11:19:44	29	86.4	-0.6	-3.0		
97+00 S	-12.8	-3.4	30.85	-7.3	11:22:12	37	77.0	-3.7	-2.2		
96+00 N	-11.6	-3.5	31.75	-6.6	11:23:24	39	79.0	-3.4	-3.6		
95+50 N	-10.0	-4.5	30.84	-5.7	11:25:38	36	70.1	1.5	-1.0		
95+00 N	-14.7	-9.1	29.70	-8.4	11:26:35	37	76.2	-0.2	0.6		
94+50 N	-0.7	-9.9	29.90	-0.4	11:27:33	29	64.1	3.5	1.6		
94+00 N	2.9	-6.5	28.17	1.7	11:28:40	39	64.0	15.4	9.4		
93+50 N	0.6	-6.0	29.30	0.3	11:29:37	29	67.3	10.8	13.1		
93+00 N	-6.9	-9.1	32.58	-4.0	11:30:53	49	70.2	-5.0	2.9		
92+50 N	-11.5	-7.3	32.82	-6.6	11:32:00	38	78.0	-12.6	-8.8		
92+00 N	-17.6	-5.5	32.14	-10.0	11:33:22	36	70.8	-12.9	-12.8		
91+50 N	-17.0	-4.3	30.99	-9.6	11:34:22	27	67.3	-9.0	-11.0		
91+00 N	-11.9	-2.5	30.44	-6.8	11:35:56	26	69.0	0.2	-4.4		
90+50 N	-16.6	-6.6	31.09	-9.5	11:36:58	35	71.6	3.3	1.7		
90+00 N	-16.0	-8.2	31.99	-9.1	11:37:52	36	72.2	-2.2	0.5		
89+50 N	-10.9	-8.9	33.69	-6.2	11:38:44	38	71.4	1.0	-0.6		
89+00 N	-13.2	-9.9	34.48	-7.6	11:39:34	37	70.3	4.8	2.9		
88+50 N	-13.3	-9.6	33.19	-7.6	11:40:29	39	68.0	0.1	2.4		
88+00 N	-7.4	-7.8	35.26	-4.3	11:41:20	29	72.7	1.9	1.0		
87+50 N	-2.0	-6.5	35.22	-1.1	11:42:11	39	78.2	9.8	5.8		
87+00 N	-16.2	-8.0	35.30	-9.2	11:43:03	37	69.2	1.6	5.7		
86+50 N	-12.5	-4.9	36.20	-7.1	11:43:53	39	75.6	-10.9	-4.7		
86+00 N	-10.0	-1.0	34.24	-5.7	11:44:44	49	71.9	-2.5	-6.7		
85+50 N	-10.1	-1.2	32.64	-5.8	11:45:33	37	70.2	4.8	1.1		
85+00 N	-9.8	-1.0	32.31	-5.5	11:46:23	48	69.7	1.5	3.1		
84+50 N	-9.9	-1.7	31.38	-5.6	11:47:12	38	68.6	0.4	0.9		
84+00 N	-6.6	0.0	30.59	-3.8	11:48:04	49	71.6	1.9	1.1		
83+50 N	-8.0	-0.9	29.82	-4.5	11:48:54	39	68.1	2.8	2.3		
83+00 N	-8.6	-1.3	29.43	-4.9	11:49:43	48	68.1	0.0	1.4		
82+50 N	-10.9	-3.0	31.05	-6.2	11:50:32	37	72.4	-2.8	-1.4		
82+00 N	-12.5	-4.0	34.23	-7.1	11:51:21	47	67.6	-3.9	-3.4		
81+50 N	-9.7	-0.7	30.81	-5.5	11:52:09	39	71.4	-1.5	-2.7		
81+00 N	-18.7	-3.8	29.80	-10.6	11:52:59	25	71.0	-2.8	-2.2		
80+50 N	-18.3	-1.4	32.05	-10.3	11:53:50	36	71.2	-8.3	-5.6		
80+00 N	-20.1	-4.5	29.69	-11.4	11:54:42	45	66.9	-5.6	-7.0		
79+50 N	-16.6	-4.3	27.66	-9.4	11:55:35	35	67.2	0.1	-2.8		
79+00 N	-12.2	-1.6	27.96	-7.0	11:56:36	36	62.9	5.3	2.7		
78+50 N	-9.5	0.3	24.32	-5.4	11:57:26	27	66.0	8.4	6.8		
78+00 N	-3.2	4.7	23.45	-1.8	11:58:32	29	69.0	9.2	8.8		
77+50 N	1.5	7.9	24.88	0.9	11:59:29	36	67.9	11.5	10.3		
77+00 N	8.8	11.3	26.76	5.1	12:00:21	38	67.1	13.2	12.3		
76+50 N	2.3	3.0	27.23	1.3	12:01:21	39	71.8	7.3	10.2		
76+00 N	1.7	-0.7	29.46	0.9	12:02:21	27	75.0	-3.8	1.7		

75+50 N	4.4	-0.8	28.46	2.5	12:03:13	27	73.8	-3.0	-3.4	
75+00 N	4.1	-0.8	28.80	2.3	12:04:38	39	69.8	2.6	-0.2	
74+50 N	4.8	-3.1	28.77	2.7	12:06:08	49	68.1	1.6	2.1	
74+00 N	10.6	-2.7	28.73	6.1	12:07:05	46	80.1	4.0	2.8	
73+50 N	7.0	-4.6	28.69	4.0	12:08:09	29	72.5	5.1	4.5	
73+00 N	4.7	-6.6	29.42	2.7	12:09:07	29	75.6	-2.1	1.5	
72+50 N	6.8	-6.4	29.93	3.9	12:10:07	38	71.2	-3.5	-2.8	
72+00 N	17.4	2.7	30.91	9.8	12:10:59	39	69.5	7.0	1.7	
71+50 N	19.3	1.8	28.61	10.9	12:11:52	39	67.5	14.1	10.5	
71+00 N	20.0	-1.2	28.08	11.3	12:12:47	38	76.2	8.5	11.3	
70+50 N	22.0	-2.0	29.41	12.4	12:13:39	29	65.8	3.0	5.7	
70+00 N	27.2	0.2	30.05	15.2	12:14:32	29	68.4	5.4	4.2	
69+50 N	34.1	4.2	31.18	18.8	12:15:21	49	68.6	10.3	7.8	
69+00 N	42.9	9.0	30.89	23.3	12:16:27	39	76.6	14.5	12.4	
68+50 N	32.0	0.1	29.12	17.7	12:17:31	39	79.3	7.0	10.7	
68+00 N	30.1	-3.2	29.18	16.8	12:18:24	36	83.7	-7.6	-0.3	
67+50 N	28.3	-2.1	29.04	15.8	12:19:24	49	77.6	-8.4	-8.0	
67+00 N	33.8	2.2	31.05	18.6	12:20:23	39	83.2	-0.1	-4.3	
66+50 N	36.1	2.8	36.32	19.9	12:21:20	33	-80.8	5.9	2.9	
66+00 N	7.9	10.4	37.77	4.5	12:22:14	29	-83.1	-10.0	-2.1	
65+50 N	3.4	8.7	35.79	2.0	12:23:18	49	87.6	-32.0	-21.0	
65+00 N	1.3	8.8	33.31	0.7	12:24:11	39	79.5	-21.7	-26.9	
64+50 N	7.2	11.4	28.70	4.2	12:25:07	49	84.2	-1.6	-11.7	
64+00 N	0.0	5.8	28.09	0.0	12:26:06	39	86.4	1.5	-0.1	
63+50 N	2.3	7.5	27.93	1.3	12:27:07	6	85.6	-3.6	-1.1	
63+00 N	-5.0	4.3	29.62	-2.9	12:28:01	19	89.9	-5.8	-4.7	
62+50 N	-19.1	-1.3	28.55	-10.8	12:28:54	38	81.7	-15.0	-10.4	
62+00 N	-18.2	1.3	29.21	-10.3	12:29:48	26	77.3	-19.5	-17.3	
61+50 N	-9.5	5.0	30.41	-5.4	12:30:46	27	78.9	-2.0	-10.8	
61+00 N	-8.3	4.6	33.40	-4.7	12:31:40	39	79.2	11.0	4.5	
60+50 N	-5.7	2.2	32.99	-3.2	12:32:34	39	86.4	7.8	9.4	
60+00 N	-7.7	1.2	31.62	-4.4	12:33:59	49	84.3	2.5	5.1	

Line 77+50 E Date 18 SEP 95 24.8 #83

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+50 N	-14.4	1.8	31.92	-8.2	12:39:55	37	89.5				

Line 79+50 E Date 18 SEP 95 24.8 #84

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
61+00 N	-5.1	1.1	31.08	-2.9	12:42:13	59	-89.6				
61+50 N	-5.6	-2.1	26.78	-3.2	12:43:44	39	82.1				
61+50 N	-7.7	-0.4	25.50	-4.4	12:44:37	29	-84.1	#			
62+00 N	0.7	2.1	25.19	0.4	12:46:22	29	-88.9				
62+00 N	0.1	2.2	25.22	0.0	12:46:48	29	-88.5	#			
62+50 N	4.8	1.0	26.85	2.7	12:47:54	37	83.0	-9.2			
63+00 N	3.0	-0.2	27.36	1.7	12:48:46	39	84.9	-7.2	-8.2		
63+50 N	0.9	-2.1	27.57	0.5	12:49:35	18	78.2	0.9	-3.2		
64+00 N	0.6	-1.0	28.22	0.3	12:50:26	19	74.7	3.6	2.2		
64+50 N	-4.5	-3.6	29.21	-2.5	12:51:20	29	76.1	4.4	4.0		
65+00 N	6.7	0.7	30.53	3.8	12:52:24	9	82.4	-0.5	1.9		
65+50 N	4.8	-1.4	29.35	2.7	12:53:17	37	79.8	-8.7	-4.6		
66+00 N	4.0	-2.0	28.60	2.3	12:54:06	39	83.8	-3.7	-6.2		
66+50 N	4.8	-2.2	27.97	2.7	12:54:56	39	86.3	1.5	-1.1		
67+00 N	5.4	-2.6	28.33	3.1	12:55:44	29	82.5	-0.6	0.3		
67+50 N	5.7	-3.2	28.69	3.2	12:56:35	29	79.1	-1.3	-1.1		

68+00 N	2.4	-6.3	28.43	1.4	12:57:25	36	79.8	1.2	-0.1
68+50 N	0.6	-9.7	29.70	0.3	12:58:16	7	79.3	4.6	2.9
69+00 N	-1.8	-12.0	30.21	-1.0	12:59:04	26	81.1	5.3	4.9
69+50 N	-0.2	-12.8	30.38	-0.1	12:59:59	29	80.7	2.8	4.0
70+00 N	1.6	-12.8	31.97	0.9	13:03:38	26	75.9	-1.5	0.6
70+50 N	1.1	-11.6	36.77	0.6	13:04:30	29	76.1	-2.6	-2.1
71+00 N	14.5	-5.4	38.93	8.2	13:05:28	27	83.3	-8.0	-5.3
71+50 N	25.3	-1.1	39.88	14.2	13:06:19	35	75.0	-20.9	-14.5
72+00 N	28.3	0.4	39.48	15.8	13:07:09	24	72.5	-21.2	-21.1
72+50 N	23.3	0.4	39.74	13.1	13:08:01	25	74.4	-6.5	-13.9
73+00 N	19.6	-1.2	38.88	11.1	13:09:00	15	73.5	5.8	-0.4
73+50 N	24.5	-0.5	39.58	13.7	13:09:50	5	70.0	4.1	4.9
74+00 N	19.8	-2.0	40.58	11.2	13:10:43	35	71.3	-0.7	1.7
74+50 N	16.4	-1.7	39.38	9.3	13:11:32	26	74.0	4.3	1.8
75+00 N	13.3	-4.5	39.67	7.6	13:12:32	36	68.0	8.0	6.1
75+50 N	6.4	-8.1	37.54	3.7	13:13:27	39	72.0	9.2	8.6
76+00 N	10.4	-2.8	33.33	5.9	13:14:24	27	73.4	7.3	8.2
76+50 N	9.4	-3.3	30.67	5.3	13:15:20	28	71.3	0.1	3.7
77+00 N	8.6	0.4	30.61	4.9	13:16:17	15	71.2	-0.6	-0.3
77+50 N	5.2	0.1	31.05	3.0	13:17:17	29	67.5	3.3	1.3
78+00 N	2.7	1.2	31.57	1.5	13:18:12	27	68.8	5.7	4.5
78+50 N	-0.3	-1.0	31.65	-0.2	13:19:06	39	73.6	6.6	6.1
79+00 N	-0.7	-1.8	31.37	-0.4	13:20:00	39	66.6	5.1	5.8
79+50 N	-0.8	-0.9	30.65	-0.4	13:20:52	19	68.9	2.1	3.6
80+00 N	-2.3	-2.3	30.68	-1.3	13:21:44	29	69.1	1.1	1.6
80+50 N	3.6	0.1	31.49	2.1	13:22:38	29	73.7	-1.6	-0.3
81+00 N	6.1	-0.2	31.52	3.5	13:23:26	27	72.1	-7.3	-4.5
81+50 N	7.1	-2.2	30.88	4.0	13:24:21	29	72.9	-6.7	-7.0
82+00 N	6.7	-4.3	31.07	3.8	13:25:09	29	69.9	-2.2	-4.5
82+50 N	1.0	-5.4	30.53	0.6	13:26:15	18	67.7	3.1	0.4
83+00 N	-1.2	-4.1	30.87	-0.7	13:27:03	29	65.0	7.9	5.5
83+50 N	-2.1	-0.5	30.67	-1.2	13:27:57	9	69.7	6.3	7.1
84+00 N	-3.0	-0.6	31.40	-1.7	13:28:45	27	71.0	2.8	4.5
84+50 N	-7.0	-3.7	32.36	-4.0	13:29:34	19	74.0	3.8	3.3
85+00 N	-5.3	-4.1	30.92	-3.0	13:30:23	29	69.2	4.1	3.9
85+50 N	-3.8	-3.7	28.46	-2.2	13:31:13	26	74.6	-0.5	1.8
86+00 N	2.5	-1.5	29.44	1.4	13:32:01	29	72.4	-6.2	-3.4
86+50 N	1.8	-2.6	30.83	1.0	13:36:09	15	75.8	-7.6	-6.9
87+00 N	6.5	-1.7	31.64	3.7	13:37:00	26	70.6	-5.5	-6.6
87+50 N	3.6	-1.4	32.28	2.0	13:38:03	19	71.2	-3.3	-4.4
88+00 N	-3.9	-3.3	32.16	-2.2	13:38:55	39	70.4	4.9	0.8
88+50 N	-2.9	-1.1	31.59	-1.6	13:39:43	29	77.1	9.5	7.2
89+00 N	-4.2	-1.5	32.20	-2.4	13:40:33	19	75.2	3.8	6.6
89+50 N	-1.6	-1.1	32.58	-0.9	13:41:22	25	73.9	-0.5	1.6
90+00 N	-4.2	-2.9	34.78	-2.4	13:42:10	69	76.1	-0.7	-0.6
90+50 N	-5.4	-2.9	33.90	-3.0	13:42:59	37	78.6	2.1	0.7
91+00 N	-6.6	-3.6	33.45	-3.7	13:43:52	39	77.6	3.4	2.7
91+50 N	-8.0	-2.5	33.31	-4.6	13:44:42	26	83.0	2.9	3.1
92+00 N	-4.6	-2.4	32.37	-2.6	13:45:31	39	80.3	0.5	1.7
92+50 N	-5.9	-2.8	33.00	-3.4	13:46:25	29	77.0	-2.3	-0.9
93+00 N	-9.6	-4.1	32.20	-5.5	13:47:15	29	84.1	1.7	-0.3
93+50 N	-9.3	-2.1	31.33	-5.3	13:48:05	24	82.2	4.8	3.2
94+00 N	-9.5	-0.9	31.50	-5.4	13:48:54	39	78.1	1.8	3.3
94+50 N	-10.5	-1.2	30.93	-6.0	13:49:44	38	84.2	0.6	1.2
95+00 N	-7.2	-0.9	30.86	-4.1	13:50:34	39	79.1	-0.6	0.0

95+50 N	-18.5	-3.4	30.65	-10.5	13:51:28	37	85.8	3.2	1.3
96+00 N	-13.5	-2.9	29.09	-7.7	13:52:59	27	-88.6	8.1	5.6
96+50 N	-2.9	-1.5	28.06	-1.6	13:54:03	49	87.0	-5.3	1.4
97+00 N	3.5	-0.7	27.99	2.0	13:54:52	39	84.3	-18.6	-12.0
97+50 N	11.2	-0.1	28.59	6.4	13:55:45	26	80.7	-17.7	-18.2
98+00 N	16.8	-0.2	31.74	9.5	13:56:47	28	82.1	-15.5	-16.6
98+50 N	6.5	-2.8	36.26	3.7	13:57:38	28	76.8	-4.8	-10.2
99+00 N	1.9	2.4	34.44	1.1	13:58:30	17	75.0	11.1	3.1
99+50 N	0.2	1.8	34.05	0.1	13:59:21	17	78.2	12.0	11.5

Line 81+50 E Date 18 SEP 95 24.8 #164

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	2.4	1.6	32.97	1.4	14:17:04	49	68.9				
0+50 S	11.2	4.5	34.10	6.4	14:20:43	37	74.5 #				
99+50 S	14.0	6.1	34.96	8.0	14:21:54	39	73.0				
99+50 S	9.0	2.9	34.42	5.1	14:23:05	39	70.8 #				
90+50 S	4.9	1.3	33.28	2.8	14:24:31	39	77.6				
90+00 S	-7.5	-2.6	34.27	-4.3	14:25:33	39	75.7	-2.3			
89+50 S	-5.8	-3.6	33.14	-3.3	14:26:53	39	83.8	-3.2	-2.8		
89+00 S	-5.6	-3.4	33.64	-3.2	14:27:59	39	76.2	-0.6	-1.9		
96+00 S	-3.2	-0.9	32.96	-1.8	14:29:33	39	74.6	-2.6	-1.6		
96+00 S	-7.9	-0.1	32.30	-4.5	14:30:51	49	82.3 #				
95+50 S	-4.8	-4.0	31.07	-2.7	14:32:14	39	82.5	-2.0	-2.3		
95+00 S	7.3	-3.9	29.80	4.2	14:33:06	9	77.6	-6.5	-4.3		
92+50 S	8.0	-2.4	28.18	4.6	14:34:27	28	74.8	-13.3	-9.9		
92+00 S	18.2	1.2	27.52	10.3	14:35:29	34	68.0	-13.4	-13.4		
91+50 S	26.1	4.4	27.77	14.6	14:36:18	44	71.8	-16.1	-14.8		
91+00 S	23.6	-0.3	32.52	13.3	14:37:07	34	65.3	-13.0	-14.6		
90+50 S	6.6	-6.1	32.64	3.8	14:38:18	49	67.0	7.8	-2.6		
90+00 S	5.6	-4.2	31.01	3.2	14:39:13	29	65.2	20.9	14.3		
89+50 S	9.2	-1.3	30.70	5.2	14:40:05	39	65.4	8.7	14.8		
89+00 S	8.3	-0.2	31.42	4.7	14:40:58	39	61.0	-2.9	2.9		
88+50 S	0.0	-2.1	30.80	0.0	14:41:48	39	63.6	3.7	0.4		
88+00 S	1.9	1.6	30.37	1.0	14:42:34	39	69.1	8.9	6.3		
87+50 S	2.5	3.7	34.83	1.4	14:43:34	39	65.8	2.3	5.6		
87+00 S	-6.5	1.1	34.52	-3.7	14:44:28	39	72.4	3.3	2.8		
86+50 S	-2.9	1.4	34.50	-1.7	14:45:18	39	73.4	7.8	5.5		
86+00 S	0.0	0.1	32.95	0.0	14:46:04	29	71.6	-0.6	3.6		
85+50 S	5.6	2.3	33.21	3.2	14:46:53	19	72.3	-8.6	-4.6		
85+00 S	2.2	1.7	33.78	1.2	14:47:41	29	69.2	-6.1	-7.4		
84+50 S	1.1	1.1	34.34	0.6	14:51:36	29	70.6	1.4	-2.4		
84+00 S	0.0	0.0	33.71	0.0	14:52:29	29	77.3	3.8	2.6		
83+50 S	-1.3	-1.6	32.91	-0.7	14:53:39	39	70.1	2.5	3.1		
83+00 S	0.9	-1.4	31.91	0.5	14:54:26	39	76.5	0.8	1.6		
82+50 S	-0.3	-2.6	33.72	-0.1	14:55:12	39	66.4	-1.1	-0.2		
82+00 S	1.1	-1.7	33.50	0.6	14:55:56	39	66.8	-0.7	-0.9		
81+50 S	1.2	-0.7	33.75	0.7	14:56:51	39	68.2	-0.9	-0.8		
81+00 S	-8.2	-1.8	33.42	-4.7	14:58:04	39	72.8	4.5	1.8		
80+50 S	-7.1	0.3	34.28	-4.0	14:58:59	39	66.3	10.0	7.2		
80+00 S	-22.7	-3.8	32.98	-12.8	15:00:04	39	71.5	12.8	11.4		
79+50 S	-14.2	0.5	30.94	-8.0	15:01:08	29	79.0	12.1	12.4		
79+00 S	-6.7	6.4	29.34	-3.8	15:02:00	39	69.5	-5.0	3.5		

Line 0+00 E Date 18 SEP 95 24.6 #204

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE

0+00 N -0.5 -2.8 40.75 -0.2 15:17:03 59 62.6

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 18 SEP 95
Operator: 3000
Records: 204
Bat: 18.0 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/18 17:41:50

Line 0+00 E Date 18 SEP 95 23.4 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	-70.7	-0.1	3728.	-10.0	10:47:57	99	0.0 !				

Line 75+50 E Date 18 SEP 95 23.4 #2

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	9.2	0.6	9.46	5.3	11:11:55	49	-17.4				
1+00 S	7.3	0.0	9.60	4.2	11:13:48	39	-21.4				
99+50 S	7.3	0.5	9.33	4.1	11:14:46	39	-21.1				
99+00 S	1.8	0.6	9.29	1.0	11:15:47	29	-22.4	-4.4			
98+50 S	-1.5	1.0	9.23	-0.8	11:17:02	39	-27.1	-8.1	-6.3		
98+00 S	-4.2	1.5	10.35	-2.4	11:18:27	39	-18.9	-8.3	-8.2		
99+00 S	5.2	2.6	10.28	2.9	11:19:44	39	-15.1	0.3	-4.0		
97+00 S	-1.9	0.1	9.19	-1.0	11:22:12	39	-18.8	5.1	2.7		
96+00 N	-1.9	1.4	10.71	-1.1	11:23:24	19	-14.0	-2.6	1.2		
95+50 N	6.4	-0.5	10.99	3.6	11:25:38	39	-25.3	0.6	-1.0		
95+00 N	1.5	-8.4	11.23	0.8	11:26:35	49	-16.0	6.5	3.5		
94+50 N	18.2	-7.1	11.82	10.3	11:27:33	49	-13.9	8.6	7.5		
94+00 N	13.2	-7.4	9.15	7.5	11:28:40	49	-21.8	13.4	11.0		
93+50 N	-1.6	-7.5	9.26	-0.9	11:29:37	39	-20.5	-4.5	4.4		
93+00 N	-5.8	1.3	11.27	-3.3	11:30:53	48	-24.1	-22.0	-13.3		
92+50 N	4.7	7.8	11.55	2.7	11:32:00	39	-18.5	-7.2	-14.6		
92+00 N	10.4	3.5	11.64	5.9	11:33:22	39	-21.4	12.8	2.8		
91+50 N	15.2	1.3	10.91	8.6	11:34:22	49	-18.4	15.1	13.9		
91+00 N	19.7	0.0	10.21	11.1	11:35:56	4	-27.3	11.1	13.1		
90+50 N	11.4	-1.1	10.47	6.5	11:36:58	49	-15.0	3.1	7.1		
90+00 N	10.2	-1.9	10.59	5.8	11:37:52	49	-14.1	-7.4	-2.2		
89+50 N	20.0	1.8	10.85	11.3	11:38:44	39	-13.8	-0.5	-4.0		
89+00 N	13.5	0.0	10.05	7.7	11:39:34	39	-15.9	6.7	3.1		
88+50 N	0.9	0.1	10.26	0.5	11:40:29	49	-16.0	-8.9	-1.1		
88+00 N	9.2	4.1	11.24	5.2	11:41:20	39	-14.2	-13.3	-11.1		
87+50 N	12.7	4.1	10.53	7.2	11:42:11	39	-14.3	4.2	-4.6		

87+00 N	13.9	1.9	10.58	7.9	11:43:03	49	-19.6	9.4	6.8
86+50 N	15.2	2.1	10.46	8.6	11:43:53	49	-16.0	4.1	6.7
86+00 N	14.6	2.2	10.03	8.3	11:44:44	39	-16.8	1.8	2.9
85+50 N	13.1	1.2	10.23	7.5	11:45:33	39	-16.0	-0.7	0.5
85+00 N	12.8	1.3	10.48	7.3	11:46:23	49	-14.1	-2.1	-1.4
84+50 N	14.8	1.4	10.16	8.4	11:47:12	49	-15.4	-0.1	-1.1
84+00 N	10.9	-0.8	10.42	6.2	11:48:04	49	-9.9	-0.2	-0.2
83+50 N	9.9	-2.0	10.24	5.7	11:48:54	39	-16.0	-3.8	-2.0
83+00 N	14.8	-0.7	10.59	8.4	11:49:43	49	-16.0	-0.5	-2.2
82+50 N	12.5	-3.8	10.43	7.1	11:50:32	49	-15.0	3.6	1.5
82+00 N	10.1	-5.4	10.32	5.7	11:51:21	49	-16.2	-1.3	1.1
81+50 N	20.3	0.4	10.17	11.5	11:52:09	39	-18.6	1.7	0.2
81+00 N	21.5	-0.2	9.66	12.1	11:52:59	39	-18.2	10.8	6.2
80+50 N	11.1	-0.8	9.88	6.3	11:53:50	39	-13.7	1.2	6.0
80+00 N	16.0	3.8	9.68	9.1	11:54:42	39	-12.7	-8.2	-3.5
79+50 N	12.3	3.4	9.20	7.0	11:55:35	39	-10.6	-2.3	-5.3
79+00 N	9.0	4.6	9.50	5.1	11:56:36	39	-5.3	-3.3	-2.8
78+50 N	3.0	5.4	9.05	1.7	11:57:26	39	-4.7	-9.3	-6.3
78+00 N	-9.2	1.9	9.27	-5.2	11:58:32	39	-3.7	-15.6	-12.5
77+50 N	-15.1	-0.2	10.46	-8.6	11:59:29	36	-3.8	-20.6	-18.1
77+00 N	-7.9	0.5	12.02	-4.5	12:00:21	39	-8.8	-9.6	-15.1
76+50 N	7.4	2.1	10.70	4.2	12:01:21	29	-12.6	13.5	1.9
76+00 N	0.1	-9.1	10.44	0.0	12:02:21	39	-2.5	17.3	15.4
75+50 N	5.7	-7.3	11.88	3.2	12:03:13	39	-7.8	3.5	10.4
75+00 N	5.4	-7.3	11.99	3.1	12:04:38	39	-9.8	2.1	2.8
74+50 N	0.9	-6.0	9.60	0.5	12:06:08	49	-14.1	0.4	1.2
74+00 N	-0.9	-3.0	9.96	-0.5	12:07:05	39	-4.4	-6.3	-3.0
73+50 N	-6.9	-3.9	9.75	-4.0	12:08:09	39	-11.1	-8.1	-7.2
73+00 N	-12.5	-5.6	9.91	-7.1	12:09:07	39	-8.1	-11.1	-9.6
72+50 N	-15.1	-6.0	10.51	-8.6	12:10:07	34	-9.4	-11.2	-11.2
72+00 N	-13.5	-2.1	10.89	-7.7	12:10:59	39	-9.1	-5.2	-8.2
71+50 N	-16.1	-5.4	11.57	-9.1	12:11:52	37	-10.9	-1.1	-3.2
71+00 N	-19.0	-9.1	12.09	-10.8	12:12:47	25	-7.3	-3.6	-2.4
70+50 N	-12.1	-4.7	12.72	-6.9	12:13:39	39	-14.1	-0.9	-2.3
70+00 N	-9.7	-3.9	12.68	-5.5	12:14:32	29	-11.1	7.5	3.3
69+50 N	-4.0	1.1	12.85	-2.3	12:15:21	39	-14.1	9.9	8.7
69+00 N	-5.7	4.5	11.95	-3.2	12:16:27	39	-22.1	6.9	8.4
68+50 N	-6.6	9.4	11.61	-3.8	12:17:31	39	-21.1	0.8	3.8
68+00 N	-11.3	8.5	12.02	-6.5	12:18:24	39	-18.6	-4.8	-2.0
67+50 N	-12.8	10.3	12.02	-7.4	12:19:24	44	-27.0	-6.9	-5.9
67+00 N	-26.4	1.1	12.87	-14.8	12:20:23	43	-25.5	-11.9	-9.4
66+50 N	-27.1	3.6	16.88	-15.1	12:21:20	34	-23.0	-16.0	-14.0
66+00 N	15.3	6.1	16.26	8.7	12:22:14	29	-29.8	15.8	-0.1
65+50 N	10.8	4.1	12.49	6.1	12:23:18	49	-33.3	44.7	30.2
65+00 N	5.6	2.9	12.13	3.2	12:24:11	49	-25.7	15.7	30.2
64+50 N	-0.2	1.9	11.59	-0.1	12:25:07	39	-26.1	-11.7	2.0
64+00 N	-2.8	0.7	11.99	-1.6	12:26:06	39	-26.6	-11.0	-11.4
63+50 N	-10.6	-3.5	12.45	-6.0	12:27:07	19	-27.0	-10.7	-10.9
63+00 N	-8.6	-3.5	14.00	-4.9	12:28:01	29	-27.7	-9.2	-10.0
62+50 N	-1.8	1.0	12.39	-1.0	12:28:54	39	-25.8	1.7	-3.8
62+00 N	-8.8	-0.8	11.75	-5.0	12:29:48	49	-22.2	4.9	3.3
61+50 N	-19.8	-2.2	12.51	-11.2	12:30:46	25	-22.4	-10.3	-2.7
61+00 N	-14.0	1.7	13.67	-7.9	12:31:40	46	-19.9	-13.1	-11.7
60+50 N	-3.0	2.3	13.71	-1.7	12:32:34	39	-12.1	6.6	-3.3
60+00 N	-3.7	0.5	13.13	-2.1	12:33:59	49	-14.4	15.3	10.9

Line 77+50 E Date 18 SEP 95 23.4 #83

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+50 N	-1.4	1.6	14.72	-0.8	12:39:55	49	-20.5				

Line 79+50 E Date 18 SEP 95 23.4 #84

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
61+00 N	-13.3	-0.7	15.73	-7.6	12:42:13	39	-19.9				
61+50 N	-30.5	-9.9	13.49	-17.1	12:43:44	19	-24.3				
61+50 N	-17.5	-5.9	11.99	-9.9	12:44:37	39	-16.9	#			
62+00 N	-2.6	-2.2	12.13	-1.5	12:46:22	39	-22.4				
62+00 N	-2.4	-2.0	12.18	-1.3	12:46:48	39	-20.3	#			
62+50 N	3.9	1.4	12.82	2.2	12:47:54	39	-24.2	-25.4			
63+00 N	1.2	-1.2	13.07	0.7	12:48:46	39	-21.5	-21.5	-23.5		
63+50 N	5.0	4.3	12.80	2.8	12:49:35	29	-23.9	-2.8	-12.2		
64+00 N	14.4	10.7	13.53	8.2	12:50:26	27	-27.9	-8.1	-5.5		
64+50 N	17.4	13.6	14.55	10.0	12:51:20	27	-27.0	-14.7	-11.4		
65+00 N	-4.6	3.6	15.27	-2.6	12:52:24	39	-19.9	3.6	-5.6		
65+50 N	-4.8	-0.4	12.60	-2.7	12:53:17	39	-23.2	23.5	13.5		
66+00 N	3.4	1.9	12.54	1.9	12:54:06	29	-19.7	8.2	15.8		
66+50 N	11.1	2.9	12.46	6.3	12:54:56	38	-13.2	-13.5	-2.7		
67+00 N	15.8	2.5	13.02	9.0	12:55:44	27	-16.7	-16.1	-14.8		
67+50 N	18.9	2.2	13.43	10.7	12:56:35	35	-13.3	-11.5	-13.8		
68+00 N	20.6	1.6	13.75	11.6	12:57:25	34	-11.4	-7.0	-9.3		
68+50 N	19.5	1.0	14.22	11.0	12:58:16	34	-12.4	-2.9	-5.0		
69+00 N	21.0	1.5	14.94	11.9	12:59:04	34	-12.8	-0.6	-1.8		
69+50 N	24.7	1.4	15.22	13.8	12:59:59	43	-16.8	-3.1	-1.9		
70+00 N	26.0	0.6	17.41	14.5	13:03:38	24	-20.7	-5.4	-4.3		
70+50 N	16.3	-2.0	19.30	9.3	13:04:30	36	-26.2	1.9	-1.8		
71+00 N	-5.6	-5.5	18.36	-3.2	13:05:28	39	-25.7	22.2	12.0		
71+50 N	-20.7	-3.7	17.03	-11.7	13:06:19	39	-22.6	38.7	30.4		
72+00 N	-24.4	-2.6	15.37	-13.7	13:07:09	29	-21.4	31.5	35.1		
72+50 N	-24.6	-5.0	13.33	-13.8	13:08:01	39	-17.6	12.6	22.0		
73+00 N	-16.3	-4.2	12.76	-9.3	13:09:00	29	-20.2	-2.3	5.1		
73+50 N	-11.4	-3.2	13.37	-6.5	13:09:50	39	-25.2	-11.7	-7.0		
74+00 N	-14.0	-6.4	13.10	-8.0	13:10:43	39	-18.6	-8.6	-10.2		
74+50 N	-12.5	-3.6	12.24	-7.1	13:11:32	39	-12.6	-0.7	-4.7		
75+00 N	-11.1	0.3	13.20	-6.3	13:12:32	39	-11.9	-1.1	-0.9		
75+50 N	-18.1	-1.9	12.84	-10.2	13:13:27	29	-12.2	1.4	0.1		
76+00 N	-13.8	-0.3	11.82	-7.9	13:14:24	39	-13.7	4.7	3.0		
76+50 N	-5.8	4.8	11.55	-3.3	13:15:20	39	-13.8	-5.3	-0.3		
77+00 N	3.4	8.9	12.90	1.9	13:16:17	19	-8.8	-16.7	-11.0		
77+50 N	0.6	6.7	13.20	0.3	13:17:17	39	-12.8	-13.4	-15.1		
78+00 N	0.5	5.4	13.75	0.3	13:18:12	29	-12.0	-2.0	-7.7		
78+50 N	-5.0	-1.0	13.21	-2.9	13:19:06	29	-6.8	4.8	1.4		
79+00 N	-2.2	-1.4	13.17	-1.2	13:20:00	39	-11.5	4.7	4.7		
79+50 N	-2.7	-4.4	12.53	-1.5	13:20:52	29	-12.4	0.1	2.4		
80+00 N	0.1	-4.4	12.68	0.0	13:21:44	39	-14.5	-2.6	-1.3		
80+50 N	3.1	-4.0	12.19	1.8	13:22:38	29	-14.1	-4.5	-3.6		
81+00 N	7.7	-4.4	11.98	4.4	13:23:26	39	-12.3	-7.7	-6.1		
81+50 N	14.2	-4.4	12.18	8.1	13:24:21	39	-12.7	-10.7	-9.2		
82+00 N	19.3	-5.4	12.82	10.9	13:25:09	34	-6.6	-12.8	-11.8		
82+50 N	21.7	-2.5	14.30	12.2	13:26:15	24	-8.9	-10.6	-11.7		
83+00 N	7.7	-3.9	14.01	4.4	13:27:03	29	-10.2	2.4	-4.1		
83+50 N	12.5	0.0	13.54	7.1	13:27:57	39	-9.6	11.6	7.0		

84+00 N	15.5	1.7	14.00	8.8	13:28:45	29	-9.6	0.7	6.1
84+50 N	8.9	0.9	15.00	5.1	13:29:34	49	-6.9	-2.4	-0.9
85+00 N	4.7	0.4	14.37	2.6	13:30:23	39	-13.3	8.2	2.9
85+50 N	4.2	-0.2	13.73	2.4	13:31:13	29	-9.0	8.9	8.5
86+00 N	10.8	1.4	12.99	6.1	13:32:01	29	-11.5	-0.8	4.0
86+50 N	18.5	3.9	13.94	10.5	13:36:09	26	-10.7	-11.6	-6.2
87+00 N	15.1	0.6	14.61	8.6	13:37:00	29	-9.1	-10.6	-11.1
87+50 N	9.1	-0.3	14.95	5.2	13:38:03	9	-9.8	2.8	-3.9
88+00 N	7.4	-1.0	14.30	4.2	13:38:55	39	-5.2	9.7	6.2
88+50 N	11.6	-1.3	13.95	6.6	13:39:43	29	-4.4	3.0	6.3
89+00 N	17.9	-1.8	14.15	10.1	13:40:33	25	-6.4	-7.3	-2.2
89+50 N	13.8	-3.9	15.07	7.8	13:41:22	27	-8.5	-7.1	-7.2
90+00 N	11.4	-2.4	15.11	6.5	13:42:10	65	-6.1	2.4	-2.4
90+50 N	11.1	-1.3	15.41	6.3	13:42:59	39	-4.1	5.1	3.7
91+00 N	15.3	1.9	15.05	8.7	13:43:52	36	-6.8	-0.7	2.2
91+50 N	10.1	1.1	15.64	5.8	13:44:42	39	-3.8	-1.7	-1.2
92+00 N	12.0	2.7	15.22	6.8	13:45:31	38	-6.9	2.4	0.3
92+50 N	8.5	2.2	15.38	4.8	13:46:25	39	-9.0	2.9	2.6
93+00 N	10.9	2.0	15.47	6.2	13:47:15	39	-1.0	1.6	2.2
93+50 N	2.6	-2.3	16.43	1.5	13:48:05	29	-4.6	3.9	2.7
94+00 N	2.2	-3.6	15.29	1.3	13:48:54	29	-6.6	8.2	6.0
94+50 N	9.0	-2.4	14.96	5.1	13:49:44	29	-5.2	1.3	4.7
95+00 N	11.8	-1.1	15.45	6.7	13:50:34	37	-9.1	-9.0	-3.9
95+50 N	4.4	0.2	15.52	2.5	13:51:28	39	-6.7	-2.8	-5.9
96+00 N	5.4	-0.1	15.27	3.1	13:52:59	39	-7.8	6.2	1.7
96+50 N	7.9	0.5	15.01	4.5	13:54:03	39	-13.2	1.6	3.9
97+00 N	10.3	1.1	15.17	5.8	13:54:52	39	-13.3	-4.7	-1.6
97+50 N	9.0	-0.2	15.17	5.1	13:55:45	9	-15.9	-3.3	-4.0
98+00 N	14.1	2.3	14.67	8.0	13:56:47	28	-13.1	-2.8	-3.1
98+50 N	15.0	0.8	15.05	8.5	13:57:38	26	-11.6	-5.6	-4.2
99+00 N	14.7	3.0	15.49	8.4	13:58:30	29	-16.8	-3.8	-4.7
99+50 N	11.9	2.9	15.33	6.8	13:59:21	29	-12.1	1.3	-1.3

Line 81+50 E Date 18 SEP 95 23.4 #164

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	11.0	2.1	14.46	6.2	14:17:04	49	-8.6				
0+50 S	3.2	-1.3	15.36	1.8	14:20:43	39	-9.6 #				
99+50 S	4.3	-0.3	15.31	2.4	14:21:54	39	-12.3				
99+50 S	6.3	0.8	15.83	3.6	14:23:05	49	-17.7 #				
90+50 S	7.1	1.3	15.76	4.0	14:24:31	9	-18.4				
90+00 S	-9.6	-1.3	15.52	-5.5	14:25:33	49	-12.9	0.9			
89+50 S	-7.5	-2.5	15.54	-4.2	14:26:53	19	-16.0	3.3	2.1		
89+00 S	-6.2	-1.6	15.62	-3.5	14:27:59	39	-15.8	-1.8	0.7		
96+00 S	-6.0	-1.3	15.39	-3.4	14:29:33	49	-16.5	-2.8	-2.3		
96+00 S	-10.0	0.2	15.93	-5.7	14:30:51	49	-11.3 #				
95+50 S	-13.1	1.2	15.93	-7.4	14:32:14	49	-18.5	3.1	0.1		
95+00 S	-14.4	1.0	15.14	-8.2	14:33:06	9	-17.5	8.7	5.9		
92+50 S	-8.9	2.8	14.82	-5.0	14:34:27	39	-18.2	2.4	5.5		
92+00 S	-6.7	3.4	15.57	-3.8	14:35:29	39	-15.0	-6.8	-2.2		
91+50 S	-6.6	3.4	14.71	-3.8	14:36:18	49	-15.1	-5.6	-6.2		
91+00 S	0.1	3.5	14.88	0.0	14:37:07	49	-13.6	-5.0	-5.3		
90+50 S	-3.3	0.4	15.28	-1.9	14:38:18	49	-11.5	-5.7	-5.4		
90+00 S	-9.9	-4.3	15.06	-5.6	14:39:13	39	-15.9	3.7	-1.0		
89+50 S	-3.9	-2.2	14.85	-2.2	14:40:55	39	-14.2	5.9	4.8		
89+00 S	-2.2	-0.6	15.54	-1.2	14:40:58	39	-15.5	-4.1	0.9		

88+50 S	-6.6	0.4	15.31	-3.8	14:41:48	49	-15.6	-2.8	-3.5
88+00 S	-6.5	1.9	14.94	-3.7	14:42:34	29	-13.6	4.1	0.6
87+50 S	-3.8	2.0	14.94	-2.2	14:43:34	29	-11.7	0.9	2.5
87+00 S	-1.8	0.2	14.66	-1.0	14:44:28	49	-12.2	-4.3	-1.7
86+50 S	-1.7	-1.3	15.17	-0.9	14:45:18	39	-14.0	-4.0	-4.2
86+00 S	-5.9	-1.5	15.39	-3.4	14:46:04	39	-15.3	1.1	-1.5
85+50 S	-8.6	-1.2	15.11	-4.9	14:46:53	39	-10.2	6.4	3.7
85+00 S	-7.2	-0.6	14.47	-4.1	14:47:41	39	-10.5	4.7	5.5
84+50 S	-4.6	-1.1	14.79	-2.6	14:51:36	9	-12.4	-1.6	1.5
84+00 S	-4.0	-0.2	14.58	-2.3	14:52:29	39	-8.1	-4.1	-2.9
83+50 S	-7.7	-1.0	14.91	-4.4	14:53:39	39	-13.8	0.0	-2.1
83+00 S	-4.1	1.1	14.12	-2.3	14:54:26	39	-8.6	1.8	0.9
82+50 S	1.7	0.9	15.45	1.0	14:55:12	39	-10.9	-5.4	-1.8
82+00 S	-8.3	-2.3	14.57	-4.7	14:55:56	39	-15.8	-3.0	-4.2
81+50 S	-2.7	-0.9	13.97	-1.5	14:56:51	39	-6.9	4.9	0.9
81+00 S	9.3	7.9	15.02	5.3	14:58:04	36	-6.4	-7.5	-1.3
80+50 S	0.2	6.7	15.23	0.1	14:58:59	39	-9.3	-11.6	-9.6
80+00 S	-15.3	0.2	14.84	-8.7	15:00:04	19	-8.9	12.4	0.4
79+50 S	-13.1	-5.5	12.67	-7.5	15:01:08	39	-8.2	21.6	17.0
79+00 S	2.1	-0.9	11.97	1.2	15:02:00	39	-10.3	-2.3	9.6

Line 0+00 E Date 18 SEP 95 23.4 #204

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	-1.8	-0.9	17.28	-1.0	15:17:03	54	-5.3				

EOF

OMNI-PLUS Tie-line MAG/VLF R22O Ser #428242
VLF TOTAL FIELD DATA (uncorrected)
Date 18 SEP 95
Operator: 3000
Records: 204
Bat: 18.0 Volt Lithium: 3.48 Volt
Last time update: 8/16 17:07:00
Start of print: 9/18 17:42:22

Line 0+00 E Date 18 SEP 95 21.4 #1

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
#1	-69.4	-0.1	3906.	-10.0	10:47:57	99	0.0 !				

Line 75+50 E Date 18 SEP 95 21.4 #2

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	10.4	0.5	11.00	5.9	11:11:55	49	-11.2				
1+00 S	8.1	-0.1	11.09	4.6	11:13:48	49	-16.3				
99+50 S	7.3	0.6	10.67	4.1	11:14:46	49	-15.3				

99+00 S	1.6	1.1	10.59	0.9	11:15:47	39	-17.5	-5.5	
98+50 S	-3.3	1.6	10.53	-1.9	11:17:02	39	-20.7	-9.7	-7.6
98+00 S	-4.3	2.0	11.72	-2.4	11:18:27	49	-13.7	-9.3	-9.5
99+00 S	3.1	3.3	11.70	1.8	11:19:44	39	-9.1	0.4	-4.5
97+00 S	-3.1	1.3	10.57	-1.8	11:22:12	39	-10.3	4.3	2.3
96+00 N	-3.9	2.2	12.08	-2.2	11:23:24	49	-10.7	-3.4	0.4
95+50 N	5.1	0.4	12.40	2.9	11:25:38	39	-18.3	0.7	-1.4
95+00 N	0.3	-7.9	12.68	0.2	11:26:35	49	-10.9	7.1	3.9
94+50 N	18.2	-6.8	13.71	10.4	11:27:33	39	-9.5	9.9	8.5
94+00 N	13.3	-7.6	10.37	7.6	11:28:40	49	-14.3	14.9	12.4
93+50 N	-1.0	-8.1	10.59	-0.6	11:29:37	39	-14.1	-3.6	5.6
93+00 N	-6.5	0.0	12.65	-3.7	11:30:53	49	-18.9	-22.3	-13.0
92+50 N	2.5	7.5	12.99	1.4	11:32:00	39	-13.6	-9.3	-15.8
92+00 N	7.9	4.2	12.93	4.5	11:33:22	49	-16.0	10.2	0.4
91+50 N	13.3	2.6	12.07	7.6	11:34:22	49	-12.4	14.4	12.3
91+00 N	14.5	0.6	11.78	8.2	11:35:56	39	-8.5	9.9	12.1
90+50 N	9.0	-0.9	11.45	5.1	11:36:58	49	-9.9	1.2	5.5
90+00 N	8.1	-2.1	11.69	4.6	11:37:52	49	-8.9	-6.1	-2.5
89+50 N	18.2	2.0	11.94	10.3	11:38:44	49	-7.9	1.6	-2.3
89+00 N	11.5	-0.1	10.88	6.6	11:39:34	49	-10.1	7.2	4.4
88+50 N	0.0	-0.1	11.29	0.0	11:40:29	49	-9.7	-8.3	-0.6
88+00 N	8.5	3.6	12.09	4.9	11:41:20	39	-6.2	-12.0	-10.2
87+50 N	11.9	3.0	11.46	6.8	11:42:11	39	-8.3	5.1	-3.5
87+00 N	11.1	2.3	11.36	6.3	11:43:03	49	-12.6	8.2	6.6
86+50 N	13.4	2.2	11.23	7.6	11:43:53	59	-9.8	2.2	5.2
86+00 N	13.4	2.9	10.86	7.6	11:44:44	49	-9.4	2.1	2.1
85+50 N	11.7	2.6	10.97	6.6	11:45:33	39	-9.9	0.3	1.2
85+00 N	11.6	2.1	11.37	6.6	11:46:23	49	-7.9	-2.0	-0.9
84+50 N	14.2	2.0	10.94	8.1	11:47:12	49	-9.5	0.5	-0.8
84+00 N	10.7	-0.3	11.22	6.1	11:48:04	49	-3.4	1.0	0.7
83+50 N	10.0	-1.1	11.03	5.7	11:48:54	49	-10.8	-2.9	-1.0
83+00 N	14.1	-0.2	11.31	8.0	11:49:43	49	-9.4	-0.5	-1.7
82+50 N	11.3	-2.9	10.98	6.4	11:50:32	49	-9.7	2.6	1.0
82+00 N	9.0	-4.8	10.94	5.1	11:51:21	49	-10.0	-2.2	0.2
81+50 N	19.6	1.4	10.72	11.0	11:52:09	49	-12.6	1.7	-0.3
81+00 N	19.8	1.0	10.05	11.2	11:52:59	49	-11.1	10.7	6.2
80+50 N	8.8	1.1	10.31	5.0	11:53:50	49	-7.1	0.1	5.4
80+00 N	12.9	5.2	10.16	7.4	11:54:42	49	-7.3	-9.8	-4.9
79+50 N	10.2	3.9	9.71	5.8	11:55:35	39	-5.1	-3.0	-6.4
79+00 N	6.4	5.3	10.05	3.6	11:56:36	49	-1.1	-3.0	-3.0
78+50 N	1.6	5.5	9.37	0.9	11:57:26	49	-0.6	-8.7	-5.9
78+00 N	-9.6	2.5	9.69	-5.5	11:58:32	49	0.1	-14.0	-11.4
77+50 N	-13.8	0.2	10.75	-7.8	11:59:29	34	0.7	-17.8	-15.9
77+00 N	-6.9	1.2	12.37	-3.9	12:00:21	39	-4.1	-7.1	-12.5
76+50 N	7.3	2.8	10.85	4.1	12:01:21	29	-6.2	13.5	3.2
76+00 N	0.6	-8.8	10.76	0.3	12:02:21	39	2.6	16.1	14.8
75+50 N	6.1	-6.8	11.90	3.5	12:03:13	39	-2.5	3.6	9.8
75+00 N	6.3	-7.0	11.96	3.6	12:04:38	39	-4.2	2.7	3.1
74+50 N	1.2	-6.1	9.58	0.7	12:06:08	49	-7.9	0.5	1.6
74+00 N	0.3	-2.6	9.69	0.1	12:07:05	49	0.6	-6.3	-2.9
73+50 N	-5.6	-3.7	9.77	-3.2	12:08:09	39	-3.7	-7.4	-6.9
73+00 N	-11.3	-5.6	9.73	-6.5	12:09:07	39	-1.2	-10.5	-9.0
72+50 N	-14.1	-6.0	10.24	-8.0	12:10:07	35	-3.2	-11.4	-11.0
72+00 N	-11.0	-2.6	10.70	-6.2	12:10:59	59	-4.0	-4.5	-6.0
71+50 N	-13.7	-6.0	11.44	-7.8	12:11:52	47	-6.3	0.5	-2.0

71+00 N	-16.2	-9.7	11.83	-9.3	12:12:47	35	-2.0	-2.9	-1.2		
70+50 N	-10.3	-5.8	12.31	-5.9	12:13:39	39	-10.4	-1.2	-2.1		
70+00 N	-6.8	-5.2	12.23	-3.9	12:14:32	39	-4.6	7.3	3.0		
69+50 N	-1.7	0.3	12.25	-1.0	12:15:21	39	-9.8	10.3	8.8		
69+00 N	-1.4	4.0	11.28	-0.8	12:16:27	49	-16.5	8.0	9.1		
68+50 N	-3.5	8.5	10.76	-2.0	12:17:31	39	-15.2	2.1	5.0		
68+00 N	-8.5	6.4	11.00	-4.8	12:18:24	49	-13.2	-5.0	-1.5		
67+50 N	-10.7	9.3	10.91	-6.1	12:19:24	55	-21.8	-8.1	-6.6		
67+00 N	-23.7	0.2	11.48	-13.3	12:20:23	43	-20.8	-12.6	-10.4		
66+50 N	-24.3	2.7	14.87	-13.6	12:21:20	34	-17.6	-16.0	-14.3		
66+00 N	16.8	8.3	14.38	9.6	12:22:14	49	-24.1	15.4	-0.3		
65+50 N	11.4	6.3	11.04	6.5	12:23:18	49	-27.6	43.0	29.2		
65+00 N	6.4	5.1	10.94	3.6	12:24:11	49	-19.6	14.1	28.5		
64+50 N	1.5	3.7	10.56	0.8	12:25:07	49	-19.9	-11.7	1.2		
64+00 N	-2.9	2.3	10.70	-1.7	12:26:06	49	-20.7	-11.0	-11.4		
63+50 N	-9.4	-1.6	11.07	-5.3	12:27:07	29	-21.8	-11.4	-11.2		
63+00 N	-8.7	-2.1	12.29	-4.9	12:28:01	29	-22.6	-9.3	-10.4		
62+50 N	-3.7	2.3	11.05	-2.1	12:28:54	49	-20.5	0.0	-4.7		
62+00 N	-10.4	-0.2	10.59	-5.9	12:29:48	47	-15.0	2.2	1.1		
61+50 N	-20.1	-1.6	11.04	-11.3	12:30:46	33	-17.1	-10.2	-4.0		
61+00 N	-14.7	1.9	12.07	-8.3	12:31:40	44	-14.7	-11.6	-10.9		
60+50 N	-3.5	3.3	12.07	-2.0	12:32:34	39	-6.3	6.9	-2.4		
60+00 N	-4.4	1.9	11.75	-2.5	12:33:59	46	-7.8	15.1	11.0		

Line 77+50 E Date 18 SEP 95 21.4 #83

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
60+50 N	-2.9	2.8	12.43	-1.6	12:39:55	49	-16.3				

Line 79+50 E Date 18 SEP 95 21.4 #84

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
61+00 N	-14.7	-0.8	13.17	-8.3	12:42:13	39	-16.2				
61+50 N	-32.1	-11.0	11.41	-18.0	12:43:44	39	-20.7				
61+50 N	-19.4	-5.6	10.17	-11.0	12:44:37	39	-11.7	#			
62+00 N	-2.6	-2.4	10.23	-1.5	12:46:22	39	-17.0				
62+00 N	-2.7	-2.2	10.11	-1.5	12:46:48	39	-15.2	#			
62+50 N	4.4	1.6	10.73	2.5	12:47:54	49	-20.8	-27.3			
63+00 N	1.8	-0.9	10.79	1.0	12:48:46	39	-16.5	-23.0	-25.2		
63+50 N	4.1	4.5	10.69	2.3	12:49:35	39	-18.9	-2.3	-12.7		
64+00 N	12.5	11.6	11.21	7.2	12:50:26	37	-21.6	-6.0	-4.2		
64+50 N	15.8	14.3	11.84	9.1	12:51:20	38	-22.0	-13.0	-9.5		
65+00 N	-5.3	3.5	12.11	-3.0	12:52:24	29	-14.2	3.4	-4.8		
65+50 N	-5.0	-0.5	10.29	-2.9	12:53:17	49	-19.2	22.2	12.8		
66+00 N	4.8	1.9	10.24	2.7	12:54:06	39	-15.0	6.3	14.2		
66+50 N	11.7	3.0	10.29	6.6	12:54:56	46	-7.9	-15.2	-4.5		
67+00 N	16.3	2.6	10.71	9.3	12:55:44	36	-12.1	-16.1	-15.7		
67+50 N	18.4	1.7	11.26	10.4	12:56:35	44	-8.6	-10.4	-13.3		
68+00 N	20.6	1.5	11.52	11.6	12:57:25	33	-5.6	-6.1	-8.3		
68+50 N	18.7	0.3	11.77	10.6	12:58:16	43	-7.5	-2.5	-4.3		
69+00 N	20.4	0.9	12.34	11.5	12:59:04	44	-9.3	-0.1	-1.3		
69+50 N	23.8	0.7	12.57	13.3	12:59:59	43	-11.8	-2.6	-1.4		
70+00 N	25.1	0.0	14.17	14.1	13:03:38	33	-15.9	-5.3	-4.0		
70+50 N	16.2	-2.9	15.66	9.2	13:04:30	34	-20.7	1.5	-1.9		
71+00 N	-4.9	-6.9	14.91	-2.8	13:05:28	39	-19.1	21.0	11.2		
71+50 N	-19.3	-6.1	13.50	-10.9	13:06:19	39	-17.8	37.0	29.0		
72+00 N	-22.6	-5.4	12.33	-12.7	13:07:09	29	-13.8	30.0	33.5		

72+50 N	-22.7	-7.2	10.96	-12.8	13:08:01	39	-11.2	11.8	20.9
73+00 N	-14.8	-5.3	10.39	-8.4	13:09:00	39	-13.3	-2.4	4.7
73+50 N	-14.5	-5.4	10.71	-8.3	13:09:50	32	-13.6	-8.8	-5.6
74+00 N	-11.4	-8.5	10.66	-6.5	13:10:43	39	-10.5	-6.4	-7.6
74+50 N	-9.1	-5.0	10.40	-5.2	13:11:32	39	-5.2	-5.0	-5.7
75+00 N	-8.9	-0.5	11.01	-5.0	13:12:32	39	-5.4	-4.6	-4.8
75+50 N	-18.6	-4.0	10.67	-10.6	13:13:27	39	-4.8	3.9	-0.4
76+00 N	-13.8	-2.5	9.84	-7.8	13:14:24	39	-6.3	8.2	6.0
76+50 N	-6.0	3.3	9.50	-3.4	13:15:20	39	-7.6	-4.4	1.9
77+00 N	2.5	7.5	10.54	1.4	13:16:17	29	-2.5	-16.4	-10.4
77+50 N	-0.1	5.5	10.92	0.0	13:17:17	29	-7.8	-12.6	-14.5
78+00 N	0.0	5.5	11.21	0.0	13:18:12	19	-6.8	-2.0	-7.3
78+50 N	-6.2	-1.4	10.80	-3.5	13:19:06	39	0.3	4.9	1.4
79+00 N	-2.7	-2.0	10.71	-1.5	13:20:00	39	-5.5	5.0	4.9
79+50 N	-3.0	-4.0	10.34	-1.7	13:20:52	39	-7.2	-0.3	2.3
80+00 N	-1.2	-4.4	10.15	-0.7	13:21:44	39	-8.0	-2.6	-1.5
80+50 N	1.1	-3.5	10.20	0.6	13:22:38	39	-8.2	-3.1	-2.9
81+00 N	7.6	-4.5	10.00	4.3	13:23:26	34	-4.8	-7.3	-5.2
81+50 N	14.0	-4.0	9.70	8.0	13:24:21	34	-5.7	-12.4	-9.9
82+00 N	19.6	-5.4	10.49	11.1	13:25:09	33	-0.4	-14.2	-13.3
82+50 N	20.1	-3.0	11.77	11.4	13:26:15	33	-3.2	-10.2	-12.2
83+00 N	7.7	-4.1	11.42	4.4	13:27:03	19	-3.6	3.3	-3.5
83+50 N	11.4	0.2	11.23	6.5	13:27:57	39	-4.4	11.6	7.4
84+00 N	14.0	2.2	11.16	7.9	13:28:45	36	-3.2	1.4	6.5
84+50 N	7.8	0.9	12.11	4.5	13:29:34	49	-1.6	-1.5	-0.1
85+00 N	3.5	0.0	11.50	2.0	13:30:23	19	-8.5	7.9	3.2
85+50 N	2.9	-0.7	10.87	1.6	13:31:13	39	-4.4	8.8	8.3
86+00 N	10.0	0.8	10.34	5.7	13:32:01	39	-6.2	-0.8	4.0
86+50 N	18.1	4.0	11.21	10.2	13:36:09	24	-4.7	-12.3	-6.6
87+00 N	14.2	0.1	11.57	8.0	13:37:00	28	-4.7	-10.9	-11.6
87+50 N	8.5	-1.0	11.86	4.8	13:38:03	17	-0.9	3.1	-3.9
88+00 N	6.1	-1.4	11.43	3.5	13:38:55	39	1.6	9.9	6.5
88+50 N	10.4	-2.0	11.00	5.9	13:39:43	35	0.3	3.4	6.6
89+00 N	16.5	-1.7	11.25	9.3	13:40:33	34	0.1	-6.9	-1.8
89+50 N	13.3	-3.7	11.82	7.6	13:41:22	24	-2.0	-7.5	-7.2
90+00 N	9.9	-3.0	11.83	5.7	13:42:10	63	1.7	1.9	-2.8
90+50 N	9.5	-1.9	11.95	5.4	13:42:59	44	1.2	5.8	3.8
91+00 N	13.4	2.0	11.70	7.6	13:43:52	35	-1.0	0.3	3.0
91+50 N	8.7	0.8	12.28	5.0	13:44:42	39	1.0	-1.5	-0.6
92+00 N	10.1	2.2	11.82	5.7	13:45:31	43	-0.8	2.3	0.4
92+50 N	7.6	2.2	11.91	4.3	13:46:25	39	-3.7	2.6	2.4
93+00 N	8.9	1.9	12.07	5.1	13:47:15	39	4.3	1.3	1.9
93+50 N	0.9	-1.7	12.77	0.5	13:48:05	39	0.6	4.4	2.8
94+00 N	0.2	-3.0	11.92	0.1	13:48:54	39	-1.3	8.8	6.6
94+50 N	7.4	-2.1	11.16	4.2	13:49:44	36	1.0	1.3	5.0
95+00 N	10.2	-0.3	11.96	5.8	13:50:34	46	-4.5	-9.4	-4.1
95+50 N	1.6	0.0	11.89	0.9	13:51:28	39	-2.2	-2.4	-5.9
96+00 N	3.7	-0.4	11.48	2.1	13:52:59	39	-3.1	7.0	2.3
96+50 N	6.9	0.4	11.47	4.0	13:54:03	39	-7.7	0.6	3.8
97+00 N	9.6	0.8	11.17	5.4	13:54:52	36	-8.3	-6.4	-2.9
97+50 N	10.2	-0.8	11.44	5.8	13:55:45	37	-10.4	-5.1	-5.8
98+00 N	15.3	0.7	10.91	8.7	13:56:47	34	-5.2	-5.1	-5.1
98+50 N	14.5	0.4	11.51	8.2	13:57:38	34	-6.0	-5.7	-5.4
99+00 N	14.1	2.9	11.65	8.0	13:58:30	38	-10.7	-1.7	-5.7
99+50 N	10.1	2.5	11.64	5.7	13:59:21	24	-4.3	3.2	0.7

Line 81+50 E Date 18 SEP 95 21.4 #164

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+50 S	11.4	2.5	10.95	6.5	14:17:04	49	-2.1				
0+50 S	5.5	-0.6	11.59	3.1	14:20:43	49	-2.8 #				
99+50 S	6.8	0.0	11.55	3.9	14:21:54	49	-3.7				
99+50 S	7.5	1.4	11.64	4.3	14:23:05	49	-12.0 #				
90+50 S	8.2	1.4	11.58	4.7	14:24:31	49	-9.7				
90+00 S	-10.1	-2.1	11.65	-5.7	14:25:33	49	-6.6	0.0			
89+50 S	-8.7	-3.3	11.29	-5.0	14:26:53	39	-7.1	2.1	1.0		
89+00 S	-7.5	-2.2	11.33	-4.2	14:27:59	39	-8.8	-1.2	0.4		
96+00 S	-6.3	-2.1	11.38	-3.6	14:29:33	49	-10.1	-2.9	-2.1		
96+00 S	-11.0	-0.9	12.13	-6.3	14:30:51	49	-6.1 #				
95+50 S	-14.8	0.4	11.50	-8.4	14:32:14	49	-11.9	2.8	-0.1		
95+00 S	-14.6	0.0	10.87	-8.3	14:33:06	49	-13.1	8.9	5.8		
92+50 S	-8.6	1.9	10.84	-4.9	14:34:27	49	-13.2	1.2	5.0		
92+00 S	-6.6	2.5	11.14	-3.7	14:35:29	39	-9.4	-8.1	-3.5		
91+50 S	-4.9	2.4	10.64	-2.8	14:36:18	49	-10.0	-6.7	-7.4		
91+00 S	2.0	2.4	11.11	1.1	14:37:07	49	-8.4	-6.9	-6.8		
90+50 S	-3.0	-1.0	11.40	-1.7	14:38:18	49	-5.0	-5.9	-6.4		
90+00 S	-9.3	-5.6	11.12	-5.3	14:39:13	39	-10.1	5.3	-0.3		
89+50 S	-3.5	-3.1	11.04	-2.0	14:40:05	39	-7.0	6.7	6.0		
89+00 S	-2.6	-0.8	11.54	-1.5	14:40:58	49	-9.0	-3.5	1.6		
88+50 S	-6.3	-0.4	11.32	-3.6	14:41:48	49	-8.2	-2.2	-2.9		
88+00 S	-6.0	1.8	10.93	-3.4	14:42:34	49	-7.5	3.5	0.6		
87+50 S	-3.8	1.6	11.19	-2.1	14:43:34	49	-4.5	0.4	1.9		
87+00 S	-3.3	0.4	10.67	-1.9	14:44:28	49	-4.5	-3.0	-1.3		
86+50 S	-2.3	-1.2	11.15	-1.3	14:45:18	47	-6.1	-2.3	-2.7		
86+00 S	-6.2	-1.6	11.36	-3.5	14:46:04	39	-9.2	0.8	-0.8		
85+50 S	-8.4	-1.1	11.24	-4.8	14:46:53	39	-3.6	5.1	2.9		
85+00 S	-6.3	-0.9	10.92	-3.6	14:47:41	39	-4.5	3.6	4.3		
84+50 S	-4.9	-0.2	10.97	-2.8	14:51:36	9	-7.7	-1.9	0.8		
84+00 S	-3.7	-0.2	10.82	-2.1	14:52:29	49	-1.3	-3.5	-2.7		
83+50 S	-8.7	-1.0	11.05	-5.0	14:53:39	49	-6.5	0.7	-1.4		
83+00 S	-4.5	0.6	10.24	-2.6	14:54:26	49	-2.0	2.7	1.7		
82+50 S	0.8	1.6	11.12	0.5	14:55:12	39	-5.2	-5.0	-1.2		
82+00 S	-8.6	-3.0	10.69	-4.9	14:55:56	49	-7.7	-3.2	-4.1		
81+50 S	-2.9	-0.8	10.23	-1.6	14:56:51	49	-0.7	4.4	0.6		
81+00 S	6.3	8.5	11.03	3.6	14:58:04	34	3.0	-6.4	-1.0		
80+50 S	-1.4	6.7	11.57	-0.8	14:58:59	39	-1.7	-9.3	-7.9		
80+00 S	-19.0	0.0	10.73	-10.7	15:00:04	39	-1.8	13.5	2.1		
79+50 S	-14.8	-5.4	9.31	-8.4	15:01:08	49	-1.5	21.9	17.7		
79+00 S	0.4	1.3	8.92	0.2	15:02:00	39	-1.8	-3.3	9.3		

Line 0+00 E Date 18 SEP 95 21.4 #204

POSITION	I/P	QUAD	T.FLD	TILT	TIME	CULT S	DIR	4-FRA	5-FRA	RESIS	PHASE
0+00 N	-1.5	-1.3	13.42	-0.8	15:17:03	44	2.0				

EOF

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP036339

P.O. BOX 11530
RENO. NV,.USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO :

:

:

:

CLIENT REFERENCE No: 21X455/229X455 RECEIVED : 6 NOV 1995

No. SAMPLES : 20 REPORTED : 9 NOV 1995

MAIN SAMPLE TYPE : SOILS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP036339

CLIENT : HECLA MINING CO.
PROJECT : NONE
REFERENCE : 21X455/229X455

REPORTED : 9 NOV 1995

SAMPLES	Au	Au(R)
21X455	<5	
22X455	<5	
211X455	8	
212X455	5	
213X455	7	
214X455	<5	
215X455	<5	
216X455	<5	
217X455	8	
218X455	<5	
219X455	<5	
221X455	<5	
222X455	6	
223X455	11	
224X455	<5	
225X455	<5	
226X455	<5	
227X455	10	
228X455	<5	
229X455	18	

American Assay Laboratories

INVOICE

******CHANGE OF ADDRESS******
------PLEASE REMIT TO
------P.O. BOX 11530
------RENO NV 89510-1530

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0035941-IN
INVOICE DATE: 10/25/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
165X785/	ROSEBUD	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
32	SAMPLES RECEIVED	.00	.00
32	SCREENING CHARGE	1.00	32.00
32	Au (1 A.T. FIRE ASSAY)	8.00	256.00
32	HYDROCHLORIC/NITRIC DIGESTION	2.00	64.00
32	Ag ANALYSES	1.00	32.00

ok to pay
716130-477
Charles V. Muehlhoff

NET INVOICE:	384.00
LESS DISCOUNT:	126.72
FREIGHT:	.00
INVOICE TOTAL:	257.28

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: 165X785/172X7425 RECEIVED : 10 OCT 1995

No. SAMPLES : 32 REPORTED : 25 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 25 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm
165X785	<5	<5	0.5
166X785	5		<0.5
167X785	46		1.2
168X785	21		0.9
169X785	5		<0.5
170X785	<5		<0.5
171X785	<5		<0.5
172X785	<5		<0.5
173X785	11	6	<0.5
174X785	64		1.4
175X785	19		0.6
176X785	<5		0.8
177X785	13		0.8
178X785	6		<0.5
179X785	<5		<0.5
180X785	<5		<0.5
1652X77	14		0.6
166X77	8		0.5
167X77	56		1.0
168X77	63		0.8
169X77	45		0.7
170X77	7		<0.5
171X77	26		<0.5
172X77	10		<0.5
165X7425	6		<0.5

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 25 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm
166X7425	29		0.6
167X7425	<5		0.5
168X7425	13		0.6
169X7425	<5		<0.5
170X7425	<5		<0.5
171X7425	<5		<0.5
172X7425	<5		<0.5

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

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CLIENT REFERENCE No: 165X785/172X7425 RECEIVED : 10 OCT 1995

No. SAMPLES : 32 REPORTED : 25 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 25 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm
165X785	<5	<5	0.5
166X785	5		<0.5
167X785	46		1.2
168X785	21		0.9
169X785	5		<0.5
170X785	<5		<0.5
171X785	<5		<0.5
172X785	<5		<0.5
173X785	11	6	<0.5
174X785	64		1.4
175X785	19		0.6
176X785	<5		0.8
177X785	13		0.8
178X785	6		<0.5
179X785	<5		<0.5
180X785	<5		<0.5
1652X77	14		0.6
166X77	8		0.5
167X77	56		1.0
168X77	63		0.8
169X77	45		0.7
170X77	7		<0.5
171X77	26		<0.5
172X77	10		<0.5
165X7425	6		<0.5

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035941

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 25 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm
166X7425	29		0.6
167X7425	<5		0.5
168X7425	13		0.6
169X7425	<5		<0.5
170X7425	<5		<0.5
171X7425	<5		<0.5
172X7425	<5		<0.5

American Assay Laboratories

INVOICE

******CHANGE OF ADDRESS******
------PLEASE REMIT TO
------P.O. BOX 11530
------RENO NV 89510-1530

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0035777-IN
INVOICE DATE: 10/20/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
G99545/99550	GATOR	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
6	SAMPLES RECEIVED	.00	.00
6	JAW CRUSHING CHARGE	1.30	7.80
6	COARSE MILLING CHARGE	2.30	13.80
6	SPLITTING CHARGE	.60	3.60
6	RING MILLING CHARGE	2.00	12.00
6	Au (1 A.T. FIRE ASSAY)	8.00	48.00
6	MULTI-ELEMENT ICP PACKAGE	13.70	82.20
6	Se ANALYSES ICP	2.50	15.00

Ok to pay
716130-477
Charles V. Muehlhoff

NET INVOICE:	182.40
LESS DISCOUNT:	55.24
FREIGHT:	.00
INVOICE TOTAL:	127.16

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035777

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : C. MUERHOFF
:
:
:

CLIENT REFERENCE No: G99545/99550
No. SAMPLES : 6
MAIN SAMPLE TYPE : ROCK CHIPS

RECEIVED : 3 OCT 1995
REPORTED : 19 OCT 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035777

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : GATOR
REFERENCE : G99545/99550

REPORTED : 19 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb
G99545	<5	
G99546	<5	
G99547	176	
G99548	252	
G99549	190	
G99550	93	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035777

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : C. MUERHOFF
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CLIENT REFERENCE No: G99545/99550
No. SAMPLES : 6
MAIN SAMPLE TYPE : ROCK CHIPS

RECEIVED : 3 OCT 1995
REPORTED : 19 OCT 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035777

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : GATOR
REFERENCE : G99545/99550

REPORTED : 19 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb
G99545	<5	
G99546	<5	
G99547	176	
G99548	252	
G99549	190	
G99550	93	

CLIENT:	HECLA/ROSEBUD
CLIENT REF:	GATOR
AAL REF:	SP035777
METHOD:	AAL 02-O + Se

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	La	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Sb	Sc	Se	Sn	Sr	Th	Ti	U	V	W	Y	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
G99545	1	7.88	5	1410	2	5	1.52	0.8	3	7	30	3.39	4.03	28	0.3	680	2	1.92	14	2	0.072	47	20	4	0.1	2	222	11	0.22	10	19	4	21	94
G99546	0.9	8.08	5	1347	2	10	2.18	1.1	2	15	150	4.63	3.39	29	0.14	381	7	2.8	14	7	0.129	33	5	7	0.1	2	340	8	0.48	10	56	4	21	105
G99547	2.9	7.78	67	1045	2	5	0.33	0.7	2	6	10	3.38	3.56	29	0.14	80	5	0.78	14	2	0.041	24	42	4	1.8	2	238	11	0.24	10	43	13	18	52
G99548	2.3	3.48	530	411	5	5	0.28	1.6	2	9	24	29.86	0.69	12	0.17	94	15	0.09	5	8	0.167	15	114	4	7.4	4	226	5	0.06	32	112	8	8	89
G99549	0.7	4.35	117	483	2	5	0.14	0.4	3	20	27	3.53	0.99	19	0.03	108	13	0.17	10	8	0.057	22	102	3	7	12	430	6	0.1	10	14	6	7	20
G99550	2.1	5.59	465	875	1	8	0.31	0.5	4	15	18	6.78	1.74	25	0.08	102	44	0.34	11	8	0.134	24	125	3	5.9	3	995	8	0.14	10	59	12	13	49
DETECTION LIMIT	0.5	0.01	5	1	1	5	0.01	0.4	2	2	2	0.01	0.01	2	0.01	5	2	0.01	2	2	0.002	5	5	1	0.1	2	2	2	0.01	10	2	4	2	2

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC, NITRIC ACID, HYDROFLUORIC AND PERCHLORIC ACIDS.
THIS IS A TOTAL ACID DIGEST THAT DUE TO VOLATISATION LOSSES CAN UNDERSTATE THE As AND Sb VALUES
THIS DIGEST WILL REPORT ACID SOLUBLE Sn, Th, U AND Zr

CLIENT: HECLA/ROSEBUD
CLIENT REF: GATOR
AAL REF: SP035777
METHOD: AAL 02-O + Se

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	La	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Sb	Sc	Se	Sn	Sr	Th	Ti	U	V	W	Y	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
G99545	1	7.88	5	1410	2	5	1.52	0.8	3	7	30	3.39	4.03	28	0.3	680	2	1.92	14	2	0.072	47	20	4	0.1	2	222	11	0.22	10	19	4	21	94
G99546	0.9	8.08	5	1347	2	10	2.18	1.1	2	15	150	4.63	3.39	29	0.14	381	7	2.8	14	7	0.129	33	5	7	0.1	2	340	8	0.48	10	56	4	21	105
G99547	2.9	7.78	67	1045	2	5	0.33	0.7	2	6	10	3.38	3.56	29	0.14	80	5	0.78	14	2	0.041	24	42	4	1.8	2	238	11	0.24	10	43	13	18	52
G99548	2.3	3.48	530	411	5	5	0.28	1.6	2	9	24	29.86	0.69	12	0.17	94	15	0.09	5	8	0.167	15	114	4	7.4	4	226	5	0.06	32	112	8	8	89
G99549	0.7	4.35	117	483	2	5	0.14	0.4	3	20	27	3.53	0.99	19	0.03	108	13	0.17	10	8	0.057	22	102	3	7	12	430	6	0.1	10	14	6	7	20
G99550	2.1	5.59	465	875	1	8	0.31	0.5	4	15	18	6.78	1.74	25	0.08	102	44	0.34	11	8	0.134	24	125	3	5.9	3	995	8	0.14	10	59	12	13	49
DETECTION LIMIT	0.5	0.01	5	1	1	5	0.01	0.4	2	2	2	0.01	0.01	2	0.01	5	2	0.01	2	2	0.002	5	5	1	0.1	2	2	2	0.01	10	2	4	2	2

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC, NITRIC ACID, HYDROFLUORIC AND PERCHLORIC ACIDS.
THIS IS A TOTAL ACID DIGEST THAT DUE TO VOLATISATION LOSSES CAN UNDERSTATE THE As AND Sb VALUES
THIS DIGEST WILL REPORT ACID SOLUBLE Sn, Th, U AND Zr

TABLE OF AU/ELEMENT RATIOS

SAMPLE	Au	Ag	As	Ba	Fe	Hg	Mn	Sb	Se	Sr	Te
# 5	2778	0.163	0.27	0.313	0.004	4.9	0.03	0.065	0.005	0.116	0.11973
# 8	614	3.11	1.47	1.4	0.024	12.29	0.08	0.307	0.015	0.193	0.000113
#15	206	0.006	1.32	3.26	0.05	14.95	3.6	0.301	0.015	4.2	0.145794
#17	103	0.001	0.97	10.28	0.038	25.33	17	0.27	0.03	4.06	0.145794
#19	11	0.04	3.8	17.7	0.244	718	9.6	1.1	0.21	4.27	0.308642
MEAN	742.4	0.664	1.566	6.5906	0.072	155.094	6.062	0.4086	0.055	2.5678	0.144015
STD DEV.	1038.427	1.224404	1.191245	6.549411	0.087352	281.5292	6.486726	0.356989	0.07791	1.971762	0.098393

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035233

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: G-001/357 RECEIVED : 23 AUG 1995

No. SAMPLES : 354 REPORTED : 11 OCT 1995

MAIN SAMPLE TYPE : SOILS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Ag	D210	10%	ppm	0.5
Hg	D210	10%	ppb	5
Se	D210	10%	ppm	0.2

Copied to Jim already

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035233

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au	Au(R)	Ag	Hg	Se
G-001	<5	<5	0.6	30	<0.2
G-002	<5		<0.5	13	<0.2
G-003	5		5.9	36	<0.2
G-004	<5		1.4	23	<0.2
G-006	<5		0.5	40	<0.2
G-007	<5		1.2	20	<0.2
G-008	<5		<0.5	28	<0.2
G-009	<5		<0.5	21	<0.2
G-010	<5		<0.5	19	<0.2
G-011	<5		<0.5	23	<0.2
G-012	<5		<0.5	33	<0.2
G-013	<5		<0.5	28	<0.2
G-014	<5		0.7	17	<0.2
G-015	<5		<0.5	26	<0.2
G-016	10		<0.5	57	<0.2
G-017	<5	<5	<0.5	38	<0.2
G-018	13		<0.5	30	0.2
G-019	<5		4.2	35	<0.2
G-020	<5		<0.5	43	<0.2
G-021	7		<0.5	38	0.2
G-022	7		<0.5	77	<0.2
G-023	<5		<0.5	17	<0.2
G-024	<5	<5	<0.5	31	<0.2
G-025	<5		<0.5	24	<0.2
G-026	<5		<0.5	20	<0.2

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CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-027	7		<0.5	38	<0.2
G-028	<5		<0.5	35	<0.2
G-029	<5		<0.5	24	<0.2
G-030	<5		<0.5	32	<0.2
G-031	<5		<0.5	47	<0.2
G-032	<5		<0.5	43	<0.2
G-033	<5		<0.5	41	0.2
G-034	<5		<0.5	20	<0.2
G-035	<5		<0.5	41	<0.2
G-036	<5		<0.5	29	<0.2
G-037	<5		<0.5	36	<0.2
G-038	<5		<0.5	44	<0.2
G-039	<5		<0.5	35	<0.2
G-040	<5		<0.5	29	<0.2
G-041	<5		0.5	35	<0.2
G-042	<5		7.5	55	<0.2
G-043	<5		0.5	60	<0.2
G-044	<5		11.5	66	<0.2
G-045	<5		<0.5	28	<0.2
G-046	<5		3.3	24	<0.2
G-047	<5		1.7	30	0.3
G-048	<5		2.7	35	<0.2
G-049	<5	<5	0.9	28	<0.2
G-050	<5		0.6	20	<0.2
G-051	<5		0.8	10	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-052	<5		<0.5	35	<0.2
G-053	<5		<0.5	10	<0.2
G-054	<5	<5	<0.5	23	<0.2
G-055	<5		0.5	24	<0.2
G-056	<5		<0.5	13	<0.2
G-057	<5		0.5	15	<0.2
G-058	<5		<0.5	24	<0.2
G-059	<5		<0.5	12	<0.2
G-060	<5		<0.5	17	<0.2
G-061	<5		<0.5	26	<0.2
G-062	<5		<0.5	15	<0.2
G-063	<5		<0.5	13	0.2
G-064	<5		<0.5	7	<0.2
G-065	<5		<0.5	22	<0.2
G-066	<5		<0.5	30	<0.2
G-067	<5		<0.5	19	<0.2
G-068	<5	<5	0.5	20	<0.2
G-069	<5		0.6	9	<0.2
G-070	<5		<0.5	18	<0.2
G-071	<5		0.5	34	0.2
G-072	<5		<0.5	37	<0.2
G-073	<5		<0.5	18	<0.2
G-074	<5		<0.5	28	<0.2
G-075	<5	<5	<0.5	20	<0.2
G-076	<5		<0.5	11	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-077	<5		<0.5	18	<0.2
G-078	<5		<0.5	33	<0.2
G-079	<5		<0.5	30	<0.2
G-080	<5		<0.5	24	<0.2
G-081	<5		<0.5	17	<0.2
G-082	<5		0.7	15	<0.2
G-083	<5		<0.5	14	<0.2
G-084	<5		0.5	32	<0.2
G-085	<5	<5	<0.5	13	<0.2
G-086	<5		0.5	28	<0.2
G-087	<5		<0.5	16	<0.2
G-088	<5		<0.5	23	<0.2
G-089	<5		<0.5	8	<0.2
G-090	<5		<0.5	24	<0.2
G-091	<5		<0.5	31	<0.2
G-092	<5		<0.5	30	<0.2
G-093	<5		<0.5	14	<0.2
G-094	<5		<0.5	17	<0.2
G-095	<5		1.1	17	<0.2
G-096	<5		<0.5	14	<0.2
G-097	<5		<0.5	15	<0.2
G-098	<5		<0.5	22	<0.2
G-099	<5		1.4	32	<0.2
G-100	<5		<0.5	15	<0.2
G-101	<5		<0.5	24	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-102	5		<0.5	43	<0.2
G-103	<5		<0.5	25	<0.2
G-104	<5		<0.5	40	<0.2
G-105	<5		<0.5	20	<0.2
G-106	<5		<0.5	17	<0.2
G-107	<5		<0.5	40	<0.2
G-108	6		0.7	22	<0.2
G-109	16		<0.5	31	<0.2
G-110	<5		<0.5	34	<0.2
G-111	<5		<0.5	7	<0.2
G-112	<5		<0.5	8	<0.2
G-113	<5		<0.5	8	<0.2
G-114	<5		<0.5	12	<0.2
G-115	6		<0.5	17	<0.2
G-116	<5		<0.5	93	<0.2
G-117	<5		<0.5	15	<0.2
G-118	<5		<0.5	11	<0.2
G-119	<5		<0.5	<5	<0.2
G-120	<5		<0.5	7	<0.2
G-121	<5		<0.5	6	<0.2
G-122	<5		<0.5	14	<0.2
G-123	<5		<0.5	<5	<0.2
G-124	<5		<0.5	10	<0.2
G-125	<5		0.5	19	<0.2
G-126	<5		<0.5	13	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-127	5		<0.5	15	<0.2
G-128	<5		0.6	19	<0.2
G-129	7		<0.5	19	<0.2
G-130	<5		<0.5	15	<0.2
G-131	<5	<5	<0.5	13	<0.2
G-132	<5		<0.5	<5	<0.2
G-133	<5		<0.5	<5	<0.2
G-134	<5		<0.5	29	<0.2
G-135	<5		0.5	<5	<0.2
G-136	<5		0.5	<5	<0.2
G-137	<5		<0.5	<5	<0.2
G-138	<5		<0.5	44	<0.2
G-139	<5		<0.5	20	<0.2
G-140	<5		<0.5	38	<0.2
G-141	<5		<0.5	28	0.2
G-142	9		<0.5	66	<0.2
G-143	7		<0.5	27	<0.2
G-144	<5		<0.5	18	<0.2
G-145	6		<0.5	<5	<0.2
G-146	<5		<0.5	<5	<0.2
G-147	<5		<0.5	<5	<0.2
G-148	<5		<0.5	13	<0.2
G-149	<5		<0.5	8	<0.2
G-150	6	<5	<0.5	<5	<0.2
G-151	14		<0.5	24	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-152	56		<0.5	31	<0.2
G-153	17		<0.5	10	<0.2
G-154	35		<0.5	26	<0.2
G-155	<5		<0.5	19	<0.2
G-156	29		<0.5	<5	<0.2
G-157	<5		<0.5	<5	<0.2
G-158	<5	<5	<0.5	40	<0.2
G-159	<5		<0.5	<5	<0.2
G-160	<5		<0.5	<5	<0.2
G-161	<5		<0.5	<5	<0.2
G-162	<5		<0.5	<5	<0.2
G-163	<5		<0.5	<5	<0.2
G-164	<5		<0.5	6	<0.2
G-165	<5	<5	<0.5	10	<0.2
G-166	<5		<0.5	<5	<0.2
G-167	<5		<0.5	34	<0.2
G-168	<5		<0.5	25	<0.2
G-169	<5		<0.5	26	<0.2
G-170	<5		<0.5	16	<0.2
G-171	<5		<0.5	35	<0.2
G-172	<5		<0.5	<5	<0.2
G-173	<5		<0.5	<5	<0.2
G-174	10		<0.5	13	<0.2
G-175	<5		<0.5	6	0.2
G-176	<5		<0.5	14	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-177	<5	<5	<0.5	11	<0.2
G-178	<5		<0.5	<5	<0.2
G-179	<5		<0.5	<5	<0.2
G-180	<5		<0.5	5	0.2
G-181	5		<0.5	7	<0.2
G-182	<5		<0.5	8	<0.2
G-183	<5		<0.5	<5	0.3
G-184	<5		<0.5	5	<0.2
G-185	<5		<0.5	22	<0.2
G-186	<5		<0.5	10	<0.2
G-187	<5		<0.5	20	0.2
G-188	<5		<0.5	17	0.2
G-189	<5		<0.5	16	0.2
G-190	<5		<0.5	<5	<0.2
G-191	<5		<0.5	27	0.2
G-192	<5		<0.5	16	<0.2
G-193	<5		<0.5	18	0.2
G-194	<5		<0.5	45	<0.2
G-195	6		<0.5	12	<0.2
G-196	<5		<0.5	15	<0.2
G-197	7		<0.5	33	<0.2
G-198	6		<0.5	18	0.2
G-199	5		<0.5	31	0.2
G-200	15		<0.5	<5	<0.2
G-201	6		<0.5	<5	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-202	38		<0.5	57	1.4
G-203	66		0.8	22	3.0
G-204	164		0.7	118	2.6
G-205	22		0.6	30	0.2
G-206	27		<0.5	18	0.7
G-207	96		0.5	140	0.6
G-208	21		0.5	21	1.0
G-209	65		1.0	38	2.1
G-210	34		1.3	76	3.1
G-211	28		0.8	27	0.9
G-212	8		0.7	49	<0.2
G-213	11		0.8	12	<0.2
G-214	7		0.7	9	<0.2
G-215	9		0.5	37	<0.2
G-216	<5		<0.5	40	<0.2
G-217	5		<0.5	49	<0.2
G-218	<5		<0.5	26	<0.2
G-219	<5		<0.5	12	<0.2
G-220	5		0.5	18	<0.2
G-221	<5		<0.5	11	<0.2
G-222	<5		<0.5	15	<0.2
G-223	<5		<0.5	57	<0.2
G-224	7	8	<0.5	10	0.2
G-225	<5		<0.5	36	<0.2
G-226	<5		<0.5	7	0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-227			INSUFFICIENT SAMPLE		
G-228	27		<0.5	63	<0.2
G-229	97	104	1.1	39	1.5
G-230	17		<0.5	217	1.4
G-231	14		<0.5	48	1.9
G-232	29		<0.5	24	2.1
G-233	15		<0.5	56	1.3
G-234	<5		<0.5	38	0.2
G-235	19	25	<0.5	45	<0.2
G-236	17		<0.5	22	<0.2
G-237	25		<0.5	78	<0.2
G-238	18		<0.5	21	<0.2
G-239	12		<0.5	122	<0.2
G-240	20		<0.5	42	<0.2
G-241	14		<0.5	41	0.2
G-242	5		<0.5	47	<0.2
G-243	<5	<5	<0.5	13	0.2
G-244	<5		<0.5	16	<0.2
G-245	<5		<0.5	24	<0.2
G-246	5		<0.5	8	<0.2
G-247	<5		<0.5	14	<0.2
G-248	<5		<0.5	29	<0.2
G-249	<5		<0.5	21	<0.2
G-250	6		0.5	29	<0.2
G-251	<5		<0.5	20	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-252	6		<0.5	28	<0.2
G-253	<5		<0.5	85	<0.2
G-254	<5		<0.5	33	<0.2
G-255	6		<0.5	42	<0.2
G-256	10		<0.5	52	<0.2
G-257	5		<0.5	15	0.3
G-258	<5		<0.5	47	<0.2
G-259	6		<0.5	19	0.2
G-260	<5		<0.5	38	<0.2
G-261	<5		<0.5	18	<0.2
G-262	<5		<0.5	5	<0.2
G-263	<5		<0.5	16	<0.2
G-264	<5		<0.5	6	<0.2
G-265	<5		<0.5	10	<0.2
G-266	<5		<0.5	75	<0.2
G-267	<5		<0.5	28	<0.2
G-268	<5	5	<0.5	8	<0.2
G-269	<5		<0.5	119	<0.2
G-270	<5		0.7	13	<0.2
G-271	<5		0.8	19	<0.2
G-272	6		<0.5	28	<0.2
G-273	14		<0.5	30	<0.2
G-274	20		<0.5	128	<0.2
G-275	<5	<5	<0.5	41	<0.2
G-276	<5		<0.5	8	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-277	<5		<0.5	37	<0.2
G-278	11		<0.5	66	<0.2
G-279	10		0.6	29	<0.2
G-280	<5		0.5	95	<0.2
G-281	60	54	0.5	124	<0.2
G-282	<5		<0.5	56	<0.2
G-283	<5	6	0.9	49	<0.2
G-284	10		0.8	18	0.2
G-285	9		0.7	<5	<0.2
G-286	12		<0.5	11	<0.2
G-287	<5		<0.5	26	<0.2
G-288	95		<0.5	105	<0.2
G-289	49		<0.5	45	<0.2
G-290	20		<0.5	275	<0.2
G-291	6	6	<0.5	14	<0.2
G-292	6		<0.5	20	<0.2
G-293	10		<0.5	40	<0.2
G-294	18		<0.5	134	<0.2
G-295	26		<0.5	69	<0.2
G-296	30		<0.5	33	<0.2
G-297			INSUFFICIENT SAMPLE		
G-298	46		<0.5	41	0.3
G-299	19		<0.5	31	1.3
G-300	16		<0.5	9	<0.2
G-301	26		0.7	34	0.3

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-302	186		0.8	250	3.8
G-303	15		<0.5	<5	<0.2
G-304	6		<0.5	38	0.8
G-305	<5		<0.5	<5	<0.2
G-306	<5		<0.5	<5	<0.2
G-307	<5		<0.5	<5	<0.2
G-308	<5		<0.5	5	<0.2
G-309	<5		<0.5	45	<0.2
G-310	<5		<0.5	29	<0.2
G-311	<5		<0.5	113	<0.2
G-312	<5		<0.5	10	<0.2
G-313	<5		<0.5	28	<0.2
G-314	<5		<0.5	18	<0.2
G-315	<5		<0.5	<5	<0.2
G-316	<5		<0.5	<5	<0.2
G-317	<5		<0.5	<5	<0.2
G-318	<5		0.5	10	<0.2
G-319	<5		0.8	<5	<0.2
G-320	<5		<0.5	24	<0.2
G-321	<5		<0.5	23	<0.2
G-322	13		<0.5	52	<0.2
G-323	10		<0.5	35	<0.2
G-324	9	8	<0.5	23	<0.2
G-325	63		0.5	28	<0.2
G-326	<5		<0.5	11	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-327	<5		<0.5	<5	<0.2
G-328	23		<0.5	194	<0.2
G-329	<5		0.8	34	<0.2
G-330	25		625.5	<5	<0.2
G-331	<5		0.5	41	<0.2
G-332	11		27.7	41	<0.2
G-333	16		<0.5	30	<0.2
G-334	57		10.2	45	<0.2
G-335	7		26.5	110	<0.2
G-336	<5	<5	<0.5	12	<0.2
G-337	<5		<0.5	13	<0.2
G-338	<5		<0.5	17	<0.2
G-339	<5		5.4	17	<0.2
G-340	<5		21.9	36	<0.2
G-341	<5		0.5	16	<0.2
G-342	15		2.7	120	<0.2
G-343	29		<0.5	249	<0.2
G-344	<5		<0.5	46	<0.2
G-345	<5	<5	1.8	17	<0.2
G-346	<5		<0.5	6	<0.2
G-347	<5		0.8	107	<0.2
G-348	<5	<5	<0.5	8	<0.2
G-349	<5		1.5	<5	<0.2
G-350	<5		1.3	92	<0.2
G-351	<5		<0.5	41	<0.2

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SAMPLES	Au	Au(R)	Ag	Hg	Se
G-352	<5		1.6	32	<0.2
G-353	<5		<0.5	40	0.2
G-354	<5	<5	0.7	79	0.3
G-355	<5		<0.5	234	0.4
G-356	<5		0.7	47	<0.2
G-357	<5		<0.5	81	<0.2

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-001	0.3	2.12	4	23	318	2	0.56	0.6	9	25	24	2.53	2	0.63	20	0.81	827	1	0.17	14	0.046	11	2	102	12	0.13	5	48	1	81
G-002	0.1	2.23	8	28	313	2	0.59	0.7	10	29	26	2.65	2	0.67	19	0.84	778	1	0.15	16	0.05	11	2	101	13	0.14	5	52	1	82
G-003	4	3.58	7	54	226	4	1.34	0.2	9	27	31	3.22	2	1	21	1.11	592	1	0.35	18	0.032	11	2	125	14	0.12	5	51	1	96
G-004	0.9	2.53	5	27	341	3	0.66	0.6	10	23	27	2.79	2	0.79	19	0.83	751	1	0.06	17	0.053	11	2	82	11	0.12	5	50	1	85
G-006	0.1	2.24	7	25	332	2	0.62	0.6	10	41	27	2.57	2	0.67	20	0.73	889	2	0.1	16	0.051	11	2	96	14	0.13	5	51	1	81
G-007	0.2	3.29	7	29	352	2	1.87	0.2	9	21	28	3.06	2	0.78	24	1.03	499	2	0.04	16	0.04	7	2	121	14	0.08	5	48	1	94
G-008	0.1	3.06	7	31	338	2	1.5	0.3	9	22	28	3.01	2	0.79	21	1.03	641	1	0.06	18	0.045	6	2	108	12	0.1	5	49	2	97
G-009	0.1	2.92	6	31	327	3	0.64	0.2	10	36	27	2.94	2	0.91	19	1.01	727	2	0.15	18	0.035	12	2	114	16	0.13	5	51	1	89
G-010	0.1	3.65	6	33	455	2	0.87	0.2	11	29	34	3.42	2	0.92	22	1.14	753	1	0.08	20	0.05	7	4	111	14	0.14	5	57	1	105
G-011	0.5	3.08	8	35	411	2	0.79	0.2	11	23	31	3.1	2	0.99	20	1.2	715	1	0.07	19	0.054	7	2	116	14	0.13	5	52	1	97
G-012	0.1	3.39	8	36	347	2	1	0.2	11	36	31	3.16	2	0.97	21	1.2	675	1	0.24	24	0.044	7	2	154	14	0.15	5	56	1	90
G-013	0.3	3.41	6	29	390	2	1.05	0.2	16	44	42	3.94	2	0.81	20	1.29	815	1	0.09	32	0.079	5	2	113	12	0.16	5	73	1	106
G-014	0.8	3.14	6	26	381	2	0.88	0.2	16	50	43	4.07	2	0.77	21	1.09	1057	1	0.08	37	0.075	6	2	103	15	0.15	5	79	1	99
G-015	0.1	3.04	5	31	343	3	0.73	0.8	13	46	40	3.78	2	0.94	21	1.05	1034	1	0.15	32	0.063	6	2	129	14	0.14	5	74	1	94
G-016	0.3	3.58	7	28	365	3	6.88	0.2	10	30	41	3.13	2	0.8	22	1.11	651	1	0.04	29	0.075	5	2	149	15	0.09	5	50	1	85
G-017	0.1	3.68	8	30	323	2	0.77	0.4	11	33	54	3.56	2	0.89	21	1.18	632	1	0.07	25	0.044	4	2	129	13	0.13	5	58	1	140
G-018	0.1	3.25	14	31	370	2	0.76	0.2	9	29	36	3.25	2	0.91	21	1.02	441	1	0.09	17	0.045	8	3	135	12	0.13	5	53	1	94
G-019	3.3	3.41	9	36	227	2	0.58	0.5	10	31	45	3.3	2	0.97	20	1.06	532	1	0.23	20	0.03	6	2	128	12	0.13	5	49	1	109
G-020	0.3	2.62	8	28	272	2	0.53	0.2	7	47	21	2.75	2	0.73	19	0.73	320	2	0.2	13	0.023	4	2	115	12	0.14	5	51	1	66
G-021	0.1	3.33	11	35	371	2	0.73	0.3	8	29	35	3.41	2	1.01	19	1.08	400	1	0.14	20	0.043	5	3	126	8	0.13	5	52	1	89
G-022	0.2	3.1	9	37	264	2	1.18	0.2	9	24	29	2.88	2	1.1	19	1.15	557	2	0.09	17	0.057	2	4	116	7	0.11	5	46	1	90
G-023	0.1	3.11	7	29	348	3	0.64	0.2	10	38	30	2.97	2	0.8	18	0.95	569	1	0.17	18	0.035	6	2	118	11	0.15	5	54	1	86
G-024	0.1	3.53	10	29	377	2	0.73	0.2	10	32	36	3.16	2	0.79	20	0.96	652	1	0.11	20	0.043	11	3	109	14	0.14	5	55	1	102
G-025	0.1	3.26	11	31	412	2	0.71	0.2	10	24	33	3.22	2	0.77	19	1.01	689	1	0.07	19	0.047	2	2	110	10	0.13	5	55	1	108
G-026	0.4	2.85	6	38	318	2	1.59	0.2	9	38	32	2.66	2	1.02	15	1.04	605	1	0.16	20	0.046	8	2	134	6	0.13	5	49	1	91
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

• SPARKS • ELKO • TUCSON • HELENA • HERMOSILLO • MONTEVIDEO •

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL D1-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-027	0.1	3	6	33	292	2	0.58	0.9	9	32	29	2.96	2	0.91	20	0.92	554	2	0.19	19	0.04	9	2	110	13	0.14	5	52	1	86
G-028	0.1	2.69	8	30	342	2	0.56	0.2	9	21	30	2.82	2	0.77	16	0.9	504	1	0.1	16	0.04	7	2	101	10	0.13	5	49	1	82
G-029	0.1	3.72	8	24	321	3	0.72	0.2	10	28	37	3.41	2	0.66	23	1.01	528	1	0.1	22	0.027	12	2	105	15	0.14	5	56	1	98
G-030	0.1	2.74	5	23	368	2	0.65	0.2	10	33	29	2.77	2	0.72	17	0.77	700	1	0.09	18	0.05	8	2	93	10	0.14	5	54	1	86
G-031	0.2	3.14	9	24	355	2	0.63	0.8	10	35	34	3.04	2	0.7	19	0.84	661	1	0.09	20	0.045	5	2	95	12	0.14	5	53	1	89
G-032	0.1	2.8	7	29	391	2	0.75	0.2	9	19	33	2.88	2	0.63	17	0.95	626	1	0.09	16	0.043	7	2	115	9	0.12	5	50	1	87
G-033	0.7	3.18	8	26	363	2	0.68	0.5	10	28	32	3.16	2	0.74	20	0.9	706	1	0.07	17	0.043	3	3	97	11	0.13	5	53	1	100
G-034	0.1	3.08	5	30	388	2	0.75	0.2	9	28	33	3.09	2	0.72	19	0.95	631	1	0.07	21	0.044	7	2	109	11	0.13	5	53	1	98
G-035	0.1	3.38	7	35	397	2	1.13	0.2	8	26	36	3.35	2	0.74	21	1.08	810	1	0.1	19	0.044	4	2	126	13	0.14	5	55	1	102
STANDARD C	6.2	1.81	40	25	182	19	0.49	18.6	32	60	59	3.81	2	0.15	39	0.88	980	19	0.06	66	0.088	36	16	50	38	0.08	20	66	9	125
G-036	0.4	3.49	6	37	369	2	0.77	0.2	10	33	34	3.31	2	0.87	19	1.02	748	2	0.11	21	0.046	2	2	116	13	0.15	5	48	1	103
G-037	0.5	3.12	7	38	355	2	0.74	0.7	9	22	36	3.07	2	0.88	16	1	588	1	0.1	21	0.042	3	2	102	6	0.13	5	42	1	98
G-038	0.2	3.81	8	32	242	3	0.68	0.2	9	33	33	3.41	2	0.76	24	0.84	812	1	0.22	20	0.034	2	2	99	16	0.14	5	48	1	100
G-039	0.4	2.95	5	30	293	3	0.62	0.2	9	44	31	3.02	2	0.75	20	0.8	718	2	0.21	19	0.033	4	2	103	13	0.15	5	45	1	88
G-040	0.9	2.85	4	31	331	2	0.9	0.2	9	27	30	2.78	2	0.94	19	0.84	841	1	0.08	17	0.051	3	2	90	11	0.12	5	39	1	89
G-041	1	3.07	5	27	311	2	0.99	0.2	8	30	26	2.81	2	0.73	20	0.83	636	1	0.09	17	0.032	3	2	104	11	0.12	5	37	1	84
G-042	0.4	3.08	8	28	252	2	0.76	0.7	8	18	33	2.84	2	0.65	19	0.86	605	1	0.14	17	0.036	8	2	108	12	0.09	5	34	2	94
G-043	0.7	3.59	2	32	337	2	1.01	0.3	9	27	25	2.92	2	0.84	21	0.94	737	1	0.22	16	0.031	9	2	157	13	0.12	5	35	1	91
G-044	0.1	3.61	8	36	204	2	0.9	0.6	8	19	31	3.1	2	0.74	21	0.99	491	1	0.19	17	0.03	6	2	139	8	0.08	5	34	1	98
G-045	0.5	3.75	8	29	356	4	0.88	0.2	10	28	33	3.26	2	0.82	22	0.94	763	1	0.09	21	0.045	2	2	100	11	0.13	5	42	2	100
G-046	2.5	4.15	7	41	270	2	0.76	0.2	8	28	40	3.61	2	0.97	28	1.15	469	1	0.21	22	0.024	4	2	108	18	0.11	5	44	1	124
G-047	1.6	2.52	7	24	225	2	0.54	0.2	9	41	28	2.64	2	0.62	24	0.7	507	2	0.18	16	0.017	8	2	93	15	0.13	5	38	1	80
G-048	2.6	4.05	6	50	192	2	2.06	0.2	8	29	32	3.4	2	1.07	23	1.18	486	1	0.34	22	0.033	7	2	147	14	0.12	5	40	1	110
G-049	1.3	2.95	5	33	229	2	0.61	0.2	9	32	28	3.04	2	0.78	20	0.89	558	1	0.24	18	0.024	7	2	113	15	0.13	5	41	1	92
G-050	0.8	3.11	7	30	282	2	0.61	0.2	10	25	31	3.14	2	0.81	23	0.91	652	2	0.15	19	0.023	8	2	86	15	0.12	5	41	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

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METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
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ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-051	0.9	3.2	8	40	234	2	0.57	0.2	10	30	29	3.22	2	0.88	21	0.94	792	1	0.27	18	0.022	6	2	112	14	0.14	5	44	1	97
G-052	0.5	3.23	8	34	308	2	1.29	0.2	9	29	29	3.08	2	1.04	21	0.97	703	1	0.1	20	0.046	5	2	104	12	0.13	5	41	1	100
G-053	0.5	3.12	6	38	281	2	0.87	0.2	9	28	29	3.13	2	1.04	20	1	729	1	0.18	19	0.031	219	2	91	12	0.12	5	41	1	98
G-054	0.3	3.52	4	37	308	2	0.92	0.7	9	26	31	3.29	2	1.04	20	1.09	641	1	0.14	20	0.033	3	2	101	11	0.12	5	43	1	103
G-055	0.2	3.07	7	32	303	2	3.18	0.3	9	26	29	2.93	2	0.85	19	0.98	628	1	0.08	22	0.073	6	2	148	9	0.1	5	41	2	86
G-056	0.2	3.15	7	33	332	2	0.79	0.8	11	36	33	3.29	2	0.87	22	0.94	834	1	0.17	24	0.057	4	2	102	13	0.16	5	50	2	95
G-057	0.7	3.14	5	32	330	2	0.71	0.3	10	30	32	3.2	2	0.9	17	0.94	649	1	0.11	22	0.045	6	2	87	12	0.14	5	45	1	92
G-058	0.3	2.94	6	33	280	2	0.65	0.4	10	32	31	3.1	2	0.95	17	0.92	717	1	0.17	23	0.042	6	2	89	12	0.15	5	46	1	88
G-059	0.6	3.14	3	32	294	2	0.65	0.9	10	37	31	3.22	2	0.89	18	0.94	729	1	0.19	24	0.039	8	2	94	12	0.15	5	46	1	93
G-060	0.6	3.04	6	35	290	2	0.65	0.8	9	29	30	3.01	2	0.96	18	0.95	601	1	0.15	18	0.035	8	3	90	13	0.14	5	43	1	88
G-061	0.1	3.1	7	37	315	2	0.66	0.3	10	34	28	3.14	2	1.05	18	0.99	739	1	0.17	20	0.04	10	2	93	11	0.15	5	45	1	95
G-062	0.2	2.72	6	32	257	2	0.57	0.2	9	30	26	2.88	2	0.95	18	0.84	680	2	0.17	17	0.034	4	2	86	11	0.14	5	42	2	84
G-063	0.1	2.96	4	29	246	2	0.68	0.8	8	25	27	2.87	2	0.84	19	0.82	481	1	0.13	17	0.028	4	2	96	9	0.13	5	38	2	79
G-064	0.2	2.94	6	35	292	2	0.71	0.2	8	33	28	2.98	2	0.96	18	0.92	630	1	0.13	18	0.055	5	2	94	10	0.13	5	41	1	84
G-065	0.4	3.11	4	32	286	2	0.64	0.2	10	27	28	2.99	2	0.92	22	0.96	772	2	0.18	20	0.04	9	2	97	12	0.13	5	40	2	88
G-066	0.4	3.11	4	34	292	2	0.65	0.7	10	31	29	3	2	0.88	20	0.86	699	1	0.2	19	0.039	7	2	108	10	0.14	5	43	1	89
G-067	0.1	3.64	9	40	354	2	0.99	0.3	9	30	31	3.12	2	0.93	21	1.11	641	1	0.15	23	0.039	9	2	120	9	0.13	5	42	2	94
G-068	0.3	2.41	7	21	297	2	0.67	0.3	10	22	25	2.63	2	0.53	21	0.67	748	1	0.14	16	0.038	11	2	100	12	0.13	5	38	1	74
G-069	0.5	3.7	6	35	263	2	0.69	1.1	9	31	31	3.41	2	0.88	22	1	554	1	0.17	22	0.031	6	2	102	12	0.13	5	41	1	100
STANDARD C	6.6	2.03	41	27	178	19	0.54	18.8	31	59	63	4.17	2	0.15	41	0.88	1033	22	0.06	73	0.097	35	17	51	41	0.09	15	58	10	137
G-070	0.1	2.6	8	27	250	2	0.58	0.2	10	29	26	2.97	2	0.74	21	0.85	661	2	0.16	14	0.036	10	2	113	14	0.13	5	45	1	85
G-071	0.1	3.31	8	36	350	2	0.72	0.2	10	31	32	3.38	2	0.87	20	1.12	584	2	0.12	20	0.04	11	2	131	10	0.14	5	50	1	95
G-072	0.1	3.33	10	29	343	2	0.76	0.2	10	30	31	3.26	2	0.79	19	1.03	735	2	0.1	18	0.051	5	2	109	14	0.15	5	51	1	99
G-073	0.1	3.49	7	38	404	2	0.73	0.2	13	33	35	3.38	2	0.9	20	1.11	744	2	0.09	20	0.034	11	2	113	15	0.15	5	54	1	100
G-074	0.1	2.93	7	28	341	2	0.67	0.6	10	26	33	3	2	0.81	16	0.89	771	2	0.07	19	0.051	9	2	98	11	0.15	5	49	1	96
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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G-075	0.1	3.43	6	28	349	2	0.66	0.4	10	28	31	3.15	2	0.78	19	0.88	683	1	0.07	19	0.039	8	2	94	9	0.14	5	49	1	90
G-076	0.1	3.4	8	30	352	2	0.72	0.2	11	30	32	3.36	2	0.83	19	0.96	799	2	0.07	20	0.043	4	2	105	13	0.14	5	51	1	98
G-077	0.1	3.41	7	32	363	2	0.72	0.2	10	29	33	3.39	2	0.84	20	1.01	733	1	0.08	20	0.041	9	2	108	11	0.14	5	52	1	100
G-078	0.1	3.41	10	31	327	2	0.68	0.2	10	27	30	3.35	2	0.77	20	0.99	667	1	0.06	19	0.039	7	2	103	11	0.12	5	47	1	103
G-079	0.1	2.96	6	32	339	2	0.76	0.9	10	29	31	3.07	2	0.75	17	0.97	976	1	0.09	18	0.057	7	2	109	11	0.14	5	50	1	99
G-080	0.1	3.18	8	37	360	2	0.78	0.3	11	31	34	3.2	2	0.88	19	1.1	839	1	0.1	20	0.046	6	2	124	12	0.14	5	52	1	99
G-081	0.1	3.08	5	43	279	2	0.67	0.2	8	28	31	3.05	2	1.01	15	1.09	531	1	0.15	17	0.033	7	2	100	9	0.13	5	44	1	94
G-082	0.3	2.74	7	24	327	2	0.69	0.2	9	26	25	3.03	2	0.71	20	0.87	714	2	0.1	14	0.038	10	2	103	11	0.1	5	42	1	94
G-083	0.3	3.17	7	34	363	2	0.73	0.2	10	28	31	3.26	2	0.83	19	1.09	820	2	0.1	21	0.048	6	2	111	13	0.13	5	49	1	102
G-084	0.1	3.41	6	30	311	2	0.74	0.5	10	29	31	3.2	2	0.86	19	1.06	632	2	0.09	19	0.028	7	2	119	11	0.13	5	45	1	93
G-085	0.1	3.11	8	27	344	2	0.68	0.3	10	31	30	3.1	2	0.79	18	0.99	711	1	0.1	18	0.035	4	2	109	13	0.14	5	48	1	91
G-086	0.2	2.23	8	17	333	2	0.6	0.4	10	31	25	2.57	2	0.5	19	0.67	704	2	0.14	16	0.036	10	2	120	13	0.14	5	45	1	71
G-087	0.1	3.47	9	33	498	2	0.78	0.2	10	38	28	3.07	2	0.92	21	1.06	748	2	0.24	17	0.038	10	3	273	15	0.14	5	45	1	94
G-088	0.1	3.2	8	33	396	2	0.74	0.3	10	27	32	3.12	2	0.83	19	1.09	707	2	0.11	19	0.034	13	2	176	13	0.14	5	47	1	94
G-089	0.1	3.34	7	33	381	2	0.74	0.7	11	31	34	3.28	2	0.87	20	1.09	759	2	0.11	19	0.04	12	2	134	13	0.15	5	51	1	99
G-090	0.3	2.68	3	29	253	2	0.56	0.7	9	30	26	2.87	2	0.74	20	0.92	594	1	0.18	15	0.026	9	2	104	14	0.13	5	43	1	88
G-091	0.1	3.73	10	28	405	2	2.67	0.2	10	27	34	3.2	2	0.68	22	1.06	560	1	0.06	23	0.047	10	2	136	13	0.12	5	47	1	90
G-092	0.1	2.82	6	29	330	2	0.59	0.2	12	31	29	2.99	2	0.7	22	0.93	774	2	0.21	19	0.022	7	2	121	17	0.14	5	48	1	86
G-093	0.1	3.23	4	30	317	2	0.75	0.2	10	25	29	3.23	2	0.78	20	1	712	1	0.09	17	0.038	7	2	104	13	0.11	5	47	1	102
G-094	0.1	3.02	9	33	359	2	0.81	0.2	10	29	30	3.03	2	0.87	19	1.04	775	2	0.08	18	0.042	13	3	107	13	0.13	5	48	1	95
G-095	0.5	3.17	7	41	210	2	0.74	0.2	10	34	29	3.13	2	0.91	20	1.04	642	2	0.3	18	0.028	13	2	137	12	0.12	5	45	1	95
G-096	0.4	2.37	6	24	259	2	0.52	0.7	10	42	25	2.74	2	0.66	18	0.79	764	3	0.17	17	0.025	11	2	100	16	0.14	5	46	1	79
G-097	0.1	4.67	5	49	183	2	0.67	0.2	10	27	31	3.9	2	1.08	20	1.34	480	1	0.49	21	0.017	10	2	150	14	0.1	5	46	1	117
G-098	0.2	2.99	7	29	331	2	0.82	0.2	10	27	28	2.97	2	0.74	18	0.97	732	2	0.09	17	0.04	8	2	114	13	0.11	5	45	1	90
G-099	0.7	3.28	6	38	195	2	0.77	0.2	9	34	30	3.21	2	0.73	22	1.06	537	2	0.22	20	0.033	13	2	152	13	0.11	5	44	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

• SPARKS • ELKO • TUCSON • HELENA • HERMOSILLO • MONTEVIDEO •

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-100	0.2	2.86	6	22	330	2	0.86	0.3	14	43	36	3.55	2	0.66	19	0.98	1033	1	0.12	28	0.082	7	2	117	12	0.14	5	61	1	93
G-101	0.1	2.55	7	27	305	2	0.72	0.2	11	31	30	3.01	2	0.78	19	0.84	858	1	0.08	19	0.065	9	2	96	11	0.14	5	52	1	91
G-102	0.1	2.92	11	27	322	2	0.67	0.2	10	33	31	3.1	2	0.92	18	0.89	779	2	0.08	19	0.055	9	2	96	14	0.14	5	50	1	94
G-103	0.1	2.71	10	26	320	2	0.68	0.3	10	31	29	2.95	2	0.78	18	0.81	786	2	0.08	19	0.064	7	2	100	13	0.14	5	49	1	89
STANDARD C	6.5	8.94	42	25	177	16	0.52	18.4	33	62	59	4.06	2	0.15	40	0.94	1014	22	0.06	69	0.092	37	18	53	39	0.09	16	62	10	131
G-104	0.5	2.7	12	24	335	2	0.72	0.6	10	37	30	2.98	2	0.72	19	0.77	876	3	0.11	19	0.061	11	2	107	15	0.14	5	45	1	90
G-105	0.1	3.11	13	28	332	2	0.73	1.1	11	33	31	3.29	2	0.86	20	0.9	776	2	0.07	20	0.062	10	2	107	13	0.14	5	47	1	100
G-106	0.6	2.2	10	16	247	2	0.53	0.3	11	40	23	2.8	2	0.51	22	0.58	732	3	0.14	15	0.034	13	3	96	15	0.13	5	42	1	79
G-107	0.5	2.57	11	21	345	2	0.7	0.6	12	43	27	2.99	2	0.66	23	0.72	1089	2	0.1	16	0.063	12	2	107	15	0.13	5	44	2	88
G-108	1.4	2.47	10	33	222	2	0.54	0.6	10	52	25	2.78	2	0.72	20	0.78	701	3	0.29	16	0.041	6	4	105	14	0.14	5	43	1	75
G-109	0.3	3.68	16	46	319	2	0.83	0.2	11	33	37	3.4	2	1.2	19	1.25	560	1	0.11	24	0.044	5	2	131	10	0.14	5	47	1	104
G-110	0.4	3.29	10	46	310	2	1.28	0.5	10	37	33	3.1	2	1.18	19	1.18	646	2	0.17	19	0.045	4	2	141	11	0.14	5	45	1	92
G-111	0.1	3.47	10	45	309	2	0.79	0.9	11	46	33	3.16	2	1.23	19	1.22	692	2	0.2	21	0.042	9	2	115	13	0.15	5	47	1	94
G-112	0.1	3.11	9	30	336	3	0.73	0.2	10	35	32	2.97	2	0.89	19	0.89	733	2	0.11	19	0.052	6	2	107	11	0.14	5	43	1	91
G-113	0.1	3.36	9	37	361	2	0.8	0.7	10	32	32	3.15	2	1.03	20	1.11	806	2	0.11	23	0.054	6	2	111	12	0.13	5	43	2	97
G-114	0.3	3.15	10	36	341	2	1.1	1.1	9	37	30	2.93	2	0.86	19	1.06	635	2	0.18	17	0.059	8	2	131	9	0.14	5	45	1	90
G-115	0.2	3.35	10	30	253	2	0.66	0.5	14	69	27	2.95	2	0.92	27	0.88	790	3	0.35	20	0.025	4	2	131	18	0.18	5	49	1	78
G-116	0.4	3.32	7	30	312	2	0.7	0.2	10	36	31	3.12	2	0.89	21	0.94	715	1	0.11	20	0.043	7	2	131	15	0.14	5	42	1	90
G-117	0.3	3.25	8	30	355	2	0.71	0.9	10	31	32	3.06	2	0.9	19	0.9	716	1	0.09	18	0.054	7	2	103	12	0.14	5	44	1	93
G-118	0.1	3.24	10	33	336	2	0.94	0.4	10	33	32	3.06	2	0.87	17	1	567	1	0.09	17	0.044	9	2	119	13	0.13	5	43	1	89
G-119	0.4	3.02	7	27	357	2	0.72	0.5	11	31	33	3.03	2	0.75	19	0.9	763	1	0.1	19	0.049	9	2	110	14	0.14	5	45	1	93
G-120	0.1	2.46	8	17	287	2	0.61	0.2	10	45	27	2.71	2	0.54	21	0.65	777	2	0.13	17	0.038	13	3	106	13	0.15	5	46	1	74
G-121	0.1	3.03	11	29	350	2	0.71	0.6	10	32	27	2.98	2	0.84	18	0.88	757	1	0.1	16	0.048	4	2	101	12	0.13	5	43	1	91
G-122	0.1	3.76	8	33	405	2	0.8	0.2	11	31	33	3.49	2	0.81	21	1.14	666	1	0.08	21	0.037	5	2	122	11	0.14	5	47	1	106
G-123	0.1	3.32	9	36	352	2	0.74	0.7	10	32	32	3.15	2	0.95	18	1.12	658	1	0.12	22	0.034	7	2	112	11	0.14	5	44	1	94
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

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CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-124	0.1	3.49	7	32	411	2	0.78	0.6	12	37	33	3.27	2	0.85	20	1.09	829	2	0.14	22	0.039	9	2	123	15	0.15	5	48	1	96
G-125	0.5	3.28	7	31	392	3	0.71	1	11	26	34	3.33	2	0.84	19	1.1	767	1	0.08	24	0.039	7	2	105	14	0.14	5	46	1	100
G-126	0.4	3.3	10	29	378	2	0.78	0.3	11	35	32	3.25	2	0.81	19	0.99	769	1	0.1	21	0.048	11	2	113	15	0.15	5	48	1	97
G-127	0.4	2.35	8	21	328	2	0.57	0.8	11	22	28	2.76	2	0.67	17	0.81	803	1	0.08	15	0.049	7	2	94	11	0.12	5	41	1	84
G-128	0.5	2.83	6	23	334	3	0.75	1.1	10	32	27	2.81	2	0.68	20	0.83	744	2	0.11	14	0.037	10	2	109	12	0.13	5	40	2	85
G-129	0.1	4.52	6	37	312	2	0.85	0.4	9	29	30	3.41	2	1.03	23	1.25	517	2	0.28	20	0.033	9	2	134	13	0.11	5	36	1	107
G-130	0.1	3.6	8	23	311	2	0.78	0.6	9	31	28	3.13	2	0.73	20	0.96	631	2	0.07	20	0.038	9	2	107	12	0.12	5	38	2	92
G-131	0.1	3.11	6	29	373	2	1.97	0.3	8	21	24	2.52	2	0.68	21	0.9	723	1	0.08	14	0.054	4	2	135	12	0.08	5	31	1	82
G-132	0.1	3.53	6	27	341	2	1.76	0.2	9	25	29	2.86	2	0.79	22	1	582	1	0.05	18	0.046	10	2	116	12	0.09	5	33	1	93
G-133	0.1	2.92	5	29	340	2	0.74	0.9	10	41	30	2.84	2	0.87	19	0.87	727	2	0.11	17	0.054	5	2	112	12	0.14	5	44	1	86
G-134	0.2	3.23	6	27	379	2	2.01	0.2	9	23	36	2.92	2	0.68	19	0.98	476	1	0.05	21	0.048	11	2	116	13	0.1	5	39	1	85
G-135	0.1	3.36	5	26	355	2	0.74	0.4	10	41	28	2.97	2	0.7	21	0.85	576	1	0.16	18	0.04	6	2	111	13	0.15	5	45	1	82
G-136	0.1	3.15	5	26	321	2	0.69	0.8	9	25	29	2.98	2	0.84	18	0.89	606	1	0.06	16	0.048	9	2	97	12	0.12	5	39	1	89
G-137	0.2	3.61	6	30	365	2	0.82	0.2	10	30	32	3.31	2	0.81	20	1.04	674	1	0.09	19	0.05	6	2	113	16	0.14	5	46	1	105
STANDARD C	6.7	1.96	41	26	176	18	0.53	19	33	64	61	4.05	2	0.16	40	0.93	1026	21	0.06	67	0.095	38	18	54	41	0.09	18	56	11	133
G-138	0.1	2.44	9	28	239	2	0.63	0.8	7	20	29	2.81	2	0.59	20	0.8	374	1	0.3	15	0.045	14	2	97	12	0.14	5	45	1	89
G-139	0.1	3.91	5	29	354	2	0.77	0.3	9	45	28	3.22	2	0.89	23	0.96	646	1	0.18	18	0.037	2	4	116	15	0.14	5	43	1	90
G-140	0.1	2.9	7	26	368	2	0.68	1.5	9	28	30	3.03	2	0.83	19	0.86	757	2	0.11	20	0.059	9	3	101	14	0.14	5	44	1	92
G-141	0.2	2.8	9	19	316	2	0.66	0.7	10	20	24	3.04	2	0.47	22	0.77	660	1	0.1	17	0.026	12	4	108	16	0.12	5	41	1	83
G-142	0.1	2.06	9	18	242	2	0.51	0.9	8	19	24	2.57	2	0.44	20	0.61	525	2	0.16	15	0.03	12	3	100	14	0.13	5	40	1	69
G-143	0.1	4.59	11	28	356	2	0.89	0.2	8	41	28	3.5	2	0.76	23	1.06	544	2	0.07	19	0.032	6	2	126	14	0.12	5	42	1	101
G-144	0.1	3.13	9	27	317	2	0.68	1.6	9	39	25	2.92	2	0.8	23	0.82	609	3	0.15	20	0.031	8	3	120	13	0.14	5	41	1	79
G-145	0.1	3.04	7	37	345	2	0.65	0.5	8	26	28	2.97	2	1.02	18	1.01	451	1	0.12	16	0.034	11	2	108	11	0.12	5	40	1	84
G-146	0.1	3.06	7	32	348	3	0.65	1	8	28	27	2.9	2	0.88	19	0.97	662	2	0.11	18	0.037	10	2	105	11	0.13	5	41	1	86
G-147	0.1	3.12	7	26	355	3	0.72	1.1	9	34	29	2.97	2	0.77	19	0.85	636	1	0.11	18	0.048	5	3	112	14	0.14	5	44	1	87
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-148	0.1	3.02	10	24	353	2	0.58	0.2	10	25	27	2.99	2	0.79	19	0.76	708	1	0.07	15	0.05	7	3	92	14	0.14	5	44	1	85
G-149	0.1	3.33	7	28	381	2	0.68	1	9	31	29	3.08	2	0.84	19	0.87	703	2	0.1	21	0.05	12	2	108	13	0.15	5	45	1	89
G-150	0.1	2.84	8	24	319	2	0.55	1.4	8	26	27	2.71	2	0.77	18	0.71	577	1	0.07	16	0.049	8	3	84	10	0.13	5	39	1	77
G-151	0.1	3.61	22	32	340	2	0.74	0.2	9	27	29	3.35	2	0.91	20	1.15	532	2	0.08	22	0.033	11	2	116	10	0.13	5	41	1	90
G-152	0.1	3.71	30	42	393	2	0.8	0.5	9	31	34	3.6	2	1.15	19	1.17	467	2	0.12	24	0.03	6	4	130	10	0.14	5	48	1	93
G-153	0.5	3.67	30	41	386	2	1.01	0.8	9	33	30	3.46	2	1.12	19	1.25	558	3	0.16	21	0.038	7	2	143	10	0.14	5	45	1	93
G-154	0.2	3.94	21	39	423	2	0.88	0.2	9	29	34	3.66	2	1.06	20	1.19	536	2	0.09	22	0.043	11	2	144	11	0.13	5	46	1	99
G-155	0.1	3.05	13	28	384	2	0.71	0.9	10	32	30	3.08	2	0.77	20	0.83	760	2	0.11	17	0.054	8	7	116	13	0.14	5	47	1	99
G-156	0.1	3.24	12	33	340	2	0.78	0.4	7	31	27	3.14	2	0.87	18	0.93	311	2	0.17	15	0.029	9	4	138	10	0.13	5	42	1	78
G-157	0.1	3.4	11	40	351	2	0.83	0.9	9	31	31	3.32	2	1.04	21	1.12	753	1	0.12	19	0.049	7	2	115	13	0.14	5	45	1	111
G-158	0.1	4.28	7	32	229	2	0.97	0.2	8	21	34	3.73	2	0.8	22	1.22	467	1	0.23	19	0.033	14	2	144	9	0.06	5	42	1	125
G-159	0.1	3.86	8	28	384	2	0.79	0.9	9	27	32	3.54	2	0.8	21	1.02	757	1	0.09	19	0.045	8	2	114	14	0.12	5	45	1	119
G-160	0.1	3.75	8	41	363	2	0.8	0.3	10	33	36	3.67	2	1.19	20	1.22	627	2	0.11	23	0.036	12	2	111	15	0.16	5	48	1	108
G-161	0.1	3.49	6	43	375	3	1.03	0.5	9	33	35	3.4	2	1.13	21	1.16	632	1	0.2	22	0.041	8	2	124	14	0.15	5	46	1	99
G-162	0.3	3.25	7	33	387	2	0.74	0.5	10	31	32	3.55	2	0.91	19	1.02	711	2	0.09	21	0.045	10	3	106	16	0.16	5	49	1	105
G-163	0.1	3.34	7	40	290	2	0.72	0.6	9	31	30	3.39	2	1.03	17	1.08	653	2	0.21	18	0.033	10	2	100	11	0.16	5	46	1	99
G-164	0.1	2.88	7	28	358	2	0.73	0.4	9	31	29	3.18	2	0.75	19	0.85	809	2	0.09	19	0.058	14	2	106	14	0.15	5	46	1	95
G-165	0.4	3.28	9	32	374	2	0.67	0.4	11	39	32	3.35	2	0.93	21	0.95	761	2	0.17	20	0.037	9	2	111	17	0.16	5	49	1	94
G-166	0.1	3.49	10	32	409	2	0.79	0.2	10	29	35	3.45	2	0.95	21	1.01	677	2	0.08	20	0.052	7	2	109	15	0.15	5	48	1	99
G-167	0.1	2.95	6	40	206	3	0.64	0.3	8	20	28	2.96	2	0.81	18	1.04	573	1	0.25	17	0.037	6	2	119	10	0.12	5	38	1	90
G-168	0.2	3.07	7	25	403	2	0.69	1.3	10	30	32	3.15	2	0.76	20	0.81	831	2	0.09	20	0.054	8	2	105	14	0.15	5	47	1	96
G-169	0.1	3.47	12	30	357	2	0.75	0.2	9	58	30	2.92	2	0.85	21	0.87	741	2	0.28	18	0.043	9	2	128	15	0.16	5	46	1	86
G-170	0.2	2.91	5	22	366	2	0.72	0.7	9	56	24	2.63	2	0.67	21	0.69	620	4	0.32	20	0.024	4	2	196	15	0.16	5	44	1	69
G-171	0.4	4.01	8	32	338	2	1.3	0.5	8	22	32	3.43	2	0.79	19	1.09	541	1	0.05	19	0.037	6	2	101	10	0.11	5	39	1	110
STANDARD C	6.7	1.98	41	27	192	18	0.53	19.5	31	58	63	4.12	2	0.16	41	0.94	1029	21	0.06	70	0.094	38	15	55	43	0.09	18	57	10	136
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-172	0.1	3.27	3	29	320	3	0.72	0.2	10	28	29	3.08	2	0.81	18	0.97	675	2	0.11	16	0.031	11	2	110	13	0.13	5	41	1	94
G-173	0.1	3.42	7	34	363	2	0.75	0.2	11	30	33	3.24	2	0.93	20	1.08	750	2	0.1	20	0.041	8	2	109	13	0.14	5	44	1	100
G-174	0.3	3.82	8	27	304	2	0.88	1.1	10	28	30	3.32	2	0.73	22	1.02	756	2	0.08	18	0.04	16	2	105	17	0.1	5	39	1	108
G-175	0.2	3.07	5	31	338	3	0.73	0.7	11	49	31	3.17	2	0.85	20	0.93	837	3	0.09	20	0.052	11	2	96	14	0.14	5	44	2	95
G-176	0.1	3.4	6	41	210	3	0.89	0.2	12	45	33	3.32	2	1.15	22	1.1	668	1	0.26	22	0.023	8	2	138	17	0.15	5	44	1	92
G-177	0.4	3.68	6	35	329	3	0.76	0.6	10	43	32	3.4	2	0.94	22	1.11	725	2	0.18	20	0.033	10	2	121	15	0.14	5	45	1	103
G-178	0.3	3.4	3	33	375	2	0.84	0.2	11	46	31	3.29	2	0.82	21	1.09	761	3	0.11	21	0.044	7	2	123	15	0.14	5	45	2	101
G-179	0.1	4.02	4	34	396	3	0.81	0.2	12	60	36	3.6	2	0.96	23	1.18	868	2	0.15	23	0.031	11	2	128	16	0.15	5	48	1	108
G-180	0.2	4.07	3	37	375	2	0.78	0.2	11	88	32	3.56	2	0.99	23	1.15	647	5	0.33	23	0.028	11	2	138	17	0.15	5	46	1	101
G-181	0.1	3.41	5	34	267	2	1.32	0.2	9	70	24	2.93	2	0.97	20	1.1	680	4	0.19	15	0.045	10	2	136	15	0.11	5	38	1	94
G-182	0.3	3.2	2	29	358	2	0.74	0.3	10	33	30	3.13	2	0.83	19	0.99	732	1	0.11	20	0.039	8	2	120	12	0.13	5	43	2	95
G-183	0.4	2.62	3	23	336	2	0.67	1	11	48	27	2.86	2	0.71	20	0.79	925	3	0.11	19	0.049	6	2	106	14	0.13	5	42	1	84
G-184	0.3	2.82	3	24	339	2	0.72	0.5	10	62	27	2.98	2	0.73	20	0.81	865	3	0.12	17	0.054	11	2	109	16	0.14	5	45	2	90
G-185	0.6	3.15	2	21	389	2	0.78	0.7	12	89	29	3.19	2	0.63	23	0.74	911	4	0.19	20	0.047	8	2	129	15	0.17	5	52	1	88
G-186	0.2	5.15	2	28	358	2	0.92	0.4	13	197	32	4.17	2	0.74	26	1.02	766	12	0.17	35	0.041	10	2	127	15	0.16	5	59	1	99
G-187	0.1	5.42	7	38	242	2	0.88	0.7	11	128	30	4.03	2	0.92	25	1.18	661	6	0.28	19	0.034	8	2	133	13	0.14	5	47	1	106
G-188	0.2	3.06	6	31	329	2	0.69	0.3	12	60	28	3.32	2	0.89	21	0.96	887	2	0.14	20	0.046	8	3	117	18	0.16	5	46	2	94
G-189	0.4	3.24	7	28	298	2	0.63	0.6	11	40	28	3.31	2	0.92	20	0.97	680	2	0.15	21	0.033	8	2	103	15	0.15	5	45	2	89
G-190	0.2	2.54	8	23	324	2	0.68	0.2	11	49	26	3.11	2	0.7	20	0.83	988	3	0.1	18	0.061	11	2	109	14	0.15	5	45	2	91
G-191	0.2	2.69	3	24	268	2	0.64	1.3	12	46	27	3.17	2	0.75	21	0.77	749	3	0.16	19	0.032	13	3	114	14	0.18	5	48	1	85
G-192	0.2	3.86	2	40	305	2	0.77	1.9	11	45	35	3.8	2	1.3	23	1.24	736	2	0.19	20	0.035	8	3	99	16	0.15	5	47	1	110
G-193	0.1	3.71	6	39	219	4	0.62	0.2	10	41	32	3.66	2	1.04	20	1.16	606	2	0.26	21	0.028	13	3	111	14	0.15	5	45	2	106
G-194	0.3	3.1	7	32	201	2	0.57	0.9	10	20	31	3.33	2	0.93	19	1.01	517	1	0.18	20	0.025	11	5	109	12	0.12	5	41	1	89
G-195	0.1	4.24	5	47	172	2	0.54	0.4	11	29	31	3.87	2	1.03	22	1.18	670	1	0.42	26	0.029	9	2	111	17	0.14	5	43	1	104
G-196	0.4	3.27	7	41	261	2	1.24	0.3	9	35	29	3.24	2	1.04	20	1.04	636	2	0.22	22	0.064	9	2	111	12	0.13	5	41	2	99
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

• SPARKS • ELKO • TUCSON • HELENA • HERMOSILLO • MONTEVIDEO •

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-197	0.1	3.6	5	53	161	2	0.87	0.2	9	37	26	3.26	2	1.19	20	1.16	501	2	0.19	19	0.032	8	2	118	13	0.11	5	36	1	96
G-198	0.1	3.02	4	26	321	2	0.86	0.5	10	28	29	3.12	2	0.79	19	0.94	730	1	0.06	19	0.051	10	2	106	10	0.12	5	40	2	95
G-199	0.3	2.93	8	32	300	2	0.72	0.2	10	37	29	3.21	2	0.9	19	0.91	741	2	0.07	18	0.058	10	2	102	11	0.13	5	46	2	95
G-200	0.4	3.74	6	37	368	2	0.85	0.2	10	34	33	3.44	2	1.03	20	1.1	557	1	0.08	20	0.053	6	2	126	12	0.13	5	44	1	94
G-201	0.4	3.27	6	37	334	2	0.75	0.2	10	34	32	3.28	2	0.99	19	1.13	540	1	0.14	21	0.038	7	2	126	8	0.14	5	45	1	89
G-202	0.1	3.73	23	36	349	2	0.84	0.7	10	34	35	3.98	2	1.03	20	1.15	460	2	0.12	21	0.032	14	6	152	12	0.14	5	47	2	92
G-203	0.8	3.78	22	43	281	2	0.84	0.2	9	33	32	3.93	2	1.35	21	1.28	442	2	0.19	22	0.028	9	6	124	14	0.12	5	44	1	92
G-204	0.4	4.63	57	35	298	2	0.88	0.2	9	47	37	4.72	2	1.15	21	1.24	423	11	0.09	23	0.032	7	5	147	13	0.14	5	53	1	101
G-205	0.3	4.66	11	25	339	2	0.76	0.6	10	85	34	3.77	2	0.75	26	0.89	591	5	0.1	25	0.035	12	2	117	12	0.16	5	55	1	88
STANDARD C	6.3	1.94	39	25	181	20	0.53	18.3	33	58	61	4.05	2	0.16	41	0.94	1020	21	0.06	72	0.093	36	18	54	43	0.09	19	56	12	132
G-206	0.1	3.38	10	30	410	2	0.71	0.4	10	35	33	3.31	2	0.97	21	0.95	661	2	0.09	21	0.048	13	2	111	11	0.14	5	53	2	91
G-207	0.1	4.06	14	38	420	2	0.94	0.6	9	46	35	3.61	2	0.89	23	1.16	539	3	0.14	19	0.043	16	2	156	12	0.14	5	58	1	96
G-208	0.5	3.78	18	37	440	2	0.81	0.7	9	41	30	3.54	2	0.94	20	1.15	535	2	0.2	22	0.038	9	2	144	13	0.14	5	54	1	92
G-209	0.7	3.82	24	38	431	2	1.01	0.4	9	36	32	3.8	2	0.99	21	1.17	500	2	0.14	22	0.038	16	2	157	11	0.14	5	56	1	93
G-210	0.1	3.39	11	33	410	2	0.81	0.8	9	36	29	3.17	2	0.89	20	1	518	1	0.12	20	0.041	11	2	133	11	0.13	5	49	1	86
G-211	0.3	3.49	11	33	415	4	0.84	0.7	8	37	29	3.05	2	0.87	21	0.99	473	1	0.13	18	0.044	13	2	149	11	0.12	5	48	1	80
G-212	0.1	3.58	10	33	398	2	0.83	0.9	9	31	31	3.28	2	0.83	23	1.04	620	2	0.1	18	0.04	16	2	127	13	0.13	5	49	1	93
G-213	0.1	4.61	8	37	363	2	0.9	0.9	9	27	37	4.21	2	1	24	1.39	632	1	0.06	23	0.033	15	2	126	18	0.13	5	53	1	121
G-214	0.1	3.85	10	33	386	2	0.84	1.2	9	35	33	3.67	2	0.93	21	1.13	811	2	0.1	21	0.048	11	2	118	14	0.14	5	53	2	106
G-215	0.1	3.36	10	31	418	2	0.83	0.9	9	27	30	3.54	2	0.79	23	1.02	1175	1	0.09	18	0.048	9	2	116	17	0.12	5	51	1	102
G-216	0.1	7.04	10	62	304	2	0.86	0.4	11	74	41	4.61	2	1.51	27	1.68	702	4	0.49	34	0.021	15	2	148	20	0.17	5	72	2	134
G-217	0.1	3.96	11	43	230	2	0.76	0.3	9	26	38	3.63	2	0.98	24	1.25	540	1	0.23	21	0.031	15	2	129	14	0.09	5	46	1	112
G-218	0.4	3.33	9	34	424	2	0.8	0.7	9	31	32	3.19	2	0.85	20	1.06	632	2	0.13	21	0.05	13	2	131	13	0.14	5	52	1	95
G-219	0.2	4.29	9	35	456	2	0.8	0.2	11	43	35	3.63	2	1.1	23	1.06	840	2	0.11	24	0.053	16	2	114	19	0.15	5	57	1	108
G-220	0.1	4.12	3	28	369	2	0.89	0.8	9	35	35	3.41	2	0.83	23	1.05	552	1	0.07	23	0.035	8	2	106	12	0.13	5	50	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-D

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT / SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-221	0.1	4.06	9	38	343	2	1.07	0.2	9	35	33	3.4	2	0.84	24	1.15	486	2	0.14	24	0.031	12	2	137	12	0.13	5	48	1	92
G-222	0.1	4.23	6	33	381	2	0.85	0.5	11	59	33	3.54	2	1.02	25	1.08	673	3	0.29	26	0.033	15	2	153	15	0.18	5	60	1	95
G-223	0.1	3.77	6	48	280	2	0.77	1	7	25	35	3.39	2	0.79	20	1.16	381	1	0.34	21	0.038	11	2	134	12	0.11	5	47	1	97
G-224	0.1	3.85	3	28	381	2	0.9	0.6	9	33	37	3.35	2	0.9	22	1.01	576	1	0.07	25	0.045	14	2	98	15	0.13	5	48	1	93
G-225	0.1	5.77	5	68	212	3	0.66	0.2	9	46	35	4.13	2	1.03	26	1.33	490	2	0.77	29	0.026	3	2	145	17	0.16	5	64	1	109
G-226	0.1	3.37	7	27	364	2	0.7	1.1	9	30	31	3.06	2	0.81	20	0.9	580	2	0.09	20	0.044	9	2	99	13	0.14	5	47	1	84
G-227	0.1	7.35	6	54	339	2	0.92	0.2	10	122	44	4.4	3	1.53	27	1.58	552	5	0.5	30	0.026	15	2	166	19	0.17	5	70	1	136
G-228	0.6	3.29	12	40	321	2	0.9	0.9	8	35	29	3.33	2	1.28	18	1.07	609	2	0.11	21	0.043	8	2	124	12	0.12	5	48	2	87
G-229	1.2	4.54	19	38	392	2	0.94	0.5	8	27	34	4.13	2	1.26	25	1.32	367	1	0.07	23	0.047	12	2	197	12	0.1	5	58	1	114
G-230	0.7	3.71	19	32	365	2	0.7	0.2	9	34	31	3.64	2	1.15	21	1	578	1	0.09	22	0.041	8	2	113	15	0.13	5	52	1	89
G-231	0.1	3.16	27	32	371	2	0.64	0.2	8	36	29	3.4	2	1.08	17	0.97	452	1	0.11	18	0.032	11	3	111	15	0.12	5	48	2	82
G-232	0.1	3.55	12	30	394	2	0.75	0.6	9	30	31	3.52	2	0.9	20	1.04	559	1	0.07	21	0.038	13	2	119	12	0.12	5	51	1	88
G-233	0.8	3.6	11	37	421	2	0.8	0.2	9	39	31	3.4	2	1	21	1.05	616	1	0.13	22	0.042	8	2	132	13	0.14	5	57	1	92
G-234	0.1	5.94	11	62	364	2	0.81	0.2	10	82	40	4.13	2	1.57	24	1.42	617	5	0.42	34	0.034	16	2	147	16	0.18	5	69	1	110
G-235	0.6	3.25	10	38	374	2	1.09	0.7	8	37	32	3.09	2	0.89	19	1.06	512	2	0.16	20	0.046	10	2	152	8	0.14	5	52	2	88
G-236	0.2	3.58	10	43	417	2	0.84	0.8	10	32	37	3.39	2	1.21	20	1.2	566	1	0.1	24	0.047	9	2	138	13	0.14	5	53	1	96
G-237	0.1	3.57	12	40	377	2	0.93	0.2	9	33	33	3.3	2	1.11	21	1.14	492	1	0.09	22	0.042	8	2	136	12	0.13	5	51	1	92
G-238	0.1	5.58	8	48	325	2	0.72	0.2	9	53	38	3.93	2	1.45	23	1.31	477	2	0.34	27	0.028	5	2	129	14	0.15	5	57	1	111
G-239	0.6	2.25	13	20	290	2	5.98	0.6	4	22	22	1.96	2	0.38	19	0.6	478	1	0.09	14	0.046	2	2	287	15	0.09	5	43	2	58
STANDARD C	6.4	1.92	39	26	191	20	0.51	19.3	30	63	60	4.05	2	0.16	40	0.94	1023	21	0.06	70	0.093	35	17	53	42	0.09	17	62	11	130
G-240	0.7	3.25	6	26	281	2	0.78	0.2	10	26	31	3.3	2	0.89	22	0.92	539	2	0.06	21	0.053	7	2	130	11	0.12	5	49	1	93
G-241	1.4	2.53	4	18	184	2	4.73	0.2	6	26	25	2.55	2	0.47	20	0.65	324	1	0.05	16	0.043	2	2	227	9	0.09	5	40	1	68
G-242	0.8	3.75	4	31	344	2	1.1	0.2	10	34	35	3.47	2	0.91	22	1.13	622	1	0.09	26	0.044	6	2	145	11	0.13	5	46	2	101
G-243	1.4	3.41	5	34	370	2	1.32	0.2	11	32	36	3.27	2	0.98	20	1.01	708	1	0.08	23	0.06	5	2	116	10	0.14	5	47	1	99
G-244	0.2	6.35	2	59	219	2	0.88	0.2	10	126	44	4.41	2	1.45	22	1.48	532	8	0.37	39	0.028	12	2	154	18	0.16	5	59	1	126
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

• SPARKS • ELKO • TUCSON • HELENA • HERMOSILLO • MONTEVIDEO •

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-D

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT / SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-245	0.2	2.64	6	26	270	2	0.55	0.2	11	20	33	3.12	2	0.7	26	0.81	580	1	0.14	22	0.024	10	3	106	14	0.14	5	44	1	85
G-246	0.4	3.5	5	31	241	2	0.73	0.4	11	37	31	3.43	2	1.03	21	1.07	638	2	0.19	26	0.028	8	2	117	14	0.14	5	44	1	93
G-247	0.9	4	2	31	238	2	0.72	0.2	11	323	32	3.52	2	0.99	23	0.93	543	16	0.25	23	0.026	9	3	137	14	0.16	5	52	1	87
G-248	0.4	2.58	7	32	187	2	0.57	0.2	10	20	30	2.96	2	0.76	18	0.85	474	1	0.18	18	0.027	7	3	118	7	0.12	5	40	1	83
G-249	0.1	6.59	2	46	257	2	0.8	0.2	11	142	34	4.1	2	1.31	25	1.31	512	7	0.3	27	0.025	15	2	147	12	0.16	5	57	2	108
G-250	0.6	3.73	6	26	322	2	0.71	0.2	11	80	34	3.52	2	0.92	23	0.93	714	6	0.15	31	0.037	8	2	125	15	0.16	5	50	1	92
G-251	0.2	3.1	10	33	198	2	0.64	0.2	11	21	39	3.37	2	0.84	19	0.98	664	1	0.21	20	0.033	11	4	107	14	0.11	5	43	1	99
G-252	0.7	4.18	3	35	295	2	0.8	0.2	11	110	36	3.59	2	1.05	23	1	693	9	0.32	35	0.034	8	2	149	11	0.18	5	55	2	94
G-253	0.2	4.51	9	34	314	2	0.77	0.2	15	227	34	3.62	2	0.95	32	0.97	816	12	0.3	28	0.03	13	2	140	19	0.18	5	62	1	92
G-254	0.3	3.48	3	30	269	2	0.66	0.2	11	74	31	3.48	2	0.96	23	0.92	678	5	0.2	28	0.021	12	2	125	16	0.17	5	53	1	97
G-255	0.1	2.66	3	33	212	2	0.55	0.2	9	21	30	3.04	2	0.77	19	0.89	478	1	0.29	17	0.033	12	3	124	12	0.14	5	45	1	84
G-256	1.1	4.08	4	35	361	2	0.85	0.2	11	29	35	3.71	2	0.97	22	1.17	641	1	0.07	24	0.047	11	2	131	12	0.13	5	49	1	107
G-257	0.2	3.58	6	23	339	2	0.77	0.2	11	71	31	3.44	2	0.68	23	0.85	683	3	0.08	19	0.042	13	2	107	12	0.12	5	52	1	102
G-258	0.2	2.67	5	28	214	2	0.71	0.4	10	24	38	3.04	2	0.53	22	0.75	538	1	0.15	20	0.038	17	2	106	11	0.1	5	46	1	98
G-259	1.1	1.79	4	18	204	2	0.52	0.3	11	20	25	2.46	2	0.36	20	0.5	556	1	0.12	16	0.027	10	2	102	13	0.12	5	43	1	62
G-260	0.6	3.87	5	27	419	2	0.8	0.2	11	47	33	3.39	2	0.86	22	0.94	702	2	0.1	23	0.047	16	2	126	12	0.14	5	50	1	97
G-261	0.7	2.67	7	25	333	2	0.72	0.4	10	42	26	2.83	2	0.8	19	0.75	859	2	0.11	20	0.056	15	2	109	13	0.14	5	46	1	86
G-262	0.5	2.91	5	28	304	2	0.67	0.2	10	27	29	3	2	0.97	19	0.93	768	1	0.09	19	0.043	13	2	98	12	0.13	5	43	1	90
G-263	0.5	3.94	2	34	373	2	0.82	0.2	10	49	32	3.42	2	0.98	22	1.09	710	1	0.21	22	0.04	13	2	130	16	0.16	5	52	1	103
G-264	0.2	3.78	4	29	313	2	0.84	0.3	10	45	28	3.17	2	0.88	23	0.98	724	2	0.27	19	0.027	9	2	144	16	0.16	5	49	2	92
G-265	0.4	3.82	3	37	260	2	0.79	0.2	10	36	27	3.2	2	1	22	1.02	496	2	0.39	16	0.022	11	2	135	15	0.14	5	47	1	97
G-266	0.4	3.69	4	27	315	2	1.5	0.2	9	28	34	3.22	2	0.81	21	0.99	587	1	0.07	22	0.05	7	2	102	12	0.12	5	44	1	89
G-267	0.1	5	2	58	228	2	0.76	0.2	11	62	41	3.95	3	1.43	21	1.46	561	3	0.38	28	0.025	9	2	140	14	0.16	5	52	1	110
G-268	0.1	5.07	3	53	243	2	0.84	0.2	11	45	42	3.99	2	1.45	22	1.59	593	2	0.32	30	0.028	8	2	151	15	0.16	5	51	1	115
G-269	0.4	3.41	2	46	421	2	1.17	0.5	10	30	35	3.25	2	1.16	20	1.13	527	1	0.19	20	0.048	10	2	129	12	0.14	5	49	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-270	0.1	3.19	7	33	342	2	0.7	0.4	10	28	30	3.07	2	0.88	23	1.02	639	1	0.13	20	0.044	15	4	115	15	0.13	5	45	1	89
G-271	0.1	3.26	2	33	380	2	0.76	0.2	10	26	32	3.14	2	0.98	19	1.02	596	1	0.12	19	0.047	10	2	109	12	0.13	5	44	1	98
G-272	0.1	4.67	2	29	357	2	1.06	0.2	18	62	48	5.15	2	0.75	27	1.08	754	1	0.15	41	0.073	9	2	131	15	0.14	5	77	1	115
G-273	0.1	3.55	9	33	403	2	0.76	0.4	11	31	32	3.33	2	0.92	21	0.94	669	2	0.08	20	0.044	10	2	120	13	0.14	5	49	1	95
STANDARD C	7	1.95	38	25	176	18	0.5	18.6	33	58	60	4.02	2	0.16	42	0.93	998	21	0.06	72	0.094	37	14	55	40	0.09	14	59	10	132
G-274	0.4	3.52	10	32	418	2	0.78	0.9	11	32	29	3.31	2	0.86	22	1.07	670	2	0.07	22	0.043	8	2	146	14	0.12	5	48	1	100
G-275	0.1	3.34	8	32	384	2	0.79	1.4	9	32	26	3.12	2	0.91	22	1.04	602	1	0.11	18	0.033	12	2	137	13	0.12	5	44	1	93
G-276	0.1	3.04	11	51	327	2	0.62	1.9	9	27	24	3.18	2	0.84	24	0.97	603	1	0.46	15	0.029	10	2	139	15	0.12	5	43	1	95
G-277	0.1	3.73	3	44	311	2	0.81	1	10	27	33	3.6	2	1.23	23	1.27	604	1	0.06	22	0.034	8	2	121	12	0.12	5	48	1	117
G-278	0.1	4.33	14	56	292	2	0.89	1.2	10	32	34	3.98	2	1.42	20	1.46	387	9	0.09	25	0.03	6	2	117	13	0.13	5	54	1	104
G-279	0.1	4.01	13	43	371	2	0.79	1.7	11	31	33	3.86	2	1.23	23	1.27	614	2	0.11	21	0.04	8	2	152	12	0.12	5	51	1	104
G-280	0.1	4.02	9	84	233	2	0.83	1	8	28	29	3.65	2	1.1	17	1.24	335	2	0.69	19	0.032	8	2	146	11	0.12	5	47	1	50
G-281	0.1	3.92	21	40	329	2	0.74	0.9	9	25	29	3.77	2	1.14	21	1.19	410	1	0.1	21	0.035	3	2	123	13	0.11	5	43	1	87
G-282	0.3	3.56	8	39	292	2	0.73	1.7	9	27	30	3.54	2	1.04	22	1.15	597	1	0.07	20	0.033	9	3	115	14	0.12	5	45	1	112
G-283	0.3	3.69	10	41	306	2	0.76	1.1	9	32	28	3.4	2	1.08	20	1.12	514	1	0.13	19	0.033	6	2	119	11	0.13	5	47	1	87
G-284	0.1	4.15	11	33	289	2	0.74	1.2	9	28	30	3.87	2	0.97	21	1.21	481	1	0.05	23	0.022	10	2	122	13	0.12	5	47	1	105
G-285	0.1	3.5	4	33	278	2	1.16	0.2	8	27	29	3.24	2	0.96	21	1.09	523	1	0.14	19	0.028	3	2	111	13	0.13	5	46	1	97
G-286	0.1	4.12	9	44	409	2	1.04	0.3	12	32	42	3.83	2	1.16	27	1.37	708	2	0.08	23	0.039	8	2	149	14	0.13	5	54	1	132
G-287	0.5	2.81	9	9	707	2	1.84	1	10	56	31	3.4	2	0.29	16	0.7	459	4	0.43	21	0.085	2	2	260	5	0.23	5	96	1	71
G-288	0.1	4.9	20	37	427	2	1	1	11	33	37	4.22	2	1.08	25	1.35	514	3	0.06	26	0.047	7	2	158	15	0.14	5	55	1	109
G-289	0.1	4.91	8	47	452	2	0.94	0.2	12	40	37	4.1	2	1.2	24	1.41	636	1	0.09	25	0.048	15	2	139	13	0.15	5	57	1	118
G-290	0.1	3.44	7	31	385	2	0.73	1.4	10	38	31	3.35	2	0.95	20	0.91	682	2	0.08	22	0.049	12	2	112	12	0.14	5	51	1	92
G-291	0.1	3.64	6	28	414	2	0.82	1.1	10	42	32	3.44	2	0.8	21	1.01	697	1	0.06	25	0.045	6	2	111	14	0.13	5	48	1	96
G-292	0.1	3.02	8	80	271	2	1.17	0.7	9	35	27	2.94	2	0.99	18	1.02	520	2	0.42	19	0.029	10	2	124	13	0.13	5	43	1	80
G-293	0.2	3.89	12	43	347	2	2.27	0.9	10	29	38	3.45	2	1.1	22	1.32	489	1	0.16	26	0.044	4	2	142	12	0.12	5	45	2	101
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
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ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-294	0.4	2.55	15	28	238	2	14.18	<2	5	14	15	1.75	2	0.34	13	0.99	209	2	0.09	19	0.036	3	2	501	21	0.07	14	27	2	49
G-295	0.1	4.51	5	33	394	2	1.53	<8	7	34	33	3.64	2	0.83	23	1.21	388	1	0.07	25	0.04	8	2	138	13	0.13	5	44	1	102
G-296	0.9	3.53	11	31	373	2	0.77	13	11	37	34	3.41	2	1.02	21	1	672	1	0.07	24	0.046	12	2	122	14	0.13	5	51	1	101
G-297	0.1	4.01	11	55	291	2	0.79	14	9	145	40	3.58	2	1.01	19	1.11	529	6	0.45	22	0.034	20	2	127	10	0.13	5	50	1	100
G-298	0.1	4.19	17	41	423	2	0.86	<4	11	29	35	4.02	2	1.06	21	1.25	555	2	0.08	23	0.038	11	2	142	13	0.14	5	56	1	108
G-299	0.2	3.21	9	45	385	2	0.99	<7	10	34	33	3.18	2	1.06	16	1.19	529	2	0.12	21	0.04	8	2	141	10	0.14	5	51	1	89
G-300	0.3	3.24	10	44	385	2	0.99	<5	10	32	33	3.18	2	1.08	16	1.19	531	1	0.12	21	0.039	5	2	142	11	0.14	5	51	1	89
G-301	0.1	3.1	7	35	282	2	1.36	<7	9	38	28	3.02	2	0.88	18	1.05	543	1	0.18	21	0.035	7	2	164	11	0.14	5	48	2	81
G-302	1.3	3.34	28	38	381	2	1.3	<5	9	32	33	3.52	2	0.93	18	1.08	510	2	0.1	21	0.043	10	2	157	9	0.13	5	51	1	86
G-303	0.4	3.53	7	25	300	2	0.69	1	10	33	30	3.17	2	0.76	23	0.81	633	1	0.06	21	0.039	5	2	103	11	0.13	5	49	1	88
G-304	0.1	3.79	7	32	359	2	1.7	<1	9	28	35	3.23	2	0.81	22	0.98	598	1	0.05	23	0.046	5	2	99	12	0.12	5	47	2	93
G-305	0.1	3.23	5	32	357	2	1	<5	10	30	30	2.96	2	0.72	20	1.01	609	1	0.1	18	0.044	5	2	128	12	0.13	5	45	1	84
G-306	0.1	3.45	6	43	416	2	0.7	<3	10	36	32	3.19	2	0.97	20	1.06	763	2	0.26	20	0.05	7	4	127	14	0.14	5	49	1	94
G-307	0.1	2.83	8	37	272	2	0.51	<2	10	32	26	2.85	2	0.8	18	0.87	671	1	0.3	19	0.035	8	2	110	13	0.14	5	46	1	80
STANDARD C	6.5	1.85	38	24	181	18	0.49	8	32	62	55	3.89	2	0.15	38	0.89	1013	20	0.06	69	0.089	36	18	50	39	0.08	14	59	10	126
G-308	0.5	3.74	2	34	381	2	1.27	<8	9	30	34	3.22	2	0.9	20	1.16	569	1	0.08	23	0.045	4	2	126	8	0.13	5	46	1	93
G-309	0.5	2.95	9	33	329	2	1.39	<5	8	32	30	2.84	2	0.82	18	0.96	696	1	0.11	18	0.053	9	2	114	9	0.13	5	47	1	85
G-310	0.1	3.6	6	31	333	2	1.47	<4	9	31	36	3.24	2	0.86	20	1.06	581	2	0.09	23	0.042	9	2	127	6	0.14	5	48	1	92
G-311	0.1	4.41	2	68	235	2	1.48	<7	9	44	33	3.6	2	1.07	21	1.29	577	2	0.2	27	0.035	9	2	153	14	0.15	5	51	1	103
G-312	0.3	3.14	7	33	320	2	2.92	<2	8	26	32	2.85	2	0.83	18	1.05	585	1	0.07	23	0.05	7	2	162	5	0.12	5	44	1	85
G-313	0.1	3.75	5	95	193	2	0.64	<2	8	56	31	3.32	2	0.92	21	1.1	586	2	0.46	21	0.037	12	2	115	11	0.14	5	52	2	96
G-314	0.1	3.41	5	73	248	2	0.65	<6	9	43	29	3.21	2	0.88	20	1.03	500	2	0.44	20	0.029	13	2	155	12	0.15	5	51	1	86
G-315	0.1	3.81	2	39	300	2	0.72	<2	9	40	32	3.46	2	1.09	20	1.2	525	2	0.26	22	0.032	11	2	147	11	0.14	5	50	1	98
G-316	0.1	3.28	5	34	334	2	0.81	<2	8	34	32	3.08	2	0.85	18	1.1	558	2	0.12	20	0.05	10	2	125	7	0.13	5	48	1	89
G-317	0.1	4.43	6	45	264	2	0.78	<7	9	49	33	3.64	2	1.06	20	1.15	596	3	0.33	24	0.042	12	2	177	11	0.15	5	54	1	104
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	<2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

American Assay Laboratories

CLIENT: NECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-318	0.1	3.36	5	30	358	2	0.87	1.2	9	28	32	3.15	2	0.77	20	0.99	646	1	0.06	20	0.052	13	2	108	12	0.12	5	47	2	91
G-319	0.1	2.77	9	18	293	2	0.61	0.6	10	48	27	2.91	2	0.52	24	0.7	706	3	0.21	19	0.031	12	2	103	15	0.15	5	52	2	75
G-320	0.2	2.69	9	22	328	2	0.66	1.5	10	37	27	2.97	2	0.67	22	0.72	1053	2	0.09	16	0.055	15	2	97	14	0.13	5	50	2	89
G-321	0.1	2.9	9	27	319	2	0.69	0.5	9	37	30	3.11	2	0.81	19	0.88	877	2	0.08	15	0.055	12	2	106	13	0.12	5	47	1	104
G-322	0.5	3.3	8	27	380	2	0.83	0.6	9	27	28	3.55	2	0.8	21	0.97	3739	1	0.06	17	0.063	10	2	110	17	0.1	5	52	1	119
G-323	0.1	4.12	6	38	241	2	0.77	0.2	9	50	28	3.7	2	1.04	24	1.12	623	3	0.2	22	0.041	9	2	134	12	0.14	5	50	2	104
G-324	0.1	3.47	8	38	252	2	0.78	1.2	9	40	27	3.5	2	1.05	22	1.07	569	1	0.24	21	0.034	7	2	131	16	0.13	5	48	2	94
G-325	0.2	3.7	9	56	194	2	0.58	0.8	10	26	35	3.9	2	1.16	20	1.35	686	1	0.34	24	0.033	17	2	142	14	0.12	5	48	1	122
G-326	0.1	4.39	8	43	378	2	0.87	0.5	10	34	37	4	2	1.07	23	1.39	761	2	0.08	23	0.037	14	2	128	14	0.14	5	54	1	132
G-327	0.1	2.82	8	27	328	2	0.63	0.2	9	28	29	3.35	2	0.73	21	0.94	777	1	0.09	17	0.036	11	2	108	12	0.13	5	48	1	103
G-328	0.1	3.32	12	31	315	2	0.75	0.8	9	24	32	3.57	2	0.78	21	1.09	639	2	0.06	19	0.039	11	3	125	12	0.11	5	46	1	102
G-329	0.5	3.79	5	39	344	2	0.83	0.6	9	27	36	3.85	2	0.96	23	1.28	607	1	0.07	21	0.034	11	2	122	11	0.12	5	50	1	118
G-330	133.5	3.27	11	41	179	2	0.5	0.5	8	39	27	3.58	2	0.99	20	1.07	544	1	0.22	17	0.027	12	2	91	12	0.11	5	43	1	100
G-331	0.5	2.99	7	25	325	2	0.69	0.5	9	28	30	3.29	2	0.76	19	0.96	746	2	0.06	18	0.046	14	2	104	10	0.12	5	46	1	102
G-332	25.1	3.98	5	34	265	2	0.72	0.9	10	32	35	3.86	2	1.05	22	1.25	881	1	0.08	23	0.034	12	2	101	15	0.12	5	47	1	130
G-333	0.1	3.37	4	37	360	2	0.75	0.2	9	28	32	3.48	2	0.96	21	1.13	637	1	0.07	19	0.047	14	2	107	13	0.13	5	50	1	97
G-334	9.3	3.6	64	40	337	6	0.74	0.4	9	26	35	4.9	2	1.09	22	1.22	527	3	0.09	23	0.057	17	11	138	14	0.1	5	54	2	103
G-335	22.1	3.17	9	42	213	3	0.49	0.3	9	34	28	3.57	2	0.9	22	0.99	562	2	0.28	18	0.029	15	2	118	15	0.13	5	45	2	95
G-336	0.5	3.08	9	28	340	4	0.71	1.1	9	28	30	3.43	2	0.79	21	0.96	720	2	0.07	19	0.048	12	2	117	15	0.12	5	50	1	97
G-337	0.1	3.14	7	28	343	2	0.65	1	10	29	34	3.48	2	0.94	19	1	821	1	0.06	20	0.046	14	2	100	12	0.13	5	50	1	96
G-338	0.1	2.85	7	20	331	2	0.55	0.8	9	26	29	3.24	2	0.69	20	0.78	817	1	0.07	20	0.038	8	2	87	15	0.13	5	49	1	90
G-339	4.9	3.26	6	26	302	2	0.57	0.2	10	28	30	3.56	2	0.77	21	0.91	783	1	0.05	19	0.031	12	2	88	14	0.13	5	49	1	96
G-340	18.8	3.45	7	21	258	2	0.68	0.2	8	27	27	3.48	2	0.56	20	0.91	578	1	0.06	19	0.03	13	2	108	14	0.11	5	43	1	101
G-341	0.1	3.18	7	26	338	2	0.64	1	9	27	30	3.27	2	0.74	20	0.91	687	1	0.06	18	0.04	12	2	97	13	0.13	5	45	1	98
STANDARD C	6.7	1.96	40	25	184	16	0.52	18.1	30	63	59	4.09	3	0.16	40	0.93	1072	21	0.06	68	0.095	37	18	54	42	0.08	21	62	11	133
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

• SPARKS • ELKO • TUCSON • HELENA • HERMOSILLO • MONTEVIDEO •

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT / SAMPLES	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm
G-342	1.3	3.35	10	35	384	2	0.84	0.2	10	22	34	3.45	2	0.78	21	1.12	642	2	0.09	19	0.047	9	2	125	8	0.1[illegible]	5	51	1	100
G-343	0.3	3.42	9	38	376	2	0.77	0.8	10	28	31	3.46	2	0.89	20	1.09	557	1	0.07	21	0.041	10	2	124	13	0.1[illegible]	5	50	1	94
G-344	0.1	3	9	24	365	2	0.69	0.9	10	26	30	3.02	2	0.68	20	0.87	713	2	0.07	15	0.049	18	2	109	13	0.1[illegible]	5	49	1	89
G-345	1	2.75	13	25	332	2	0.62	0.9	10	23	30	3.07	2	0.67	20	0.81	677	2	0.06	17	0.044	14	2	107	13	0.1[illegible]	5	49	1	82
G-346	0.1	2.92	5	29	398	2	0.64	0.2	10	27	30	3.05	2	0.78	19	0.89	684	1	0.08	17	0.044	8	2	104	11	0.1[illegible]	5	49	1	91
G-347	0.4	3.65	11	39	395	2	0.75	0.7	11	25	37	3.56	2	1.05	21	1.2	622	1	0.09	21	0.047	17	2	116	11	0.1[illegible]	5	50	1	107
G-348	0.1	2.78	7	31	342	2	0.73	0.2	10	29	30	3.03	2	0.8	15	0.92	767	1	0.14	17	0.03	14	2	94	12	0.1[illegible]	5	48	1	89
G-349	1.5	3.29	8	40	371	2	0.64	1	10	28	36	3.37	2	0.99	17	1.24	626	1	0.13	22	0.028	12	2	98	11	0.1[illegible]	5	49	1	101
G-350	0.6	2.69	4	36	330	2	0.71	0.8	8	22	31	2.82	2	0.78	12	1.03	515	1	0.2	17	0.033	8	2	113	8	0.1[illegible]	5	46	1	84
G-351	0.1	3.7	7	38	416	3	0.85	1.4	11	26	36	3.81	2	0.83	22	1.23	848	1	0.09	20	0.041	9	2	132	14	0.1[illegible]	5	56	1	115
G-352	2.4	2.9	6	35	326	2	0.68	1	9	25	31	3.11	2	0.9	17	1.08	646	1	0.15	16	0.038	7	2	103	13	0.1[illegible]	5	48	1	97
G-353	0.1	3.87	5	46	461	2	0.86	0.2	12	34	39	3.78	2	1.13	23	1.36	842	1	0.09	24	0.052	9	2	132	13	0.1[illegible]	5	55	1	127
G-354	0.7	2.45	9	27	338	2	0.68	1.2	9	21	26	3.08	2	0.68	18	0.86	859	1	0.06	15	0.048	13	2	108	14	0.1[illegible]	5	44	1	98
G-355	0.1	3.17	10	36	306	2	0.89	1.5	9	27	31	3.38	2	1	19	1.08	718	1	0.07	20	0.045	11	2	115	11	0.1[illegible]	5	46	1	103
G-356	0.5	2.73	10	26	346	2	0.68	0.2	9	22	30	3.42	2	0.7	19	0.91	839	2	0.05	17	0.043	14	2	96	13	0.1[illegible]	5	43	1	111
G-357	0.1	3.15	8	30	354	2	0.68	0.2	10	28	31	3.65	2	0.85	22	1.03	752	1	0.07	19	0.034	13	2	107	13	0.1[illegible]	5	47	1	102
STANDARD C	6.4	1.84	40	30	185	17	0.5	18.7	32	59	57	3.82	2	0.15	39	0.88	958	20	0.06	63	0.089	37	17	50	41	0.08	19	60	12	124
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

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American Assay Laboratories

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035666

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax 1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO :

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:

CLIENT REFERENCE No: 173X4425/180X4675 RECEIVED : 27 SEP 1995

No. SAMPLES : 25 REPORTED : 2 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035666

CLIENT : HECLA MINING CO.
PROJECT :
REFERENCE : 173X4425/180X4675

REPORTED : 2 OCT 1995

SAMPLES	Au	Au(R)	Ag
173X4425	<5		<0.5
174X4425	<5		<0.5
175X4425	22	20	<0.5
176X4425	<5		<0.5
177X4425	<5		<0.5
178X4425	<5		<0.5
179X4425	<5		<0.5
180X4425	<5		<0.5
173X455	<5		<0.5
174X455	<5		<0.5
175X455	32		<0.5
176X455	<5		<0.5
177X455	<5		<0.5
178X455	<5		<0.5
179X455	<5		<0.5
180X455	<5		<0.5
172X4675	<5		<0.5
173X4675	<5		<0.5
174X4675	30		<0.5
175X4675	<5		<0.5
176X4675	60		<0.5
177X4675	<5		<0.5
178X4675	<5		<0.5
179X4675	<5		<0.5
180X4675	<5		<0.5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035377

P.O. BOX 11530
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Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

GATOR

HECLA MINING CO.

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:

CLIENT REFERENCE No: 795SC RECEIVED : 1 SEP 1995

No. SAMPLES : 4 REPORTED : 15 SEP 1995

MAIN SAMPLE TYPE : SOILS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au+20#	FA30	15%	ppb	5
Au-20#	FA30	15%	ppb	5
Au-30#	FA30	15%	ppb	5
Au-40#	FA30	15%	ppb	5
Au-50#	FA30	15%	ppb	5
Au-60#	FA30	15%	ppb	5
Ag+20#	D210	15%	ppm	0.5
Ag-20#	D210	15%	ppm	0.5
Ag-30#	D210	15%	ppm	0.5
Ag-40#	D210	15%	ppm	0.5
Ag-50#	D210	15%	ppm	0.5
Ag-60#	D210	15%	ppm	0.5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035377

CLIENT : HECLA MINING CO.
PROJECT : GATOR
REFERENCE : 795SC

REPORTED : 15 SEP 1995

SAMPLES	Au+20#	Au-20#	Au-30#	Au-40#	Au-50#	Au-60#
795SC1	6	<5	<5	6	<5	<5
795SC2	<5	<5	<5	<5	5	5
795SC3	5	14	21	20	19	20
795SC3 21200N X4050EWR	<5	5	<5	6	<5	<5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035377

CLIENT : HECLA MINING CO.
PROJECT : GATOR
REFERENCE : 795SC

REPORTED : 15 SEP 1995

SAMPLES	Ag+20#	Ag-20#	Ag-30#	Ag-40#	Ag-50#	Ag-60#
795SC1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
795SC2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
795SC3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
795SC3 21200N X4050EWR	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035557

P.O. BOX 11530
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Telex:

GATOR

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

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:

:

CLIENT REFERENCE No: 755X167/795X177 RECEIVED : 18 SEP 1995

No. SAMPLES : 5 REPORTED : 22 SEP 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035557

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 755X167/795X177

REPORTED : 22 SEP 1995

SAMPLES	Au	Au(R)	Ag
755X167	102	116	
755X181	64		
775X167	207	234	
795X174	89		
795X177	100		

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035665

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RENO, NV,,USA
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Telex:

HECLA MINING CO.

COPIES TO :

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CLIENT REFERENCE No: 164X765/184X6825 RECEIVED : 27 SEP 1995

No. SAMPLES : 39 REPORTED : 2 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035665

CLIENT : HECLA MINING CO.
PROJECT :
REFERENCE : 164X765/184X6825

REPORTED : 2 OCT 1995

SAMPLES	Au	Au(R)	Ag
164X765	<5		<0.5
165X765	<5		<0.5
166X765	44	50	<0.5
167X765	154		1.0
168X765	82	80	0.8
169X765	52		<0.5
170X765	12		<0.5
171X765	<5		<0.5
172X765	24		<0.5
173X765	<5		<0.5
174X765	<5		<0.5
175X765	<5		<0.5
176X765	<5	<5	<0.5
164X8075	<5		<0.5
165X8075	<5		<0.5
166X8075	<5		<0.5
167X8075	<5		<0.5
168X8075	<5		0.6
169X8075	<5		<0.5
170X8075	<5		<0.5
171X8075	<5		<0.5
172X8075	<5		<0.5
173X8075	<5		<0.5
174X8075	<5		<0.5
175X8075	<5		<0.5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035665

CLIENT : HECLA MINING CO.
PROJECT :
REFERENCE : 164X765/184X6825

REPORTED : 2 OCT 1995

SAMPLES	Au	Au(R)	Ag
176X8075	10		<0.5
177X8075	16		0.5
178X8075	<5		<0.5
179X8075	<5		<0.5
180X8075	56		<0.5
1745X6925	<5		<0.5
180X6975	<5	<5	<0.5
1835X6925	<5		<0.5
1755X6925	<5		<0.5
1845X6925	<5		<0.5
175X7025	<5		<0.5
184X7025	<5		<0.5
175X6825	<5		<0.5
184X6825	<5		<0.5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035777

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : C. MUERHOFF

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CLIENT REFERENCE No: G99545/99550 RECEIVED : 3 OCT 1995

No. SAMPLES : 6 REPORTED : 6 OCT 1995

MAIN SAMPLE TYPE : ROCK CHIPS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035777

CLIENT : HECLA MINING CO.
PROJECT : GATOR
REFERENCE : G99545/99550

REPORTED : 6 OCT 1995

SAMPLES	Au	Au(R)
G99545	<5	
G99546	<5	
G99547	176	
G99548	252	
G99549	180	
G99550	93	

American Assay Laboratories

INVOICE

******CHANGE OF ADDRESS******
------PLEASE REMIT TO
------P.O. BOX 11530
------RENO NV 89510-1530

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 35233A -IN
INVOICE DATE: 10/10/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
G-001/357	ROSEBUD	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	ADJUSTMENT TO SP#35233 FOR ADDITIONAL ANALYSIS REQUESTED. (Hg, Se & ICP)		
354	HYDROCHLORIC/NITRIC DIGESTION	2.00	708.00
354	Hg ANALYSES	2.60	920.40
354	Se ANALYSES	2.50	885.00
354	MULTI-ELEMENT ICP PACKAGE	7.50	2,655.00

OK to pay
716130-477
Charles V. Mueller

NET INVOICE:	5,168.40
LESS DISCOUNT:	1,285.02
FREIGHT:	.00
INVOICE TOTAL:	3,883.38

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

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CLIENT REFERENCE No: G-001/357 RECEIVED : 23 AUG 1995

No. SAMPLES : 354 REPORTED : 11 OCT 1995

MAIN SAMPLE TYPE : SOILS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Ag	D210	10%	ppm	0.5
Hg	D210	10%	ppb	5
Se	D210	10%	ppm	0.2

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

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CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-001	<5	<5	0.6	30	<0.2
G-002	<5		<0.5	13	<0.2
G-003	5		5.9	36	<0.2
G-004	<5		1.4	23	<0.2
G-006	<5		0.5	40	<0.2
G-007	<5		1.2	20	<0.2
G-008	<5		<0.5	28	<0.2
G-009	<5		<0.5	21	<0.2
G-010	<5		<0.5	19	<0.2
G-011	<5		<0.5	23	<0.2
G-012	<5		<0.5	33	<0.2
G-013	<5		<0.5	28	<0.2
G-014	<5		0.7	17	<0.2
G-015	<5		<0.5	26	<0.2
G-016	10		<0.5	57	<0.2
G-017	<5	<5	<0.5	38	<0.2
G-018	13		<0.5	30	0.2
G-019	<5		4.2	35	<0.2
G-020	<5		<0.5	43	<0.2
G-021	7		<0.5	38	0.2
G-022	7		<0.5	77	<0.2
G-023	<5		<0.5	17	<0.2
G-024	<5	<5	<0.5	31	<0.2
G-025	<5		<0.5	24	<0.2
G-026	<5		<0.5	20	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-027	7		<0.5	38	<0.2
G-028	<5		<0.5	35	<0.2
G-029	<5		<0.5	24	<0.2
G-030	<5		<0.5	32	<0.2
G-031	<5		<0.5	47	<0.2
G-032	<5		<0.5	43	<0.2
G-033	<5		<0.5	41	0.2
G-034	<5		<0.5	20	<0.2
G-035	<5		<0.5	41	<0.2
G-036	<5		<0.5	29	<0.2
G-037	<5		<0.5	36	<0.2
G-038	<5		<0.5	44	<0.2
G-039	<5		<0.5	35	<0.2
G-040	<5		<0.5	29	<0.2
G-041	<5		0.5	35	<0.2
G-042	<5		7.5	55	<0.2
G-043	<5		0.5	60	<0.2
G-044	<5		11.5	66	<0.2
G-045	<5		<0.5	28	<0.2
G-046	<5		3.3	24	<0.2
G-047	<5		1.7	30	0.3
G-048	<5		2.7	35	<0.2
G-049	<5	<5	0.9	28	<0.2
G-050	<5		0.6	20	<0.2
G-051	<5		0.8	10	<0.2

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-052	<5		<0.5	35	<0.2
G-053	<5		<0.5	10	<0.2
G-054	<5	<5	<0.5	23	<0.2
G-055	<5		0.5	24	<0.2
G-056	<5		<0.5	13	<0.2
G-057	<5		0.5	15	<0.2
G-058	<5		<0.5	24	<0.2
G-059	<5		<0.5	12	<0.2
G-060	<5		<0.5	17	<0.2
G-061	<5		<0.5	26	<0.2
G-062	<5		<0.5	15	<0.2
G-063	<5		<0.5	13	0.2
G-064	<5		<0.5	7	<0.2
G-065	<5		<0.5	22	<0.2
G-066	<5		<0.5	30	<0.2
G-067	<5		<0.5	19	<0.2
G-068	<5	<5	0.5	20	<0.2
G-069	<5		0.6	9	<0.2
G-070	<5		<0.5	18	<0.2
G-071	<5		0.5	34	0.2
G-072	<5		<0.5	37	<0.2
G-073	<5		<0.5	18	<0.2
G-074	<5		<0.5	28	<0.2
G-075	<5	<5	<0.5	20	<0.2
G-076	<5		<0.5	11	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-077	<5		<0.5	18	<0.2
G-078	<5		<0.5	33	<0.2
G-079	<5		<0.5	30	<0.2
G-080	<5		<0.5	24	<0.2
G-081	<5		<0.5	17	<0.2
G-082	<5		0.7	15	<0.2
G-083	<5		<0.5	14	<0.2
G-084	<5		0.5	32	<0.2
G-085	<5	<5	<0.5	13	<0.2
G-086	<5		0.5	28	<0.2
G-087	<5		<0.5	16	<0.2
G-088	<5		<0.5	23	<0.2
G-089	<5		<0.5	8	<0.2
G-090	<5		<0.5	24	<0.2
G-091	<5		<0.5	31	<0.2
G-092	<5		<0.5	30	<0.2
G-093	<5		<0.5	14	<0.2
G-094	<5		<0.5	17	<0.2
G-095	<5		1.1	17	<0.2
G-096	<5		<0.5	14	<0.2
G-097	<5		<0.5	15	<0.2
G-098	<5		<0.5	22	<0.2
G-099	<5		1.4	32	<0.2
G-100	<5		<0.5	15	<0.2
G-101	<5		<0.5	24	<0.2

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-102	5		<0.5	43	<0.2
G-103	<5		<0.5	25	<0.2
G-104	<5		<0.5	40	<0.2
G-105	<5		<0.5	20	<0.2
G-106	<5		<0.5	17	<0.2
G-107	<5		<0.5	40	<0.2
G-108	6		0.7	22	<0.2
G-109	16		<0.5	31	<0.2
G-110	<5		<0.5	34	<0.2
G-111	<5		<0.5	7	<0.2
G-112	<5		<0.5	8	<0.2
G-113	<5		<0.5	8	<0.2
G-114	<5		<0.5	12	<0.2
G-115	6		<0.5	17	<0.2
G-116	<5		<0.5	93	<0.2
G-117	<5		<0.5	15	<0.2
G-118	<5		<0.5	11	<0.2
G-119	<5		<0.5	<5	<0.2
G-120	<5		<0.5	7	<0.2
G-121	<5		<0.5	6	<0.2
G-122	<5		<0.5	14	<0.2
G-123	<5		<0.5	<5	<0.2
G-124	<5		<0.5	10	<0.2
G-125	<5		0.5	19	<0.2
G-126	<5		<0.5	13	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-127	5		<0.5	15	<0.2
G-128	<5		0.6	19	<0.2
G-129	7		<0.5	19	<0.2
G-130	<5		<0.5	15	<0.2
G-131	<5	<5	<0.5	13	<0.2
G-132	<5		<0.5	<5	<0.2
G-133	<5		<0.5	<5	<0.2
G-134	<5		<0.5	29	<0.2
G-135	<5		0.5	<5	<0.2
G-136	<5		0.5	<5	<0.2
G-137	<5		<0.5	<5	<0.2
G-138	<5		<0.5	44	<0.2
G-139	<5		<0.5	20	<0.2
G-140	<5		<0.5	38	<0.2
G-141	<5		<0.5	28	0.2
G-142	9		<0.5	66	<0.2
G-143	7		<0.5	27	<0.2
G-144	<5		<0.5	18	<0.2
G-145	6		<0.5	<5	<0.2
G-146	<5		<0.5	<5	<0.2
G-147	<5		<0.5	<5	<0.2
G-148	<5		<0.5	13	<0.2
G-149	<5		<0.5	8	<0.2
G-150	6	<5	<0.5	<5	<0.2
G-151	14		<0.5	24	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-152	56		<0.5	31	<0.2
G-153	17		<0.5	10	<0.2
G-154	35		<0.5	26	<0.2
G-155	<5		<0.5	19	<0.2
G-156	29		<0.5	<5	<0.2
G-157	<5		<0.5	<5	<0.2
G-158	<5	<5	<0.5	40	<0.2
G-159	<5		<0.5	<5	<0.2
G-160	<5		<0.5	<5	<0.2
G-161	<5		<0.5	<5	<0.2
G-162	<5		<0.5	<5	<0.2
G-163	<5		<0.5	<5	<0.2
G-164	<5		<0.5	6	<0.2
G-165	<5	<5	<0.5	10	<0.2
G-166	<5		<0.5	<5	<0.2
G-167	<5		<0.5	34	<0.2
G-168	<5		<0.5	25	<0.2
G-169	<5		<0.5	26	<0.2
G-170	<5		<0.5	16	<0.2
G-171	<5		<0.5	35	<0.2
G-172	<5		<0.5	<5	<0.2
G-173	<5		<0.5	<5	<0.2
G-174	10		<0.5	13	<0.2
G-175	<5		<0.5	6	0.2
G-176	<5		<0.5	14	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-177	<5	<5	<0.5	11	<0.2
G-178	<5		<0.5	<5	<0.2
G-179	<5		<0.5	<5	<0.2
G-180	<5		<0.5	5	0.2
G-181	5		<0.5	7	<0.2
G-182	<5		<0.5	8	<0.2
G-183	<5		<0.5	<5	0.3
G-184	<5		<0.5	5	<0.2
G-185	<5		<0.5	22	<0.2
G-186	<5		<0.5	10	<0.2
G-187	<5		<0.5	20	0.2
G-188	<5		<0.5	17	0.2
G-189	<5		<0.5	16	0.2
G-190	<5		<0.5	<5	<0.2
G-191	<5		<0.5	27	0.2
G-192	<5		<0.5	16	<0.2
G-193	<5		<0.5	18	0.2
G-194	<5		<0.5	45	<0.2
G-195	6		<0.5	12	<0.2
G-196	<5		<0.5	15	<0.2
G-197	7		<0.5	33	<0.2
G-198	6		<0.5	18	0.2
G-199	5		<0.5	31	0.2
G-200	15		<0.5	<5	<0.2
G-201	6		<0.5	<5	<0.2

AMERICAN ASSAY LABORATORIES
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-202	38		<0.5	57	1.4
G-203	66		0.8	22	3.0
G-204	164		0.7	118	2.6
G-205	22		0.6	30	0.2
G-206	27		<0.5	18	0.7
G-207	96		0.5	140	0.6
G-208	21		0.5	21	1.0
G-209	65		1.0	38	2.1
G-210	34		1.3	76	3.1
G-211	28		0.8	27	0.9
G-212	8		0.7	49	<0.2
G-213	11		0.8	12	<0.2
G-214	7		0.7	9	<0.2
G-215	9		0.5	37	<0.2
G-216	<5		<0.5	40	<0.2
G-217	5		<0.5	49	<0.2
G-218	<5		<0.5	26	<0.2
G-219	<5		<0.5	12	<0.2
G-220	5		0.5	18	<0.2
G-221	<5		<0.5	11	<0.2
G-222	<5		<0.5	15	<0.2
G-223	<5		<0.5	57	<0.2
G-224	7	8	<0.5	10	0.2
G-225	<5		<0.5	36	<0.2
G-226	<5		<0.5	7	0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-227			INSUFFICIENT SAMPLE		
G-228	27		<0.5	63	<0.2
G-229	97	104	1.1	39	1.5
G-230	17		<0.5	217	1.4
G-231	14		<0.5	48	1.9
G-232	29		<0.5	24	2.1
G-233	15		<0.5	56	1.3
G-234	<5		<0.5	38	0.2
G-235	19	25	<0.5	45	<0.2
G-236	17		<0.5	22	<0.2
G-237	25		<0.5	78	<0.2
G-238	18		<0.5	21	<0.2
G-239	12		<0.5	122	<0.2
G-240	20		<0.5	42	<0.2
G-241	14		<0.5	41	0.2
G-242	5		<0.5	47	<0.2
G-243	<5	<5	<0.5	13	0.2
G-244	<5		<0.5	16	<0.2
G-245	<5		<0.5	24	<0.2
G-246	5		<0.5	8	<0.2
G-247	<5		<0.5	14	<0.2
G-248	<5		<0.5	29	<0.2
G-249	<5		<0.5	21	<0.2
G-250	6		0.5	29	<0.2
G-251	<5		<0.5	20	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-252	6		<0.5	28	<0.2
G-253	<5		<0.5	85	<0.2
G-254	<5		<0.5	33	<0.2
G-255	6		<0.5	42	<0.2
G-256	10		<0.5	52	<0.2
G-257	5		<0.5	15	0.3
G-258	<5		<0.5	47	<0.2
G-259	6		<0.5	19	0.2
G-260	<5		<0.5	38	<0.2
G-261	<5		<0.5	18	<0.2
G-262	<5		<0.5	5	<0.2
G-263	<5		<0.5	16	<0.2
G-264	<5		<0.5	6	<0.2
G-265	<5		<0.5	10	<0.2
G-266	<5		<0.5	75	<0.2
G-267	<5		<0.5	28	<0.2
G-268	<5	5	<0.5	8	<0.2
G-269	<5		<0.5	119	<0.2
G-270	<5		0.7	13	<0.2
G-271	<5		0.8	19	<0.2
G-272	6		<0.5	28	<0.2
G-273	14		<0.5	30	<0.2
G-274	20		<0.5	128	<0.2
G-275	<5	<5	<0.5	41	<0.2
G-276	<5		<0.5	8	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-277	<5		<0.5	37	<0.2
G-278	11		<0.5	66	<0.2
G-279	10		0.6	29	<0.2
G-280	<5		0.5	95	<0.2
G-281	60	54	0.5	124	<0.2
G-282	<5		<0.5	56	<0.2
G-283	<5	6	0.9	49	<0.2
G-284	10		0.8	18	0.2
G-285	9		0.7	<5	<0.2
G-286	12		<0.5	11	<0.2
G-287	<5		<0.5	26	<0.2
G-288	95		<0.5	105	<0.2
G-289	49		<0.5	45	<0.2
G-290	20		<0.5	275	<0.2
G-291	6	6	<0.5	14	<0.2
G-292	6		<0.5	20	<0.2
G-293	10		<0.5	40	<0.2
G-294	18		<0.5	134	<0.2
G-295	26		<0.5	69	<0.2
G-296	30		<0.5	33	<0.2
G-297				INSUFFICIENT SAMPLE	
G-298	46		<0.5	41	0.3
G-299	19		<0.5	31	1.3
G-300	16		<0.5	9	<0.2
G-301	26		0.7	34	0.3

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-302	186		0.8	250	3.8
G-303	15		<0.5	<5	<0.2
G-304	6		<0.5	38	0.8
G-305	<5		<0.5	<5	<0.2
G-306	<5		<0.5	<5	<0.2
G-307	<5		<0.5	<5	<0.2
G-308	<5		<0.5	5	<0.2
G-309	<5		<0.5	45	<0.2
G-310	<5		<0.5	29	<0.2
G-311	<5		<0.5	113	<0.2
G-312	<5		<0.5	10	<0.2
G-313	<5		<0.5	28	<0.2
G-314	<5		<0.5	18	<0.2
G-315	<5		<0.5	<5	<0.2
G-316	<5		<0.5	<5	<0.2
G-317	<5		<0.5	<5	<0.2
G-318	<5		0.5	10	<0.2
G-319	<5		0.8	<5	<0.2
G-320	<5		<0.5	24	<0.2
G-321	<5		<0.5	23	<0.2
G-322	13		<0.5	52	<0.2
G-323	10		<0.5	35	<0.2
G-324	9	8	<0.5	23	<0.2
G-325	63		0.5	28	<0.2
G-326	<5		<0.5	11	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-327	<5		<0.5	<5	<0.2
G-328	23		<0.5	194	<0.2
G-329	<5		0.8	34	<0.2
G-330	25		625.5	<5	<0.2
G-331	<5		0.5	41	<0.2
G-332	11		27.7	41	<0.2
G-333	16		<0.5	30	<0.2
G-334	57		10.2	45	<0.2
G-335	7		26.5	110	<0.2
G-336	<5	<5	<0.5	12	<0.2
G-337	<5		<0.5	13	<0.2
G-338	<5		<0.5	17	<0.2
G-339	<5		5.4	17	<0.2
G-340	<5		21.9	36	<0.2
G-341	<5		0.5	16	<0.2
G-342	15		2.7	120	<0.2
G-343	29		<0.5	249	<0.2
G-344	<5		<0.5	46	<0.2
G-345	<5	<5	1.8	17	<0.2
G-346	<5		<0.5	6	<0.2
G-347	<5		0.8	107	<0.2
G-348	<5	<5	<0.5	8	<0.2
G-349	<5		1.5	<5	<0.2
G-350	<5		1.3	92	<0.2
G-351	<5		<0.5	41	<0.2

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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PROJECT : ROSEBUD
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-352	<5		1.6	32	<0.2
G-353	<5		<0.5	40	0.2
G-354	<5	<5	0.7	79	0.3
G-355	<5		<0.5	234	0.4
G-356	<5		0.7	47	<0.2
G-357	<5		<0.5	81	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: G-001/357
No. SAMPLES : 354
MAIN SAMPLE TYPE : SOILS

RECEIVED : 23 AUG 1995
REPORTED : 11 OCT 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Ag	D210	10%	ppm	0.5
Hg	D210	10%	ppb	5
Se	D210	10%	ppm	0.2

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-001	<5	<5	0.6	30	<0.2
G-002	<5		<0.5	13	<0.2
G-003	5		5.9	36	<0.2
G-004	<5		1.4	23	<0.2
G-006	<5		0.5	40	<0.2
G-007	<5		1.2	20	<0.2
G-008	<5		<0.5	28	<0.2
G-009	<5		<0.5	21	<0.2
G-010	<5		<0.5	19	<0.2
G-011	<5		<0.5	23	<0.2
G-012	<5		<0.5	33	<0.2
G-013	<5		<0.5	28	<0.2
G-014	<5		0.7	17	<0.2
G-015	<5		<0.5	26	<0.2
G-016	10		<0.5	57	<0.2
G-017	<5	<5	<0.5	38	<0.2
G-018	13		<0.5	30	0.2
G-019	<5		4.2	35	<0.2
G-020	<5		<0.5	43	<0.2
G-021	7		<0.5	38	0.2
G-022	7		<0.5	77	<0.2
G-023	<5		<0.5	17	<0.2
G-024	<5	<5	<0.5	31	<0.2
G-025	<5		<0.5	24	<0.2
G-026	<5		<0.5	20	<0.2

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-027	7		<0.5	38	<0.2
G-028	<5		<0.5	35	<0.2
G-029	<5		<0.5	24	<0.2
G-030	<5		<0.5	32	<0.2
G-031	<5		<0.5	47	<0.2
G-032	<5		<0.5	43	<0.2
G-033	<5		<0.5	41	0.2
G-034	<5		<0.5	20	<0.2
G-035	<5		<0.5	41	<0.2
G-036	<5		<0.5	29	<0.2
G-037	<5		<0.5	36	<0.2
G-038	<5		<0.5	44	<0.2
G-039	<5		<0.5	35	<0.2
G-040	<5		<0.5	29	<0.2
G-041	<5		0.5	35	<0.2
G-042	<5		7.5	55	<0.2
G-043	<5		0.5	60	<0.2
G-044	<5		11.5	66	<0.2
G-045	<5		<0.5	28	<0.2
G-046	<5		3.3	24	<0.2
G-047	<5		1.7	30	0.3
G-048	<5		2.7	35	<0.2
G-049	<5	<5	0.9	28	<0.2
G-050	<5		0.6	20	<0.2
G-051	<5		0.8	10	<0.2

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

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PROJECT : ROSEBUD
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-052	<5		<0.5	35	<0.2
G-053	<5		<0.5	10	<0.2
G-054	<5	<5	<0.5	23	<0.2
G-055	<5		0.5	24	<0.2
G-056	<5		<0.5	13	<0.2
G-057	<5		0.5	15	<0.2
G-058	<5		<0.5	24	<0.2
G-059	<5		<0.5	12	<0.2
G-060	<5		<0.5	17	<0.2
G-061	<5		<0.5	26	<0.2
G-062	<5		<0.5	15	<0.2
G-063	<5		<0.5	13	0.2
G-064	<5		<0.5	7	<0.2
G-065	<5		<0.5	22	<0.2
G-066	<5		<0.5	30	<0.2
G-067	<5		<0.5	19	<0.2
G-068	<5	<5	0.5	20	<0.2
G-069	<5		0.6	9	<0.2
G-070	<5		<0.5	18	<0.2
G-071	<5		0.5	34	0.2
G-072	<5		<0.5	37	<0.2
G-073	<5		<0.5	18	<0.2
G-074	<5		<0.5	28	<0.2
G-075	<5	<5	<0.5	20	<0.2
G-076	<5		<0.5	11	<0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-077	<5		<0.5	18	<0.2
G-078	<5		<0.5	33	<0.2
G-079	<5		<0.5	30	<0.2
G-080	<5		<0.5	24	<0.2
G-081	<5		<0.5	17	<0.2
G-082	<5		0.7	15	<0.2
G-083	<5		<0.5	14	<0.2
G-084	<5		0.5	32	<0.2
G-085	<5	<5	<0.5	13	<0.2
G-086	<5		0.5	28	<0.2
G-087	<5		<0.5	16	<0.2
G-088	<5		<0.5	23	<0.2
G-089	<5		<0.5	8	<0.2
G-090	<5		<0.5	24	<0.2
G-091	<5		<0.5	31	<0.2
G-092	<5		<0.5	30	<0.2
G-093	<5		<0.5	14	<0.2
G-094	<5		<0.5	17	<0.2
G-095	<5		1.1	17	<0.2
G-096	<5		<0.5	14	<0.2
G-097	<5		<0.5	15	<0.2
G-098	<5		<0.5	22	<0.2
G-099	<5		1.4	32	<0.2
G-100	<5		<0.5	15	<0.2
G-101	<5		<0.5	24	<0.2

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-102	5		<0.5	43	<0.2
G-103	<5		<0.5	25	<0.2
G-104	<5		<0.5	40	<0.2
G-105	<5		<0.5	20	<0.2
G-106	<5		<0.5	17	<0.2
G-107	<5		<0.5	40	<0.2
G-108	6		0.7	22	<0.2
G-109	16		<0.5	31	<0.2
G-110	<5		<0.5	34	<0.2
G-111	<5		<0.5	7	<0.2
G-112	<5		<0.5	8	<0.2
G-113	<5		<0.5	8	<0.2
G-114	<5		<0.5	12	<0.2
G-115	6		<0.5	17	<0.2
G-116	<5		<0.5	93	<0.2
G-117	<5		<0.5	15	<0.2
G-118	<5		<0.5	11	<0.2
G-119	<5		<0.5	<5	<0.2
G-120	<5		<0.5	7	<0.2
G-121	<5		<0.5	6	<0.2
G-122	<5		<0.5	14	<0.2
G-123	<5		<0.5	<5	<0.2
G-124	<5		<0.5	10	<0.2
G-125	<5		0.5	19	<0.2
G-126	<5		<0.5	13	<0.2

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-127	5		<0.5	15	<0.2
G-128	<5		0.6	19	<0.2
G-129	7		<0.5	19	<0.2
G-130	<5		<0.5	15	<0.2
G-131	<5	<5	<0.5	13	<0.2
G-132	<5		<0.5	<5	<0.2
G-133	<5		<0.5	<5	<0.2
G-134	<5		<0.5	29	<0.2
G-135	<5		0.5	<5	<0.2
G-136	<5		0.5	<5	<0.2
G-137	<5		<0.5	<5	<0.2
G-138	<5		<0.5	44	<0.2
G-139	<5		<0.5	20	<0.2
G-140	<5		<0.5	38	<0.2
G-141	<5		<0.5	28	0.2
G-142	9		<0.5	66	<0.2
G-143	7		<0.5	27	<0.2
G-144	<5		<0.5	18	<0.2
G-145	6		<0.5	<5	<0.2
G-146	<5		<0.5	<5	<0.2
G-147	<5		<0.5	<5	<0.2
G-148	<5		<0.5	13	<0.2
G-149	<5		<0.5	8	<0.2
G-150	6	<5	<0.5	<5	<0.2
G-151	14		<0.5	24	<0.2

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CLIENT : HECLA MINING CO.
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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-152	56		<0.5	31	<0.2
G-153	17		<0.5	10	<0.2
G-154	35		<0.5	26	<0.2
G-155	<5		<0.5	19	<0.2
G-156	29		<0.5	<5	<0.2
G-157	<5		<0.5	<5	<0.2
G-158	<5	<5	<0.5	40	<0.2
G-159	<5		<0.5	<5	<0.2
G-160	<5		<0.5	<5	<0.2
G-161	<5		<0.5	<5	<0.2
G-162	<5		<0.5	<5	<0.2
G-163	<5		<0.5	<5	<0.2
G-164	<5		<0.5	6	<0.2
G-165	<5	<5	<0.5	10	<0.2
G-166	<5		<0.5	<5	<0.2
G-167	<5		<0.5	34	<0.2
G-168	<5		<0.5	25	<0.2
G-169	<5		<0.5	26	<0.2
G-170	<5		<0.5	16	<0.2
G-171	<5		<0.5	35	<0.2
G-172	<5		<0.5	<5	<0.2
G-173	<5		<0.5	<5	<0.2
G-174	10		<0.5	13	<0.2
G-175	<5		<0.5	6	0.2
G-176	<5		<0.5	14	<0.2

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American Assay Laboratories

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-177	<5	<5	<0.5	11	<0.2
G-178	<5		<0.5	<5	<0.2
G-179	<5		<0.5	<5	<0.2
G-180	<5		<0.5	5	0.2
G-181	5		<0.5	7	<0.2
G-182	<5		<0.5	8	<0.2
G-183	<5		<0.5	<5	0.3
G-184	<5		<0.5	5	<0.2
G-185	<5		<0.5	22	<0.2
G-186	<5		<0.5	10	<0.2
G-187	<5		<0.5	20	0.2
G-188	<5		<0.5	17	0.2
G-189	<5		<0.5	16	0.2
G-190	<5		<0.5	<5	<0.2
G-191	<5		<0.5	27	0.2
G-192	<5		<0.5	16	<0.2
G-193	<5		<0.5	18	0.2
G-194	<5		<0.5	45	<0.2
G-195	6		<0.5	12	<0.2
G-196	<5		<0.5	15	<0.2
G-197	7		<0.5	33	<0.2
G-198	6		<0.5	18	0.2
G-199	5		<0.5	31	0.2
G-200	15		<0.5	<5	<0.2
G-201	6		<0.5	<5	<0.2

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-202	38		<0.5	57	1.4
G-203	66		0.8	22	3.0
G-204	164		0.7	118	2.6
G-205	22		0.6	30	0.2
G-206	27		<0.5	18	0.7
G-207	96		0.5	140	0.6
G-208	21		0.5	21	1.0
G-209	65		1.0	38	2.1
G-210	34		1.3	76	3.1
G-211	28		0.8	27	0.9
G-212	8		0.7	49	<0.2
G-213	11		0.8	12	<0.2
G-214	7		0.7	9	<0.2
G-215	9		0.5	37	<0.2
G-216	<5		<0.5	40	<0.2
G-217	5		<0.5	49	<0.2
G-218	<5		<0.5	26	<0.2
G-219	<5		<0.5	12	<0.2
G-220	5		0.5	18	<0.2
G-221	<5		<0.5	11	<0.2
G-222	<5		<0.5	15	<0.2
G-223	<5		<0.5	57	<0.2
G-224	7	8	<0.5	10	0.2
G-225	<5		<0.5	36	<0.2
G-226	<5		<0.5	7	0.2

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-227				INSUFFICIENT SAMPLE	
G-228	27		<0.5	63	<0.2
G-229	97	104	1.1	39	1.5
G-230	17		<0.5	217	1.4
G-231	14		<0.5	48	1.9
G-232	29		<0.5	24	2.1
G-233	15		<0.5	56	1.3
G-234	<5		<0.5	38	0.2
G-235	19	25	<0.5	45	<0.2
G-236	17		<0.5	22	<0.2
G-237	25		<0.5	78	<0.2
G-238	18		<0.5	21	<0.2
G-239	12		<0.5	122	<0.2
G-240	20		<0.5	42	<0.2
G-241	14		<0.5	41	0.2
G-242	5		<0.5	47	<0.2
G-243	<5	<5	<0.5	13	0.2
G-244	<5		<0.5	16	<0.2
G-245	<5		<0.5	24	<0.2
G-246	5		<0.5	8	<0.2
G-247	<5		<0.5	14	<0.2
G-248	<5		<0.5	29	<0.2
G-249	<5		<0.5	21	<0.2
G-250	6		0.5	29	<0.2
G-251	<5		<0.5	20	<0.2

AMERICAN ASSAY LABORATORIES

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SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-252	6		<0.5	28	<0.2
G-253	<5		<0.5	85	<0.2
G-254	<5		<0.5	33	<0.2
G-255	6		<0.5	42	<0.2
G-256	10		<0.5	52	<0.2
G-257	5		<0.5	15	0.3
G-258	<5		<0.5	47	<0.2
G-259	6		<0.5	19	0.2
G-260	<5		<0.5	38	<0.2
G-261	<5		<0.5	18	<0.2
G-262	<5		<0.5	5	<0.2
G-263	<5		<0.5	16	<0.2
G-264	<5		<0.5	6	<0.2
G-265	<5		<0.5	10	<0.2
G-266	<5		<0.5	75	<0.2
G-267	<5		<0.5	28	<0.2
G-268	<5	5	<0.5	8	<0.2
G-269	<5		<0.5	119	<0.2
G-270	<5		0.7	13	<0.2
G-271	<5		0.8	19	<0.2
G-272	6		<0.5	28	<0.2
G-273	14		<0.5	30	<0.2
G-274	20		<0.5	128	<0.2
G-275	<5	<5	<0.5	41	<0.2
G-276	<5		<0.5	8	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-277	<5		<0.5	37	<0.2
G-278	11		<0.5	66	<0.2
G-279	10		0.6	29	<0.2
G-280	<5		0.5	95	<0.2
G-281	60	54	0.5	124	<0.2
G-282	<5		<0.5	56	<0.2
G-283	<5	6	0.9	49	<0.2
G-284	10		0.8	18	0.2
G-285	9		0.7	<5	<0.2
G-286	12		<0.5	11	<0.2
G-287	<5		<0.5	26	<0.2
G-288	95		<0.5	105	<0.2
G-289	49		<0.5	45	<0.2
G-290	20		<0.5	275	<0.2
G-291	6	6	<0.5	14	<0.2
G-292	6		<0.5	20	<0.2
G-293	10		<0.5	40	<0.2
G-294	18		<0.5	134	<0.2
G-295	26		<0.5	69	<0.2
G-296	30		<0.5	33	<0.2
G-297			INSUFFICIENT SAMPLE		
G-298	46		<0.5	41	0.3
G-299	19		<0.5	31	1.3
G-300	16		<0.5	9	<0.2
G-301	26		0.7	34	0.3

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-302	186		0.8	250	3.8
G-303	15		<0.5	<5	<0.2
G-304	6		<0.5	38	0.8
G-305	<5		<0.5	<5	<0.2
G-306	<5		<0.5	<5	<0.2
G-307	<5		<0.5	<5	<0.2
G-308	<5		<0.5	5	<0.2
G-309	<5		<0.5	45	<0.2
G-310	<5		<0.5	29	<0.2
G-311	<5		<0.5	113	<0.2
G-312	<5		<0.5	10	<0.2
G-313	<5		<0.5	28	<0.2
G-314	<5		<0.5	18	<0.2
G-315	<5		<0.5	<5	<0.2
G-316	<5		<0.5	<5	<0.2
G-317	<5		<0.5	<5	<0.2
G-318	<5		0.5	10	<0.2
G-319	<5		0.8	<5	<0.2
G-320	<5		<0.5	24	<0.2
G-321	<5		<0.5	23	<0.2
G-322	13		<0.5	52	<0.2
G-323	10		<0.5	35	<0.2
G-324	9	8	<0.5	23	<0.2
G-325	63		0.5	28	<0.2
G-326	<5		<0.5	11	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-327	<5		<0.5	<5	<0.2
G-328	23		<0.5	194	<0.2
G-329	<5		0.8	34	<0.2
G-330	25		625.5	<5	<0.2
G-331	<5		0.5	41	<0.2
G-332	11		27.7	41	<0.2
G-333	16		<0.5	30	<0.2
G-334	57		10.2	45	<0.2
G-335	7		26.5	110	<0.2
G-336	<5	<5	<0.5	12	<0.2
G-337	<5		<0.5	13	<0.2
G-338	<5		<0.5	17	<0.2
G-339	<5		5.4	17	<0.2
G-340	<5		21.9	36	<0.2
G-341	<5		0.5	16	<0.2
G-342	15		2.7	120	<0.2
G-343	29		<0.5	249	<0.2
G-344	<5		<0.5	46	<0.2
G-345	<5	<5	1.8	17	<0.2
G-346	<5		<0.5	6	<0.2
G-347	<5		0.8	107	<0.2
G-348	<5	<5	<0.5	8	<0.2
G-349	<5		1.5	<5	<0.2
G-350	<5		1.3	92	<0.2
G-351	<5		<0.5	41	<0.2

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP035233

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : G-001/357

REPORTED : 11 OCT 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	Hg D210 ppb	Se D210 ppm
G-352	<5		1.6	32	<0.2
G-353	<5		<0.5	40	0.2
G-354	<5	<5	0.7	79	0.3
G-355	<5		<0.5	234	0.4
G-356	<5		0.7	47	<0.2
G-357	<5		<0.5	81	<0.2

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-001	0.3	2.12	4	23	318	2	0.56	0.6	9	25	24	2.53	2	0.63	20	0.81	827	1	0.17	14	0.046	11	2	102	12	0.13	5	48	1	81
G-002	0.1	2.23	8	28	313	2	0.59	0.7	10	29	26	2.65	2	0.67	19	0.84	778	1	0.15	16	0.05	11	2	101	13	0.14	5	52	1	82
G-003	4	3.58	7	54	226	4	1.34	0.2	9	27	31	3.22	2	1	21	1.11	592	1	0.35	18	0.032	11	2	125	14	0.12	5	51	1	96
G-004	0.9	2.53	5	27	341	3	0.66	0.6	10	23	27	2.79	2	0.79	19	0.83	751	1	0.06	17	0.053	11	2	82	11	0.12	5	50	1	85
G-006	0.1	2.24	7	25	332	2	0.62	0.6	10	41	27	2.57	2	0.67	20	0.73	889	2	0.1	16	0.051	11	2	96	14	0.13	5	51	1	81
G-007	0.2	3.29	7	29	352	2	1.87	0.2	9	21	28	3.06	2	0.78	24	1.03	499	2	0.04	16	0.04	7	2	121	14	0.08	5	48	1	94
G-008	0.1	3.06	7	31	338	2	1.5	0.3	9	22	28	3.01	2	0.79	21	1.03	641	1	0.06	18	0.045	6	2	108	12	0.1	5	49	2	97
G-009	0.1	2.92	6	31	327	3	0.64	0.2	10	36	27	2.94	2	0.91	19	1.01	727	2	0.15	18	0.035	12	2	114	16	0.13	5	51	1	89
G-010	0.1	3.65	6	33	455	2	0.87	0.2	11	29	34	3.42	2	0.92	22	1.14	753	1	0.08	20	0.05	7	4	111	14	0.14	5	57	1	105
G-011	0.5	3.08	8	35	411	2	0.79	0.2	11	23	31	3.1	2	0.99	20	1.2	715	1	0.07	19	0.054	7	2	116	14	0.13	5	52	1	97
G-012	0.1	3.39	8	36	347	2	1	0.2	11	36	31	3.16	2	0.97	21	1.2	675	1	0.24	24	0.044	7	2	154	14	0.15	5	56	1	90
G-013	0.3	3.41	6	29	390	2	1.05	0.2	16	44	42	3.94	2	0.81	20	1.29	815	1	0.09	32	0.079	5	2	113	12	0.16	5	73	1	106
G-014	0.8	3.14	6	26	381	2	0.88	0.2	16	50	43	4.07	2	0.77	21	1.09	1057	1	0.08	37	0.075	6	2	103	15	0.15	5	79	1	99
G-015	0.1	3.04	5	31	343	3	0.73	0.8	13	46	40	3.78	2	0.94	21	1.05	1034	1	0.15	32	0.063	6	2	129	14	0.14	5	74	1	94
G-016	0.3	3.58	7	28	365	3	6.88	0.2	10	30	41	3.13	2	0.8	22	1.11	651	1	0.04	29	0.075	5	2	149	15	0.09	5	50	1	85
G-017	0.1	3.68	8	30	323	2	0.77	0.4	11	33	54	3.56	2	0.89	21	1.18	632	1	0.07	25	0.044	4	2	129	13	0.13	5	58	1	140
G-018	0.1	3.25	14	31	370	2	0.76	0.2	9	29	36	3.25	2	0.91	21	1.02	441	1	0.09	17	0.045	8	3	135	12	0.13	5	53	1	94
G-019	3.3	3.41	9	36	227	2	0.58	0.5	10	31	45	3.3	2	0.97	20	1.06	532	1	0.23	20	0.03	6	2	128	12	0.13	5	49	1	109
G-020	0.3	2.62	8	28	272	2	0.53	0.2	7	47	21	2.75	2	0.73	19	0.73	320	2	0.2	13	0.023	4	2	115	12	0.14	5	51	1	66
G-021	0.1	3.33	11	35	371	2	0.73	0.3	8	29	35	3.41	2	1.01	19	1.08	400	1	0.14	20	0.043	5	3	126	8	0.13	5	52	1	89
G-022	0.2	3.1	9	37	264	2	1.18	0.2	9	24	29	2.88	2	1.1	19	1.15	557	2	0.09	17	0.057	2	4	116	7	0.11	5	46	1	90
G-023	0.1	3.11	7	29	348	3	0.64	0.2	10	38	30	2.97	2	0.8	18	0.95	569	1	0.17	18	0.035	6	2	118	11	0.15	5	54	1	86
G-024	0.1	3.53	10	29	377	2	0.73	0.2	10	32	36	3.16	2	0.79	20	0.96	652	1	0.11	20	0.043	11	3	109	14	0.14	5	55	1	102
G-025	0.1	3.26	11	31	412	2	0.71	0.2	10	24	33	3.22	2	0.77	19	1.01	689	1	0.07	19	0.047	2	2	110	10	0.13	5	55	1	108
G-026	0.4	2.85	6	38	318	2	1.59	0.2	9	38	32	2.66	2	1.02	15	1.04	605	1	0.16	20	0.046	8	2	134	6	0.13	5	49	1	91
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-027	0.1	3	6	33	292	2	0.58	0.9	9	32	29	2.96	2	0.91	20	0.92	554	2	0.19	19	0.04	9	2	110	13	0.14	5	52	1	86
G-028	0.1	2.69	8	30	342	2	0.56	0.2	9	21	30	2.82	2	0.77	16	0.9	504	1	0.1	16	0.04	7	2	101	10	0.13	5	49	1	82
G-029	0.1	3.72	8	24	321	3	0.72	0.2	10	28	37	3.41	2	0.66	23	1.01	528	1	0.1	22	0.027	12	2	105	15	0.14	5	56	1	98
G-030	0.1	2.74	5	23	368	2	0.65	0.2	10	33	29	2.77	2	0.72	17	0.77	700	1	0.09	18	0.05	8	2	93	10	0.14	5	54	1	86
G-031	0.2	3.14	9	24	355	2	0.63	0.8	10	35	34	3.04	2	0.7	19	0.84	661	1	0.09	20	0.045	5	2	95	12	0.14	5	53	1	89
G-032	0.1	2.8	7	29	391	2	0.75	0.2	9	19	33	2.88	2	0.63	17	0.95	626	1	0.09	16	0.043	7	2	115	9	0.12	5	50	1	87
G-033	0.7	3.18	8	26	363	2	0.68	0.5	10	28	32	3.16	2	0.74	20	0.9	706	1	0.07	17	0.043	3	3	97	11	0.13	5	53	1	100
G-034	0.1	3.08	5	30	388	2	0.75	0.2	9	28	33	3.09	2	0.72	19	0.95	631	1	0.07	21	0.044	7	2	109	11	0.13	5	53	1	98
G-035	0.1	3.38	7	35	397	2	1.13	0.2	8	26	36	3.35	2	0.74	21	1.08	810	1	0.1	19	0.044	4	2	126	13	0.14	5	55	1	102
STANDARD C	6.2	1.81	40	25	182	19	0.49	18.6	32	60	59	3.81	2	0.15	39	0.88	980	19	0.06	66	0.088	36	16	50	38	0.08	20	66	9	125
G-036	0.4	3.49	6	37	369	2	0.77	0.2	10	33	34	3.31	2	0.87	19	1.02	748	2	0.11	21	0.046	2	2	116	13	0.15	5	48	1	103
G-037	0.5	3.12	7	38	355	2	0.74	0.7	9	22	36	3.07	2	0.88	16	1	588	1	0.1	21	0.042	3	2	102	6	0.13	5	42	1	98
G-038	0.2	3.81	8	32	242	3	0.68	0.2	9	33	33	3.41	2	0.76	24	0.84	812	1	0.22	20	0.034	2	2	99	16	0.14	5	48	1	100
G-039	0.4	2.95	5	30	293	3	0.62	0.2	9	44	31	3.02	2	0.75	20	0.8	718	2	0.21	19	0.033	4	2	103	13	0.15	5	45	1	88
G-040	0.9	2.85	4	31	331	2	0.9	0.2	9	27	30	2.78	2	0.94	19	0.84	841	1	0.08	17	0.051	3	2	90	11	0.12	5	39	1	89
G-041	1	3.07	5	27	311	2	0.99	0.2	8	30	26	2.81	2	0.73	20	0.83	636	1	0.09	17	0.032	3	2	104	11	0.12	5	37	1	84
G-042	0.4	3.08	8	28	252	2	0.76	0.7	8	18	33	2.84	2	0.65	19	0.86	605	1	0.14	17	0.036	8	2	108	12	0.09	5	34	2	94
G-043	0.7	3.59	2	32	337	2	1.01	0.3	9	27	25	2.92	2	0.84	21	0.94	737	1	0.22	16	0.031	9	2	157	13	0.12	5	35	1	91
G-044	0.1	3.61	8	36	204	2	0.9	0.6	8	19	31	3.1	2	0.74	21	0.99	491	1	0.19	17	0.03	6	2	139	8	0.08	5	34	1	98
G-045	0.5	3.75	8	29	356	4	0.88	0.2	10	28	33	3.26	2	0.82	22	0.94	763	1	0.09	21	0.045	2	2	100	11	0.13	5	42	2	100
G-046	2.5	4.15	7	41	270	2	0.76	0.2	8	28	40	3.61	2	0.97	28	1.15	469	1	0.21	22	0.024	4	2	108	18	0.11	5	44	1	124
G-047	1.6	2.52	7	24	225	2	0.54	0.2	9	41	28	2.64	2	0.62	24	0.7	507	2	0.18	16	0.017	8	2	93	15	0.13	5	38	1	80
G-048	2.6	4.05	6	50	192	2	2.06	0.2	8	29	32	3.4	2	1.07	23	1.18	486	1	0.34	22	0.033	7	2	147	14	0.12	5	40	1	110
G-049	1.3	2.95	5	33	229	2	0.61	0.2	9	32	28	3.04	2	0.78	20	0.89	558	1	0.24	18	0.024	7	2	113	15	0.13	5	41	1	92
G-050	0.8	3.11	7	30	282	2	0.61	0.2	10	25	31	3.14	2	0.81	23	0.91	652	2	0.15	19	0.023	8	2	86	15	0.12	5	41	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-051	0.9	3.2	8	40	234	2	0.57	0.2	10	30	29	3.22	2	0.88	21	0.94	792	1	0.27	18	0.022	6	2	112	14	0.14	5	44	1	97
G-052	0.5	3.23	8	34	308	2	1.29	0.2	9	29	29	3.08	2	1.04	21	0.97	703	1	0.1	20	0.046	5	2	104	12	0.13	5	41	1	100
G-053	0.5	3.12	6	38	281	2	0.87	0.2	9	28	29	3.13	2	1.04	20	1	729	1	0.18	19	0.031	219	2	91	12	0.12	5	41	1	98
G-054	0.3	3.52	4	37	308	2	0.92	0.7	9	26	31	3.29	2	1.04	20	1.09	641	1	0.14	20	0.033	3	2	101	11	0.12	5	43	1	103
G-055	0.2	3.07	7	32	303	2	3.18	0.3	9	26	29	2.93	2	0.85	19	0.98	628	1	0.08	22	0.073	6	2	148	9	0.1	5	41	2	86
G-056	0.2	3.15	7	33	332	2	0.79	0.8	11	36	33	3.29	2	0.87	22	0.94	834	1	0.17	24	0.057	4	2	102	13	0.16	5	50	2	95
G-057	0.7	3.14	5	32	330	2	0.71	0.3	10	30	32	3.2	2	0.9	17	0.94	649	1	0.11	22	0.045	6	2	87	12	0.14	5	45	1	92
G-058	0.3	2.94	6	33	280	2	0.65	0.4	10	32	31	3.1	2	0.95	17	0.92	717	1	0.17	23	0.042	6	2	89	12	0.15	5	46	1	88
G-059	0.6	3.14	3	32	294	2	0.65	0.9	10	37	31	3.22	2	0.89	18	0.94	729	1	0.19	24	0.039	8	2	94	12	0.15	5	46	1	93
G-060	0.6	3.04	6	35	290	2	0.65	0.8	9	29	30	3.01	2	0.96	18	0.95	601	1	0.15	18	0.035	8	3	90	13	0.14	5	43	1	88
G-061	0.1	3.1	7	37	315	2	0.66	0.3	10	34	28	3.14	2	1.05	18	0.99	739	1	0.17	20	0.04	10	2	93	11	0.15	5	45	1	95
G-062	0.2	2.72	6	32	257	2	0.57	0.2	9	30	26	2.88	2	0.95	18	0.84	680	2	0.17	17	0.034	4	2	86	11	0.14	5	42	2	84
G-063	0.1	2.96	4	29	246	2	0.68	0.8	8	25	27	2.87	2	0.84	19	0.82	481	1	0.13	17	0.028	4	2	96	9	0.13	5	38	2	79
G-064	0.2	2.94	6	35	292	2	0.71	0.2	8	33	28	2.98	2	0.96	18	0.92	630	1	0.13	18	0.055	5	2	94	10	0.13	5	41	1	84
G-065	0.4	3.11	4	32	286	2	0.64	0.2	10	27	28	2.99	2	0.92	22	0.96	772	2	0.18	20	0.04	9	2	97	12	0.13	5	40	2	88
G-066	0.4	3.11	4	34	292	2	0.65	0.7	10	31	29	3	2	0.88	20	0.86	699	1	0.2	19	0.039	7	2	108	10	0.14	5	43	1	89
G-067	0.1	3.64	9	40	354	2	0.99	0.3	9	30	31	3.12	2	0.93	21	1.11	641	1	0.15	23	0.039	9	2	120	9	0.13	5	42	2	94
G-068	0.3	2.41	7	21	297	2	0.67	0.3	10	22	25	2.63	2	0.53	21	0.67	748	1	0.14	16	0.038	11	2	100	12	0.13	5	38	1	74
G-069	0.5	3.7	6	35	263	2	0.69	1.1	9	31	31	3.41	2	0.88	22	1	554	1	0.17	22	0.031	6	2	102	12	0.13	5	41	1	100
STANDARD C	6.6	2.03	41	27	178	19	0.54	18.8	31	59	63	4.17	2	0.15	41	0.88	1033	22	0.06	73	0.097	35	17	51	41	0.09	15	58	10	137
G-070	0.1	2.6	8	27	250	2	0.58	0.2	10	29	26	2.97	2	0.74	21	0.85	661	2	0.16	14	0.036	10	2	113	14	0.13	5	45	1	85
G-071	0.1	3.31	8	36	350	2	0.72	0.2	10	31	32	3.38	2	0.87	20	1.12	584	2	0.12	20	0.04	11	2	131	10	0.14	5	50	1	95
G-072	0.1	3.33	10	29	343	2	0.76	0.2	10	30	31	3.26	2	0.79	19	1.03	735	2	0.1	18	0.051	5	2	109	14	0.15	5	51	1	99
G-073	0.1	3.49	7	38	404	2	0.73	0.2	13	33	35	3.38	2	0.9	20	1.11	744	2	0.09	20	0.034	11	2	113	15	0.15	5	54	1	100
G-074	0.1	2.93	7	28	341	2	0.67	0.6	10	26	33	3	2	0.81	16	0.89	771	2	0.07	19	0.051	9	2	98	11	0.15	5	49	1	96
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-075	0.1	3.43	6	28	349	2	0.66	0.4	10	28	31	3.15	2	0.78	19	0.88	683	1	0.07	19	0.039	8	2	94	9	0.14	5	49	1	90
G-076	0.1	3.4	8	30	352	2	0.72	0.2	11	30	32	3.36	2	0.83	19	0.96	799	2	0.07	20	0.043	4	2	105	13	0.14	5	51	1	98
G-077	0.1	3.41	7	32	363	2	0.72	0.2	10	29	33	3.39	2	0.84	20	1.01	733	1	0.08	20	0.041	9	2	108	11	0.14	5	52	1	100
G-078	0.1	3.41	10	31	327	2	0.68	0.2	10	27	30	3.35	2	0.77	20	0.99	667	1	0.06	19	0.039	7	2	103	11	0.12	5	47	1	103
G-079	0.1	2.96	6	32	339	2	0.76	0.9	10	29	31	3.07	2	0.75	17	0.97	976	1	0.09	18	0.057	7	2	109	11	0.14	5	50	1	99
G-080	0.1	3.18	8	37	360	2	0.78	0.3	11	31	34	3.2	2	0.88	19	1.1	839	1	0.1	20	0.046	6	2	124	12	0.14	5	52	1	99
G-081	0.1	3.08	5	43	279	2	0.67	0.2	8	28	31	3.05	2	1.01	15	1.09	531	1	0.15	17	0.033	7	2	100	9	0.13	5	44	1	94
G-082	0.3	2.74	7	24	327	2	0.69	0.2	9	26	25	3.03	2	0.71	20	0.87	714	2	0.1	14	0.038	10	2	103	11	0.1	5	42	1	94
G-083	0.3	3.17	7	34	363	2	0.73	0.2	10	28	31	3.26	2	0.83	19	1.09	820	2	0.1	21	0.048	6	2	111	13	0.13	5	49	1	102
G-084	0.1	3.41	6	30	311	2	0.74	0.5	10	29	31	3.2	2	0.86	19	1.06	632	2	0.09	19	0.028	7	2	119	11	0.13	5	45	1	93
G-085	0.1	3.11	8	27	344	2	0.68	0.3	10	31	30	3.1	2	0.79	18	0.99	711	1	0.1	18	0.035	4	2	109	13	0.14	5	48	1	91
G-086	0.2	2.23	8	17	333	2	0.6	0.4	10	31	25	2.57	2	0.5	19	0.67	704	2	0.14	16	0.036	10	2	120	13	0.14	5	45	1	71
G-087	0.1	3.47	9	33	498	2	0.78	0.2	10	38	28	3.07	2	0.92	21	1.06	748	2	0.24	17	0.038	10	3	273	15	0.14	5	45	1	94
G-088	0.1	3.2	8	33	396	2	0.74	0.3	10	27	32	3.12	2	0.83	19	1.09	707	2	0.11	19	0.034	13	2	176	13	0.14	5	47	1	94
G-089	0.1	3.34	7	33	381	2	0.74	0.7	11	31	34	3.28	2	0.87	20	1.09	759	2	0.11	19	0.04	12	2	134	13	0.15	5	51	1	99
G-090	0.3	2.68	3	29	253	2	0.56	0.7	9	30	26	2.87	2	0.74	20	0.92	594	1	0.18	15	0.026	9	2	104	14	0.13	5	43	1	88
G-091	0.1	3.73	10	28	405	2	2.67	0.2	10	27	34	3.2	2	0.68	22	1.06	560	1	0.06	23	0.047	10	2	136	13	0.12	5	47	1	90
G-092	0.1	2.82	6	29	330	2	0.59	0.2	12	31	29	2.99	2	0.7	22	0.93	774	2	0.21	19	0.022	7	2	121	17	0.14	5	48	1	86
G-093	0.1	3.23	4	30	317	2	0.75	0.2	10	25	29	3.23	2	0.78	20	1	712	1	0.09	17	0.038	7	2	104	13	0.11	5	47	1	102
G-094	0.1	3.02	9	33	359	2	0.81	0.2	10	29	30	3.03	2	0.87	19	1.04	775	2	0.08	18	0.042	13	3	107	13	0.13	5	48	1	95
G-095	0.5	3.17	7	41	210	2	0.74	0.2	10	34	29	3.13	2	0.91	20	1.04	642	2	0.3	18	0.028	13	2	137	12	0.12	5	45	1	95
G-096	0.4	2.37	6	24	259	2	0.52	0.7	10	42	25	2.74	2	0.66	18	0.79	764	3	0.17	17	0.025	11	2	100	16	0.14	5	46	1	79
G-097	0.1	4.67	5	49	183	2	0.67	0.2	10	27	31	3.9	2	1.08	20	1.34	480	1	0.49	21	0.017	10	2	150	14	0.1	5	46	1	117
G-098	0.2	2.99	7	29	331	2	0.82	0.2	10	27	28	2.97	2	0.74	18	0.97	732	2	0.09	17	0.04	8	2	114	13	0.11	5	45	1	90
G-099	0.7	3.28	6	38	195	2	0.77	0.2	9	34	30	3.21	2	0.73	22	1.06	537	2	0.22	20	0.033	13	2	152	13	0.11	5	44	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-100	0.2	2.86	6	22	330	2	0.86	0.3	14	43	36	3.55	2	0.66	19	0.98	1033	1	0.12	28	0.082	7	2	117	12	0.14	5	61	1	93
G-101	0.1	2.55	7	27	305	2	0.72	0.2	11	31	30	3.01	2	0.78	19	0.84	858	1	0.08	19	0.065	9	2	96	11	0.14	5	52	1	91
G-102	0.1	2.92	11	27	322	2	0.67	0.2	10	33	31	3.1	2	0.92	18	0.89	779	2	0.08	19	0.055	9	2	96	14	0.14	5	50	1	94
G-103	0.1	2.71	10	26	320	2	0.68	0.3	10	31	29	2.95	2	0.78	18	0.81	786	2	0.08	19	0.064	7	2	100	13	0.14	5	49	1	89
STANDARD C	6.5	1.94	42	25	177	16	0.52	18.4	33	62	59	4.06	2	0.15	40	0.94	1014	22	0.06	69	0.092	37	18	53	39	0.09	16	62	10	131
G-104	0.5	2.7	12	24	335	2	0.72	0.6	10	37	30	2.98	2	0.72	19	0.77	876	3	0.11	19	0.061	11	2	107	15	0.14	5	45	1	90
G-105	0.1	3.11	13	28	332	2	0.73	1.1	11	33	31	3.29	2	0.86	20	0.9	776	2	0.07	20	0.062	10	2	107	13	0.14	5	47	1	100
G-106	0.6	2.2	10	16	247	2	0.53	0.3	11	40	23	2.8	2	0.51	22	0.58	732	3	0.14	15	0.034	13	3	96	15	0.13	5	42	1	79
G-107	0.5	2.57	11	21	345	2	0.7	0.6	12	43	27	2.99	2	0.66	23	0.72	1089	2	0.1	16	0.063	12	2	107	15	0.13	5	44	2	88
G-108	1.4	2.47	10	33	222	2	0.54	0.6	10	52	25	2.78	2	0.72	20	0.78	701	3	0.29	16	0.041	6	4	105	14	0.14	5	43	1	75
G-109	0.3	3.68	16	46	319	2	0.83	0.2	11	33	37	3.4	2	1.2	19	1.25	560	1	0.11	24	0.044	5	2	131	10	0.14	5	47	1	104
G-110	0.4	3.29	10	46	310	2	1.28	0.5	10	37	33	3.1	2	1.18	19	1.18	646	2	0.17	19	0.045	4	2	141	11	0.14	5	45	1	92
G-111	0.1	3.47	10	45	309	2	0.79	0.9	11	46	33	3.16	2	1.23	19	1.22	692	2	0.2	21	0.042	9	2	115	13	0.15	5	47	1	94
G-112	0.1	3.11	9	30	336	3	0.73	0.2	10	35	32	2.97	2	0.89	19	0.89	733	2	0.11	19	0.052	6	2	107	11	0.14	5	43	1	91
G-113	0.1	3.36	9	37	361	2	0.8	0.7	10	32	32	3.15	2	1.03	20	1.11	806	2	0.11	23	0.054	6	2	111	12	0.13	5	43	2	97
G-114	0.3	3.15	10	36	341	2	1.1	1.1	9	37	30	2.93	2	0.86	19	1.06	635	2	0.18	17	0.059	8	2	131	9	0.14	5	45	1	90
G-115	0.2	3.35	10	30	253	2	0.66	0.5	14	69	27	2.95	2	0.92	27	0.88	790	3	0.35	20	0.025	4	2	131	18	0.18	5	49	1	78
G-116	0.4	3.32	7	30	312	2	0.7	0.2	10	36	31	3.12	2	0.89	21	0.94	715	1	0.11	20	0.043	7	2	131	15	0.14	5	42	1	90
G-117	0.3	3.25	8	30	355	2	0.71	0.9	10	31	32	3.06	2	0.9	19	0.9	716	1	0.09	18	0.054	7	2	103	12	0.14	5	44	1	93
G-118	0.1	3.24	10	33	336	2	0.94	0.4	10	33	32	3.06	2	0.87	17	1	567	1	0.09	17	0.044	9	2	119	13	0.13	5	43	1	89
G-119	0.4	3.02	7	27	357	2	0.72	0.5	11	31	33	3.03	2	0.75	19	0.9	763	1	0.1	19	0.049	9	2	110	14	0.14	5	45	1	93
G-120	0.1	2.46	8	17	287	2	0.61	0.2	10	45	27	2.71	2	0.54	21	0.65	777	2	0.13	17	0.038	13	3	106	13	0.15	5	46	1	74
G-121	0.1	3.03	11	29	350	2	0.71	0.6	10	32	27	2.98	2	0.84	18	0.88	757	1	0.1	16	0.048	4	2	101	12	0.13	5	43	1	91
G-122	0.1	3.76	8	33	405	2	0.8	0.2	11	31	33	3.49	2	0.81	21	1.14	666	1	0.08	21	0.037	5	2	122	11	0.14	5	47	1	106
G-123	0.1	3.32	9	36	352	2	0.74	0.7	10	32	32	3.15	2	0.95	18	1.12	658	1	0.12	22	0.034	7	2	112	11	0.14	5	44	1	94
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-124	0.1	3.49	7	32	411	2	0.78	0.6	12	37	33	3.27	2	0.85	20	1.09	829	2	0.14	22	0.039	9	2	123	15	0.15	5	48	1	96
G-125	0.5	3.28	7	31	392	3	0.71	1	11	26	34	3.33	2	0.84	19	1.1	767	1	0.08	24	0.039	7	2	105	14	0.14	5	46	1	100
G-126	0.4	3.3	10	29	378	2	0.78	0.3	11	35	32	3.25	2	0.81	19	0.99	769	1	0.1	21	0.048	11	2	113	15	0.15	5	48	1	97
G-127	0.4	2.35	8	21	328	2	0.57	0.8	11	22	28	2.76	2	0.67	17	0.81	803	1	0.08	15	0.049	7	2	94	11	0.12	5	41	1	84
G-128	0.5	2.83	6	23	334	3	0.75	1.1	10	32	27	2.81	2	0.68	20	0.83	744	2	0.11	14	0.037	10	2	109	12	0.13	5	40	2	85
G-129	0.1	4.52	6	37	312	2	0.85	0.4	9	29	30	3.41	2	1.03	23	1.25	517	2	0.28	20	0.033	9	2	134	13	0.11	5	36	1	107
G-130	0.1	3.6	8	23	311	2	0.78	0.6	9	31	28	3.13	2	0.73	20	0.96	631	2	0.07	20	0.038	9	2	107	12	0.12	5	38	2	92
G-131	0.1	3.11	6	29	373	2	1.97	0.3	8	21	24	2.52	2	0.68	21	0.9	723	1	0.08	14	0.054	4	2	135	12	0.08	5	31	1	82
G-132	0.1	3.53	6	27	341	2	1.76	0.2	9	25	29	2.86	2	0.79	22	1	582	1	0.05	18	0.046	10	2	116	12	0.09	5	33	1	93
G-133	0.1	2.92	5	29	340	2	0.74	0.9	10	41	30	2.84	2	0.87	19	0.87	727	2	0.11	17	0.054	5	2	112	12	0.14	5	44	1	86
G-134	0.2	3.23	6	27	379	2	2.01	0.2	9	23	36	2.92	2	0.68	19	0.98	476	1	0.05	21	0.048	11	2	116	13	0.1	5	39	1	85
G-135	0.1	3.36	5	26	355	2	0.74	0.4	10	41	28	2.97	2	0.7	21	0.85	576	1	0.16	18	0.04	6	2	111	13	0.15	5	45	1	82
G-136	0.1	3.15	5	26	321	2	0.69	0.8	9	25	29	2.98	2	0.84	18	0.89	606	1	0.06	16	0.048	9	2	97	12	0.12	5	39	1	89
G-137	0.2	3.61	6	30	365	2	0.82	0.2	10	30	32	3.31	2	0.81	20	1.04	674	1	0.09	19	0.05	6	2	113	16	0.14	5	46	1	105
STANDARD C	6.7	1.96	41	26	176	18	0.53	19	33	64	61	4.05	2	0.16	40	0.93	1026	21	0.06	67	0.095	38	18	54	41	0.09	18	56	11	133
G-138	0.1	2.44	9	28	239	2	0.63	0.8	7	20	29	2.81	2	0.59	20	0.8	374	1	0.3	15	0.045	14	2	97	12	0.14	5	45	1	89
G-139	0.1	3.91	5	29	354	2	0.77	0.3	9	45	28	3.22	2	0.89	23	0.96	646	1	0.18	18	0.037	2	4	116	15	0.14	5	43	1	90
G-140	0.1	2.9	7	26	368	2	0.68	1.5	9	28	30	3.03	2	0.83	19	0.86	757	2	0.11	20	0.059	9	3	101	14	0.14	5	44	1	92
G-141	0.2	2.8	9	19	316	2	0.66	0.7	10	20	24	3.04	2	0.47	22	0.77	660	1	0.1	17	0.026	12	4	108	16	0.12	5	41	1	83
G-142	0.1	2.06	9	18	242	2	0.51	0.9	8	19	24	2.57	2	0.44	20	0.61	525	2	0.16	15	0.03	12	3	100	14	0.13	5	40	1	69
G-143	0.1	4.59	11	28	356	2	0.89	0.2	8	41	28	3.5	2	0.76	23	1.06	544	2	0.07	19	0.032	6	2	126	14	0.12	5	42	1	101
G-144	0.1	3.13	9	27	317	2	0.68	1.6	9	39	25	2.92	2	0.8	23	0.82	609	3	0.15	20	0.031	8	3	120	13	0.14	5	41	1	79
G-145	0.1	3.04	7	37	345	2	0.65	0.5	8	26	28	2.97	2	1.02	18	1.01	451	1	0.12	16	0.034	11	2	108	11	0.12	5	40	1	84
G-146	0.1	3.06	7	32	348	3	0.65	1	8	28	27	2.9	2	0.88	19	0.97	662	2	0.11	18	0.037	10	2	105	11	0.13	5	41	1	86
G-147	0.1	3.12	7	26	355	3	0.72	1.1	9	34	29	2.97	2	0.77	19	0.85	636	1	0.11	18	0.048	5	3	112	14	0.14	5	44	1	87
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-148	0.1	3.02	10	24	353	2	0.58	0.2	10	25	27	2.99	2	0.79	19	0.76	708	1	0.07	15	0.05	7	3	92	14	0.14	5	44	1	85
G-149	0.1	3.33	7	28	381	2	0.68	1	9	31	29	3.08	2	0.84	19	0.87	703	2	0.1	21	0.05	12	2	108	13	0.15	5	45	1	89
G-150	0.1	2.84	8	24	319	2	0.55	1.4	8	26	27	2.71	2	0.77	18	0.71	577	1	0.07	16	0.049	8	3	84	10	0.13	5	39	1	77
G-151	0.1	3.61	22	32	340	2	0.74	0.2	9	27	29	3.35	2	0.91	20	1.15	532	2	0.08	22	0.033	11	2	116	10	0.13	5	41	1	90
G-152	0.1	3.71	30	42	393	2	0.8	0.5	9	31	34	3.6	2	1.15	19	1.17	467	2	0.12	24	0.03	6	4	130	10	0.14	5	48	1	93
G-153	0.5	3.67	30	41	386	2	1.01	0.8	9	33	30	3.46	2	1.12	19	1.25	558	3	0.16	21	0.038	7	2	143	10	0.14	5	45	1	93
G-154	0.2	3.94	21	39	423	2	0.88	0.2	9	29	34	3.66	2	1.06	20	1.19	536	2	0.09	22	0.043	11	2	144	11	0.13	5	46	1	99
G-155	0.1	3.05	13	28	384	2	0.71	0.9	10	32	30	3.08	2	0.77	20	0.83	760	2	0.11	17	0.054	8	7	116	13	0.14	5	47	1	99
G-156	0.1	3.24	12	33	340	2	0.78	0.4	7	31	27	3.14	2	0.87	18	0.93	311	2	0.17	15	0.029	9	4	138	10	0.13	5	42	1	78
G-157	0.1	3.4	11	40	351	2	0.83	0.9	9	31	31	3.32	2	1.04	21	1.12	753	1	0.12	19	0.049	7	2	115	13	0.14	5	45	1	111
G-158	0.1	4.28	7	32	229	2	0.97	0.2	8	21	34	3.73	2	0.8	22	1.22	467	1	0.23	19	0.033	14	2	144	9	0.06	5	42	1	125
G-159	0.1	3.86	8	28	384	2	0.79	0.9	9	27	32	3.54	2	0.8	21	1.02	757	1	0.09	19	0.045	8	2	114	14	0.12	5	45	1	119
G-160	0.1	3.75	8	41	363	2	0.8	0.3	10	33	36	3.67	2	1.19	20	1.22	627	2	0.11	23	0.036	12	2	111	15	0.16	5	48	1	108
G-161	0.1	3.49	6	43	375	3	1.03	0.5	9	33	35	3.4	2	1.13	21	1.16	632	1	0.2	22	0.041	8	2	124	14	0.15	5	46	1	99
G-162	0.3	3.25	7	33	387	2	0.74	0.5	10	31	32	3.55	2	0.91	19	1.02	711	2	0.09	21	0.045	10	3	106	16	0.16	5	49	1	105
G-163	0.1	3.34	7	40	290	2	0.72	0.6	9	31	30	3.39	2	1.03	17	1.08	653	2	0.21	18	0.033	10	2	100	11	0.16	5	46	1	99
G-164	0.1	2.88	7	28	358	2	0.73	0.4	9	31	29	3.18	2	0.75	19	0.85	809	2	0.09	19	0.058	14	2	106	14	0.15	5	46	1	95
G-165	0.4	3.28	9	32	374	2	0.67	0.4	11	39	32	3.35	2	0.93	21	0.95	761	2	0.17	20	0.037	9	2	111	17	0.16	5	49	1	94
G-166	0.1	3.49	10	32	409	2	0.79	0.2	10	29	35	3.45	2	0.95	21	1.01	677	2	0.08	20	0.052	7	2	109	15	0.15	5	48	1	99
G-167	0.1	2.95	6	40	206	3	0.64	0.3	8	20	28	2.96	2	0.81	18	1.04	573	1	0.25	17	0.037	6	2	119	10	0.12	5	38	1	90
G-168	0.2	3.07	7	25	403	2	0.69	1.3	10	30	32	3.15	2	0.76	20	0.81	831	2	0.09	20	0.054	8	2	105	14	0.15	5	47	1	96
G-169	0.1	3.47	12	30	357	2	0.75	0.2	9	58	30	2.92	2	0.85	21	0.87	741	2	0.28	18	0.043	9	2	128	15	0.16	5	46	1	86
G-170	0.2	2.91	5	22	366	2	0.72	0.7	9	56	24	2.63	2	0.67	21	0.69	620	4	0.32	20	0.024	4	2	196	15	0.16	5	44	1	69
G-171	0.4	4.01	8	32	338	2	1.3	0.5	8	22	32	3.43	2	0.79	19	1.09	541	1	0.05	19	0.037	6	2	101	10	0.11	5	39	1	110
STANDARD C	6.7	1.98	41	27	192	18	0.53	19.5	31	58	63	4.12	2	0.16	41	0.94	1029	21	0.06	70	0.094	38	15	55	43	0.09	18	57	10	136
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-172	0.1	3.27	3	29	320	3	0.72	0.2	10	28	29	3.08	2	0.81	18	0.97	675	2	0.11	16	0.031	11	2	110	13	0.13	5	41	1	94
G-173	0.1	3.42	7	34	363	2	0.75	0.2	11	30	33	3.24	2	0.93	20	1.08	750	2	0.1	20	0.041	8	2	109	13	0.14	5	44	1	100
G-174	0.3	3.82	8	27	304	2	0.88	1.1	10	28	30	3.32	2	0.73	22	1.02	756	2	0.08	18	0.04	16	2	105	17	0.1	5	39	1	108
G-175	0.2	3.07	5	31	338	3	0.73	0.7	11	49	31	3.17	2	0.85	20	0.93	837	3	0.09	20	0.052	11	2	96	14	0.14	5	44	2	95
G-176	0.1	3.4	6	41	210	3	0.89	0.2	12	45	33	3.32	2	1.15	22	1.1	668	1	0.26	22	0.023	8	2	138	17	0.15	5	44	1	92
G-177	0.4	3.68	6	35	329	3	0.76	0.6	10	43	32	3.4	2	0.94	22	1.11	725	2	0.18	20	0.033	10	2	121	15	0.14	5	45	1	103
G-178	0.3	3.4	3	33	375	2	0.84	0.2	11	46	31	3.29	2	0.82	21	1.09	761	3	0.11	21	0.044	7	2	123	15	0.14	5	45	2	101
G-179	0.1	4.02	4	34	396	3	0.81	0.2	12	60	36	3.6	2	0.96	23	1.18	868	2	0.15	23	0.031	11	2	128	16	0.15	5	48	1	108
G-180	0.2	4.07	3	37	375	2	0.78	0.2	11	88	32	3.56	2	0.99	23	1.15	647	5	0.33	23	0.028	11	2	138	17	0.15	5	46	1	101
G-181	0.1	3.41	5	34	267	2	1.32	0.2	9	70	24	2.93	2	0.97	20	1.1	680	4	0.19	15	0.045	10	2	136	15	0.11	5	38	1	94
G-182	0.3	3.2	2	29	358	2	0.74	0.3	10	33	30	3.13	2	0.83	19	0.99	732	1	0.11	20	0.039	8	2	120	12	0.13	5	43	2	95
G-183	0.4	2.62	3	23	336	2	0.67	1	11	48	27	2.86	2	0.71	20	0.79	925	3	0.11	19	0.049	6	2	106	14	0.13	5	42	1	84
G-184	0.3	2.82	3	24	339	2	0.72	0.5	10	62	27	2.98	2	0.73	20	0.81	865	3	0.12	17	0.054	11	2	109	16	0.14	5	45	2	90
G-185	0.6	3.15	2	21	389	2	0.78	0.7	12	89	29	3.19	2	0.63	23	0.74	911	4	0.19	20	0.047	8	2	129	15	0.17	5	52	1	88
G-186	0.2	5.15	2	28	358	2	0.92	0.4	13	197	32	4.17	2	0.74	26	1.02	766	12	0.17	35	0.041	10	2	127	15	0.16	5	59	1	99
G-187	0.1	5.42	7	38	242	2	0.88	0.7	11	128	30	4.03	2	0.92	25	1.18	661	6	0.28	19	0.034	8	2	133	13	0.14	5	47	1	106
G-188	0.2	3.06	6	31	329	2	0.69	0.3	12	60	28	3.32	2	0.89	21	0.96	887	2	0.14	20	0.046	8	3	117	18	0.16	5	46	2	94
G-189	0.4	3.24	7	28	298	2	0.63	0.6	11	40	28	3.31	2	0.92	20	0.97	680	2	0.15	21	0.033	8	2	103	15	0.15	5	45	2	89
G-190	0.2	2.54	8	23	324	2	0.68	0.2	11	49	26	3.11	2	0.7	20	0.83	988	3	0.1	18	0.061	11	2	109	14	0.15	5	45	2	91
G-191	0.2	2.69	3	24	268	2	0.64	1.3	12	46	27	3.17	2	0.75	21	0.77	749	3	0.16	19	0.032	13	3	114	14	0.18	5	48	1	85
G-192	0.2	3.86	2	40	305	2	0.77	1.9	11	45	35	3.8	2	1.3	23	1.24	736	2	0.19	20	0.035	8	3	99	16	0.15	5	47	1	110
G-193	0.1	3.71	6	39	219	4	0.62	0.2	10	41	32	3.66	2	1.04	20	1.16	606	2	0.26	21	0.028	13	3	111	14	0.15	5	45	2	106
G-194	0.3	3.1	7	32	201	2	0.57	0.9	10	20	31	3.33	2	0.93	19	1.01	517	1	0.18	20	0.025	11	5	109	12	0.12	5	41	1	89
G-195	0.1	4.24	5	47	172	2	0.54	0.4	11	29	31	3.87	2	1.03	22	1.18	670	1	0.42	26	0.029	9	2	111	17	0.14	5	43	1	104
G-196	0.4	3.27	7	41	261	2	1.24	0.3	9	35	29	3.24	2	1.04	20	1.04	636	2	0.22	22	0.064	9	2	111	12	0.13	5	41	2	99
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
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ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-197	0.1	3.6	5	53	161	2	0.87	0.2	9	37	26	3.26	2	1.19	20	1.16	501	2	0.19	19	0.032	8	2	118	13	0.11	5	36	1	96
G-198	0.1	3.02	4	26	321	2	0.86	0.5	10	28	29	3.12	2	0.79	19	0.94	730	1	0.06	19	0.051	10	2	106	10	0.12	5	40	2	95
G-199	0.3	2.93	8	32	300	2	0.72	0.2	10	37	29	3.21	2	0.9	19	0.91	741	2	0.07	18	0.058	10	2	102	11	0.13	5	46	2	95
G-200	0.4	3.74	6	37	368	2	0.85	0.2	10	34	33	3.44	2	1.03	20	1.1	557	1	0.08	20	0.053	6	2	126	12	0.13	5	44	1	94
G-201	0.4	3.27	6	37	334	2	0.75	0.2	10	34	32	3.28	2	0.99	19	1.13	540	1	0.14	21	0.038	7	2	126	8	0.14	5	45	1	89
G-202	0.1	3.73	23	36	349	2	0.84	0.7	10	34	35	3.98	2	1.03	20	1.15	460	2	0.12	21	0.032	14	6	152	12	0.14	5	47	2	92
G-203	0.8	3.78	22	43	281	2	0.84	0.2	9	33	32	3.93	2	1.35	21	1.28	442	2	0.19	22	0.028	9	6	124	14	0.12	5	44	1	92
G-204	0.4	4.63	57	35	298	2	0.88	0.2	9	47	37	4.72	2	1.15	21	1.24	423	11	0.09	23	0.032	7	5	147	13	0.14	5	53	1	101
G-205	0.3	4.66	11	25	339	2	0.76	0.6	10	85	34	3.77	2	0.75	26	0.89	591	5	0.1	25	0.035	12	2	117	12	0.16	5	55	1	88
STANDARD C	6.3	1.94	39	25	181	20	0.53	18.3	33	58	61	4.05	2	0.16	41	0.94	1020	21	0.06	72	0.093	36	18	54	43	0.09	19	56	12	132
G-206	0.1	3.38	10	30	410	2	0.71	0.4	10	35	33	3.31	2	0.97	21	0.95	661	2	0.09	21	0.048	13	2	111	11	0.14	5	53	2	91
G-207	0.1	4.06	14	38	420	2	0.94	0.6	9	46	35	3.61	2	0.89	23	1.16	539	3	0.14	19	0.043	16	2	156	12	0.14	5	58	1	96
G-208	0.5	3.78	18	37	440	2	0.81	0.7	9	41	30	3.54	2	0.94	20	1.15	535	2	0.2	22	0.038	9	2	144	13	0.14	5	54	1	92
G-209	0.7	3.82	24	38	431	2	1.01	0.4	9	36	32	3.8	2	0.99	21	1.17	500	2	0.14	22	0.038	16	2	157	11	0.14	5	56	1	93
G-210	0.1	3.39	11	33	410	2	0.81	0.8	9	36	29	3.17	2	0.89	20	1	518	1	0.12	20	0.041	11	2	133	11	0.13	5	49	1	86
G-211	0.3	3.49	11	33	415	4	0.84	0.7	8	37	29	3.05	2	0.87	21	0.99	473	1	0.13	18	0.044	13	2	149	11	0.12	5	48	1	80
G-212	0.1	3.58	10	33	398	2	0.83	0.9	9	31	31	3.28	2	0.83	23	1.04	620	2	0.1	18	0.04	16	2	127	13	0.13	5	49	1	93
G-213	0.1	4.61	8	37	363	2	0.9	0.9	9	27	37	4.21	2	1	24	1.39	632	1	0.06	23	0.033	15	2	126	18	0.13	5	53	1	121
G-214	0.1	3.85	10	33	386	2	0.84	1.2	9	35	33	3.67	2	0.93	21	1.13	811	2	0.1	21	0.048	11	2	118	14	0.14	5	53	2	106
G-215	0.1	3.36	10	31	418	2	0.83	0.9	9	27	30	3.54	2	0.79	23	1.02	1175	1	0.09	18	0.048	9	2	116	17	0.12	5	51	1	102
G-216	0.1	7.04	10	62	304	2	0.86	0.4	11	74	41	4.61	2	1.51	27	1.68	702	4	0.49	34	0.021	15	2	148	20	0.17	5	72	2	134
G-217	0.1	3.96	11	43	230	2	0.76	0.3	9	26	38	3.63	2	0.98	24	1.25	540	1	0.23	21	0.031	15	2	129	14	0.09	5	46	1	112
G-218	0.4	3.33	9	34	424	2	0.8	0.7	9	31	32	3.19	2	0.85	20	1.06	632	2	0.13	21	0.05	13	2	131	13	0.14	5	52	1	95
G-219	0.2	4.29	9	35	456	2	0.8	0.2	11	43	35	3.63	2	1.1	23	1.06	840	2	0.11	24	0.053	16	2	114	19	0.15	5	57	1	108
G-220	0.1	4.12	3	28	369	2	0.89	0.8	9	35	35	3.41	2	0.83	23	1.05	552	1	0.07	23	0.035	8	2	106	12	0.13	5	50	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-221	0.1	4.06	9	38	343	2	1.07	0.2	9	35	33	3.4	2	0.84	24	1.15	486	2	0.14	24	0.031	12	2	137	12	0.13	5	48	1	92
G-222	0.1	4.23	6	33	381	2	0.85	0.5	11	59	33	3.54	2	1.02	25	1.08	673	3	0.29	26	0.033	15	2	153	15	0.18	5	60	1	95
G-223	0.1	3.77	6	48	280	2	0.77	1	7	25	35	3.39	2	0.79	20	1.16	381	1	0.34	21	0.038	11	2	134	12	0.11	5	47	1	97
G-224	0.1	3.85	3	28	381	2	0.9	0.6	9	33	37	3.35	2	0.9	22	1.01	576	1	0.07	25	0.045	14	2	98	15	0.13	5	48	1	93
G-225	0.1	5.77	5	68	212	3	0.66	0.2	9	46	35	4.13	2	1.03	26	1.33	490	2	0.77	29	0.026	3	2	145	17	0.16	5	64	1	109
G-226	0.1	3.37	7	27	364	2	0.7	1.1	9	30	31	3.06	2	0.81	20	0.9	580	2	0.09	20	0.044	9	2	99	13	0.14	5	47	1	84
G-227	0.1	7.35	6	54	339	2	0.92	0.2	10	122	44	4.4	3	1.53	27	1.58	552	5	0.5	30	0.026	15	2	166	19	0.17	5	70	1	136
G-228	0.6	3.29	12	40	321	2	0.9	0.9	8	35	29	3.33	2	1.28	18	1.07	609	2	0.11	21	0.043	8	2	124	12	0.12	5	48	2	87
G-229	1.2	4.54	19	38	392	2	0.94	0.5	8	27	34	4.13	2	1.26	25	1.32	367	1	0.07	23	0.047	12	2	197	12	0.1	5	58	1	114
G-230	0.7	3.71	19	32	365	2	0.7	0.2	9	34	31	3.64	2	1.15	21	1	578	1	0.09	22	0.041	8	2	113	15	0.13	5	52	1	89
G-231	0.1	3.16	27	32	371	2	0.64	0.2	8	36	29	3.4	2	1.08	17	0.97	452	1	0.11	18	0.032	11	3	111	15	0.12	5	48	2	82
G-232	0.1	3.55	12	30	394	2	0.75	0.6	9	30	31	3.52	2	0.9	20	1.04	559	1	0.07	21	0.038	13	2	119	12	0.12	5	51	1	88
G-233	0.8	3.6	11	37	421	2	0.8	0.2	9	39	31	3.4	2	1	21	1.05	616	1	0.13	22	0.042	8	2	132	13	0.14	5	57	1	92
G-234	0.1	5.94	11	62	364	2	0.81	0.2	10	82	40	4.13	2	1.57	24	1.42	617	5	0.42	34	0.034	16	2	147	16	0.18	5	69	1	110
G-235	0.6	3.25	10	38	374	2	1.09	0.7	8	37	32	3.09	2	0.89	19	1.06	512	2	0.16	20	0.046	10	2	152	8	0.14	5	52	2	88
G-236	0.2	3.58	10	43	417	2	0.84	0.8	10	32	37	3.39	2	1.21	20	1.2	566	1	0.1	24	0.047	9	2	138	13	0.14	5	53	1	96
G-237	0.1	3.57	12	40	377	2	0.93	0.2	9	33	33	3.3	2	1.11	21	1.14	492	1	0.09	22	0.042	8	2	136	12	0.13	5	51	1	92
G-238	0.1	5.58	8	48	325	2	0.72	0.2	9	53	38	3.93	2	1.45	23	1.31	477	2	0.34	27	0.028	5	2	129	14	0.15	5	57	1	111
G-239	0.6	2.25	13	20	290	2	5.98	0.6	4	22	22	1.96	2	0.38	19	0.6	478	1	0.09	14	0.046	2	2	287	15	0.09	5	43	2	58
STANDARD C	6.4	1.92	39	26	191	20	0.51	19.3	30	63	60	4.05	2	0.16	40	0.94	1023	21	0.06	70	0.093	35	17	53	42	0.09	17	62	11	130
G-240	0.7	3.25	6	26	281	2	0.78	0.2	10	26	31	3.3	2	0.89	22	0.92	539	2	0.06	21	0.053	7	2	130	11	0.12	5	49	1	93
G-241	1.4	2.53	4	18	184	2	4.73	0.2	6	26	25	2.55	2	0.47	20	0.65	324	1	0.05	16	0.043	2	2	227	9	0.09	5	40	1	68
G-242	0.8	3.75	4	31	344	2	1.1	0.2	10	34	35	3.47	2	0.91	22	1.13	622	1	0.09	26	0.044	6	2	145	11	0.13	5	46	2	101
G-243	1.4	3.41	5	34	370	2	1.32	0.2	11	32	36	3.27	2	0.98	20	1.01	708	1	0.08	23	0.06	5	2	116	10	0.14	5	47	1	99
G-244	0.2	6.35	2	59	219	2	0.88	0.2	10	126	44	4.41	2	1.45	22	1.48	532	8	0.37	39	0.028	12	2	154	18	0.16	5	59	1	126
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-245	0.2	2.64	6	26	270	2	0.55	0.2	11	20	33	3.12	2	0.7	26	0.81	580	1	0.14	22	0.024	10	3	106	14	0.14	5	44	1	85
G-246	0.4	3.5	5	31	241	2	0.73	0.4	11	37	31	3.43	2	1.03	21	1.07	638	2	0.19	26	0.028	8	2	117	14	0.14	5	44	1	93
G-247	0.9	4	2	31	238	2	0.72	0.2	11	323	32	3.52	2	0.99	23	0.93	543	16	0.25	23	0.026	9	3	137	14	0.16	5	52	1	87
G-248	0.4	2.58	7	32	187	2	0.57	0.2	10	20	30	2.96	2	0.76	18	0.85	474	1	0.18	18	0.027	7	3	118	7	0.12	5	40	1	83
G-249	0.1	6.59	2	46	257	2	0.8	0.2	11	142	34	4.1	2	1.31	25	1.31	512	7	0.3	27	0.025	15	2	147	12	0.16	5	57	2	108
G-250	0.6	3.73	6	26	322	2	0.71	0.2	11	80	34	3.52	2	0.92	23	0.93	714	6	0.15	31	0.037	8	2	125	15	0.16	5	50	1	92
G-251	0.2	3.1	10	33	198	2	0.64	0.2	11	21	39	3.37	2	0.84	19	0.98	664	1	0.21	20	0.033	11	4	107	14	0.11	5	43	1	99
G-252	0.7	4.18	3	35	295	2	0.8	0.2	11	110	36	3.59	2	1.05	23	1	693	9	0.32	35	0.034	8	2	149	11	0.18	5	55	2	94
G-253	0.2	4.51	9	34	314	2	0.77	0.2	15	227	34	3.62	2	0.95	32	0.97	816	12	0.3	28	0.03	13	2	140	19	0.18	5	62	1	92
G-254	0.3	3.48	3	30	269	2	0.66	0.2	11	74	31	3.48	2	0.96	23	0.92	678	5	0.2	28	0.021	12	2	125	16	0.17	5	53	1	97
G-255	0.1	2.66	3	33	212	2	0.55	0.2	9	21	30	3.04	2	0.77	19	0.89	478	1	0.29	17	0.033	12	3	124	12	0.14	5	45	1	84
G-256	1.1	4.08	4	35	361	2	0.85	0.2	11	29	35	3.71	2	0.97	22	1.17	641	1	0.07	24	0.047	11	2	131	12	0.13	5	49	1	107
G-257	0.2	3.58	6	23	339	2	0.77	0.2	11	71	31	3.44	2	0.68	23	0.85	683	3	0.08	19	0.042	13	2	107	12	0.12	5	52	1	102
G-258	0.2	2.67	5	28	214	2	0.71	0.4	10	24	38	3.04	2	0.53	22	0.75	538	1	0.15	20	0.038	17	2	106	11	0.1	5	46	1	98
G-259	1.1	1.79	4	18	204	2	0.52	0.3	11	20	25	2.46	2	0.36	20	0.5	556	1	0.12	16	0.027	10	2	102	13	0.12	5	43	1	62
G-260	0.6	3.87	5	27	419	2	0.8	0.2	11	47	33	3.39	2	0.86	22	0.94	702	2	0.1	23	0.047	16	2	126	12	0.14	5	50	1	97
G-261	0.7	2.67	7	25	333	2	0.72	0.4	10	42	26	2.83	2	0.8	19	0.75	859	2	0.11	20	0.056	15	2	109	13	0.14	5	46	1	86
G-262	0.5	2.91	5	28	304	2	0.67	0.2	10	27	29	3	2	0.97	19	0.93	768	1	0.09	19	0.043	13	2	98	12	0.13	5	43	1	90
G-263	0.5	3.94	2	34	373	2	0.82	0.2	10	49	32	3.42	2	0.98	22	1.09	710	1	0.21	22	0.04	13	2	130	16	0.16	5	52	1	103
G-264	0.2	3.78	4	29	313	2	0.84	0.3	10	45	28	3.17	2	0.88	23	0.98	724	2	0.27	19	0.027	9	2	144	16	0.16	5	49	2	92
G-265	0.4	3.82	3	37	260	2	0.79	0.2	10	36	27	3.2	2	1	22	1.02	496	2	0.39	16	0.022	11	2	135	15	0.14	5	47	1	97
G-266	0.4	3.69	4	27	315	2	1.5	0.2	9	28	34	3.22	2	0.81	21	0.99	587	1	0.07	22	0.05	7	2	102	12	0.12	5	44	1	89
G-267	0.1	5	2	58	228	2	0.76	0.2	11	62	41	3.95	3	1.43	21	1.46	561	3	0.38	28	0.025	9	2	140	14	0.16	5	52	1	110
G-268	0.1	5.07	3	53	243	2	0.84	0.2	11	45	42	3.99	2	1.45	22	1.59	593	2	0.32	30	0.028	8	2	151	15	0.16	5	51	1	115
G-269	0.4	3.41	2	46	421	2	1.17	0.5	10	30	35	3.25	2	1.16	20	1.13	527	1	0.19	20	0.048	10	2	129	12	0.14	5	49	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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CLIENT: HECLA MINING CO.
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METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-270	0.1	3.19	7	33	342	2	0.7	0.4	10	28	30	3.07	2	0.88	23	1.02	639	1	0.13	20	0.044	15	4	115	15	0.13	5	45	1	89
G-271	0.1	3.26	2	33	380	2	0.76	0.2	10	26	32	3.14	2	0.98	19	1.02	596	1	0.12	19	0.047	10	2	109	12	0.13	5	44	1	91
G-272	0.1	4.67	2	29	357	2	1.06	0.2	18	62	48	5.15	2	0.75	27	1.08	754	1	0.15	41	0.073	9	2	131	15	0.14	5	77	1	114
G-273	0.1	3.55	9	33	403	2	0.76	0.4	11	31	32	3.33	2	0.92	21	0.94	669	2	0.08	20	0.044	10	2	120	13	0.14	5	49	1	96
STANDARD C	7	1.95	38	25	176	18	0.5	18.6	33	58	60	4.02	2	0.16	42	0.93	998	21	0.06	72	0.094	37	14	55	40	0.09	14	59	10	132
G-274	0.4	3.52	10	32	418	2	0.78	0.9	11	32	29	3.31	2	0.86	22	1.07	670	2	0.07	22	0.043	8	2	146	14	0.12	5	48	1	100
G-275	0.1	3.34	8	32	384	2	0.79	1.4	9	32	26	3.12	2	0.91	22	1.04	602	1	0.11	18	0.033	12	2	137	13	0.12	5	44	1	93
G-276	0.1	3.04	11	51	327	2	0.62	1.9	9	27	24	3.18	2	0.84	24	0.97	603	1	0.46	15	0.029	10	2	139	15	0.12	5	43	1	96
G-277	0.1	3.73	3	44	311	2	0.81	1	10	27	33	3.6	2	1.23	23	1.27	604	1	0.06	22	0.034	8	2	121	12	0.12	5	48	1	117
G-278	0.1	4.33	14	56	292	2	0.89	1.2	10	32	34	3.98	2	1.42	20	1.46	387	9	0.09	25	0.03	6	2	117	13	0.13	5	54	1	104
G-279	0.1	4.01	13	43	371	2	0.79	1.7	11	31	33	3.86	2	1.23	23	1.27	614	2	0.11	21	0.04	8	2	152	12	0.12	5	51	1	104
G-280	0.1	4.02	9	84	233	2	0.83	1	8	28	29	3.65	2	1.1	17	1.24	335	2	0.69	19	0.032	8	2	146	11	0.12	5	47	1	90
G-281	0.1	3.92	21	40	329	2	0.74	0.9	9	25	29	3.77	2	1.14	21	1.19	410	1	0.1	21	0.035	3	2	123	13	0.11	5	43	1	87
G-282	0.3	3.56	8	39	292	2	0.73	1.7	9	27	30	3.54	2	1.04	22	1.15	597	1	0.07	20	0.033	9	3	115	14	0.12	5	45	1	112
G-283	0.3	3.69	10	41	306	2	0.76	1.1	9	32	28	3.4	2	1.08	20	1.12	514	1	0.13	19	0.033	6	2	119	11	0.13	5	47	1	87
G-284	0.1	4.15	11	33	289	2	0.74	1.2	9	28	30	3.87	2	0.97	21	1.21	481	1	0.05	23	0.022	10	2	122	13	0.12	5	47	1	105
G-285	0.1	3.5	4	33	278	2	1.16	0.2	8	27	29	3.24	2	0.96	21	1.09	523	1	0.14	19	0.028	3	2	111	13	0.13	5	46	1	97
G-286	0.1	4.12	9	44	409	2	1.04	0.3	12	32	42	3.83	2	1.16	27	1.37	708	2	0.08	23	0.039	8	2	149	14	0.13	5	54	1	132
G-287	0.5	2.81	9	9	707	2	1.84	1	10	56	31	3.4	2	0.29	16	0.7	459	4	0.43	21	0.085	2	2	260	5	0.23	5	96	1	71
G-288	0.1	4.9	20	37	427	2	1	1	11	33	37	4.22	2	1.08	25	1.35	514	3	0.06	26	0.047	7	2	158	15	0.14	5	55	1	109
G-289	0.1	4.91	8	47	452	2	0.94	0.2	12	40	37	4.1	2	1.2	24	1.41	636	1	0.09	25	0.048	15	2	139	13	0.15	5	57	1	118
G-290	0.1	3.44	7	31	385	2	0.73	1.4	10	38	31	3.35	2	0.95	20	0.91	682	2	0.08	22	0.049	12	2	112	12	0.14	5	51	1	92
G-291	0.1	3.64	6	28	414	2	0.82	1.1	10	42	32	3.44	2	0.8	21	1.01	697	1	0.06	25	0.045	6	2	111	14	0.13	5	48	1	96
G-292	0.1	3.02	8	80	271	2	1.17	0.7	9	35	27	2.94	2	0.99	18	1.02	520	2	0.42	19	0.029	10	2	124	13	0.13	5	43	1	80
G-293	0.2	3.89	12	43	347	2	2.27	0.9	10	29	38	3.45	2	1.1	22	1.32	489	1	0.16	26	0.044	4	2	142	12	0.12	5	45	2	101
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-294	0.4	2.55	15	28	238	2	14.18	0.2	5	14	15	1.75	2	0.34	13	0.99	209	2	0.09	19	0.036	3	2	501	21	0.07	14	27	2	49
G-295	0.1	4.51	5	33	394	2	1.53	0.8	7	34	33	3.64	2	0.83	23	1.21	388	1	0.07	25	0.04	8	2	138	13	0.13	5	44	1	102
G-296	0.9	3.53	11	31	373	2	0.77	1.3	11	37	34	3.41	2	1.02	21	1	672	1	0.07	24	0.046	12	2	122	14	0.13	5	51	1	101
G-297	0.1	4.01	11	55	291	2	0.79	1.4	9	145	40	3.58	2	1.01	19	1.11	529	6	0.45	22	0.034	20	2	127	10	0.13	5	50	1	100
G-298	0.1	4.19	17	41	423	2	0.86	0.4	11	29	35	4.02	2	1.06	21	1.25	555	2	0.08	23	0.038	11	2	142	13	0.14	5	56	1	108
G-299	0.2	3.21	9	45	385	2	0.99	0.7	10	34	33	3.18	2	1.06	16	1.19	529	2	0.12	21	0.04	8	2	141	10	0.14	5	51	1	89
G-300	0.3	3.24	10	44	385	2	0.99	0.5	10	32	33	3.18	2	1.08	16	1.19	531	1	0.12	21	0.039	5	2	142	11	0.14	5	51	1	89
G-301	0.1	3.1	7	35	282	2	1.36	0.7	9	38	28	3.02	2	0.88	18	1.05	543	1	0.18	21	0.035	7	2	164	11	0.14	5	48	2	81
G-302	1.3	3.34	28	38	381	2	1.3	0.5	9	32	33	3.52	2	0.93	18	1.08	510	2	0.1	21	0.043	10	2	157	9	0.13	5	51	1	86
G-303	0.4	3.53	7	25	300	2	0.69	1	10	33	30	3.17	2	0.76	23	0.81	633	1	0.06	21	0.039	5	2	103	11	0.13	5	49	1	88
G-304	0.1	3.79	7	32	359	2	1.7	1.1	9	28	35	3.23	2	0.81	22	0.98	598	1	0.05	23	0.046	5	2	99	12	0.12	5	47	2	93
G-305	0.1	3.23	5	32	357	2	1	0.5	10	30	30	2.96	2	0.72	20	1.01	609	1	0.1	18	0.044	5	2	128	12	0.13	5	45	1	84
G-306	0.1	3.45	6	43	416	2	0.7	0.3	10	36	32	3.19	2	0.97	20	1.06	763	2	0.26	20	0.05	7	4	127	14	0.14	5	49	1	94
G-307	0.1	2.83	8	37	272	2	0.51	0.2	10	32	26	2.85	2	0.8	18	0.87	671	1	0.3	19	0.035	8	2	110	13	0.14	5	46	1	80
STANDARD C	6.5	1.85	38	24	181	18	0.49	18	32	62	55	3.89	2	0.15	38	0.89	1013	20	0.06	69	0.089	36	18	50	39	0.08	14	59	10	126
G-308	0.5	3.74	2	34	381	2	1.27	0.8	9	30	34	3.22	2	0.9	20	1.16	569	1	0.08	23	0.045	4	2	126	8	0.13	5	46	1	93
G-309	0.5	2.95	9	33	329	2	1.39	0.5	8	32	30	2.84	2	0.82	18	0.96	696	1	0.11	18	0.053	9	2	114	9	0.13	5	47	1	85
G-310	0.1	3.6	6	31	333	2	1.47	1.4	9	31	36	3.24	2	0.86	20	1.06	581	2	0.09	23	0.042	9	2	127	6	0.14	5	48	1	92
G-311	0.1	4.41	2	68	235	2	1.48	0.7	9	44	33	3.6	2	1.07	21	1.29	577	2	0.2	27	0.035	9	2	153	14	0.15	5	51	1	103
G-312	0.3	3.14	7	33	320	2	2.92	0.2	8	26	32	2.85	2	0.83	18	1.05	585	1	0.07	23	0.05	7	2	162	5	0.12	5	44	1	85
G-313	0.1	3.75	5	95	193	2	0.64	0.2	8	56	31	3.32	2	0.92	21	1.1	586	2	0.46	21	0.037	12	2	115	11	0.14	5	52	2	96
G-314	0.1	3.41	5	73	248	2	0.65	0.6	9	43	29	3.21	2	0.88	20	1.03	500	2	0.44	20	0.029	13	2	155	12	0.15	5	51	1	86
G-315	0.1	3.81	2	39	300	2	0.72	0.2	9	40	32	3.46	2	1.09	20	1.2	525	2	0.26	22	0.032	11	2	147	11	0.14	5	50	1	98
G-316	0.1	3.28	5	34	334	2	0.81	0.2	8	34	32	3.08	2	0.85	18	1.1	558	2	0.12	20	0.05	10	2	125	7	0.13	5	48	1	89
G-317	0.1	4.43	6	45	264	2	0.78	0.7	9	49	33	3.64	2	1.06	20	1.15	596	3	0.33	24	0.042	12	2	177	11	0.15	5	54	1	104
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-318	0.1	3.36	5	30	358	2	0.87	1.2	9	28	32	3.15	2	0.77	20	0.99	646	1	0.06	20	0.052	13	2	108	12	0.12	5	47	2	91
G-319	0.1	2.77	9	18	293	2	0.61	0.6	10	48	27	2.91	2	0.52	24	0.7	706	3	0.21	19	0.031	12	2	103	15	0.15	5	52	2	75
G-320	0.2	2.69	9	22	328	2	0.66	1.5	10	37	27	2.97	2	0.67	22	0.72	1053	2	0.09	16	0.055	15	2	97	14	0.13	5	50	2	89
G-321	0.1	2.9	9	27	319	2	0.69	0.5	9	37	30	3.11	2	0.81	19	0.88	877	2	0.08	15	0.055	12	2	106	13	0.12	5	47	1	104
G-322	0.5	3.3	8	27	380	2	0.83	0.6	9	27	28	3.55	2	0.8	21	0.97	3739	1	0.06	17	0.063	10	2	110	17	0.1	5	52	1	119
G-323	0.1	4.12	6	38	241	2	0.77	0.2	9	50	28	3.7	2	1.04	24	1.12	623	3	0.2	22	0.041	9	2	134	12	0.14	5	50	2	104
G-324	0.1	3.47	8	38	252	2	0.78	1.2	9	40	27	3.5	2	1.05	22	1.07	569	1	0.24	21	0.034	7	2	131	16	0.13	5	48	2	94
G-325	0.2	3.7	9	56	194	2	0.58	0.8	10	26	35	3.9	2	1.16	20	1.35	686	1	0.34	24	0.033	17	2	142	14	0.12	5	48	1	122
G-326	0.1	4.39	8	43	378	2	0.87	0.5	10	34	37	4	2	1.07	23	1.39	761	2	0.08	23	0.037	14	2	128	14	0.14	5	54	1	132
G-327	0.1	2.82	8	27	328	2	0.63	0.2	9	28	29	3.35	2	0.73	21	0.94	777	1	0.09	17	0.036	11	2	108	12	0.13	5	48	1	103
G-328	0.1	3.32	12	31	315	2	0.75	0.8	9	24	32	3.57	2	0.78	21	1.09	639	2	0.06	19	0.039	11	3	125	12	0.11	5	46	1	102
G-329	0.5	3.79	5	39	344	2	0.83	0.6	9	27	36	3.85	2	0.96	23	1.28	607	1	0.07	21	0.034	11	2	122	11	0.12	5	50	1	118
G-330	133.5	3.27	11	41	179	2	0.5	0.5	8	39	27	3.58	2	0.99	20	1.07	544	1	0.22	17	0.027	12	2	91	12	0.11	5	43	1	100
G-331	0.5	2.99	7	25	325	2	0.69	0.5	9	28	30	3.29	2	0.76	19	0.96	746	2	0.06	18	0.046	14	2	104	10	0.12	5	46	1	102
G-332	25.1	3.98	5	34	265	2	0.72	0.9	10	32	35	3.86	2	1.05	22	1.25	881	1	0.08	23	0.034	12	2	101	15	0.12	5	47	1	130
G-333	0.1	3.37	4	37	360	2	0.75	0.2	9	28	32	3.48	2	0.96	21	1.13	637	1	0.07	19	0.047	14	2	107	13	0.13	5	50	1	97
G-334	9.3	3.6	64	40	337	6	0.74	0.4	9	26	35	4.9	2	1.09	22	1.22	527	3	0.09	23	0.057	17	11	138	14	0.1	5	54	2	103
G-335	22.1	3.17	9	42	213	3	0.49	0.3	9	34	28	3.57	2	0.9	22	0.99	562	2	0.28	18	0.029	15	2	118	15	0.13	5	45	2	95
G-336	0.5	3.08	9	28	340	4	0.71	1.1	9	28	30	3.43	2	0.79	21	0.96	720	2	0.07	19	0.048	12	2	117	15	0.12	5	50	1	97
G-337	0.1	3.14	7	28	343	2	0.65	1	10	29	34	3.48	2	0.94	19	1	821	1	0.06	20	0.046	14	2	100	12	0.13	5	50	1	96
G-338	0.1	2.85	7	20	331	2	0.55	0.8	9	26	29	3.24	2	0.69	20	0.78	817	1	0.07	20	0.038	8	2	87	15	0.13	5	49	1	90
G-339	4.9	3.26	6	26	302	2	0.57	0.2	10	28	30	3.56	2	0.77	21	0.91	783	1	0.05	19	0.031	12	2	88	14	0.13	5	49	1	96
G-340	18.8	3.45	7	21	258	2	0.68	0.2	8	27	27	3.48	2	0.56	20	0.91	578	1	0.06	19	0.03	13	2	108	14	0.11	5	43	1	101
G-341	0.1	3.18	7	26	338	2	0.64	1	9	27	30	3.27	2	0.74	20	0.91	687	1	0.06	18	0.04	12	2	97	13	0.13	5	45	1	98
STANDARD C	6.7	1.96	40	25	184	16	0.52	18.1	30	63	59	4.09	3	0.16	40	0.93	1072	21	0.06	68	0.095	37	18	54	42	0.08	21	62	11	133
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-342	1.3	3.35	10	35	384	2	0.84	0.2	10	22	34	3.45	2	0.78	21	1.12	642	2	0.09	19	0.047	9	2	125	8	0.12	5	51	1	100
G-343	0.3	3.42	9	38	376	2	0.77	0.8	10	28	31	3.46	2	0.89	20	1.09	557	1	0.07	21	0.041	10	2	124	13	0.13	5	50	1	94
G-344	0.1	3	9	24	365	2	0.69	0.9	10	26	30	3.02	2	0.68	20	0.87	713	2	0.07	15	0.049	18	2	109	13	0.12	5	49	1	89
G-345	1	2.75	13	25	332	2	0.62	0.9	10	23	30	3.07	2	0.67	20	0.81	677	2	0.06	17	0.044	14	2	107	13	0.12	5	49	1	82
G-346	0.1	2.92	5	29	398	2	0.64	0.2	10	27	30	3.05	2	0.78	19	0.89	684	1	0.08	17	0.044	8	2	104	11	0.13	5	49	1	91
G-347	0.4	3.65	11	39	395	2	0.75	0.7	11	25	37	3.56	2	1.05	21	1.2	622	1	0.09	21	0.047	17	2	116	11	0.12	5	50	1	107
G-348	0.1	2.78	7	31	342	2	0.73	0.2	10	29	30	3.03	2	0.8	15	0.92	767	1	0.14	17	0.03	14	2	94	12	0.14	5	48	1	89
G-349	1.5	3.29	8	40	371	2	0.64	1	10	28	36	3.37	2	0.99	17	1.24	626	1	0.13	22	0.028	12	2	98	11	0.13	5	49	1	101
G-350	0.6	2.69	4	36	330	2	0.71	0.8	8	22	31	2.82	2	0.78	12	1.03	515	1	0.2	17	0.033	8	2	113	8	0.13	5	46	1	84
G-351	0.1	3.7	7	38	416	3	0.85	1.4	11	26	36	3.81	2	0.83	22	1.23	848	1	0.09	20	0.041	9	2	132	14	0.14	5	56	1	115
G-352	2.4	2.9	6	35	326	2	0.68	1	9	25	31	3.11	2	0.9	17	1.08	646	1	0.15	16	0.038	7	2	103	13	0.13	5	48	1	97
G-353	0.1	3.87	5	46	461	2	0.86	0.2	12	34	39	3.78	2	1.13	23	1.36	842	1	0.09	24	0.052	9	2	132	13	0.13	5	55	1	127
G-354	0.7	2.45	9	27	338	2	0.68	1.2	9	21	26	3.08	2	0.68	18	0.86	859	1	0.06	15	0.048	13	2	108	14	0.11	5	44	1	98
G-355	0.1	3.17	10	36	306	2	0.89	1.5	9	27	31	3.38	2	1	19	1.08	718	1	0.07	20	0.045	11	2	115	11	0.12	5	46	1	103
G-356	0.5	2.73	10	26	346	2	0.68	0.2	9	22	30	3.42	2	0.7	19	0.91	839	2	0.05	17	0.043	14	2	96	13	0.11	5	43	1	111
G-357	0.1	3.15	8	30	354	2	0.68	0.2	10	28	31	3.65	2	0.85	22	1.03	752	1	0.07	19	0.034	13	2	107	13	0.13	5	47	1	102
STANDARD C	6.4	1.84	40	30	185	17	0.5	18.7	32	59	57	3.82	2	0.15	39	0.88	958	20	0.06	63	0.089	37	17	50	41	0.08	19	60	12	124
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-001	0.3	2.12	4	23	318	2	0.56	0.6	9	25	24	2.53	2	0.63	20	0.81	827	1	0.17	14	0.046	11	2	102	12	0.13	5	48	1	81
G-002	0.1	2.23	8	28	313	2	0.59	0.7	10	29	26	2.65	2	0.67	19	0.84	778	1	0.15	16	0.05	11	2	101	13	0.14	5	52	1	82
G-003	4	3.58	7	54	226	4	1.34	0.2	9	27	31	3.22	2	1	21	1.11	592	1	0.35	18	0.032	11	2	125	14	0.12	5	51	1	96
G-004	0.9	2.53	5	27	341	3	0.66	0.6	10	23	27	2.79	2	0.79	19	0.83	751	1	0.06	17	0.053	11	2	82	11	0.12	5	50	1	85
G-006	0.1	2.24	7	25	332	2	0.62	0.6	10	41	27	2.57	2	0.67	20	0.73	889	2	0.1	16	0.051	11	2	96	14	0.13	5	51	1	81
G-007	0.2	3.29	7	29	352	2	1.87	0.2	9	21	28	3.06	2	0.78	24	1.03	499	2	0.04	16	0.04	7	2	121	14	0.08	5	48	1	94
G-008	0.1	3.06	7	31	338	2	1.5	0.3	9	22	28	3.01	2	0.79	21	1.03	641	1	0.06	18	0.045	6	2	108	12	0.1	5	49	2	97
G-009	0.1	2.92	6	31	327	3	0.64	0.2	10	36	27	2.94	2	0.91	19	1.01	727	2	0.15	18	0.035	12	2	114	16	0.13	5	51	1	89
G-010	0.1	3.65	6	33	455	2	0.87	0.2	11	29	34	3.42	2	0.92	22	1.14	753	1	0.08	20	0.05	7	4	111	14	0.14	5	57	1	105
G-011	0.5	3.08	8	35	411	2	0.79	0.2	11	23	31	3.1	2	0.99	20	1.2	715	1	0.07	19	0.054	7	2	116	14	0.13	5	52	1	97
G-012	0.1	3.39	8	36	347	2	1	0.2	11	36	31	3.16	2	0.97	21	1.2	675	1	0.24	24	0.044	7	2	154	14	0.15	5	56	1	90
G-013	0.3	3.41	6	29	390	2	1.05	0.2	16	44	42	3.94	2	0.81	20	1.29	815	1	0.09	32	0.079	5	2	113	12	0.16	5	73	1	106
G-014	0.8	3.14	6	26	381	2	0.88	0.2	16	50	43	4.07	2	0.77	21	1.09	1057	1	0.08	37	0.075	6	2	103	15	0.15	5	79	1	99
G-015	0.1	3.04	5	31	343	3	0.73	0.8	13	46	40	3.78	2	0.94	21	1.05	1034	1	0.15	32	0.063	6	2	129	14	0.14	5	74	1	94
G-016	0.3	3.58	7	28	365	3	6.88	0.2	10	30	41	3.13	2	0.8	22	1.11	651	1	0.04	29	0.075	5	2	149	15	0.09	5	50	1	85
G-017	0.1	3.68	8	30	323	2	0.77	0.4	11	33	54	3.56	2	0.89	21	1.18	632	1	0.07	25	0.044	4	2	129	13	0.13	5	58	1	140
G-018	0.1	3.25	14	31	370	2	0.76	0.2	9	29	36	3.25	2	0.91	21	1.02	441	1	0.09	17	0.045	8	3	135	12	0.13	5	53	1	94
G-019	3.3	3.41	9	36	227	2	0.58	0.5	10	31	45	3.3	2	0.97	20	1.06	532	1	0.23	20	0.03	6	2	128	12	0.13	5	49	1	109
G-020	0.3	2.62	8	28	272	2	0.53	0.2	7	47	21	2.75	2	0.73	19	0.73	320	2	0.2	13	0.023	4	2	115	12	0.14	5	51	1	66
G-021	0.1	3.33	11	35	371	2	0.73	0.3	8	29	35	3.41	2	1.01	19	1.08	400	1	0.14	20	0.043	5	3	126	8	0.13	5	52	1	89
G-022	0.2	3.1	9	37	264	2	1.18	0.2	9	24	29	2.88	2	1.1	19	1.15	557	2	0.09	17	0.057	2	4	116	7	0.11	5	46	1	90
G-023	0.1	3.11	7	29	348	3	0.64	0.2	10	38	30	2.97	2	0.8	18	0.95	569	1	0.17	18	0.035	6	2	118	11	0.15	5	54	1	86
G-024	0.1	3.53	10	29	377	2	0.73	0.2	10	32	36	3.16	2	0.79	20	0.96	652	1	0.11	20	0.043	11	3	109	14	0.14	5	55	1	102
G-025	0.1	3.26	11	31	412	2	0.71	0.2	10	24	33	3.22	2	0.77	19	1.01	689	1	0.07	19	0.047	2	2	110	10	0.13	5	55	1	108
G-026	0.4	2.85	6	38	318	2	1.59	0.2	9	38	32	2.66	2	1.02	15	1.04	605	1	0.16	20	0.046	8	2	134	6	0.13	5	49	1	91
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-027	0.1	3	6	33	292	2	0.58	0.9	9	32	29	2.96	2	0.91	20	0.92	554	2	0.19	19	0.04	9	2	110	13	0.14	5	52	1	86
G-028	0.1	2.69	8	30	342	2	0.56	0.2	9	21	30	2.82	2	0.77	16	0.9	504	1	0.1	16	0.04	7	2	101	10	0.13	5	49	1	82
G-029	0.1	3.72	8	24	321	3	0.72	0.2	10	28	37	3.41	2	0.66	23	1.01	528	1	0.1	22	0.027	12	2	105	15	0.14	5	56	1	98
G-030	0.1	2.74	5	23	368	2	0.65	0.2	10	33	29	2.77	2	0.72	17	0.77	700	1	0.09	18	0.05	8	2	93	10	0.14	5	54	1	86
G-031	0.2	3.14	9	24	355	2	0.63	0.8	10	35	34	3.04	2	0.7	19	0.84	661	1	0.09	20	0.045	5	2	95	12	0.14	5	53	1	89
G-032	0.1	2.8	7	29	391	2	0.75	0.2	9	19	33	2.88	2	0.63	17	0.95	626	1	0.09	16	0.043	7	2	115	9	0.12	5	50	1	87
G-033	0.7	3.18	8	26	363	2	0.68	0.5	10	28	32	3.16	2	0.74	20	0.9	706	1	0.07	17	0.043	3	3	97	11	0.13	5	53	1	100
G-034	0.1	3.08	5	30	388	2	0.75	0.2	9	28	33	3.09	2	0.72	19	0.95	631	1	0.07	21	0.044	7	2	109	11	0.13	5	53	1	98
G-035	0.1	3.38	7	35	397	2	1.13	0.2	8	26	36	3.35	2	0.74	21	1.08	810	1	0.1	19	0.044	4	2	126	13	0.14	5	55	1	102
STANDARD C	6.2	1.81	40	25	182	19	0.49	18.6	32	60	59	3.81	2	0.15	39	0.88	980	19	0.06	66	0.088	36	16	50	38	0.08	20	66	9	125
G-036	0.4	3.49	6	37	369	2	0.77	0.2	10	33	34	3.31	2	0.87	19	1.02	748	2	0.11	21	0.046	2	2	116	13	0.15	5	48	1	103
G-037	0.5	3.12	7	38	355	2	0.74	0.7	9	22	36	3.07	2	0.88	16	1	588	1	0.1	21	0.042	3	2	102	6	0.13	5	42	1	98
G-038	0.2	3.81	8	32	242	3	0.68	0.2	9	33	33	3.41	2	0.76	24	0.84	812	1	0.22	20	0.034	2	2	99	16	0.14	5	48	1	100
G-039	0.4	2.95	5	30	293	3	0.62	0.2	9	44	31	3.02	2	0.75	20	0.8	718	2	0.21	19	0.033	4	2	103	13	0.15	5	45	1	88
G-040	0.9	2.85	4	31	331	2	0.9	0.2	9	27	30	2.78	2	0.94	19	0.84	841	1	0.08	17	0.051	3	2	90	11	0.12	5	39	1	89
G-041	1	3.07	5	27	311	2	0.99	0.2	8	30	26	2.81	2	0.73	20	0.83	636	1	0.09	17	0.032	3	2	104	11	0.12	5	37	1	84
G-042	0.4	3.08	8	28	252	2	0.76	0.7	8	18	33	2.84	2	0.65	19	0.86	605	1	0.14	17	0.036	8	2	108	12	0.09	5	34	2	94
G-043	0.7	3.59	2	32	337	2	1.01	0.3	9	27	25	2.92	2	0.84	21	0.94	737	1	0.22	16	0.031	9	2	157	13	0.12	5	35	1	91
G-044	0.1	3.61	8	36	204	2	0.9	0.6	8	19	31	3.1	2	0.74	21	0.99	491	1	0.19	17	0.03	6	2	139	8	0.08	5	34	1	98
G-045	0.5	3.75	8	29	356	4	0.88	0.2	10	28	33	3.26	2	0.82	22	0.94	763	1	0.09	21	0.045	2	2	100	11	0.13	5	42	2	100
G-046	2.5	4.15	7	41	270	2	0.76	0.2	8	28	40	3.61	2	0.97	28	1.15	469	1	0.21	22	0.024	4	2	108	18	0.11	5	44	1	124
G-047	1.6	2.52	7	24	225	2	0.54	0.2	9	41	28	2.64	2	0.62	24	0.7	507	2	0.18	16	0.017	8	2	93	15	0.13	5	38	1	80
G-048	2.6	4.05	6	50	192	2	2.06	0.2	8	29	32	3.4	2	1.07	23	1.18	486	1	0.34	22	0.033	7	2	147	14	0.12	5	40	1	110
G-049	1.3	2.95	5	33	229	2	0.61	0.2	9	32	28	3.04	2	0.78	20	0.89	558	1	0.24	18	0.024	7	2	113	15	0.13	5	41	1	92
G-050	0.8	3.11	7	30	282	2	0.61	0.2	10	25	31	3.14	2	0.81	23	0.91	652	2	0.15	19	0.023	8	2	86	15	0.12	5	41	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-051	0.9	3.2	8	40	234	2	0.57	0.2	10	30	29	3.22	2	0.88	21	0.94	792	1	0.27	18	0.022	6	2	112	14	0.14	5	44	1	97
G-052	0.5	3.23	8	34	308	2	1.29	0.2	9	29	29	3.08	2	1.04	21	0.97	703	1	0.1	20	0.046	5	2	104	12	0.13	5	41	1	100
G-053	0.5	3.12	6	38	281	2	0.87	0.2	9	28	29	3.13	2	1.04	20	1	729	1	0.18	19	0.031	219	2	91	12	0.12	5	41	1	98
G-054	0.3	3.52	4	37	308	2	0.92	0.7	9	26	31	3.29	2	1.04	20	1.09	641	1	0.14	20	0.033	3	2	101	11	0.12	5	43	1	103
G-055	0.2	3.07	7	32	303	2	3.18	0.3	9	26	29	2.93	2	0.85	19	0.98	628	1	0.08	22	0.073	6	2	148	9	0.1	5	41	2	86
G-056	0.2	3.15	7	33	332	2	0.79	0.8	11	36	33	3.29	2	0.87	22	0.94	834	1	0.17	24	0.057	4	2	102	13	0.16	5	50	2	95
G-057	0.7	3.14	5	32	330	2	0.71	0.3	10	30	32	3.2	2	0.9	17	0.94	649	1	0.11	22	0.045	6	2	87	12	0.14	5	45	1	92
G-058	0.3	2.94	6	33	280	2	0.65	0.4	10	32	31	3.1	2	0.95	17	0.92	717	1	0.17	23	0.042	6	2	89	12	0.15	5	46	1	88
G-059	0.6	3.14	3	32	294	2	0.65	0.9	10	37	31	3.22	2	0.89	18	0.94	729	1	0.19	24	0.039	8	2	94	12	0.15	5	46	1	93
G-060	0.6	3.04	6	35	290	2	0.65	0.8	9	29	30	3.01	2	0.96	18	0.95	601	1	0.15	18	0.035	8	3	90	13	0.14	5	43	1	88
G-061	0.1	3.1	7	37	315	2	0.66	0.3	10	34	28	3.14	2	1.05	18	0.99	739	1	0.17	20	0.04	10	2	93	11	0.15	5	45	1	95
G-062	0.2	2.72	6	32	257	2	0.57	0.2	9	30	26	2.88	2	0.95	18	0.84	680	2	0.17	17	0.034	4	2	86	11	0.14	5	42	2	84
G-063	0.1	2.96	4	29	246	2	0.68	0.8	8	25	27	2.87	2	0.84	19	0.82	481	1	0.13	17	0.028	4	2	96	9	0.13	5	38	2	79
G-064	0.2	2.94	6	35	292	2	0.71	0.2	8	33	28	2.98	2	0.96	18	0.92	630	1	0.13	18	0.055	5	2	94	10	0.13	5	41	1	84
G-065	0.4	3.11	4	32	286	2	0.64	0.2	10	27	28	2.99	2	0.92	22	0.96	772	2	0.18	20	0.04	9	2	97	12	0.13	5	40	2	88
G-066	0.4	3.11	4	34	292	2	0.65	0.7	10	31	29	3	2	0.88	20	0.86	699	1	0.2	19	0.039	7	2	108	10	0.14	5	43	1	89
G-067	0.1	3.64	9	40	354	2	0.99	0.3	9	30	31	3.12	2	0.93	21	1.11	641	1	0.15	23	0.039	9	2	120	9	0.13	5	42	2	94
G-068	0.3	2.41	7	21	297	2	0.67	0.3	10	22	25	2.63	2	0.53	21	0.67	748	1	0.14	16	0.038	11	2	100	12	0.13	5	38	1	74
G-069	0.5	3.7	6	35	263	2	0.69	1.1	9	31	31	3.41	2	0.88	22	1	554	1	0.17	22	0.031	6	2	102	12	0.13	5	41	1	100
STANDARD C	6.6	2.03	41	27	178	19	0.54	18.8	31	59	63	4.17	2	0.15	41	0.88	1033	22	0.06	73	0.097	35	17	51	41	0.09	15	58	10	137
G-070	0.1	2.6	8	27	250	2	0.58	0.2	10	29	26	2.97	2	0.74	21	0.85	661	2	0.16	14	0.036	10	2	113	14	0.13	5	45	1	85
G-071	0.1	3.31	8	36	350	2	0.72	0.2	10	31	32	3.38	2	0.87	20	1.12	584	2	0.12	20	0.04	11	2	131	10	0.14	5	50	1	95
G-072	0.1	3.33	10	29	343	2	0.76	0.2	10	30	31	3.26	2	0.79	19	1.03	735	2	0.1	18	0.051	5	2	109	14	0.15	5	51	1	99
G-073	0.1	3.49	7	38	404	2	0.73	0.2	13	33	35	3.38	2	0.9	20	1.11	744	2	0.09	20	0.034	11	2	113	15	0.15	5	54	1	100
G-074	0.1	2.93	7	28	341	2	0.67	0.6	10	26	33	3	2	0.81	16	0.89	771	2	0.07	19	0.051	9	2	98	11	0.15	5	49	1	96
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-075	0.1	3.43	6	28	349	2	0.66	0.4	10	28	31	3.15	2	0.78	19	0.88	683	1	0.07	19	0.039	8	2	94	9	0.14	5	49	1	90
G-076	0.1	3.4	8	30	352	2	0.72	0.2	11	30	32	3.36	2	0.83	19	0.96	799	2	0.07	20	0.043	4	2	105	13	0.14	5	51	1	98
G-077	0.1	3.41	7	32	363	2	0.72	0.2	10	29	33	3.39	2	0.84	20	1.01	733	1	0.08	20	0.041	9	2	108	11	0.14	5	52	1	100
G-078	0.1	3.41	10	31	327	2	0.68	0.2	10	27	30	3.35	2	0.77	20	0.99	667	1	0.06	19	0.039	7	2	103	11	0.12	5	47	1	103
G-079	0.1	2.96	6	32	339	2	0.76	0.9	10	29	31	3.07	2	0.75	17	0.97	976	1	0.09	18	0.057	7	2	109	11	0.14	5	50	1	99
G-080	0.1	3.18	8	37	360	2	0.78	0.3	11	31	34	3.2	2	0.88	19	1.1	839	1	0.1	20	0.046	6	2	124	12	0.14	5	52	1	99
G-081	0.1	3.08	5	43	279	2	0.67	0.2	8	28	31	3.05	2	1.01	15	1.09	531	1	0.15	17	0.033	7	2	100	9	0.13	5	44	1	94
G-082	0.3	2.74	7	24	327	2	0.69	0.2	9	26	25	3.03	2	0.71	20	0.87	714	2	0.1	14	0.038	10	2	103	11	0.1	5	42	1	94
G-083	0.3	3.17	7	34	363	2	0.73	0.2	10	28	31	3.26	2	0.83	19	1.09	820	2	0.1	21	0.048	6	2	111	13	0.13	5	49	1	102
G-084	0.1	3.41	6	30	311	2	0.74	0.5	10	29	31	3.2	2	0.86	19	1.06	632	2	0.09	19	0.028	7	2	119	11	0.13	5	45	1	93
G-085	0.1	3.11	8	27	344	2	0.68	0.3	10	31	30	3.1	2	0.79	18	0.99	711	1	0.1	18	0.035	4	2	109	13	0.14	5	48	1	91
G-086	0.2	2.23	8	17	333	2	0.6	0.4	10	31	25	2.57	2	0.5	19	0.67	704	2	0.14	16	0.036	10	2	120	13	0.14	5	45	1	71
G-087	0.1	3.47	9	33	498	2	0.78	0.2	10	38	28	3.07	2	0.92	21	1.06	748	2	0.24	17	0.038	10	3	273	15	0.14	5	45	1	94
G-088	0.1	3.2	8	33	396	2	0.74	0.3	10	27	32	3.12	2	0.83	19	1.09	707	2	0.11	19	0.034	13	2	176	13	0.14	5	47	1	94
G-089	0.1	3.34	7	33	381	2	0.74	0.7	11	31	34	3.28	2	0.87	20	1.09	759	2	0.11	19	0.04	12	2	134	13	0.15	5	51	1	99
G-090	0.3	2.68	3	29	253	2	0.56	0.7	9	30	26	2.87	2	0.74	20	0.92	594	1	0.18	15	0.026	9	2	104	14	0.13	5	43	1	88
G-091	0.1	3.73	10	28	405	2	2.67	0.2	10	27	34	3.2	2	0.68	22	1.06	560	1	0.06	23	0.047	10	2	136	13	0.12	5	47	1	90
G-092	0.1	2.82	6	29	330	2	0.59	0.2	12	31	29	2.99	2	0.7	22	0.93	774	2	0.21	19	0.022	7	2	121	17	0.14	5	48	1	86
G-093	0.1	3.23	4	30	317	2	0.75	0.2	10	25	29	3.23	2	0.78	20	1	712	1	0.09	17	0.038	7	2	104	13	0.11	5	47	1	102
G-094	0.1	3.02	9	33	359	2	0.81	0.2	10	29	30	3.03	2	0.87	19	1.04	775	2	0.08	18	0.042	13	3	107	13	0.13	5	48	1	95
G-095	0.5	3.17	7	41	210	2	0.74	0.2	10	34	29	3.13	2	0.91	20	1.04	642	2	0.3	18	0.028	13	2	137	12	0.12	5	45	1	95
G-096	0.4	2.37	6	24	259	2	0.52	0.7	10	42	25	2.74	2	0.66	18	0.79	764	3	0.17	17	0.025	11	2	100	16	0.14	5	46	1	79
G-097	0.1	4.67	5	49	183	2	0.67	0.2	10	27	31	3.9	2	1.08	20	1.34	480	1	0.49	21	0.017	10	2	150	14	0.1	5	46	1	117
G-098	0.2	2.99	7	29	331	2	0.82	0.2	10	27	28	2.97	2	0.74	18	0.97	732	2	0.09	17	0.04	8	2	114	13	0.11	5	45	1	90
G-099	0.7	3.28	6	38	195	2	0.77	0.2	9	34	30	3.21	2	0.73	22	1.06	537	2	0.22	20	0.033	13	2	152	13	0.11	5	44	1	97
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-100	0.2	2.86	6	22	330	2	0.86	0.3	14	43	36	3.55	2	0.66	19	0.98	1033	1	0.12	28	0.082	7	2	117	12	0.14	5	61	1	93
G-101	0.1	2.55	7	27	305	2	0.72	0.2	11	31	30	3.01	2	0.78	19	0.84	858	1	0.08	19	0.065	9	2	96	11	0.14	5	52	1	91
G-102	0.1	2.92	11	27	322	2	0.67	0.2	10	33	31	3.1	2	0.92	18	0.89	779	2	0.08	19	0.055	9	2	96	14	0.14	5	50	1	94
G-103	0.1	2.71	10	26	320	2	0.68	0.3	10	31	29	2.95	2	0.78	18	0.81	786	2	0.08	19	0.064	7	2	100	13	0.14	5	49	1	89
STANDARD C	6.5	1.94	42	25	177	16	0.52	18.4	33	62	59	4.06	2	0.15	40	0.94	1014	22	0.06	69	0.092	37	18	53	39	0.09	16	62	10	131
G-104	0.5	2.7	12	24	335	2	0.72	0.6	10	37	30	2.98	2	0.72	19	0.77	876	3	0.11	19	0.061	11	2	107	15	0.14	5	45	1	90
G-105	0.1	3.11	13	28	332	2	0.73	1.1	11	33	31	3.29	2	0.86	20	0.9	776	2	0.07	20	0.062	10	2	107	13	0.14	5	47	1	100
G-106	0.6	2.2	10	16	247	2	0.53	0.3	11	40	23	2.8	2	0.51	22	0.58	732	3	0.14	15	0.034	13	3	96	15	0.13	5	42	1	79
G-107	0.5	2.57	11	21	345	2	0.7	0.6	12	43	27	2.99	2	0.66	23	0.72	1089	2	0.1	16	0.063	12	2	107	15	0.13	5	44	2	88
G-108	1.4	2.47	10	33	222	2	0.54	0.6	10	52	25	2.78	2	0.72	20	0.78	701	3	0.29	16	0.041	6	4	105	14	0.14	5	43	1	75
G-109	0.3	3.68	16	46	319	2	0.83	0.2	11	33	37	3.4	2	1.2	19	1.25	560	1	0.11	24	0.044	5	2	131	10	0.14	5	47	1	104
G-110	0.4	3.29	10	46	310	2	1.28	0.5	10	37	33	3.1	2	1.18	19	1.18	646	2	0.17	19	0.045	4	2	141	11	0.14	5	45	1	92
G-111	0.1	3.47	10	45	309	2	0.79	0.9	11	46	33	3.16	2	1.23	19	1.22	692	2	0.2	21	0.042	9	2	115	13	0.15	5	47	1	94
G-112	0.1	3.11	9	30	336	3	0.73	0.2	10	35	32	2.97	2	0.89	19	0.89	733	2	0.11	19	0.052	6	2	107	11	0.14	5	43	1	91
G-113	0.1	3.36	9	37	361	2	0.8	0.7	10	32	32	3.15	2	1.03	20	1.11	806	2	0.11	23	0.054	6	2	111	12	0.13	5	43	2	97
G-114	0.3	3.15	10	36	341	2	1.1	1.1	9	37	30	2.93	2	0.86	19	1.06	635	2	0.18	17	0.059	8	2	131	9	0.14	5	45	1	90
G-115	0.2	3.35	10	30	253	2	0.66	0.5	14	69	27	2.95	2	0.92	27	0.88	790	3	0.35	20	0.025	4	2	131	18	0.18	5	49	1	78
G-116	0.4	3.32	7	30	312	2	0.7	0.2	10	36	31	3.12	2	0.89	21	0.94	715	1	0.11	20	0.043	7	2	131	15	0.14	5	42	1	90
G-117	0.3	3.25	8	30	355	2	0.71	0.9	10	31	32	3.06	2	0.9	19	0.9	716	1	0.09	18	0.054	7	2	103	12	0.14	5	44	1	93
G-118	0.1	3.24	10	33	336	2	0.94	0.4	10	33	32	3.06	2	0.87	17	1	567	1	0.09	17	0.044	9	2	119	13	0.13	5	43	1	89
G-119	0.4	3.02	7	27	357	2	0.72	0.5	11	31	33	3.03	2	0.75	19	0.9	763	1	0.1	19	0.049	9	2	110	14	0.14	5	45	1	93
G-120	0.1	2.46	8	17	287	2	0.61	0.2	10	45	27	2.71	2	0.54	21	0.65	777	2	0.13	17	0.038	13	3	106	13	0.15	5	46	1	74
G-121	0.1	3.03	11	29	350	2	0.71	0.6	10	32	27	2.98	2	0.84	18	0.88	757	1	0.1	16	0.048	4	2	101	12	0.13	5	43	1	91
G-122	0.1	3.76	8	33	405	2	0.8	0.2	11	31	33	3.49	2	0.81	21	1.14	666	1	0.08	21	0.037	5	2	122	11	0.14	5	47	1	106
G-123	0.1	3.32	9	36	352	2	0.74	0.7	10	32	32	3.15	2	0.95	18	1.12	658	1	0.12	22	0.034	7	2	112	11	0.14	5	44	1	94
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-124	0.1	3.49	7	32	411	2	0.78	0.6	12	37	33	3.27	2	0.85	20	1.09	829	2	0.14	22	0.039	9	2	123	15	0.15	5	48	1	96
G-125	0.5	3.28	7	31	392	3	0.71	1	11	26	34	3.33	2	0.84	19	1.1	767	1	0.08	24	0.039	7	2	105	14	0.14	5	46	1	100
G-126	0.4	3.3	10	29	378	2	0.78	0.3	11	35	32	3.25	2	0.81	19	0.99	769	1	0.1	21	0.048	11	2	113	15	0.15	5	48	1	97
G-127	0.4	2.35	8	21	328	2	0.57	0.8	11	22	28	2.76	2	0.67	17	0.81	803	1	0.08	15	0.049	7	2	94	11	0.12	5	41	1	84
G-128	0.5	2.83	6	23	334	3	0.75	1.1	10	32	27	2.81	2	0.68	20	0.83	744	2	0.11	14	0.037	10	2	109	12	0.13	5	40	2	85
G-129	0.1	4.52	6	37	312	2	0.85	0.4	9	29	30	3.41	2	1.03	23	1.25	517	2	0.28	20	0.033	9	2	134	13	0.11	5	36	1	107
G-130	0.1	3.6	8	23	311	2	0.78	0.6	9	31	28	3.13	2	0.73	20	0.96	631	2	0.07	20	0.038	9	2	107	12	0.12	5	38	2	92
G-131	0.1	3.11	6	29	373	2	1.97	0.3	8	21	24	2.52	2	0.68	21	0.9	723	1	0.08	14	0.054	4	2	135	12	0.08	5	31	1	82
G-132	0.1	3.53	6	27	341	2	1.76	0.2	9	25	29	2.86	2	0.79	22	1	582	1	0.05	18	0.046	10	2	116	12	0.09	5	33	1	93
G-133	0.1	2.92	5	29	340	2	0.74	0.9	10	41	30	2.84	2	0.87	19	0.87	727	2	0.11	17	0.054	5	2	112	12	0.14	5	44	1	86
G-134	0.2	3.23	6	27	379	2	2.01	0.2	9	23	36	2.92	2	0.68	19	0.98	476	1	0.05	21	0.048	11	2	116	13	0.1	5	39	1	85
G-135	0.1	3.36	5	26	355	2	0.74	0.4	10	41	28	2.97	2	0.7	21	0.85	576	1	0.16	18	0.04	6	2	111	13	0.15	5	45	1	82
G-136	0.1	3.15	5	26	321	2	0.69	0.8	9	25	29	2.98	2	0.84	18	0.89	606	1	0.06	16	0.048	9	2	97	12	0.12	5	39	1	89
G-137	0.2	3.61	6	30	365	2	0.82	0.2	10	30	32	3.31	2	0.81	20	1.04	674	1	0.09	19	0.05	6	2	113	16	0.14	5	46	1	105
STANDARD C	6.7	1.96	41	26	176	18	0.53	19	33	64	61	4.05	2	0.16	40	0.93	1026	21	0.06	67	0.095	38	18	54	41	0.09	18	56	11	133
G-138	0.1	2.44	9	28	239	2	0.63	0.8	7	20	29	2.81	2	0.59	20	0.8	374	1	0.3	15	0.045	14	2	97	12	0.14	5	45	1	89
G-139	0.1	3.91	5	29	354	2	0.77	0.3	9	45	28	3.22	2	0.89	23	0.96	646	1	0.18	18	0.037	2	4	116	15	0.14	5	43	1	90
G-140	0.1	2.9	7	26	368	2	0.68	1.5	9	28	30	3.03	2	0.83	19	0.86	757	2	0.11	20	0.059	9	3	101	14	0.14	5	44	1	92
G-141	0.2	2.8	9	19	316	2	0.66	0.7	10	20	24	3.04	2	0.47	22	0.77	660	1	0.1	17	0.026	12	4	108	16	0.12	5	41	1	83
G-142	0.1	2.06	9	18	242	2	0.51	0.9	8	19	24	2.57	2	0.44	20	0.61	525	2	0.16	15	0.03	12	3	100	14	0.13	5	40	1	69
G-143	0.1	4.59	11	28	356	2	0.89	0.2	8	41	28	3.5	2	0.76	23	1.06	544	2	0.07	19	0.032	6	2	126	14	0.12	5	42	1	101
G-144	0.1	3.13	9	27	317	2	0.68	1.6	9	39	25	2.92	2	0.8	23	0.82	609	3	0.15	20	0.031	8	3	120	13	0.14	5	41	1	79
G-145	0.1	3.04	7	37	345	2	0.65	0.5	8	26	28	2.97	2	1.02	18	1.01	451	1	0.12	16	0.034	11	2	108	11	0.12	5	40	1	84
G-146	0.1	3.06	7	32	348	3	0.65	1	8	28	27	2.9	2	0.88	19	0.97	662	2	0.11	18	0.037	10	2	105	11	0.13	5	41	1	86
G-147	0.1	3.12	7	26	355	3	0.72	1.1	9	34	29	2.97	2	0.77	19	0.85	636	1	0.11	18	0.048	5	3	112	14	0.14	5	44	1	87
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
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METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-148	0.1	3.02	10	24	353	2	0.58	0.2	10	25	27	2.99	2	0.79	19	0.76	708	1	0.07	15	0.05	7	3	92	14	0.14	5	44	1	85
G-149	0.1	3.33	7	28	381	2	0.68	1	9	31	29	3.08	2	0.84	19	0.87	703	2	0.1	21	0.05	12	2	108	13	0.15	5	45	1	89
G-150	0.1	2.84	8	24	319	2	0.55	1.4	8	26	27	2.71	2	0.77	18	0.71	577	1	0.07	16	0.049	8	3	84	10	0.13	5	39	1	77
G-151	0.1	3.61	22	32	340	2	0.74	0.2	9	27	29	3.35	2	0.91	20	1.15	532	2	0.08	22	0.033	11	2	116	10	0.13	5	41	1	90
G-152	0.1	3.71	30	42	393	2	0.8	0.5	9	31	34	3.6	2	1.15	19	1.17	467	2	0.12	24	0.03	6	4	130	10	0.14	5	48	1	93
G-153	0.5	3.67	30	41	386	2	1.01	0.8	9	33	30	3.46	2	1.12	19	1.25	558	3	0.16	21	0.038	7	2	143	10	0.14	5	45	1	93
G-154	0.2	3.94	21	39	423	2	0.88	0.2	9	29	34	3.66	2	1.06	20	1.19	536	2	0.09	22	0.043	11	2	144	11	0.13	5	46	1	99
G-155	0.1	3.05	13	28	384	2	0.71	0.9	10	32	30	3.08	2	0.77	20	0.83	760	2	0.11	17	0.054	8	7	116	13	0.14	5	47	1	99
G-156	0.1	3.24	12	33	340	2	0.78	0.4	7	31	27	3.14	2	0.87	18	0.93	311	2	0.17	15	0.029	9	4	138	10	0.13	5	42	1	78
G-157	0.1	3.4	11	40	351	2	0.83	0.9	9	31	31	3.32	2	1.04	21	1.12	753	1	0.12	19	0.049	7	2	115	13	0.14	5	45	1	111
G-158	0.1	4.28	7	32	229	2	0.97	0.2	8	21	34	3.73	2	0.8	22	1.22	467	1	0.23	19	0.033	14	2	144	9	0.06	5	42	1	125
G-159	0.1	3.86	8	28	384	2	0.79	0.9	9	27	32	3.54	2	0.8	21	1.02	757	1	0.09	19	0.045	8	2	114	14	0.12	5	45	1	119
G-160	0.1	3.75	8	41	363	2	0.8	0.3	10	33	36	3.67	2	1.19	20	1.22	627	2	0.11	23	0.036	12	2	111	15	0.16	5	48	1	108
G-161	0.1	3.49	6	43	375	3	1.03	0.5	9	33	35	3.4	2	1.13	21	1.16	632	1	0.2	22	0.041	8	2	124	14	0.15	5	46	1	99
G-162	0.3	3.25	7	33	387	2	0.74	0.5	10	31	32	3.55	2	0.91	19	1.02	711	2	0.09	21	0.045	10	3	106	16	0.16	5	49	1	105
G-163	0.1	3.34	7	40	290	2	0.72	0.6	9	31	30	3.39	2	1.03	17	1.08	653	2	0.21	18	0.033	10	2	100	11	0.16	5	46	1	99
G-164	0.1	2.88	7	28	358	2	0.73	0.4	9	31	29	3.18	2	0.75	19	0.85	809	2	0.09	19	0.058	14	2	106	14	0.15	5	46	1	95
G-165	0.4	3.28	9	32	374	2	0.67	0.4	11	39	32	3.35	2	0.93	21	0.95	761	2	0.17	20	0.037	9	2	111	17	0.16	5	49	1	94
G-166	0.1	3.49	10	32	409	2	0.79	0.2	10	29	35	3.45	2	0.95	21	1.01	677	2	0.08	20	0.052	7	2	109	15	0.15	5	48	1	99
G-167	0.1	2.95	6	40	206	3	0.64	0.3	8	20	28	2.96	2	0.81	18	1.04	573	1	0.25	17	0.037	6	2	119	10	0.12	5	38	1	90
G-168	0.2	3.07	7	25	403	2	0.69	1.3	10	30	32	3.15	2	0.76	20	0.81	831	2	0.09	20	0.054	8	2	105	14	0.15	5	47	1	96
G-169	0.1	3.47	12	30	357	2	0.75	0.2	9	58	30	2.92	2	0.85	21	0.87	741	2	0.28	18	0.043	9	2	128	15	0.16	5	46	1	86
G-170	0.2	2.91	5	22	366	2	0.72	0.7	9	56	24	2.63	2	0.67	21	0.69	620	4	0.32	20	0.024	4	2	196	15	0.16	5	44	1	69
G-171	0.4	4.01	8	32	338	2	1.3	0.5	8	22	32	3.43	2	0.79	19	1.09	541	1	0.05	19	0.037	6	2	101	10	0.11	5	39	1	110
STANDARD C	6.7	1.98	41	27	192	18	0.53	19.5	31	58	63	4.12	2	0.16	41	0.94	1029	21	0.06	70	0.094	38	15	55	43	0.09	18	57	10	136
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-172	0.1	3.27	3	29	320	3	0.72	0.2	10	28	29	3.08	2	0.81	18	0.97	675	2	0.11	16	0.031	11	2	110	13	0.13	5	41	1	94
G-173	0.1	3.42	7	34	363	2	0.75	0.2	11	30	33	3.24	2	0.93	20	1.08	750	2	0.1	20	0.041	8	2	109	13	0.14	5	44	1	100
G-174	0.3	3.82	8	27	304	2	0.88	1.1	10	28	30	3.32	2	0.73	22	1.02	756	2	0.08	18	0.04	16	2	105	17	0.1	5	39	1	108
G-175	0.2	3.07	5	31	338	3	0.73	0.7	11	49	31	3.17	2	0.85	20	0.93	837	3	0.09	20	0.052	11	2	96	14	0.14	5	44	2	95
G-176	0.1	3.4	6	41	210	3	0.89	0.2	12	45	33	3.32	2	1.15	22	1.1	668	1	0.26	22	0.023	8	2	138	17	0.15	5	44	1	92
G-177	0.4	3.68	6	35	329	3	0.76	0.6	10	43	32	3.4	2	0.94	22	1.11	725	2	0.18	20	0.033	10	2	121	15	0.14	5	45	1	103
G-178	0.3	3.4	3	33	375	2	0.84	0.2	11	46	31	3.29	2	0.82	21	1.09	761	3	0.11	21	0.044	7	2	123	15	0.14	5	45	2	101
G-179	0.1	4.02	4	34	396	3	0.81	0.2	12	60	36	3.6	2	0.96	23	1.18	868	2	0.15	23	0.031	11	2	128	16	0.15	5	48	1	108
G-180	0.2	4.07	3	37	375	2	0.78	0.2	11	88	32	3.56	2	0.99	23	1.15	647	5	0.33	23	0.028	11	2	138	17	0.15	5	46	1	101
G-181	0.1	3.41	5	34	267	2	1.32	0.2	9	70	24	2.93	2	0.97	20	1.1	680	4	0.19	15	0.045	10	2	136	15	0.11	5	38	1	94
G-182	0.3	3.2	2	29	358	2	0.74	0.3	10	33	30	3.13	2	0.83	19	0.99	732	1	0.11	20	0.039	8	2	120	12	0.13	5	43	2	95
G-183	0.4	2.62	3	23	336	2	0.67	1	11	48	27	2.86	2	0.71	20	0.79	925	3	0.11	19	0.049	6	2	106	14	0.13	5	42	1	84
G-184	0.3	2.82	3	24	339	2	0.72	0.5	10	62	27	2.98	2	0.73	20	0.81	865	3	0.12	17	0.054	11	2	109	16	0.14	5	45	2	90
G-185	0.6	3.15	2	21	389	2	0.78	0.7	12	89	29	3.19	2	0.63	23	0.74	911	4	0.19	20	0.047	8	2	129	15	0.17	5	52	1	88
G-186	0.2	5.15	2	28	358	2	0.92	0.4	13	197	32	4.17	2	0.74	26	1.02	766	12	0.17	35	0.041	10	2	127	15	0.16	5	59	1	99
G-187	0.1	5.42	7	38	242	2	0.88	0.7	11	128	30	4.03	2	0.92	25	1.18	661	6	0.28	19	0.034	8	2	133	13	0.14	5	47	1	106
G-188	0.2	3.06	6	31	329	2	0.69	0.3	12	60	28	3.32	2	0.89	21	0.96	887	2	0.14	20	0.046	8	3	117	18	0.16	5	46	2	94
G-189	0.4	3.24	7	28	298	2	0.63	0.6	11	40	28	3.31	2	0.92	20	0.97	680	2	0.15	21	0.033	8	2	103	15	0.15	5	45	2	89
G-190	0.2	2.54	8	23	324	2	0.68	0.2	11	49	26	3.11	2	0.7	20	0.83	988	3	0.1	18	0.061	11	2	109	14	0.15	5	45	2	91
G-191	0.2	2.69	3	24	268	2	0.64	1.3	12	46	27	3.17	2	0.75	21	0.77	749	3	0.16	19	0.032	13	3	114	14	0.18	5	48	1	85
G-192	0.2	3.86	2	40	305	2	0.77	1.9	11	45	35	3.8	2	1.3	23	1.24	736	2	0.19	20	0.035	8	3	99	16	0.15	5	47	1	110
G-193	0.1	3.71	6	39	219	4	0.62	0.2	10	41	32	3.66	2	1.04	20	1.16	606	2	0.26	21	0.028	13	3	111	14	0.15	5	45	2	106
G-194	0.3	3.1	7	32	201	2	0.57	0.9	10	20	31	3.33	2	0.93	19	1.01	517	1	0.18	20	0.025	11	5	109	12	0.12	5	41	1	89
G-195	0.1	4.24	5	47	172	2	0.54	0.4	11	29	31	3.87	2	1.03	22	1.18	670	1	0.42	26	0.029	9	2	111	17	0.14	5	43	1	104
G-196	0.4	3.27	7	41	261	2	1.24	0.3	9	35	29	3.24	2	1.04	20	1.04	636	2	0.22	22	0.064	9	2	111	12	0.13	5	41	2	99
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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AAL REF: SP035233
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-197	0.1	3.6	5	53	161	2	0.87	0.2	9	37	26	3.26	2	1.19	20	1.16	501	2	0.19	19	0.032	8	2	118	13	0.11	5	36	1	96
G-198	0.1	3.02	4	26	321	2	0.86	0.5	10	28	29	3.12	2	0.79	19	0.94	730	1	0.06	19	0.051	10	2	106	10	0.12	5	40	2	95
G-199	0.3	2.93	8	32	300	2	0.72	0.2	10	37	29	3.21	2	0.9	19	0.91	741	2	0.07	18	0.058	10	2	102	11	0.13	5	46	2	95
G-200	0.4	3.74	6	37	368	2	0.85	0.2	10	34	33	3.44	2	1.03	20	1.1	557	1	0.08	20	0.053	6	2	126	12	0.13	5	44	1	94
G-201	0.4	3.27	6	37	334	2	0.75	0.2	10	34	32	3.28	2	0.99	19	1.13	540	1	0.14	21	0.038	7	2	126	8	0.14	5	45	1	89
G-202	0.1	3.73	23	36	349	2	0.84	0.7	10	34	35	3.98	2	1.03	20	1.15	460	2	0.12	21	0.032	14	6	152	12	0.14	5	47	2	92
G-203	0.8	3.78	22	43	281	2	0.84	0.2	9	33	32	3.93	2	1.35	21	1.28	442	2	0.19	22	0.028	9	6	124	14	0.12	5	44	1	92
G-204	0.4	4.63	57	35	298	2	0.88	0.2	9	47	37	4.72	2	1.15	21	1.24	423	11	0.09	23	0.032	7	5	147	13	0.14	5	53	1	101
G-205	0.3	4.66	11	25	339	2	0.76	0.6	10	85	34	3.77	2	0.75	26	0.89	591	5	0.1	25	0.035	12	2	117	12	0.16	5	55	1	88
STANDARD C	6.3	1.94	39	25	181	20	0.53	18.3	33	58	61	4.05	2	0.16	41	0.94	1020	21	0.06	72	0.093	36	18	54	43	0.09	19	56	12	132
G-206	0.1	3.38	10	30	410	2	0.71	0.4	10	35	33	3.31	2	0.97	21	0.95	661	2	0.09	21	0.048	13	2	111	11	0.14	5	53	2	91
G-207	0.1	4.06	14	38	420	2	0.94	0.6	9	46	35	3.61	2	0.89	23	1.16	539	3	0.14	19	0.043	16	2	156	12	0.14	5	58	1	96
G-208	0.5	3.78	18	37	440	2	0.81	0.7	9	41	30	3.54	2	0.94	20	1.15	535	2	0.2	22	0.038	9	2	144	13	0.14	5	54	1	92
G-209	0.7	3.82	24	38	431	2	1.01	0.4	9	36	32	3.8	2	0.99	21	1.17	500	2	0.14	22	0.038	16	2	157	11	0.14	5	56	1	93
G-210	0.1	3.39	11	33	410	2	0.81	0.8	9	36	29	3.17	2	0.89	20	1	518	1	0.12	20	0.041	11	2	133	11	0.13	5	49	1	86
G-211	0.3	3.49	11	33	415	4	0.84	0.7	8	37	29	3.05	2	0.87	21	0.99	473	1	0.13	18	0.044	13	2	149	11	0.12	5	48	1	80
G-212	0.1	3.58	10	33	398	2	0.83	0.9	9	31	31	3.28	2	0.83	23	1.04	620	2	0.1	18	0.04	16	2	127	13	0.13	5	49	1	93
G-213	0.1	4.61	8	37	363	2	0.9	0.9	9	27	37	4.21	2	1	24	1.39	632	1	0.06	23	0.033	15	2	126	18	0.13	5	53	1	121
G-214	0.1	3.85	10	33	386	2	0.84	1.2	9	35	33	3.67	2	0.93	21	1.13	811	2	0.1	21	0.048	11	2	118	14	0.14	5	53	2	106
G-215	0.1	3.36	10	31	418	2	0.83	0.9	9	27	30	3.54	2	0.79	23	1.02	1175	1	0.09	18	0.048	9	2	116	17	0.12	5	51	1	102
G-216	0.1	7.04	10	62	304	2	0.86	0.4	11	74	41	4.61	2	1.51	27	1.68	702	4	0.49	34	0.021	15	2	148	20	0.17	5	72	2	134
G-217	0.1	3.96	11	43	230	2	0.76	0.3	9	26	38	3.63	2	0.98	24	1.25	540	1	0.23	21	0.031	15	2	129	14	0.09	5	46	1	112
G-218	0.4	3.33	9	34	424	2	0.8	0.7	9	31	32	3.19	2	0.85	20	1.06	632	2	0.13	21	0.05	13	2	131	13	0.14	5	52	1	95
G-219	0.2	4.29	9	35	456	2	0.8	0.2	11	43	35	3.63	2	1.1	23	1.06	840	2	0.11	24	0.053	16	2	114	19	0.15	5	57	1	108
G-220	0.1	4.12	3	28	369	2	0.89	0.8	9	35	35	3.41	2	0.83	23	1.05	552	1	0.07	23	0.035	8	2	106	12	0.13	5	50	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

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DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-221	0.1	4.06	9	38	343	2	1.07	0.2	9	35	33	3.4	2	0.84	24	1.15	486	2	0.14	24	0.031	12	2	137	12	0.13	5	48	1	92
G-222	0.1	4.23	6	33	381	2	0.85	0.5	11	59	33	3.54	2	1.02	25	1.08	673	3	0.29	26	0.033	15	2	153	15	0.18	5	60	1	95
G-223	0.1	3.77	6	48	280	2	0.77	1	7	25	35	3.39	2	0.79	20	1.16	381	1	0.34	21	0.038	11	2	134	12	0.11	5	47	1	97
G-224	0.1	3.85	3	28	381	2	0.9	0.6	9	33	37	3.35	2	0.9	22	1.01	576	1	0.07	25	0.045	14	2	98	15	0.13	5	48	1	93
G-225	0.1	5.77	5	68	212	3	0.66	0.2	9	46	35	4.13	2	1.03	26	1.33	490	2	0.77	29	0.026	3	2	145	17	0.16	5	64	1	109
G-226	0.1	3.37	7	27	364	2	0.7	1.1	9	30	31	3.06	2	0.81	20	0.9	580	2	0.09	20	0.044	9	2	99	13	0.14	5	47	1	84
G-227	0.1	7.35	6	54	339	2	0.92	0.2	10	122	44	4.4	3	1.53	27	1.58	552	5	0.5	30	0.026	15	2	166	19	0.17	5	70	1	136
G-228	0.6	3.29	12	40	321	2	0.9	0.9	8	35	29	3.33	2	1.28	18	1.07	609	2	0.11	21	0.043	8	2	124	12	0.12	5	48	2	87
G-229	1.2	4.54	19	38	392	2	0.94	0.5	8	27	34	4.13	2	1.26	25	1.32	367	1	0.07	23	0.047	12	2	197	12	0.1	5	58	1	114
G-230	0.7	3.71	19	32	365	2	0.7	0.2	9	34	31	3.64	2	1.15	21	1	578	1	0.09	22	0.041	8	2	113	15	0.13	5	52	1	89
G-231	0.1	3.16	27	32	371	2	0.64	0.2	8	36	29	3.4	2	1.08	17	0.97	452	1	0.11	18	0.032	11	3	111	15	0.12	5	48	2	82
G-232	0.1	3.55	12	30	394	2	0.75	0.6	9	30	31	3.52	2	0.9	20	1.04	559	1	0.07	21	0.038	13	2	119	12	0.12	5	51	1	88
G-233	0.8	3.6	11	37	421	2	0.8	0.2	9	39	31	3.4	2	1	21	1.05	616	1	0.13	22	0.042	8	2	132	13	0.14	5	57	1	92
G-234	0.1	5.94	11	62	364	2	0.81	0.2	10	82	40	4.13	2	1.57	24	1.42	617	5	0.42	34	0.034	16	2	147	16	0.18	5	69	1	110
G-235	0.6	3.25	10	38	374	2	1.09	0.7	8	37	32	3.09	2	0.89	19	1.06	512	2	0.16	20	0.046	10	2	152	8	0.14	5	52	2	88
G-236	0.2	3.58	10	43	417	2	0.84	0.8	10	32	37	3.39	2	1.21	20	1.2	566	1	0.1	24	0.047	9	2	138	13	0.14	5	53	1	96
G-237	0.1	3.57	12	40	377	2	0.93	0.2	9	33	33	3.3	2	1.11	21	1.14	492	1	0.09	22	0.042	8	2	136	12	0.13	5	51	1	92
G-238	0.1	5.58	8	48	325	2	0.72	0.2	9	53	38	3.93	2	1.45	23	1.31	477	2	0.34	27	0.028	5	2	129	14	0.15	5	57	1	111
G-239	0.6	2.25	13	20	290	2	5.98	0.6	4	22	22	1.96	2	0.38	19	0.6	478	1	0.09	14	0.046	2	2	287	15	0.09	5	43	2	58
STANDARD C	6.4	1.92	39	26	191	20	0.51	19.3	30	63	60	4.05	2	0.16	40	0.94	1023	21	0.06	70	0.093	35	17	53	42	0.09	17	62	11	130
G-240	0.7	3.25	6	26	281	2	0.78	0.2	10	26	31	3.3	2	0.89	22	0.92	539	2	0.06	21	0.053	7	2	130	11	0.12	5	49	1	93
G-241	1.4	2.53	4	18	184	2	4.73	0.2	6	26	25	2.55	2	0.47	20	0.65	324	1	0.05	16	0.043	2	2	227	9	0.09	5	40	1	68
G-242	0.8	3.75	4	31	344	2	1.1	0.2	10	34	35	3.47	2	0.91	22	1.13	622	1	0.09	26	0.044	6	2	145	11	0.13	5	46	2	101
G-243	1.4	3.41	5	34	370	2	1.32	0.2	11	32	36	3.27	2	0.98	20	1.01	708	1	0.08	23	0.06	5	2	116	10	0.14	5	47	1	99
G-244	0.2	6.35	2	59	219	2	0.88	0.2	10	126	44	4.41	2	1.45	22	1.48	532	8	0.37	39	0.028	12	2	154	18	0.16	5	59	1	126
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-245	0.2	2.64	6	26	270	2	0.55	0.2	11	20	33	3.12	2	0.7	26	0.81	580	1	0.14	22	0.024	10	3	106	14	0.14	5	44	1	85
G-246	0.4	3.5	5	31	241	2	0.73	0.4	11	37	31	3.43	2	1.03	21	1.07	638	2	0.19	26	0.028	8	2	117	14	0.14	5	44	1	93
G-247	0.9	4	2	31	238	2	0.72	0.2	11	323	32	3.52	2	0.99	23	0.93	543	16	0.25	23	0.026	9	3	137	14	0.16	5	52	1	87
G-248	0.4	2.58	7	32	187	2	0.57	0.2	10	20	30	2.96	2	0.76	18	0.85	474	1	0.18	18	0.027	7	3	118	7	0.12	5	40	1	83
G-249	0.1	6.59	2	46	257	2	0.8	0.2	11	142	34	4.1	2	1.31	25	1.31	512	7	0.3	27	0.025	15	2	147	12	0.16	5	57	2	108
G-250	0.6	3.73	6	26	322	2	0.71	0.2	11	80	34	3.52	2	0.92	23	0.93	714	6	0.15	31	0.037	8	2	125	15	0.16	5	50	1	92
G-251	0.2	3.1	10	33	198	2	0.64	0.2	11	21	39	3.37	2	0.84	19	0.98	664	1	0.21	20	0.033	11	4	107	14	0.11	5	43	1	99
G-252	0.7	4.18	3	35	295	2	0.8	0.2	11	110	36	3.59	2	1.05	23	1	693	9	0.32	35	0.034	8	2	149	11	0.18	5	55	2	94
G-253	0.2	4.51	9	34	314	2	0.77	0.2	15	227	34	3.62	2	0.95	32	0.97	816	12	0.3	28	0.03	13	2	140	19	0.18	5	62	1	92
G-254	0.3	3.48	3	30	269	2	0.66	0.2	11	74	31	3.48	2	0.96	23	0.92	678	5	0.2	28	0.021	12	2	125	16	0.17	5	53	1	97
G-255	0.1	2.66	3	33	212	2	0.55	0.2	9	21	30	3.04	2	0.77	19	0.89	478	1	0.29	17	0.033	12	3	124	12	0.14	5	45	1	84
G-256	1.1	4.08	4	35	361	2	0.85	0.2	11	29	35	3.71	2	0.97	22	1.17	641	1	0.07	24	0.047	11	2	131	12	0.13	5	49	1	107
G-257	0.2	3.58	6	23	339	2	0.77	0.2	11	71	31	3.44	2	0.68	23	0.85	683	3	0.08	19	0.042	13	2	107	12	0.12	5	52	1	102
G-258	0.2	2.67	5	28	214	2	0.71	0.4	10	24	38	3.04	2	0.53	22	0.75	538	1	0.15	20	0.038	17	2	106	11	0.1	5	46	1	98
G-259	1.1	1.79	4	18	204	2	0.52	0.3	11	20	25	2.46	2	0.36	20	0.5	556	1	0.12	16	0.027	10	2	102	13	0.12	5	43	1	62
G-260	0.6	3.87	5	27	419	2	0.8	0.2	11	47	33	3.39	2	0.86	22	0.94	702	2	0.1	23	0.047	16	2	126	12	0.14	5	50	1	97
G-261	0.7	2.67	7	25	333	2	0.72	0.4	10	42	26	2.83	2	0.8	19	0.75	859	2	0.11	20	0.056	15	2	109	13	0.14	5	46	1	86
G-262	0.5	2.91	5	28	304	2	0.67	0.2	10	27	29	3	2	0.97	19	0.93	768	1	0.09	19	0.043	13	2	98	12	0.13	5	43	1	90
G-263	0.5	3.94	2	34	373	2	0.82	0.2	10	49	32	3.42	2	0.98	22	1.09	710	1	0.21	22	0.04	13	2	130	16	0.16	5	52	1	103
G-264	0.2	3.78	4	29	313	2	0.84	0.3	10	45	28	3.17	2	0.88	23	0.98	724	2	0.27	19	0.027	9	2	144	16	0.16	5	49	2	92
G-265	0.4	3.82	3	37	260	2	0.79	0.2	10	36	27	3.2	2	1	22	1.02	496	2	0.39	16	0.022	11	2	135	15	0.14	5	47	1	97
G-266	0.4	3.69	4	27	315	2	1.5	0.2	9	28	34	3.22	2	0.81	21	0.99	587	1	0.07	22	0.05	7	2	102	12	0.12	5	44	1	89
G-267	0.1	5	2	58	228	2	0.76	0.2	11	62	41	3.95	3	1.43	21	1.46	561	3	0.38	28	0.025	9	2	140	14	0.16	5	52	1	110
G-268	0.1	5.07	3	53	243	2	0.84	0.2	11	45	42	3.99	2	1.45	22	1.59	593	2	0.32	30	0.028	8	2	151	15	0.16	5	51	1	115
G-269	0.4	3.41	2	46	421	2	1.17	0.5	10	30	35	3.25	2	1.16	20	1.13	527	1	0.19	20	0.048	10	2	129	12	0.14	5	49	1	92
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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CLIENT: HECLA MINING CO.
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AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-270	0.1	3.19	7	33	342	2	0.7	0.4	10	28	30	3.07	2	0.88	23	1.02	639	1	0.13	20	0.044	15	4	115	15	0.13	5	45	1	89
G-271	0.1	3.26	2	33	380	2	0.76	0.2	10	26	32	3.14	2	0.98	19	1.02	596	1	0.12	19	0.047	10	2	109	12	0.13	5	44	1	91
G-272	0.1	4.67	2	29	357	2	1.06	0.2	18	62	48	5.15	2	0.75	27	1.08	754	1	0.15	41	0.073	9	2	131	15	0.14	5	77	1	114
G-273	0.1	3.55	9	33	403	2	0.76	0.4	11	31	32	3.33	2	0.92	21	0.94	669	2	0.08	20	0.044	10	2	120	13	0.14	5	49	1	96
STANDARD C	7	1.95	38	25	176	18	0.5	18.6	33	58	60	4.02	2	0.16	42	0.93	998	21	0.06	72	0.094	37	14	55	40	0.09	14	59	10	132
G-274	0.4	3.52	10	32	418	2	0.78	0.9	11	32	29	3.31	2	0.86	22	1.07	670	2	0.07	22	0.043	8	2	146	14	0.12	5	48	1	100
G-275	0.1	3.34	8	32	384	2	0.79	1.4	9	32	26	3.12	2	0.91	22	1.04	602	1	0.11	18	0.033	12	2	137	13	0.12	5	44	1	93
G-276	0.1	3.04	11	51	327	2	0.62	1.9	9	27	24	3.18	2	0.84	24	0.97	603	1	0.46	15	0.029	10	2	139	15	0.12	5	43	1	96
G-277	0.1	3.73	3	44	311	2	0.81	1	10	27	33	3.6	2	1.23	23	1.27	604	1	0.06	22	0.034	8	2	121	12	0.12	5	48	1	117
G-278	0.1	4.33	14	56	292	2	0.89	1.2	10	32	34	3.98	2	1.42	20	1.46	387	9	0.09	25	0.03	6	2	117	13	0.13	5	54	1	104
G-279	0.1	4.01	13	43	371	2	0.79	1.7	11	31	33	3.86	2	1.23	23	1.27	614	2	0.11	21	0.04	8	2	152	12	0.12	5	51	1	104
G-280	0.1	4.02	9	84	233	2	0.83	1	8	28	29	3.65	2	1.1	17	1.24	335	2	0.69	19	0.032	8	2	146	11	0.12	5	47	1	90
G-281	0.1	3.92	21	40	329	2	0.74	0.9	9	25	29	3.77	2	1.14	21	1.19	410	1	0.1	21	0.035	3	2	123	13	0.11	5	43	1	87
G-282	0.3	3.56	8	39	292	2	0.73	1.7	9	27	30	3.54	2	1.04	22	1.15	597	1	0.07	20	0.033	9	3	115	14	0.12	5	45	1	112
G-283	0.3	3.69	10	41	306	2	0.76	1.1	9	32	28	3.4	2	1.08	20	1.12	514	1	0.13	19	0.033	6	2	119	11	0.13	5	47	1	87
G-284	0.1	4.15	11	33	289	2	0.74	1.2	9	28	30	3.87	2	0.97	21	1.21	481	1	0.05	23	0.022	10	2	122	13	0.12	5	47	1	105
G-285	0.1	3.5	4	33	278	2	1.16	0.2	8	27	29	3.24	2	0.96	21	1.09	523	1	0.14	19	0.028	3	2	111	13	0.13	5	46	1	97
G-286	0.1	4.12	9	44	409	2	1.04	0.3	12	32	42	3.83	2	1.16	27	1.37	708	2	0.08	23	0.039	8	2	149	14	0.13	5	54	1	132
G-287	0.5	2.81	9	9	707	2	1.84	1	10	56	31	3.4	2	0.29	16	0.7	459	4	0.43	21	0.085	2	2	260	5	0.23	5	96	1	71
G-288	0.1	4.9	20	37	427	2	1	1	11	33	37	4.22	2	1.08	25	1.35	514	3	0.06	26	0.047	7	2	158	15	0.14	5	55	1	109
G-289	0.1	4.91	8	47	452	2	0.94	0.2	12	40	37	4.1	2	1.2	24	1.41	636	1	0.09	25	0.048	15	2	139	13	0.15	5	57	1	118
G-290	0.1	3.44	7	31	385	2	0.73	1.4	10	38	31	3.35	2	0.95	20	0.91	682	2	0.08	22	0.049	12	2	112	12	0.14	5	51	1	92
G-291	0.1	3.64	6	28	414	2	0.82	1.1	10	42	32	3.44	2	0.8	21	1.01	697	1	0.06	25	0.045	6	2	111	14	0.13	5	48	1	96
G-292	0.1	3.02	8	80	271	2	1.17	0.7	9	35	27	2.94	2	0.99	18	1.02	520	2	0.42	19	0.029	10	2	124	13	0.13	5	43	1	80
G-293	0.2	3.89	12	43	347	2	2.27	0.9	10	29	38	3.45	2	1.1	22	1.32	489	1	0.16	26	0.044	4	2	142	12	0.12	5	45	2	101
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-294	0.4	2.55	15	28	238	2	14.18	0.2	5	14	15	1.75	2	0.34	13	0.99	209	2	0.09	19	0.036	3	2	501	21	0.07	14	27	2	49
G-295	0.1	4.51	5	33	394	2	1.53	0.8	7	34	33	3.64	2	0.83	23	1.21	388	1	0.07	25	0.04	8	2	138	13	0.13	5	44	1	102
G-296	0.9	3.53	11	31	373	2	0.77	1.3	11	37	34	3.41	2	1.02	21	1	672	1	0.07	24	0.046	12	2	122	14	0.13	5	51	1	101
G-297	0.1	4.01	11	55	291	2	0.79	1.4	9	145	40	3.58	2	1.01	19	1.11	529	6	0.45	22	0.034	20	2	127	10	0.13	5	50	1	100
G-298	0.1	4.19	17	41	423	2	0.86	0.4	11	29	35	4.02	2	1.06	21	1.25	555	2	0.08	23	0.038	11	2	142	13	0.14	5	56	1	108
G-299	0.2	3.21	9	45	385	2	0.99	0.7	10	34	33	3.18	2	1.06	16	1.19	529	2	0.12	21	0.04	8	2	141	10	0.14	5	51	1	89
G-300	0.3	3.24	10	44	385	2	0.99	0.5	10	32	33	3.18	2	1.08	16	1.19	531	1	0.12	21	0.039	5	2	142	11	0.14	5	51	1	89
G-301	0.1	3.1	7	35	282	2	1.36	0.7	9	38	28	3.02	2	0.88	18	1.05	543	1	0.18	21	0.035	7	2	164	11	0.14	5	48	2	81
G-302	1.3	3.34	28	38	381	2	1.3	0.5	9	32	33	3.52	2	0.93	18	1.08	510	2	0.1	21	0.043	10	2	157	9	0.13	5	51	1	86
G-303	0.4	3.53	7	25	300	2	0.69	1	10	33	30	3.17	2	0.76	23	0.81	633	1	0.06	21	0.039	5	2	103	11	0.13	5	49	1	88
G-304	0.1	3.79	7	32	359	2	1.7	1.1	9	28	35	3.23	2	0.81	22	0.98	598	1	0.05	23	0.046	5	2	99	12	0.12	5	47	2	93
G-305	0.1	3.23	5	32	357	2	1	0.5	10	30	30	2.96	2	0.72	20	1.01	609	1	0.1	18	0.044	5	2	128	12	0.13	5	45	1	84
G-306	0.1	3.45	6	43	416	2	0.7	0.3	10	36	32	3.19	2	0.97	20	1.06	763	2	0.26	20	0.05	7	4	127	14	0.14	5	49	1	94
G-307	0.1	2.83	8	37	272	2	0.51	0.2	10	32	26	2.85	2	0.8	18	0.87	671	1	0.3	19	0.035	8	2	110	13	0.14	5	46	1	80
STANDARD C	6.5	1.85	38	24	181	18	0.49	18	32	62	55	3.89	2	0.15	38	0.89	1013	20	0.06	69	0.089	36	18	50	39	0.08	14	59	10	126
G-308	0.5	3.74	2	34	381	2	1.27	0.8	9	30	34	3.22	2	0.9	20	1.16	569	1	0.08	23	0.045	4	2	126	8	0.13	5	46	1	93
G-309	0.5	2.95	9	33	329	2	1.39	0.5	8	32	30	2.84	2	0.82	18	0.96	696	1	0.11	18	0.053	9	2	114	9	0.13	5	47	1	85
G-310	0.1	3.6	6	31	333	2	1.47	1.4	9	31	36	3.24	2	0.86	20	1.06	581	2	0.09	23	0.042	9	2	127	6	0.14	5	48	1	92
G-311	0.1	4.41	2	68	235	2	1.48	0.7	9	44	33	3.6	2	1.07	21	1.29	577	2	0.2	27	0.035	9	2	153	14	0.15	5	51	1	103
G-312	0.3	3.14	7	33	320	2	2.92	0.2	8	26	32	2.85	2	0.83	18	1.05	585	1	0.07	23	0.05	7	2	162	5	0.12	5	44	1	85
G-313	0.1	3.75	5	95	193	2	0.64	0.2	8	56	31	3.32	2	0.92	21	1.1	586	2	0.46	21	0.037	12	2	115	11	0.14	5	52	2	96
G-314	0.1	3.41	5	73	248	2	0.65	0.6	9	43	29	3.21	2	0.88	20	1.03	500	2	0.44	20	0.029	13	2	155	12	0.15	5	51	1	86
G-315	0.1	3.81	2	39	300	2	0.72	0.2	9	40	32	3.46	2	1.09	20	1.2	525	2	0.26	22	0.032	11	2	147	11	0.14	5	50	1	98
G-316	0.1	3.28	5	34	334	2	0.81	0.2	8	34	32	3.08	2	0.85	18	1.1	558	2	0.12	20	0.05	10	2	125	7	0.13	5	48	1	89
G-317	0.1	4.43	6	45	264	2	0.78	0.7	9	49	33	3.64	2	1.06	20	1.15	596	3	0.33	24	0.042	12	2	177	11	0.15	5	54	1	104
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-318	0.1	3.36	5	30	358	2	0.87	1.2	9	28	32	3.15	2	0.77	20	0.99	646	1	0.06	20	0.052	13	2	108	12	0.12	5	47	2	91
G-319	0.1	2.77	9	18	293	2	0.61	0.6	10	48	27	2.91	2	0.52	24	0.7	706	3	0.21	19	0.031	12	2	103	15	0.15	5	52	2	75
G-320	0.2	2.69	9	22	328	2	0.66	1.5	10	37	27	2.97	2	0.67	22	0.72	1053	2	0.09	16	0.055	15	2	97	14	0.13	5	50	2	89
G-321	0.1	2.9	9	27	319	2	0.69	0.5	9	37	30	3.11	2	0.81	19	0.88	877	2	0.08	15	0.055	12	2	106	13	0.12	5	47	1	104
G-322	0.5	3.3	8	27	380	2	0.83	0.6	9	27	28	3.55	2	0.8	21	0.97	3739	1	0.06	17	0.063	10	2	110	17	0.1	5	52	1	119
G-323	0.1	4.12	6	38	241	2	0.77	0.2	9	50	28	3.7	2	1.04	24	1.12	623	3	0.2	22	0.041	9	2	134	12	0.14	5	50	2	104
G-324	0.1	3.47	8	38	252	2	0.78	1.2	9	40	27	3.5	2	1.05	22	1.07	569	1	0.24	21	0.034	7	2	131	16	0.13	5	48	2	94
G-325	0.2	3.7	9	56	194	2	0.58	0.8	10	26	35	3.9	2	1.16	20	1.35	686	1	0.34	24	0.033	17	2	142	14	0.12	5	48	1	122
G-326	0.1	4.39	8	43	378	2	0.87	0.5	10	34	37	4	2	1.07	23	1.39	761	2	0.08	23	0.037	14	2	128	14	0.14	5	54	1	132
G-327	0.1	2.82	8	27	328	2	0.63	0.2	9	28	29	3.35	2	0.73	21	0.94	777	1	0.09	17	0.036	11	2	108	12	0.13	5	48	1	103
G-328	0.1	3.32	12	31	315	2	0.75	0.8	9	24	32	3.57	2	0.78	21	1.09	639	2	0.06	19	0.039	11	3	125	12	0.11	5	46	1	102
G-329	0.5	3.79	5	39	344	2	0.83	0.6	9	27	36	3.85	2	0.96	23	1.28	607	1	0.07	21	0.034	11	2	122	11	0.12	5	50	1	118
G-330	133.5	3.27	11	41	179	2	0.5	0.5	8	39	27	3.58	2	0.99	20	1.07	544	1	0.22	17	0.027	12	2	91	12	0.11	5	43	1	100
G-331	0.5	2.99	7	25	325	2	0.69	0.5	9	28	30	3.29	2	0.76	19	0.96	746	2	0.06	18	0.046	14	2	104	10	0.12	5	46	1	102
G-332	25.1	3.98	5	34	265	2	0.72	0.9	10	32	35	3.86	2	1.05	22	1.25	881	1	0.08	23	0.034	12	2	101	15	0.12	5	47	1	130
G-333	0.1	3.37	4	37	360	2	0.75	0.2	9	28	32	3.48	2	0.96	21	1.13	637	1	0.07	19	0.047	14	2	107	13	0.13	5	50	1	97
G-334	9.3	3.6	64	40	337	6	0.74	0.4	9	26	35	4.9	2	1.09	22	1.22	527	3	0.09	23	0.057	17	11	138	14	0.1	5	54	2	103
G-335	22.1	3.17	9	42	213	3	0.49	0.3	9	34	28	3.57	2	0.9	22	0.99	562	2	0.28	18	0.029	15	2	118	15	0.13	5	45	2	95
G-336	0.5	3.08	9	28	340	4	0.71	1.1	9	28	30	3.43	2	0.79	21	0.96	720	2	0.07	19	0.048	12	2	117	15	0.12	5	50	1	97
G-337	0.1	3.14	7	28	343	2	0.65	1	10	29	34	3.48	2	0.94	19	1	821	1	0.06	20	0.046	14	2	100	12	0.13	5	50	1	96
G-338	0.1	2.85	7	20	331	2	0.55	0.8	9	26	29	3.24	2	0.69	20	0.78	817	1	0.07	20	0.038	8	2	87	15	0.13	5	49	1	90
G-339	4.9	3.26	6	26	302	2	0.57	0.2	10	28	30	3.56	2	0.77	21	0.91	783	1	0.05	19	0.031	12	2	88	14	0.13	5	49	1	96
G-340	18.8	3.45	7	21	258	2	0.68	0.2	8	27	27	3.48	2	0.56	20	0.91	578	1	0.06	19	0.03	13	2	108	14	0.11	5	43	1	101
G-341	0.1	3.18	7	26	338	2	0.64	1	9	27	30	3.27	2	0.74	20	0.91	687	1	0.06	18	0.04	12	2	97	13	0.13	5	45	1	98
STANDARD C	6.7	1.96	40	25	184	16	0.52	18.1	30	63	59	4.09	3	0.16	40	0.93	1072	21	0.06	68	0.095	37	18	54	42	0.08	21	62	11	133
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

American Assay Laboratories

CLIENT: HECLA MINING CO.
CLIENT REF: ROSEBUD
AAL REF: SP035233
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G-342	1.3	3.35	10	35	384	2	0.84	0.2	10	22	34	3.45	2	0.78	21	1.12	642	2	0.09	19	0.047	9	2	125	8	0.12	5	51	1	100
G-343	0.3	3.42	9	38	376	2	0.77	0.8	10	28	31	3.46	2	0.89	20	1.09	557	1	0.07	21	0.041	10	2	124	13	0.13	5	50	1	94
G-344	0.1	3	9	24	365	2	0.69	0.9	10	26	30	3.02	2	0.68	20	0.87	713	2	0.07	15	0.049	18	2	109	13	0.12	5	49	1	89
G-345	1	2.75	13	25	332	2	0.62	0.9	10	23	30	3.07	2	0.67	20	0.81	677	2	0.06	17	0.044	14	2	107	13	0.12	5	49	1	82
G-346	0.1	2.92	5	29	398	2	0.64	0.2	10	27	30	3.05	2	0.78	19	0.89	684	1	0.08	17	0.044	8	2	104	11	0.13	5	49	1	91
G-347	0.4	3.65	11	39	395	2	0.75	0.7	11	25	37	3.56	2	1.05	21	1.2	622	1	0.09	21	0.047	17	2	116	11	0.12	5	50	1	107
G-348	0.1	2.78	7	31	342	2	0.73	0.2	10	29	30	3.03	2	0.8	15	0.92	767	1	0.14	17	0.03	14	2	94	12	0.14	5	48	1	89
G-349	1.5	3.29	8	40	371	2	0.64	1	10	28	36	3.37	2	0.99	17	1.24	626	1	0.13	22	0.028	12	2	98	11	0.13	5	49	1	101
G-350	0.6	2.69	4	36	330	2	0.71	0.8	8	22	31	2.82	2	0.78	12	1.03	515	1	0.2	17	0.033	8	2	113	8	0.13	5	46	1	84
G-351	0.1	3.7	7	38	416	3	0.85	1.4	11	26	36	3.81	2	0.83	22	1.23	848	1	0.09	20	0.041	9	2	132	14	0.14	5	56	1	115
G-352	2.4	2.9	6	35	326	2	0.68	1	9	25	31	3.11	2	0.9	17	1.08	646	1	0.15	16	0.038	7	2	103	13	0.13	5	48	1	97
G-353	0.1	3.87	5	46	461	2	0.86	0.2	12	34	39	3.78	2	1.13	23	1.36	842	1	0.09	24	0.052	9	2	132	13	0.13	5	55	1	127
G-354	0.7	2.45	9	27	338	2	0.68	1.2	9	21	26	3.08	2	0.68	18	0.86	859	1	0.06	15	0.048	13	2	108	14	0.11	5	44	1	98
G-355	0.1	3.17	10	36	306	2	0.89	1.5	9	27	31	3.38	2	1	19	1.08	718	1	0.07	20	0.045	11	2	115	11	0.12	5	46	1	103
G-356	0.5	2.73	10	26	346	2	0.68	0.2	9	22	30	3.42	2	0.7	19	0.91	839	2	0.05	17	0.043	14	2	96	13	0.11	5	43	1	111
G-357	0.1	3.15	8	30	354	2	0.68	0.2	10	28	31	3.65	2	0.85	22	1.03	752	1	0.07	19	0.034	13	2	107	13	0.13	5	47	1	102
STANDARD C	6.4	1.84	40	30	185	17	0.5	18.7	32	59	57	3.82	2	0.15	39	0.88	958	20	0.06	63	0.089	37	17	50	41	0.08	19	60	12	124
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP036339

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO :

:

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CLIENT REFERENCE No: 21[illegible]455/229X455 RECEIVED : 6 NOV 1995

No. SAMPLES : 20 REPORTED : 9 NOV 1995

MAIN SAMPLE TYPE : SOILS

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP036339

CLIENT : HECLA MINING CO.
PROJECT : NONE
REFERENCE : 21X455/:29X455

REPORTED : 9 NOV 1:95

SAMPLES	Au	A (R)
21X455	<5	
[illegible]	[illegible]	
211X455	8	
212X455	5	
213X455	7	
214X455	<5	
215X455	<5	
216X455	<5	
217X455	8	
218X455	<5	
221X455	<5	
222X455	6	
223X455	11	
224X455	<5	
225X455	<5	
226X455	<5	
227X455	10	
228X455	<5	
229X455	18	

American Assay Laboratories

INVOICE

******CHANGE OF ADDRESS******
------PLEASE REMIT TO
------P.O. BOX 11530
------RENO NV 89510-1530

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0036339-IN
INVOICE DATE: 11/10/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
21X455/229X455		NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
20	SAMPLES RECEIVED	.00	.00
20	SCREENING CHARGE	1.00	20.00
20	Au (1 A.T. FIRE ASSAY)	8.00	160.00

ok to pay
716130-477
Carolyn Minkoff

NET INVOICE:	180.00
LESS DISCOUNT:	59.40
FREIGHT:	.00
INVOICE TOTAL:	120.60

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036339

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO :

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:

:

CLIENT REFERENCE No: 21X455/229X455

No. SAMPLES : 20

MAIN SAMPLE TYPE : SOILS

RECEIVED : 6 NOV 1995

REPORTED : 10 NOV 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036339

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : NONE
REFERENCE : 21X455/229X455

REPORTED : 10 NOV 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb
21X455	<5	
22X455	<5	
211X455	8	
212X455	5	
213X455	7	
214X455	<5	
215X455	<5	
216X455	<5	
217X455	8	
218X455	<5	
219X455	<5	
221X455	<5	
222X455	6	
223X455	11	
224X455	<5	
225X455	<5	
226X455	<5	
227X455	10	
228X455	<5	
229X455	18	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036339

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO :

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CLIENT REFERENCE No: 21X455/229X455

No. SAMPLES : 20

MAIN SAMPLE TYPE : SOILS

RECEIVED : 6 NOV 1995

REPORTED : 10 NOV 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036339

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : NONE
REFERENCE : 21X455/229X455

REPORTED : 10 NOV 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb
21X455	<5	
22X455	<5	
211X455	8	
212X455	5	
213X455	7	
214X455	<5	
215X455	<5	
216X455	<5	
217X455	8	
218X455	<5	
219X455	<5	
221X455	<5	
222X455	6	
223X455	11	
224X455	<5	
225X455	<5	
226X455	<5	
227X455	10	
228X455	<5	
229X455	18	

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036271

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: RS-67/95
No. SAMPLES : 29
MAIN SAMPLE TYPE : ROCK CHIPS

RECEIVED : 31 OCT 1995
REPORTED : 13 NOV 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
Ag	D210	10%	ppm	0.5
As	D210	10%	ppm	2

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036271

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : RS-67/95

REPORTED : 13 NOV 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	As D210 ppm
RS-67	185		<0.5	28
RS-68	15		<0.5	129
RS-69	26		<0.5	29
RS-70	20		<0.5	33
RS-71	16		<0.5	13
RS-72	72		<0.5	27
RS-73	114		2.9	32
RS-74	300		1.0	27
RS-75	5		<0.5	5
RS-76	72		<0.5	40
RS-77	190		<0.5	39
RS-78	15	17	<0.5	41
RS-79	11		<0.5	25
RS-80	52		<0.5	254
RS-81	92		5.7	18
RS-82	30		1.2	29
RS-83	92		0.6	45
RS-84	35		<0.5	10
RS-85	101		<0.5	7
RS-86	63		<0.5	137
RS-87	64		<0.5	16
RS-88	50		<0.5	104
RS-89	30		<0.5	37
RS-90	107		2.1	97
RS-91	29		0.6	70

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP036271

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : RS-67/95

REPORTED : 13 NOV 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	Ag D210 ppm	As D210 ppm
RS-92	10		0.5	26
RS-93	93		0.7	32
RS-94	255		1.3	70
RS-95	82		0.6	57

CLIENT: HELCA MINING CO./MIKE BRADY
CLIENT REF: ROSEBUD
AAL REF: SP036271
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RS-67	0.2	1.04	23	6	115	4	0.16	0.2	2	14	15	3.79	3	0.11	15	0.04	150	9	0.01	5	0.038	11	31	26	9	0.01	23	5	1	54
RS-68	0.1	1.09	121	7	128	2	0.16	0.6	1	7	9	1.75	2	0.36	19	0.07	41	3	0.02	4	0.011	13	15	36	11	0.01	5	2	1	10
RS-69	0.1	0.7	23	2	212	2	0.24	0.2	1	9	8	2.02	2	0.22	23	0.04	69	3	0.02	3	0.03	27	20	63	6	0.01	5	6	1	8
RS-70	0.3	1.36	26	5	375	2	0.5	0.4	2	17	17	2.73	5	0.07	12	0.1	200	6	0.01	8	0.033	19	19	89	6	0.01	5	9	1	12
RS-71	0.1	0.83	4	6	100	2	0.39	0.3	4	31	28	2.93	5	0.06	11	0.05	256	8	0.09	12	0.017	10	13	50	3	0.01	5	6	1	20
RS-72	0.1	0.66	8	5	59	7	0.2	0.4	1	6	15	9.47	2	1.12	52	0.04	61	6	0.06	3	0.118	9	26	498	10	0.01	5	11	1	53
RS-73	2.7	1.08	23	5	95	4	0.15	0.4	1	9	13	3.1	2	0.12	22	0.05	73	3	0.01	4	0.036	23	33	99	9	0.01	5	6	1	10
RS-74	0.6	1.15	19	3	86	2	0.11	0.5	1	9	12	2.7	2	0.09	17	0.04	67	3	0.01	5	0.027	17	77	75	9	0.01	5	3	1	9
RS-75	0.1	0.79	2	4	261	2	0.27	0.3	1	6	8	2.12	2	0.37	23	0.09	36	3	0.02	2	0.043	11	2	129	10	0.01	5	3	1	9
RS-76	0.1	1.28	34	4	179	2	0.22	0.5	1	6	8	2.61	3	0.08	12	0.07	32	6	0.01	2	0.022	14	21	61	10	0.01	5	5	1	7
RS-77	0.1	1.11	21	6	123	4	0.25	0.2	1	10	15	5.69	2	0.3	24	0.03	61	5	0.08	4	0.132	10	29	78	6	0.01	5	22	1	32
RS-78	0.1	0.92	51	2	101	2	0.2	0.2	3	7	13	3.23	5	0.11	23	0.02	95	5	0.01	3	0.061	23	32	52	8	0.01	5	7	1	36
RS-79	0.1	1.34	15	4	82	2	0.2	0.2	2	16	15	2.64	4	0.08	18	0.03	83	5	0.01	5	0.048	6	15	44	6	0.01	5	5	1	14
RS-80	0.1	1.74	138	4	117	2	0.08	0.5	1	10	13	3.11	11	0.29	8	0.01	51	3	0.02	4	0.034	16	30	37	4	0.01	5	5	1	8
RS-81	3.6	1.02	46	4	133	2	0.12	0.3	2	15	14	2.55	3	0.65	16	0.03	79	8	0.03	6	0.03	10	19	77	6	0.01	5	5	1	7
RS-82	0.8	1.26	19	3	123	2	0.13	0.5	1	7	7	1.82	2	0.25	26	0.04	47	2	0.04	3	0.027	12	7	112	10	0.01	5	4	1	7
RS-83	0.6	0.53	35	4	96	2	0.42	0.2	3	24	21	2.87	2	0.18	41	0.05	415	9	0.02	9	0.016	8	19	26	11	0.01	5	7	1	49
RS-84	0.1	0.15	2	2	648	2	0.27	0.2	5	38	38	3.03	6	0.04	2	0.04	251	9	0.01	16	0.02	6	5	34	2	0.01	5	9	1	5
RS-85	0.1	0.06	2	6	238	3	1.36	0.2	2	13	16	1.07	2	0.02	2	0.17	59	3	0.1	6	0.005	3	2	73	2	0.01	5	4	1	4
RS-86	0.1	1.14	149	3	256	2	0.25	0.2	3	22	22	2.82	29	0.11	10	0.04	194	9	0.02	10	0.05	13	112	90	4	0.01	5	11	1	16
RS-87	0.1	0.85	46	2	95	4	0.23	0.2	2	17	17	2.37	6	0.13	15	0.03	95	6	0.02	7	0.022	32	40	57	5	0.01	5	6	1	8
RS-88	0.1	1.17	102	4	245	2	0.29	0.5	1	11	15	3.96	5	0.16	20	0.08	143	5	0.01	4	0.07	24	43	102	6	0.01	5	8	1	11
RS-89	0.2	0.97	18	2	175	2	0.12	0.2	1	11	12	2.26	2	0.29	20	0.07	68	4	0.03	6	0.018	12	13	34	10	0.01	5	7	1	10
RS-90	1.9	0.94	82	2	164	2	0.14	0.4	2	16	16	2.43	2	0.25	23	0.04	111	5	0.01	7	0.027	17	19	95	7	0.01	5	6	1	8
RS-91	0.6	0.84	51	6	72	2	0.08	0.4	2	16	14	2.3	3	0.22	21	0.02	91	6	0.02	5	0.009	13	19	20	10	0.01	5	4	1	11
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HELCA MINING CO./MIKE BRADY
CLIENT REF: ROSEBUD
AAL REF: SP036271
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RS-92	0.3	0.79	9	3	115	2	0.16	0.3	2	20	19	2.19	3	0.24	20	0.03	128	6	0.03	6	0.01	6	17	24	10	0.01	5	7	1	7
RS-93	0.3	0.74	26	3	134	2	0.17	0.2	3	29	28	3.07	2	0.19	35	0.02	193	9	0.02	11	0.05	6	16	27	9	0.01	5	10	1	26
RS-94	1.1	0.76	68	3	70	3	0.18	0.4	1	15	15	2.97	2	0.28	14	0.03	66	4	0.01	6	0.007	12	23	23	5	0.01	5	3	1	4
RS-95	0.2	0.49	37	2	41	2	0.17	0.3	4	32	30	3.08	6	0.04	6	0.04	161	8	0.01	13	0.012	7	10	24	2	0.01	8	8	1	5
STANDARD C	6.6	1.89	41	26	191	21	0.5	18.4	31	60	61	4.13	2	0.16	41	0.95	1113	22	0.07	70	0.098	38	18	52	38	0.08	21	59	12	137
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

American Assay Laboratories

INVOICE

Remit To: P.O. Box 71060
Reno, NV 89570
Phone No.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0036083-IN
INVOICE DATE: 11/02/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
RS-44/66	ROSEBUD	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
22	SAMPLES RECEIVED	.00	.00
22	JAW CRUSHING CHARGE	1.30	28.60
22	SPLITTING CHARGE	.60	13.20
22	KEEGOR MILLING CHARGE	2.00	44.00
22	Au (1 A.T. FIRE ASSAY)	8.00	176.00
22	MULTI-ELEMENT ICP PACKAGE	7.50	165.00

ok to pay
716130-477
Charles P. Marshall

NET INVOICE:	426.80
LESS DISCOUNT:	140.84
FREIGHT:	.00
INVOICE TOTAL:	285.96

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP036083

American Assay Laboratories

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: RS-44/66

No. SAMPLES : 22

MAIN SAMPLE TYPE : ROCK CHIPS

RECEIVED : 19 OCT 1995

REPORTED : 2 NOV 1995

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT : SP036083

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : RS-44/66

REPORTED : 2 NOV 1995

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb
RS-45	43	
RS-46	65	
RS-47	4118	
RS-48	125	
RS-49	28	
RS-50	<5	
RS-51	<5	
RS-52	69	
RS-53	23	
RS-54	182	
RS-55	61	
RS-56	49	
RS-57	19	
RS-58	63	
RS-59	48	
RS-60	385	
RS-61	21	
RS-62	<5	
RS-63	<5	
RS-64	534	
RS-65	1299	
RS-66	129	

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD - MIKE BRADY
AAL REF: SP036083
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RS-45	1.9	0.42	28	4	171	2	0.12	0.2	3	21	22	2.68	2	0.29	12	0.06	108	5	0.01	9	0.008	12	7	36	9	0.01	5	6	1	7
RS-46	3.3	0.31	18	4	33	2	0.12	0.2	3	15	15	2.93	2	0.2	7	0.03	115	5	0.02	9	0.017	12	11	21	7	0.01	5	5	1	9
RS-47	130	0.24	121	2	21	2	0.05	0.2	3	20	21	6.54	4	1.06	4	0.03	83	15	0.06	9	0.011	41	83	82	3	0.01	5	7	1	7
RS-48	3.1	0.29	44	3	72	2	0.12	0.2	3	16	16	3.03	2	0.17	8	0.03	118	5	0.01	10	0.004	12	14	16	7	0.01	5	5	1	4
RS-49	0.9	0.68	13	5	66	2	0.15	0.3	1	8	9	1.53	2	0.34	10	0.03	31	2	0.03	4	0.003	14	6	25	8	0.01	5	3	1	9
RS-50	0.3	0.97	9	5	97	2	0.28	0.2	2	10	12	1.75	2	0.49	24	0.07	87	2	0.14	5	0.006	21	2	223	10	0.01	5	4	1	42
RS-51	1	0.63	73	3	62	4	0.09	0.3	3	16	12	2.31	2	0.09	14	0.03	93	4	0.01	9	0.021	13	8	158	10	0.01	5	5	1	9
RS-52	0.9	0.71	67	37	73	2	1.48	0.2	1	6	7	3.56	2	0.42	16	0.19	69	6	0.81	2	0.033	15	18	160	4	0.01	5	7	1	29
RS-53	5.1	0.29	115	3	142	2	0.17	0.3	5	24	24	4	4	0.06	5	0.03	336	18	0.01	14	0.011	8	92	44	2	0.01	5	10	1	21
RS-54	1.9	0.49	70	4	92	2	0.12	0.2	4	29	28	3.41	8	0.05	8	0.04	134	18	0.01	13	0.011	36	48	31	5	0.01	5	6	1	13
RS-55	0.1	0.38	37	6	77	3	0.13	0.4	4	20	19	3.68	5	0.13	17	0.06	175	14	0.01	12	0.019	48	30	52	11	0.01	5	6	1	24
RS-56	0.8	0.39	55	9	48	2	0.19	0.3	5	33	34	5.01	3	0.11	9	0.04	1882	10	0.01	15	0.048	16	46	43	4	0.01	5	12	1	63
RS-57	0.1	0.34	29	4	44	2	0.17	0.6	3	15	15	2.85	4	0.07	15	0.04	110	5	0.01	9	0.011	8	22	33	8	0.01	5	5	1	2
RS-58	0.8	0.3	61	2	49	2	0.05	0.3	3	27	23	2.85	2	0.09	9	0.02	107	7	0.01	10	0.009	11	20	16	5	0.01	5	6	1	8
RS-59	0.1	0.44	18	2	173	2	0.04	0.4	5	30	33	3.59	2	0.11	8	0.02	150	7	0.01	13	0.007	7	8	38	4	0.01	5	7	1	7
RS-60	3.3	0.33	21	4	155	2	0.23	0.2	3	20	20	2.27	3	0.14	13	0.07	119	5	0.01	9	0.008	7	16	31	7	0.01	5	5	1	4
RS-61	0.3	0.36	13	3	43	2	0.22	0.2	3	18	18	2.02	2	0.09	11	0.06	111	5	0.01	9	0.009	6	10	20	8	0.01	5	4	1	4
RS-62	0.1	0.42	5	5	55	2	0.21	0.2	1	4	4	0.67	2	0.25	27	0.04	107	1	0.07	1	0.004	10	2	26	13	0.01	5	3	1	33
RS-63	0.4	1.22	8	2	666	2	0.87	0.2	2	7	7	1.59	2	0.37	28	0.09	339	2	0.21	4	0.034	18	2	828	11	0.02	5	5	1	34
RS-64	10.2	0.63	263	3	34	2	0.3	0.2	1	11	26	5.03	2	1.26	14	0.03	48	18	0.03	4	0.005	34	39	29	9	0.01	5	4	1	189
RS-65	6.8	0.59	158	2	51	2	0.3	0.3	1	8	22	3.64	2	0.97	21	0.02	38	11	0.06	4	0.004	31	10	21	13	0.01	5	2	1	381
RS-66	0.1	0.75	32	4	175	2	0.15	0.2	4	14	16	3.48	2	0.13	16	0.04	179	7	0.01	7	0.057	17	21	360	8	0.01	5	4	1	54
STANDARD C	7.1	1.97	43	28	180	22	0.52	18.8	31	63	61	4.18	4	0.16	41	0.96	1091	21	0.06	67	0.096	36	18	54	44	0.09	17	57	13	136
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

American Assay Laboratories

INVOICE

******CHANGE OF ADDRESS******
------PLEASE REMIT TO
------P.O. BOX 11530
------RENO NV 89510-1530

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0036112-IN
INVOICE DATE: 11/03/95

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
	ROSEBUD	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
28	SAMPLES RECEIVED	.00	.00
28	NO PREPARATION REQUIRED	.00	.00
28	MULTI-ELEMENT ICP PACKAGE	7.50	210.00

OK to pay
716130 - 477
Charles V. Mueller

NET INVOICE:	210.00
LESS DISCOUNT:	69.30
FREIGHT:	.00
INVOICE TOTAL:	140.70

PLEASE NOTE THAT WE HAVE CHANGED OUR REMIT TO MAILING ADDRESS.

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD - MIKE BRADY
AAL REF: SP036112
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RS-17	0.3	1.34	23	5	59	2	0.49	0.2	3	18	18	2.71	2	0.16	19	0.12	156	5	0.01	9	0.024	10	13	48	5	0.01	5	10	18	36
RS-18	0.1	0.83	20	6	28	2	0.36	0.4	4	23	29	2.7	2	0.12	13	0.07	157	6	0.01	10	0.017	5	13	26	5	0.01	5	7	2	8
RS-19	0.1	0.78	13	3	84	2	0.33	0.2	5	28	28	3.61	2	0.12	5	0.09	227	7	0.01	13	0.027	7	10	41	3	0.01	5	14	1	48
RS-20	0.4	1.05	97	8	343	2	0.56	0.2	2	15	35	1.69	2	0.48	5	0.09	55	10	0.06	5	0.029	5	11	68	2	0.01	5	25	1	6
RS-21	0.1	0.99	11	6	363	2	0.35	0.3	3	13	13	1.5	2	0.67	12	0.1	92	3	0.05	8	0.016	6	4	187	5	0.01	5	9	1	17
RS-22	2.1	0.52	58	4	172	2	0.17	0.2	2	13	19	1.81	7	0.33	16	0.09	48	3	0.03	6	0.017	7	27	149	8	0.01	5	6	1	13
RS-23	2.2	0.43	22	5	205	2	0.54	0.2	3	15	19	2.01	2	0.31	12	0.1	130	4	0.02	8	0.026	11	4	133	2	0.01	5	9	1	5
RS-24	17.3	0.28	26	4	306	2	0.5	0.2	9	52	65	4	2	0.05	3	0.08	615	12	0.01	22	0.043	6	12	70	2	0.01	5	13	1	5
RS-25	27.3	0.52	56	4	727	2	0.3	0.2	5	24	28	2.55	10	0.09	4	0.05	173	6	0.01	13	0.007	5	28	55	2	0.01	5	13	1	5
RS-26	2.7	0.29	21	4	425	2	38.52	0.2	1	4	7	0.33	2	0.1	2	0.11	2705	1	0.01	2	0.014	4	7	178	5	0.01	16	6	1	18
RS-27	0.2	0.78	34	6	92	2	0.23	0.3	4	23	21	2.08	2	0.24	11	0.03	225	6	0.01	11	0.005	6	3	23	2	0.01	5	8	1	21
RS-28	3.6	0.4	150	2	69	2	0.56	0.2	4	30	44	2.88	2	0.28	11	0.03	255	17	0.01	13	0.008	47	12	26	4	0.01	5	5	1	10
RS-29	0.1	0.63	16	2	88	2	0.12	0.2	5	33	57	2.96	2	0.14	7	0.04	178	8	0.02	15	0.033	11	11	135	2	0.01	5	9	1	20
RS-30	1	0.87	44	3	83	2	0.32	0.2	7	28	84	3.66	2	0.06	10	0.09	260	6	0.01	14	0.05	11	22	33	3	0.01	5	12	1	28
RS-31	0.4	0.71	33	4	36	2	0.12	0.4	3	27	24	2	2	0.08	15	0.03	119	6	0.01	11	0.008	12	5	17	7	0.01	5	6	1	3
RS-32	2.5	1.05	32	4	70	2	0.13	0.2	4	22	27	2.77	6	0.14	19	0.05	125	6	0.02	11	0.008	19	16	24	11	0.01	5	8	1	10
RS-33	15.9	0.92	101	14	110	2	0.58	0.2	1	5	17	2.79	2	0.25	12	0.09	31	5	0.62	3	0.01	19	11	58	10	0.01	5	7	1	56
RS-34	197	0.5	70	2	10	2	0.08	0.4	4	26	29	2.42	2	0.13	10	0.03	129	6	0.01	12	0.003	9	202	26	4	0.01	5	5	1	6
RS-35	0.2	0.74	14	3	23	2	0.09	0.3	1	13	11	2.08	2	0.11	9	0.02	60	4	0.01	6	0.009	11	12	33	7	0.01	5	3	1	27
RS-36	0.1	0.93	10	2	157	2	0.21	0.2	3	9	12	1.86	2	0.38	21	0.05	89	2	0.03	7	0.009	14	4	23	13	0.01	5	4	1	11
RS-37	128.1	0.61	25	3	69	2	0.09	0.2	3	21	24	3.07	2	0.37	11	0.05	123	5	0.02	9	0.008	10	87	22	8	0.01	5	6	1	14
RS-38	0.1	1.32	7	2	39	2	0.07	0.2	4	20	18	2.47	2	0.65	3	0.02	136	6	0.01	12	0.03	3	8	44	2	0.01	5	5	1	2
RS-39	0.3	1.07	7	2	72	2	0.29	0.2	5	33	31	2.92	2	0.37	10	0.03	160	8	0.03	14	0.019	5	8	37	6	0.01	5	7	1	6
RS-40	0.1	1.07	9	2	128	2	0.07	0.2	7	36	30	3.63	2	0.44	2	0.03	223	10	0.01	18	0.005	4	24	43	2	0.01	7	10	1	1
RS-41	0.1	0.71	23	4	66	4	0.09	0.2	2	16	15	3.9	2	0.1	19	0.03	79	6	0.01	7	0.009	6	27	27	11	0.01	5	14	1	10
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD - MIKE BRADY
AAL REF: SP036112
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RS-42	62.1	0.71	75	3	334	2	0.1	0.2	4	17	20	2.43	27	0.21	6	0.03	110	6	0.01	9	0.007	9	25	55	2	0.01	5	5	1	6
RS-43	1.1	0.39	31	2	559	2	0.21	0.2	4	19	24	2.11	2	0.21	11	0.08	112	5	0.02	11	0.013	8	4	55	5	0.01	5	8	1	27
RS-44	0.4	0.54	36	3	138	2	0.1	0.2	2	11	10	1.9	2	0.3	12	0.05	92	3	0.02	6	0.011	9	5	27	5	0.01	5	5	1	7
STANDARD C	6.3	1.92	39	31	188	21	0.51	20.0	33	61	59	4.05	2	0.15	40	0.94	1065	21	0.06	66	0.094	36	16	52	37	0.08	20	61	12	134
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G358	0.4	3.18	7	22	297	2	0.74	0.5	8	19	32	3.23	2	0.65	18	0.89	644	1	0.04	16	0.043	27	10	92	7	0.12	5	43	1	103
G359	0.4	2.45	6	25	287	2	0.74	0.8	9	18	29	2.82	2	0.68	15	0.79	712	1	0.05	18	0.06	18	10	89	6	0.11	5	40	1	90
G360	0.4	4.38	11	44	144	2	1.14	0.9	12	21	44	4	2	1.28	18	1.32	523	1	0.23	18	0.025	34	11	103	7	0.07	5	38	1	138
G361	0.4	2.73	3	32	259	2	0.88	0.9	9	17	28	3.04	2	0.93	17	1.01	615	1	0.05	14	0.05	10	9	92	6	0.1	5	41	1	108
G362	0.4	2.26	5	10	144	2	0.73	0.7	12	19	19	3.91	2	0.38	19	0.86	1381	1	0.02	9	0.062	8	7	51	4	0.03	5	47	1	103
G363	0.3	1.92	8	15	250	2	0.58	0.5	9	16	22	2.6	2	0.48	16	0.55	839	1	0.04	11	0.06	13	8	77	5	0.1	5	41	1	82
G364	0.3	2.11	10	21	263	2	0.56	0.4	8	16	25	2.93	2	0.65	17	0.67	719	1	0.04	14	0.055	13	9	74	5	0.1	5	40	1	83
G365	0.2	2.53	5	19	297	2	0.58	0.4	9	17	27	2.87	2	0.56	17	0.75	621	1	0.05	16	0.051	13	6	80	6	0.11	5	42	1	85
G366	0.3	2.38	9	17	268	2	1.77	0.4	9	13	21	2.96	2	0.43	19	0.8	786	1	0.03	12	0.069	13	6	98	5	0.05	5	45	1	97
G367	0.4	4.73	6	103	144	2	2.11	0.7	9	21	36	4.09	2	1.01	21	1.58	437	2	0.61	22	0.041	18	15	179	7	0.08	5	48	1	126
G368	0.3	3.18	2	40	236	2	0.66	0.5	9	20	32	3.1	2	0.74	18	0.98	593	1	0.25	18	0.043	16	8	132	6	0.13	5	45	1	95
G369	0.2	2.28	6	24	276	2	0.54	0.4	10	22	28	2.83	2	0.66	18	0.77	513	1	0.12	16	0.033	17	7	109	7	0.16	5	49	1	77
G370	0.4	2.47	5	23	353	2	0.61	0.3	10	20	30	2.87	2	0.6	19	0.81	616	1	0.12	20	0.042	16	8	103	8	0.15	5	47	1	82
G371	0.4	3.39	9	19	252	2	1.29	0.2	8	21	35	3.19	2	0.53	20	0.68	534	1	0.03	15	0.046	15	9	85	7	0.13	5	52	1	87
G372	0.3	3.18	7	22	357	2	0.6	0.3	10	20	31	2.99	2	0.61	18	0.77	653	1	0.05	18	0.037	16	9	83	6	0.14	5	46	1	85
G373	0.3	3.3	6	26	377	2	0.67	0.4	10	21	33	3.23	2	0.75	18	0.91	705	1	0.05	18	0.04	18	9	90	7	0.14	5	49	1	97
G374	0.3	2.66	6	20	301	2	0.52	0.3	9	19	27	2.86	2	0.6	17	0.72	680	1	0.05	17	0.044	17	7	75	7	0.15	5	46	1	80
G375	0.4	4.5	10	107	264	2	0.63	0.6	9	23	34	4.31	2	1.16	18	1.36	533	1	0.74	23	0.036	18	14	84	7	0.13	5	49	1	124
G376	0.3	2.64	10	17	264	2	0.48	0.3	9	17	26	3.26	2	0.5	19	0.61	791	1	0.03	15	0.045	17	9	69	7	0.13	5	44	1	87
G377	0.3	3.36	12	36	322	3	0.74	0.4	9	19	29	3.72	2	0.86	20	1.02	653	1	0.06	18	0.053	20	11	102	7	0.13	5	46	1	105
G378	0.3	2.71	8	36	244	2	0.52	0.3	9	19	31	3.42	2	0.77	19	0.95	588	1	0.17	17	0.034	17	11	78	7	0.13	5	45	1	90
G379	0.3	2.82	5	31	329	2	0.76	0.5	10	21	33	3.26	2	0.81	20	1.05	716	1	0.05	20	0.052	16	9	98	6	0.13	5	45	1	98
G380	0.3	3.4	7	36	350	2	0.84	0.5	9	20	33	3.59	2	0.81	20	1.05	570	1	0.05	19	0.047	15	12	115	6	0.12	5	46	1	105
G381	0.4	3.18	3	33	380	2	0.79	0.6	10	19	32	3.29	2	0.71	19	1.06	909	1	0.06	18	0.054	20	8	105	5	0.13	5	49	1	101
G382	0.3	3.48	9	38	351	3	0.87	1	10	21	35	3.71	2	0.8	19	1.18	839	1	0.07	19	0.055	20	13	113	6	0.13	5	50	1	113
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G383	0.3	3.25	4	34	366	2	0.87	0.6	9	20	32	3.34	2	0.69	17	1.12	612	1	0.1	17	0.054	15	7	126	5	0.14	5	47	1	108
G384	0.3	3.11	5	38	352	2	0.85	0.3	10	20	33	3.17	2	0.74	17	1.15	766	1	0.1	18	0.056	13	9	129	4	0.14	5	49	1	100
G385	0.3	3.25	9	40	362	2	0.83	0.6	9	20	34	3.32	2	0.79	18	1.14	495	1	0.08	19	0.046	15	10	132	5	0.13	5	46	1	97
G386	0.4	3.23	5	37	381	2	0.78	0.3	10	19	33	3.32	2	0.79	19	1.13	671	1	0.08	20	0.05	16	9	127	5	0.12	5	47	1	97
G387	0.4	3.25	11	36	373	2	0.77	0.6	9	20	33	3.3	2	0.78	19	1.11	577	1	0.07	17	0.051	17	10	123	5	0.13	5	48	1	94
G388	0.3	3	7	40	349	2	0.73	0.3	10	19	33	3.1	2	0.91	16	1.08	572	1	0.08	18	0.054	13	8	108	4	0.13	5	47	1	90
G389	0.3	3.06	8	33	324	2	0.72	0.3	10	20	32	3.17	2	0.81	17	0.95	624	1	0.05	16	0.05	16	10	98	6	0.13	5	47	1	90
G390	0.5	2.58	11	25	226	2	0.6	0.3	9	19	27	2.91	2	0.64	22	0.79	444	1	0.12	17	0.038	23	9	92	6	0.13	5	44	1	76
G391	0.3	2.5	10	22	320	2	0.58	0.2	10	19	31	2.84	2	0.61	18	0.83	758	1	0.06	19	0.034	15	10	82	6	0.13	5	42	1	85
STANDARD C	6.7	1.95	42	26	181	21	0.54	18.2	33	60	62	4.13	2	0.16	39	0.95	1048	21	0.06	69	0.096	38	20	51	35	0.09	18	62	10	136
G392	0.3	2.9	8	35	338	2	0.76	0.2	10	20	33	3.2	2	0.88	16	1.14	755	1	0.06	17	0.046	15	10	92	6	0.14	5	47	1	103
G393	0.3	3.04	5	36	360	2	0.98	0.2	8	20	35	3.1	2	0.83	16	1.13	666	1	0.06	18	0.049	17	9	108	5	0.13	5	45	1	102
G394	0.2	2.67	7	37	324	2	0.6	0.5	10	19	31	3.08	2	0.83	15	1.09	743	1	0.13	21	0.039	14	10	88	6	0.14	5	46	1	96
G395	0.3	3.3	7	33	302	2	0.75	0.3	9	20	35	3.34	2	0.82	17	1.08	665	1	0.05	19	0.043	19	10	91	6	0.12	5	45	1	112
G396	0.2	2.92	6	36	341	3	0.78	0.2	9	19	33	3.14	2	0.76	15	1.15	723	1	0.07	19	0.045	18	10	95	6	0.13	5	47	1	102
G397	0.2	2.79	10	33	368	2	0.76	0.4	9	19	32	3.04	2	0.69	17	1.12	664	1	0.09	19	0.05	14	8	122	5	0.14	5	47	1	100
G398	0.3	3.47	5	37	307	2	0.74	0.2	9	20	36	3.35	2	0.87	18	1.19	575	1	0.13	19	0.03	15	9	96	6	0.12	5	45	1	105
G399	0.2	2.71	8	36	275	2	0.64	0.4	9	18	32	2.96	2	0.82	15	1.05	574	1	0.1	18	0.028	14	8	93	5	0.13	5	43	1	89
G400	0.2	2.6	6	32	216	2	0.56	0.2	9	19	30	2.97	2	0.76	16	1.01	544	1	0.16	18	0.023	16	8	92	6	0.12	5	42	1	86
G401	0.2	2.82	7	31	357	2	0.71	0.2	11	21	33	3.15	2	0.81	17	1.07	733	1	0.09	18	0.041	18	8	95	6	0.14	5	47	1	93
G402	0.3	3.5	3	44	274	2	1.04	0.3	10	21	37	3.39	2	1.2	17	1.34	683	1	0.1	24	0.046	19	11	100	6	0.14	5	48	1	105
G403	0.3	3.31	8	39	411	2	0.74	0.4	10	21	35	3.25	2	0.97	18	1.08	734	1	0.07	21	0.06	18	11	102	5	0.14	5	49	1	102
G404	0.3	2.92	7	33	333	2	0.79	0.3	9	19	32	3.11	2	0.71	19	0.97	648	1	0.06	18	0.043	16	11	116	5	0.12	5	45	1	97
G405	0.2	3.49	12	43	376	2	0.83	0.2	11	21	35	3.4	2	0.9	18	1.21	688	1	0.07	22	0.05	20	13	128	5	0.13	5	47	1	105
G406	0.3	3.17	7	30	314	2	0.82	0.4	8	18	400	2.91	2	0.58	18	0.98	636	1	0.14	18	0.027	23	10	149	6	0.1	5	36	1	172
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G407	0.2	2.37	3	22	321	2	0.65	0.2	8	16	25	2.7	2	0.51	19	0.75	635	1	0.12	14	0.046	21	8	77	7	0.12	5	39	1	81
G408	0.2	2.68	4	22	327	2	0.71	0.2	9	16	26	2.95	2	0.56	19	0.84	716	1	0.06	17	0.045	14	9	89	7	0.11	5	40	1	90
G409	0.3	3.65	6	35	216	2	0.68	0.2	8	22	52	3.37	2	0.7	20	1.02	518	1	0.16	17	0.028	23	10	93	7	0.12	5	45	1	99
G410	0.2	2.75	8	24	346	2	0.62	0.2	9	18	28	3.07	2	0.61	20	0.86	655	1	0.07	19	0.033	17	10	91	6	0.13	5	43	1	83
G411	0.3	3.39	8	23	312	2	0.74	0.2	9	18	25	3.17	2	0.53	18	0.86	550	1	0.08	17	0.029	21	9	92	7	0.1	5	41	1	88
G412	0.1	4.29	10	42	239	3	0.84	0.2	12	26	51	4.07	2	0.81	22	1.13	774	2	0.17	23	0.027	32	19	102	8	0.14	5	54	1	117
G413	0.2	2.71	8	24	341	2	0.59	0.2	10	20	30	3.02	2	0.66	18	0.82	719	1	0.07	17	0.041	20	9	88	6	0.14	5	43	1	86
G414	0.1	2.66	4	27	261	2	0.55	0.2	9	18	30	2.92	2	0.75	15	0.87	617	1	0.09	18	0.028	16	10	81	7	0.13	5	42	1	85
G415	0.3	2.38	7	19	298	2	0.54	0.2	9	18	28	2.84	2	0.57	17	0.68	765	1	0.04	18	0.049	12	9	78	7	0.14	5	45	1	82
G416	0.2	2.6	6	24	328	2	0.67	0.2	8	17	27	2.89	2	0.64	16	0.78	632	1	0.04	16	0.051	15	8	90	6	0.12	5	41	1	83
G417	0.3	2.94	5	25	280	2	0.58	0.2	9	20	28	3.09	2	0.7	17	0.9	638	1	0.12	19	0.039	18	9	86	7	0.13	5	43	1	86
G418	0.3	3.46	5	26	371	2	0.89	0.2	8	19	32	3.34	2	0.68	20	1.03	600	1	0.05	17	0.049	20	10	101	6	0.12	5	43	1	102
G419	0.3	2.78	4	24	348	2	0.64	0.2	9	19	30	2.98	2	0.64	17	0.82	695	1	0.05	19	0.048	15	7	87	6	0.13	5	43	1	90
G420	0.4	3.42	3	39	376	2	0.88	0.4	10	19	33	3.06	2	0.66	23	0.94	1056	1	0.14	21	0.037	13	8	112	6	0.11	5	41	1	91
G421	0.2	3.01	4	32	345	2	0.61	0.3	9	20	33	3.19	2	0.8	16	0.99	629	1	0.12	19	0.034	13	8	93	6	0.14	5	46	1	92
G422	0.2	2.15	2	23	246	2	0.56	0.2	8	17	25	2.72	2	0.55	17	0.74	577	1	0.16	16	0.025	14	7	93	6	0.14	5	41	1	73
G423	0.4	2.76	4	30	313	2	0.66	0.5	9	17	28	3.04	2	0.68	19	0.96	701	1	0.13	19	0.038	19	9	98	7	0.12	5	39	1	96
G424	0.4	3.42	6	34	316	2	0.77	0.3	9	19	37	3.36	2	0.87	19	1.16	532	1	0.04	20	0.036	15	10	102	6	0.12	5	43	1	98
G425	0.2	3.3	6	40	278	2	0.69	0.4	9	19	36	3.19	2	1.04	16	1.15	550	1	0.13	19	0.032	18	8	106	7	0.13	5	43	1	93
STANDARD C	6.6	1.87	38	26	182	21	0.52	17.1	32	55	59	3.94	2	0.14	38	0.92	1064	19	0.06	68	0.092	39	20	50	35	0.09	19	59	11	129
G426	0.3	3.33	2	31	280	2	0.64	0.4	10	20	33	3.44	2	0.87	18	1.02	565	1	0.13	18	0.033	19	8	91	7	0.12	5	47	1	92
G427	0.4	3.28	2	32	256	2	0.72	0.3	9	18	51	3.08	2	0.76	18	1.06	613	1	0.14	20	0.04	23	7	109	6	0.11	5	42	1	93
G428	0.4	2.79	7	28	260	2	4	0.2	7	15	36	2.67	2	0.73	17	0.93	499	1	0.05	21	0.049	14	6	120	3	0.09	5	40	1	82
G429	0.4	2.43	7	21	266	2	3.19	0.2	6	13	28	2.51	2	0.53	19	0.82	562	1	0.04	14	0.058	13	7	130	4	0.07	5	40	1	89
G430	0.4	3.02	2	24	342	2	0.93	0.2	9	14	25	2.79	2	0.65	20	0.88	771	1	0.04	16	0.056	20	8	133	6	0.07	5	42	1	89
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G431	0.4	2.32	5	17	190	2	5.9	0.3	5	9	21	1.99	2	0.36	17	0.67	567	1	0.03	13	0.06	14	5	141	4	0.03	5	27	1	85
G432	0.4	3.54	5	28	344	2	0.97	0.2	8	17	30	3.04	2	0.71	21	1.11	696	1	0.05	18	0.05	17	7	113	5	0.08	5	43	1	106
G433	0.4	2.63	7	28	338	2	0.63	0.2	8	17	32	2.72	2	0.79	17	0.97	684	1	0.05	18	0.04	18	6	94	5	0.12	5	44	1	89
G434	0.4	2.58	5	23	234	2	0.81	0.5	7	12	38	2.13	2	0.5	20	0.8	956	1	0.14	14	0.035	23	7	95	5	0.04	5	31	1	80
G435	0.3	2.34	5	12	288	2	0.81	0.2	9	9	19	2.47	2	0.4	19	0.66	793	1	0.06	12	0.032	19	5	96	5	0.01	5	31	1	79
G436	0.5	3.54	2	31	291	2	0.84	0.2	8	19	39	3.23	2	0.71	20	1.1	472	1	0.04	20	0.038	18	9	100	5	0.09	5	48	1	99
G437	0.3	2.47	4	26	299	2	0.65	0.2	9	19	28	2.94	2	0.57	19	0.85	623	1	0.14	20	0.041	18	5	118	6	0.12	5	50	1	86
G438	0.4	2.82	8	28	343	2	0.72	0.4	9	20	33	3	2	0.65	16	0.92	599	1	0.05	20	0.051	12	6	100	6	0.13	5	50	1	95
G439	0.4	2.42	4	24	305	2	0.6	0.7	9	19	30	2.78	2	0.73	16	0.78	728	1	0.04	19	0.054	16	9	78	5	0.12	5	48	1	88
G440	0.4	2.5	5	24	300	2	0.7	0.2	9	18	28	2.85	2	0.62	16	0.78	677	1	0.04	20	0.053	14	8	79	4	0.12	5	47	1	86
G441	0.3	2.04	6	21	272	2	0.54	0.4	9	18	24	2.69	2	0.51	15	0.64	765	1	0.04	18	0.048	14	7	72	6	0.12	5	49	1	79
STANDARD C	6.3	1.87	39	25	185	22	0.49	15.9	30	55	61	3.86	2	0.14	37	0.89	1073	19	0.06	65	0.091	40	17	49	35	0.09	18	63	10	129
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G358	0.4	3.18	7	22	297	2	0.74	0.5	8	19	32	3.23	2	0.65	18	0.89	644	1	0.04	16	0.043	27	10	92	7	0.12	5	43	1	103
G359	0.4	2.45	6	25	287	2	0.74	0.8	9	18	29	2.82	2	0.68	15	0.79	712	1	0.05	18	0.06	18	10	89	6	0.11	5	40	1	90
G360	0.4	4.38	11	44	144	2	1.14	0.9	12	21	44	4	2	1.28	18	1.32	523	1	0.23	18	0.025	34	11	103	7	0.07	5	38	1	138
G361	0.4	2.73	3	32	259	2	0.88	0.9	9	17	28	3.04	2	0.93	17	1.01	615	1	0.05	14	0.05	10	9	92	6	0.1	5	41	1	108
G362	0.4	2.26	5	10	144	2	0.73	0.7	12	19	19	3.91	2	0.38	19	0.86	1381	1	0.02	9	0.062	8	7	51	4	0.03	5	47	1	103
G363	0.3	1.92	8	15	250	2	0.58	0.5	9	16	22	2.6	2	0.48	16	0.55	839	1	0.04	11	0.06	13	8	77	5	0.1	5	41	1	82
G364	0.3	2.11	10	21	263	2	0.56	0.4	8	16	25	2.93	2	0.65	17	0.67	719	1	0.04	14	0.055	13	9	74	5	0.1	5	40	1	83
G365	0.2	2.53	5	19	297	2	0.58	0.4	9	17	27	2.87	2	0.56	17	0.75	621	1	0.05	16	0.051	13	6	80	6	0.11	5	42	1	85
G366	0.3	2.38	9	17	268	2	1.77	0.4	9	13	21	2.96	2	0.43	19	0.8	786	1	0.03	12	0.069	13	6	98	5	0.05	5	45	1	97
G367	0.4	4.73	6	103	144	2	2.11	0.7	9	21	36	4.09	2	1.01	21	1.58	437	2	0.61	22	0.041	18	15	179	7	0.08	5	48	1	126
G368	0.3	3.18	2	40	236	2	0.66	0.5	9	20	32	3.1	2	0.74	18	0.98	593	1	0.25	18	0.043	16	8	132	6	0.13	5	45	1	95
G369	0.2	2.28	6	24	276	2	0.54	0.4	10	22	28	2.83	2	0.66	18	0.77	513	1	0.12	16	0.033	17	7	109	7	0.16	5	49	1	77
G370	0.4	2.47	5	23	353	2	0.61	0.3	10	20	30	2.87	2	0.6	19	0.81	616	1	0.12	20	0.042	16	8	103	8	0.15	5	47	1	82
G371	0.4	3.39	9	19	252	2	1.29	0.2	8	21	35	3.19	2	0.53	20	0.68	534	1	0.03	15	0.046	15	9	85	7	0.13	5	52	1	87
G372	0.3	3.18	7	22	357	2	0.6	0.3	10	20	31	2.99	2	0.61	18	0.77	653	1	0.05	18	0.037	16	9	83	6	0.14	5	46	1	85
G373	0.3	3.3	6	26	377	2	0.67	0.4	10	21	33	3.23	2	0.75	18	0.91	705	1	0.05	18	0.04	18	9	90	7	0.14	5	49	1	97
G374	0.3	2.66	6	20	301	2	0.52	0.3	9	19	27	2.86	2	0.6	17	0.72	680	1	0.05	17	0.044	17	7	75	7	0.15	5	46	1	80
G375	0.4	4.5	10	107	264	2	0.63	0.6	9	23	34	4.31	2	1.16	18	1.36	533	1	0.74	23	0.036	18	14	84	7	0.13	5	49	1	124
G376	0.3	2.64	10	17	264	2	0.48	0.3	9	17	26	3.26	2	0.5	19	0.61	791	1	0.03	15	0.045	17	9	69	7	0.13	5	44	1	87
G377	0.3	3.36	12	36	322	3	0.74	0.4	9	19	29	3.72	2	0.86	20	1.02	653	1	0.06	18	0.053	20	11	102	7	0.13	5	46	1	105
G378	0.3	2.71	8	36	244	2	0.52	0.3	9	19	31	3.42	2	0.77	19	0.95	588	1	0.17	17	0.034	17	11	78	7	0.13	5	45	1	90
G379	0.3	2.82	5	31	329	2	0.76	0.5	10	21	33	3.26	2	0.81	20	1.05	716	1	0.05	20	0.052	16	9	98	6	0.13	5	45	1	98
G380	0.3	3.4	7	36	350	2	0.84	0.5	9	20	33	3.59	2	0.81	20	1.05	570	1	0.05	19	0.047	15	12	115	6	0.12	5	46	1	105
G381	0.4	3.18	3	33	380	2	0.79	0.6	10	19	32	3.29	2	0.71	19	1.06	909	1	0.06	18	0.054	20	8	105	5	0.13	5	49	1	101
G382	0.3	3.48	9	38	351	3	0.87	1	10	21	35	3.71	2	0.8	19	1.18	839	1	0.07	19	0.055	20	13	113	6	0.13	5	50	1	113
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-0

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G383	0.3	3.25	4	34	366	2	0.87	0.6	9	20	32	3.34	2	0.69	17	1.12	612	1	0.1	17	0.054	15	7	126	5	0.14	5	47	1	108
G384	0.3	3.11	5	38	352	2	0.85	0.3	10	20	33	3.17	2	0.74	17	1.15	766	1	0.1	18	0.056	13	9	129	4	0.14	5	49	1	100
G385	0.3	3.25	9	40	362	2	0.83	0.6	9	20	34	3.32	2	0.79	18	1.14	495	1	0.08	19	0.046	15	10	132	5	0.13	5	46	1	97
G386	0.4	3.23	5	37	381	2	0.78	0.3	10	19	33	3.32	2	0.79	19	1.13	671	1	0.08	20	0.05	16	9	127	5	0.12	5	47	1	97
G387	0.4	3.25	11	36	373	2	0.77	0.6	9	20	33	3.3	2	0.78	19	1.11	577	1	0.07	17	0.051	17	10	123	5	0.13	5	48	1	94
G388	0.3	3	7	40	349	2	0.73	0.3	10	19	33	3.1	2	0.91	16	1.08	572	1	0.08	18	0.054	13	8	108	4	0.13	5	47	1	90
G389	0.3	3.06	8	33	324	2	0.72	0.3	10	20	32	3.17	2	0.81	17	0.95	624	1	0.05	16	0.05	16	10	98	6	0.13	5	47	1	90
G390	0.5	2.58	11	25	226	2	0.6	0.3	9	19	27	2.91	2	0.64	22	0.79	444	1	0.12	17	0.038	23	9	92	6	0.13	5	44	1	76
G391	0.3	2.5	10	22	320	2	0.58	0.2	10	19	31	2.84	2	0.61	18	0.83	758	1	0.06	19	0.034	15	10	82	6	0.13	5	42	1	85
STANDARD C	6.7	1.95	42	26	181	21	0.54	18.2	33	60	62	4.13	2	0.16	39	0.95	1048	21	0.06	69	0.096	38	20	51	35	0.09	18	62	10	136
G392	0.3	2.9	8	35	338	2	0.76	0.2	10	20	33	3.2	2	0.88	16	1.14	755	1	0.06	17	0.046	15	10	92	6	0.14	5	47	1	103
G393	0.3	3.04	5	36	360	2	0.98	0.2	8	20	35	3.1	2	0.83	16	1.13	666	1	0.06	18	0.049	17	9	108	5	0.13	5	45	1	102
G394	0.2	2.67	7	37	324	2	0.6	0.5	10	19	31	3.08	2	0.83	15	1.09	743	1	0.13	21	0.039	14	10	88	6	0.14	5	46	1	96
G395	0.3	3.3	7	33	302	2	0.75	0.3	9	20	35	3.34	2	0.82	17	1.08	665	1	0.05	19	0.043	19	10	91	6	0.12	5	45	1	112
G396	0.2	2.92	6	36	341	3	0.78	0.2	9	19	33	3.14	2	0.76	15	1.15	723	1	0.07	19	0.045	18	10	95	6	0.13	5	47	1	102
G397	0.2	2.79	10	33	368	2	0.76	0.4	9	19	32	3.04	2	0.69	17	1.12	664	1	0.09	19	0.05	14	8	122	5	0.14	5	47	1	100
G398	0.3	3.47	5	37	307	2	0.74	0.2	9	20	36	3.35	2	0.87	18	1.19	575	1	0.13	19	0.03	15	9	96	6	0.12	5	45	1	105
G399	0.2	2.71	8	36	275	2	0.64	0.4	9	18	32	2.96	2	0.82	15	1.05	574	1	0.1	18	0.028	14	8	93	5	0.13	5	43	1	89
G400	0.2	2.6	6	32	216	2	0.56	0.2	9	19	30	2.97	2	0.76	16	1.01	544	1	0.16	18	0.023	16	8	92	6	0.12	5	42	1	86
G401	0.2	2.82	7	31	357	2	0.71	0.2	11	21	33	3.15	2	0.81	17	1.07	733	1	0.09	18	0.041	18	8	95	6	0.14	5	47	1	93
G402	0.3	3.5	3	44	274	2	1.04	0.3	10	21	37	3.39	2	1.2	17	1.34	683	1	0.1	24	0.046	19	11	100	6	0.14	5	48	1	105
G403	0.3	3.31	8	39	411	2	0.74	0.4	10	21	35	3.25	2	0.97	18	1.08	734	1	0.07	21	0.06	18	11	102	5	0.14	5	49	1	102
G404	0.3	2.92	7	33	333	2	0.79	0.3	9	19	32	3.11	2	0.71	19	0.97	648	1	0.06	18	0.043	16	11	116	5	0.12	5	45	1	97
G405	0.2	3.49	12	43	376	2	0.83	0.2	11	21	35	3.4	2	0.9	18	1.21	688	1	0.07	22	0.05	20	13	128	5	0.13	5	47	1	105
G406	0.3	3.17	7	30	314	2	0.82	0.4	8	18	400	2.91	2	0.58	18	0.98	636	1	0.14	18	0.027	23	10	149	6	0.1	5	36	1	172
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
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1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G407	0.2	2.37	3	22	321	2	0.65	0.2	8	16	25	2.7	2	0.51	19	0.75	635	1	0.12	14	0.046	21	8	77	7	0.12	5	39	1	81
G408	0.2	2.68	4	22	327	2	0.71	0.2	9	16	26	2.95	2	0.56	19	0.84	716	1	0.06	17	0.045	14	9	89	7	0.11	5	40	1	90
G409	0.3	3.65	6	35	216	2	0.68	0.2	8	22	52	3.37	2	0.7	20	1.02	518	1	0.16	17	0.028	23	10	93	7	0.12	5	45	1	99
G410	0.2	2.75	8	24	346	2	0.62	0.2	9	18	28	3.07	2	0.61	20	0.86	655	1	0.07	19	0.033	17	10	91	6	0.13	5	43	1	83
G411	0.3	3.39	8	23	312	2	0.74	0.2	9	18	25	3.17	2	0.53	18	0.86	550	1	0.08	17	0.029	21	9	92	7	0.1	5	41	1	88
G412	0.1	4.29	10	42	239	3	0.84	0.2	12	26	51	4.07	2	0.81	22	1.13	774	2	0.17	23	0.027	32	19	102	8	0.14	5	54	1	117
G413	0.2	2.71	8	24	341	2	0.59	0.2	10	20	30	3.02	2	0.66	18	0.82	719	1	0.07	17	0.041	20	9	88	6	0.14	5	43	1	86
G414	0.1	2.66	4	27	261	2	0.55	0.2	9	18	30	2.92	2	0.75	15	0.87	617	1	0.09	18	0.028	16	10	81	7	0.13	5	42	1	85
G415	0.3	2.38	7	19	298	2	0.54	0.2	9	18	28	2.84	2	0.57	17	0.68	765	1	0.04	18	0.049	12	9	78	7	0.14	5	45	1	82
G416	0.2	2.6	6	24	328	2	0.67	0.2	8	17	27	2.89	2	0.64	16	0.78	632	1	0.04	16	0.051	15	8	90	6	0.12	5	41	1	83
G417	0.3	2.94	5	25	280	2	0.58	0.2	9	20	28	3.09	2	0.7	17	0.9	638	1	0.12	19	0.039	18	9	86	7	0.13	5	43	1	86
G418	0.3	3.46	5	26	371	2	0.89	0.2	8	19	32	3.34	2	0.68	20	1.03	600	1	0.05	17	0.049	20	10	101	6	0.12	5	43	1	102
G419	0.3	2.78	4	24	348	2	0.64	0.2	9	19	30	2.98	2	0.64	17	0.82	695	1	0.05	19	0.048	15	7	87	6	0.13	5	43	1	90
G420	0.4	3.42	3	39	376	2	0.88	0.4	10	19	33	3.06	2	0.66	23	0.94	1056	1	0.14	21	0.037	13	8	112	6	0.11	5	41	1	91
G421	0.2	3.01	4	32	345	2	0.61	0.3	9	20	33	3.19	2	0.8	16	0.99	629	1	0.12	19	0.034	13	8	93	6	0.14	5	46	1	92
G422	0.2	2.15	2	23	246	2	0.56	0.2	8	17	25	2.72	2	0.55	17	0.74	577	1	0.16	16	0.025	14	7	93	6	0.14	5	41	1	73
G423	0.4	2.76	4	30	313	2	0.66	0.5	9	17	28	3.04	2	0.68	19	0.96	701	1	0.13	19	0.038	19	9	98	7	0.12	5	39	1	96
G424	0.4	3.42	6	34	316	2	0.77	0.3	9	19	37	3.36	2	0.87	19	1.16	532	1	0.04	20	0.036	15	10	102	6	0.12	5	43	1	98
G425	0.2	3.3	6	40	278	2	0.69	0.4	9	19	36	3.19	2	1.04	16	1.15	550	1	0.13	19	0.032	18	8	106	7	0.13	5	43	1	93
STANDARD C	6.6	1.87	38	26	182	21	0.52	17.1	32	55	59	3.94	2	0.14	38	0.92	1064	19	0.06	68	0.092	39	20	50	35	0.09	19	59	11	129
G426	0.3	3.33	2	31	280	2	0.64	0.4	10	20	33	3.44	2	0.87	18	1.02	565	1	0.13	18	0.033	19	8	91	7	0.12	5	47	1	92
G427	0.4	3.28	2	32	256	2	0.72	0.3	9	18	51	3.08	2	0.76	18	1.06	613	1	0.14	20	0.04	23	7	109	6	0.11	5	42	1	93
G428	0.4	2.79	7	28	260	2	4	0.2	7	15	36	2.67	2	0.73	17	0.93	499	1	0.05	21	0.049	14	6	120	3	0.09	5	40	1	82
G429	0.4	2.43	7	21	266	2	3.19	0.2	6	13	28	2.51	2	0.53	19	0.82	562	1	0.04	14	0.058	13	7	130	4	0.07	5	40	1	89
G430	0.4	3.02	2	24	342	2	0.93	0.2	9	14	25	2.79	2	0.65	20	0.88	771	1	0.04	16	0.056	20	8	133	6	0.07	5	42	1	89
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

CLIENT: HECLA MINING COMPANY
CLIENT REF: ROSEBUD- JIM NYREHN
AAL REF: SP035322
METHOD: AAL 01-O

1500 GLENDALE AVENUE
SPARKS, NEVADA 89431
TELEPHONE (702) 356-0606
FACSIMILE (702) 356-1413

ELEMENT	Ag	Al	As	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sr	Th	Ti	U	V	W	Zn
SAMPLES	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
G431	0.4	2.32	5	17	190	2	5.9	0.3	5	9	21	1.99	2	0.36	17	0.67	567	1	0.03	13	0.06	14	5	141	4	0.03	5	27	1	85
G432	0.4	3.54	5	28	344	2	0.97	0.2	8	17	30	3.04	2	0.71	21	1.11	696	1	0.05	18	0.05	17	7	113	5	0.08	5	43	1	106
G433	0.4	2.63	7	28	338	2	0.63	0.2	8	17	32	2.72	2	0.79	17	0.97	684	1	0.05	18	0.04	18	6	94	5	0.12	5	44	1	89
G434	0.4	2.58	5	23	234	2	0.81	0.5	7	12	38	2.13	2	0.5	20	0.8	956	1	0.14	14	0.035	23	7	95	5	0.04	5	31	1	80
G435	0.3	2.34	5	12	288	2	0.81	0.2	9	9	19	2.47	2	0.4	19	0.66	793	1	0.06	12	0.032	19	5	96	5	0.01	5	31	1	79
G436	0.5	3.54	2	31	291	2	0.84	0.2	8	19	39	3.23	2	0.71	20	1.1	472	1	0.04	20	0.038	18	9	100	5	0.09	5	48	1	99
G437	0.3	2.47	4	26	299	2	0.65	0.2	9	19	28	2.94	2	0.57	19	0.85	623	1	0.14	20	0.041	18	5	118	6	0.12	5	50	1	86
G438	0.4	2.82	8	28	343	2	0.72	0.4	9	20	33	3	2	0.65	16	0.92	599	1	0.05	20	0.051	12	6	100	6	0.13	5	50	1	95
G439	0.4	2.42	4	24	305	2	0.6	0.7	9	19	30	2.78	2	0.73	16	0.78	728	1	0.04	19	0.054	16	9	78	5	0.12	5	48	1	88
G440	0.4	2.5	5	24	300	2	0.7	0.2	9	18	28	2.85	2	0.62	16	0.78	677	1	0.04	20	0.053	14	8	79	4	0.12	5	47	1	86
G441	0.3	2.04	6	21	272	2	0.54	0.4	9	18	24	2.69	2	0.51	15	0.64	765	1	0.04	18	0.048	14	7	72	6	0.12	5	49	1	79
STANDARD C	6.3	1.87	39	25	185	22	0.49	15.9	30	55	61	3.86	2	0.14	37	0.89	1073	19	0.06	65	0.091	40	17	49	35	0.09	18	63	10	129
DETECTION LIMIT	0.1	0.01	2	2	2	2	0.01	0.2	1	1	1	0.01	1	0.01	2	0.01	1	1	0.01	1	0.001	2	2	1	2	0.01	5	2	1	1

0.500 GRAMS OF PULP IS DIGESTED WITH HYDROCHLORIC AND NITRIC ACID AT 95 DEGREE CENTIGRADE FOR ONE HOUR.
DIGEST IS PARTIAL FOR B Ba Ca Cr Fe La Mg Mn Sr Ti AND W
DIGEST IS LIMITED FOR Al K AND Na

AMERICAN ASSAY LABORATORIES

~~PROVISIONAL REPORT : SP035941~~

P.O. BOX 11530
RENO, NV,,USA
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: 165X785/172X7425 RECEIVED : 10 OCT 1995

No. SAMPLES : 32 REPORTED : 23 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035941

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 23 OCT 1995

SAMPLES	Au	Au(R)	Ag
165X785	<5	<5	
166X785	5		
167X785	46		
168X785	21		
169X785	5		
170X785	<5		
171X785	<5		
172X785	<5		
173X785	11	6	
174X785	64		
175X785	19		
176X785	<5		
177X785	13		
178X785	6		
179X785	<5		
180X785	<5		
1652X77	14		
166X77	8		
167X77	56		
168X77	63		
169X77	45		
170X77	7		
171X77	26		
172X77	10		
165X7425	6		

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035941

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 23 OCT 1995

SAMPLES	Au	Au(R)	Ag
166X7425	29		
167X7425	<5		
168X7425	13		
169X7425	<5		
170X7425	<5		
171X7425	<5		
172X7425	<5		

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No. SAMPLES : 32 REPORTED : 24 OCT 1995

MAIN SAMPLE TYPE : SOILS

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

SIGNATORY : Sue King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035941

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 24 OCT 1995

SAMPLES	Au	Au(R)	Ag
165X785	<5	<5	0.5
166X785	5		<0.5
167X785	46		1.2
168X785	21		0.9
169X785	5		<0.5
170X785	<5		<0.5
171X785	<5		<0.5
172X785	<5		<0.5
173X785	11	6	<0.5
174X785	64		1.4
175X785	19		0.6
176X785	<5		0.8
177X785	13		0.8
178X785	6		<0.5
179X785	<5		<0.5
180X785	<5		<0.5
1652X77	14		0.6
166X77	8		0.5
167X77	56		1.0
168X77	63		0.8
169X77	45		0.7
170X77	7		<0.5
171X77	26		<0.5
172X77	10		<0.5
165X7425	6		<0.5

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT : SP035941

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 165X785/172X7425

REPORTED : 24 OCT 1995

SAMPLES	Au	Au(R)	Ag
166X7425	29		0.6
167X7425	<5		0.5
168X7425	13		0.6
169X7425	<5		<0.5
170X7425	<5		<0.5
171X7425	<5		<0.5
172X7425	<5		<0.5