5.0 SUMMARY

Acid rock drainage and metal leaching assessment testwork conducted to date for the Ulu Project consists of:

- Static testing on whole ore samples (Rescan, 1991; Klohn, 1996 and 1998);
- Kinetic testing (Klohn, 1998);
  - Coarse ore (>1.5 mm fraction) humidity cell @ 22 degrees C;
  - Same coarse ore (>1.5 mm fraction) humidity cell @ 4 degrees C;
  - Fine ore (<1.5 mm fraction)(called tailings) humidity cell @ 22 degrees C;
  - Field column testing (Klohn, 1998; Echo Bay, 2002) on the same coarse ore sample (>1.5 mm fraction).

The results to date indicate that, with respect to acid generating potential:

- Compared to kinetic test results from other sites (as compiled in the International Kinetic Database, Morin,1999), the reactivity of the Ulu site materials, in terms of NP and sulphur leaching rates, are low.
- Coarse and fine ore with NPR<3 is considered potentially acid generating (PAG) at 22 degrees C under humidity cell test conditions with prolonged weathering (Klohn, 1998).
- Under colder conditions, the NPR required to eliminate the possibility of ARD from coarse ore under humidity cell conditions can be as high as 7, however the amount of acid released on an annual basis is expected so low that it should not cause any significant impact (Klohn, 1998).
- These NPR thresholds, based on humidity cell conditions, are considered conservative by MEMI for field conditions where lower flushing rates and volumes are expected to reduce NP depletion rates. Field conditions do not appear to affect sulphur depletion rates.
- Results from the field columns suggest that threshold NPRs to avoid acidic drainage may be as low as 1.3 and 2.0. The reduced threshold NPR values (as compared to the humidity cell test results) are attributed to the reduced NP depletion rate, as a result of lower flushing volumes and frequency under field conditions. However, these field column NPR threshold values should be viewed with caution as all oxidation products may not be released as they are produced, and the sulphate release rates may continue to increase as products build up and become available for release on subsequent flush events. Confirmation and use of these lower threshold NPR values would require continued test work (allowing for stabilization of oxidation rates), or dismantling and analysis of field columns.
- Under field conditions, a threshold NPR of 3 is considered a reasonably conservative means of classifying PAG waste materials to avoid the onset of acid generation. From the existing database, this appears to be consistent with a total sulphur cutoff of 0.2%.

- The coarse ore field column did not produce acidic drainage in 5 years of testing. Lag times to produce acidic drainage, even for relatively high sulphide samples (i.e. 1.2 to 1.5 % total sulphur) and fine grainsizes (< 1.5 mm), are likely to be in the order of decades.
- Given the characteristics of the coarse ore and fine ore or tailings samples used in the kinetic tests relative to the current sample database, the humidity cell and field tests appear to provide reasonable worst case results, rather than average or expected results from ore materials.
- Given the characteristics of the selected waste rock sample used in the humidity cell tests relative to the current sample database, the results from the waste rock humidity cell tests are likely to represent reasonable worst case results, rather than average or expected results for waste materials. However, waste rock characteristics appear to be highly variable, as demonstrated by the range in NPR results of 0.1 to 137 for the 37 waste rock samples in the current database, such that a portion of the waste rock may be more reactive than the tested samples.
- The characteristics of ore samples collected to date, along deposit mineralogy, suggest that all ore will likely have a NPR<3, therefore all ore should be classified as PAG.
- Based on the ABA database compiled to date, and a threshold NPR of 3 for separating PAG and NPAG material, gabbro and diabase material for the most part are likely to be NPAG, greywacke may be PAG or NPAG depending on the sulphur content, mafic volcanics are likely to be PAG, basalt material is highly variable but generally PAG and all ore and altered material are PAG.
- The onset of acidic conditions, and/or predicted metal leaching, may not necessarily result in significant adverse affects on the environment. Impact assessments are required to assess potential impacts, and typically take into account the mass of material maintained in a frozen state, volume and grainsize of the stockpiled material, site temperatures, the tendency for water to flow through channels and bypass many of the rock surfaces potentially holding stored oxidation products, and the volume of runoff and leachate that may contact the stockpile materials. MEMI recommends that impact assessments for specific site conditions be conducted to quantitatively define potential impacts associated with temporary and/or permanent storage of ore or waste rock on site.

With respect to the metal leaching potential:

- Arsenic and zinc leaching may be of concern at neutral pH. Arsenic leaching from ore samples under field conditions at neutral pH appears to occur rapidly, and achieved concentrations in the field in the range of 0.5 mg/L to 2 mg/L, i.e. may exceed the federal *Metal Mining Effluent Regulations* maximum allowable values. However, release or loading rates under field conditions are low relative to humidity cell results, such that impacts to the receiving environment may not be significant.

Quantitative predictions are required to determine the significance of potential impacts.

- Klohn (1998) did not consider metal leaching to be a potential problem for waste rock materials, based on the waste rock kinetic test results and the geological description of the ore deposit. However, the current database is limited, and metal content may be elevated in portions of the waste rock, for example in rock in close proximity to the ore body. The potential for metals, such as arsenic and zinc, leaching from waste rock at neutral pH should be considered in impact predictions.
- Metal leaching under acidic conditions have not been assessed, as acidic conditions are not predicted to occur for decades. If acidic conditions should eventually develop, leaching rates of other metals, such as copper, are expected to increase.

6.0 IMPLICATIONS FOR ORE AND MINE WASTE MANAGEMENT

Significant findings from the two extended field column tests conducted on the coarse ore material, that have potential implications for ore and waste rock management include the following:

6.1 Implications for Ore Stockpiles

- Given the characteristics of the coarse ore and fine ore or tailings samples, the humidity cell and field tests are likely to provide reasonable worst case results, rather than average or expected results.
- High arsenic concentrations, and elevated zinc concentrations are anticipated from coarse ore (>1.5 mm) materials located in the active layer on site at neutral pH. These arsenic concentrations may be of concern as they occasionally exceeded the federal *Metal Mining Effluent Regulations* maximum allowable values, particularly in the later stages of the 5 year test.
- Actual ore stockpiles that include some finer (<1.5 mm) material would produce higher arsenic and zinc release rates, higher zinc and arsenic concentrations, higher sulphate and NP depletion rates and more rapid onset of acid generating conditions than suggested by the field columns conducted solely on the coarse ore fraction.
- Klohn's NPR threshold values to avoid acidic drainage, calculated from humidity cell results, of 3 and 7 for 22 ^{o}C and 4 ^{o}C respectively, are considered conservative due to the relatively large volumes of water used in a humidity cell test as compared to field conditions. Lag times before the onset of acidic conditions associated with these thresholds are likely to be in the order of decades.
- Results from the field columns suggest that threshold NPRs to avoid acidic drainage may be as low as 1.3 and 2.0. The reduced threshold NPR values (as compared to the humidity cell test results) are attributed to the reduced NP

depletion rate, as a result of lower flushing volumes and frequency under field conditions. However, these field column NPR threshold values should be viewed with caution as all oxidation products may not be released as they are produced, and the sulphate release rates may continue to increase as products build up and become available for release on subsequent flush events. Confirmation and use of these lower threshold NPR values would require continued test work (allowing for stabilization of oxidation rates), or dismantling and analysis of field columns.

- Given that ore stockpiles are anticipated to be milled quickly, and are not likely to be stored for more than one year before transport to an offsite mill, the predicted arsenic and zinc concentrations and the predicted delay until the onset of acidic conditions are unlikely to result in significant adverse affects on the environment.
- Potential impacts from limited metal leaching over the proposed ore stockpile turnover period can be estimated from humidity cell and field column leach rates, combined with the volume and grainsize of the stockpiled material, site temperatures, the tendency for water to flow through channels and bypass many of the rock surfaces potentially holding stored oxidation products, and the volume of precipitation that may contact the stockpile materials.

6.2 Implications for Waste Rock Piles

- The results from the humidity cell tests on the selected higher sulphide waste rock sample are likely to represent reasonable worst case results, rather than average or expected results. However, the range in NPR results of 0.1 to 137 for the 37 waste rock samples indicates the waste rock characteristics are highly variable.
- Based on the ABA database compiled to date, and a threshold NPR of 3 for separating PAG and NPAG material, gabbro and diabase material for the most part are likely to be NPAG, greywacke may be PAG or NPAG depending on the sulphur content, mafic volcanics are likely to be PAG, basalt material is highly variable but generally PAG and all ore and altered material are PAG. Note that the database is dominated by surface samples, and deeper materials may not maintain the indicated trends. Also note that the samples may have been biased to those containing visible sulphides.
- Extrapolating the field column results on coarse ore to the waste rock, and assuming the waste rock responds in a similar manner to field conditions, suggests that an on site waste rock pile would likely display slower NP release rates and similar sulphate release rates to those shown by the waste rock humidity cells. The lower NP release rates would be attributed to the less frequent and lower volume flushing experienced by waste material exposed in the field.
- These results indicate that Klohn's NPR threshold values to avoid acidic drainage, calculated from humidity cell results, of 3 and 7 for 22°C and 4°C respectively, are likely conservative due to the relatively large volumes of water

used in a humidity cell test as compared to field conditions. Lag time before the onset of acidic conditions, associated with these thresholds, are likely to be in the order of decades or more.

- Threshold NPRs to avoid acidic drainage calculated from coarse ore field columns may be applicable to waste rock, with similar caveats as mentioned above for ore stockpiles. Field column NPR thresholds of 1.3 and 2.0 should be viewed with caution as all oxidation products may not be released as they are produced, and the sulphate release rates may continue to increase as products build up and become available for release on subsequent flush events. Confirmation of lower threshold NPR values would require continued test work (allowing for stabilization of oxidation rates), or dismantling and analysis of field columns.
- Based on the geologic description of the ore deposit, Klohn (1996) anticipates that the waste rock will contain limited mineralization, such that metal leaching would not be significant. This was supported by humidity cell test on a composite waste rock samples (Klohn, 1998) at neutral pH values. However, any waste material that contains arsenic, such as waste rock adjacent to the ore, may have a potential to leach As at elevated concentrations, and should be assessed and/or managed accordingly. Zinc may also be a potential metal leaching concern if present in waste materials in similar quantities and form as the tested coarse and fine ore samples.
- Should acidic conditions eventually develop, leaching of other metals may occur. For example, copper values in the waste rock are noted as being slightly more elevated than ore samples.
- Under field conditions, a threshold NPR of 3 is considered a reasonably conservative means of classifying PAG waste materials to avoid the onset of acid generation. From the existing database, this appears to be consistent with a total sulphur cutoff of 0.2%.
- The onset of acidic conditions, and/or predicted metal leaching, may not necessarily result in significant adverse affects on the environment. Impact assessments are required to assess potential impacts, and typically take into account the mass of material maintained in a frozen state, volume and grainsize of the stockpiled material, site temperatures, the tendency for water to flow through channels and bypass many of the rock surfaces potentially holding stored oxidation products, and the volume of runoff and leachate that may contact the stockpile materials. MEMI recommends that impact assessments for specific site conditions be conducted to quantitatively define potential impacts from waste rock storage.

7.0 RECOMMENDATIONS

- ABA and metal content monitoring should continue during operations, particularly at deeper depths, to confirm if rock type trends identified from the current database remain consistent.
- Additional ABA and metal content sampling of the constructed camp pads should be undertaken to determine their susceptibility for ARD and metal leaching.
- Quantification of the low levels of mineralization in waste rock assumed by Klohn (1996) on the basis of the geological model should be confirmed. This, in conjuction with the lack of a metal leaching problem associated with the single, high sulphide waste rock kinetic test sample, is the basis for anticipating no significant metal leaching from waste rock. However, the limited metal database for waste rock samples precludes a quantitative assessment of arsenic and zinc content in waste materials at this time. For example, metals content may be elevated in waste in close proximity to the ore deposit. Metal content of waste materials should be confirmed by operational monitoring. Greater clarity of the potential quantity of waste rock that might contain elevated metal levels may be determined by review of the 7305 ICP's referred to the BHP geology report (1993).
- The field column tests on coarse ore should continue to determine if lower threshold NPR values may be valid for the site conditions. Alternatively, dismantling of the field columns should be conducted to analytically determine the amounts of soluble salts held in the columns and not flushed out under site conditions. This data could be extrapolated to the waste rock to assess whether lower threshold NPR values might be valid for identifying PAG waste rock quantities stored permanently on site.
- Since the onset of acidic conditions, and/or predicted metal leaching, may not necessarily result in significant adverse affects on the environment, impact assessments should be undertaken to assess potential impacts. These quantitative assessments typically take into account the mass of material maintained in a frozen state, volume and grainsize of the stockpiled material, site temperatures, the tendency for water to flow through channels and bypass many of the rock surfaces potentially holding stored oxidation products, and the volume of runoff and leachate that may contact the stockpile materials.
- Should quantitative impact assessments indicate potential for adverse long-term impacts, field column kinetic tests could potentially be conducted on waste material to confirm metal leaching rates and NPR thresholds for the different types of waste rock and varying composition with depth. However, on the basis of the field column tests conducted on coarse ore, waste rock columns would require several years to develop information supportive of lower threshold NPR values.

We trust this report meets your current requirements.

MEHLING ENVIRONMENTAL MANAGEMENT INC.
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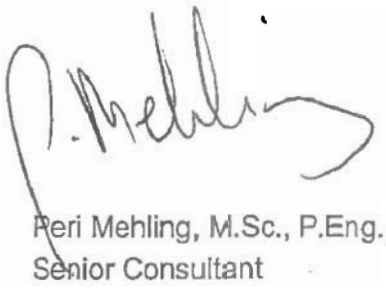

Peri Mehling, M.Sc., P.Eng. (B.C./N.W.T.)
Senior Consultant

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TABLES

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Ulu Project

Table 8: ABA Database by Rock Type

Sample #	Rock Type	Description	Vert. Depth (m)	%S	$\%SO_4$-S	kg CaCO3/tonne AP	NP	NNP	NPR
Intrusive - Gabbro & Diabase									
ARD-1	gabbro	adjacent to zone, 89VD04, 20.0-20.8m	0.8	0.24		7.5	21.95939	14.5	2.9
ARD-3	diabase	fresh, Mod Mg, 89VD14, 37.9-38.9m	30	0.29		9.1	51.94898	42.8	5.7
ARD-9	diabase	hanging wall, 90VD43, 319-320m	240	0.02		0.6	53.38776	52.8	85.4
ARD-10	gabbro	fresh, 90VD66, 171-172.05m		0.13		4.1	10.35714	6.3	2.5
Ulu KC-22	gabbro	BH96-4, 3-23m		0.22	0.01	7	25	18	3.6
Ulu KC-23	gabbro	BH96-3, 3-40m		0.13	0.01	4	18	14	4.4
Ulu KC-24	gabbro	BH96-1, 25-52m		0.06	0.01	2	15	13	8.0
		count		7					
		min.		0.02		0.6	10.36	6.3	2.5
		max.		0.29		9.1	53.39	52.8	85.4
		mean		0.16		5	28	23	5.7
Volcanics									
ARD-2	mafic volcanic	low grade, 1% As, 0.5% Po, 89VD05, 60.6-61.6m	30	0.74		23.1	35.66327	12.5	1.5
Ulu KC-19	mafic volcanic	BH96-2, 11-12m		0.93	0.01	29	18	-11	0.6
		count		2					
		min.		0.74		23.1	18	-11	0.6
		max.		0.93		29	35.66	12.5	1.5
		mean		0.84		26	27	1	1.0
Greywacke & Biotite Schist									
ARD-8	greywacke	footwall, 90VD44, 409.54-410.54m	360	0.17		5.3	20.44898	15.1	3.8
ARD-13	greywacke	fresh, 90VD62, 363-364m	260	0.25		7.8	15.79592	8.0	2.0
Ulu KC-20	biotite schist	BH96-2, 34-38m		0.11	0.01	3	22	19	6.4
Ulu KC-21	biotite schist	BH96-2, 38-42m		0.07	0.01	2	21	19	9.6
		count		4					
		min.		0.07		2	15.79592	8.0	2.0
		max.		0.25		8	22	19	9.6
		mean		0.15		5	20	15	4.2
Basalt/Porphyry/Band Tuff									
ARD-4	band tuff	below zone, tr. Po, calcite, 89VD22, 171-172m	120	0.04		1.3	23.4898	22.2	19
ARD-5	q-f porphy	footwall, 1% Po, 90VD31, 377.78-378.1m	325	0.02		0.8	27.7449	27.1	44
ARD-6	basalt	hanging wall, 1% qtz stringers, 89VD10, 17.38-18.38m	10	0.01		0.3	42.70408	42.4	137
ARD-7	basalt	footwall, 1% qtz stringers, 0.5% Po, 89VD10, 36.05-37.05m	12	0.25		7.8	30.07143	22.3	3.8
ARD-11	basalt	fresh, tr. qtz stringers, 90VD62, 199-200m	150	0.12		3.8	19.64286	15.9	5.2
ARD-12	f-porphy	fresh, 90VD62, 253-254m	180	0.01		0.3	39.23469	38.9	126
ARD-14	basalt	country rock, 7-8% qtz-carb strg, 90VD62, 91.1-92.1m	35	0.22		6.9	84.78571	77.9	12
ARD-15	basalt	country rock, 4-5% qtz stringers, 90VD72, 207.5-208.5m		0.57		17.8	40.73469	22.9	2.3
Ulu KC-1	basalt	portal, working face		0.26	0.005	8	45	37	5.5
Ulu KC-2	basalt & gabbro	portal, N ramp		0.09	0.01	3	27	24	9.6
Ulu KC-4	basalt & gabbro	portal, S ramp		0.49	0.01	15	22	7	1.4
Ulu KC-25	basalt	EBM-Ulu ARD-1 camp pads		1.49	0.01	47	22	-25	0.5
Ulu KC-26	basalt	EBM-Ulu ARD-2 camp pads		0.58	<0.01	18	19	1	1.0
Ulu KC-27	basalt	EBM-Ulu ARD-3 camp pads		0.80	0.01	25	23	-2	0.9
Ulu KC-28	basalt	EBM-Ulu ARD-4 camp pads		0.31	<0.01	10	23	13	2.4
Ulu KC-29	Qtz-feld porphyry + basalt	EBM-Ulu ARD-5 camp pads		0.73	0.01	23	23	0	1.0
Ulu KC-31	basalt + minor QFP	EBM-Ulu ARD-7 camp pads		0.32	<0.01	10	19	9	1.9
		count		17					
		min.		0.01		0	19	-25	0.5
		max.		1.49		47	84.79	77.9	137
		mean		0.37		12	31	20	2.7
Mineralized Zone									
Ulu KC-9	altered basalt	BH96-20, 117.9-118.9		0.15	0.01	5	30	25	6.4
Ulu KC-10	altered basalt	BH96-20, 166.8-167.8		0.28	0.01	9	26	17	3.0
Ulu KC-11	altered basalt	BH96-20, 167.8-169.2		0.93	0.02	29	33	4	1.1
Ulu KC-12	altered basalt	BH96-20, 169.2-170.1		1.17	0.01	37	33	-4	0.9
Ulu KC-13	mineralized zone	BH96-20, 173.3-175.0		2.24	0.01	70	30	-40	0.4
Ulu KC-14	quartz vein	BH96-20, 184.4-185.9		1.60	0.01	50	18	-32	0.4
Ulu KC-15	altered sediment	BH96-20, 85.9-187.6		0.28	0.02	9	24	15	2.7
Ulu KC-16	altered graywacke	BH96-20, 198.9-200.8		0.22	0.03	7	16	9	2.3
Ulu KC-17	fresh interior of grab ore sample	ore zone surface		1.19	0.06	37	23	-14.19	0.6
Ulu KC-18	Alteration rind of grab ore sample	ore zone surface		1.29	0.03	40	26	-14.31	0.6
		count		10					
		min.		0.15		5	16	-40	0.4
		max.		2.24		70	33	25	6.4
		mean		0.94		29	26	-3	0.9
Other - Unspecified									
Ulu KC-3	sulphide (pc+py)-rich	portal, N ramp		3.91	0.02	122	13	-109.2	0.1
Ulu KC-5	EBM-Ulu pulp 18701	portal material		2.65	0.01	83	21	-62	0.3
Ulu KC-6	EBM-Ulu pulp 18702	portal material		2.80	0.01	88	14	-74	0.2
Ulu KC-7	EBM-Ulu pulp 18703	portal material		3.15	0.01	98	21	-77	0.2
Ulu KC-8	EBM-Ulu pulp 18704	portal material		2.29	0.02	72	24	-48	0.3
Ulu KC-30	EBM-Ulu ARD-6	camp pads		0.37	<0.01	12	20	8	1.7
Ulu KC-32	EBM-Ulu ARD-8	camp pads		0.20	0.01	6	19	13	3.0
		count		7					
		min.		0.20		6	13	-109	0.1
		max.		3.91		122	24	13	3.0
		mean		2.20		69	19	-50	0.3

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Table 5: Ulu Project - Field Column #1 Test Data

Sample Weight (kg) 18

Sample	Sample Date	Weeks Between	Cumulative Weeks	Field pH	Field Conductivity	Field H2O volume	Field Temp. (air)	Lab pH	Lab Conductivity	Lab Acidity	Lab T-Alkalinity as CaCO3	Lab Sulphate Dissolved	Lab Ammonium N Dissolved	Lab Cyanide Strong Acid Dissociable
ICP-SOLIDS														
ULU[1]	Wednesday, January 15, 1997													
ICP-LEACHATES					uS/cm	L	C		uS/cm	mg CaCO3/L	mg/L	mg/L	mg/L	mg/L
ULU1[1]	Wednesday, June 18, 1997	22	22	7.67	9140	1.400	11.4	7.67	8500	16	49	64		
ULU1[1]	Wednesday, August 27, 1997	10	32	7.26	9250	0.453	11.5	7.74	8200	7.1	40	192		
ULU1[1]	Friday, September 12, 1997	2.3	34.3			0.490		7.78	4750	7.8	48	240		
ULU1	Saturday, June 06, 1998	38	72.3	7.68	1820	3.300	15					191		
ULU1	Monday, July 13, 1998	5.3	77.6	7.78	368	1.600	9					89.5		
ULU1	Friday, August 21, 1998	5.5	83.1	7.85	272	1.775	18					66.7		
ULU1	Wednesday, September 16, 1998	5.7	88.8	7.7	280	0.926	1					73.7		
ULU1	Tuesday, June 15, 1999	38.5	123.3	8.96	811	2.180	8					280		
ULU1	Saturday, August 07, 1999	7.5	132.8	7.58	292	1.200	5					94.8		
ULU1	Wednesday, September 08, 1999	4.5	137.3	7.26	248	1.840	0					90.4		
ULU1	Tuesday, July 18, 2000	44.5	181.8	7.92	450	1.275	-					189		
ULU1	Tuesday, August 22, 2000	5	186.8	7.66	1062	0.725	-					673		
ULU1	Sunday, September 17, 2000	4.5	191.3	7.4	933	1.189	2					484		
ULU1	Wednesday, July 04, 2001	41	252.3	7.45	1064	4.650	20					656		
ULU1	Thursday, August 02, 2001	4.3	236.8	7.29	904	2.115	-					379		
ULU1	Saturday, September 01, 2001	4.3	240.9	6.98	683	1.330	-					403		
ULU1	Sunday, July 07, 2002	44	284.9				-	8.76	5340		884	578		
ULU1	Friday, August 16, 2002	6.7	290.6				-	8.04	1010		19	283	30.8	0.118
Maximum		-		7.92	9140							688		
Minimum				6.88	248							74		
UNIT LEACH RATES												mg/kg/wk		
ULU1[1]	Wednesday, June 18, 1997											0.36		
ULU1[1]	Wednesday, August 27, 1997											0.68		
ULU1[1]	Friday, September 12, 1997											2.78		
ULU1	Saturday, June 06, 1998											0.77		
ULU1	Monday, July 13, 1998											1.80		
ULU1	Friday, August 21, 1998											1.84		
ULU1	Wednesday, September 16, 1998											1.23		
ULU1	Tuesday, June 15, 1999											0.88		
ULU1	Saturday, August 07, 1999											1.01		
ULU1	Wednesday, September 08, 1999											2.60		
ULU1	Tuesday, July 18, 2000											0.39		
ULU1	Tuesday, August 22, 2000											6.54		
ULU1	Sunday, September 17, 2000											8.16		
ULU1	Wednesday, July 04, 2001											5.83		
ULU1	Thursday, August 02, 2001											12.4		
ULU1	Saturday, September 01, 2001											8.2		
Maximum												12.4		
Minimum												0.36		
CUMULATIVE LEACH RATES												mg/kg		
ULU1[1]	Wednesday, June 18, 1997											7.84		
ULU1[1]	Wednesday, August 27, 1997											12.8		
ULU1[1]	Friday, September 12, 1997											20.0		
ULU1	Saturday, June 06, 1998											45.3		
ULU1	Monday, July 13, 1998											58.8		
ULU1	Friday, August 21, 1998											68.0		
ULU1	Wednesday, September 16, 1998											73.5		
ULU1	Tuesday, June 15, 1999											107		
ULU1	Saturday, August 07, 1999											115		
ULU1	Wednesday, September 08, 1999											127		
ULU1	Tuesday, July 18, 2000											144		
ULU1	Tuesday, August 22, 2000											171		
ULU1	Sunday, September 17, 2000											206		
ULU1	Wednesday, July 04, 2001											414		
ULU1	Thursday, August 02, 2001											453		
ULU1	Saturday, September 01, 2001											503		

Sample	Sample Date	Aluminum Total	Antimony Total	Arsenic Hydride Total	Arsenic Total	Barium Total	Beryllium Total	Bismuth Total	Boron Total	Cadmium Total	Calcium Total	Chromium Total	Cobalt Total
ICP-SOLIDS		ppm	ppm		ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
ULU[1]	Wednesday, January 15, 1997	15300	< 2		7780	80	< 5	< 2		< .5	10000	88	31
ICP-LEACHATES		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU1[1]	Wednesday, June 18, 1997	< 1	0.05		0.10	< 0.01	< 0.001			0.003	130	< 0.30	< 0.02
ULU1[1]	Wednesday, August 27, 1997	< 1	0.05		0.40	< 0.01	< 0.001			< 0.001	86	< 0.30	< 0.02
ULU1[1]	Friday, September 12, 1997	< 1	0.05		0.30	< 0.01	< 0.001			< 0.001	165	< 0.02	< 0.02
ULU1	Saturday, June 06, 1998	0.053	0.029		0.48	0.034	< 0.0006	< 0.008	0.045	< 0.0006	61.2	< 0.0009	0.007
ULU1	Monday, July 13, 1998	0.104	0.01		0.15	0.0277	< 0.0006	< 0.008	0.013	< 0.0006	38	< 0.0009	0.0009
ULU1	Friday, August 21, 1998	0.040	0.017		0.17	0.0462	< 0.0006	< 0.008	0.004	< 0.0006	56.4	< 0.0009	< 0.0009
ULU1	Wednesday, September 16, 1998	0.084	0.029		0.58	0.0026	< 0.0006	< 0.008	0.003	< 0.0006	40.3	0.0011	< 0.0008
ULU1	Tuesday, June 15, 1999	< 0.038	0.011		0.17	0.0465	< 0.0006	< 0.008	< 0.002	< 0.0006	81.3	< 0.0009	0.0097
ULU1	Saturday, August 07, 1999	0.041	0.009		0.23	0.0222	< 0.0006	< 0.008	< 0.002	< 0.0006	41.7	< 0.0009	< 0.0009
ULU1	Wednesday, September 08, 1999	0.029	0.009		0.2	0.0119	< 0.0006	< 0.008	< 0.002	< 0.0006	42.5	< 0.0009	< 0.0009
ULU1	Tuesday, July 18, 2000	0.029	0.01		0.2	0.0651	< 0.0006	< 0.008	< 0.002	< 0.0006	71.4	< 0.0009	< 0.0006
ULU1	Tuesday, August 22, 2000	< 0.069	0.01		0.88	0.0994	< 0.0006	< 0.008	0.003	< 0.0006	212	< 0.0009	0.0019
ULU1	Sunday, September 17, 2000	< 0.009	0.007		0.83	0.0906	< 0.0006	< 0.008	< 0.002	< 0.0006	181	< 0.0009	0.0018
ULU1	Wednesday, July 04, 2001	0.702	0.008	0.499	0.83	0.038	< 0.0006	< 0.008	0.024	< 0.0006	234	< 0.0009	0.0097
ULU1	Thursday, August 02, 2001	0.034	< 0.006	0.444	0.45	0.2302	< 0.0006	< 0.008	0.017	< 0.0006	148	< 0.0009	0.0019
ULU1	Saturday, September 01, 2001	0.023	0.008	0.407	0.35	0.0382	< 0.0006	< 0.008	0.014	< 0.0008	143	< 0.0009	< 0.0008
ULU1	Sunday, July 07, 2002	0.12	0.012		1.74	0.008	< 0.001	< 0.005	0.027	< 0.0001	32.4	< 0.005	0.018
ULU1	Friday, August 16, 2002	0.028	0.0078		0.88	0.021		< 0.0005	0.018	0.00004	117	< 0.0005	0.0046
Maximum		1	0.05	0.499	1.74	0.0999	0.001	0.008	0.045	0.003	334	0.32	0.02
Minimum		0.009	0.006	0.407	0.17	0.01	< 0.0006	< 0.0005	< 0.002	< 0.00004	29	< 0.0005	< 0.0009
UNIT LEACH RATES		mg/kg/wk	mg/kg/wk		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
ULU1[1]	Wednesday, June 18, 1997	0.0042	0.00021		0.0071	0.00004	0.000004			0.000013	0.55	0.00008	0.000085
ULU1[1]	Wednesday, August 27, 1997	0.0030	0.00016		0.0012	0.00005	0.000005			0.000009	0.26	0.00008	0.000080
ULU1[1]	Friday, September 12, 1997	0.0118	0.00058		0.0026	0.00012	0.000012			0.000012	1.91	0.00023	0.000232
ULU1	Saturday, June 06, 1998	0.0003	0.00017		0.0026	0.0002	0.000004	0.00006	0.00025	0.000004	0.36	0.000008	0.000041
ULU1	Monday, July 13, 1998	0.0021	0.00029		0.0070	0.0030	0.000012	0.00016	0.00025	0.000012	0.60	0.000018	0.000016
ULU1	Friday, August 21, 1998	0.0010	0.00037		0.0058	0.00099	0.000013	0.00017	0.00008	0.000013	0.76	0.000019	0.000017
ULU1	Wednesday, September 16, 1998	0.0011	0.00042		0.0055	0.00106	0.000010	0.00013	0.00005	0.000010	0.67	0.000018	0.000013
ULU1	Tuesday, June 15, 1999	0.0000	0.00004		0.0006	0.00017	0.000002	0.00003	0.00001	0.000002	0.34	0.000003	0.000021
ULU1	Saturday, August 07, 1999	0.0004	0.00010		0.0025	0.00024	0.000008	0.00009	0.00002	0.000008	0.44	0.000010	0.000009
ULU1	Wednesday, September 08, 1999	0.0088	0.00025		0.0057	0.00034	0.000017	0.00023	0.00006	0.000017	1.22	0.000026	0.000023
ULU1	Tuesday, July 18, 2000	0.0001	0.00032		0.0004	0.00011	0.000001	0.00002	0.00000	0.000001	0.14	0.000002	0.000002
ULU1	Tuesday, August 22, 2000	0.0001	0.00010		0.0085	0.00097	0.000008	0.00008	0.00000	0.000006	2.06	0.000000	0.000017
ULU1	Sunday, September 17, 2000	0.0002	0.00012		0.016	0.02164	0.000011	0.00014	0.00004	0.000011	2.83	0.000015	0.000032
ULU1	Wednesday, July 04, 2001	0.0053	0.00006	0.0038	0.0060	0.00029	0.000006	0.00006	0.00018	0.000006	1.77	0.000007	0.000066
ULU1	Thursday, August 02, 2001	0.0011	0.00020	0.0146	0.0141	0.00099	0.000020	0.00006	0.00066	0.000030	4.76	0.000030	0.000082
ULU1	Saturday, September 01, 2001	0.0009	0.00012	0.0065	0.0272	0.00078	0.000012	0.00016	0.00026	0.000012	2.85	0.000019	0.000015
Maximum		0.0118	0.00058	0.0146	0.016	0.00184	0.00002	0.00026	0.00066	0.00002	4.76	0.00023	0.000231884
Minimum		0.00003	0.00002	0.0038	0.0004	0.00003	< 0.000001	< 0.00002	< 0.000004	< 0.000001	0.14	< 0.000002	< 0.000002
CUMULATIVE LEACH RATES		mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ULU1[1]	Wednesday, June 18, 1997	0.092	0.005		0.023	0.001	0.0001			0.00028	12.1	0.00187	0.00187
ULU1[1]	Wednesday, August 27, 1997	0.123	0.008		0.055	0.001	0.0001			0.00031	16.0	0.00247	0.00247
ULU1[1]	Friday, September 12, 1997	0.150	0.008		0.049	0.002	0.0002			0.00034	36.4	0.00300	0.00300
ULU1	Saturday, June 06, 1998	0.162	0.014		0.161	0.006	0.0003	0.0018	0.0101	0.00047	33.1	0.00320	0.00436
ULU1	Monday, July 13, 1998	0.173	0.016		0.158	0.012	0.0003	0.0026	0.0114	0.00053	35.1	0.00330	0.00460
ULU1	Friday, August 21, 1998	0.178	0.017		0.220	0.018	0.0004	0.0035	0.0116	0.00061	40.4	0.00340	0.00475
ULU1	Wednesday, September 16, 1998	0.182	0.019		0.243	0.021	0.0005	0.0041	0.0121	0.00064	42.9	0.00347	0.00480
ULU1	Tuesday, June 15, 1999	0.184	0.020		0.266	0.028	0.0005	0.0052	0.0124	0.00073	58.0	0.00360	0.00562
ULU1	Saturday, August 07, 1999	0.187	0.021		0.290	0.030	0.0006	0.0059	0.0122	0.00078	59.3	0.00367	0.00569
ULU1	Wednesday, September 08, 1999	0.191	0.022		0.312	0.031	0.0007	0.0066	0.0128	0.00085	64.8	0.00379	0.00579
ULU1	Tuesday, July 18, 2000	0.193	0.023		0.320	0.036	0.0007	0.0076	0.0130	0.00091	70.8	0.00387	0.00586
ULU1	Tuesday, August 22, 2000	0.194	0.023		0.372	0.041	0.0007	0.0080	0.0131	0.00093	81.2	0.00391	0.00595
ULU1	Sunday, September 17, 2000	0.194	0.024		0.448	0.048	0.0008	0.0086	0.0133	0.00098	93.8	0.00395	0.00609
ULU1	Wednesday, July 04, 2001	0.412	0.026		0.609	0.080	0.0010	0.0111	0.0207	0.00117	186	0.00425	0.00679
ULU1	Thursday, August 02, 2001	0.417	0.027		0.670	0.088	0.0011	0.0122	0.0231	0.00125	187	0.00439	0.00808
ULU1	Saturday, September 01, 2001	0.419	0.028		0.701	0.088	0.0011	0.0129	0.0243	0.00131	189	0.00447	0.00812

Note:
[1] - Data from Mohn, 1998. Dissolved metals, not total metals.

ECHO BAY MINES LTD.
Table 9: Ulu Project - Field Column #1 Test Data

Sample Weight (kg) 18

	Sample Date	Weeks Between	Cummulative Weeks	Copper Total	Iron Total	Lead Total	Lithium Total	Magnesium Total	Manganese Total	Molybdenum Total	Nickel Total	Phosphorus Total
ICP-SOLIDS				ppm	ppm	ppm		ppm	ppm	ppm	ppm	ppm
ULU[1]	Wednesday, January 15, 1997			80	47100	2		6600	396	1	11	690
ICP-LEACHATE				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU1[1]	Wednesday, June 18, 1997	22	22	< 0.01	< 1	< 0.05		18.0	4.1	< 0.01	< 0.01	< 1
ULU1[1]	Wednesday, August 27, 1997	10	32	< 0.01	< 1	< 0.05		11.6	1.8	< 0.01	< 0.01	< 1
ULU1[1]	Friday, September 12, 1997	2.3	34.5	< 0.01	< 1	< 0.05		20	1.0	0.01	< 0.01	< 1
ULU1	Saturday, June 06, 1998	38	72.5	0.014	0.677	0.003	0.035	7.42	1.85	0.006	0.006	0.11
ULU1	Monday, July 13, 1998	5.5	77.8	0.007	0.073	< 0.002	0.021	1.54	0.0862	0.003	0.003	< 0.03
ULU1	Friday, August 21, 1998	5.5	83.1	0.01	0.026	< 0.002	0.023	1.74	0.0379	0.002	0.002	< 0.03
ULU1	Wednesday, September 16, 1998	3.7	86.8	0.006	0.11	< 0.002	0.03	1.89	0.0184	0.002	0.006	< 0.05
ULU1	Tuesday, June 15, 1999	38.6	125.3	0.011	0.026	< 0.002	0.031	5.03	1.22	0.001	0.006	< 0.03
ULU1	Saturday, August 07, 1999	7.6	132.8	0.008	0.018	0.003	0.024	2.01	0.0844	0.001	0.003	< 0.03
ULU1	Wednesday, September 08, 1999	4.9	137.5	0.005	0.019	< 0.002	0.018	1.6	0.0067	0.001	0.002	< 0.03
ULU1	Tuesday, July 18, 2000	44.3	181.8	0.006	0.012	< 0.002	0.019	2.95	0.002	< 0.001	0.002	< 0.03
ULU1	Tuesday, August 22, 2000	4	185.8	0.012	0.024	< 0.002	0.004	7.09	0.0467	0.002	0.006	< 0.03
ULU1	Sunday, September 17, 2000	4.5	190.3	0.015	0.028	0.004	0.032	8.45	0.0607	< 0.001	0.004	< 0.03
ULU1	Wednesday, July 04, 2001	41	232.3	0.009	0.472	< 0.002	0.035	4.28	0.628	< 0.001	0.006	0.04
ULU1	Thursday, August 02, 2001	4.3	236.6	0.011	0.014	< 0.002	0.03	2.34	0.166	0.001	0.006	< 0.03
ULU1	Saturday, September 01, 2001	4.3	240.9	0.008	0.009	< 0.002	0.030	2.89	0.0947	< 0.001	0.006	< 0.03
ULU1	Sunday, July 07, 2002	44	284.9	0.028	0.3	0.0016	0.02	1.52	0.013	< 0.01	0.016	
ULU1	Friday, August 16, 2002	6.7	290.6	0.021	<0.1	0.0003	0.029	5.2	0.373	0.002	0.0074	
Maximum				0.028	1	0.05	0.036	20	4.1	0.01	0.016	1
Minimum				0.01	0.008	0.0003	0.015	1.52	0.002	< 0.001	0.002	< 0.03
UNIT LEACH RATES				mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
ULU1[1]	Wednesday, June 18, 1997			0.000042	0.0042	0.000212		0.061	0.017	0.00004	0.00004	0.0042
ULU1[1]	Wednesday, August 27, 1997			0.000030	0.0030	0.000150		0.035	0.005	0.00003	0.00003	0.0030
ULU1[1]	Friday, September 12, 1997			0.000118	0.0116	0.000580		0.232	0.036	0.00012	0.00012	0.0116
ULU1	Saturday, June 06, 1998			0.000082	0.0006	0.000018	0.00021	0.044	0.008	0.00003	0.00004	0.0006
ULU1	Monday, July 13, 1998			0.00014	0.0013	0.000040	0.0004	0.035	0.003	0.000030	0.00006	0.0006
ULU1	Friday, August 21, 1998			0.00022	0.0005	0.000043	0.0005	0.037	0.001	0.000043	0.00004	0.0066
ULU1	Wednesday, September 16, 1998			0.00013	0.0018	0.000033	0.0005	0.033	0.000	0.000033	0.00006	0.0308
ULU1	Tuesday, June 15, 1999			0.00004	0.0001	0.000007	0.0001	0.019	0.006	0.000004	0.00002	0.0061
ULU1	Saturday, August 07, 1999			0.00010	0.0002	0.000002	0.0002	0.021	0.001	0.000011	0.00003	0.0003
ULU1	Wednesday, September 08, 1999			0.00014	0.0004	0.000007	0.0004	0.045	0.002	0.000026	0.00006	0.0008
ULU1	Tuesday, July 18, 2000			0.00001	0.0000	0.000004	0.0000	0.006	0.000	0.000002	0.00000	0.0001
ULU1	Tuesday, August 22, 2000			0.00012	0.0002	0.000019	0.0003	0.060	0.000	0.000019	0.00006	0.0003
ULU1	Sunday, September 17, 2000			0.00023	0.0003	0.000070	0.0006	0.113	0.001	0.000018	0.00007	0.0005
ULU1	Wednesday, July 04, 2001			0.00007	0.0036	0.000015	0.0003	0.032	0.006	0.000006	0.00008	0.0003
ULU1	Thursday, August 02, 2001			0.00036	0.0065	0.000088	0.0010	0.077	0.006	0.000053	0.00026	0.0010
ULU1	Saturday, September 01, 2001			0.00016	0.0002	0.000041	0.0007	0.053	0.002	0.000029	0.00012	0.0006
Maximum				0.00036	0.0116	0.00058	0.0010	0.232	0.036	0.00012	0.0003	0.0116
Minimum				0.00001	0.00002	0.000004	0.00004	0.006	0.000004	< 0.000002	0.000	< 0.0001
UNIT CUMULATIVE LEACH RATES				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ULU1[1]	Wednesday, June 18, 1997			0.00093	0.093	0.0047		1.77	0.58	0.0009	0.0009	0.093
ULU1[1]	Wednesday, August 27, 1997			0.00123	0.123	0.0062		2.19	0.44	0.0012	0.0012	0.123
ULU1[1]	Friday, September 12, 1997			0.00150	0.150	0.0075		2.64	0.22	0.0015	0.0015	0.150
ULU1	Saturday, June 06, 1998			0.00483	0.187	0.0082	0.0060	4.29	0.82	0.0026	0.0028	0.175
ULU1	Monday, July 13, 1998			0.00537	0.175	0.0084	0.0100	4.47	0.83	0.0029	0.0032	0.178
ULU1	Friday, August 21, 1998			0.00656	0.178	0.0086	0.0130	4.67	0.84	0.0032	0.0034	0.181
ULU1	Wednesday, September 16, 1998			0.00705	0.186	0.0087	0.0146	4.80	0.84	0.0033	0.0037	0.183
ULU1	Tuesday, June 15, 1999			0.00863	0.188	0.0090	0.0193	5.82	1.02	0.0034	0.0046	0.187
ULU1	Saturday, August 07, 1999			0.00935	0.190	0.0093	0.0212	5.68	1.02	0.0035	0.0048	0.190
ULU1	Wednesday, September 08, 1999			0.01000	0.192	0.0093	0.0232	5.69	1.03	0.0037	0.0051	0.194
ULU1	Tuesday, July 18, 2000			0.01051	0.193	0.0097	0.0248	6.14	1.03	0.0037	0.0052	0.196
ULU1	Tuesday, August 22, 2000			0.01108	0.194	0.0098	0.0264	6.42	1.03	0.0038	0.0055	0.198
ULU1	Sunday, September 17, 2000			0.01212	0.198	0.0101	0.0290	6.96	1.04	0.0038	0.0055	0.200
ULU1	Wednesday, July 04, 2001			0.01491	0.342	0.0107	0.0389	8.32	1.23	0.0042	0.0083	0.213
ULU1	Thursday, August 02, 2001			0.01640	0.344	0.0110	0.0440	8.63	1.25	0.0044	0.0084	0.217
ULU1	Saturday, September 01, 2001			0.01718	0.345	0.0112	0.0471	8.99	1.28	0.0044	0.0086	0.219

	Sample Date	Potassium Total	Selenium Total	Silicon Total	Silver Total	Sodium Total	Strontium Total	Sulphur Total	Thallium Total	Tin Total	Titanium Total	Uranium Total	Vanadium Total	Zinc Total	Zirconium Total
ICP-SOLIDS		ppm			ppm	ppm	ppm	ppm			ppm	ppm	ppm	ppm	
ULU[1]	Wednesday, January 15, 1997	6700			< 0.2	700	8	11400			0.14	10	119	86	
ICP-LEACHATE		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU1[1]	Wednesday, June 18, 1997	40			< 0.01	1510	0.41				< 1		< 0.01	0.16	
ULU1[1]	Wednesday, August 27, 1997	20			< 0.01	860	0.18				< 1		< 0.01	0.05	
ULU1[1]	Friday, September 12, 1997	30			< 0.01	880	0.34				< 1		< 0.01	0.07	
ULU1	Saturday, June 06, 1998	12.2	0.006	1.8	< 0.001	298	0.111	44.9	< 0.004	< 0.006	0.0021		0.003	0.086	
ULU1	Monday, July 13, 1998	5.2	< 0.004	1.53	< 0.001	47.4	0.0402	29.9	< 0.004	< 0.003	0.0031		< 0.001	0.018	
ULU1	Friday, August 21, 1998	8.8	0.007	1.86	< 0.001	18.5	0.0471	27.6	< 0.004	< 0.003	0.0009		0.001	0.0132	
ULU1	Wednesday, September 16, 1998	12.1	< 0.004	2.06	< 0.001	15.1	0.0507	23.1	< 0.004	< 0.003	0.0013		0.002	0.077	
ULU1	Tuesday, June 15, 1999	13	< 0.004	1.12	< 0.001	48.2	0.107	78.7	< 0.004	< 0.003	< 0.0004		< 0.001	0.332	
ULU1	Saturday, August 07, 1999	11.3	< 0.004	1.43	< 0.001	18.7	0.0478	31.6	< 0.004	< 0.003	< 0.0004		< 0.001	0.0229	
ULU1	Wednesday, September 08, 1999	8.8	0.007	1.03	< 0.001	6	0.0431	28.8	< 0.004	< 0.003	< 0.0004		< 0.001	0.0041	
ULU1	Tuesday, July 18, 2000	11.6	0.013	1.72	< 0.001	14	0.0787	65.4	< 0.004	< 0.003	< 0.0004		0.001	0.0236	
ULU1	Tuesday, August 22, 2000	21.7	0.005	1.78	< 0.001	23.1	0.157	100	< 0.004	< 0.003	< 0.0004		0.002	0.0483	
ULU1	Sunday, September 17, 2000	20.9	0.029	1.27	< 0.001	22.5	0.118	147	< 0.004	< 0.003	< 0.0004		0.002	0.142	
ULU1	Wednesday, July 04, 2001	20.9	0.019	2.65	< 0.001	5.8	0.174	210	0.007	< 0.003	< 0.0004		< 0.001	0.0183	
ULU1	Thursday, August 02, 2001	16.3	< 0.004	1.99	< 0.001	3	0.107	122	< 0.004	< 0.003	< 0.0004		< 0.001	0.0023	
ULU1	Saturday, September 01, 2001	16.5	0.007	1.7	< 0.001	3.2	0.103	128	< 0.004	0.004	< 0.0004		< 0.001	0.0366	
ULU1	Sunday, July 07, 2002	124	< 0.002	2.04	< 0.001	84.8	0.021	284	< 0.0005		0.0074	< 0.005	0.001	0.056	< 0.01
ULU1	Friday, August 16, 2002	22.5	0.0007	1.89	< 0.0001	6.5	0.093	84.8	< 0.00005		0.004	< 0.0005	0.0007	0.033	< 0.001
Maximum		124	0.013	2.65	< 0.01	1510	0.41	210	0.007	0.004	1		0.01	0.332	
Minimum		5.2	0.0007	1.03	< 0.0001	3	0.021	22	< 0.00005	< 0.003	< 0.0004		< 0.0007	0.0132	
UNIT LEACH RATES		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk		mg/kg/wk	mg/kg/wk	
ULU1[1]	Wednesday, June 18, 1997	0.17			0.00004	0.41	0.0017				0.004		0.00004	0.0007	
ULU1[1]	Wednesday, August 27, 1997	0.06			0.00003	1.85	0.0005				0.005		0.00003	0.0002	
ULU1[1]	Friday, September 12, 1997	0.25			0.00012	3.88	0.0039				0.01		0.0001	0.0008	
ULU1	Saturday, June 06, 1998	0.07	0.00005	0.0112	0.00001	1.74	0.0007	0.26	0.00002	0.00002	0.00001		0.00001	0.0006	
ULU1	Monday, July 13, 1998	0.12	0.00008	0.0336	0.00002	0.0646	0.0009	0.50	0.00008	0.00006	0.000062		0.000020	0.0003	
ULU1	Friday, August 21, 1998	0.10	0.00018	0.0336	0.00008	0.4002	0.0010	0.59	0.00008	0.00008	0.000019		0.000022	0.0003	
ULU1	Wednesday, September 16, 1998	0.20	0.00007	0.0344	0.00002	0.2610	0.0009	0.39	0.00007	0.00006	0.000022		0.000033	0.0004	
ULU1	Tuesday, June 15, 1999	0.08	0.00001	0.0042	0.00000	0.1738	0.0004	0.30	0.00001	0.00001	0.000001		0.000004	0.0012	
ULU1	Saturday, August 07, 1999	0.12	0.00004	0.0163	0.00001	0.1791	0.0008	0.34	0.00004	0.00005	0.000004		0.000011	0.0002	
ULU1	Wednesday, September 08, 1999	0.24	0.00020	0.0295	0.00005	0.1724	0.0012	0.86	0.00011	0.00009	0.000011		0.000029	0.0010	
ULU1	Tuesday, July 18, 2000	0.02	0.00002	0.0035	0.00000	0.0287	0.0001	0.12	0.00001	0.00001	0.000001		0.000002	0.0005	
ULU1	Tuesday, August 22, 2000	0.21	0.00005	0.0172	0.00001	0.2233	0.0016	1.84	0.00004	0.00003	0.000004		0.000018	0.0030	
ULU1	Sunday, September 17, 2000	0.37	0.00016	0.0223	0.00002	0.3850	0.0021	2.58	0.00007	0.00005	0.000007		0.000035	0.0025	
ULU1	Wednesday, July 04, 2001	0.16	0.00010	0.0200	0.00001	0.0614	0.0015	1.56	0.00005	0.00002	0.000003		0.000008	0.001	
ULU1	Thursday, August 02, 2001	0.50	0.00013	0.0649	0.00003	0.0984	0.0036	4.00	0.00013	0.00010	0.000013		0.000033	0.0020	
ULU1	Saturday, September 01, 2001	0.39	0.00014	0.0048	0.00002	0.0565	0.0021	2.58	0.00008	0.00008	0.000008		0.000020	0.0008	
Maximum		0.50	0.00020	0.0649	< 0.00012	3.88	0.0039	4.00	0.00013	0.0001	0.01		0.0001	0.0029	
Minimum		0.02	0.00001	0.0033	< 0.000002	0.0287	0.0001	0.12	< 0.000008	< 0.00001	< 0.000001		< 0.000002	0.00005	
UNIT CUMULATIVE LEACH RATES		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	
ULU1[1]	Wednesday, June 18, 1997	3.7			0.0009	141	0.038				0.093		0.0009	0.015	
ULU1[1]	Wednesday, August 27, 1997	4.5			0.0012	167	0.044				0.123		0.0012	0.016	
ULU1[1]	Friday, September 12, 1997	6.1			0.0015	180	0.053				0.150		0.0015	0.018	
ULU1	Saturday, June 06, 1998	7.9	0.0020	0.424	0.0017	246	0.079	10.0	0.0029	0.0007	0.160		0.0022	0.040	
ULU1	Monday, July 13, 1998	8.6	0.0024	0.599	0.0018	251	0.082	13.2	0.0013	0.0010	0.151		0.0023	0.042	
ULU1	Friday, August 21, 1998	9.6	0.0033	0.772	0.0019	253	0.088	16.5	0.0016	0.0013	0.151		0.0024	0.044	
ULU1	Wednesday, September 16, 1998	10.3	0.0035	0.869	0.0020	254	0.091	17.6	0.0020	0.0016	0.151		0.0025	0.045	
ULU1	Tuesday, June 15, 1999	12.8	0.0041	1.08	0.0022	261	0.106	29.4	0.0026	0.0020	0.151		0.0027	0.053	
ULU1	Saturday, August 07, 1999	13.4	0.0044	1.17	0.0022	262	0.110	31.9	0.0029	0.0022	0.151		0.0027	0.056	
ULU1	Wednesday, September 08, 1999	14.6	0.0053	1.31	0.0024	265	0.116	35.0	0.0036	0.0026	0.151		0.0029	0.069	
ULU1	Tuesday, July 18, 2000	15.5	0.0064	1.45	0.0024	284	0.122	41.8	0.0038	0.0028	0.151		0.0030	0.10	
ULU1	Tuesday, August 22, 2000	16.6	0.0067	1.64	0.0025	285	0.129	50.6	0.0040	0.0030	0.151		0.0031	0.10	
ULU1	Sunday, September 17, 2000	18.2	0.0074	1.84	0.0026	287	0.139	62.1	0.0043	0.0032	0.151		0.0032	0.11	
ULU1	Wednesday, July 04, 2001	24.6	0.0114	2.46	0.0029	268	0.193	127	0.0065	0.0042	0.151		0.0035	0.12	
ULU1	Thursday, August 02, 2001	25.6	0.0128	2.74	0.0030	273	0.208	144	0.0070	0.0046	0.151		0.0037	0.13	
ULU1	Saturday, September 01, 2001	26.6	0.0126	2.89	0.0031	270	0.217	150	0.0074	0.0049	0.151		0.0039	0.13	

Note:
[1] - Data from Klohn, 1998. Dissolved metals, not total metals.

ECHO BAY MINES LTD.
Table 9: Ulu Project - Field Column #1 Test Data

Sample Weight (kg) 18

Station	Sample Date	Weeks Between	Cumulative Weeks	Solids Total Suspended	Temperature of observed pH	Bicarbonate	Calcium Dissolved	Carbonate	Hardness as CaCO3	Hydroxide	Magnesium Dissolved	P-Alkalinity as CaCO3	Ca	Mg	Ca+Mg+0.5Na+0.5K	mM Ca+Mg+.5Na+.5K	mM SO4	mM S
ICP-SOLIDS															ppm	mM CaCO3/kg		mM S/kg
ULU[1]	Wednesday, January 15, 1997														20660	638		338
ICP LEACHATES				mg/L	C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			mg/L			
ULU1[1]	Wednesday, June 18, 1997	22	22												924			
ULU1[1]	Wednesday, August 27, 1997	10	32												880			
ULU1[1]	Friday, September 12, 1997	2.3	34.3												628			
ULU1	Saturday, June 06, 1998	38	72.2												223			
ULU1	Monday, July 13, 1998	5.8	77.8												56			
ULU1	Friday, August 21, 1998	8.8	83.1												82			
ULU1	Wednesday, September 16, 1998	3.7	86.8												86			
ULU1	Tuesday, June 15, 1999	38.5	125.3												127			
ULU1	Saturday, August 07, 1999	7.8	132.8												58			
ULU1	Wednesday, September 08, 1999	4.5	137.3												61			
ULU1	Tuesday, July 18, 2000	44.5	181.8												67			
ULU1	Tuesday, August 22, 2000	6	186.8												241			
ULU1	Sunday, September 17, 2000	4.5	191.8												186			
ULU1	Wednesday, July 04, 2001	41	233.3												252			
ULU1	Thursday, August 02, 2001	4.3	236.8												186			
ULU1	Saturday, September 01, 2001	4.3	240.8												157			
ULU1	Sunday, July 07, 2002	44	284.9		20.9	810	32.4	< 8	93.8	< 5	1.1	< 5			115			
ULU1	Friday, August 16, 2002	8.7	290.8	< 1	20.5	< 5	122	12	316	<5	3.4	<5			134			
Maximum																		
Minimum																		
UNITIZED LEACHATES													mM/kg/wk	mM/kg/wk	mg/kg/wk	mM CaCO3/kg/wk	mM SO4/kg/wk	
ULU1[1]	Wednesday, June 18, 1997												0.014	0.0033	3.9	0.16	0.004	
ULU1[1]	Wednesday, August 27, 1997												0.007	0.0014	1.2	0.05	0.006	
ULU1[1]	Friday, September 12, 1997												0.049	0.0098	7.2	0.28	0.029	
ULU1	Saturday, June 06, 1998												0.009	0.0018	1.3	0.05	0.008	
ULU1	Monday, July 13, 1998												0.014	0.0014	1.1	0.04	0.019	
ULU1	Friday, August 21, 1998												0.020	0.0016	1.1	0.03	0.019	
ULU1	Wednesday, September 16, 1998												0.017	0.0014	0.9	0.05	0.013	
ULU1	Tuesday, June 15, 1999												0.008	0.0008	0.5	0.01	0.009	
ULU1	Saturday, August 07, 1999												0.011	0.0009	0.8	0.02	0.011	
ULU1	Wednesday, September 08, 1999												0.039	0.0019	1.5	0.04	0.027	
ULU1	Tuesday, July 18, 2000												0.003	0.0002	0.2	0.00	0.004	
ULU1	Tuesday, August 22, 2000												0.051	0.0028	2.3	0.08	0.058	
ULU1	Sunday, September 17, 2000												0.071	0.0047	3.3	0.09	0.086	
ULU1	Wednesday, July 04, 2001												0.044	0.0013	1.8	0.05	0.052	
ULU1	Thursday, August 02, 2001												0.119	0.0032	8.1	0.13	0.129	
ULU1	Saturday, September 01, 2001														3.2	0.08	0.086	
Maximum																		
Minimum																		
ULU1 CUMULATIVE LEACHATES															mg/kg	mM CaCO3/kg	mM SO4/kg	mM S/kg
ULU1[1]	Wednesday, June 18, 1997														88.2	3.8	0.08	0.00
ULU1[1]	Wednesday, August 27, 1997														95.0	3.9	0.14	0.08
ULU1[1]	Friday, September 12, 1997														115	4.6	0.21	0.00
ULU1	Saturday, June 06, 1998														164	6.0	0.61	0.31
ULU1	Monday, July 13, 1998														170	6.7	0.61	0.41
ULU1	Friday, August 21, 1998														177	6.9	0.72	0.51
ULU1	Wednesday, September 16, 1998														180	6.9	0.77	0.56
ULU1	Tuesday, June 15, 1999														186	7.5	1.12	0.92
ULU1	Saturday, August 07, 1999														203	7.6	1.20	1.00
ULU1	Wednesday, September 08, 1999														210	7.8	1.32	1.12
ULU1	Tuesday, July 18, 2000														217	8.0	1.60	1.29
ULU1	Tuesday, August 22, 2000														229	8.3	1.78	1.59
ULU1	Sunday, September 17, 2000														244	8.7	2.17	1.94
ULU1	Wednesday, July 04, 2001														322	10.7	4.31	3.97
ULU1	Thursday, August 02, 2001														344	11.2	4.87	4.60
ULU1	Saturday, September 01, 2001														858	11.5	5.34	4.85

S depletion rate (mM/kg/wk)	#REF!
NP depletion rate (mM CaCO3/kg/wk)	0.029
Time for total S depletion (years)	#REF!
Time for total NP depletion (years)	211

Note:
1 - Data from Klohn, 1998. Dissolved metals, not total metals.

ECHO BAY MINES LTD.
Table 10: Ulu Project - Field Column #2 Test Data

Sample Weight (kg) 15

Sample ID	Sample Date	Weeks Between	Cummulative Weeks	Field pH	Field Conductivity	Field H2O Volume	Field Temp (air)	Lab pH	Lab Conductivity	Acidity	Alkalinity as CaCO3	Sulphate Dissolved	Ammonium N Dissolved	Cyanide Strong Acid Dissociable
ICP-SOLIDS														
ULU[1]	Wednesday, January 15, 1997													
ICP-LEACHATE														
ULU2[1]	Wednesday, June 18, 1997	22	22	7.72	10100	1.650	11.3	7.68	9000	10	39	98		
ULU2[1]	Wednesday, August 27, 1997	10	32	7.52	2220	0.450	11.5	7.48	2100	8.8	28	181		
ULU2[1]	Friday, September 12, 1997	2.3	34.3			0.400		7.81	3700	21	84	209		
ULU2	Monday, July 13, 1998	43.3	77.6	7.83	374	1.230	9					150		
ULU2	Friday, August 21, 1998	5.5	83.1	7.35	245	1.630	16					74.4		
ULU2	Wednesday, September 16, 1998	3.7	86.8	7.68	827	0.980	1					239		
ULU2	Tuesday, June 15, 1999	38.5	125.3	8.8	673	2.200	8					285		
ULU2	Saturday, August 07, 1999	7.5	132.8	7.8	405	1.540	8					171		
ULU2	Wednesday, September 08, 1999	4.5	137.3	7.44	302	1.845	5					249		
ULU2	Tuesday, July 18, 2000	44.5	181.8	7.96	326	1.325	-					249		
ULU2	Tuesday, August 22, 2000	5	186.8	7.94	550	0.750	-					440		
ULU2	Sunday, September 17, 2000	4.6	191.3	7.46	928	1.900	2					460		
ULU2	Wednesday, July 04, 2001	41	232.3	6.73	906	2.975	20							
ULU2	Thursday, August 02, 2001	4.3	236.6	7.22	798	2.374	-					408		
ULU2	Saturday, September 01, 2001	4.3	240.9	7.67	532	1.418	-					308		
ULU2	Sunday, July 07, 2002	44	284.9				-	7.05	921		34	423		
ULU2	Friday, August 16, 2002	5.7	290.6				-	6.87	728		17	397	0.1	0.014
Maximum				7.96	10100							460		
Minimum				6.73	243							74		
ULU2 LEACHATES (mg/kg/wk)														
ULU2[1]	Wednesday, June 18, 1997											0.44		
ULU2[1]	Wednesday, August 27, 1997											0.45		
ULU2[1]	Friday, September 12, 1997											2.42		
ULU2	Monday, July 13, 1998											0.28		
ULU2	Friday, August 21, 1998											1.47		
ULU2	Wednesday, September 16, 1998											4.36		
ULU2	Tuesday, June 15, 1999											1.02		
ULU2	Saturday, August 07, 1999											2.48		
ULU2	Wednesday, September 08, 1999											6.81		
ULU2	Tuesday, July 18, 2000											5.49		
ULU2	Tuesday, August 22, 2000											4.40		
ULU2	Sunday, September 17, 2000											12.8		
ULU2	Wednesday, July 04, 2001													
ULU2	Thursday, August 02, 2001											16.9		
ULU2	Saturday, September 01, 2001											8.70		
Maximum												16.9		
Minimum												0.28		
ULU2 CUMULATIVE LEACHATES (mg/kg)														
ULU2[1]	Wednesday, June 18, 1997											0.88		
ULU2[1]	Wednesday, August 27, 1997											14.2		
ULU2[1]	Friday, September 12, 1997											19.5		
ULU2	Monday, July 13, 1998											30.4		
ULU2	Friday, August 21, 1998											38.8		
ULU2	Wednesday, September 16, 1998											53.7		
ULU2	Tuesday, June 15, 1999											83.0		
ULU2	Saturday, August 07, 1999											112		
ULU2	Wednesday, September 08, 1999											142		
ULU2	Tuesday, July 18, 2000											184		
ULU2	Tuesday, August 22, 2000											189		
ULU2	Sunday, September 17, 2000											244		
ULU2	Wednesday, July 04, 2001											244		
ULU2	Thursday, August 02, 2001											317		
ULU2	Saturday, September 01, 2001											345		

Sample ID	Sample Date	Aluminum Total	Antimony Total	Arsenic Hydride Total	Arsenic Total	Barium Total	Beryllium Total	Bismuth Total	Boron Total	Cadmium Total	Calcium Total	Chromium Total	Cobalt Total
ICP-SOLIDS		ppm	ppm		ppm	ppm	ppm	ppm		ppm	ppm	ppm	ppm
ULU[1]	Wednesday, January 15, 1997	15300	<2		7780	90	<5	<2		<.8	10330	38	31
ICP-LEACHATE		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU2[1]	Wednesday, June 18, 1997	<1	0.06		0.28	<0.01	<0.001			0.002	136	<0.02	<0.02
ULU2[1]	Wednesday, August 27, 1997	<1	0.18		0.48	<0.01	<0.001			<0.001	71	<0.02	<0.02
ULU2[1]	Friday, September 12, 1997	<1	0.18		0.25	<0.01	<0.001			<0.001	128	<0.02	<0.02
ULU2	Monday, July 13, 1998	0.083	0.02		0.38	0.047	<0.0006	<0.006	0.024	<0.0006	37	<0.0009	0.0021
ULU2	Friday, August 21, 1998	0.036	0.015		0.35	0.0417	<0.0006	<0.009	<0.002	<0.0006	33.3	0.0009	<0.0006
ULU2	Wednesday, September 16, 1998	<0.009	0.033		0.35	0.0614	<0.0006	<0.009	0.019	<0.0006	65.5	<0.0009	0.0028
ULU2	Tuesday, June 15, 1999	<0.009	0.012		0.14	0.0432	<0.0006	<0.008	0.007	<0.0006	101	<0.0009	0.0069
ULU2	Saturday, August 07, 1999	<0.009	0.009		0.29	0.0537	<0.0006	<0.008	<0.002	<0.0006	89.3	<0.0009	<0.0006
ULU2	Wednesday, September 08, 1999	<0.009	0.012		0.18	0.0503	<0.0006	<0.008	<0.002	<0.0006	60.8	<0.0009	<0.0006
ULU2	Tuesday, July 18, 2000	<0.009	0.008		0.11	0.0427	<0.0006	<0.009	<0.002	<0.0006	102	<0.0009	<0.0006
ULU2	Tuesday, August 22, 2000	<0.009	0.012		0.42	0.0599	<0.0006	<0.008	<0.002	<0.0006	180	<0.0009	<0.0006
ULU2	Sunday, September 17, 2000	<0.009	0.060		0.97	0.0293	<0.0006	<0.008	<0.002	<0.0006	181	<0.0009	<0.0006
ULU2	Wednesday, July 04, 2001	0.021	<0.005	0.564	0.90	0.0306	<0.0006	<0.006	0.018	<0.0006	193	<0.0009	0.0034
ULU2	Thursday, August 02, 2001	0.017	<0.006	0.323	0.21	0.04	<0.0006	<0.008	0.015	<0.0006	170	<0.0009	0.0013
ULU2	Saturday, September 01, 2001	0.013	<0.006	0.501	0.34	0.0288	<0.0006	<0.006	0.012	<0.0006	113	<0.0009	<0.0006
ULU2	Sunday, July 07, 2002	0.025	0.0084		0.294	0.032	<0.0001	<0.0005	0.016	0.00005	107	<0.0006	0.0013
ULU2	Friday, August 16, 2002	0.035	0.0071		0.177	0.029		<0.0005	0.017	0.00004	134	<0.0006	0.0007
Maximum		1	0.1	0.564	0.97	0.0614	0.001	0.009	0.024	0.002	193	0.02	0.02
Minimum		0.009	0.005	0.323	0.11	0.01	<0.0001	<0.0005	<0.002	<0.00004	34	<0.0006	<0.0007
ULU2 LEACHATES		mg/kg/wk	mg/kg/wk		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
ULU2[1]	Wednesday, June 18, 1997	0.005	0.0003		0.0010	0.0001	0.000006			0.000010	0.078	0.00010	0.00010
ULU2[1]	Wednesday, August 27, 1997	0.003	0.0003		0.0014	0.00003	0.000020			0.000009	0.218	0.00006	0.00006
ULU2[1]	Friday, September 12, 1997	0.012	0.0012		0.0025	0.0001	0.000012			0.000012	1.301	0.00023	0.00020
ULU2	Monday, July 13, 1998	0.0001	0.00004		0.0007	0.0001	0.000001	0.00002	0.00005	0.000001	0.075	0.00000	0.000004
ULU2	Friday, August 21, 1998	0.0007	0.00032		0.0061	0.00062	0.000012	0.00010	0.00004	0.000012	0.876	0.00002	0.000018
ULU2	Wednesday, September 16, 1998	0.0003	0.00065		0.0043	0.00106	0.000010	0.00014	0.00033	0.000010	1.475	0.00002	0.000048
ULU2	Tuesday, June 15, 1999	0.00003	0.00005		0.0005	0.00016	0.000000	0.00002	0.00003	0.000002	0.350	0.00000	0.000026
ULU2	Saturday, August 07, 1999	0.0001	0.00013		0.0034	0.00076	0.000008	0.00012	0.00002	0.000008	1.918	0.00001	0.000012
ULU2	Wednesday, September 08, 1999	0.0002	0.00033		0.0040	0.00137	0.000016	0.00022	0.00005	0.000015	2.949	0.00032	0.000022
ULU2	Tuesday, July 18, 2000	0.0000	0.00062		0.0002	0.00038	0.000001	0.00002	0.00009	0.000001	0.202	0.00030	0.000002
ULU2	Tuesday, August 22, 2000	0.0001	0.00012		0.0042	0.00066	0.000006	0.00008	0.00002	0.000006	1.909	0.00021	0.000008
ULU2	Sunday, September 17, 2000	0.0002	0.00016		0.036	0.00078	0.000018	0.00021	0.00005	0.000016	4.827	0.00012	0.000021
ULU2	Wednesday, July 04, 2001	0.0030	0.00003	0.0027	0.0027	0.00018	0.000000	0.00004	0.00008	0.000000	0.234	0.00000	0.000018
ULU2	Thursday, August 02, 2001	0.0006	0.00022	0.0119	0.011	0.00147	0.000022	0.00029	0.00066	0.000022	6.257	0.00003	0.000044
ULU2	Saturday, September 01, 2001	0.0035	0.00013	0.0086	0.0075	0.00063	0.000013	0.00018	0.00026	0.000013	2.471	0.00002	0.000018
Maximum		0.0118	0.0012	0.0119	0.036	0.00147	0.00002	0.00039	0.00068	0.00002	6.26	0.00023	0.00022
Minimum		0.00002	0.00002	0.0027	0.0002	0.00003	<0.000001	<0.00002	<0.000004	<0.000001	0.07	<0.000002	<0.000002
ULU2 CUMULATIVE LEACHATES		mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ULU2[1]	Wednesday, June 18, 1997	0.110	0.006		0.022	0.001	0.00011			0.00022	14.8	0.0022	0.0022
ULU2[1]	Wednesday, August 27, 1997	0.146	0.009		0.036	0.001	0.00014			0.00025	17.0	0.0028	0.0028
ULU2[1]	Friday, September 12, 1997	0.167	0.011		0.042	0.002	0.00017			0.00028	20.2	0.0033	0.0033
ULU2	Monday, July 13, 1998	0.171	0.013		0.072	0.006	0.00022	0.0007	0.0020	0.00033	23.2	0.0034	0.0036
ULU2	Friday, August 21, 1998	0.175	0.010		0.100	0.010	0.00029	0.0016	0.0022	0.00039	26.9	0.0035	0.0036
ULU2	Wednesday, September 16, 1998	0.176	0.017		0.118	0.014	0.00032	0.0026	0.0034	0.00043	32.3	0.0036	0.0039
ULU2	Tuesday, June 15, 1999	0.177	0.018		0.136	0.020	0.00041	0.0032	0.0044	0.00052	47.2	0.0037	0.0046
ULU2	Saturday, August 07, 1999	0.178	0.019		0.161	0.026	0.00047	0.0041	0.0045	0.00058	54.8	0.0038	0.0049
ULU2	Wednesday, September 08, 1999	0.179	0.021		0.164	0.032	0.00056	0.0051	0.0049	0.00066	68.7	0.0039	0.0050
ULU2	Tuesday, July 18, 2000	0.180	0.022		0.165	0.036	0.00060	0.0058	0.0051	0.00071	75.7	0.0040	0.0050
ULU2	Tuesday, August 22, 2000	0.180	0.022		0.214	0.039	0.00063	0.0062	0.0052	0.00074	84.7	0.0040	0.0051
ULU2	Sunday, September 17, 2000	0.181	0.023		0.331	0.043	0.00070	0.0071	0.0054	0.00081	106	0.0041	0.0052
ULU2	Wednesday, July 04, 2001	0.304	0.024		0.442	0.049	0.00082	0.0087	0.0066	0.00093	145	0.0043	0.0056
ULU2	Thursday, August 02, 2001	0.307	0.025		0.488	0.056	0.00092	0.0100	0.0109	0.00103	172	0.0045	0.0060
ULU2	Saturday, September 01, 2001	0.309	0.026		1.020	0.058	0.00097	0.0107	0.0121	0.00106	182	0.0045	0.0061

Note:
[1] - Data from Klohn, 1998. Dissolved metals, not total metals.

ECHO BAY MINES LTD.
Table 10: Ulu Project - Field Column #2 Test Data

Sample Weight (kg) 15

Sample ID	Sample Date	Weeks Between	Cumulative Weeks	Copper Total	Iron Total	Lead Total	Lithium Total	Magnesium Total
ICP-SOLIDS				ppm	ppm	ppm		ppm
ULU	Wednesday, January 15, 1997			80	47100	2		6800
LEACHATE				mg/L	mg/L	mg/L	mg/L	mg/L
ULU2[1]	Wednesday, June 18, 1997	22	22	< 0.01	< 1	< 0.05		20
ULU2[1]	Wednesday, August 27, 1997	10	32	< 0.01	< 1	< 0.05		8.0
ULU2[1]	Friday, September 12, 1997	2.3	34.3	< 0.01	< 1	< 0.05		15.0
ULU2	Monday, July 13, 1998	43.3	77.6	0.031	0.026	< 0.002	0.025	2.23
ULU2	Friday, August 21, 1998	5.5	83.1	0.024	0.016	< 0.002	0.017	1.86
ULU2	Wednesday, September 16, 1998	3.7	86.8	0.028	0.024	0.003	0.047	4.46
ULU2	Tuesday, June 15, 1999	38.5	125.3	0.042	0.015	< 0.002	0.034	5.14
ULU2	Saturday, August 07, 1999	7.5	132.8	0.023	0.013	< 0.002	0.026	2.7
ULU2	Wednesday, September 08, 1999	4.5	137.3	0.014	0.024	0.003	0.026	3.12
ULU2	Tuesday, July 18, 2000	44.5	181.8	0.018	0.014	< 0.002	0.02	3.30
ULU2	Tuesday, August 22, 2000	5	186.8	0.022	0.013	< 0.002	0.02	4.22
ULU2	Sunday, September 17, 2000	4.5	191.3	0.019	0.022	< 0.002	0.025	4.07
ULU2	Wednesday, July 04, 2001	41	232.3	0.015	0.036	< 0.002	0.026	4.22
ULU2	Thursday, August 02, 2001	4.3	236.6	0.013	0.01	< 0.002	0.05	2.63
ULU2	Saturday, September 01, 2001	4.3	240.9	0.009	0.006	< 0.002	0.024	1.83
ULU2	Sunday, July 07, 2002	44	284.9	0.019	0.24	0.0014	0.024	3.39
ULU2	Friday, August 16, 2002	6.7	290.6	0.01	0.2	0.0003	0.023	2.2
Maximum				0.042	1	0.05	0.047	20
Minimum				0.01	0.006	0.0002	0.017	1.83
ULU2 LEACHRATES				mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
ULU2[1]	Wednesday, June 18, 1997			0.00005	0.006	0.00020		0.16
ULU2[1]	Wednesday, August 27, 1997			0.00003	0.003	0.00015		0.02
ULU2[1]	Friday, September 12, 1997			0.00012	0.012	0.00088		0.17
ULU2	Monday, July 13, 1998			0.00006	0.0001	0.00008	0.00098	0.00
ULU2	Friday, August 21, 1998			0.00047	0.00032	0.00004	0.0070	0.03
ULU2	Wednesday, September 16, 1998			0.00045	0.00065	0.00005	0.0076	0.08
ULU2	Tuesday, June 15, 1999			0.00016	0.00006	0.00001	0.0001	0.02
ULU2	Saturday, August 07, 1999			0.00034	0.00018	0.00003	0.0004	0.04
ULU2	Wednesday, September 08, 1999			0.00056	0.00066	0.00008	0.0007	0.09
ULU2	Tuesday, July 18, 2000			0.00003	0.00003	0.00000	0.0000	0.01
ULU2	Tuesday, August 22, 2000			0.00022	0.00013	0.00002	0.0002	0.04
ULU2	Sunday, September 17, 2000			0.00051	0.00059	0.00008	0.0006	0.12
ULU2	Wednesday, July 04, 2001			0.00007	0.00017	0.00001	0.0001	0.09
ULU2	Thursday, August 02, 2001			0.00046	0.00037	0.00007	0.0011	0.10
ULU2	Saturday, September 01, 2001			0.00018	0.00018	0.00004	0.0006	0.04
Maximum				0.00057	0.0116	0.00087971	0.0011	0.174
Minimum				0.00003	0.00003	0.000004	0.00004	0.004
ULU2 CUMULATIVE LEACHRATES				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ULU2[1]	Wednesday, June 18, 1997			0.001	0.110	0.0066		2.20
ULU2[1]	Wednesday, August 27, 1997			0.001	0.140	0.0070		2.44
ULU2[1]	Friday, September 12, 1997			0.002	0.167	0.0083		2.64
ULU2	Monday, July 13, 1998			0.004	0.171	0.0086	0.0021	3.02
ULU2	Friday, August 21, 1998			0.007	0.173	0.0087	0.0038	3.21
ULU2	Wednesday, September 16, 1998			0.008	0.175	0.0089	0.0089	3.49
ULU2	Tuesday, June 15, 1999			0.016	0.177	0.0092	0.0119	4.24
ULU2	Saturday, August 07, 1999			0.017	0.179	0.0094	0.0147	4.54
ULU2	Wednesday, September 08, 1999			0.018	0.182	0.0098	0.0179	4.82
ULU2	Tuesday, July 18, 2000			0.020	0.183	0.0100	0.0197	5.22
ULU2	Tuesday, August 22, 2000			0.021	0.184	0.0101	0.0207	5.43
ULU2	Sunday, September 17, 2000			0.024	0.183	0.0123	0.0234	5.98
ULU2	Wednesday, July 04, 2001			0.027	0.193	0.0107	0.0280	6.82
ULU2	Thursday, August 02, 2001			0.029	0.197	0.0116	0.0333	7.23
ULU2	Saturday, September 01, 2001			0.030	0.198	0.0112	0.0356	7.32

Sample ID	Sample Date	Manganese Total	Molybdenum Total	Nickel Total	Phosphorus Total	Potassium Total	Selenium Total	Silicon Total	Silver Total	Sodium Total
ICP-SOLIDS		ppm	ppm	ppm	ppm	ppm			ppm	ppm
ULU	Wednesday, January 15, 1997	366	1	11	690	5700			< 0.2	780
LEACHATE		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU2[1]	Wednesday, June 18, 1997	4.9	< 0.01	< 0.01	< 1	45			< 0.01	1630
ULU2[1]	Wednesday, August 27, 1997	1.88	< 0.01	< 0.01	< 1	15			< 0.01	360
ULU2[1]	Friday, September 12, 1997	9.3	< 0.01	< 0.01	< 1	20			< 0.01	660
ULU2	Monday, July 13, 1998	0.393	0.005	0.003	< 0.03	7.7	< 0.004	1.67	< 0.001	43.5
ULU2	Friday, August 21, 1998	0.0037	< 0.001	0.002	< 0.03	5.5	< 0.004	0.799	< 0.001	16.8
ULU2	Wednesday, September 16, 1998	0.45	0.003	0.007	< 0.03	16.5	< 0.004	2.18	< 0.001	57.7
ULU2	Tuesday, June 15, 1999	0.062	0.001	0.009	< 0.03	16.4	0.015	1.22	< 0.001	49.9
ULU2	Saturday, August 07, 1999	0.0362	0.005	0.003	< 0.03	13.7	< 0.004	1.51	< 0.001	13.7
ULU2	Wednesday, September 08, 1999	0.004	< 0.001	0.003	< 0.03	15.8	< 0.004	1.54	< 0.001	13
ULU2	Tuesday, July 18, 2000	0.0014	< 0.001	0.002	< 0.03	15.1	< 0.004	1.32	< 0.001	15.4
ULU2	Tuesday, August 22, 2000	0.0054	0.001	0.005	< 0.03	17.7	< 0.004	1.42	< 0.001	7.6
ULU2	Sunday, September 17, 2000	0.0089	0.002	0.008	< 0.03	16.6	< 0.004	1.53	< 0.001	9.6
ULU2	Wednesday, July 04, 2001	0.240	< 0.001	0.007	0.22	16.6	< 0.004	1.54	< 0.001	6.6
ULU2	Thursday, August 02, 2001	0.0509	< 0.001	0.007	< 0.03	16	0.01	1.09	< 0.001	5
ULU2	Saturday, September 01, 2001	0.007	< 0.001	0.005	< 0.03	15.1	< 0.004	1.82	< 0.001	1.6
ULU2	Sunday, July 07, 2002	0.0086	< 0.001	0.0027		21.2	0.0006	1.99	< 0.0001	4.3
ULU2	Friday, August 16, 2002	0.019	0.002	0.0021		14.8	< 0.0002	1.65	< 0.0001	2.5
Maximum		4.9	0.01	0.01	1	45	0.015	2.18	< 0.01	1630
Minimum		0.001	< 0.001	0.002	< 0.03	5.5	0.0002	0.77	< 0.0001	2
ULU2 LEACHRATES		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
ULU2[1]	Wednesday, June 18, 1997	0.026	0.00006	0.0001	0.005	0.23			0.00005	8.15
ULU2[1]	Wednesday, August 27, 1997	0.006	0.00003	0.0000	0.003	0.05			0.00003	1.08
ULU2[1]	Friday, September 12, 1997	0.038	0.00012	0.0001	0.012	0.23			0.00012	7.85
ULU2	Monday, July 13, 1998	0.0007	0.00001	0.0000	0.0001	0.01	0.00001	0.003	0.000002	0.06
ULU2	Friday, August 21, 1998	0.0001	0.000020	0.0000	0.0006	0.11	0.00008	0.015	0.00002	0.33
ULU2	Wednesday, September 16, 1998	0.0077	0.000051	0.0001	0.0005	0.32	0.00037	0.037	0.00002	0.95
ULU2	Tuesday, June 15, 1999	0.0037	0.000064	0.0000	0.0001	0.06	0.00006	0.008	0.00000	0.15
ULU2	Saturday, August 07, 1999	0.0005	0.000044	0.0000	0.0004	0.20	0.00006	0.022	0.00001	0.20
ULU2	Wednesday, September 08, 1999	0.0001	0.000027	0.0001	0.0009	0.43	0.00011	0.042	0.00003	0.38
ULU2	Tuesday, July 18, 2000	0.0000	0.000002	0.0000	0.0001	0.03	0.00001	0.003	0.00000	0.03
ULU2	Tuesday, August 22, 2000	0.0001	0.000010	0.0001	0.0003	0.18	0.00004	0.014	0.00001	0.08
ULU2	Sunday, September 17, 2000	0.0001	0.000055	0.0001	0.0008	0.60	0.00011	0.041	0.00003	0.26
ULU2	Wednesday, July 04, 2001	0.0012	0.000006	0.0000	0.0011	0.08	0.00002	0.009	0.00000	0.03
ULU2	Thursday, August 02, 2001	0.0020	0.000057	0.0000	0.0011	0.70	0.00037	0.073	0.00004	0.11
ULU2	Saturday, September 01, 2001	0.0002	0.000022	0.0001	0.0007	0.38	0.00006	0.033	0.00002	0.04
Maximum		0.038	0.00013	0.0003	0.012	0.79	0.00037	0.0729	< 0.00012	8.15
Minimum		0.000003	< 0.000002	0.000	< 0.0001	0.01	0.00001	0.0026	< 0.000002	0.0266
ULU2 CUMULATIVE LEACHRATES		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ULU2[1]	Wednesday, June 18, 1997	0.54	0.0011	0.0011	0.110	4.96			0.0011	179.3
ULU2[1]	Wednesday, August 27, 1997	0.56	0.0014	0.0014	0.140	6.42			0.0014	190.1
ULU2[1]	Friday, September 12, 1997	0.67	0.0017	0.0017	0.167	6.93			0.0017	207.7
ULU2	Monday, July 13, 1998	0.71	0.0018	0.0019	0.169	6.86	0.0003	0.129	0.0017	211.3
ULU2	Friday, August 21, 1998	0.71	0.0020	0.0021	0.172	7.16	0.0008	0.212	0.0019	213.1
ULU2	Wednesday, September 16, 1998	0.73	0.0022	0.0026	0.174	8.35	0.0019	0.399	0.0019	216.8
ULU2	Tuesday, June 15, 1999	0.88	0.0024	0.0036	0.179	10.7	0.0034	0.529	0.0021	224.1
ULU2	Saturday, August 07, 1999	0.88	0.0027	0.0039	0.182	12.2	0.0035	0.664	0.0022	225.6
ULU2	Wednesday, September 08, 1999	0.88	0.0028	0.0042	0.186	14.2	0.0045	0.804	0.0023	227.2
ULU2	Tuesday, July 18, 2000	0.88	0.0029	0.0043	0.188	16.5	0.0046	1.00	0.0024	228.4
ULU2	Tuesday, August 22, 2000	0.88	0.0029	0.0046	0.190	16.4	0.0048	1.07	0.0024	228.6
ULU2	Sunday, September 17, 2000	0.88	0.0032	0.0052	0.195	18.7	0.0053	1.25	0.0026	229.6
ULU2	Wednesday, July 04, 2001	0.95	0.0034	0.0066	0.237	22.6	0.0061	1.62	0.0028	231.1
ULU2	Thursday, August 02, 2001	0.94	0.0035	0.0077	0.242	25.0	0.0077	1.95	0.0029	231.6
ULU2	Saturday, September 01, 2001	0.94	0.0036	0.0080	0.245	27.0	0.0081	2.08	0.0030	231.7

Sample ID	Sample Date	Strontium Total	Sulphur Total	Thallium Total	Tin Total	Titanium Total	Uranium Total	Vanadium Total	Zinc Total	Zirconium Total
ICP-SOLIDS		ppm	ppm			ppm	ppm	ppm	ppm	
ULU	Wednesday, January 15, 1997	8	11400			0.14	10	119	80	
LEACHATE		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU2[1]	Wednesday, June 18, 1997	0.42				< 1		< 0.01	0.04	
ULU2[1]	Wednesday, August 27, 1997	0.11				< 1		< 0.01	0.01	
ULU2[1]	Friday, September 12, 1997	0.21				< 1		< 0.01	0.03	
ULU2	Monday, July 13, 1998	0.0484	44.5	< 0.004	< 0.003	0.0018		0.002	0.0299	
ULU2	Friday, August 21, 1998	0.0082	26.1	< 0.004	< 0.003	< 0.0004		0.002	0.0307	
ULU2	Wednesday, September 16, 1998	0.0927	82.8	0.008	< 0.003	< 0.0004		0.001	0.0439	
ULU2	Tuesday, June 15, 1999	0.106	83.4	< 0.004	< 0.003	< 0.0004		< 0.001	0.0436	
ULU2	Saturday, August 07, 1999	0.0032	55.3	< 0.004	< 0.003	< 0.0004		0.002	0.0244	
ULU2	Wednesday, September 08, 1999	0.0683	78.4	0.008	< 0.003	< 0.0004		< 0.001	0.0216	
ULU2	Tuesday, July 18, 2000	0.0622	92	< 0.004	< 0.003	< 0.0004		0.001	0.0137	
ULU2	Tuesday, August 22, 2000	0.118	161	< 0.004	< 0.003	< 0.0004		0.001	0.0170	
ULU2	Sunday, September 17, 2000	0.119	163	0.005	< 0.003	< 0.0004		0.002	0.0146	
ULU2	Wednesday, July 04, 2001	0.136	166	< 0.004	< 0.003	< 0.0004		< 0.001	0.0167	
ULU2	Thursday, August 02, 2001	0.110	147	< 0.004	< 0.003	< 0.0004		< 0.001	0.0166	
ULU2	Saturday, September 01, 2001	0.2763	94.5	< 0.004	< 0.003	< 0.0004		< 0.001	0.0148	
ULU2	Sunday, July 07, 2002	0.131	145	< 0.00006		0.0048	< 0.0005	0.0004	0.013	< 0.001
ULU2	Friday, August 16, 2002	0.107	114	< 0.00003		0.0046	< <0.0005	0.0003	0.009	< 0.001
Maximum		0.42	166	0.008	0.003	1		0.01	0.0439	
Minimum		0.0032	26	< 0.00003	< 0.003	< 0.0004		< 0.0003	0.0090	
ULU2 LEACHRATES		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk		mg/kg/wk	mg/kg/wk	
ULU2[1]	Wednesday, June 18, 1997	0.002				0.005		0.00005	0.0007	
ULU2[1]	Wednesday, August 27, 1997	0.001				0.003		0.00003	0.00003	
ULU2[1]	Friday, September 12, 1997	0.002				0.012		0.00012	0.00035	
ULU2	Monday, July 13, 1998	0.0001	0.004	0.00001	0.00001	0.0000		0.000004	0.0001	
ULU2	Friday, August 21, 1998	0.0008	0.60	0.00008	0.00009	0.000006		0.000040	0.0004	
ULU2	Wednesday, September 16, 1998	0.0010	1.42	0.00009	0.00003	0.000067		0.000017	0.0005	
ULU2	Tuesday, June 15, 1999	0.0004	0.26	0.00002	0.00001	0.000002		0.000004	0.0007	
ULU2	Saturday, August 07, 1999	0.0009	0.81	0.00005	0.00004	0.000086		0.000029	0.0004	
ULU2	Wednesday, September 08, 1999	0.0022	2.14	0.00015	0.00006	0.000011		0.000027	0.0003	
ULU2	Tuesday, July 18, 2000	0.0002	0.56	0.00001	0.00001	0.000001		0.000002	0.00003	
ULU2	Tuesday, August 22, 2000	0.0012	1.81	0.00004	0.00003	0.000004		0.000010	0.0002	
ULU2	Sunday, September 17, 2000	0.0031	4.08	0.00013	0.00008	0.000011		0.000053	0.0004	
ULU2	Wednesday, July 04, 2001	0.0007	0.80	0.00002	0.00001	0.000002		0.000005	0.0001	
ULU2	Thursday, August 02, 2001	0.0044	5.41	0.00016	0.00011	0.000016		0.000037	0.0007	
ULU2	Saturday, September 01, 2001	0.0017	2.07	0.00006	0.00007	0.000009		0.000022	0.0003	
Maximum		0.0044	5.41	0.00016	0.0001	0.01		0.0001	0.0008	
Minimum		0.0001	0.00	< 0.000003	< 0.00001	< 0.000001		< 0.000002	0.00003	
ULU2 CUMULATIVE LEACHRATES		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	
ULU2[1]	Wednesday, June 18, 1997	0.046				0.110		0.0011	0.004	
ULU2[1]	Wednesday, August 27, 1997	0.050				0.140		0.0014	0.005	
ULU2[1]	Friday, September 12, 1997	0.056				0.167		0.0017	0.008	
ULU2	Monday, July 13, 1998	0.059	3.85	0.0003	0.0002	0.167		0.0018	0.008	
ULU2	Friday, August 21, 1998	0.059	6.58	0.0008	0.0005	0.167		0.0020	0.010	
ULU2	Wednesday, September 16, 1998	0.059	11.5	0.0011	0.0008	0.167		0.0021	0.013	
ULU2	Tuesday, June 15, 1999	0.064	26.3	0.0017	0.0012	0.167		0.0023	0.019	
ULU2	Saturday, August 07, 1999	0.091	31.4	0.0021	0.0015	0.167		0.0025	0.022	
ULU2	Wednesday, September 08, 1999	0.101	41.0	0.0029	0.0019	0.167		0.0026	0.026	
ULU2	Tuesday, July 18, 2000	0.109	48.3	0.0032	0.0022	0.167		0.0027	0.026	
ULU2	Tuesday, August 22, 2000	0.115	56.6	0.0034	0.0025	0.167		0.0027	0.027	
ULU2	Sunday, September 17, 2000	0.128	74.2	0.0040	0.0027	0.167		0.0030	0.029	
ULU2	Wednesday, July 04, 2001	0.160	107	0.0048	0.0033	0.167		0.0032	0.032	
ULU2	Thursday, August 02, 2001	0.175	130	0.0054	0.0037	0.167		0.0033	0.035	
ULU2	Saturday, September 01, 2001	0.182	139	0.0058	0.0040	0.167		0.0034	0.037	

Note:
[1] - Data from Klohn, 1998. Dissolved metals, not total metals.

ECHO BAY MINES LTD.
Table 10: Ulu Project - Field Column #2 Test Data

Sample Weight (kg) 15

Client ID	Sample Date	Weeks Between	Cumulative Weeks	Solids Total Suspended	Temperature of observed pH	Bicarbonate	Calcium Dissolved	Carbonate	Hardness as CaCO3	Hydroxide	Magnesium Dissolved	P-Alkalinity as CaCO3
ICP-SOLIDS												
ULU[1]	Wednesday, January 15, 1997											
ICP-LEACHATE				mg/L	C	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ULU2[1]	Wednesday, June 18, 1997	22	22									
ULU2[1]	Wednesday, August 27, 1997	10	32									
ULU2[1]	Friday, September 12, 1997	2.3	34.3									
ULU2	Monday, July 13, 1998	43.3	77.6									
ULU2	Friday, August 21, 1998	5.5	83.1									
ULU2	Wednesday, September 16, 1998	3.7	86.8									
ULU2	Tuesday, June 15, 1999	38.5	125.3									
ULU2	Saturday, August 07, 1999	7.5	132.8									
ULU2	Wednesday, September 08, 1999	4.5	137.3									
ULU2	Tuesday, July 18, 2000	44.5	181.8									
ULU2	Tuesday, August 22, 2000	5	186.8									
ULU2	Sunday, September 17, 2000	4.5	191.3									
ULU2	Wednesday, July 04, 2001	41	232.3									
ULU2	Thursday, August 02, 2001	4.5	236.5									
ULU2	Saturday, September 01, 2001	4.5	240.9									
ULU2	Sunday, July 07, 2002	44	284.8		23.5	42	180	< 5	489	< 5	3.57	< 5
ULU2	Friday, August 16, 2002	5.7	290.5	< 1	20.6	21	140	< 5	360	< 2	2.4	< 5
Maximum												
Minimum												

Client ID	Sample Date	Ca	Mg	[illegible]	mM Ca+Mg+.5Na+.5K	mM SO4	mM S
ICP-SOLIDS				ppm	mM CaCO3/kg		mM S/kg
ULU[1]	Wednesday, January 15, 1997			29036	838		390
ICP-LEACHATE				mg/L			
ULU2[1]	Wednesday, June 18, 1997			993			
ULU2[1]	Wednesday, August 27, 1997			267			
ULU2[1]	Friday, September 12, 1997			478			
ULU2	Monday, July 13, 1998			69			
ULU2	Friday, August 21, 1998			47			
ULU2	Wednesday, September 16, 1998			138			
ULU2	Tuesday, June 15, 1999			138			
ULU2	Saturday, August 07, 1999			80			
ULU2	Wednesday, September 08, 1999			114			
ULU2	Tuesday, July 18, 2000			120			
ULU2	Tuesday, August 22, 2000			197			
ULU2	Sunday, September 17, 2000			280			
ULU2	Wednesday, July 04, 2001			210			
ULU2	Thursday, August 02, 2001			184			
ULU2	Saturday, September 01, 2001			124			
ULU2	Sunday, July 07, 2002			203			
ULU2	Friday, August 16, 2002			140			
Maximum							
Minimum							
ULU2 LEACH RATES		mM/kg/wk	mM/kg/wk	mg/kg/wk	mM CaCO3/kg/wk	mM SO4/kg/wk	
ULU2[1]	Wednesday, June 18, 1997	0.017	0.0041	5.0	0.20	0.006	
ULU2[1]	Wednesday, August 27, 1997	0.005	0.0019	0.8	0.03	0.006	
ULU2[1]	Friday, September 12, 1997	0.035	0.0072	5.5	0.21	0.025	
ULU2	Monday, July 13, 1998	0.002	0.0042	0.1	0.00	0.003	
ULU2	Friday, August 21, 1998	0.017	0.0014	0.6	0.03	0.015	
ULU2	Wednesday, September 16, 1998	0.037	0.0032	2.2	0.07	0.043	
ULU2	Tuesday, June 15, 1999	0.018	0.0009	0.5	0.02	0.011	
ULU2	Saturday, August 07, 1999	0.029	0.0016	1.3	0.03	0.026	
ULU2	Wednesday, September 08, 1999	0.069	0.0035	3.1	0.08	0.071	
ULU2	Tuesday, July 18, 2000	0.003	0.0063	0.2	0.01	0.006	
ULU2	Tuesday, August 22, 2000	0.045	0.0017	2.6	0.08	0.048	
ULU2	Sunday, September 17, 2000	0.120	0.0080	6.3	0.14	0.133	
ULU2	Wednesday, July 04, 2001	0.075	0.0006	1.0	0.05	0.090	
ULU2	Thursday, August 02, 2001	0.156	0.0040	6.8	0.17	0.176	
ULU2	Saturday, September 01, 2001	0.062	0.0015	2.7	0.07	0.070	
Maximum							
Minimum							
ULU2 CUMULATIVE LEACH RATES				mg/kg	mM CaCO3/kg	mM SO4/kg	mM S/kg
ULU2[1]	Wednesday, June 18, 1997			139	4.4	0.10	0.00
ULU2[1]	Wednesday, August 27, 1997			117	4.7	0.15	0.00
ULU2[1]	Friday, September 12, 1997			130	5.2	0.21	0.00
ULU2	Monday, July 13, 1998			136	5.4	0.32	0.11
ULU2	Friday, August 21, 1998			146	5.5	0.45	0.20
ULU2	Wednesday, September 16, 1998			148	5.8	0.55	0.36
ULU2	Tuesday, June 15, 1999			169	6.4	0.87	0.79
ULU2	Saturday, August 07, 1999			178	6.8	1.16	0.98
ULU2	Wednesday, September 08, 1999			192	7.0	1.48	1.29
ULU2	Tuesday, July 18, 2000			203	7.3	1.71	1.51
ULU2	Tuesday, August 22, 2000			213	7.5	1.94	1.74
ULU2	Sunday, September 17, 2000			257	8.1	2.54	2.31
ULU2	Wednesday, July 04, 2001			278	8.2	2.64	3.36
ULU2	Thursday, August 02, 2001			307	8.9	3.30	4.07
ULU2	Saturday, September 01, 2001			319	10.2	3.59	4.34

S depletion rate (mM/kg/wk)	0.016
NP depletion rate (mM CaCO3/kg/wk)	0.030
Time for total S depletion (years)	488
Time for total NP depletion (years)	297

Note:
[1] - Data from Klohn, 1998. Dissolved metals, not total metals.