Appendix 2.4 Rock Characterization

Contents

Appendix 2.4-1 2005 Static Testing Data

Wolverine Project
2005 Acid-Base Accounting Data

SAMPLE	Rock Type	pH	Total S	Sulphate S	Sulphide S	%C	%CO2	MPA	NP	Carb-NP	NNP	NP/MPA	FIZZ RATING
A083503	1	8.1	0.53	0.01	0.52	0.23	0.90	16.6	15	20.47	-2	0.91	2
A083513	1	8.6	0.25	0.01	0.24	0.27	1.00	7.8	26	22.74	18	3.33	2
A083518	1	8	1.44	<0.01	1.44	0.79	2.90	45	82	65.95	37	1.82	3
A083526	1	7.9	1.24	0.05	1.19	0.32	1.20	38.8	29	27.29	-10	0.75	2
A083529	1	7.9	0.95	<0.01	0.95	0.29	1.10	29.7	22	25.02	-8	0.74	2
A083537	1	8.1	3.84	0.04	3.8	1.15	4.2	120	102	95.52	-18	0.85	3
A083508	2	7.8	0.56	<0.01	0.56	0.31	1.10	17.5	25	25.02	8	1.43	2
A083515	2	8.1	1.32	<0.01	1.32	0.51	1.90	41.3	35	43.21	-6	0.85	2
A083528	2	8.7	0.54	0.03	0.51	0.57	2.10	16.9	68	47.76	51	4.03	3
A083531	2	8.1	1.68	0.01	1.67	0.45	1.70	52.5	31	38.66	-22	0.59	2
A083538	2	7.4	3.12	0.02	3.1	0.23	0.9	97.5	21	20.47	-77	0.22	1
A083510	3	8.1	2.13	0.26	1.87	0.58	2.10	66.6	61	47.76	-6	0.92	3
A083519	3	8.2	2.04	0.47	1.57	1.89	6.90	63.8	174	156.92	110	2.73	4
A083524	3	7.8	8.03	<0.01	8.03	5.9	21.60	251	516	491.24	265	2.06	4
A083530	3	7.8	5.96	0.02	5.94	3.95	14.50	186.5	345	329.77	159	1.85	4
A083539	3	7.9	0.40	0.08	0.32	0.36	1.3	12.5	22	29.57	10	1.76	2
A083504	4	7.8	1.79	0.34	1.45	1.28	4.70	55.9	89	106.89	33	1.59	3
A083509	4	7.8	0.74	<0.01	0.74	1.25	4.60	23.1	80	104.62	57	3.46	3
A083517	4	8.3	1.85	0.35	1.5	1.26	4.60	57.8	116	104.62	58	2.01	4
A083523	4	8.1	1.94	0.38	1.56	0.59	2.20	60.6	34	50.03	-27	0.56	2
A083525	4	8.2	3.04	0.2	2.84	0.35	1.30	95	31	29.57	-64	0.33	2
A083540	4	8.1	0.89	0.01	0.88	0.54	2	27.8	37	45.49	9	1.33	2
A083505	5	8.2	0.91	0.04	0.87	0.46	1.70	28.4	21	38.66	-7	0.74	2
A083507	5	8	0.57	0.01	0.56	0.47	1.70	17.8	33	38.66	15	1.85	2
A083511	5	7.9	0.95	0.04	0.91	0.62	2.30	29.7	67	52.31	37	2.26	3
A083520	5	8.2	0.91	<0.01	0.91	1.93	7.10	28.4	173	161.47	145	6.08	3
A083541	5	8.1	2.16	0.31	1.85	0.85	3.1	67.5	48	70.50	-20	0.71	2
A083501	7	8.5	0.18	0.01	0.17	0.15	0.60	5.6	17	13.65	11	3.02	2
A083502	7	8.6	0.53	0.02	0.51	1.05	3.90	16.6	89	88.70	72	5.37	3
A083512	7	8.2	1.35	0.02	1.33	0.81	3.00	42.2	80	68.23	38	1.9	3
A083514	7	8.8	0.32	<0.01	0.32	0.25	0.90	10	24	20.47	14	2.4	2
A083516	7	8.7	1.32	0.04	1.28	0.46	1.70	41.3	35	38.66	-6	0.85	2
A083522	7	8.4	0.74	0.03	0.71	0.35	1.30	23.1	29	29.57	6	1.25	2
A083542	7	8.0	0.94	0.05	0.89	0.76	2.8	29.4	56	63.68	27	1.91	2

Rock_Type_Codes					
1	argillites (non- carbonaceous)	3	calcite-pyrite exhalite	5	interbedded rhyolite/argillites
2	carbonaceous argillites	4	banded magnetite iron formations and silica-pyrite exhalite	7	rhyolites and rhyolitic fragmentals

Wolverine Project
2005 ICP Data

SAMPLE	Rock_Type	Se_ME-XRF05_ppm	Ag_ME-MS41_ppm	Al_ME-MS41_%	As_ME-MS41_ppm	B_ME-MS41_ppm	Ba_ME-MS41_ppm	Be_ME-MS41_ppm	Bi_ME-MS41_ppm	Ca_ME-MS41_%	Cd_ME-MS41_ppm	Ce_ME-MS41_ppm	Co_ME-MS41_ppm	Cr_ME-MS41_ppm
A083503	1	<2	0.19	0.55	4.8	<10	330	0.38	0.17	0.44	0.15	18.95	7.3	58
A083513	1	<2	0.11	1.01	6.3	<10	1180	0.23	0.24	0.64	0.04	39.7	11.4	66
A083518	1	9	0.62	0.94	4.6	<10	60	0.12	0.16	2.12	0.31	19.05	12	49
A083526	1	7	0.56	1.13	2.5	<10	80	0.33	0.18	0.86	0.23	47.8	8.4	52
A083529	1	4	0.47	0.47	8.4	<10	120	0.34	0.15	0.72	0.34	15.25	4.9	118
A083508	2	<2	0.35	0.39	3.3	<10	310	0.27	0.19	0.83	0.12	16.9	6.3	81
A083515	2	7	0.59	0.74	4.8	<10	80	0.18	0.2	0.96	0.23	21.2	10.2	77
A083528	2	<2	0.25	0.99	2.3	<10	580	0.23	0.18	1.93	0.67	44.4	8.4	46
A083531	2	7	0.64	0.61	7.1	<10	80	0.28	0.15	0.92	0.25	16.15	10.5	94
A083510	3	3	0.43	1.16	3.7	<10	90	1.47	0.08	1.36	0.11	9.56	6.2	77
A083519	3	<2	0.26	0.78	4.5	<10	50	1.01	0.11	6.11	0.06	8.88	3.2	54
A083524	3	2	0.29	0.29	31	<10	20	0.98	0.04	19.85	0.25	12.25	2	12
A083530	3	3	0.41	0.25	19	<10	20	1.32	0.09	13.7	50.4	11.65	2.7	21
A083504	4	4	0.39	0.89	2.6	<10	60	0.4	0.14	2.62	0.04	12.65	6.1	71
A083509	4	<2	0.22	0.89	4.4	<10	170	0.47	0.08	2.41	0.01	16.05	2.7	49
A083517	4	<2	0.12	0.96	1.1	<10	220	1.36	0.07	3.62	<0.01	10.65	2.2	49
A083523	4	<2	0.23	1.36	5.4	<10	130	1.08	0.15	0.98	<0.01	13.6	12.3	58
A083525	4	<2	0.07	1.33	0.8	<10	250	1.36	0.06	1	0.21	10.35	3.8	65
A083505	5	3	0.36	0.46	3.9	<10	220	0.23	0.13	0.46	0.08	21.3	9.6	103
A083507	5	<2	0.3	0.51	2.7	<10	330	0.27	0.2	1.06	0.06	15.4	7.2	60
A083511	5	7	0.63	1.18	8.3	<10	100	0.23	0.16	1.48	0.24	22.8	9.4	81
A083520	5	<2	0.38	0.77	5.1	<10	100	0.63	0.14	6.1	0.02	10.85	10.4	54
A083501	7	<2	0.14	1.08	4.7	<10	520	0.2	0.13	0.42	0.06	33.4	8.6	55
A083502	7	<2	0.12	0.73	4.6	<10	210	0.36	0.18	2.99	0.05	61.3	4.4	41
A083512	7	151	8.33	1.5	219	<10	80	0.24	4.11	1.44	2.29	29.4	12	39
A083514	7	<2	0.1	0.77	3.9	<10	910	0.15	0.19	0.69	0.53	22.7	9.3	56
A083516	7	2	0.22	0.71	7.9	<10	70	0.15	0.18	1.05	0.02	12.85	7	48
A083522	7	<2	0.16	0.41	3.1	<10	140	0.16	0.18	0.94	0.02	14.35	6.4	54

Rock Type Codes

1	argillites (non- carbonaceous)	3	calcite-pyrite exhalite	5	interbedded rhyolite/argillites
2	carbonaceous argillites	4	banded magnetite iron formations and silica-pyrite exhalite	7	rhyolites and rhyolitic fragmentals

Wolverine Project
2005 ICP Data

SAMPLE	Rock_Type	Cs_ME-MS41_ppm	Cu_ME-MS41_ppm	Fe_ME-MS41_%	Ga_ME-MS41_ppm	Ge_ME-MS41_ppm	Hf_ME-MS41_ppm	Hg_ME-MS41_ppm	In_ME-MS41_ppm	K_ME-MS41_%	La_ME-MS41_ppm	Li_ME-MS41_ppm	Mg_ME-MS41_%
A083503	1	1.21	69.2	1.42	1.71	<0.05	0.15	0.07	0.012	0.23	10.3	5.9	0.21
A083513	1	2.87	81.4	1.94	4.18	0.06	0.38	0.02	0.015	0.39	19.1	12.2	0.6
A083518	1	2.01	75.9	3.06	1.86	0.07	0.51	0.05	0.019	0.19	11	3.9	0.67
A083526	1	4.23	61.2	2.6	3.03	0.08	0.44	0.03	0.017	0.18	24.5	6	0.57
A083529	1	0.63	62.5	1.76	1.41	<0.05	0.24	0.06	0.019	0.13	8.1	2.7	0.19
A083508	2	0.56	76.9	1.18	1.29	<0.05	0.23	0.04	0.016	0.13	8.1	2.6	0.2
A083515	2	1.46	70.1	2.68	1.92	0.07	0.46	0.07	0.015	0.19	11.5	3.8	0.55
A083528	2	1.17	40.9	2.02	3.09	0.06	0.31	0.01	0.011	0.41	22.8	9.9	0.66
A083531	2	1.2	69.4	2.96	1.56	0.06	0.46	0.07	0.017	0.18	8.8	4.4	0.4
A083510	3	0.92	42.2	10.6	3.85	0.17	0.16	0.13	0.015	0.14	5	7.2	0.35
A083519	3	0.95	48.7	3.31	2.27	0.05	0.08	0.03	0.015	0.12	4.2	3.7	0.19
A083524	3	0.42	28.5	8.38	0.93	0.1	0.05	0.03	0.009	0.07	8.5	3.2	0.22
A083530	3	0.52	26	5.76	0.79	0.08	0.05	1.85	0.015	0.1	7.8	3.9	0.14
A083504	4	1.13	70.4	4.92	2.79	0.08	0.22	0.08	0.022	0.21	6	4.9	0.44
A083509	4	0.97	60.8	4.61	3.03	0.06	0.1	0.02	0.019	0.06	8	3.2	0.42
A083517	4	1.65	26.8	11.85	3.81	0.26	0.07	0.01	0.011	0.15	5.1	3.5	0.24
A083523	4	3.41	68.4	13.05	4.88	0.22	0.07	0.04	0.018	0.14	6.4	4.9	0.28
A083525	4	1.53	23.5	17.75	5.61	0.65	0.05	0.01	0.021	0.18	4.4	5.5	0.21
A083505	5	0.94	67.9	2.37	1.64	0.05	0.2	0.07	0.016	0.14	11.2	2.7	0.31
A083507	5	1.19	79.4	1.71	1.73	<0.05	0.18	0.02	0.015	0.19	8.5	4.1	0.28
A083511	5	4.11	68.1	2.6	2.25	0.06	0.59	0.03	0.016	0.24	11.8	5.1	0.69
A083520	5	4.42	52.6	2.77	2.46	<0.05	0.1	0.05	0.014	0.23	5.3	4.6	0.26
A083501	7	0.4	79.4	1.64	3.97	0.05	0.14	0.01	0.014	0.21	16.9	13.2	0.7
A083502	7	1.83	25.2	1.32	2.44	0.07	0.18	0.04	0.017	0.21	29.9	4.6	0.35
A083512	7	8.8	2220	3.63	5.44	0.39	0.62	0.22	0.485	0.42	15.3	19.1	1.62
A083514	7	1.19	62.5	1.36	2.88	<0.05	0.17	0.04	0.012	0.22	10	7.6	0.4
A083516	7	0.67	46.8	1.53	1.88	<0.05	0.16	0.04	0.013	0.19	5.8	3.2	0.29
A083522	7	0.6	45.7	1.1	1.21	<0.05	0.16	0.04	0.013	0.16	6.7	3.1	0.18

Rock Type Codes

1	argillites (non- carbonaceous)	3	calcite-pyrite exhalite	5	interbedded rhyolite/argillites
2	carbonaceous argillites	4	banded magnetite iron formations and silica-pyrite exhalite	7	rhyolites and rhyolitic fragmentals

Wolverine Project
2005 ICP Data

SAMPLE	Rock_Type	Mn_ME-MS41_ppm	Mo_ME-MS41_ppm	Na_ME-MS41_%	Nb_ME-MS41_ppm	Ni_ME-MS41_ppm	P_ME-MS41_ppm	Pb_ME-MS41_ppm	Rb_ME-MS41_ppm	Re_ME-MS41_ppm	S_ME-MS41_%	Sb_ME-MS41_ppm	Sc_ME-MS41_ppm
A083503	1	170	1.1	0.01	0.09	32.8	360	16.1	13.2	0.001	0.53	1.56	1.8
A083513	1	1850	1.56	0.02	0.41	45.5	340	13.6	27.3	<0.001	0.27	0.16	2.8
A083518	1	727	3.72	0.02	0.05	108	1030	13.2	14.8	0.009	1.52	0.92	2.2
A083526	1	230	3.03	0.02	0.05	54.6	670	15.9	13	0.007	1.16	1.51	1.7
A083529	1	222	2.26	0.01	0.05	36.8	450	29.2	8.3	0.002	0.92	3.15	1.8
A083508	2	387	1.26	0.01	<0.05	42.7	1950	8.9	8.5	0.003	0.55	1.14	1.7
A083515	2	337	2.54	0.01	0.08	87.5	720	11.2	14.6	0.009	1.32	1.16	2.1
A083528	2	781	3.05	0.01	0.34	36.9	610	13.2	23.5	0.003	0.58	0.31	2
A083531	2	355	3.84	0.01	<0.05	83.8	690	14.4	13.1	0.009	1.74	1.93	1.8
A083510	3	872	35.9	0.02	0.16	46.4	640	39.9	8.7	0.006	0.7	0.46	4.3
A083519	3	903	7.15	0.02	0.08	15.2	570	75.8	8	<0.001	1.33	0.65	3.6
A083524	3	2400	12.05	0.01	0.12	7.2	2350	549	3.7	0.002	9.02	3.5	2.6
A083530	3	1520	12.6	0.01	0.1	12.8	1410	449	5.1	0.001	6.14	3.8	3.3
A083504	4	4020	3.36	0.02	0.17	35.2	800	18.8	13.4	<0.001	1.3	1.52	4.6
A083509	4	1640	5.71	0.01	<0.05	14.6	850	5	5	<0.001	0.63	1.82	4.1
A083517	4	907	8.4	0.02	0.23	13.6	170	5.8	9.7	<0.001	0.39	0.6	3.5
A083523	4	3800	9.33	0.01	0.17	40.8	460	5.5	11.4	0.001	0.47	1.53	5.2
A083525	4	1000	8.43	0.03	0.19	15.8	260	7.3	11.9	<0.001	0.26	0.37	4.7
A083505	5	281	1.14	0.01	<0.05	57.8	200	10.4	8.6	0.002	0.92	3.5	2.3
A083507	5	673	1.89	0.01	0.09	39.7	280	53.2	13	0.002	0.59	1.08	2.5
A083511	5	440	2.48	0.02	0.11	74.9	720	11.9	18.9	0.009	0.83	2.38	2.7
A083520	5	1490	8.37	0.02	0.17	32.5	480	9.6	16.6	0.001	0.82	3.28	3.3
A083501	7	636	0.44	0.01	<0.05	32	150	6.1	10.4	<0.001	0.18	0.15	2.5
A083502	7	847	2.27	0.02	0.27	21.9	190	9.6	9.9	<0.001	0.44	1.86	2.3
A083512	7	495	2.61	0.02	0.14	59.3	270	69.3	33.1	0.005	1.47	4.84	2.6
A083514	7	969	0.99	0.01	0.13	30.1	290	8.6	14.6	<0.001	0.31	0.16	2.1
A083516	7	232	1.34	0.02	<0.05	40.4	120	6.6	11.2	0.001	1.1	1.2	2
A083522	7	178	1.26	0.01	<0.05	34.1	90	4.7	10	0.001	0.66	0.92	1.8

Rock Type Codes

1	argillites (non- carbonaceous)	3	calcite-pyrite exhalite	5	interbedded rhyolite/argillites
2	carbonaceous argillites	4	banded magnetite iron formations and silica-pyrite exhalite	7	rhyolites and rhyolitic fragmentals

Wolverine Project
2005 ICP Data

SAMPLE	Rock_Type	Se_ME-MS41_ppm	Sn_ME-MS41_ppm	Sr_ME-MS41_ppm	Ta_ME-MS41_ppm	Te_ME-MS41_ppm	Th_ME-MS41_ppm	Ti_ME-MS41_%	Tl_ME-MS41_ppm	U_ME-MS41_ppm	V_ME-MS41_ppm	W_ME-MS41_ppm	Y_ME-MS41_ppm	Zn_ME-MS41_ppm	Zr_ME-MS41_ppm
A083503	1	1.2	0.3	28.1	<0.01	0.12	3	0.012	0.5	0.55	22	0.2	3.11	132	6.3
A083513	1	0.9	0.4	68.4	0.01	0.07	7.1	0.055	0.26	0.9	19	0.26	4.61	69	13.9
A083518	1	5.5	0.3	316	<0.01	0.09	3.2	0.012	0.05	2.6	17	0.48	6.65	224	21.4
A083526	1	4.1	0.5	103.5	<0.01	0.05	6.4	0.008	0.21	1.4	14	0.4	6.25	123	16.4
A083529	1	2.4	0.3	76.1	<0.01	0.04	3	<0.005	0.41	0.56	16	0.43	3.48	192	9.5
A083508	2	2.1	0.3	307	<0.01	0.06	2.1	0.005	0.26	0.68	13	0.18	7.87	107	9.4
A083515	2	4.9	0.3	240	<0.01	0.07	3.4	0.016	0.09	2.19	17	0.16	4.65	206	20.8
A083528	2	1.8	0.4	114	<0.01	0.07	9.3	0.047	0.12	1.81	19	0.44	10.65	85	11.5
A083531	2	5.1	0.3	158	<0.01	0.07	2.9	0.005	0.43	1.62	17	0.16	4.25	201	18.4
A083510	3	4	0.4	164.5	<0.01	0.04	1.5	0.019	0.16	0.7	70	0.27	6.67	252	6.3
A083519	3	2.1	0.3	192.5	<0.01	0.04	1.2	0.008	0.4	0.26	32	0.22	7.52	39	3.2
A083524	3	4	0.2	236	<0.01	0.04	1	<0.005	0.87	0.32	26	0.17	15.75	68	2.3
A083530	3	4.3	0.3	141.5	<0.01	0.07	1.1	0.005	1.23	0.38	31	0.28	13.85	9240	2.4
A083504	4	4.3	0.4	163.5	<0.01	0.05	1.8	0.016	0.4	0.58	45	0.58	7.38	106	9.5
A083509	4	1.1	0.3	152	<0.01	0.02	1.6	<0.005	0.19	0.45	43	0.29	10.15	30	3.9
A083517	4	1.2	0.4	215	<0.01	0.03	1.2	0.023	0.14	0.28	81	0.19	5.07	23	2.8
A083523	4	1.5	0.4	126	<0.01	0.06	2	0.03	0.34	0.78	78	0.44	5.4	86	3.2
A083525	4	1.5	0.5	138	<0.01	0.03	1.5	0.029	0.26	0.25	104	0.35	4.83	182	1.8
A083505	5	2.3	0.3	39.6	<0.01	0.05	4.3	<0.005	0.3	1.03	17	0.45	3.68	159	8.8
A083507	5	1.9	0.3	99.9	<0.01	0.07	2.7	0.01	0.31	0.5	17	0.49	3.33	53	8.1
A083511	5	4.4	0.3	261	<0.01	0.04	3.4	0.027	0.16	1.84	24	0.92	5.15	153	22.5
A083520	5	1.4	0.4	140	<0.01	0.07	2.2	0.017	0.7	0.65	24	6.25	7.87	45	4
A083501	7	0.5	0.3	25.8	<0.01	0.04	4.3	0.015	0.02	0.36	27	0.13	4.22	61	5.5
A083502	7	1.3	0.5	140.5	<0.01	0.03	9.1	0.006	0.21	0.9	7	0.35	12	35	7.5
A083512	7	108	2.2	131	<0.01	0.05	8.3	0.024	4.67	1.95	20	0.41	6.22	306	24.3
A083514	7	0.8	0.3	62.2	<0.01	0.09	3.2	0.023	0.09	0.41	17	0.92	2.91	125	7.2
A083516	7	2.4	0.3	91.5	<0.01	0.08	2.1	0.005	0.09	0.4	14	0.35	3.58	33	6.9
A083522	7	1.2	0.2	87	<0.01	0.06	2.4	0.005	0.07	0.35	11	0.47	2.99	34	6.2

Rock Type Codes					
1	argillites (non- carbonaceous)	3	calcite-pyrite exhalite	5	interbedded rhyolite/argillites
2	carbonaceous argillites	4	banded magnetite iron formations and silica-pyrite exhalit	7	rhyolites and rhyolitic fragmentals

Appendix 2.4-2 1996 Static Testing Data

ACID BASE ACCOUNTING TEST REPORT

Client : Westmin Resources Limited (Wolverine Lake Project)
Sample id : Hanging Wall Composite

Date : December 31, 1997
Project : 96-121

Sample	DDH	From	To	Rock Code	% Total Sulfur	% Sulfate Sulfur	Paste pH	Acid Potential	Neutralization Potential (NP)		
									Actual	Ratio	Net
105235	WV96-39	416.1	419.1	RHCT	0.28	<0.01	8.8	8.8	49.5	5.66	41.
105809	WV96-58	73.0	73.9	RHAT	0.79	0.02	7.4	24.1	14.10	0.59	-10.
105812	WV96-58	78.2	81.3	EXSP	2.14	<0.01	7.7	66.9	24.30	0.36	-43.
105816	WV96-58	104.2	105.6	RHDS	7.14	<0.01	8.1	223.	375.	1.68	152.
105763	WV96-60	262.74	263.65	RHST	3.30	<0.01	8.2	103.	109.	1.06	6.0
105766	WV96-60	268.0	268.87	QTVN	0.13	<0.01	8.8	4.1	31.9	7.85	28.
105773	WV96-60	278.4	280.9	STFL	2.87	0.02	7.7	89.1	82.7	0.93	- 6.4
105777	WV96-60	287.5	288.34	RHST	2.15	<0.01	8.2	67.2	21.5	0.32	-46.
172410	WV96-63	80.5	83.5	RHFS	0.56	<0.01	8.3	17.5	227.	12.97	209.
172411	WV96-63	83.5	89.0	ARRH	1.11	<0.01	8.1	34.7	234.	6.75	200.
172412	WV96-63	89.0	93.5	ARSI	1.16	<0.01	8.2	36.3	155.	4.26	118.
172414	WV96-63	96.3	99.0	ARTF	2.12	<0.01	8.3	66.3	65.2	0.98	- 1.1
105921	WV96-63	103.3	105.2	STFL	2.69	<0.01	7.9	84.1	151.	1.79	67.
172451	WV96-72	96.1	97.1	ARSI	4.04	<0.01	7.4	126.	83.7	0.66	-43.
172454	WV96-72	100.6	102.7	ARSI	2.64	<0.01	7.1	82.5	5.10	0.06	-77.
172455	WV96-72	102.7	104.3	STFL	1.78	<0.01	7.1	55.6	28.0	0.50	-28.

Process Research Associates Ltd.

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CERTIFICATE OF ANALYSIS
iPL 96L1300

Client: Process Research Associates Ltd iPL: 96L1300 Out: Dec 20, 1996 Page 2 of 2 Section 1 of 2
Project: 96-121 49 Pulp In: Dec 18, 1996 [130018:31:49:69122096] Certified BC Assayer: David Chiu

Sample Name		Al ppm	Sb ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Ca ppm	Cr ppm	Co ppm	Cu ppm	Fe ppm	La ppm	Pb ppm	Mg ppm	Mn ppm	Hg ppm	Mo ppm	Ni ppm	P ppm
96-121 172455	P	3118	134	52	45	<	47.0	17038	160	3	397	18511	8	286	820	56	<	26	100	7636
96-121 172456	P	426	472	315	5	6	3310.5	25329	52	17	4242	15%	4	14010	337	755	126	9	84	419
96-121 172458	P	740	346	621	<	29	1788.0	20257	30	10	4558	17%	<	13665	605	441	79	13	103	501
96-121 172459	P	398	275	435	4	<	3049.4	31518	24	23	2575	17%	<	13237	747	633	120	14	97	186
96-121 172460	P	5418	65	67	109	<	53.6	6.6%	32	3	786	25903	18	401	41323	616	3	30	32	323
96-121 172464	P	26325	10	16	52	<	9.2	5893	25	8	29	40824	47	64	26795	580	<	7	6	368
96-121 172604	P	2581	6	9	88	<	6.5	35636	40	4	15	15433	5	57	1104	345	<	4	3	327
96-121 175608	P	1818	16	43	55	<	20.1	8995	40	2	35	17887	7	103	596	94	<	14	32	660
96-121 175609	P	1837	20	32	30	<	14.8	10735	69	2	43	42945	4	65	531	105	<	22	61	1423
96-121 175613	P	3227	28	28	73	<	13.9	16433	97	5	78	18536	11	117	348	45	<	17	107	7514
Min Limit		100	5	5	2	2	0.1	100	1	1	1	100	2	2	100	1	3	1	1	100
Max Reported*		50000	1000	10000	10000	10000	10000.0	50000	10000	10000	20000	50000	10000	20000	50000	10000	10000	1000	10000	50000
Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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CERTIFICATE OF ANALYSIS
iPL 96L1300

Client: Process Research Associates Ltd iPL: 96L1300 Out: Dec 20, 1996 Page 2 of 2 Section 2 of 2
Project: 96-121 49 Pulp In: Dec 18, 1996 [130018:28:24:69122096] Certified BC Assayer: David Chiu

Sample Name		K ppm	Sc ppm	Ag ppm	Na ppm	Sr ppm	Tl ppm	Ti ppm	W ppm	V ppm	Zn ppm	Zr ppm
96-121 172455	P	1085	<	7.4	121	65	<	<	<	98	3553	8
96-121 172456	P	537	<	0.2m	<	49	<	<	<	21	27%	3
96-121 172458	P	154	<	0.1m	<	69	<	<	<	49	14%	11
96-121 172459	P	1004	<	0.1m	<	108	<	<	<	29	24%	4
96-121 172460	P	2169	<	12.2	125	202	<	<	<	26	4207	38
96-121 172464	P	797	<	0.1	101	14	<	<	<	16	743	20
96-121 172604	P	1082	<	0.2	106	77	<	<	<	<	448	7
96-121 175608	P	727	<	1.3	106	24	<	<	<	12	973	10
96-121 175609	P	765	<	1.5	<	50	<	<	<	34	773	9
96-121 175613	P	1263	<	3.1	117	151	<	<	<	89	876	10
Min Limit		100	1	0.1	100	1	10	100	5	2	1	1
Max Reported*		50000	10000	100.0	50000	10000	1000	50000	1000	10000	20000	10000
Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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CERTIFICATE OF ANALYSIS
iPL 96L1300

Client: Process Research Associates Ltd iPL: 96L1300 Out: Dec 20, 1996 Page 1 of 2 Section 1 of 2
Project: 96-121 49 Pulp In: Dec 18, 1996 [130018:28:23:69122096] Certified BC Assayer: David Chiu

Sample Name		Al ppm	Sb ppm	As ppm	Ba ppm	Bi ppm	Cd ppm	Ca ppm	Cr ppm	Co ppm	Cu ppm	Fe ppm	La ppm	Pb ppm	Mg ppm	Mn ppm	Hg ppm	Mo ppm	Ni ppm	P ppm
96-121 105223	P	2247	23	66	34	<	19.9	14852	48	4	75	23906	5	334	778	214	<	16	34	649
96-121 105226+105213	P	3196	439	369	6	2	376.3	12107	82	17	2678	7.2%	<	5585	435	157	7	63	146	1770
96-121 105227	P	25071	235	161	17	20	303.2	6737	73	40	3.1%	10%	26	1644	23227	613	7	8	6	1159
96-121 105235	P	16500	<	51	121	<	2.4	10713	50	5	152	22154	37	26	22883	531	<	5	3	297
96-121 105756	P	698	604	1900	11	<	750.5	22743	42	16	5162	18%	4	5892	951	585	25	16	22	131
96-121 105763+105764	P	2128	65	98	28	<	106.9	38281	58	3	585	26186	2	160	1038	423	7	6	7	<
96-121 105766	P	1447	29	50	361	<	3.4	9914	172	7	71	5442	4	19	1876	234	<	1	17	<
96-121 105773	P	3751	47	109	38	<	19.9	36998	60	3	115	24218	4	94	1405	311	<	26	74	2446
96-121 105777	P	2317	7	13	55	<	1.5	8135	75	3	26	20732	3	35	545	110	<	5	7	574
96-121 105809	P	12044	<	<	102	<	0.6	2842	114	3	91	30041	4	11	2287	98	<	3	13	827
96-121 105812	P	2055	<	<	30	<	2.0	7174	107	5	52	23429	<	209	1025	310	<	11	28	277
96-121 105816+105817	P	3957	277	94	22	<	233.5	6.8%	59	5	661	49042	<	111	33300	2879	19	13	29	105
96-121 105820	P	5683	414	246	22	<	856.5	5.3%	81	28	3819	16%	<	405	15395	1527	52	26	71	189
96-121 105824+105825	P	1654	180	233	3	40	855.4	35638	62	84	18236	19%	<	8970	1087	634	15	34	127	970
96-121 105829+105830	P	2509	283	437	11	6	137.1	25059	72	19	3593	9.1%	4	868	520	313	<	49	134	2517
96-121 105831	P	2017	32	52	18	<	4.7	6665	68	4	123	30036	7	59	359	96	<	6	58	1383
96-121 105835	P	5.0%	6	30	95	<	1.0	6584	70	14	74	7.0%	19	33	45498	1120	<	8	2	255
96-121 105921	P	2071	13	116	50	<	32.7	5.4%	103	3	169	23799	3	361	1396	643	<	12	31	389
96-121 105926+105927	P	681	120	1867	5	3	673.8	23695	63	30	11660	19%	<	8170	582	533	14	12	31	1153
96-121 105934+105935	P	759	816	650	9	24	2849.0	1892	62	58	7410	18%	<	11117	650	173	33	29	166	347
96-121 105938+105939	P	4511	254	100	16	10	85.7	40168	79	13	13797	6.1%	11	1305	18007	696	<	22	75	1506
96-121 105944	P	33042	<	15	112	7	12.2	24783	42	18	528	5.3%	55	118	36628	523	<	7	4	351
96-121 105950	P	3171	<	<	122	<	2.5	7.1%	35	4	42	10078	41	20	5300	524	<	4	4	395
96-121 172337	P	10465	<	<	177	<	<	3214	122	7	91	41921	3	15	2883	270	<	9	37	286
96-121 172340	P	2403	36	301	<	<	112.9	15062	77	13	1560	9.1%	<	4260	4960	632	<	10	49	1046
96-121 172344	P	1810	9	41	51	<	3.6	5931	71	2	42	15363	5	80	505	131	<	6	13	352
96-121 172346	P	594	359	325	<	229	936.7	7069	33	44	6352	15%	<	11869	339	256	48	9	51	442
96-121 172348	P	376	547	1535	<	54	504.3	2848	37	37	9902	18%	<	11302	274	157	11	7	25	410
96-121 172350	P	320	260	406	4	17	1027.3	16332	30	34	19329	19%	3	11290	298	448	17	4	20	596
96-121 172410	P	5962	31	21	341	<	7.8	7.8%	91	3	169	9322	4	117	2381	646	<	1	32	750
96-121 172411	P	1267	8	5	80	<	4.3	8.3%	69	3	120	13394	2	77	1120	1106	<	2	21	<
96-121 172412	P	2073	8	<	84	<	2.8	5.7%	115	4	89	15694	3	58	1237	1033	<	1	30	996
96-121 172414	P	2457	9	53	53	<	3.7	26100	96	5	62	21774	3	78	753	446	<	9	38	935
96-121 172420	P	2453	17	<	44	<	1.6	6674	57	10	149	25253	3	58	1725	490	<	2	70	145
96-121 172421	P	2726	9	11	139	<	0.6	5.3%	74	17	140	14965	4	168	1910	2831	<	3	48	684
96-121 172424	P	6297	25	<	77	<	1.3	5.9%	58	10	94	43425	3	117	11944	3495	<	3	41	217
96-121 172435	P	1411	40	82	16	<	215.5	34728	54	8	1134	5.1%	<	1510	822	602	<	9	24	512
96-121 172451	P	2593	48	219	22	<	15.5	36000	61	5	297	33980	8	59	2605	480	<	28	123	4328
96-121 172454	P	1866	28	39	24	<	4.3	4371	87	4	58	24043	7	24	403	56	<	5	47	1545
Min Limit		100	5	5	2	2	0.1	100	1	1	1	100	2	2	100	1	3	1	1	100
Max Reported*		50000	1000	10000	10000	10000	10000.0	50000	10000	10000	20000	50000	10000	20000	50000	10000	10000	1000	10000	50000
Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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CERTIFICATE OF ANALYSIS
iPL 96L1300

Client: Process Research Associates Ltd iPL: 96L1300 Out: Dec 20, 1996 Page 1 of 2 Section 2 of 2
Project: 96-121 49 Pulp In: Dec 18, 1996 [130018:28:23:69122096] Certified BC Assayer: David Chiu

Sample Name		K ppm	Sc ppm	Ag ppm	Na ppm	Sr ppm	Tl ppm	Ti ppm	W ppm	V ppm	Zn ppm	Zr ppm
96-121 105223	P	1028	<	4.6	124	62	<	<	<	12	2155	14
96-121 105226+105213	P	758	<	0.1m	119	17	<	<	<	75	3.7%	12
96-121 105227	P	961	2	0.2m	<	21	<	106	<	13	2.8%	9
96-121 105235	P	2355	<	0.1	150	27	<	106	<	4	324	19
96-121 105756	P	<	2	0.1m	<	35	<	<	<	22	7.6%	3
96-121 105763+105764	P	1077	<	1.8	105	155	<	<	<	3	10595	16
96-121 105766	P	671	<	0.1	107	52	<	<	<	6	423	2
96-121 105773	P	1436	<	2.7	101	135	<	<	<	47	1639	10
96-121 105777	P	1217	<	0.4	<	35	<	<	<	3	159	6
96-121 105809	P	1013	3	0.2	194	60	<	<	<	35	98	4
96-121 105812	P	818	<	1.0	<	27	<	<	<	12	903	3
96-121 105816+105817	P	1935	2	6.4	115	163	<	<	<	123	2.2%	5
96-121 105820	P	3481	<	6.2	113	101	<	<	<	180	7.7%	33
96-121 105824+105825	P	197	<	78.2	<	43	<	<	<	91	11%	9
96-121 105829+105830	P	910	<	33.0	<	60	<	<	<	77	14893	14
96-121 105831	P	818	<	1.4	102	18	<	<	<	12	691	11
96-121 105835	P	853	2	0.4	<	16	<	188	<	17	470	17
96-121 105921	P	903	<	4.1	101	354	<	<	<	11	4152	17
96-121 105926+105927	P	<	<	0.2m	<	84	<	<	<	20	8.1%	6
96-121 105934+105935	P	<	<	0.2m	<	8	<	<	<	41	25%	4
96-121 105938+105939	P	1164	<	0.2m	115	93	<	<	<	38	8528	21
96-121 105944	P	1277	1	1.2	101	57	<	147	<	9	1478	13
96-121 105950	P	1649	<	0.1	119	143	<	<	<	<	257	15
96-121 172337	P	1419	3	0.2	171	118	<	278	<	46	174	6
96-121 172340	P	525	2	25.0	<	58	<	<	<	37	15431	14
96-121 172344	P	1016	<	1.1	106	21	<	<	<	4	437	13
96-121 172346	P	<	<	0.2m	<	21	<	<	<	18	11%	5
96-121 172348	P	<	<	0.2m	<	14	<	<	<	10	6.0%	3
96-121 172350	P	<	<	0.2m	<	61	<	<	<	14	10%	3
96-121 172410	P	393	6	0.4	154	575	<	<	<	8	946	2
96-121 172411	P	209	5	0.2	109	373	<	<	<	2	556	2
96-121 172412	P	726	1	<	117	213	<	<	<	7	383	5
96-121 172414	P	1549	<	1.0	122	132	<	<	<	10	407	17
96-121 172420	P	911	<	0.2	108	26	<	<	<	6	436	9
96-121 172421	P	958	2	0.2	130	189	<	<	<	8	88	3
96-121 172424	P	2195	3	1.1	122	138	<	197	<	17	222	6
96-121 172435	P	730	<	14.4	<	201	<	<	<	12	17663	15
96-121 172451	P	957	<	2.7	117	120	<	<	<	44	1250	12
96-121 172454	P	757	<	1.2	<	14	<	<	<	9	281	11
Min Limit		100	1	0.1	100	1	10	100	5	2	1	1
Max Reported*		50000	10000	100.0	50000	10000	1000	50000	1000	10000	20000	10000
Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

ACID BASE ACCOUNTING TEST REPORT

Client : Westmin Resources Limited (Wolverine Lake Project)
Sample id : Foot Wall Composite

Date : December 31, 1997
Project : 96-121

Sample	DDH	From	To	Rock Code	% Total Sulfur	% Sulfate Sulfur	Paste pH	Acid Potential	Neutralization Potential (NP)		
									Actual	Ratio	Net
172420	WV96-39	366.7	370.8	RHFS	2.08	<0.01	7.9	65.0	28.2	0.43	- 36.8
172421	WV96-39	371.3	374.1	RHAR	0.82	<0.01	7.9	25.6	174.	6.79	148.
172424	WV96-39	379.5	383.7	ARMS	1.60	<0.01	8.1	50.0	249.	4.98	199.
105223	WV96-39	387.1	389.1	ARCB	2.99	<0.01	7.4	93.4	38.1	0.41	- 55.3
105226	WV96-39	393.3	395.2	ARCB	9.77	0.06	6.4	303.	29.4	0.10	-274.
105831	WV96-58	151.9	154.1	ARMS	3.31	0.01	7.7	103.	17.8	0.17	-85.
105835	WV96-58	160.6	163.6	RHQL	0.11	<0.01	8.2	3.4	39.1	11.37	36.
105938	WV96-63	130.0	130.3	SSSG	6.83	<0.01	7.6	213.	200.	0.94	-14.
105944	WV96-63	135.9	137.7	RHCT	0.82	<0.01	8.5	25.6	145.	5.65	119.
105950	WV96-63	149.0	151.4	ARSC	0.33	<0.01	8.4	10.3	221.	21.40	210.
175604	WV96-63	157.7	159.2	RHST	1.59	<0.01	8.1	49.7	99.3	2.00	50.
175605	WV96-63	159.2	161.6	ARMS	2.06	<0.01	7.7	64.4	23.6	0.37	-41.
175609	WV96-63	167.0	169.6	STFL	5.08	<0.01	7.3	159.	25.4	0.16	-133.
175613	WV96-63	176.6	178.6	ARTF	2.19	<0.01	5.8	68.4	22.2	0.32	-46.
172337	WV96-72	36.7	39.5	EXMT	0.73	0.16	7.4	22.8	41.6	1.82	19.
172340	WV96-72	83.4	84.7	STGG	11.9	<0.01	7.8	372.	62.9	0.17	-309.
172344	WV96-72	88.7	90.3	ARSI	1.72	<0.01	8.1	53.8	16.9	0.31	-37.
172345	WV96-72	90.3	91.7	ARSI	7.60	<0.01	8.4	238.	103.	0.43	-135.
172460	WV96-72	107.3	109.4	ARMS	1.70	<0.01	8.4	53.1	345.	6.49	291.
172464	WV96-72	117.5	120.4	RHSR	0.58	<0.01	8.6	18.1	28.7	1.58	11.

Process Research Associates Ltd.

ACID BASE ACCOUNTING TEST REPORT

Client : Westmin Resources Limited (Wolverine Lake Project) **Date :** December 31, 1997
Sample id : Massive Sulphide Composite **Project :** 96-121

Sample	DDH	From	To	Rock Code	% Total Sulfur	% Sulfate Sulfur	Paste pH	Acid Potential	Neutralization Potential (NP)		
									Actual	Ratio	Net
105221	WV96-39	401.0	401.58	SSMS	10.20	<0.01	7.6	319.	32.1	0.10	-287.
105820	WV96-58	144.6	144.8	PYSM	22.2	<0.01	8.2	694.	242.	0.35	-452.
105824	WV96-58	147.2	147.5	SSMS	28.4	0.14	7.8	883.	85.70	0.10	-797.
105829	WV96-58	150.0	150.45	SSMS	12.8	0.03	7.7	399.	59.20	0.15	-340.
105756	WV96-63	252.68	254.67	SSMS	44.0	0.11	7.0	1372.	85.5	0.06	-1286.
105926	WV96-63	114.6	114.8	ARCB	37.2	0.07	7.9	1160.	70.5	0.06	-1090.
105934	WV96-63	124.66	125.0	ARCB	30.5	0.03	7.0	952.	18.0	0.02	-934.
172346	WV96-72	91.7	92.7	SSMS	40.2	0.06	6.9	1254.	25.9	0.02	-1228.
172348	WV96-72	93.7	94.6	SSMS	45.6	0.02	6.3	1424.	10.4	0.01	-1414.
172350	WV96-72	95.4	96.1	SSMS	41.6	<0.01	7.5	1300.	54.8	0.04	-1245.
172456	WV96-72	104.3	105.7	SSMS	32.8	<0.01	7.6	1025.	80.2	0.08	-945.
172458	WV96-72	105.9	106.7	SSMS	33.2	<0.01	7.5	1038.	69.6	0.07	-968.
172459	WV96-72	106.7	107.3	SSMS	32.9	<0.01	7.5	1028.	130.	0.13	-898.

Process Research Associates Ltd.

Appendix 2.4-3 1996 Kinetic Testing Data

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC1

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-63 Hanging Wall Composite (Comp 1)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997
Page: 1 of 3

		Cycle										
Element	Unit	0	1	2	3	4	5	6	7	8	9	10
Al	mg/L	0.18			0.11			0.08			0.10	
Sb	mg/L	<0.05			<0.05			<0.05			<0.05	
As	mg/L	<0.03			<0.03			<0.03			<0.03	
Ba	mg/L	0.063			0.028			0.021			0.018	
Be	mg/L	<0.001			<0.001			<0.001			<0.001	
Bi	mg/L	<0.1			<0.1			<0.1			<0.1	
B	mg/L	0.24			0.30			0.26			0.36	
Cd	mg/L	<0.005			<0.005			<0.005			<0.005	
Ca	mg/L	37.79			26.72			21.54			19.17	
Cr	mg/L	<0.01			<0.01			<0.01			<0.01	
Co	mg/L	<0.01			<0.01			<0.01			<0.01	
Cu	mg/L	<0.01			<0.01			0.02			0.02	
Fe	mg/L	<0.01			<0.01			<0.01			<0.01	
Pb	mg/L	<0.05			<0.05			<0.05			<0.05	
Li	mg/L	<0.02			<0.02			<0.02			<0.02	
Mg	mg/L	2.8			1.8			1.7			1.6	
Mn	mg/L	0.404			0.574			0.673			0.681	
Hg	mg/L	<0.02			<0.02			<0.02			<0.02	
Mo	mg/L	<0.01			<0.01			<0.01			<0.01	
Ni	mg/L	0.16			0.05			0.05			0.06	
P	mg/L	<0.1			<0.1			<0.1			<0.1	
K	mg/L	3			<2			<2			<2	
Se	mg/L	<0.05			<0.05			<0.05			<0.05	
Si	mg/L	0.46			0.18			0.12			0.28	
Ag	mg/L	<0.02			<0.02			<0.02			<0.02	
Na	mg/L	6			1.5			1.0			1.0	
Sr	mg/L	0.221			0.162			0.127			0.112	
Tl	mg/L	<0.2			<0.2			<0.2			<0.2	
Sn	mg/L	<0.1			<0.1			<0.1			<0.1	
Ti	mg/L	<0.01			<0.01			<0.01			<0.01	
W	mg/L	<0.1			<0.1			<0.1			<0.1	
V	mg/L	<0.01			<0.01			<0.01			<0.01	
Zn	mg/L	0.084			0.100			0.103			0.107	
Leachate Vol	mL	462	410	487	480	477	487	458	470	465	472	474
pH		7.4	7.1	6.8	7.3	6.7	7.1	6.9	6.8	6.7	6.9	6.9
Conductivity	µS	263	167	155	160	140	151	124	109	124	111	112
ORP	mV	120	117	119	90	120	93	103	106	118	114	270
Acidity	mg $CaCO_3$/L	4.6	3.8	3.6	4.0	4.7	2.3	2.7	2.8	3.7	3.3	3.0
Alkalinity	mg $CaCO_3$/L	2.5	11.4	10.5	12.9	11.5	8.8	8.6	6.4	9.5	8.4	7.9
Sulphate	mg/L	95	69	61	66	52	55	49	40	44	45	43
Cum. Sulphate	mg/kg	44	72	102	134	158	185	208	226	247	268	288

Process Research Associates Ltd.

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC1

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-63 Hanging Wall Composite (Comp 1)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	11	12	13	14	15	16	17	18	19	20	21
Al	mg/L		0.06			0.12			0.07	0.05	<0.05	0.11
Sb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
As	mg/L		<0.03			<0.03			<0.03	<0.03	<0.03	<0.03
Ba	mg/L		0.017			0.016			0.013	0.013	0.012	0.011
Be	mg/L		<0.001			<0.001			<0.001	<0.001	<0.001	0.001
Bi	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
B	mg/L		0.35			0.39			0.28	0.28	0.38	0.31
Cd	mg/L		<0.005			<0.005			<0.005	<0.005	<0.005	<0.005
Ca	mg/L		17.63			17.08			14.25	14.47	13.52	13.13
Cr	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Co	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Cu	mg/L		0.02			0.02			0.01	<0.01	<0.01	0.02
Fe	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	0.11
Pb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Li	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mg	mg/L		1.5			1.5			1.7	1.6	1.2	0.9
Mn	mg/L		0.695			0.643			0.549	0.497	0.396	0.380
Hg	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mo	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Ni	mg/L		0.05			0.04			0.02	0.02	<0.01	0.03
P	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
K	mg/L		<2			<2			<2	<2	<2	<2
Se	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Si	mg/L		0.09			0.22			0.12	0.11	0.10	0.11
Ag	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Na	mg/L		1.0			0.9			1.0	0.7	0.9	1.4
Sr	mg/L		0.105			0.101			0.094	0.088	0.079	0.073
Tl	mg/L		<0.2			<0.2			<0.2	<0.2	<0.2	<0.2
Sn	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
Ti	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
W	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
V	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Zn	mg/L		0.097			0.114			0.067	0.063	0.057	0.075
Leachate Vol	mL	470	466	465	467	474	472	492	471	461	488	470
pH		6.9	7.0	6.7	6.7	7.0	6.9	6.7	6.9	6.6	6.9	6.5
Conductivity	µS	112	97	107	101	100	85	91	93	88	81	69
ORP	mV	290	235	244	212	193	206	257	223	205	221	150
Acidity	mg $CaCO_3$/L	3.5	2.3	4.2	3.3	2.5	3.7	1.8	2.7	3.9	3.2	4.6
Alkalinity	mg $CaCO_3$/L	11.0	9.3	10.2	8.0	6.4	8.0	5.8	9.1	9.5	9.1	6.4
Sulphate	mg/L	40	34	40	36	30	30	39	33	30	29	29
Cum. Sulphate	mg/kg	307	323	342	359	373	387	406	422	435	450	463

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC1

Reporting Date: January 29, 1998
Project: 96-121

Sample id: DDH-WV96-63 Hanging Wall Composite (Comp 1)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997
Page: 3 of 3

		Cycle										
Element	Unit	22	23	24	25	26	27	28	29	30	31	32
Al	mg/L	0.15	0.12	0.07	0.12	0.12						
Sb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
As	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03						
Ba	mg/L	0.012	0.011	0.008	0.011	0.010						
Be	mg/L	0.002	<0.001	<0.001	<0.001	<0.001						
Bi	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
B	mg/L	0.41	0.30	0.34	0.22	0.36						
Cd	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005						
Ca	mg/L	13.50	14.21	9.64	12.79	11.78						
Cr	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Co	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Cu	mg/L	0.06	0.02	0.06	0.05	<0.01						
Fe	mg/L	0.17	<0.01	0.05	0.02	<0.01						
Pb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Li	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mg	mg/L	1.3	1.4	1.0	0.9	0.9						
Mn	mg/L	0.439	0.444	0.282	0.328	0.277						
Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mo	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Ni	mg/L	0.03	0.02	0.01	0.02	0.01						
P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
K	mg/L	<2	<2	<2	<2	<2						
Se	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Si	mg/L	0.29	0.22	0.17	0.20	0.25						
Ag	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Na	mg/L	0.6	<0.2	1.2	0.4	0.6						
Sr	mg/L	0.081	0.081	0.046	0.073	0.067						
Tl	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2						
Sn	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
W	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
V	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Zn	mg/L	0.064	0.057	0.065	0.053	0.022						
Leachate Vol	mL	470	474	495	470	485						
pH		6.6	6.4	6.7	6.7	6.4						
Conductivity	µS	69	69	53	66	59						
ORP	mV	178	179	244	336	277						
Acidity	mg $CaCO_3$/L	4.6	3.7	3.8	4.0	4.4						
Alkalinity	mg $CaCO_3$/L	7.1	8.2	4.6	8.6	7.1						
Sulphate	mg/L	31	30	22	26	28						
Cum. Sulphate	mg/kg	478	492	503	515	529						

Process Research Associates Ltd.

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC2

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-60 Foot Wall Composite (Comp 2)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	0	1	2	3	4	5	6	7	8	9	10
Al	mg/L	0.17			0.11			0.10			0.07	
Sb	mg/L	0.13			0.10			0.05			<0.05	
As	mg/L	<0.03			<0.03			<0.03			<0.03	
Ba	mg/L	0.052			0.021			0.019			0.015	
Be	mg/L	<0.001			<0.001			<0.001			<0.001	
Bi	mg/L	<0.1			<0.1			<0.1			<0.1	
B	mg/L	0.26			0.34			0.38			0.31	
Cd	mg/L	0.011			0.006			0.014			0.018	
Ca	mg/L	21.97			20.38			17.40			18.63	
Cr	mg/L	<0.01			<0.01			<0.01			<0.01	
Co	mg/L	<0.01			<0.01			<0.01			<0.01	
Cu	mg/L	0.03			0.02			0.06			0.02	
Fe	mg/L	0.02			<0.01			0.03			0.11	
Pb	mg/L	<0.05			<0.05			<0.05			<0.05	
Li	mg/L	<0.02			<0.02			<0.02			<0.02	
Mg	mg/L	2.9			2.2			1.8			1.7	
Mn	mg/L	0.083			0.066			0.080			0.100	
Hg	mg/L	<0.02			<0.02			<0.02			<0.02	
Mo	mg/L	<0.01			<0.01			<0.01			<0.01	
Ni	mg/L	0.11			0.02			0.12			0.07	
P	mg/L	<0.1			<0.1			<0.1			<0.1	
K	mg/L	18			8			3			<2	
Se	mg/L	0.13			<0.05			<0.05			<0.05	
Si	mg/L	0.55			0.25			0.27			0.15	
Ag	mg/L	<0.02			<0.02			<0.02			<0.02	
Na	mg/L	32.2			7.9			2.3			1.3	
Sr	mg/L	0.086			0.081			0.067			0.068	
Tl	mg/L	<0.2			<0.2			<0.2			<0.2	
Sn	mg/L	<0.1			<0.1			<0.1			<0.1	
Ti	mg/L	<0.01			<0.01			<0.01			<0.01	
W	mg/L	<0.1			<0.1			<0.1			<0.1	
V	mg/L	<0.01			<0.01			<0.01			<0.01	
Zn	mg/L	0.37			0.300			0.875			1.101	
Leachate Vol	mL	422	430	458	482	458	456	456	456	470	456	454
pH		7.3	7.0	6.6	6.9	6.7	6.7	6.7	6.7	6.6	6.5	6.6
Conductivity	µS	29	166	14	174	14	147	122	126	134	114	119
ORP	mV	111	157	128	90	136	96	121	117	125	123	276
Acidity	mg $CaCO_3$/L	6.3	4.0	3.4	4.0	2.8	4.2	3.6	3.9	3.9	3.7	3.9
Alkalinity	mg $CaCO_3$/L	18.0	5.5	5.9	7.3	6.4	4.4	3.8	3.8	3.8	3.9	4.9
Sulphate	mg/L	125	58	56	67	57	57	47	47	54	51	51
Cum. Sulphate	mg/kg	53	78	103	136	162	188	209	231	256	279	302

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC2

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-60 Foot Wall Composite (Comp 2)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	11	12	13	14	15	16	17	18	19	20	21
Al	mg/L		0.07			0.06			<0.05	<0.05	<0.05	0.1
Sb	mg/L		<0.05			<0.05			<0.05	<0.05	0.05	<0.05
As	mg/L		<0.03			<0.03			<0.03	<0.03	<0.03	<0.03
Ba	mg/L		0.011			0.010			0.011	0.011	0.011	0.009
Be	mg/L		<0.001			<0.001			<0.001	<0.001	<0.001	<0.001
Bi	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
B	mg/L		0.34			0.3			0.26	0.36	0.35	0.25
Cd	mg/L		0.019			0.013			0.007	0.008	0.012	0.013
Ca	mg/L		17.94			14.70			13.44	15.23	13.83	18.84
Cr	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Co	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Cu	mg/L		0.01			0.04			<0.01	<0.01	0.02	<0.01
Fe	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	0.02
Pb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Li	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mg	mg/L		1.5			1.3			1.2	1.2	1.1	1.4
Mn	mg/L		0.108			0.093			0.078	0.085	0.074	0.093
Hg	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mo	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Ni	mg/L		0.06			0.04			0.02	0.02	0.01	0.03
P	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
K	mg/L		<2			<2			<2	<2	<2	<2
Se	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Si	mg/L		0.13			0.12			0.15	0.18	0.16	0.15
Ag	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Na	mg/L		1.2			0.9			0.9	0.9	0.9	1.4
Sr	mg/L		0.064			0.053			0.056	0.058	0.053	0.069
Tl	mg/L		<0.2			<0.2			<0.2	<0.2	<0.2	<0.2
Sn	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
Ti	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
W	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
V	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Zn	mg/L		1.112			0.764			0.356	0.463	0.454	0.597
Leachate Vol	mL	440	447	445	460	458	467	499	493	478	496	484
pH		6.7	6.8	6.5	6.6	6.7	6.7	6.7	6.8	6.8	6.7	6.6
Conductivity	µS	116	103	104		94	72	83	88	91	84	96
ORP	mV	202	240	245	226	201	213	265	237	213	238	177
Acidity	mg $CaCO_3$/L	3.9	3.5	5.4	4.4	3.5	2.8	2.3	3.2	2.5	3.2	4.6
Alkalinity	mg $CaCO_3$/L	6.9	6.4	7.1	6.2	4.9	4.4	5.8	6.4	8.0	9.3	5.5
Sulphate	mg/L	45	45	42	37	34	29	35	33	33	31	46
Cum. Sulphate	mg/kg	322	342	361	378	394	407	425	441	457	472	494

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC2

Reporting Date: January 29, 1998
Project: 96-121

Sample id: DDH-WV96-60 Foot Wall Composite (Comp 2)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	22	23	24	25	26	27	28	29	30	31	32
Al	mg/L	0.11	0.11	0.09	0.10	0.10						
Sb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
As	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03						
Ba	mg/L	0.008	0.009	0.011	0.010	0.010						
Be	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001						
Bi	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
B	mg/L	0.33	0.27	0.30	0.20	0.31						
Cd	mg/L	0.009	0.011	0.009	0.011	0.010						
Ca	mg/L	14.11	13.71	11.79	10.51	11.32						
Cr	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Co	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Cu	mg/L	0.03	<0.01	0.08	0.03	0.01						
Fe	mg/L	0.02	<0.01	<0.01	<0.01	<0.01						
Pb	mg/L	<0.05	<0.05	0.06	<0.05	<0.05						
Li	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mg	mg/L	1.0	1.0	0.8	0.7	0.8						
Mn	mg/L	0.076	0.069	0.087	0.058	0.054						
Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mo	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Ni	mg/L	0.02	0.03	0.03	0.02	0.02						
P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
K	mg/L	<2	<2	<2	<2	<2						
Se	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Si	mg/L	0.18	0.20	0.23	0.20	0.28						
Ag	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Na	mg/L	0.5	<0.2	1.2	<0.2	0.5						
Sr	mg/L	0.051	0.049	0.035	0.039	0.040						
Tl	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2						
Sn	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
W	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
V	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Zn	mg/L	0.413	0.455	0.525	0.395	0.392						
Leachate Vol	mL	490	490	496	491	485						
pH		6.4	6.6	6.5	6.5	6.4						
Conductivity	µS	74	67	60	55	57						
ORP	mV	197	184	249	340	276						
Acidity	mg $CaCO_3$/L	4.5	3.6	3.7	4.2	4.4						
Alkalinity	mg $CaCO_3$/L	6.6	7.3	6.4	7.1	6.6						
Sulphate	mg/L	33	29	20	21	29						
Cum. Sulphate	mg/kg	510	525	535	545	559						

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC3

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-58 Foot Wall Composite (Comp 3)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	0	1	2	3	4	5	6	7	8	9	10
Al	mg/L	0.8			0.23			0.37			0.37	
Sb	mg/L	<0.05			<0.05			<0.05			<0.05	
As	mg/L	<0.03			<0.03			<0.03			<0.03	
Ba	mg/L	0.133			0.041			0.021			0.014	
Be	mg/L	<0.001			<0.001			<0.001			<0.001	
Bi	mg/L	<0.1			<0.1			<0.1			<0.1	
B	mg/L	0.24			0.26			0.39			0.35	
Cd	mg/L	<0.005			<0.005			<0.005			<0.005	
Ca	mg/L	31.92			38.14			22.64			20.65	
Cr	mg/L	<0.01			<0.01			<0.01			<0.01	
Co	mg/L	0.04			0.03			0.02			0.03	
Cu	mg/L	0.12			0.07			0.12			0.14	
Fe	mg/L	6.5			1.60			5.09			6.48	
Pb	mg/L	<0.05			<0.05			<0.05			<0.05	
Li	mg/L	<0.02			<0.02			<0.02			<0.02	
Mg	mg/L	5.7			5.3			5.1			6.3	
Mn	mg/L	0.698			0.891			0.999			1.174	
Hg	mg/L	<0.02			<0.02			<0.02			<0.02	
Mo	mg/L	<0.01			<0.01			<0.01			<0.01	
Ni	mg/L	0.8			0.31			0.30			0.31	
P	mg/L	<0.1			<0.1			<0.1			<0.1	
K	mg/L	3			<2			<2			<2	
Se	mg/L	<0.05			<0.05			<0.05			<0.05	
Si	mg/L	0.55			0.38			0.36			0.21	
Ag	mg/L	<0.02			<0.02			<0.02			<0.02	
Na	mg/L	8.9			1.9			1.1			1.1	
Sr	mg/L	0.1			0.093			0.061			0.055	
Tl	mg/L	<0.2			<0.2			<0.2			<0.2	
Sn	mg/L	<0.1			<0.1			<0.1			<0.1	
Ti	mg/L	<0.01			<0.01			<0.01			<0.01	
W	mg/L	<0.1			<0.1			<0.1			<0.1	
V	mg/L	<0.01			<0.01			<0.01			<0.01	
Zn	mg/L	0.788			0.563			0.610			0.697	
Leachate Vol	mL	467	420	490	420	407	449	430	458	452	446	451
pH		4.8	4.5	4.5	4.8	4.8	4.5	4.4	4.3	4.2	4.1	4.3
Conductivity	µS	308	444	358	246	224	140	186	164	220	190	260
ORP	mV	183	204	190	**134**	146	165	227	166	195	186	293
Acidity	mg $CaCO_3$/L	23.5	101.8	59.4	10.7	10.3	10.5	18.3	17.0	25.0	24.9	27.0
Alkalinity	mg $CaCO_3$/L	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/L	140	225	180	110	95	60	90	75	95	95	100
Cum. Sulphate	mg/kg	65	160	248	294	333	360	399	433	476	518	563

Process Research Associates Ltd.

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC3

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-58 Foot Wall Composite (Comp 3)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	11	12	13	14	15	16	17	18	19	20	21
Al	mg/L		0.22			0.09			0.16	0.09	0.08	0.15
Sb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
As	mg/L		<0.03			<0.03			<0.03	<0.03	<0.03	<0.03
Ba	mg/L		0.011			0.010			0.011	0.011	0.01	0.006
Be	mg/L		<0.001			<0.001			<0.001	<0.001	<0.001	<0.001
Bi	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
B	mg/L		0.42			0.42			0.27	0.35	0.39	0.31
Cd	mg/L		<0.005			<0.005			<0.005	<0.005	<0.005	<0.005
Ca	mg/L		15.25			14.23			11.04	12.36	11.75	16.63
Cr	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Co	mg/L		0.02			<0.01			<0.01	<0.01	<0.01	<0.01
Cu	mg/L		0.13			0.06			0.08	0.05	0.07	0.07
Fe	mg/L		3.10			0.21			0.50	0.43	0.42	0.55
Pb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Li	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mg	mg/L		6.2			4.1			2.4	2.8	2.5	3.3
Mn	mg/L		1.159			0.654			0.343	0.393	0.366	0.480
Hg	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mo	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Ni	mg/L		0.24			0.11			0.05	0.06	0.05	0.07
P	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
K	mg/L		<2			<2			<2	<2	<2	<2
Se	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Si	mg/L		0.34			0.22			0.19	0.20	0.30	0.32
Ag	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Na	mg/L		1.0			1.0			0.9	0.8	0.8	1.4
Sr	mg/L		0.045			0.040			0.035	0.035	0.033	0.046
Tl	mg/L		<0.2			<0.2			<0.2	<0.2	<0.2	<0.2
Sn	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
Ti	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
W	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
V	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Zn	mg/L		0.559			0.235			0.148	0.135	0.130	0.143
Leachate Vol	mL	437	449	480	460	464	476	463	466	476	470	470
pH		4.3	4.6	4.6	4.8	4.9	4.9	5.2	5.1	5.3	5.3	5.2
Conductivity	µS	164	140	195	154	118	113	85	85	89	89	105
ORP	mV	291	263	288	239	235	196	157	147	171	176	240
Acidity	mg $CaCO_3$/L	16.0	14.0	14.0	8.4	5.1	6.0	5.8	4.6	5.7	6.2	7.6
Alkalinity	mg $CaCO_3$/L	--	--	--	--	--	--	0.4	--	0.4	0.2	--
Sulphate	mg/L	85	75	95	73	50	56	41	40	40	40	58
Cum. Sulphate	mg/kg	600	634	680	713	737	763	782	801	820	839	866

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC3

Reporting Date: January 29, 1998
Project: 96-121

Sample id: DDH-WV96-58 Foot Wall Composite (Comp 3)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	22	23	24	25	26	27	28	29	30	31	32
Al	mg/L	0.15	0.15	0.11	0.12	0.12						
Sb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
As	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03						
Ba	mg/L	0.007	0.008	0.008	0.008	0.007						
Be	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001						
Bi	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
B	mg/L	0.40	0.29	0.30	0.19	0.31						
Cd	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005						
Ca	mg/L	11.54	11.97	11.19	11.34	10.69						
Cr	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Co	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Cu	mg/L	0.08	0.07	0.12	0.09	0.04						
Fe	mg/L	0.56	0.52	0.42	0.52	0.43						
Pb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Li	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mg	mg/L	2.5	2.6	2.3	2.1	1.9						
Mn	mg/L	0.400	0.403	0.363	0.336	0.290						
Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mo	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Ni	mg/L	0.07	0.07	0.06	0.05	0.03						
P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
K	mg/L	<2	<2	<2	<2	<2						
Se	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Si	mg/L	0.35	0.30	0.18	0.28	0.40						
Ag	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Na	mg/L	0.6	<0.2	1.2	<0.2	0.5						
Sr	mg/L	0.034	0.033	0.027	0.031	0.029						
Tl	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2						
Sn	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
W	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
V	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Zn	mg/L	0.129	0.127	0.124	0.107	0.075						
Leachate Vol	mL	465	474	484	468	470						
pH		4.8	5.0	5.3	5.5	5.4						
Conductivity	µS	78	75	75	70	67						
ORP	mV	210	193	200	253	216						
Acidity	mg $CaCO_3$/L	8.0	5.3	5.2	6.3	5.98						
Alkalinity	mg $CaCO_3$/L	--	--	1	0.2	0.2						
Sulphate	mg/L	40	42	34	35	40						
Cum. Sulphate	mg/kg	885	904	921	937	956						

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC4

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-72 Hanging Wall Composite (Comp 4)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	0	1	2	3	4	5	6	7	8	9	10
Al	mg/L	0.17			0.12			0.11			0.12	
Sb	mg/L	<0.05			<0.05			<0.05			<0.05	
As	mg/L	<0.03			<0.03			<0.03			<0.03	
Ba	mg/L	0.067			0.036			0.033			0.025	
Be	mg/L	<0.001			<0.001			<0.001			<0.001	
Bi	mg/L	<0.1			<0.1			<0.1			<0.1	
B	mg/L	0.24			0.34			0.29			0.34	
Cd	mg/L	0.017			0.008			0.017			0.012	
Ca	mg/L	55.69			25.81			32.99			25.58	
Cr	mg/L	<0.01			<0.01			<0.01			<0.01	
Co	mg/L	0.01			<0.01			<0.01			<0.01	
Cu	mg/L	0.01			<0.01			0.04			0.03	
Fe	mg/L	<0.01			<0.01			<0.01			0.03	
Pb	mg/L	<0.05			<0.05			<0.05			<0.05	
Li	mg/L	<0.02			<0.02			<0.02			<0.02	
Mg	mg/L	9.8			4.0			6.9			4.8	
Mn	mg/L	1.033			0.323			0.514			0.366	
Hg	mg/L	<0.02			<0.02			<0.02			<0.02	
Mo	mg/L	<0.01			<0.01			<0.01			<0.01	
Ni	mg/L	0.14			0.01			0.02			<0.01	
P	mg/L	<0.1			<0.1			<0.1			<0.1	
K	mg/L	5			<2			<2			<2	
Se	mg/L	0.1			<0.05			0.07			<0.05	
Si	mg/L	0.62			0.27			0.25			0.28	
Ag	mg/L	<0.02			<0.02			<0.02			<0.02	
Na	mg/L	14.5			2.0			1.3			1.1	
Sr	mg/L	0.311			0.175			0.191			0.140	
Tl	mg/L	<0.2			<0.2			<0.2			<0.2	
Sn	mg/L	<0.1			<0.1			<0.1			<0.1	
Ti	mg/L	<0.01			<0.01			<0.01			<0.01	
W	mg/L	<0.1			<0.1			<0.1			<0.1	
V	mg/L	<0.01			<0.01			<0.01			<0.01	
Zn	mg/L	1.426			0.622			1.292			0.836	
Leachate Vol	mL	417	415	483	458	440	425	452	451	467	452	467
pH		7.1	6.6	7.0	6.8	6.7	6.6	6.5	6.7	6.3	6.5	6.7
Conductivity	µS	456	241	398	175	225	211	220	210	210	163	150
ORP	mV	112	168	115	164	142	111	140	124	142	157	275
Acidity	mg $CaCO_3$/L	8.4	5.3	4.2	3.7	3.9	4.2	3.8	3.7	3.9	3.9	3.5
Alkalinity	mg $CaCO_3$/L	17.7	6.4	8.6	7.5	5.9	3.9	5.1	3.5	4.2	3.5	4.4
Sulphate	mg/L	175	105	180	90	95	95	95	90	95	90	78
Cum. Sulphate	mg/kg	73	117	203	245	287	327	370	410	455	495	532

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC4

Reporting Date: December 31, 1997
Project: 96-121

Sample id: DDH-WV96-72 Hanging Wall Composite (Comp 4)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997

		Cycle										
Element	Unit	11	12	13	14	15	16	17	18	19	20	21
Al	mg/L		0.06			0.08			<0.05	0.07	0.05	0.11
Sb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
As	mg/L		<0.03			<0.03			<0.03	<0.03	<0.03	<0.03
Ba	mg/L		0.023			0.021			0.016	0.014	0.018	0.013
Be	mg/L		<0.001			<0.001			<0.001	<0.001	<0.001	<0.001
Bi	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
B	mg/L		0.22			0.35			0.25	0.31	0.37	0.24
Cd	mg/L		0.009			0.009			0.006	0.006	0.011	0.010
Ca	mg/L		17.73			17.17			14.02	15.34	14.18	20.68
Cr	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Co	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Cu	mg/L		0.02			0.01			0.02	0.02	<0.01	<0.01
Fe	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	0.02
Pb	mg/L		<0.05			<0.05			<0.05	<0.05	<0.05	<0.05
Li	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mg	mg/L		3.9			3.7			3.0	3.4	3.1	4.1
Mn	mg/L		0.319			0.362			0.280	0.295	0.300	0.396
Hg	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Mo	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Ni	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
P	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
K	mg/L		<2			<2			<2	<2	<2	<2
Se	mg/L		<0.05			<0.05			<0.05	<0.05	0.05	<0.05
Si	mg/L		0.12			0.18			0.12	0.14	0.15	0.19
Ag	mg/L		<0.02			<0.02			<0.02	<0.02	<0.02	<0.02
Na	mg/L		0.9			0.8			0.8	0.8	0.9	1.4
Sr	mg/L		0.096			0.093			0.085	0.082	0.080	0.109
Tl	mg/L		<0.2			<0.2			<0.2	<0.2	<0.2	<0.2
Sn	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
Ti	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
W	mg/L		<0.1			<0.1			<0.1	<0.1	<0.1	<0.1
V	mg/L		<0.01			<0.01			<0.01	<0.01	<0.01	<0.01
Zn	mg/L		0.739			0.708			0.459	0.466	0.601	0.783
Leachate Vol	mL	455	456	460	459	459	482	474	479	483	482	480
pH		6.7	6.6	6.6	6.6	6.7	6.6	6.6	6.6	6.6	6.8	6.6
Conductivity	µS	159	117	133	129	130	104	110	106	108	102	122
ORP	mV	102	243	167	228	213	182	146	139	146	188	198
Acidity	mg $CaCO_3$/L	4.0	4.2	5.1	4.9	3.5	3.2	2.8	3.0	3.0	4.1	5.1
Alkalinity	mg $CaCO_3$/L	5.7	4.6	6.6	5.3	3.5	5.1	4.9	4.6	4.6	6.2	4.6
Sulphate	mg/L	75	57	60	64	50	45	45	41	45	40	66
Cum. Sulphate	mg/kg	566	592	620	649	672	694	715	735	756	776	807

HUMIDITY CELL TEST REPORT

Client: Westmin Resources Limited (Wolverine Lake Project)
Test: HC4

Reporting Date: January 29, 1998
Project: 96-121

Sample id: DDH-WV96-72 Hanging Wall Composite (Comp 4)
Sample weight: 1 kg
Flush volume: 500 mL

Starting Date: July 15, 1997
Page: 3 of 3

		Cycle										
Element	Unit	22	23	24	25	26	27	28	29	30	31	32
Al	mg/L	0.14	0.07	0.08	0.10	0.12						
Sb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
As	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03						
Ba	mg/L	0.015	0.013	0.013	0.014	0.015						
Be	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001						
Bi	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
B	mg/L	0.42	0.23	0.34	0.19	0.33						
Cd	mg/L	0.009	0.007	0.008	0.008	0.008						
Ca	mg/L	14.90	13.82	11.61	12.08	11.33						
Cr	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Co	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Cu	mg/L	<0.01	<0.01	0.05	0.03	<0.01						
Fe	mg/L	0.03	<0.01	<0.01	<0.01	<0.01						
Pb	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Li	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mg	mg/L	3.4	3.0	2.6	2.6	2.5						
Mn	mg/L	0.342	0.300	0.273	0.283	0.251						
Hg	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Mo	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Ni	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
P	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
K	mg/L	<2	<2	<2	<2	<2						
Se	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05						
Si	mg/L	0.32	0.15	0.16	0.16	0.35						
Ag	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02						
Na	mg/L	0.7	<0.2	1.3	<0.2	0.5						
Sr	mg/L	0.080	0.073	0.054	0.067	0.062						
Tl	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2						
Sn	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
Ti	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
W	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1						
V	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01						
Zn	mg/L	0.584	0.537	0.545	0.575	0.513						
Leachate Vol	mL	480	486	492	478	478						
pH		6.4	6.4	6.6	6.2	6.4						
Conductivity	µS	94	82	75	75	70						
ORP	mV	172	160	172	259	195						
Acidity	mg $CaCO_3$/L	5.3	4.2	4.1	5.1	4.6						
Alkalinity	mg $CaCO_3$/L	6.6	6.6	6.0	6.9	6.6						
Sulphate	mg/L	43	37	31	33	38						
Cum. Sulphate	mg/kg	828	846	861	877	895						