

## **APPENDIX 1**

### **PG SLURRY SAMPLING RESULTS**

	SOURCE	TOTAL			WASHED			BLENDS	TOTAL			WASHED		
PARCEL	PIT	P205	FE2O3	AL2O3	P205	FE2O3	AL2O3		P205	FE2O3	AL2O3	P205	FE2O3	AL2O3
T16063	Galah	22.76	1.52	1.46	22.96	1.53	1.47	4(063):1(023/24)	23.26	1.46	1.44	23.47	1.36	1.16
S14023/24	Brolga	23.39	1.45	1.44	23.60	1.32	1.08	4(059):1(023/24)	23.37	1.41	1.45	23.58	1.28	1.09
T16059	Galah	23.36	1.40	1.45	23.57	1.27	1.09							
S14052-55	Brolga	22.97	1.48	1.1	23.17	1.34	0.83	4(58+60):1(52-55)	24.32	1.51	1.64	24.54	1.49	1.59
T16058+060	Galah	24.66	1.52	1.77	24.88	1.53	1.79							
PT16057+061	Galah	23.17	1.55	1.72	23.38	1.56	1.74	4(57+61):1(52-55)	23.13	1.54	1.60	23.33	1.52	1.55
PT16068	Galah	23.63	1.56	1.50	23.84	1.42	1.13	4(68):1(52-55)	23.50	1.54	1.42	23.71	1.40	1.07
PT16069	Galah	23.21	1.31	1.50	23.42	1.19	1.13	4(69):1(52-55)	23.16	1.34	1.42	23.37	1.22	1.07
Off-spec	Galah	22.09	2.6	2.05	22.29	2.36	1.54	1(52-55):3(69):1(os)	22.94	1.60	1.53	23.14	1.45	1.15
PT16070	Galah	23.41	1.41	1.61	23.62	1.28	1.21	1(52-55):4(070)	23.32	1.42	1.51	23.53	1.29	1.13
PT17072	Galah	22.94	1.42	1.81	23.14	1.29	1.36	3(51):7(072)	23.08	1.39	1.70	23.28	1.26	1.27
PS14051	Brolga	23.4	1.31	1.43	23.61	1.19	1.07							
PS14056	Brolga	22.59	1.19	1.56	22.79	1.08	1.17	1(56):4(073)	22.84	1.37	1.72	23.04	1.25	1.29
PT17073	Galah	22.9	1.42	1.76	23.10	1.29	1.32							
PS14094	Brolga	23.49	1.26	1.58	23.70	1.14	1.19	1(94):4(76)	23.82	1.40	1.63	24.03	1.27	1.22
PT17076	Galah	23.9	1.44	1.64	24.11	1.31	1.23							

## ORE SOURCES, GRADES AND BLENDS OVER SLURRY SAMPLING PERIOD

SAMPLE NO.	PG001A	PG001B	PG002A	PG002B	PG003A (west spigot)	PG003B (east spigot)	PG004A	PG004B	PG005A	PG005B	PG006A	PG006B	PG007A	PG007B	PG008A	PG008B	PG009A	PG009B	PG010A	PG010B	PG011A	PG011B	PG012A	PG012B
DATE	25.10.00	25.10.00	15.11.00	15.11.00	12.12.00	12.12.00	17.1.01	17.1.01	28.2.01	28.2.01	21.3.01	21.3.01	11.4.01	11.4.01	3.5.01	3.5.01	13.6.01	13.6.01	4.7.01	4.7.01	27.8.01	27.8.01	26.9.01	26.9.01
TIME	0645	0645	0650	0650	1645	645	645	1645	645	645	640	640	640	640	1045	1045	705	705	710	710	650	650	645	645
ORE STOCKPILE/S	4xT16063: 1xS14023/24		4xT16059: 1xS14023/24		4xT16058+T16060: 1xS14052-055		4x57+61+1x52-55		4x68+1x52-55		4x69+1x52-55		1x52-55+3x069+ 1xo/spec		1x52-55+4x070		3x51+7x72		1x56+4x73	1x56+4x73	1x56+4x73	1x56+4x73	1x94+4x76	
SOURCE	4 Galah:1 Brolga		4 Galah:1 Brolga		4 Galah:1 Brolga		4 Galah:1 Brolga		4Galah:1Brolga		4Galah:1Brolga		1Brolga:3Galah: 1offspec		1Brolga:4Galah		3Brolga: 7Galah		1Brolga: 4Galah	1Brolga: 4Galah	1Brolga: 4Galah	1Brolga: 4Galah	1Brolga:4Galah	
EXPECTED %P2O5(T)	23.26		23.37		23.02		23.12		23.50		23.16		22.94		23.32		23.08		22.84	22.84	22.84	22.84	23.82	
FE2O3(T)	1.46		1.41		1.55		1.44		1.54		#REF!		1.60		1.42		1.42		1.37	1.37	1.37	1.37	1.40	
AL2O3(T)	1.44		1.45		1.71		1.66		1.42		1.42		1.53		1.51		1.70		1.72	1.72	1.72	1.72	1.63	
FEED %P2O5		21.40		23.05		22.40		25.01		22.62		22.18		23.72		23.02		21.99		22.70		24.77		22.70
FE2O3		1.52		1.22		1.44		1.36		1.42		1.05		1.56		1.56		1.25		1.52		1.17		1.11
AL2O3		1.48		1.39		1.78		1.73		1.52		1.25		1.96		1.91		1.62		1.93		1.71		1.23
EXPECTED %P2O5(W)	23.47		23.58		23.22		23.33		23.71		23.37		23.14		23.53		23.28		23.04	23.04	23.04	23.04	24.03	
FE2O3(W)	1.36		1.28		1.41		1.31		1.40		1.22		1.45		1.29		1.26		1.25	1.25	1.25	1.25	1.27	
AL2O3(W)	1.16		1.59		1.28		1.25		1.07		1.07		1.15		1.13		1.27		1.29	1.29	1.29	1.29	1.22	
PRODUCT %P2O5		21.56		21.90		20.60		23.19		22.17		21.49		21.36		21.29		20.94		21.69		21.46		22.79
FE2O3		1.19		1.19		1.14		1.05		1.34		1.12		1.25		1.16		1.11		1.19		1.11		1.31
AL2O3		0.89		0.98		0.96		0.95		1.05		1.04		1.10		1.00		1.10		1.07		1.10		1.14
WEATHER	Clear, warm, humid (3 days after major rain)		Still, warm, humid, storm approaching		Warm, dry		Warm-hot, humid		Warm, humid		Warm, Humid		cool, dry		warm, dry		cool, dry		cool, dry		cold, dry		cool, dry	
NOTES					Afternoon despatch meant overnight wait before analysis									shipped on pm plane so longer interval between despatch and processing.				much higher content of solids noted during this sampling.	Last sample before plant closed for major repair works.	First sample after completion of major shutdown of the plant.	*Notably different in appearance: dark brown, increased organics, sandier and not cementing as well. Plant apparently producing dihydrate = mostly silica going to the stack with little or no cementing occurring.			
% TOTAL SOLIDS	15	20	21	19	18	21	18	21	21	23	25	24	33	32	25	25	28	24	70	60	45	40	67	55
pH	1.43	1.38	1.32	1.32	1.49	1.43	1.41	1.4	1.47	1.45	1.55	1.48	1.4	1.4	1.48	1.46	1.44	1.46	1.16	1.29	1.39	1.37	1.15	1.23
TURBIDITY	272	30.7	115	118	161	103	477	134	106	30.6	39	110.6	3.5	2.8	19	18	28	42	590	232	52		13	13
LIQUID ANALYSIS: MAJOR ELEMENTS (ppm by ICPMS)																								
Al	900	929	836	815	951	923	917	908	1052	1012	1140	1070	565	571	1020	1010	1200	1220	697	705	1080	1060	1380	1330
Ca	2000	2010	1977	1935	2472	2590	1964	1965.7	1925	1881	2290	2320	2010	2097	1840	1900	1620	1650	1320	1340	1780	1730	2030	1950
Fe	561	560	593	588	500	498	456.2	458	449	436	416	410	371	367	314	311	416	421	570	569	1170	1160	666	649
K	223	226	187	189	213	213	207	208	201	200	440	438	152	153	181	200	364	356	90.9	87.9	172	179	56	225
Mg	112	112	114	111	111	111	107	107	107	104	107	105	87	87	111	111	131	132	70.6	71.5	151	150	171	166
Mn	107	107	113	112	110	110	114	113	116	113	111	109	92	93	92.6	92.9	109	126	126	126	159	159	138	134
Na	618	621	515	509	539	535	602	605	801	788	745	704	726	734	731	721	744	750	749	754	815	815	968	920
P	31.3	36.2	8000	7840	7485	7500	7634	7671	8218	7682	8000	7860	7510	7614	6980	7060	8680	8810	11300	11400	15500	15200	12800	12500
S	1550	1500	1445	1431	1790	1909	1335	1349	1453	1397	1400	1480	1637	1726	1460	1530	1980	2010	1420	1430	1970	2010	2020	2020
Si	1900	1900	2101	2082	2032	2040	2180	2190	2500	2394	2010	1990	2123	2126	2350	2380	1830	1840	2370	2360	2480	2460	2660	2590
Sr	14.1	14.4	14.2	13.9	15.5	15.6	15.5	15.2	19.0	18.3	16.7	16.2	12.8	13.0	12.9	13.3	10.5	10.4	8.6	9.5	10.9	11.9	24.7	23.8
Y	30.2	32.6	32.7	31.9	31.2	30.0	22.0	20.9	11.0	10.0	21.9	20.5	17.5	18.6	20.8	21.1	30.1	32.0	30.6	31.0	47.4	48.4	50.6	47.2

**SLURRY SAMPLING INFORMATION & RESULTS – MAJORS – SAMPLES PG001A TO PG012B**

SAMPLE NO.	AVERAGES PG01-10,12	% TOTAL SOLIDS	30.71	16.81	24.00	70.00	15.00	42.5	3.53553391	42.5	45	40	AVERAGES	STDDEV	MEDIAN	MAX	MIN	
DATE		pH	1.39	0.11	1.43	1.55	1.15	1.38	0.01414214	1.38	1.39	1.37	ALL PG % TOTAL SOLIDS	31.74	16.40	25.00	70.00	15.00
TIME		TURBIDITY	125.12	155.86	103.00	590.00	2.80	52		52	52	52	pH	1.39	0.10	1.41	1.55	1.15
ORE STOCKPILE/S		LIQUID ANALYSIS: MAJOR ELEMENTS (ppm by ICPMS)											TURBIDITY	121.80	152.90	77.50	590.00	2.80
SOURCE		Al	961.36	217.02	939.88	1380.00	564.69	1070.0	14.1	1070.0	1080.0	1060.0	ALL PG LIQUID ANALYSIS: MAJOR ELEMENTS (ppm by ICPMS)					
EXPECTED %P2O5(T)	23.82	Ca	1958.49	305.53	1964.86	2590.00	1320.00	1755.1	35.1	1755.1	1780.0	1730.3	Al	970.42	209.65	980.53	1380.00	564.69
FE2O3(T)	1.40	Fe	480.91	102.01	457.18	665.93	311.29	1165.1	7.0	1165.1	1170.0	1160.1	Ca	1941.55	297.62	1957.02	2590.00	1320.00
AL2O3(T)	1.63	K	218.60	100.05	203.62	439.55	55.52	175.6	5.0	175.6	179.1	172.0	Fe	537.93	216.36	478.05	1170.00	311.29
FEED %P2O5	22.70	Mg	111.14	23.81	110.71	170.76	70.65	150.8	0.6	150.8	151.2	150.3	K	215.02	96.38	200.35	439.55	55.52
FE2O3	1.11	Mn	111.31	12.26	110.78	138.49	92.48	159.2	0.1	159.2	159.2	159.1	Mg	114.45	25.36	110.87	170.76	70.65
AL2O3	1.23	Na	698.99	121.22	728.63	967.64	508.77	814.8	0.2	814.8	815.0	814.7	Mn	115.30	17.89	111.62	159.23	92.48
EXPECTED %P2O5(W)	24.03	P	7845.98	3059.10	7761.04	12800.00	31.35	15350.0	212.1	15350.0	15500.0	15200.0	Na	708.64	120.36	732.91	967.64	508.77
FE2O3(W)	1.27	S	1603.19	240.51	1490.00	2020.00	1335.22	1990.0	28.3	1990.0	2010.0	1970.0	P	8471.32	3610.37	7850.09	15500.00	31.35
AL2O3(W)	1.22	Si	2179.39	239.79	2124.36	2660.00	1830.00	2470.0	14.1	2470.0	2480.0	2460.0	S	1635.43	254.51	1515.00	2020.00	1335.22
PRODUCT %P2O5	22.79	Sr	14.92	3.99	14.30	24.67	8.63	11.4	0.7	11.4	11.9	10.9	Si	2203.61	243.39	2152.79	2660.00	1830.00
FE2O3	1.31	Y	27.01	9.92	30.05	50.64	10.00	47.9	0.8	47.9	48.4	47.4	Sr	14.62	3.95	14.18	24.67	8.63
AL2O3	1.14												Y	28.75	11.17	30.15	50.64	10.00

**SLURRY SAMPLING & RESULTS – SELECTED AVERAGES**

**STATISTICS, ALL SAMPLES**

SAMPLE NO.	PG001A	PG001B	PG002A	PG002B	PG003A (west spigot)	PG003B (east spigot)	PG004A	PG004B	PG005A	PG005B	PG006A	PG006B	PG007A	PG007B	PG008A	PG008B	PG009A	PG009B	PG010A	PG010B	PG011A	PG011B	PG012A	PG012B	AVERAGES ALL (PG001-010, 012)	STDDEV	MEDIAN	MAX	MIN	AVERAGES PG011	STDDEV	MEDIAN	MAX	MIN	
As	650	750	920	880	890	870	930	830	725	693	790	760	540	530	610	520	829	830	840	780	320	260	994	1140	786.41	154.81	809.51	1140.00	520.00	290.0	42.4	290.0	320.0	260.0	
Ba	590	946	615	654	1915	1640	724	820	788	688	2990	1830	2170	2280	1730	1620	1120	1310	3560	4270	1000	1020	1080	1150	1567.72	995.39	1230.00	4270.00	590.00	1009.9	14.3	1009.9	1020.0	999.7	
Cd	155	201	178	172	195	182	200	189	243	247	206	203	248	245	207	218	280	284	310	307	360	370	367	387	237.56	62.26	212.91	386.76	155.26	365.0	7.1	365.0	370.0	360.0	
Co	710	790	1106	1060	1350	1280	1400	1260	1140	1090	1560	1450	1330	1310	1310	1240	1740	1700	1820	1760	2170	2290	2110	2290	1400.30	386.24	1320.00	2290.00	710.00	2230.0	84.9	2230.0	2290.0	2170.0	
Cr	1800	2090	2860	2720	2890	2720	2990	2610	2580	2530	3140	2800	2160	2110	2170	2010	2530	2450	2750	2670	3840	3920	2690	2970	2556.36	358.19	2640.00	3140.00	1800.00	3880.0	56.6	3880.0	3920.0	3840.0	
Cu	1760	2000	2250	2140	2320	2200	2360	2120	2820	2750	2810	2620	2920	2780	2210	2570	3270	3200	4490	4370	5770	5910	4880	5320	2916.36	981.69	2685.00	5320.00	1760.00	5840.0	99.0	5840.0	5910.0	5770.0	
Ga	168	198	284	271	288	271	435	391	310	292	355	333	315	310	360	341	712	720	720	696	1010	1020	1250	1340	470.89	315.23	336.74	1340.00	167.70	1015.0	7.1	1015.0	1020.0	1010.0	
Nb	12.9	14.3	45	17.1	16.6	14.7	29	18.0	16	15	32	18.7	21.0	17.4	15.7	22	34	30.6	30	21.2	26.0	26	41.3	35	23.56	9.47	19.83	44.66	12.85	25.8	0.3	25.8	26.0	25.7	
Ni	1500	1650	2370	2240	2450	2343	2420	2190	2120	2080	2340	2190	2070	2060	2230	2100	2510	2460	2590	2550	3500	3680	3540	3880	2358.33	513.96	2290.00	3880.00	1500.00	3590.0	127.3	3590.0	3680.0	3500.0	
Pb	72	102	87	89.4	184	160	105	101	141	141	163	142	183	171	118	94	96	318	343	163	163	189	189	189	153.30	69.05	141.46	342.96	72.06	162.9	0.6	162.9	163.4	162.5	
Rb	774	960	1011	982	1184	1090	1360	1240	1020	1040	1170	1110	1070	1060	960	910	1310	1320	1290	1260	1520	1560	1370	1470	1134.58	176.33	1100.06	1470.00	773.87	1540.1	28.4	1540.1	1560.2	1520.0	
Sc	310	340	670	600	610	580	890	690	880	645	690	580	480	470	710	640	800	780	1020	960	1240	1290	2430	2570	833.83	568.55	680.00	2570.00	310.00	1265.0	35.4	1265.0	1290.0	1240.0	
Sn	11.6	14.8	38	34.2	30	25	21	13.2	13.8	12.7	19	15.3	19.4	15.9	13.1	11	22.8	21.6	49	39	27.7	25	27.7	24.5	22.49	10.30	20.31	48.89	11.44	26.2	2.2	26.2	27.7	24.6	
Th	182	289	307	279	310	288	182	155	110	111	207	202	180	200	151	154	340	331	370	410	810	780	618	550	269.35	132.77	242.91	617.66	110.31	795.1	21.4	795.1	810.3	780.0	
Ti	2700	2900	4690	4400	4400	4230	4700	4090	3240	2140	4120	3740	2880	2840	2850	2720	3900	3700	4100	4000	7630	7920	6200	6800	3879.10	1121.13	3950.00	6800.00	2140.00	7775.0	205.1	7775.0	7920.0	7630.0	
U	2400	3230	3080	3190	3320	3080	2540	2340	2920	3000	2080	2180	3420	3350	2310	2419	4040	3960	4330	4540	7500	7800	5364	5760	3311.49	1001.58	3135.00	5760.19	2080.00	7650.0	212.1	7650.0	7800.0	7500.0	
V	2800	3100	4680	4400	4800	4590	5400	4750	4150	4060	3690	4400	4020	4010	4090	3890	5100	4900	5400	5140	8040	8510	6981	7580	4633.27	1087.74	4495.00	7580.00	2800.00	8275.0	332.3	8275.0	8510.0	8040.0	
Zr	313	382	476	448	442	422	480	405	315	301	320	303	286	278	260	232	340	337	370	342	970	780	552	529	369.64	88.54	340.96	552.01	232.04	875.0	134.4	875.0	970.0	780.0	
XRD Mineralogy (%)																																			
SiO2	25	16	2	19	22	16	15	16	19	20	2	21	17	20	18	20									17.73	5.58	20.00	25.00	2.00	19.0	0.0	19.0	19.0	19.0	
CaSO4.2H2O+.0.5H2O	72	81	75	74	70	65	65	63	68	74	39	39	58	60	53	74	21	20	21	20	19	19	74	74	64.86	10.78	66.50	81.00	39.00	35.5	13.4	35.5	45.0	26.0	
CaSO4 (anhydrite)	3	3	5	7	8	19	6	19	2	2	1	10	2	1	4	4	57	63	70	68	45	26	0	1	5.00	5.14	3.00	19.00	0.00	28.0	5.7	28.0	32.0	24.0	
Mica							3	2	10	4			4	2	4		4	3	3	3	24	32			4.11	2.37	4.00	10.00	2.00				0.0	0.0	
Smectite							1	1	3	3				1	1	2		4	4							2.30	1.70	1.50	6.00	1.00	4.5	2.1	4.5	6.0	3.0
Bassanite (HH)							2	1	1	1	31	36	6	8	3	1	1		4	6	3	6	1	1		5.94	11.01	1.00	36.00	0.00	11.5	7.8	11.5	17.0	6.0
Amphibole							7	3	2	2			12	8	17		2	1	0	0	6	17			8.11	5.18	8.00	17.00	2.00				0.0	0.0	
Clinoptile																	12	10					1	3		2.75	1.26	3.00	4.00	1.00	2.5	0.7	2.5	3.0	2.0
Heulandite																			3	4	3	2	4			4.00		4.00	4.00				0.0	0.0	

**SLURRY SAMPLING & RESULTS – TRACE & XRD – SAMPLES PG001A TO PG0012B AND AVERAGES**

SAMPLE NO.	AVERAGES	STDDEV	MEDIAN	MAX	MIN	XRD Mineralogy (%)	AVERAGES	STDDEV	MEDIAN	MAX	MIN
TRACE ELEMENTS (ppb by ICPMS)	ALL (PG001-012)										
As	745.05	203.97	785.00	1140.00	260.00	SiO2	17.83	5.35	19.50	25.00	2.00
Ba	1521.23	964.09	1135.00	4270.00	590.00	CaSO4.2H2O+.0.5H2O	62.42	13.51	65.00	81.00	26.00
Cd	248.18	69.54	230.96	386.76	155.26	CaSO4 (anhydrite)	6.92	8.22	3.50	32.00	0.00
Co	1469.44	437.49	1340.00	2290.00	710.00	Mica	4.11	2.37	4.00	10.00	2.00
Cr	2666.67	506.89	2680.00	3920.00	1800.00	Smectite	2.67	1.87	2.50	6.00	1.00
Cu	3160.00	1249.67	2765.00	5910.00	1760.00	Bassanite (HH)	6.56	10.66	1.50	36.00	0.00
Ga	516.23	338.13	347.80	1340.00	167.70	Amphibole	8.11	5.18	8.00	17.00	2.00
Nb	23.75	9.08	21.11	44.66	12.85	Clinoptile	2.67	1.03	3.00	4.00	1.00
Ni	2460.97	602.33	2341.55	3880.00	1500.00	Heulandite	4.00		4.00	4.00	4.00
Pb	154.10	66.04	151.05	342.96	72.06						
Rb	1168.37	203.79	1140.00	1560.16	773.87						
Sc	869.76	556.79	690.00	2570.00	310.00						
Sn	22.80	9.91	21.38	48.89	11.44						
Th	313.17	195.32	283.50	810.27	110.31						
Ti	4203.76	1536.01	4045.00	7920.00	2140.00						
U	3673.04	1555.07	3210.00	7800.00	2080.00						
V	4936.74	1463.64	4635.00	8510.00	2800.00						
Zr	411.76	168.22	355.90	970.00	232.04						

Date	Ca (ppm)	Average (month)	Average (all)	2SD	2SD	S (ppm)	Average (month)	Average (all)	2SD	2SD
	2000					1550				
Oct-00	2010	2005	1941.6	1346.3	2536.8	1500	1525	1635.4	1126.4	2144.5
	1977.077					1445.207				
Nov-00	1935.249	1956.163	1941.6	1346.3	2536.8	1430.888	1438.047	1635.4	1126.4	2144.5
	2472.116					1789.712				
Dec-00	2590	2531.058	1941.6	1346.3	2536.8	1908.827	1849.27	1635.4	1126.4	2144.5
	1964.045					1335.216				
Jan-01	1965.668	1964.857	1941.6	1346.3	2536.8	1348.555	1341.886	1635.4	1126.4	2144.5
	1925.344					1452.755				
Feb-01	1880.548	1902.946	1941.6	1346.3	2536.8	1396.938	1424.847	1635.4	1126.4	2144.5
	2290					1400				
Mar-01	2320	2305	1941.6	1346.3	2536.8	1480	1440	1635.4	1126.4	2144.5
	2009.812					1636.505				
Apr-01	2097.344	2053.578	1941.6	1346.3	2536.8	1726.222	1681.363	1635.4	1126.4	2144.5
	1840					1460				
May-01	1899.66	1869.83	1941.6	1346.3	2536.8	1530	1495	1635.4	1126.4	2144.5
	1620					1979.764				
Jun-01	1650	1635	1941.6	1346.3	2536.8	2009.643	1994.704	1635.4	1126.4	2144.5
	1320					1420				
Jul-01	1340	1330	1941.6	1346.3	2536.8	1430	1425	1635.4	1126.4	2144.5
	1780					1970				
Aug-01	1730.299	1755.149	1941.6	1346.3	2536.8	2010	1990	1635.4	1126.4	2144.5
	2030					2020				
Sep-01	1950	1990	1941.6	1346.3	2536.8	2020	2020	1635.4	1126.4	2144.5
Avg	1941.548					1635.426				
SD	297.6215					254.5112				
	plus2SD	2536.791				plus2SD	2144.449			
	minus2SD	1346.305				minus2SD	1126.404			

Date	Si	Average	2SD	2SD	P	Average	2SD	2SD
	1900.00				31.35			
Oct-00	1899.59	2179.39	1699.81	2658.98	36.23	7845.98	1727.79	13964.18
	2100.50				8000.00			
Nov-00	2082.42	2179.39	1699.81	2658.98	7840.17	7845.98	1727.79	13964.18
	2031.99				7485.17			
Dec-00	2040.00	2179.39	1699.81	2658.98	7500.00	7845.98	1727.79	13964.18
	2180.00				7634.02			
Jan-01	2190.00	2179.39	1699.81	2658.98	7670.77	7845.98	1727.79	13964.18
	2499.65				8217.53			
Feb-01	2393.74	2179.39	1699.81	2658.98	7681.91	7845.98	1727.79	13964.18
	2010.00				7999.81			
Mar-01	1990.00	2179.39	1699.81	2658.98	7860.00	7845.98	1727.79	13964.18
	2123.14				7510.43			
Apr-01	2125.57	2179.39	1699.81	2658.98	7614.41	7845.98	1727.79	13964.18
	2350.00				6980.00			
May-01	2380.00	2179.39	1699.81	2658.98	7060.00	7845.98	1727.79	13964.18
	1830.00				8680.00			
Jun-01	1840.04	2179.39	1699.81	2658.98	8810.00	7845.98	1727.79	13964.18
	2370.00				11299.78			
Jul-01	2360.00	2179.39	1699.81	2658.98	11400.00	7845.98	1727.79	13964.18
	2480.00				15500.00			
Aug-01	2460.00	2179.39	1699.81	2658.98	15200.00	7845.98	1727.79	13964.18
	2660.00				12800.00			
Sep-01	2590.00	2179.39	1699.81	2658.98	12500.00	7845.98	1727.79	13964.18
	2179.39				7845.98			
	239.79				3059.10			
Plus2SD		2658.98				13964.18		
Minus2SD		1699.81				1727.79		

**SELECTED SAMPLE AVERAGES AND STATISTICS (ICP MAJORS)**

Date	Y (ppm)	Average	2SD	2SD	Sr (ppm)	Average	2SD	2SD	Ba (ppb)	Average	2SD	2SD	Mn (ppm)	Average	2SD	2SD
Oct-00	30.187691	27.013362	7.1696088	46.857116	14.125044	14.919234	6.9389351	22.899534	590	1567.7199	-423.06219	3558.502	106.94573	111.31119	86.78609	135.83629
Oct-00	32.640184	27.013362	7.1696088	46.857116	14.370631	14.919234	6.9389351	22.899534	946.408	1567.7199	-423.06219	3558.502	107.10125	111.31119	86.78609	135.83629
Nov-00	32.73293	27.013362	7.1696088	46.857116	14.228261	14.919234	6.9389351	22.899534	614.715	1567.7199	-423.06219	3558.502	113.11317	111.31119	86.78609	135.83629
Nov-00	31.901827	27.013362	7.1696088	46.857116	13.927381	14.919234	6.9389351	22.899534	653.994	1567.7199	-423.06219	3558.502	111.99285	111.31119	86.78609	135.83629
Dec-00	31.153543	27.013362	7.1696088	46.857116	15.479194	14.919234	6.9389351	22.899534	1915.448	1567.7199	-423.06219	3558.502	110.30899	111.31119	86.78609	135.83629
Dec-00	29.991949	27.013362	7.1696088	46.857116	15.578195	14.919234	6.9389351	22.899534	1640	1567.7199	-423.06219	3558.502	109.37634	111.31119	86.78609	135.83629
Jan-01	22.010157	27.013362	7.1696088	46.857116	15.490408	14.919234	6.9389351	22.899534	723.632	1567.7199	-423.06219	3558.502	113.73943	111.31119	86.78609	135.83629
Jan-01	20.91529	27.013362	7.1696088	46.857116	15.231762	14.919234	6.9389351	22.899534	820	1567.7199	-423.06219	3558.502	113.12233	111.31119	86.78609	135.83629
Feb-01	10.989502	27.013362	7.1696088	46.857116	18.993538	14.919234	6.9389351	22.899534	788.1284	1567.7199	-423.06219	3558.502	116.10712	111.31119	86.78609	135.83629
Feb-01	10.003086	27.013362	7.1696088	46.857116	18.303164	14.919234	6.9389351	22.899534	687.5123	1567.7199	-423.06219	3558.502	112.69362	111.31119	86.78609	135.83629
Mar-01	21.871813	27.013362	7.1696088	46.857116	16.670174	14.919234	6.9389351	22.899534	2990	1567.7199	-423.06219	3558.502	111.24683	111.31119	86.78609	135.83629
Mar-01	20.455325	27.013362	7.1696088	46.857116	16.211792	14.919234	6.9389351	22.899534	1830	1567.7199	-423.06219	3558.502	109.05536	111.31119	86.78609	135.83629
Apr-01	17.47	27.013362	7.1696088	46.857116	12.807593	14.919234	6.9389351	22.899534	2170	1567.7199	-423.06219	3558.502	92.475891	111.31119	86.78609	135.83629
Apr-01	18.56	27.013362	7.1696088	46.857116	13.001733	14.919234	6.9389351	22.899534	2280	1567.7199	-423.06219	3558.502	93.275024	111.31119	86.78609	135.83629
May-01	20.817625	27.013362	7.1696088	46.857116	12.901907	14.919234	6.9389351	22.899534	1730	1567.7199	-423.06219	3558.502	92.636612	111.31119	86.78609	135.83629
May-01	21.108084	27.013362	7.1696088	46.857116	13.308012	14.919234	6.9389351	22.899534	1620	1567.7199	-423.06219	3558.502	92.857834	111.31119	86.78609	135.83629
Jun-01	30.106503	27.013362	7.1696088	46.857116	10.504128	14.919234	6.9389351	22.899534	1120	1567.7199	-423.06219	3558.502	108.5813	111.31119	86.78609	135.83629
Jun-01	31.952745	27.013362	7.1696088	46.857116	10.432159	14.919234	6.9389351	22.899534	1310	1567.7199	-423.06219	3558.502	109.46503	111.31119	86.78609	135.83629
Jul-01	30.574877	27.013362	7.1696088	46.857116	8.6265869	14.919234	6.9389351	22.899534	3560	1567.7199	-423.06219	3558.502	126.11652	111.31119	86.78609	135.83629
Jul-01	30.979406	27.013362	7.1696088	46.857116	9.5153646	14.919234	6.9389351	22.899534	4270	1567.7199	-423.06219	3558.502	126.11452	111.31119	86.78609	135.83629
Aug-01	47.353943	27.013362	7.1696088	46.857116	10.871334	14.919234	6.9389351	22.899534	999.71	1567.7199	-423.06219	3558.502	159.12326	111.31119	86.78609	135.83629
Aug-01	48.439442	27.013362	7.1696088	46.857116	11.854561	14.919234	6.9389351	22.899534	1020	1567.7199	-423.06219	3558.502	159.23152	111.31119	86.78609	135.83629
Sep-01	50.642627	27.013362	7.1696088	46.857116	24.670313	14.919234	6.9389351	22.899534	1080	1567.7199	-423.06219	3558.502	138.48597	111.31119	86.78609	135.83629
Sep-01	47.228804	27.013362	7.1696088	46.857116	23.845817	14.919234	6.9389351	22.899534	1150	1567.7199	-423.06219	3558.502	134.03445	111.31119	86.78609	135.83629
<b>SD</b>	<b>9.9218767</b>				<b>3.9901496</b>				<b>995.39104</b>				<b>12.262549</b>			
+2SD		46.857116				22.899534				3558.502				135.83629		
-2SD		7.1696088				6.9389351				-423.06219				86.78609		

**SAMPLE AVERAGES AND STATISTICS (ICP TRACE)**

Date	Tl (ppb)	Average	2SD	2SD	V (ppb)	Average	2SD	2SD	U (ppb)	Average	2SD	2SD	Cr (ppb)	Average	2SD	2SD
Oct-00	2700	3879.0971	1636.8277	6121.3665	2800	4633.2656	2457.7852	6808.746	2400	3311.4945	1308.3381	5314.6508	1800	2556.3636	1839.9826	3272.7446
Oct-00	2900	3879.0971	1636.8277	6121.3665	3100	4633.2656	2457.7852	6808.746	3230	3311.4945	1308.3381	5314.6508	2090	2556.3636	1839.9826	3272.7446
Nov-00	4690.136	3879.0971	1636.8277	6121.3665	4680	4633.2656	2457.7852	6808.746	3080	3311.4945	1308.3381	5314.6508	2860	2556.3636	1839.9826	3272.7446
Nov-00	4400	3879.0971	1636.8277	6121.3665	4400	4633.2656	2457.7852	6808.746	3190	3311.4945	1308.3381	5314.6508	2720	2556.3636	1839.9826	3272.7446
Dec-00	4400	3879.0971	1636.8277	6121.3665	4800	4633.2656	2457.7852	6808.746	3320	3311.4945	1308.3381	5314.6508	2890	2556.3636	1839.9826	3272.7446
Dec-00	4230	3879.0971	1636.8277	6121.3665	4590	4633.2656	2457.7852	6808.746	3080	3311.4945	1308.3381	5314.6508	2720	2556.3636	1839.9826	3272.7446
Jan-01	4700	3879.0971	1636.8277	6121.3665	5400	4633.2656	2457.7852	6808.746	2540	3311.4945	1308.3381	5314.6508	2990	2556.3636	1839.9826	3272.7446
Jan-01	4090	3879.0971	1636.8277	6121.3665	4750	4633.2656	2457.7852	6808.746	2340	3311.4945	1308.3381	5314.6508	2610	2556.3636	1839.9826	3272.7446
Feb-01	3240	3879.0971	1636.8277	6121.3665	4150	4633.2656	2457.7852	6808.746	2920	3311.4945	1308.3381	5314.6508	2580	2556.3636	1839.9826	3272.7446
Feb-01	2140	3879.0971	1636.8277	6121.3665	4060.463	4633.2656	2457.7852	6808.746	3000	3311.4945	1308.3381	5314.6508	2530	2556.3636	1839.9826	3272.7446
Mar-01	4120	3879.0971	1636.8277	6121.3665	3690	4633.2656	2457.7852	6808.746	2080	3311.4945	1308.3381	5314.6508	3140	2556.3636	1839.9826	3272.7446
Mar-01	3740	3879.0971	1636.8277	6121.3665	4400	4633.2656	2457.7852	6808.746	2180	3311.4945	1308.3381	5314.6508	2800	2556.3636	1839.9826	3272.7446
Apr-01	2880	3879.0971	1636.8277	6121.3665	4020	4633.2656	2457.7852	6808.746	3420	3311.4945	1308.3381	5314.6508	2160	2556.3636	1839.9826	3272.7446
Apr-01	2840	3879.0971	1636.8277	6121.3665	4010	4633.2656	2457.7852	6808.746	3349.5	3311.4945	1308.3381	5314.6508	2110	2556.3636	1839.9826	3272.7446
May-01	2850	3879.0971	1636.8277	6121.3665	4090.22	4633.2656	2457.7852	6808.746	2310	3311.4945	1308.3381	5314.6508	2170	2556.3636	1839.9826	3272.7446
May-01	2720	3879.0971	1636.8277	6121.3665	3890	4633.2656	2457.7852	6808.746	2418.928	3311.4945	1308.3381	5314.6508	2010	2556.3636	1839.9826	3272.7446
Jun-01	3900	3879.0971	1636.8277	6121.3665	5100	4633.2656	2457.7852	6808.746	4040	3311.4945	1308.3381	5314.6508	2530	2556.3636	1839.9826	3272.7446
Jun-01	3700	3879.0971	1636.8277	6121.3665	4900	4633.2656	2457.7852	6808.746	3960	3311.4945	1308.3381	5314.6508	2450	2556.3636	1839.9826	3272.7446
Jul-01	4100	3879.0971	1636.8277	6121.3665	5400	4633.2656	2457.7852	6808.746	4330	3311.4945	1308.3381	5314.6508	2750	2556.3636	1839.9826	3272.7446
Jul-01	4000	3879.0971	1636.8277	6121.3665	5140	4633.2656	2457.7852	6808.746	4540	3311.4945	1308.3381	5314.6508	2670	2556.3636	1839.9826	3272.7446
Aug-01	7630	3879.0971	1636.8277	6121.3665	8040	4633.2656	2457.7852	6808.746	7500	3311.4945	1308.3381	5314.6508	3840	2556.3636	1839.9826	3272.7446
Aug-01	7920	3879.0971	1636.8277	6121.3665	8510	4633.2656	2457.7852	6808.746	7800	3311.4945	1308.3381	5314.6508	3920	2556.3636	1839.9826	3272.7446
Sep-01	6200	3879.0971	1636.8277	6121.3665	6981.16	4633.2656	2457.7852	6808.746	5364.26	3311.4945	1308.3381	5314.6508	2690	2556.3636	1839.9826	3272.7446
Sep-01	6800	3879.0971	1636.8277	6121.3665	7580	4633.2656	2457.7852	6808.746	5760.19	3311.4945	1308.3381	5314.6508	2970	2556.3636	1839.9826	3272.7446
<b>SD</b>	<b>1121.1347</b>				<b>1087.7402</b>				<b>1001.5782</b>				<b>358.1905</b>			
+2SD		6121.3665				6808.746				5314.6508				3272.7446		
-2SD		1636.8277				2457.7852				1308.3381				1839.9826		

**SAMPLE AVERAGES AND STATISTICS (ICP TRACE)**

Date	Cu (ppb)	Average	2SD	2SD	Ni (ppb)	Average	2SD	2SD	Co (ppb)	Average	2SD	2SD	Ga (ppb)	Average	2SD	2SD	As (ppb)	Average	2SD	2SD	
Oct-00	1760	2916.3636	952.97933	4879.7479	1500	2358.3275	1330.4158	3386.2391	710	1400.2986	627.81239	2172.7849	167.702	470.88889	-159.57925	1101.357	649.88	786.41	476.79	1096.03	
Oct-00	2000	2916.3636	952.97933	4879.7479	1650	2358.3275	1330.4158	3386.2391	790.335	1400.2986	627.81239	2172.7849	198.234	470.88889	-159.57925	1101.357	750.00	786.41	476.79	1096.03	
Nov-00	2250	2916.3636	952.97933	4879.7479	2370	2358.3275	1330.4158	3386.2391	1105.952	1400.2986	627.81239	2172.7849	283.678	470.88889	-159.57925	1101.357	920.00	786.41	476.79	1096.03	
Nov-00	2140	2916.3636	952.97933	4879.7479	2240	2358.3275	1330.4158	3386.2391	1060	1400.2986	627.81239	2172.7849	270.936	470.88889	-159.57925	1101.357	880.00	786.41	476.79	1096.03	
Dec-00	2320	2916.3636	952.97933	4879.7479	2450	2358.3275	1330.4158	3386.2391	1350	1400.2986	627.81239	2172.7849	288.169	470.88889	-159.57925	1101.357	890.00	786.41	476.79	1096.03	
Dec-00	2200	2916.3636	952.97933	4879.7479	2343.094	2358.3275	1330.4158	3386.2391	1280	1400.2986	627.81239	2172.7849	270.856	470.88889	-159.57925	1101.357	870.00	786.41	476.79	1096.03	
Jan-01	2360	2916.3636	952.97933	4879.7479	2420	2358.3275	1330.4158	3386.2391	1400	1400.2986	627.81239	2172.7849	434.88	470.88889	-159.57925	1101.357	930.00	786.41	476.79	1096.03	
Jan-01	2120	2916.3636	952.97933	4879.7479	2190	2358.3275	1330.4158	3386.2391	1259.96	1400.2986	627.81239	2172.7849	390.845	470.88889	-159.57925	1101.357	830.00	786.41	476.79	1096.03	
Feb-01	2820	2916.3636	952.97933	4879.7479	2120	2358.3275	1330.4158	3386.2391	1140	1400.2986	627.81239	2172.7849	310.3439	470.88889	-159.57925	1101.357	725.05	786.41	476.79	1096.03	
Feb-01	2750	2916.3636	952.97933	4879.7479	2080.11	2358.3275	1330.4158	3386.2391	1090	1400.2986	627.81239	2172.7849	292.4756	470.88889	-159.57925	1101.357	693.14	786.41	476.79	1096.03	
Mar-01	2810	2916.3636	952.97933	4879.7479	2340	2358.3275	1330.4158	3386.2391	1560	1400.2986	627.81239	2172.7849	354.748	470.88889	-159.57925	1101.357	790.00	786.41	476.79	1096.03	
Mar-01	2620	2916.3636	952.97933	4879.7479	2190	2358.3275	1330.4158	3386.2391	1450	1400.2986	627.81239	2172.7849	332.622	470.88889	-159.57925	1101.357	760.00	786.41	476.79	1096.03	
Apr-01	2920	2916.3636	952.97933	4879.7479	2070	2358.3275	1330.4158	3386.2391	1330	1400.2986	627.81239	2172.7849	315.28	470.88889	-159.57925	1101.357	540.00	786.41	476.79	1096.03	
Apr-01	2780	2916.3636	952.97933	4879.7479	2060	2358.3275	1330.4158	3386.2391	1310	1400.2986	627.81239	2172.7849	310.44	470.88889	-159.57925	1101.357	530.00	786.41	476.79	1096.03	
May-01	2210	2916.3636	952.97933	4879.7479	2230	2358.3275	1330.4158	3386.2391	1310	1400.2986	627.81239	2172.7849	360	470.88889	-159.57925	1101.357	610.00	786.41	476.79	1096.03	
May-01	2570	2916.3636	952.97933	4879.7479	2100	2358.3275	1330.4158	3386.2391	1240	1400.2986	627.81239	2172.7849	340.85	470.88889	-159.57925	1101.357	520.00	786.41	476.79	1096.03	
Jun-01	3270	2916.3636	952.97933	4879.7479	2510	2358.3275	1330.4158	3386.2391	1740	1400.2986	627.81239	2172.7849	711.5861	470.88889	-159.57925	1101.357	829.02	786.41	476.79	1096.03	
Jun-01	3200	2916.3636	952.97933	4879.7479	2460	2358.3275	1330.4158	3386.2391	1700.323	1400.2986	627.81239	2172.7849	720	470.88889	-159.57925	1101.357	830.00	786.41	476.79	1096.03	
Jul-01	4490	2916.3636	952.97933	4879.7479	2590	2358.3275	1330.4158	3386.2391	1820	1400.2986	627.81239	2172.7849	720	470.88889	-159.57925	1101.357	840.00	786.41	476.79	1096.03	
Jul-01	4370	2916.3636	952.97933	4879.7479	2550	2358.3275	1330.4158	3386.2391	1760	1400.2986	627.81239	2172.7849	695.91	470.88889	-159.57925	1101.357	780.00	786.41	476.79	1096.03	
Aug-01	5770	2916.3636	952.97933	4879.7479	3500	2358.3275	1330.4158	3386.2391	2170	1400.2986	627.81239	2172.7849	1010	470.88889	-159.57925	1101.357	320.00	786.41	476.79	1096.03	
Aug-01	5910	2916.3636	952.97933	4879.7479	3680	2358.3275	1330.4158	3386.2391	2290	1400.2986	627.81239	2172.7849	1020	470.88889	-159.57925	1101.357	260.00	786.41	476.79	1096.03	
Sep-01	4880	2916.3636	952.97933	4879.7479	3540	2358.3275	1330.4158	3386.2391	2110	1400.2986	627.81239	2172.7849	1250	470.88889	-159.57925	1101.357	994.00	786.41	476.79	1096.03	
Sep-01	5320	2916.3636	952.97933	4879.7479	3880	2358.3275	1330.4158	3386.2391	2290	1400.2986	627.81239	2172.7849	1340	470.88889	-159.57925	1101.357	1140.00	786.41	476.79	1096.03	
<b>SD</b>	<b>981.69215</b>				<b>513.95584</b>				<b>386.24312</b>				<b>315.23407</b>				<b>154.81</b>				
+2SD		4879.7479				3386.2391				2172.7849				1101.357					1096.03		
-2SD		952.97933				1330.4158				627.81239				-159.57925					476.79		

**SAMPLE AVERAGES AND STATISTICS (ICP TRACE)**



Date	Cd (ppb)	Date	Cd (ppb)	Mean (all samples)	-2SD of Mean	+2SD of Mean	Pb	Pb (ppb)	Mean (all samples)	-2SD of Mean	+2SD of Mean	Rb	Average	2SD	2SD	Sc	Average	2SD	2SD	Th	Average	2SD	2SD	
Oct-00	155.26						72.06					773.87	1134.58	781.93	1487.24	310.00	833.83	-303.28	1970.94	181.85	269.35	3.80	534.90	
Oct-00	201.22	Oct-00	178.24	237.56	113.03	362.09	101.75	86.90	153.30	15.19	291.41	960.45	1134.58	781.93	1487.24	340.00	833.83	-303.28	1970.94	289.46	269.35	3.80	534.90	
Nov-00	177.59						87.48					1011.21	1134.58	781.93	1487.24	670.00	833.83	-303.28	1970.94	307.00	269.35	3.80	534.90	
Nov-00	172.49	Nov-00	175.04	237.56	113.03	362.09	89.44	88.46	153.30	15.19	291.41	981.61	1134.58	781.93	1487.24	600.00	833.83	-303.28	1970.94	279.00	269.35	3.80	534.90	
Dec-00	194.69						184.17					1183.61	1134.58	781.93	1487.24	609.57	833.83	-303.28	1970.94	310.00	269.35	3.80	534.90	
Dec-00	182.23	Dec-00	188.46	237.56	113.03	362.09	160.26	172.21	153.30	15.19	291.41	1090.11	1134.58	781.93	1487.24	580.00	833.83	-303.28	1970.94	288.00	269.35	3.80	534.90	
Jan-01	200.06						105.12					1360.00	1134.58	781.93	1487.24	890.00	833.83	-303.28	1970.94	182.13	269.35	3.80	534.90	
Jan-01	189.37	Jan-01	194.72	237.56	113.03	362.09	100.77	102.94	153.30	15.19	291.41	1240.00	1134.58	781.93	1487.24	690.00	833.83	-303.28	1970.94	155.24	269.35	3.80	534.90	
Feb-01	243.49						140.81					1020.00	1134.58	781.93	1487.24	879.57	833.83	-303.28	1970.94	110.31	269.35	3.80	534.90	
Feb-01	247.22	Feb-01	245.35	237.56	113.03	362.09	141.08	140.94	153.30	15.19	291.41	1040.00	1134.58	781.93	1487.24	645.12	833.83	-303.28	1970.94	110.94	269.35	3.80	534.90	
Mar-01	205.70						162.97					1170.00	1134.58	781.93	1487.24	690.00	833.83	-303.28	1970.94	206.82	269.35	3.80	534.90	
Mar-01	203.06	Mar-01	204.38	237.56	113.03	362.09	141.84	152.40	153.30	15.19	291.41	1110.00	1134.58	781.93	1487.24	580.00	833.83	-303.28	1970.94	201.69	269.35	3.80	534.90	
Apr-01	248.21						183.31					1070.00	1134.58	781.93	1487.24	480.00	833.83	-303.28	1970.94	180.00	269.35	3.80	534.90	
Apr-01	245.37	Apr-01	246.79	237.56	113.03	362.09	182.88	183.10	153.30	15.19	291.41	1060.00	1134.58	781.93	1487.24	470.00	833.83	-303.28	1970.94	200.00	269.35	3.80	534.90	
May-01	207.38						171.34					960.00	1134.58	781.93	1487.24	710.00	833.83	-303.28	1970.94	151.06	269.35	3.80	534.90	
May-01	218.44	May-01	212.91	237.56	113.03	362.09	117.96	144.65	153.30	15.19	291.41	909.96	1134.58	781.93	1487.24	640.00	833.83	-303.28	1970.94	153.57	269.35	3.80	534.90	
Jun-01	279.76						94.16					1310.00	1134.58	781.93	1487.24	800.00	833.83	-303.28	1970.94	340.00	269.35	3.80	534.90	
Jun-01	283.90	Jun-01	281.83	237.56	113.03	362.09	96.33	95.25	153.30	15.19	291.41	1320.00	1134.58	781.93	1487.24	780.00	833.83	-303.28	1970.94	330.64	269.35	3.80	534.90	
Jul-01	310.00						318.49					1290.00	1134.58	781.93	1487.24	1020.00	833.83	-303.28	1970.94	370.00	269.35	3.80	534.90	
Jul-01	306.76	Jul-01	308.38	237.56	113.03	362.09	342.96	330.73	153.30	15.19	291.41	1260.00	1134.58	781.93	1487.24	960.00	833.83	-303.28	1970.94	410.00	269.35	3.80	534.90	
Aug-01	360.00						163.36					1520.00	1134.58	781.93	1487.24	1240.00	833.83	-303.28	1970.94	810.27	269.35	3.80	534.90	
Aug-01	370.00	Aug-01	365.00	237.56	113.03	362.09	162.52	162.94	153.30	15.19	291.41	1560.16	1134.58	781.93	1487.24	1290.00	833.83	-303.28	1970.94	780.00	269.35	3.80	534.90	
Sep-01	367.36						188.92					1370.00	1134.58	781.93	1487.24	2430.00	833.83	-303.28	1970.94	617.66	269.35	3.80	534.90	
Sep-01	386.76	Sep-01	377.06	237.56	113.03	362.09	188.51	188.72	153.30	15.19	291.41	1470.00	1134.58	781.93	1487.24	2570.00	833.83	-303.28	1970.94	550.34	269.35	3.80	534.90	
<b>SD</b>	<b>62.26</b>						<b>69.05</b>					<b>176.33</b>				<b>568.55</b>				<b>132.77</b>				
+2SD				362.09					291.41				1487.24				1970.94					534.90		
-2SD				113.03					15.19				781.93				-303.28					3.80		

**SAMPLE AVERAGES AND STATISTICS (ICP TRACE)**

Date	U	Average	2SD	2SD
Oct-00	2400.00	3311.49	1308.34	5314.65
Oct-00	3230.00	3311.49	1308.34	5314.65
Nov-00	3080.00	3311.49	1308.34	5314.65
Nov-00	3190.00	3311.49	1308.34	5314.65
Dec-00	3320.00	3311.49	1308.34	5314.65
Dec-00	3080.00	3311.49	1308.34	5314.65
Jan-01	2540.00	3311.49	1308.34	5314.65
Jan-01	2340.00	3311.49	1308.34	5314.65
Feb-01	2920.00	3311.49	1308.34	5314.65
Feb-01	3000.00	3311.49	1308.34	5314.65
Mar-01	2080.00	3311.49	1308.34	5314.65
Mar-01	2180.00	3311.49	1308.34	5314.65
Apr-01	3420.00	3311.49	1308.34	5314.65
Apr-01	3349.50	3311.49	1308.34	5314.65
May-01	2310.00	3311.49	1308.34	5314.65
May-01	2418.93	3311.49	1308.34	5314.65
Jun-01	4040.00	3311.49	1308.34	5314.65
Jun-01	3960.00	3311.49	1308.34	5314.65
Jul-01	4330.00	3311.49	1308.34	5314.65
Jul-01	4540.00	3311.49	1308.34	5314.65
Aug-01	7500.00	3311.49	1308.34	5314.65
Aug-01	7800.00	3311.49	1308.34	5314.65
Sep-01	5364.26	3311.49	1308.34	5314.65
Sep-01	5760.19	3311.49	1308.34	5314.65
<b>SD</b>	<b>1001.58</b>			
+2SD		5314.65		
-2SD		1308.34		

**SAMPLE AVERAGES AND STATISTICS (ICP TRACE)**

ELEMENT	LIQUID PHASE AVERAGES (ppm)	SOLID PHASE AVERAGES (ppm)	SOLID ANALYSIS: MAJOR ELEMENTS	%	x 10000	x conversion factor = equiv ppm element	ELEMENT	LIQUID PHASE AVERAGES (ppm)	SOLID PHASE AVERAGES (ppm)
Al	970	3119	SiO2	23.21717	232171.667	108526.09	As	0.745	9.792
Ca	1942	167043	TiO2	0.04396	439.604167	263.54621	Ba	1.521	317.792
F		5392	Al2O3	0.589278	5892.77778	3118.7526	Cd	0.248	
Fe	538	914	Fe2O3T	0.130715	1307.15278	914.26579	Co	1.469	10.292
K	215	1095	MnO	0.031369	313.6875	242.93748	Cr	2.667	24.833
Mg	114	614	MgO	0.101828	1018.27778	614.12842	Cu	3.160	41.792
Mn	115	243	CaO	23.37275	233727.465	167043.38	Ga	0.516	3.000
Na	709	843	Na2O	0.113598	1135.97917	842.72842	Nb	0.024	
P	8471	11790	K2O	0.131932	1319.31944	1095.2317	Ni	2.461	6.524
S	1635	118580	P2O5	2.701618	27016.1806	11790.429	Pb	0.154	18.250
Si	2204	108526	SO3	29.6109	296109.028	118579.53	Rb	1.168	
Sr	15	357.750	F	0.539181	5391.80556	5391.80556	Sc	0.870	7.417
Y	29	148.792					Sn	0.023	
							Th	0.313	
							Ti	4.203	186.620
							U	3.673	
							V	4.937	19.000
							Zn		29.625
							Zr	0.412	9.917

**CONVERSION CHART FOR RELATIVE ABUNDANCE GRAPHS**

Date	SiO2	Average	2SD	2SD	CaSO4.2H2O +*.0.5H2O	Average	2SD	2SD	CaSO4 (anhydrite)	Average	2SD	2SD	Total Gyp	Average	2SD	2SD
Oct-00	25	17.83333	7.141334	28.52533	72	62.41667	35.39065	89.44269	3	6.916667	-9.53264	23.36597	75	69.3	46.6394	92.02726
Oct-00	16	17.83333	7.141334	28.52533	81	62.41667	35.39065	89.44269	3	6.916667	-9.53264	23.36597	84	69.3	46.6394	92.02726
Nov-00	2	17.83333	7.141334	28.52533	75	62.41667	35.39065	89.44269	5	6.916667	-9.53264	23.36597	80	69.3	46.6394	92.02726
Nov-00	19	17.83333	7.141334	28.52533	74	62.41667	35.39065	89.44269	7	6.916667	-9.53264	23.36597	81	69.3	46.6394	92.02726
Dec-00	22	17.83333	7.141334	28.52533	70	62.41667	35.39065	89.44269	8	6.916667	-9.53264	23.36597	78	69.3	46.6394	92.02726
Dec-00	16	17.83333	7.141334	28.52533	65	62.41667	35.39065	89.44269	19	6.916667	-9.53264	23.36597	84	69.3	46.6394	92.02726
Jan-01	15	17.83333	7.141334	28.52533	65	62.41667	35.39065	89.44269	6	6.916667	-9.53264	23.36597	71	69.3	46.6394	92.02726
Jan-01	16	17.83333	7.141334	28.52533	65	62.41667	35.39065	89.44269	19	6.916667	-9.53264	23.36597	84	69.3	46.6394	92.02726
Feb-01	19	17.83333	7.141334	28.52533	63	62.41667	35.39065	89.44269	2	6.916667	-9.53264	23.36597	65	69.3	46.6394	92.02726
Feb-01	20	17.83333	7.141334	28.52533	68	62.41667	35.39065	89.44269	2	6.916667	-9.53264	23.36597	70	69.3	46.6394	92.02726
Mar-01	2	17.83333	7.141334	28.52533	39	62.41667	35.39065	89.44269	1	6.916667	-9.53264	23.36597	40	69.3	46.6394	92.02726
Mar-01	21	17.83333	7.141334	28.52533	39	62.41667	35.39065	89.44269	10	6.916667	-9.53264	23.36597	49	69.3	46.6394	92.02726
Apr-01	17	17.83333	7.141334	28.52533	58	62.41667	35.39065	89.44269	2	6.916667	-9.53264	23.36597	60	69.3	46.6394	92.02726
Apr-01	20	17.83333	7.141334	28.52533	60	62.41667	35.39065	89.44269	1	6.916667	-9.53264	23.36597	61	69.3	46.6394	92.02726
May-01	18	17.83333	7.141334	28.52533	53	62.41667	35.39065	89.44269	4	6.916667	-9.53264	23.36597	57	69.3	46.6394	92.02726
May-01	20	17.83333	7.141334	28.52533	74	62.41667	35.39065	89.44269	4	6.916667	-9.53264	23.36597	78	69.3	46.6394	92.02726
Jun-01	21	17.83333	7.141334	28.52533	57	62.41667	35.39065	89.44269	4	6.916667	-9.53264	23.36597	61	69.3	46.6394	92.02726
Jun-01	20	17.83333	7.141334	28.52533	63	62.41667	35.39065	89.44269	3	6.916667	-9.53264	23.36597	66	69.3	46.6394	92.02726
Jul-01	21	17.83333	7.141334	28.52533	70	62.41667	35.39065	89.44269	3	6.916667	-9.53264	23.36597	73	69.3	46.6394	92.02726
Jul-01	20	17.83333	7.141334	28.52533	68	62.41667	35.39065	89.44269	3	6.916667	-9.53264	23.36597	71	69.3	46.6394	92.02726
Aug-01	19	17.83333	7.141334	28.52533	45	62.41667	35.39065	89.44269	24	6.916667	-9.53264	23.36597	69	69.3	46.6394	92.02726
Aug-01	19	17.83333	7.141334	28.52533	26	62.41667	35.39065	89.44269	32	6.916667	-9.53264	23.36597	58	69.3	46.6394	92.02726
Sep-01	20	17.83333	7.141334	28.52533	74	62.41667	35.39065	89.44269	0	6.916667	-9.53264	23.36597	74	69.3	46.6394	92.02726
Sep-01	20	17.83333	7.141334	28.52533	74	62.41667	35.39065	89.44269	1	6.916667	-9.53264	23.36597	75	69.3	46.6394	92.02726
Avg	17.83333				62.4166667				6.9166667				69.33333333			
SD	5.345999				13.5130104				8.2246536				11.34696537			
	plus2SD	28.52533				89.44269				23.36597				92.02726		
	minus2SD	7.141334				35.39065				-9.53264				46.6394		

**XRD RESULTS AND STATISTICS - ANNUAL**

CaSO4.2H2O+*.0.5H2O	Date	CaSO4.2H2O+*.0.5H2O	Month Average	2SD	2SD		SiO2	Date	Month Avg	Mean, All Samples	-2SD of Mean	+2SD of Mean	Total All Gyp	Date	Month Avg	Mean, all samples	-2SD of Mean	+2SD of Mean	
72								25						75					
81	Oct-00	76.5	64.863636	43.311525	86.415748			16	Oct-00	20.5	17.727273	6.5630131	28.891532	84	Oct-00	79.5	69.3	46.639403	92.027264
75								2						80					
74	Nov-00	74.5	64.863636	43.311525	86.415748			19	Nov-00	10.5	17.727273	6.5630131	28.891532	81	Nov-00	80.5	69.3	46.639403	92.027264
70								22						78					
65	Dec-00	67.5	64.863636	43.311525	86.415748			16	Dec-00	19	17.727273	6.5630131	28.891532	84	Dec-00	81	69.3	46.639403	92.027264
65								15						71					
65	Jan-01	65	64.863636	43.311525	86.415748			16	Jan-01	15.5	17.727273	6.5630131	28.891532	84	Jan-01	77.5	69.3	46.639403	92.027264
63								19						65					
68	Feb-01	65.5	64.863636	43.311525	86.415748			20	Feb-01	19.5	17.727273	6.5630131	28.891532	70	Feb-01	67.5	69.3	46.639403	92.027264
39								2						40					
39	Mar-01	39	64.863636	43.311525	86.415748			21	Mar-01	11.5	17.727273	6.5630131	28.891532	49	Mar-01	44.5	69.3	46.639403	92.027264
58								17						60					
60	Apr-01	59	64.863636	43.311525	86.415748			20	Apr-01	18.5	17.727273	6.5630131	28.891532	61	Apr-01	60.5	69.3	46.639403	92.027264
53								18						57					
74	May-01	63.5	64.863636	43.311525	86.415748			20	May-01	19	17.727273	6.5630131	28.891532	78	May-01	67.5	69.3	46.639403	92.027264
57								21						61					
63	Jun-01	60	64.863636	43.311525	86.415748			20	Jun-01	20.5	17.727273	6.5630131	28.891532	66	Jun-01	63.5	69.3	46.639403	92.027264
70								21						73					
68	Jul-01	69	64.863636	43.311525	86.415748			20	Jul-01	20.5	17.727273	6.5630131	28.891532	71	Jul-01	72	69.3	46.639403	92.027264
45								19						69					
26	Aug-01	35.5	64.863636	43.311525	86.415748			19	Aug-01	19	17.727273	6.5630131	28.891532	58	Aug-01	63.5	69.3	46.639403	92.027264
74								20						74					
74	Sep-01	74	64.863636	43.311525	86.415748			20	Sep-01	20	17.727273	6.5630131	28.891532	75	Sep-01	74.5	69.3	46.639403	92.027264

**XRD RESULTS, AVERAGES AND STATISTICS BY MONTH**

Date		Avg P2O5/month	Average	2SD	2SD		Date	CaSO4 (anhydrite)	Avg CaSO4/month	Average	2SD	2SD		Date	CaSO4.0.5H2O (Bassanite)	Avg. Bassanite/month	Average	2SD	2SD
		2.13						3.00											
Oct-00		2.31	2.22	2.7	1.16	4.24	Oct-00	3.00	3	6.9166667	-9.5326406	23.365974		Oct-00			6.5555556	27.879083	-14.767972
		2.94						5.00											
Nov-00		3.26	3.1	2.7	1.16	4.24	Nov-00	7.00	6	6.9166667	-9.5326406	23.365974		Nov-00			6.5555556	27.879083	-14.767972
		2.04						8.00											
Dec-00		2.04	2.04	2.7	1.16	4.24	Dec-00	19.00	13.5	6.9166667	-9.5326406	23.365974		Dec-00			6.5555556	27.879083	-14.767972
		2.149						6.00							2				
Jan-01		2.211	2.18	2.7	1.16	4.24	Jan-01	19.00	12.5	6.9166667	-9.5326406	23.365974		Jan-01	1	1.5	6.5555556	27.879083	-14.767972
		1.792333333						2.00							1				
Feb-01		1.865	1.8286667	2.7	1.16	4.24	Feb-01	2.00	2	6.9166667	-9.5326406	23.365974		Feb-01	1	1	6.5555556	27.879083	-14.767972
		2.479						1.00							31				
Mar-01		2.377	2.428	2.7	1.16	4.24	Mar-01	10.00	5.5	6.9166667	-9.5326406	23.365974		Mar-01	36	33.5	6.5555556	27.879083	-14.767972
		2.792						2.00							6				
Apr-01		2.037	2.4145	2.7	1.16	4.24	Apr-01	1.00	1.5	6.9166667	-9.5326406	23.365974		Apr-01	8	7	6.5555556	27.879083	-14.767972
		2.056						4.00							3				
May-01		2.273	2.1645	2.7	1.16	4.24	May-01	4.00	4	6.9166667	-9.5326406	23.365974		May-01	1	2	6.5555556	27.879083	-14.767972
		2.96025						4.00							2				
Jun-01		3.01875	2.9895	2.7	1.16	4.24	Jun-01	3.00	3.5	6.9166667	-9.5326406	23.365974		Jun-01	1	1.5	6.5555556	27.879083	-14.767972
		2.994						3.00							0				
Jul-01		2.664	2.829	2.7	1.16	4.24	Jul-01	3.00	3	6.9166667	-9.5326406	23.365974		Jul-01	0	0	6.5555556	27.879083	-14.767972
		3.5405						24.00							6				
Aug-01		4.383	3.96175	2.7	1.16	4.24	Aug-01	32.00	28	6.9166667	-9.5326406	23.365974		Aug-01	17	11.5	6.5555556	27.879083	-14.767972
		4.306						0.00							1				
Sep-01		4.221	4.2635	2.7	1.16	4.24	Sep-01	1.00	0.5	6.9166667	-9.5326406	23.365974		Sep-01	1	1	6.5555556	27.879083	-14.767972
Avg		2.701618056					Avg	6.9166667						Avg	6.555555556				
SD		0.770941852					SD	8.2246536						SD	10.66176358				
		plus2SD	4.2435018					plus2SD	23.365974						plus2SD	27.8790827			
		minus2SD	1.1597344					minus2SD	-9.5326406						minus2SD	-14.7679716			

**XRF RESULTS FOR P2O5 AND XRD RESULTS FOR GYPSUM, AVERAGES AND STATISTICS BY MONTH**

DATE	SAMPLE	Analyte	SiO2	TiO2	Al2O3	Fe2O3T	MnO	MgO	CaO	Na2O	K2O	P2O5	SO3	F	LOI	SUM
		UNITS	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		Sum corrected for Oxygen replaced by Fluorine														
		LAB #														
25.10.00	PG001A	3859-01	22.1	0.04	0.47	0.13	0.03	0.09	23.8	0.06	0.10	2.13	31.0	0.4	20.2	80.2
	PG001B	3859-02	13.6	0.04	0.39	0.12	0.02	0.09	26.6	0.06	0.09	2.31	36.1	0.4	20.8	79.6
15.11.00	PG002A	3894-01	19.1	0.04	0.51	0.15	0.04	0.10	23.7	0.11	0.12	2.94	30.7	0.9	21.5	78.0
	PG002B	3894-02	16.4	0.04	0.52	0.15	0.04	0.10	24.3	0.12	0.14	3.26	32.8	1.1	22.1	78.5
12.12.00	PG003A	3926-01	22.6	0.05	0.57	0.14	0.03	0.09	23.7	0.07	0.12	2.04	29.0	0.6	22.2	78.8
	PG003B	3926-02	18.5	0.05	0.56	0.11	0.03	0.10	25.4	0.10	0.12	2.04	34.4	0.5	18.3	81.7
17.1.01	PG004A	3959-01	15.8	0.04	0.56	0.10	0.03	0.09	26.4	0.10	0.12	2.15	33.5	0.3	21.1	100.2
	PG004B	3959-02	20.4	0.04	0.59	0.11	0.03	0.09	24.5	0.11	0.13	2.21	30.2	0.6	21.1	99.7
28.2.01	PG005A	3959-07	30.0	0.04	0.59	0.12	0.03	0.09	21.7	0.09	0.13	1.79	29.4	0.71	16.2	100.6
	PG005B	3959-08	23.2	0.04	0.58	0.09	0.02	0.09	23.7	0.09	0.13	1.87	32.5	0.87	17.7	100.6
21.3.01	PG006A	4038-01	27.5	0.05	0.60	0.13	0.04	0.11	24.4	0.13	0.17	2.48	27.1	0.64	16.7	99.8
	PG006B	4038-02	24.0	0.04	0.63	0.11	0.03	0.10	25.5	0.13	0.15	2.38	30.2	0.30	16.6	100.0
11.4.01	PG007A	4071-01	24.9	0.04	0.76	0.13	0.03	0.11	22.7	0.15	0.16	2.79	28.3	0.49	19.2	99.5
	PG007B	4071-02	24.7	0.04	0.68	0.11	0.02	0.10	23.5	0.14	0.14	2.04	29.2	0.53	19.6	100.4
3.5.01	PG008A	4109-01	22.3	0.05	0.6	0.08	0.03	0.10	24.5	0.14	0.12	2.06	30.6	0.46	19.9	100.7
	PG008B	4109-02	18.3	0.04	0.6	0.08	0.03	0.10	25.6	0.14	0.12	2.27	32.5	0.60	20.7	100.8
13.6.01	PG009A	4171-01	30.3	0.05	0.57	0.13	0.03	0.11	21.0	0.12	0.14	2.96	27.1	0.3	17.9	100.6
	PG009B	4171-02	34.7	0.05	0.60	0.13	0.04	0.11	19.5	0.11	0.14	3.02	24.4	0.4	17.7	100.7
4.7.01	PG010A	4198-01	23.4	0.05	0.7	0.14	0.03	0.10	23.0	0.13	0.16	2.99	28.2	0.54	21.2	100.3
	PG010B	4198-02	18.9	0.04	0.6	0.12	0.03	0.11	25.2	0.13	0.13	2.66	31.3	0.55	20.1	99.6
27.8.01	PG011A	4289-01	37.2	0.05	0.53	0.20	0.05	0.11	18.1	0.10	0.11	3.54	22.1	0.2	17.7	99.9
	PG011B	4289-02	30.1	0.04	0.52	0.23	0.05	0.12	17.7	0.09	0.10	4.38	21.4	0.5	24.7	99.8
26.9.01	PG012A	4363-01	20.4	0.04	0.70	0.18	0.04	0.12	23.0	0.15	0.17	4.31	28.8	0.51	22.1	100.4
	PG012B	4363-02	18.9	0.04	0.69	0.17	0.04	0.13	23.6	0.16	0.17	4.22	29.7	0.53	22.5	100.6
		<b>Arith Avg</b>	<b>22.2692</b>	<b>0.0438</b>	<b>0.5949</b>	<b>0.1233</b>	<b>0.0298</b>	<b>0.1007</b>	<b>23.8705</b>	<b>0.1152</b>	<b>0.1345</b>	<b>2.5871</b>	<b>30.3234</b>	<b>0.5549</b>	<b>19.7824</b>	
		<b>Median</b>	<b>22.2005</b>	<b>0.0440</b>	<b>0.5953</b>	<b>0.1239</b>	<b>0.0280</b>	<b>0.0970</b>	<b>23.7500</b>	<b>0.1188</b>	<b>0.1305</b>	<b>2.3435</b>	<b>30.1875</b>	<b>0.5268</b>	<b>20.1365</b>	
		<b>Std Dev</b>	<b>5.9242</b>	<b>0.0017</b>	<b>0.0809</b>	<b>0.0355</b>	<b>0.0075</b>	<b>0.0113</b>	<b>2.3335</b>	<b>0.0279</b>	<b>0.0228</b>	<b>0.7709</b>	<b>3.5092</b>	<b>0.2015</b>	<b>2.1895</b>	
		<b>Min</b>	13.6000	0.0412	0.3850	0.0820	0.0235	0.0859	19.4880	0.0637	0.0887	1.7923	24.3893	0.3013	16.1593	
		<b>Max</b>	30.0060	0.0450	0.7615	0.1785	0.0393	0.1270	26.6000	0.1570	0.1720	4.3060	36.1000	1.1000	22.5150	
	PG011	<b>Arith Avg</b>	<b>33.6</b>	<b>0.0</b>	<b>0.527</b>	<b>0.213</b>	<b>0.049</b>	<b>0.115</b>	<b>17.897</b>	<b>0.096</b>	<b>0.104</b>	<b>3.962</b>	<b>21.774</b>	<b>0.367</b>	<b>21.217</b>	
		<b>Median</b>	<b>33.6</b>	<b>0.0</b>	<b>0.527</b>	<b>0.213</b>	<b>0.049</b>	<b>0.115</b>	<b>17.897</b>	<b>0.096</b>	<b>0.104</b>	<b>3.962</b>	<b>21.774</b>	<b>0.367</b>	<b>21.217</b>	
		<b>Std Dev</b>	<b>5.0041947</b>	<b>0.0021213</b>	<b>0.0081317</b>	<b>0.0215668</b>	<b>0.0021213</b>	<b>0.0014142</b>	<b>0.2899138</b>	<b>0.0060104</b>	<b>0.0106066</b>	<b>0.5957375</b>	<b>0.4673976</b>	<b>0.2298097</b>	<b>4.9437371</b>	
		<b>Min</b>	30.1	0.04	0.52	0.20	0.05	0.11	17.7	0.09	0.10	3.54	21.4	0.2	17.7	
		<b>Max</b>	<b>37.2</b>	<b>0.05</b>	<b>0.53</b>	<b>0.23</b>	<b>0.05</b>	<b>0.12</b>	<b>18.1</b>	<b>0.10</b>	<b>0.11</b>	<b>4.38</b>	<b>22.1</b>	<b>0.5</b>	<b>24.7</b>	
		<b>Arith Avg</b>	<b>23.2172</b>	<b>0.0440</b>	<b>0.5893</b>	<b>0.1307</b>	<b>0.0314</b>	<b>0.1018</b>	<b>23.3727</b>	<b>0.1136</b>	<b>0.1319</b>	<b>2.7016</b>	<b>29.6109</b>	<b>0.5392</b>		

**XRF RESULTS AND STATISTICS - MAJORS**

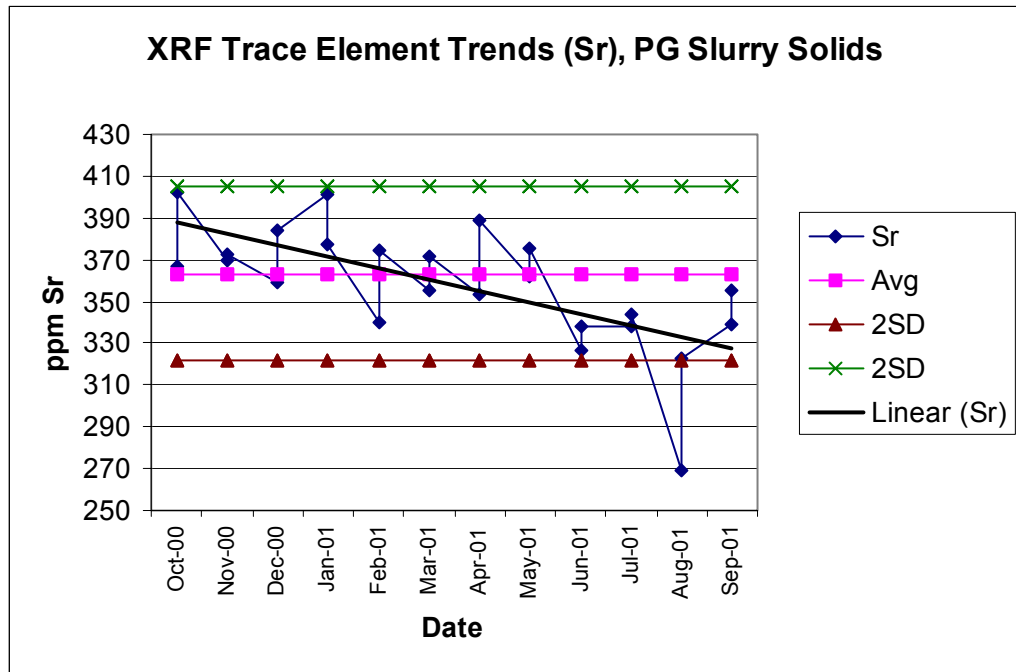
DATE		ELEMENT	Sc	Ba	Ti	V	Cr	Mn	Co	Ni	Cu	Zn	Ga	As	Pb	Rb	Sr	Y	Zr	Nb	Th	U	
		Max (ppm)	55	4000	22600	526	4000	2500	210	2360	2360	290	40	330	133	1300	700	720	490	268	1003	650	
		LLD (ppm)	3	10	5	4	3	4	2	3	3	3	3	10	10	2	2	2	3	2	3	3	
		Overlaps	Ca	Ce,Tl	Ba	Ba,Tl	V,La	Cr	Fe,Sr	Y	Sr,Th			Pb		U		Rb,Pb	Sr,Ba Th	Y,La U,Th	Bi,Rb	Rb,Sr	
		UNITS	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		SAMPLE LAB #																					
25.10.00	PG001A	3859-01	1	357	182	10	16	226	3	3	13	45	bd	2	13	bd	367	141	9	bd	bd	bd	
	PG001B	3859-02	6	317	172	15	16	196	4	2	12	28	bd	2	14	bd	402	146	6	bd	bd	bd	
15.11.00	PG002A	3894-01	7	326	175	19	16	295	3	1	14	32	bd	2	11	bd	370	157	8	bd	bd	bd	
	PG002B	3894-02	10	294	146	21	20	390	4	5	15	41	bd	3	11	bd	373	179	7	bd	bd	bd	
12.12.00	PG003A	3926-01	8	294	214	18	21	189	5	2	12	24	bd	2	12	bd	359	152	11	bd	bd	bd	
	PG003B	3926-02	8	317	193	17	16	219	3	bd	13	26	bd	1	13	bd	384	166	8	bd	bd	bd	
17.1.00	PG004A	3959-01	7	302	191	18	16	242	4	5	137	29	bd	83	39	bd	401	176	5	bd	bd	bd	
	PG004B	3959-02	7	316	180	25	23	349	4	3	52	36	bd	36	35	bd	377	184	7	bd	bd	bd	
28.2.01	PG005A	3959-07	10	275	163	18	32	234	4	28	14	26	bd	5	14	bd	340	155	32	bd	bd	bd	
	PG005B	3959-08	6	248	143	11	26	140	3	25	12	21	bd	3	15	bd	374	173	14	bd	bd	bd	
21.3.01	PG006A	4038-01	9	546	193	15	22	183	22	8	135	18	bd	14	25	bd	355	121	10	bd	bd	bd	
	PG006B	4038-02	9	335	188	15	24	169	25	10	42	17	bd	8	15	bd	372	137	10	bd	bd	bd	
11.4.01	PG007A	4071-01	6	280	191	15	17	209	13	2	17	18	bd	4	12	bd	353	153	9	bd	bd	bd	
	PG007B	4071-02	8	287	195	13	19	144	10	1	15	16	bd	2	11	bd	389	160	15	bd	bd	bd	
3.5.01	PG008A	4109-01	7	324	171	16	19	201	8	1	61	17	bd	7	17	bd	362	150	6	bd	bd	bd	
	PG008B	4109-02	9	299	167	13	18	223	9	bd	33	20	bd	3	16	bd	375	160	6	bd	bd	bd	
13.6.01	PG009A	4171-01	4	489	203	22	23	275	17	4	99	25	bd	5	12	bd	327	106	10	bd	bd	bd	
	PG009B	4171-02	8	344	193	27	30	325	21	4	47	28	3	5	12	bd	338	113	11	bd	bd	bd	
4.7.01	PG010A	4198-01	8	276	187	21	31	306	9	3	19	31	bd	3	14	bd	338	161	7	bd	bd	bd	
	PG010B	4198-02	8	261	169	15	21	243	8	bd	16	27	bd	3	13	bd	344	167	7	bd	bd	bd	
27.8.01	PG011A	4289-01	8	284	331	36	93	407	22	10	25	53	bd	6	11	bd	269	91	14	bd	bd	bd	
	PG011B	4289-02	7	265	203	28	35	347	35	8	24	46	bd	3	14	bd	323	108	13	bd	bd	bd	
26.9.01	PG012A	4363-01	8	328	165	28	21	404	6	8	148	50	bd	28	67	bd	339	165	6	bd	bd	bd	
	PG012B	4363-02	9	263	164	20	21	266	5	4	28	37	3	5	22	bd	355	150	7	bd	bd	bd	
		Arith Avg	7.41	321.73	179.32	17.82	21.27	246.73	8.64	6.26	43.36	27.82	3.00	10.27	18.77	#DIV/0!	363.36	153.27	9.59	#DIV/0!	#DIV/0!	#DIV/0!	
		Median	8.00	309.00	181.00	17.50	21.00	230.00	5.50	4.00	18.00	26.50	3.00	3.50	14.00	#NUM!	364.50	156.00	8.00	#NUM!	#NUM!	#NUM!	
		Std Dev	2.02	69.89	17.62	4.79	4.89	73.12	6.76	7.57	44.78	9.37	0.00	18.44	13.13	#DIV/0!	20.75	20.19	5.64	#DIV/0!	#DIV/0!	#DIV/0!	
		Min	4.00	248.00	143.00	10.00	16.00	140.00	3.00	bd	12.00	16.00	bd	1.00	11.00	bd	327.00	113.00	5.00	bd	bd	bd	
		Max	10.00	546.00	214.00	28.00	32.00	404.00	25.00	28.00	148.00	53.00	3.00	83.00	67.00	bd	402.00	184.00	32.00	bd	bd	bd	

XRF RESULTS AND STATISTICS - TRACE



DATE	ELEMENT	Sc	Ba	Ti	V	Cr	Mn	Co	Ni	Cu	Zn	Ga	As	Pb	Rb	Sr	Y	Zr	Nb	Th	U
	Arith Avg	7.50	274.50	267.00	32.00	64.00	377.00	28.50	9.00	24.50	49.50	#DIV/0!	4.50	12.50	#DIV/0!	296.00	99.50	13.50	#DIV/0!	#DIV/0!	#DIV/0!
	Median	7.50	274.50	267.00	32.00	64.00	377.00	28.50	9.00	24.50	49.50	#NUM!	4.50	12.50	#NUM!	296.00	99.50	13.50	#NUM!	#NUM!	#NUM!
	Std Dev	0.71	13.44	90.51	5.66	41.01	42.43	9.19	1.41	0.71	4.95	#DIV/0!	2.12	2.12	#DIV/0!	38.18	12.02	0.71	#DIV/0!	#DIV/0!	#DIV/0!
	Min	7.00	265.00	203.00	28.00	35.00	347.00	22.00	8.00	24.00	46.00	bd	3.00	11.00	bd	269.00	91.00	13.00	bd	bd	bd
	Max	8.00	284.00	331.00	36.00	93.00	407.00	35.00	10.00	25.00	53.00	bd	6.00	14.00	bd	323.00	108.00	14.00	bd	bd	bd
	Arith Avg	7.42	317.79	186.63	19.00	24.83	257.58	10.29	6.52	41.79	29.63	3.00	9.79	18.25	#DIV/0!	357.75	148.79	9.92	#DIV/0!	#DIV/0!	#DIV/0!
	Median	8.00	296.50	184.50	18.00	21.00	238.00	8.00	4.00	21.50	27.50	#DIV/0!	3.00	13.50	#DIV/0!	357.00	152.50	8.50	#DIV/0!	#DIV/0!	#DIV/0!
	Std Dev	1.93	68.16	35.39	6.19	15.51	79.46	8.76	7.24	43.12	10.90	0.00	17.70	12.68	#DIV/0!	28.61	24.67	5.50	#DIV/0!	#DIV/0!	#DIV/0!

**XRF RESULTS AND STATISTICS – TRACE (CONTINUED)**



<b>BENE ORE FEED GRADES</b>				
%				
Phosphate Rock sampled at After secondary crushing (-25mm)				
	P2O5	FE2O3	AL2O3	
10/24/00 18:00	21.69	1.78	1.50	
10/25/00 6:00	21.12	1.27	1.47	
<b>Average</b>	<b>21.41</b>	<b>1.52</b>	<b>1.48</b>	
11/14/00 18:00	23.13	1.37	1.47	
11/15/00 6:00	22.96	1.06	1.32	
	<b>23.05</b>	<b>1.22</b>	<b>1.39</b>	
12/11/00 18:00	22.07	1.38	1.83	
12/12/00 6:00	22.25	1.52	1.85	
12/12/00 18:00	22.89	1.43	1.66	
	22.40	1.44	<b>1.78</b>	
1/16/01 18:00	23.97	1.38	1.96	
1/17/01 6:00	24.89	1.25	1.66	
1/17/01 18:00	26.16	1.45	1.58	
	25.01	1.36	<b>1.73</b>	
5/2/01 18:00	22.75	1.53	2.01	
5/3/01 6:00	24.43	1.66	1.65	
5/3/01 18:00	21.87	1.48	2.09	
	23.02	1.56	<b>1.91</b>	
6/12/01 18:00	21.19	1.26	1.73	
6/13/01 6:00	22.36	1.32	1.42	
6/13/01 18:00	22.42	1.17	1.71	
	21.99	1.25	<b>1.62</b>	
7/3/01 18:00	23.13	1.41	2.03	
7/4/01 6:00	23.39	1.25	1.71	
7/4/01 18:00	21.57	1.91	2.05	
	22.70	1.52	<b>1.93</b>	
8/27/01 18:00	22.39	1.37	2.21	
8/28/01 6:00	26.40	1.17	1.42	
8/28/01 18:00	25.52	0.97	1.51	
	24.77	1.17	<b>1.71</b>	
9/25/01 18:00	23.40	1.28	1.28	
9/26/01 6:00	22.02	1.09	1.22	
9/26/01 18:00	22.68	0.97	1.18	
	22.70	1.11	<b>1.23</b>	

Date	%P2O5	Mean	+2SD	-2SD
Oct-00	21.40	22.96	25.10	20.82
Nov-00	23.04	22.96	25.10	20.82
Dec-00	22.40	22.96	25.10	20.82
Jan-01	25.01	22.96	25.10	20.82
Feb-01	22.62	22.96	25.10	20.82
Mar-01	22.18	22.96	25.10	20.82
Apr-01	23.72	22.96	25.10	20.82
May-01	23.02	22.96	25.10	20.82
Jun-01	21.99	22.96	25.10	20.82
Jul-01	22.69	22.96	25.10	20.82
Aug-01	24.77	22.96	25.10	20.82
Sep-01	22.70	22.96	25.10	20.82
Mean	22.96			
SD	1.07			

**BENEFICIATION PLANT FEED GRADES OVER SLURRY SAMPLING PERIOD  
(WMCF ICP RESULTS FROM PIMS)**

Date	Average %P2O5 (month)	Average % P2O5 (all)	2SD	2SD
Oct-00	22.62	23.05	21.54	24.56
		23.05		
Nov-00	23.05	23.05	21.54	24.56
		23.05		
Dec-00	22.20	23.05	21.54	24.56
		23.05		
Jan-01	24.39	23.05	21.54	24.56
		23.05		
Feb-01	23.68	23.05	21.54	24.56
		23.05		
Mar-01	23.26	23.05	21.54	24.56
		23.05		
Apr-01	22.73	23.05	21.54	24.56
		23.05		
May-01	23.22	23.05	21.54	24.56
		23.05		
Jun-01	22.73	23.05	21.54	24.56
		23.05		
Jul-01	23.03	23.05	21.54	24.56
		23.05		
Aug-01	21.66	23.05	21.54	24.56
		23.05		
Sep-01	24.04	23.05	21.54	24.56
<b>Avg</b>	<b>23.05</b>			
<b>SD</b>	<b>0.76</b>			
<b>plus2SD</b>	<b>24.56</b>			
<b>minus2SD</b>	<b>21.54</b>			

**PHOSPHORIC ACID PLANT FEED GRADES OVER SLURRY SAMPLING PERIOD (WMCF ICP RESULTS FROM PIMS)**

Date	Filter recovery efficiency	Acid produced:rock input efficiency	Input - Losses efficiency
Oct-00	94.6	124.8	87.3
Nov-00	83.7	94.7	83.3
Dec-00	91.8	94.9	89.7
Jan-01	91.3	105.8	86.3
Feb-01	92	90.6	90.6
Mar-01	92.8	88.8	92.5
Apr-01	91.9	88.1	91.3
May-01	92.4	90.4	91.4
Jun-01	87.6	88.4	84.6
Jul-01	86.8	90.1	82.9
Aug-01	74.7	99.4	74.9
Sep-01	89.3	92.1	84.3

**PHOSPHORIC ACID PLANT RECOVERIES (%) OVER SLURRY SAMPLING PERIOD (WMCF CALCULATIONS FROM PIMS)**

XRF Ba	Solid Mn	Solid Sr	Solid Y	XRF Ti	ICP Ba	Liquid Mn	Liquid Sr	Liquid Y	ICP Ti	ppm XRF:	Solid Cr	Solid Co	Solid Cu	Solid Ni	Solid Pb	Solid Sc	Solid Zn	ppb ICP Cr	Liquid Cr	Co	Liquid Co	Cu	Liquid Cu	Ni	Liquid Ni	Solid V	
357	226	367	141	182	590	107	14	30	2700		16	3	13	3	13	10	9	1800	1.8	710	0.7	1760	1.8	1500	1.5	10	
317	196	402	146	172	946	107	14	33	2900		16	4	12	2	14	6	6	2090	2.1	790	0.8	2000	2	1650	1.6	15	
326	295	370	157	175	615	113	14	33	4690		16	3	14	1	11	7	8	2860	2.9	1106	1.1	2250	2.2	2370	2.4	19	
294	390	373	179	146	654	112	14	32	4400		20	4	15	5	11	10	7	2720	2.7	1060	1.1	2140	2.1	2240	2.2	21	
294	189	359	152	214	1915	110	15	31	4400		21	5	12	2	12	8	11	2890	2.9	1350	1.3	2320	2.3	2450	2.4	18	
317	219	384	166	193	1640	109	16	30	4230		16	3	13	0	13	8	8	2720	2.7	1280	1.3	2200	2.2	2343	2.3	17	
302	242	401	176	191	724	114	15	22	4700		16	4	137	5	39	7	5	2990	3	1400	1.4	2360	2.4	2420	2.4	18	
316	349	377	184	180	820	113	15	21	4090		23	4	52	3	35	7	7	2610	2.6	1260	1.3	2120	2.1	2190	2.2	25	
275	234	340	155	163	788	116	19	11	3240		32	4	14	28	14	10	32	2580	2.6	1140	1.1	2820	2.8	2120	2.1	18	
248	140	374	173	143	688	113	18	10	2140		26	3	12	25	15	6	14	2530	2.5	1090	1.1	2750	2.7	2080	2.1	11	
546	183	355	121	193	2990	111	17	22	4120		22	22	135	8	25	9	10	3140	3.1	1560	1.6	2810	2.8	2340	2.3	15	
335	169	372	137	188	1830	109	16	20	3740		24	25	42	10	15	9	10	2800	2.8	1450	1.4	2620	2.6	2190	2.2	15	
280	209	353	153	191	2170	92	13	17	2880		17	13	17	2	12	6	9	2160	2.2	1330	1.3	2920	2.9	2070	2.1	15	
287	144	389	160	195	2280	93	13	19	2840		19	10	15	1	11	8	15	2110	2.1	1310	1.3	2780	2.8	2060	2.1	13	
324	201	362	150	171	1730	93	13	21	2850		19	8	61	1	17	7	6	2170	2.2	1310	1.3	2210	2.2	2230	2.2	16	
299	223	375	160	167	1620	93	13	21	2720		18	9	33	0	16	9	6	2010	2	1240	1.2	2570	2.6	2100	2.1	13	
489	275	327	106	203	1120	109	11	30	3900		23	17	99	4	12	4	10	2530	2.5	1740	1.7	3270	3.3	2510	2.5	22	
344	325	338	113	193	1310	109	10	32	3700		30	21	47	4	12	8	11	2450	2.4	1700	1.7	3200	3.2	2460	2.5	27	
276	306	338	161	187	3560	126	9	31	4100		31	9	19	3	14	8	7	2750	2.7	1820	1.8	4490	4.5	2590	2.6	21	
261	243	344	167	169	4270	126	10	31	4000		21	8	16	0	13	8	7	2670	2.7	1760	1.8	4370	4.4	2550	2.6	15	
284	407	269	91	331	1000	159	11	47	7630		93	22	25	10	11	8	14	3840	3.8	2170	2.2	5770	5.8	3500	3.5	36	
265	347	323	108	203	1020	159	12	48	7920		35	35	24	8	14	7	13	3920	3.9	2290	2.3	5910	5.9	3680	3.7	28	
328	404	339	165	165	1080	138	25	51	6200		21	6	148	8	67	8	6	2690	2.7	2110	2.1	4880	4.9	3540	3.5	28	
263	266	355	150	164	1150	134	24	47	6800		21	5	28	4	22	9	7	2970	3	2290	2.3	5320	5.3	3880	3.9	20	
					ppb	ppm	ppm	ppm	ppb																		

**SELECTED TRACE ELEMENTS TRENDS, PG SLURRY**

	Pb	Liquid Pb	Sc	Liquid Sc	V	Liquid V	Zr	Liquid Zr
	72	0.07	310	0.31	2800	2.8	313	0.31
	102	0.1	340	0.34	3100	3.1	382	0.38
	87	0.09	670	0.67	4680	4.7	476	0.48
	89	0.09	600	0.6	4400	4.4	448	0.45
	184	0.18	610	0.61	4800	4.8	442	0.44
	160	16	580	0.58	4590	4.6	422	0.42
	105	0.1	890	0.89	5400	5.4	480	0.48
	101	0.1	690	0.69	4750	4.7	405	0.4
	141	14	880	0.88	4150	4.1	315	0.32
	141	0.14	645	0.64	4060	4.1	301	0.3
	163	0.16	690	0.69	3690	3.7	320	0.32
	142	0.14	580	0.58	4400	4.4	303	0.3
	183	0.18	480	0.48	4020	4	286	0.29
	183	0.18	470	0.47	4010	4	278	0.28
	171	0.17	710	0.71	4090	4.1	260	0.26
	118	0.12	640	0.64	3890	3.9	232	0.23
	94	0.09	800	0.8	5100	5.1	340	0.34
	96	0.1	780	0.78	4900	4.9	337	0.34
	318	0.32	1020	1	5400	5.4	370	0.37
	343	0.34	960	0.96	5140	5.1	342	0.34
	163	0.16	1240	1.24	8040	8	970	0.97
	163	0.16	1290	1.29	8510	8.5	780	0.78
	189	0.19	2430	2.43	6981	6.98	552	0.55
	189	0.19	2570	2.57	7580	7.6	529	0.53

**SELECTED TRACE ELEMENTS TRENDS, PG SLURRY (CONTINUED)**

XRF %:	SiO2	TiO2	Al2O3	Fe2O3T	MnO	MgO	CaO	Na2O	K2O	P2O5	SO3	F	LOI
Avg DH	22.26923	0.04382	0.594917	0.123258	0.029766	0.100676	23.87054	0.115175	0.134471	2.587061	30.32339	0.554879	19.78242
PG011	33.6445	0.0455	0.52725	0.21275	0.049	0.1145	17.897	0.09625	0.104	3.96175	21.7735	0.3665	21.21675
Avg Columns HH	21.14	0.03	0.37	0.08	0.02	0.03	20.04	0.11	0.08	2.16	40.17		15.22
Avg Columns DH	35.58925	0.035125	0.536	0.125625	0.033125	0.078125	17.0525	0.09775	0.096625	2.648	27.4415	0.5015	15.7355
Avg all DH & PG011	30.50099	0.041482	0.552722	0.153878	0.037297	0.097767	19.60668	0.103058	0.111699	3.065604	26.5128	0.474293	18.91156
Avg all DH no PG011	28.92924	0.039473	0.565458	0.124441	0.031445	0.0894	20.46152	0.106463	0.115548	2.61753	28.88245	0.528189	17.75896

**XRF MAJORS AVERAGES**

Sample	U238	Ra226	Pb210	Po210
2000 Solid		0.02	0.22	0.37
2003 Solid		0.05	0.37	0.33
2000 Liquor		29.75	0.29	1
2003 Liquor		110	2.7	22

**RADIONUCLIDE RESULTS, 2000 AND 2003 SAMPLING**