

**Table 2: Rock
Sample Data**

Sample ID	Geologic Unit	Description	7 1/2 minute Quadrangle Location	Latitude	Longitude
Travertine					
10-18-06-1	Verde	tan travertine	Lk Montezuma	34.648769	-111.785197
10-21-06-6	Verde	tan travertine	Lk Montezuma	34.649647	-111.755792
10-21-06-7	Verde	tan travertine	Lk Montezuma	34.651589	-111.753039
10-21-06-9	Verde	tan mg travertine	Lk Montezuma	34.660433	-111.751822
Verde Limestone					
10-21-06-2	Verde	tan siltstone	Camp Verde	34.612142	-111.771681
10-21-06-3	Verde	silty limestone	Camp Verde	34.613814	-111.770697
10-21-06-5	Verde	tan limestone	Camp Verde	34.620014	-111.759086
10-22-06-5	Verde	tan limestone	Casner Butte	34.653097	-111.740281
Other Verde					
10-21-06-1	Verde	red mudstone	Camp Verde	34.621442	-111.769319
10-21-06-4	Verde	red sandstone	Camp Verde	34.618783	-111.758936
10-22-06-1	Verde	white chalk	Camp Verde	34.530650	-111.786261
10-22-06-2	Verde	white chalk	Camp Verde	34.530986	-111.786261
10-22-06-3	Verde	tan calcareous mudstone	Camp Verde	34.530172	-111.783203
10-23-06-1A	Verde	red mudstone	Lk Montezuma	34.659183	-111.781511
10-23-06-1B	Verde	red calcareous sandstone	Lk Montezuma	34.659183	-111.781511
10-23-06-2	Verde	basalt cobble conglomerate	Lk Montezuma	34.649528	-111.761142
10-24-06-1	Verde	green mudstone	Camp Verde	34.606328	-111.869611
10-24-06-2	Verde	green claystone	Camp Verde	34.610667	-111.863725
10-24-06-3	Verde	evaporite with sulfate casts	Camp Verde	34.610667	-111.863725
10-24-06-4	Verde	red collapse fill	Lk Montezuma	34.631111	-111.833361
10-25-06-1	Verde	gray travertine	Lk Montezuma	34.663103	-111.752861
Basalt					
10-21-06-8	Young basalt	basalt	Casner Butte	34.677172	-111.739975
10-22-06-6	Young basalt	basalt	Casner Butte	34.657083	-111.733431
10-23-06-3	Young basalt	basalt	Casner Butte	34.719000	-111.720850
10-23-06-4	Young basalt	basalt	Munds Mtn	34.763550	-111.655850

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Upgradient					
10-24-06-5	Schnebley Hill	red sandstone	Munds Mtn	34.869631	-111.719283
10-22-06-4	Hermit	red siltstone	Casner Butte	34.676503	-111.720161
10-24-06-6	Hermit	red sandstone	Munds Mtn	34.866461	-111.743222
10-25-06-2	Supai	sandstone	Matterhorn	35.046200	-112.291400
Pk-LW	Kaibab	silty limestone	Apache Maid Mtn	34.685891	-111.573820
Pc-LW	Coconino	sandstone	Apache Maid Mtn	34.685891	-111.573820

ins = insufficient sample

ICP-AES = inductively coupled plasma, atomic emission spectroscopy and ICP-MS 55 element combination, contract lab

ICP-MS = inductively coupled plasma, mass spectroscopy only, Mineral's Lab

**Table 2: Rock
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Sample ID	Collection Date	$^{87}\text{Sr}/^{86}\text{Sr}$	ICP-MS Ag ppm	ICP-AES Ag ppm	ICP-MS Al ppm	ICP-AES Al %	ICP-MS As ppm
Travertine							
10-18-06-1	10/18/2006	0.70839	<1	<1	354	0.03	46.4
10-21-06-6	10/21/2006	0.70818	<1	<1	205	0.02	35.3
10-21-06-7	10/21/2006	0.70811	<1	<1	616	0.05	32.5
10-21-06-9	10/21/2006	0.70848	<1	<1	567	0.04	59.3
Verde Limestone							
10-21-06-2	10/21/2006	0.70933	<1	<1	2570	0.22	4.4
10-21-06-3	10/21/2006	0.70973	<1	<1	4080	0.33	4.6
10-21-06-5	10/21/2006	0.70920	<1	<1	1860	0.14	2.7
10-22-06-5	10/22/2006	0.70902	<1	<1	9070	0.5	6.2
Other Verde							
10-21-06-1	10/21/2006	0.71356	<1	<1	32900	2.67	26.3
10-21-06-4	10/21/2006	0.71030	<1	<1	21800	1.56	55.2
10-22-06-1	10/22/2006	0.70973	<1	<1	12800	0.7	30.5
10-22-06-2	10/22/2006	0.70898	<1	<1	13000	0.73	1
10-22-06-3	10/22/2006	0.71029	<1	<1	114000	6.25	142
10-23-06-1A	10/23/2006	0.71124	<1	<1	78800	6.83	146
10-23-06-1B	10/23/2006	0.71049	<1	<1	32000	2.98	40.1
10-23-06-2	10/23/2006	0.70557	<1	<1	45200	4.37	28
10-24-06-1	10/24/2006	0.71014	<1	<1	57800	5.15	87.1
10-24-06-2	10/24/2006	0.70966	<1	<1	54800	4.75	60.2
10-24-06-3	10/24/2006	0.70926	<1	<1	21400	4.67	23.2
10-24-06-4	10/24/2006	0.71206	<1	<1	72500	5.86	14.9
10-25-06-1	10/25/2006	ins	ins	ins	ins	ins	ins
Basalt							
10-21-06-8	10/21/2006	0.70362	<1	<1	123000	7.51	1
10-22-06-6	10/22/2006	0.70508	<1	<1	154000	8.29	3.5
10-23-06-3	10/23/2006	0.70438	<1	<1	79100	7.72	1.8
10-23-06-4	10/23/2006	0.70424	<1	<1	80100	7.74	1.7

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Sample ID	Collection Date	$^{87}\text{Sr}/^{86}\text{Sr}$	ICP-MS Ag ppm	ICP-AES Ag ppm	ICP-MS Al ppm	ICP-AES Al %	ICP-MS As ppm
Upgradient							
10-24-06-5	10/24/2006	0.72213	<1	<1	35300	2.99	9.5
10-22-06-4	10/22/2006	0.71947	<1	<1	79700	4.09	8.7
10-24-06-6	10/24/2006	0.72183	<1	<1	38100	3.63	12.8
10-25-06-2	10/25/2006	0.71939	<1	<1	8080	0.69	2.4
Pk-LW	10/25/2006	0.71630	<1	<1	5410	0.52	1.7
Pc-LW	10/25/2006	0.71003	<1	<1	9450	0.9	1.3

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Sample ID	ICP-AES As ppm	ICP-AES B ppm	ICP-MS Ba ppm	ICP-AES Ba ppm	ICP-MS Be ppm	ICP-AES Be ppm	ICP-MS Bi ppm	ICP-AES Bi ppm
Travertine								
10-18-06-1	40	10	164	150	0.12	<5	< 0.06	<0.1
10-21-06-6	<30	<10	202	146	0.12	<5	< 0.06	<0.1
10-21-06-7	<30	<10	128	99.1	0.03	<5	< 0.06	<0.1
10-21-06-9	50	<10	96.1	78.4	0.94	<5	< 0.06	<0.1
Verde Limestone								
10-21-06-2	<30	<10	20.6	17.8	0.28	<5	< 0.06	<0.1
10-21-06-3	<30	<10	34.8	34.2	0.47	<5	< 0.06	<0.1
10-21-06-5	<30	<10	17	16.7	0.46	<5	< 0.06	<0.1
10-22-06-5	<30	<10	109	74.4	0.39	<5	< 0.06	<0.1
Other Verde								
10-21-06-1	<30	30	232	201	0.78	<5	0.08	0.1
10-21-06-4	50	10	937	797	0.72	<5	< 0.06	<0.1
10-22-06-1	<30	50	101	82	0.33	<5	< 0.06	<0.1
10-22-06-2	<30	<10	120	91	0.4	<5	< 0.06	<0.1
10-22-06-3	110	160	768	560	2.3	<5	0.17	0.2
10-23-06-1A	120	40	1090	945	1.8	<5	0.18	0.2
10-23-06-1B	30	10	316	284	0.87	<5	0.08	<0.1
10-23-06-2	<30	<10	826	745	1	<5	< 0.06	<0.1
10-24-06-1	80	310	406	365	1.6	<5	0.18	0.2
10-24-06-2	50	260	426	394	1.3	<5	0.14	0.1
10-24-06-3	50	250	146	395	0.66	<5	0.07	0.1
10-24-06-4	<30	70	483	405	1.7	<5	0.24	0.2
10-25-06-1	ins		ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	<30	<10	542	431	1.4	<5	< 0.06	<0.1
10-22-06-6	<30	<10	3040	2190	1.5	<5	< 0.06	<0.1
10-23-06-3	<30	<10	292	279	0.79	<5	< 0.06	<0.1
10-23-06-4	<30	<10	376	358	0.93	<5	< 0.06	<0.1

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Sample ID	ICP-AES As ppm	ICP-AES B ppm	ICP-MS Ba ppm	ICP-AES Ba ppm	ICP-MS Be ppm	ICP-AES Be ppm	ICP-MS Bi ppm	ICP-AES Bi ppm
Upgradient								
10-24-06-5	<30	30	282	233	1.1	<5	0.07	<0.1
10-22-06-4	<30	40	456	311	1.7	<5	0.06	<0.1
10-24-06-6	<30	40	268	263	1.1	<5	0.08	<0.1
10-25-06-2	<30	<10	74	63.9	0.23	<5	< 0.06	<0.1
Pk-LW	<30	10	74.3	74.4	0.18	<5	< 0.06	<0.1
Pc-LW	<30	<10	16.9	16.8	0.18	<5	< 0.06	<0.1

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Sample ID	ICP-MS Ca ppm	ICP-AES Ca %	ICP-MS Cd ppm	ICP-AES Cd ppm	ICP-MS Ce ppm	ICP-AES Ce ppm	ICP-MS Co ppm	ICP-AES Co ppm
Travertine								
10-18-06-1	394000	34.7	0.09	<0.2	0.53	0.4	0.39	1
10-21-06-6	481000	32.2	0.1	<0.2	0.24	0.2	1.2	1.5
10-21-06-7	486000	>35	0.01	<0.2	0.7	0.5	0.25	0.8
10-21-06-9	504000	>35	0.75	0.8	1.7	1.2	0.47	1
Verde Limestone								
10-21-06-2	417000	>35	0.16	0.3	2.8	2.3	0.43	1.1
10-21-06-3	434000	>35	0.13	<0.2	4.7	3.6	1.3	2
10-21-06-5	467000	>35	0.19	<0.2	2.7	2	0.66	1.3
10-22-06-5	488000	34.2	0.14	<0.2	6.9	5.2	1.6	1.6
Other Verde								
10-21-06-1	213000	17.6	0.09	<0.2	29.9	23.9	6.9	7.4
10-21-06-4	275000	21.4	0.08	<0.2	23.9	18	5.3	5.5
10-22-06-1	238000	15.8	0.05	<0.2	11.4	7.8	2.1	2.1
10-22-06-2	256000	18	0.04	<0.2	15.5	11.3	1.4	1.4
10-22-06-3	85800	5.71	0.33	0.2	98.2	65.8	17.3	14.5
10-23-06-1A	18400	1.76	0.05	<0.2	79.3	73.9	42.4	40.1
10-23-06-1B	199000	17.1	0.12	<0.2	37.2	31.4	11.4	10.4
10-23-06-2	172000	15.3	0.11	<0.2	66.2	63.8	12.6	12
10-24-06-1	17800	1.72	0.12	<0.2	48.4	45.1	10.6	9.4
10-24-06-2	20100	1.76	0.09	<0.2	49.1	44.6	11.6	10.1
10-24-06-3	44800	1.74	0.08	<0.2	23.6	44.9	7	10.3
10-24-06-4	54900	4.5	0.06	<0.2	69.7	55.8	15.1	12.2
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	95800	6.95	0.05	<0.2	48	34.8	57.5	53
10-22-06-6	131000	8.61	0.09	<0.2	329	219	54	43.2
10-23-06-3	73300	7	0.05	<0.2	33.1	33.7	55.1	51.1
10-23-06-4	68900	6.77	0.04	<0.2	36.1	37.1	48.3	50.4

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Sample ID	ICP-MS Ca ppm	ICP-AES Ca %	ICP-MS Cd ppm	ICP-AES Cd ppm	ICP-MS Ce ppm	ICP-AES Ce ppm	ICP-MS Co ppm	ICP-AES Co ppm
Upgradient								
10-24-06-5	23400	2.02	0.05	<0.2	39.9	33.2	4.7	3.8
10-22-06-4	2160	0.25	0.02	<0.2	52.5	35	8.2	6.7
10-24-06-6	29400	2.88	0.02	<0.2	40.7	40.7	4.5	4.5
10-25-06-2	226	0.1	<0.007	<0.2	5.3	5.1	0.63	0.5
Pk-LW	105000	10.3	0.4	0.5	3.7	4	0.35	<0.5
Pc-LW	1780	0.32	0.06	<0.2	5.8	5.8	1	0.8

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Sample ID	ICP-MS Cr ppm	ICP-AES Cr ppm	ICP-MS Cs ppm	ICP-AES Cs ppm	ICP-MS Cu ppm	ICP-AES Cu ppm	ICP-AES Dy ppm	ICP-AES Er ppm
Travertine								
10-18-06-1	2.3	<10	0.12	0.1	2.9	<5	0.11	0.05
10-21-06-6	1.9	<10	0.08	<0.1	2.1	<5	<0.05	<0.05
10-21-06-7	2	<10	0.2	0.2	<2	<5	<0.05	0.1
10-21-06-9	2.8	<10	0.13	0.1	7.6	<5	0.21	0.17
Verde Limestone								
10-21-06-2	7.1	<10	0.94	0.9	3.1	<5	0.3	0.18
10-21-06-3	9.3	20	3.1	2.9	5.1	6	0.55	0.32
10-21-06-5	4.3	60	0.65	0.6	3.6	6	0.2	0.19
10-22-06-5	10.2	10	2.5	1.9	4.7	<5	0.34	0.24
Other Verde								
10-21-06-1	45	60	16.9	16.2	16	13	1.82	1.05
10-21-06-4	40	70	4.1	3.7	15.8	12	1.14	0.67
10-22-06-1	7.3	<10	4.1	3.5	5.8	<5	0.47	0.33
10-22-06-2	6.4	10	0.92	0.8	5	7	0.86	0.55
10-22-06-3	72	70	40.5	31.8	50.9	46	4.09	2.35
10-23-06-1A	72.3	70	24.5	24.8	47.5	34	4.06	2.09
10-23-06-1B	157	210	6.6	6.5	19.4	15	2.43	1.36
10-23-06-2	342	430	6.8	7.4	39.1	34	3.23	1.72
10-24-06-1	48.6	50	7.9	8.7	35.2	30	3.08	1.8
10-24-06-2	49.3	50	5.6	6.2	28	23	3.12	1.78
10-24-06-3	18.6	70	3.7	6.4	16	23	3.11	1.72
10-24-06-4	75.1	60	66.9	61.5	48	40	3.07	1.73
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	363	290	0.48	0.4	85.3	68	3.79	1.99
10-22-06-6	77.9	70	3.7	2.9	104	87	4.96	2.5
10-23-06-3	376	340	0.2	0.2	88.3	87	4.01	2.27
10-23-06-4	373	350	0.12	0.1	91.1	84	4.05	2.1

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Sample ID	ICP-MS Cr ppm	ICP-AES Cr ppm	ICP-MS Cs ppm	ICP-AES Cs ppm	ICP-MS Cu ppm	ICP-AES Cu ppm	ICP-AES Dy ppm	ICP-AES Er ppm
Upgradient								
10-24-06-5	30.4	40	2.9	2.9	7.2	<5	2.96	1.87
10-22-06-4	25.2	60	10.3	8.2	17.9	12	3.05	1.87
10-24-06-6	34.3	40	3.2	3.7	9.9	8	3.8	2.25
10-25-06-2	2.4	<10	0.51	0.5	2	<5	0.37	0.21
Pk-LW	10.3	20	0.21	0.2	2	<5	0.73	0.52
Pc-LW	3.4	<10	0.37	0.4	3.5	<5	0.55	0.33

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Sample ID	ICP-AES Eu ppm	ICP-MS Fe ppm	ICP-AES Fe %	ICP-MS Ga ppm	ICP-AES Ga ppm	ICP-MS K ppm	ICP-AES K %	ICP-AES Gd ppm
Travertine								
10-18-06-1	<0.05	337	0.02	0.1	<1	145	0.05	0.07
10-21-06-6	<0.05	404	0.02	0.05	<1	103	0.06	<0.05
10-21-06-7	<0.05	346	0.02	0.1	<1	205	0.09	<0.05
10-21-06-9	<0.05	822	0.05	0.1	<1	146	0.08	0.22
Verde Limestone								
10-21-06-2	0.07	1170	0.09	0.5	<1	479	0.1	0.22
10-21-06-3	0.17	2070	0.18	0.8	<1	843	0.14	0.6
10-21-06-5	0.06	918	0.08	0.32	<1	377	0.11	0.2
10-22-06-5	0.12	3400	0.25	1.3	1	1860	0.17	0.41
Other Verde								
10-21-06-1	0.58	14500	1.28	6.2	5	8990	0.86	2.07
10-21-06-4	0.43	11800	0.99	3.8	3	3130	0.32	1.46
10-22-06-1	0.18	5020	0.38	1.9	1	3460	0.31	0.58
10-22-06-2	0.15	4410	0.37	2	2	3170	0.28	0.86
10-22-06-3	1.17	43800	3.48	16.8	14	34400	2.22	4.98
10-23-06-1A	1.24	46400	4.02	18	15	19800	1.76	4.56
10-23-06-1B	0.71	22200	1.96	7	6	7840	0.83	2.71
10-23-06-2	1.37	49200	4.48	10.5	9	5000	0.55	4.51
10-24-06-1	0.87	32900	2.9	13.1	11	20800	1.97	3.71
10-24-06-2	0.81	27400	2.35	12.5	10	21800	2.03	3.56
10-24-06-3	0.91	13000	2.33	5.2	10	8520	1.97	3.36
10-24-06-4	0.85	39400	3.18	17.4	13	21000	1.78	3.81
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	1.18	90500	7.61	17.9	16	10500	0.8	3.81
10-22-06-6	2.89	85200	6.74	18.6	15	12800	0.86	9.72
10-23-06-3	1.18	88200	8.22	17.1	15	4830	0.54	3.96
10-23-06-4	1.34	78000	7.51	17	16	6160	0.67	4.24

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Sample ID	ICP-AES Eu ppm	ICP-MS Fe ppm	ICP-AES Fe %	ICP-MS Ga ppm	ICP-AES Ga ppm	ICP-MS K ppm	ICP-AES K %	ICP-AES Gd ppm
Upgradient								
10-24-06-5	0.62	11600	0.97	7.1	5	22200	1.86	3.05
10-22-06-4	0.67	14700	1.15	9.8	8	36600	2.28	3.36
10-24-06-6	0.74	14100	1.35	7.7	7	23400	2.25	3.59
10-25-06-2	0.15	1160	0.1	1.7	1	5240	0.49	0.57
Pk-LW	0.16	1050	0.08	0.92	<1	4420	0.47	0.79
Pc-LW	0.16	718	0.07	2.2	2	1130	0.15	0.58

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Sample ID	ICP-AES Ge ppm	ICP-AES Hf ppm	ICP-AES Ho ppm	ICP-AES In ppm	ICP-MS La ppm	ICP-AES La ppm	ICP-MS Li ppm	ICP-AES Li ppm
Travertine								
10-18-06-1	<1	<1	<0.05	<0.2	0.29	0.2	5.8	<10
10-21-06-6	<1	<1	<0.05	<0.2	0.14	0.1	8.8	<10
10-21-06-7	<1	<1	<0.05	<0.2	0.38	0.3	11.8	<10
10-21-06-9	<1	<1	0.05	<0.2	0.87	0.7	8.3	<10
Verde Limestone								
10-21-06-2	<1	<1	<0.05	<0.2	1.8	1.5	4.8	<10
10-21-06-3	<1	<1	0.1	<0.2	4	3.1	7.1	<10
10-21-06-5	<1	<1	<0.05	<0.2	2	1.4	5.6	<10
10-22-06-5	<1	<1	0.07	<0.2	3.8	2.8	7.2	<10
Other Verde								
10-21-06-1	1	3	0.36	<0.2	17.8	14.3	25.7	20
10-21-06-4	<1	2	0.22	<0.2	15	11	24.5	20
10-22-06-1	<1	<1	0.09	<0.2	6.1	4.1	226	170
10-22-06-2	<1	<1	0.18	<0.2	8.4	5.8	61.8	40
10-22-06-3	1	4	0.78	<0.2	52.8	35.9	212	160
10-23-06-1A	2	5	0.71	<0.2	37.7	34.9	45.5	40
10-23-06-1B	<1	4	0.45	<0.2	22.2	19.3	15.5	10
10-23-06-2	<1	3	0.56	<0.2	38.1	37.1	12.6	10
10-24-06-1	<1	3	0.57	<0.2	27.8	25.8	238	230
10-24-06-2	1	3	0.56	<0.2	26.1	23.7	208	190
10-24-06-3	1	3	0.53	<0.2	12.4	23.9	218	190
10-24-06-4	2	4	0.53	<0.2	31.6	25.3	76.5	60
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	1	2	0.7	<0.2	26.1	18.6	15.1	<10
10-22-06-6	1	3	0.85	<0.2	180	117	19.6	<10
10-23-06-3	1	2	0.74	<0.2	17.9	18.1	7.8	<10
10-23-06-4	1	2	0.73	<0.2	19.3	19.3	8.2	<10

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Ge ppm	ICP-AES Hf ppm	ICP-AES Ho ppm	ICP-AES In ppm	ICP-MS La ppm	ICP-AES La ppm	ICP-MS Li ppm	ICP-AES Li ppm
Upgradient								
10-24-06-5	<1	9	0.58	<0.2	20.8	17.6	24.4	20
10-22-06-4	2	6	0.57	<0.2	29.1	18.8	58.6	40
10-24-06-6	1	10	0.7	<0.2	21.4	21	23.2	20
10-25-06-2	<1	<1	0.07	<0.2	3.4	3.1	2.3	<10
Pk-LW	<1	<1	0.13	<0.2	5	4.7	1.7	<10
Pc-LW	<1	2	0.09	<0.2	3.6	3.6	2.8	<10

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Lu ppm	ICP-MS Mg ppm	ICP-AES Mg %	ICP-MS Mn ppm	ICP-AES Mn %	ICP-MS Mo ppm	ICP-AES Mo ppm	ICP-MS Na ppm
Travertine								
10-18-06-1	<0.05	4640	0.43	7.6	<0.01	< 0.05	<2	258
10-21-06-6	<0.05	6140	0.37	25.9	<0.01	< 0.05	<2	384
10-21-06-7	<0.05	7920	0.5	9.2	<0.01	< 0.05	<2	384
10-21-06-9	<0.05	7860	0.49	19	<0.01	< 0.05	<2	408
Verde Limestone								
10-21-06-2	<0.05	2850	0.26	27.2	<0.01	0.2	<2	76.9
10-21-06-3	0.06	2670	0.23	108	<0.01	0.36	<2	81.4
10-21-06-5	<0.05	2850	0.22	36.4	<0.01	0.1	<2	74.8
10-22-06-5	<0.05	6990	0.43	402	0.03	0.08	<2	936
Other Verde								
10-21-06-1	0.14	6100	0.49	302	0.03	1.1	<2	913
10-21-06-4	0.07	4850	0.35	188	0.02	1.8	2	209
10-22-06-1	<0.05	229000	12.6	167	0.01	0.95	<2	1870
10-22-06-2	0.06	204000	11.8	276	0.02	< 0.05	<2	2490
10-22-06-3	0.29	84000	4.66	636	0.05	11.9	13	14700
10-23-06-1A	0.26	20800	1.86	1270	0.11	1.3	<2	6470
10-23-06-1B	0.18	9200	0.87	348	0.03	0.33	<2	3500
10-23-06-2	0.2	9010	0.89	528	0.05	0.44	<2	7000
10-24-06-1	0.2	102000	9.23	462	0.04	3.9	4	4340
10-24-06-2	0.21	101000	8.91	499	0.04	1.6	<2	6570
10-24-06-3	0.23	190000	8.89	406	0.04	1.1	<2	1740
10-24-06-4	0.21	25700	2.14	607	0.05	0.77	<2	8360
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	0.24	83800	5.22	1300	0.12	0.52	<2	30800
10-22-06-6	0.33	70300	3.88	1450	0.12	0.64	<2	35000
10-23-06-3	0.26	56000	5.41	1260	0.13	0.57	<2	21700
10-23-06-4	0.23	47200	4.82	1070	0.12	0.3	<2	22400

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Lu ppm	ICP-MS Mg ppm	ICP-AES Mg %	ICP-MS Mn ppm	ICP-AES Mn %	ICP-MS Mo ppm	ICP-AES Mo ppm	ICP-MS Na ppm
Upgradient								
10-24-06-5	0.28	13600	1.15	273	0.02	0.38	<2	525
10-22-06-4	0.25	7310	0.39	443	0.03	4.8	5	1170
10-24-06-6	0.38	14700	1.42	270	0.02	0.22	<2	543
10-25-06-2	<0.05	472	0.04	16.9	<0.01	0.07	<2	131
Pk-LW	0.06	65900	6.41	107	<0.01	1.6	<2	188
Pc-LW	<0.05	634	0.07	32.2	<0.01	0.07	<2	<20

**Table 2: Rock
Sample Data**

Sample ID	ICP-MS Nb ppm	ICP-AES Nb ppm	ICP-AES Nd ppm	ICP-MS Ni ppm	ICP-AES Ni ppm	ICP-MS P ppm	ICP-AES P %	ICP-MS Pb ppm
Travertine								
10-18-06-1	0.2	<1	0.2	8.3	<5	193	<0.01	<0.4
10-21-06-6	< 0.1	<1	0.1	9.8	<5	215	0.01	<0.4
10-21-06-7	< 0.1	<1	0.2	7.6	<5	157	0.03	<0.4
10-21-06-9	0.2	<1	0.6	12.2	<5	205	0.01	<0.4
Verde Limestone								
10-21-06-2	0.72	<1	1.4	8.3	<5	109	0.02	0.98
10-21-06-3	0.9	<1	3.1	12.1	<5	178	0.02	1.43
10-21-06-5	0.38	<1	1.2	9.4	<5	151	0.01	0.77
10-22-06-5	2.3	2	2.4	21.6	<5	501	0.03	1.26
Other Verde								
10-21-06-1	6.1	8	12.7	39.3	29	640	0.06	6.78
10-21-06-4	4.4	5	9.5	20.9	11	409	0.05	3.38
10-22-06-1	2.2	2	3.5	9.2	<5	528	0.03	1.69
10-22-06-2	3.4	3	4.9	6.9	<5	391	0.03	2.05
10-22-06-3	30	19	29.8	47.7	35	2140	0.11	15.4
10-23-06-1A	39	26	29.6	145	134	863	0.08	16.8
10-23-06-1B	10	11	16.3	57.9	43	571	0.06	6.47
10-23-06-2	33	26	30.5	129	108	1800	0.18	6.1
10-24-06-1	21	15	22.8	38.9	36	973	0.09	13.5
10-24-06-2	20	12	20.7	36.2	36	1060	0.1	7.73
10-24-06-3	10	13	21.3	18.2	32	780	0.09	4.86
10-24-06-4	24	16	22.7	60.1	47	1040	0.08	16.1
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	33	20	17.9	225	194	2010	0.11	2.67
10-22-06-6	85	51	101	122	93	8200	0.41	9.11
10-23-06-3	26	14	17.7	230	213	1160	0.11	2.92
10-23-06-4	22	19	19.3	171	159	1170	0.11	3.56

**Table 2: Rock
Sample Data**

Sample ID	ICP-MS Nb ppm	ICP-AES Nb ppm	ICP-AES Nd ppm	ICP-MS Ni ppm	ICP-AES Ni ppm	ICP-MS P ppm	ICP-AES P %	ICP-MS Pb ppm
Upgradient								
10-24-06-5	8.8	8	16.1	11.6	17	368	0.05	7.7
10-22-06-4	5.8	8	17.3	24.5	26	724	0.03	7.91
10-24-06-6	5	9	20	12.8	15	387	0.04	6.56
10-25-06-2	0.1	<1	2.9	3.2	9	60.2	<0.01	2.78
Pk-LW	< 0.1	<1	3.7	4.8	<5	1150	0.1	3.23
Pc-LW	0.27	<1	3.6	2	7	224	0.02	5.25

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Pb ppm	ICP-AES Pr ppm	ICP-MS Rb ppm	ICP-AES Rb ppm	ICP-MS Sb ppm	ICP-AES Sb ppm	ICP-MS Sc ppm	ICP-AES Sc ppm
Travertine								
10-18-06-1	<5	0.05	0.49	0.7	<0.04	<0.1	0.2	<5
10-21-06-6	8	<0.05	0.21	0.4	<0.04	<0.1	0.4	<5
10-21-06-7	<5	0.06	0.52	0.8	<0.04	<0.1	0.3	<5
10-21-06-9	9	0.13	0.34	0.6	<0.04	<0.1	1.2	<5
Verde Limestone								
10-21-06-2	8	0.32	2.4	3	<0.04	0.2	0.6	<5
10-21-06-3	7	0.73	4.9	6	<0.04	<0.1	1	<5
10-21-06-5	<5	0.31	1.5	2.1	<0.04	0.1	0.7	<5
10-22-06-5	<5	0.62	6.2	5.9	0.04	<0.1	1.8	<5
Other Verde								
10-21-06-1	8	3.16	43.6	48.3	0.28	0.3	4.9	<5
10-21-06-4	<5	2.29	12.7	13.6	0.1	0.1	6.2	<5
10-22-06-1	<5	0.86	12.5	12.7	0.07	<0.1	1.9	<5
10-22-06-2	<5	1.24	10.2	11.1	0.06	<0.1	1.5	<5
10-22-06-3	16	7.61	148	134	1.1	1	16.6	11
10-23-06-1A	23	7.75	127	128	0.72	0.9	17.2	13
10-23-06-1B	6	4.02	36.1	38.8	0.24	0.3	9.9	8
10-23-06-2	8	7.82	16.9	18.5	0.1	0.2	22.2	18
10-24-06-1	13	5.76	109	113	0.71	0.7	10.7	8
10-24-06-2	7	5.25	98.2	97.5	0.5	0.4	9.9	8
10-24-06-3	10	5.33	35.1	99.3	0.22	0.6	4.1	8
10-24-06-4	13	5.91	211	195	0.82	0.8	12.7	9
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	<5	4.23	9.1	9.5	0.1	<0.1	34.5	24
10-22-06-6	15	26.2	20.1	18.4	0.1	<0.1	44.6	28
10-23-06-3	<5	4.05	8.2	9.4	0.1	0.2	29.6	25
10-23-06-4	<5	4.48	10.8	12.6	0.07	<0.1	28.8	25

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Pb ppm	ICP-AES Pr ppm	ICP-MS Rb ppm	ICP-AES Rb ppm	ICP-MS Sb ppm	ICP-AES Sb ppm	ICP-MS Sc ppm	ICP-AES Sc ppm
Upgradient								
10-24-06-5	6	4.1	51.7	48.4	0.33	0.4	4.7	<5
10-22-06-4	9	4.34	72.4	67.4	0.47	0.6	7	<5
10-24-06-6	7	4.88	55	62.1	0.33	0.5	5.3	<5
10-25-06-2	<5	0.72	12.7	12.7	0.09	0.2	0.8	<5
Pk-LW	8	0.86	9.1	10.4	0.05	<0.1	0.5	<5
Pc-LW	5	0.83	3.6	4.1	0.08	<0.1	1.1	<5

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Sm ppm	ICP-AES Sn ppm	ICP-MS Sr ppm	ICP-AES Sr ppm	ICP-AES Ta ppm	ICP-AES Tb ppm	ICP-MS Th ppm	ICP-AES Th ppm
Travertine								
10-18-06-1	<0.1	<1	257	245	<0.5	<0.05	< 0.1	<0.1
10-21-06-6	<0.1	1	211	176	<0.5	<0.05	< 0.1	<0.1
10-21-06-7	<0.1	1	208	200	<0.5	<0.05	< 0.1	<0.1
10-21-06-9	0.1	<1	115	115	<0.5	<0.05	< 0.1	0.1
Verde Limestone								
10-21-06-2	0.2	<1	110	112	<0.5	<0.05	0.3	0.3
10-21-06-3	0.5	<1	69.8	73.6	<0.5	0.09	0.38	0.5
10-21-06-5	0.2	<1	84.9	89.5	<0.5	<0.05	0.22	0.2
10-22-06-5	0.4	1	156	140	<0.5	0.06	0.44	0.8
Other Verde								
10-21-06-1	2.1	1	98.2	95.7	0.9	0.29	3.64	3.4
10-21-06-4	1.7	1	110	108	0.6	0.22	1.94	1.9
10-22-06-1	0.6	2	951	813	<0.5	0.08	0.83	1
10-22-06-2	0.9	2	363	329	<0.5	0.14	1.45	1.6
10-22-06-3	4.9	1	2410	1920	1.2	0.74	10.2	9
10-23-06-1A	5.2	3	241	199	1.4	0.68	10.4	10.1
10-23-06-1B	2.8	1	148	142	0.7	0.4	4.88	4.3
10-23-06-2	4.8	<1	533	478	1.4	0.59	5.77	5.6
10-24-06-1	3.8	2	467	414	0.9	0.51	8.21	7.3
10-24-06-2	3.5	2	1250	1050	0.8	0.5	7.14	6.1
10-24-06-3	3.5	3	1030	1020	0.7	0.51	3.05	6.1
10-24-06-4	3.9	2	227	181	1	0.54	10.6	8.5
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	3.4	2	552	451	1.1	0.56	2.49	2.1
10-22-06-6	13.1	1	1480	1140	2.2	1.07	17.8	16.1
10-23-06-3	3.5	<1	415	378	0.7	0.65	2.63	2.5
10-23-06-4	3.9	3	470	416	1	0.65	2.57	2.5

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES Sm ppm	ICP-AES Sn ppm	ICP-MS Sr ppm	ICP-AES Sr ppm	ICP-AES Ta ppm	ICP-AES Tb ppm	ICP-MS Th ppm	ICP-AES Th ppm
Upgradient								
10-24-06-5	3.2	2	85.3	73.9	0.6	0.48	5.43	5
10-22-06-4	3	2	140	116	0.6	0.49	5.6	5
10-24-06-6	3.8	2	91.1	92	0.6	0.6	6.09	6.4
10-25-06-2	0.5	<1	34	34.3	<0.5	0.08	0.75	0.8
Pk-LW	0.6	1	41.7	45.8	<0.5	0.11	0.36	0.5
Pc-LW	0.5	<1	37.2	40.4	<0.5	0.09	0.7	0.8

**Table 2: Rock
Sample Data**

Sample ID	ICP-MS	ICP-AES	ICP-MS	ICP-AES	ICP-AES	ICP-MS	ICP-AES	ICP-MS
	Ti ppm	Ti %	Ti ppm	Ti ppm	Tm ppm	U ppm	U ppm	V ppm
Travertine								
10-18-06-1	< 40	<0.01	<0.08	<0.5	<0.05	0.95	0.89	0.7
10-21-06-6	< 40	<0.01	<0.08	<0.5	<0.05	0.98	0.82	0.9
10-21-06-7	< 40	<0.01	<0.08	<0.5	<0.05	0.59	0.61	0.5
10-21-06-9	45.4	<0.01	<0.08	<0.5	<0.05	1.43	1.38	8.9
Verde Limestone								
10-21-06-2	151	0.01	<0.08	<0.5	<0.05	0.4	0.39	3.7
10-21-06-3	240	0.02	0.3	<0.5	<0.05	0.28	0.28	4.6
10-21-06-5	91.1	<0.01	0.26	<0.5	<0.05	0.3	0.29	1.6
10-22-06-5	418	0.03	0.1	<0.5	<0.05	0.6	0.59	9.5
Other Verde								
10-21-06-1	1830	0.17	0.33	<0.5	0.14	0.93	0.94	30.8
10-21-06-4	1270	0.11	0.1	<0.5	0.08	0.49	0.5	34.3
10-22-06-1	543	0.04	<0.08	<0.5	<0.05	5.95	5.49	36.7
10-22-06-2	446	0.04	<0.08	<0.5	0.06	3.33	3.31	23.4
10-22-06-3	5310	0.41	0.36	0.6	0.29	9.02	8.52	144
10-23-06-1A	6100	0.51	0.34	<0.5	0.27	2.35	2.42	120
10-23-06-1B	2750	0.25	0.24	<0.5	0.18	1.08	1.16	48.7
10-23-06-2	5440	0.49	0.12	<0.5	0.22	1.07	1.04	94.5
10-24-06-1	3530	0.32	0.4	<0.5	0.22	5.69	5.15	111
10-24-06-2	3310	0.29	0.38	<0.5	0.23	5.31	4.73	98.2
10-24-06-3	1380	0.29	0.16	<0.5	0.23	6.22	4.81	61.4
10-24-06-4	4710	0.39	0.64	<0.5	0.22	2.01	1.83	130
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	9430	0.72	<0.08	<0.5	0.26	0.58	0.51	246
10-22-06-6	7070	0.51	<0.08	<0.5	0.31	4.4	3.98	344
10-23-06-3	8080	0.69	<0.08	<0.5	0.28	0.65	0.63	212
10-23-06-4	6680	0.72	<0.08	<0.5	0.26	0.84	0.75	210

**Table 2: Rock
Sample Data**

Sample ID	ICP-MS Ti ppm	ICP-AES Ti %	ICP-MS TI ppm	ICP-AES TI ppm	ICP-AES Tm ppm	ICP-MS U ppm	ICP-AES U ppm	ICP-MS V ppm
Upgradient								
10-24-06-5	1920	0.24	0.37	<0.5	0.26	1.45	1.49	26.6
10-22-06-4	2110	0.25	0.54	<0.5	0.24	1.28	1.35	53.7
10-24-06-6	1980	0.31	0.31	<0.5	0.29	1.47	1.74	33.1
10-25-06-2	140	0.01	0.08	<0.5	<0.05	0.27	0.25	3
Pk-LW	107	0.01	0.16	<0.5	0.05	1.08	0.94	3.5
Pc-LW	214	0.02	<0.08	<0.5	<0.05	0.32	0.31	6.2

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES V ppm	ICP-AES W ppm	ICP-MS Y ppm	ICP-AES Y ppm	ICP-AES Yb ppm	ICP-MS Zn ppm	ICP-AES Zn ppm	ICP-AES Zr ppm
Travertine								
10-18-06-1	<5	<1	0.57	0.8	<0.1	10.8	16	4
10-21-06-6	<5	<1	0.35	<0.5	<0.1	19.8	18	2.9
10-21-06-7	<5	<1	0.2	<0.5	<0.1	5.6	<5	4.4
10-21-06-9	<5	<1	2.8	2.7	0.2	133	128	9.5
Verde Limestone								
10-21-06-2	<5	<1	1.9	1.9	0.2	18.1	12	11.1
10-21-06-3	<5	<1	3.2	3.1	0.3	27.4	23	20.1
10-21-06-5	<5	<1	1.6	1.7	0.1	28.2	29	8.1
10-22-06-5	8	<1	2.3	2	0.2	7.2	7	29.9
Other Verde								
10-21-06-1	31	<1	9.6	9.8	1	47.1	45	118
10-21-06-4	31	<1	6.8	6.3	0.6	58.7	50	90.2
10-22-06-1	25	<1	2.8	2.6	0.2	12	6	18.3
10-22-06-2	23	<1	4.7	4.8	0.4	8.4	8	39.9
10-22-06-3	126	2	25.4	22.8	2.1	105	84	145
10-23-06-1A	106	1	17.3	18.2	1.9	92.3	71	189
10-23-06-1B	49	<1	14.6	14	1.3	36.7	24	181
10-23-06-2	94	<1	18.5	16.1	1.4	61.4	43	135
10-24-06-1	103	1	17.4	16.7	1.6	79.8	66	133
10-24-06-2	91	1	17.3	16.3	1.6	64.1	49	116
10-24-06-3	88	1	7.1	16.4	1.7	32.2	49	112
10-24-06-4	112	1	16.9	15.3	1.5	101	80	166
10-25-06-1	ins	ins	ins	ins	ins	ins	ins	ins
Basalt								
10-21-06-8	211	<1	23.2	19.4	1.7	98.6	76	110
10-22-06-6	264	<1	30.7	23.8	2.2	96.2	77	139
10-23-06-3	205	<1	24	20.6	2	105	84	89.8
10-23-06-4	205	<1	21.5	20.2	1.7	90.7	80	85.4

**Table 2: Rock
Sample Data**

Sample ID	ICP-AES V ppm	ICP-AES W ppm	ICP-MS Y ppm	ICP-AES Y ppm	ICP-AES Yb ppm	ICP-MS Zn ppm	ICP-AES Zn ppm	ICP-AES Zr ppm
Upgradient								
10-24-06-5	26	<1	12.8	16.8	1.9	19.2	11	341
10-22-06-4	43	2	11.9	17.4	1.8	56.7	40	254
10-24-06-6	36	<1	13.5	20.1	2.2	19.1	17	407
10-25-06-2	<5	<1	1.9	2	0.2	4.1	<5	23.8
Pk-LW	<5	<1	6.9	6.4	0.4	12.4	9	26.3
Pc-LW	<5	<1	2.7	2.8	0.3	4.3	<5	67.2