

Table 3. Summary of XRF geochemical data from surficial deposits and associated rock substrates (Canyonlands area, Utah)

Site	Sample type	Depth, cm	N	Ti, wt %	Fe, wt %	Zr, ppm	V, ppm	Cr, ppm	Mn, ppm	Ni, ppm	Cu, ppm	Zn, ppm	Rb, ppm	Sr, ppm	Y, ppm	Nb, ppm	Mo, ppm	Sn, ppm	Sb, ppm	Cs, ppm	Ba, ppm	La, ppm	Ce, ppm
7U-1, 2, 3	Crust	0–0.5	7	0.16	1.03	235	25	44	326	18	16	29	50	61	13	15	13	7	1	19	491	17	19
	Soil under crust	0.5–2.0	7	0.16	1.14	197	28	42	393	19	15	31	52	61	14	15	11	6	2	19	495	12	25
	Soil under crust	2.0–5.0	4	0.17	1.25	194	26	45	376	21	15	30	51	60	12	20	15	6	1	13	506	14	24
	<i>Red sandstone</i>		3	0.10	0.87	153	17	49	333	17	14	22	46	45	15	5	3	5	1	2	316	16	15
7U-4, 5, 6	Crust	0–0.5	7	0.15	0.92	226	21	41	181	18	13	29	58	77	7	15	12	4	2	13	426	6	15
	Soil under crust	0.5–2.0	7	0.16	0.94	178	39	33	183	18	13	26	60	89	6	16	14	3	1	15	423	10	22
	Soil under crust	2.0–5.0	4	0.16	0.98	155	20	35	179	19	14	26	56	96	4	22	19	3	1	16	399	13	9
	<i>Sandstone</i>		3	0.08	0.58	110	11	43	71	15	11	23	63	67	7	5	3	4	2	22	433	6	12
7U-7	Crust/surface	0–0.5	2	0.21	1.19	517	31	54	197	19	17	44	50	92	17	19	15	3	1	23	364	21	29
	Soil under crust	0.5–2.0	2	0.18	1.16	281	36	47	192	22	15	41	43	85	8	20	15	3	2	17	404	24	45
	Soil under crust	2.0–5.0	3	0.19	1.28	326	38	41	231	20	15	52	49	81	17	17	13	6	2	14	456	15	29
	<i>Sandstone</i>		1	0.056	0.54	51	2	43	116	16	3	4	27	58	8	5	3	2	2	29	208	0	2
7U-8	Crust	0–0.5	2	0.15	0.96	290	26	43	191	16	11	31	37	75	9	18	19	4	2	7	339	14	11
	Soil under crust	0.5–2.0	2	0.14	0.83	208	15	41	167	16	11	28	30	68	5	21	17	2	1	22	338	13	22
	Soil under crust	2.0–5.0	2	0.14	0.93	221	27	39	183	17	12	30	43	89	13	13	10	4	2	17	357	13	6
	<i>Sandstone</i>		1	0.052	0.47	46	8	48	60	14	7	21	23	46	4	7	2	5	2	18	167	18	2
7U-9	Crust	0–0.5	2	0.16	1.18	190	28	47	199	22	12	28	53	128	16	8	3	8	2	7	383	28	16
	Soil under crust	0.5–2.0	2	0.14	1.18	133	22	43	171	22	12	32	58	108	13	8	3	4	1	16	389	9	8
	Soil under crust	2.0–5.0	2	0.11	1.03	112	14	39	121	18	7	20	50	79	12	12	11	4	2	21	419	21	17
	<i>Red sandstone</i>		1	0.100	0.85	165	13	40	46	13	6	7	45	49	5	7	3	2	2	36	596	20	24
7U-10	Crust	0–0.5	1	0.160	1.13	283	36	41	255	18	15	30	47	81	10	17	16	7	2	20	582	15	43
	Soil under crust	0.5–2.0	1	0.150	1.17	218	37	44	245	18	11	29	58	88	14	7	5	3	2	25	454	7	2
	Soil under crust	2.0–5.0	1	0.140	1.19	226	24	41	248	17	13	33	51	96	10	17	15	5	1	17	355	16	17
	<i>Red sandstone</i>		1	0.053	0.53	55	2	48	392	17	9	23	28	78	10	5	3	5	2	7	322	20	2
7U-11	Crust	0–0.5	2	0.16	1.01	353	20	45	382	18	13	36	47	94	9	18	15	5	2	35	510	28	25
	Soil under crust	0.5–2.0	2	0.14	0.90	256	11	46	390	17	13	31	49	121	10	12	9	4	2	10	475	5	17
	Soil under crust	2.0–5.0	2	0.15	1.03	197	46	31	525	17	13	47	43	123	10	19	16	6	2	4	481	15	26
	<i>Limestone</i>			0.046	0.53	34	2	25	1500	27	0	266	20	95	8	6	2	8	3	31	216	11	2
7U-12	Crust	0–0.5	2	0.11	0.71	205	23	46	145	14	17	16	27	41	4	15	18	3	1	27	345	13	13
	Soil under crust	0.5–2.0	1	0.093	0.61	133	17	31	131	15	13	31	34	45	10	4	3	4	1	22	246	7	2
	Soil under crust	2.0–5.0	1	0.086	0.69	155	14	51	135	14	14	13	34	43	7	5	3	3	1	0	303	17	2

	<i>Sandstone</i>	1	0.075	0.53	99	9	56	61	14	12	24	26	31	7	6	2	4	2	7	231	5	2
BHVO-1	SD	6	0.010	0.04	5	73	22	0	10	3	2	1	7	2	6	5	1	0	7	17	8	15
GSP-1	SD	2	0.0	0.0	12	8	0	4	1	0	1	3	5	1	0	0	0	0	3	50	6	4

Crust, biologic soil crust; *N*, number of samples; wt %, weight percent; SD, standard deviation for standard reference materials, granite (GSP-1) and Hawaiian basalt (BHVO-1).