

Whole-Rock Geochemical Data for the Furner Ridge, Jericho, and Tintic Mountain Quadrangles, Utah

by
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INTRODUCTION

This Open-File Report makes available raw analytical data from laboratory procedures completed to determine the geochemistry of rock samples collected during geologic investigations partially supported by the Utah Geological Survey (UGS). Additional information about the geologic setting of these samples is available in Morris (1977), Clark (2003), Kwon and Mitra (2005), UGS and NMGR (2007), Hayden and others (2008), Keith and others (2009), and UGS and NIGL (2009). These data were prepared by ALS Chemex Labs, Inc., Sparks, Nevada, under contract to the UGS. These data are highly technical in nature and proper interpretation requires considerable training in applicable geochemical techniques.

DISCLAIMER

This open-file release is intended as a data repository for information gathered in support of various UGS projects. The data are presented as received from ALS Chemex Labs, Inc., and do not necessarily conform to UGS technical, editorial, or policy standards; this should be considered by an individual or group planning to take action based on the contents of this report. The Utah Department of Natural Resources, Utah Geological Survey, makes no warranty, expressed or implied, regarding the suitability of this product for a particular use. The Utah Department of Natural Resources, Utah Geological Survey, shall not be liable under any circumstances for any direct, indirect, special, incidental, or consequential damages with respect to claims by users of this product.

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Table 1. Major- and trace-element whole-rock analyses for the Tintic Mountain quadrangle and adjacent areas.

Sample #	Map Unit	Rock Name	7.5' Quad	Latitude (N)	Longitude (W)	SiO ₂	Al ₂ O ₃
TM-1	Flows of Rattlesnake Peak	latite	Tintic Mountain	39°50'27.2"	112°02'18.2"	55.54	16.53
TM-2	Flows of Rattlesnake Peak	andesite	Tintic Mountain	39°48'15.2"	112°01'30.2"	60.14	17.23
TM-3	Flows of Rattlesnake Peak	latite	Tintic Mountain	39°47'53.2"	112°02'16.2"	59.44	17
TM-4	Latite Ridge Latite	trachyte	Tintic Mountain	39°47'49.2"	112°01'47.2"	61.83	17.64
TM-5	Fernow Quartz Latite	rhyolite	Tintic Mountain	39°45'25.2"	112°03'55.2"	72.83	13.39
TM111907-1	Flows of Rattlesnake Peak	latite	Tintic Mountain	39°48'52.7"	112°05'55.3"	58.41	17.63
TM111907-2	Intrusions of Keystone Springs	rhyolite	Tintic Mountain	39°48'56.0"	112°05'34.1"	69.14	16.48
TM111907-3	Latite of Rock Canyon	latite	Tintic Mountain	39°49'07.8"	112°04'26.8"	60.1	16.13
TM111907-4	Shoshonite of Buckhorn Mtn	shoshonite	Tintic Mountain	39°49'00.1"	112°04'52.8"	53.2	16.84
TM111907-5	Latite Ridge Latite	trachyte	Tintic Mountain	39°46'42.8"	112°07'16.7"	62.51	17.17
TM111907-6	Flows of Rattlesnake Peak	andesite	Tintic Mountain	39°46'20.2"	112°07'01.9"	57.74	16.86
TM112007-1	Plagioclase-rich lava flows	latite	Tintic Mountain	39°47'37.7"	112°04'54.6"	58.04	17.2
TM112007-3	Latite of Dry Herd Canyon	shoshonite	Tintic Mountain	39°47'26.3"	112°05'11.3"	55.01	16.73
TM112007-4	Flows of Rattlesnake Peak	shoshonite-K trachybasalt	Tintic Mountain	39°47'38.7"	112°06'56.9"	51.01	15.46
FR112007-1	Fernow Quartz Latite	rhyolite	Furner Ridge	39°39'31.0"	112°04'13.8"	73.22	13.77
J112007-1	dacite tuff	dacite	Jericho	39°37'31.4"	112°07'42.4"	65.9	15.36

Notes:

Major oxides reported in weight percent by x-ray fluorescence (XRF); minor and trace elements report in ppm by inductively coupled plasma-mass spectrometry (ICP-MS).

All analyses performed by ALS Chemex Labs, Inc. Sparks, NV

Rock names using total alkali-silica diagram of Le Bas and others (1986).

LOI is loss on ignition.

Location data based on NAD27.

Map unit designations for Tintic Mountain quadrangle from Keith and others (2009) and for Furner Ridge quadrangle from Morris (1977).

Fe ₂ O ₃	CaO	MgO	Na ₂ O	K ₂ O	Cr ₂ O ₃	TiO ₂	MnO	P ₂ O ₅	SrO	BaO	LOI	Total
8.36	6	2.86	3.25	3.79	0.01	1.14	0.14	0.57	0.11	0.17	1.23	99.67
5.41	4.74	1.72	2.48	3.98	0.01	1	0.1	0.44	0.09	0.15	2.32	99.81
5.87	5.39	1.94	2.56	3.87	0.01	1.03	0.11	0.45	0.09	0.15	1.93	99.82
4.5	2.48	0.69	3.53	5.94	0.01	0.97	0.06	0.31	0.07	0.18	1.64	99.83
1.81	1.76	0.46	3.24	4.3	0.01	0.29	0.06	0.11	0.03	0.08	1.13	99.49
5.88	5.39	2.02	3.03	3.8	<0.01	1.05	0.12	0.47	0.09	0.16	1.71	99.77
0.9	0.56	0.36	2.5	6.49	<0.01	0.34	<0.01	0.016	0.01	0.19	2.95	99.93
6.15	4.72	2.31	3.13	4.25	0.01	0.91	0.08	0.424	0.07	0.15	1.48	99.92
8.62	6.28	3.08	3.22	4.29	<0.01	1.12	0.14	0.603	0.11	0.18	2.11	99.79
3.55	2.81	0.79	3.55	6.33	<0.01	0.82	0.02	0.268	0.05	0.17	1.94	99.99
6.82	5.68	2.78	2.55	3.74	<0.01	1.08	0.12	0.477	0.09	0.15	1.75	99.84
6.42	5.15	0.96	3.03	4.16	<0.01	1.03	0.06	0.451	0.08	0.17	3.08	99.83
8.81	6.56	3.2	2.91	3.3	<0.01	1.2	0.13	0.502	0.07	0.13	1.35	99.89
10.33	8.7	5.56	2.24	2.75	0.02	1.26	0.15	0.61	0.09	0.12	1.65	99.95
2.06	1.58	0.45	3.36	4.47	<0.01	0.25	0.05	0.047	0.02	0.09	0.45	99.82
3.75	3.82	1.34	3	2.93	<0.01	0.58	0.04	0.131	0.05	0.14	1.71	98.74

Ag	Ba	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Ga	Gd	Hf
<1	1515	110.5	22.5	30	5.3	45	5.4	2.9	2.7	25	7.8	6
<1	1175	108	10.4	30	4.2	9	6.4	3.6	2.6	25	7	8
<1	1190	102.5	11.2	40	4	10	5.4	3.1	2.3	23	7.7	8
<1	1375	137	6.6	10	7.7	12	5.5	3.2	2.2	24	8.3	14
<1	650	64.7	3.1	40	5.8	<5	3	1.9	0.8	17	3.4	5
<1	1380	125	11.6	20	3.98	33	5.81	3.31	2.42	22.6	8.86	6.6
<1	1575	133	0.9	10	1.99	<5	5.38	3.06	1.64	18.7	7.81	9
<1	1235	108	17.7	40	6.35	27	4.2	2.24	1.7	20.9	6.65	5.6
<1	1540	122.5	27.6	20	6.66	78	5.02	2.55	2.34	23.9	8.19	6.3
<1	1450	158	6.7	10	5.68	9	5.65	3.23	2.19	22.1	9.46	10.1
<1	1235	111.5	18.3	10	3.67	20	5.48	2.9	2.21	22.3	8.34	6.4
<1	1405	108.5	15.4	10	2.27	20	4.89	2.67	2.18	23	7.82	6.4
<1	1005	118	29	10	2.92	40	5.25	3.01	2.17	23.3	8.51	6.4
<1	938	88.1	35	120	3.49	65	4.84	2.62	2.05	22.1	7.61	4.7
<1	694	66.8	3.9	<10	8.56	<5	2.5	1.68	0.73	17.8	3.61	3.6
<1	1180	117	8.5	20	4.2	6	4.04	2.48	1.53	22.1	6.36	7.6

Ho	La	Lu	Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sm	Sn	Sr
0.9	55.5	0.4	2	15	46.8	12	37	12.7	109.5	11	2	972
0.9	51.5	0.4	2	15	46.8	<5	25	12.4	98.4	11.2	1	816
1	53.8	0.4	2	14	49.3	5	23	12.9	115	10	1	814
0.9	79.3	0.4	2	25	56.6	<5	31	16.4	193	10.8	2	599
0.5	32.8	0.3	<2	18	20.8	<5	40	6.4	130.5	4.4	1	241
1.11	60.7	0.43	5	14.4	56	5	19	14.85	125	10.75	3	809
1.04	69.2	0.46	3	18.8	50.2	<5	17	14.75	158	8.72	3	138
0.79	56.1	0.32	3	13.9	43.6	17	21	12.15	135	8	3	658
0.9	61.1	0.34	5	14.4	53.1	14	21	14.05	143.5	9.84	3	889
1.08	80.5	0.45	4	23.1	61.6	<5	26	17.65	233	10.95	4	454
1.02	55.4	0.41	2	13.1	49.5	7	16	13.05	119	9.39	3	750
0.9	56.2	0.34	4	13.2	47	7	16	12.95	127.5	8.52	2	728
1.01	60.1	0.39	3	13.7	49.6	10	17	13.5	111.5	9.03	3	630
0.89	41.8	0.35	2	9.1	41.4	36	12	10.85	94.8	8.09	2	756
0.51	35	0.29	2	16.6	22	<5	27	6.83	175	3.67	2	227
0.8	63.5	0.36	2	18.8	40.8	11	22	12.3	102	6.62	3	520

Ta	Tb	Th	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
0.8	1	22	<0.5	0.3	6.8	145	2	24.4	2.5	108	213
0.8	1	15	<0.5	0.3	4.7	70	2	23	3.2	85	267
0.8	1.1	16	<0.5	0.3	4.4	82	1	25.2	2.8	85	257
1.4	1.1	40	<0.5	0.4	9.6	41	4	25.5	3	81	452
1.4	0.5	23	<0.5	0.3	7.8	21	2	15.2	2	37	156
1	1.17	16.4	0.7	0.43	4.34	118	4	30.5	2.88	95	264
1.3	1.13	31.2	0.8	0.44	7.6	17	3	30.1	3.02	15	353
1.1	0.86	23.4	0.8	0.3	6.35	150	7	22.1	2.12	86	215
1	1.04	23.5	0.7	0.33	6.33	227	9	25.7	2.28	104	249
1.6	1.19	42.3	0.9	0.46	9.65	50	9	30.3	2.89	71	412
0.9	1.08	16.05	0.7	0.41	4.3	155	10	27.5	2.65	92	245
0.9	1.02	17.75	0.6	0.36	4.12	128	6	25.1	2.41	81	251
0.9	1.09	19.4	0.7	0.4	3.95	191	7	27	2.65	111	257
0.7	0.99	11.25	0.7	0.33	2.94	245	4	24.5	2.32	110	176
1.8	0.46	24.7	1	0.26	5.74	25	6	15.5	1.87	39	110
1.5	0.81	25.2	0.8	0.36	4.89	73	6	22	2.41	74	287