UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality maps of stream-sediment, heavy-mineral-concentrate, and rock samples from the Fish Springs Range, Wilderness Study Area, Juab County, Utah

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STUDIES RELATED TO WILDERNESS

Bureau of Land Management Wilderness Study Areas

The Federal Land Policy and Management Act (Public Law 94-579, October 21, 1976) requires the U.S. Geological Survey and the U.S. Bureau of Mines to conduct mineral surveys on certain areas to determine their mineral values, if any. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the Fish Springs Area Wilderness Study Area, Juab County, Utah.

INTRODUCTION

In 1986, the U.S. Geological Survey conducted a reconnaissance geochemical survey of the Fish Springs Range (UT-50-127) Wilderness Study Area, Juab County, Idaho.

The Fish Springs Range Wilderness Study Area comprises about 33,840 acres (approximately 52.8 mi^2) in the Fish Spring Range in Juab County, Utah, and lies about 50 mi northwest of Delta (see fig. 1). Access to the study area is accessible by foot from dirt roads and jeep trails along the east and west sides of the Fish Springs Range.

The following comments regarding the general geology of the study area have been summarized from Lindsey and others (1988). The Fish Springs Range Wilderness Study Area contains mostly Cambrian through Devonian sedimentary rocks. These rocks are tilted west by the major range-bounding normal fault that extends along the east side of the range. No comparable fault is exposed on the west side of the range. The entire section of Paleozoic rocks in the Fish Springs Range, and perhaps a thick section of Precambrian sedimentary rocks in the subsurface, probably rest on low-angle faults as interpreted from a deep seismic profile across the House Range to the south. The faults are interpreted tentatively as having moved as thrusts during the Mesozoic Sevier orogeny and as extensional detachments during Cenozoic basin range faulting. The low-angle faults and the rocks overlying them form a gentle arch beneath the range.

Within the wilderness study area, most of the crest of the Fish Springs Range is about 7,000-8,000 ft in elevation. Sparse piñon and juniper grow on steep slopes between cliffs of limestone. Coalescing alluvial fans extend from the foot of the range to the floor of Fish Springs Flat (elevation 4,300 ft) to the east and Snake Valley (elevation about 5,000 ft) to the west.

METHODS OF STUDY

Sample Media

Analyses of the stream-sediment samples represent the chemistry of the rock material eroded from the drainage basin upstream from each sample site. Such information is useful in identifying those basins which contain concentrations of elements that may be related to mineral deposits. Heavy-mineral-concentrate samples provide information about the chemistry of certain minerals in rock material eroded from the drainage basin upstream from each sample site. The selective concentration of minerals, many of which may be ore related, permits determination of some elements that are not easily detected in stream-sediment samples.

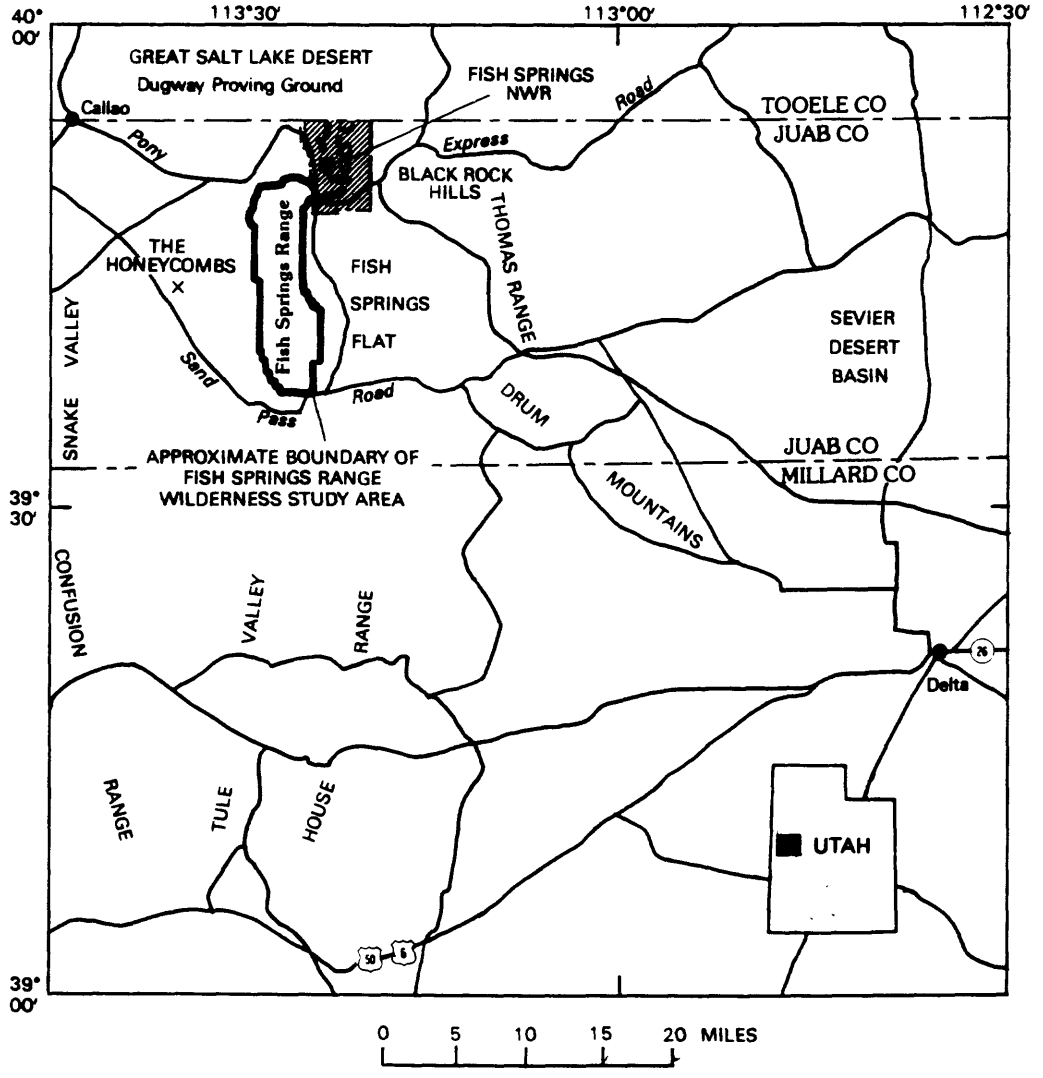

Figure 1. Index map of the Fish Springs Range Wilderness Study Area, Juab County, Utah.

Analyses of unaltered or unmineralized rock samples provide background geochemical data for individual rock units. On the other hand, analyses of altered or mineralized rocks, where present, may provide useful geochemical information about the major- and trace-element assemblages associated with a mineralizing system.

Sample Collection

Forty three stream-sediment and 42 heavy-mineral-concentrate samples were collected (plate 1). One hundred sixteen rock samples were collected (plate 2).

Stream-sediment samples

The stream-sediment samples consisted of active alluvium collected primarily from first-order (unbranched) and second-order (below the junction of two first-order) streams as shown on USGS topographic maps (scale = 1:24,000). Each sample was composited from several localities within an area that may extend as much as 50 ft from the site plotted on the map.

Heavy-mineral-concentrate samples

Heavy-mineral-concentrate samples were collected from the same active alluvium as the stream-sediment samples. Each bulk sample was screened with a 2.0-mm (10-mesh) screen to remove the coarse material. The less than 2.0-mm fraction was panned until most of the quartz, feldspar, organic material, and clay-sized material were removed.

Rock samples

Rock samples were collected from outcrops or exposures in the vicinity of the plotted site location. Samples were collected from unaltered and/or altered and/or mineralized rocks. A summary of geochemical anomalies for selected elements from rock samples is included in table 6.

Sample Preparation

The stream-sediment samples were air dried, then sieved using 80-mesh (0.17-mm) stainless-steel sieves. The portion of the sediment passing through the sieve was saved for analysis.

After air drying, bromoform (specific gravity 2.8) was used to remove the remaining quartz and feldspar from the heavy-mineral-concentrate samples that had been panned in the field. The resultant heavy-mineral sample was separated into three fractions using a large electromagnet (in this case a modified Frantz Isodynamic Separator). The most magnetic material, primarily magnetite, was not analyzed. The second fraction, largely ferromagnesian silicates and iron oxides, was saved for analysis/archival storage. The third fraction (the least magnetic material which may include the nonmagnetic ore minerals, zircon, sphene, etc.) was split using a Jones splitter. One split was hand ground for spectrographic analysis; the other split was saved for mineralogical analysis. These magnetic separates are the same separates that would be produced by using a Frantz Isodynamic Separator set at a slope of 15° and a tilt of 10° with a current of 0.2 ampere to remove the magnetite and ilmenite, and a current of 0.6 ampere to split the remainder of the sample into paramagnetic and nonmagnetic fractions.

Rock samples were crushed and then pulverized to minus 0.15 mm with ceramic plates.

Sample Analysis

Spectrographic method

The stream-sediment, heavy-mineral-concentrate, and rock samples were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). The elements analyzed and their lower limits of determination are listed in table 1. Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. The precision of the analytical method is approximately plus or minus one reporting interval at the 83 percent confidence level and plus or minus two reporting intervals at the 96 percent confidence level (Motooka and Grimes, 1976). Values determined for the major elements (iron, magnesium, calcium, and titanium) are given in weight percent; all others are given in parts per million (micrograms/gram). Analytical data for samples from the Fish Springs Wilderness Study Area are listed in tables 3, 4, and 5.

Chemical methods

Other methods of analysis used on samples from the Fish Springs Wilderness Study Area are summarized in table 2. Rock and stream-sediment samples were analyzed for gold (Au), arsenic (As), bismuth (Bi), cadmium (Cd), antimony (Sb), and zinc (Zn) using either an atomic absorption spectroscopy method by Thompson and others (1968) or by an inductively coupled plasma-atomic emission spectroscopy (ICP-AES) method by Crock and others (1983).

Analytical results for stream-sediment and rock samples are listed in tables 3 and 5 respectively.

ROCK ANALYSIS STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into a computer-based file called Rock Analysis Storage System (RASS). This data base contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and converted to a binary form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1977).

DESCRIPTION OF DATA TABLES

Tables 3-5 list the results of analyses for the samples of stream sediment, heavy-mineral concentrate, and rock, respectively. For the three tables, the data are arranged so that column 1 contains the USGS-assigned sample numbers. These numbers correspond to the numbers shown on the site location maps (plates 1 and 2). Columns in which the element headings show the letter "s" below the element symbol are emission spectrographic analyses; "aa" indicates atomic absorption analyses; "icp" indicates inductively coupled

plasma-atomic emission spectroscopy. A letter "N" in the tables indicates that a given element was looked for but not detected at the lower limit of determination shown for that element in table 1. If an element was observed but was below the lowest reporting value, a "less than" symbol (<) was entered in the tables in front of the lower limit of determination. If an element was observed but was above the highest reporting value, a "greater than" symbol (>) was entered in the tables in front of the upper limit of determination. If an element was not looked for in a sample, two dashes (--) are entered in tables 3-5 in place of an analytical value. Because of the formatting used in the computer program that produced tables 3-5, some of the elements listed in these tables (Fe, Mg, Ca, Ti, Ag, and Be) carry one or more nonsignificant digits to the right of the significant digits. The analysts did not determine these elements to the accuracy suggested by the extra zeros.

REFERENCES CITED

Crock, J.G., Briggs, P.H., Jackson, L.L., and Lichte, F.E., 1987, Analytical methods for the analysis of stream sediments and rocks from wilderness study areas: U.S. Geological Survey Open-File Report 87-84, 35 p.

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

Lindsey, David A., Zimbelman, David R., Campbell, David L., Bisdorf, Robert J., Daval, Joseph S., Cook, Kenneth L., Podwysocki, Melvin H., Brickey, David W., Yambrick, Robert A., and Korzeb, Stanley L., 1988, Mineral resources of the Fish Springs Range Wilderness Study Area, Juab county, Utah: U.S. Geological Survey Bulletin 1745A, 41 p.

Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.

O'Leary, R. M., and Viets, J. G., 1986, Determination of antimony, arsenic, bismuth, cadmium, copper, lead, molybdenum, silver, and zinc in geologic materials by atomic absorption spectrometry using a hydrochloric acid-hydrogen peroxide digestion: Atomic Spectroscopy, 7, p. 4-8.

Thompson, C. E., Nakagawa, H. M., and Van Sickle, G. H., 1968, Rapid analysis for gold in geologic materials, in Geological Survey research 1968: U.S. Geological Survey Professional Paper 600-B, p. B130-B132.

VanTrump, George, Jr., and Miesch, A. T., 1977, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, v. 3, p. 475-488.

TABLE 1.--Limits of determination for the spectrographic analysis of rocks and stream sediments, based on a 10-mg sample

[The spectrographic limits of determination for heavy-mineral-concentrate samples are based on a 5-mg sample, and are therefore two reporting intervals higher than the limits given for rocks and stream sediments]

Elements	Lower determination limit	Upper determination limit
	Percent	
Iron (Fe)	0.05	20
Magnesium (Mg)	.02	10
Calcium (Ca)	.05	20
Titanium (Ti)	.002	1
	Parts per million	
Manganese (Mn)	10	5,000
Silver (Ag)	0.5	5,000
Arsenic (As)	200	10,000
Gold (Au)	10	500
Boron (B)	10	2,000
Barium (Ba)	20	5,000
Beryllium (Be)	1	1,000
Bismuth (Bi)	10	1,000
Cadmium (Cd)	20	500
Cobalt (Co)	5	2,000
Chromium (Cr)	10	5,000
Copper (Cu)	5	20,000
Lanthanum (La)	20	1,000
Molybdenum (Mo)	5	2,000
Niobium (Nb)	20	2,000
Nickel (Ni)	5	5,000
Lead (Pb)	10	20,000
Antimony (Sb)	100	10,000
Scandium (Sc)	5	100
Tin (Sn)	10	1,000
Strontium (Sr)	100	5,000
Vanadium (V)	10	10,000
Tungsten (W)	50	10,000
Yttrium (Y)	10	2,000
Zinc (Zn)	200	10,000
Zirconium (Zr)	10	1,000
Thorium (Th)	100	2,000

TABLE 2.--Commonly used chemical methods

[AA = atomic absorption; ICP = inductively coupled plasma spectroscopy]

Element or constituent determined	Sample type	Method	Determination limit (micrograms/ gram or ppm)	Analyst	Reference
Gold (Au)		AA	0.05		Thompson and others, 1968.
Arsenic (As)		AA	5 or 10		O'Leary and Viets, 1986.
Antimony (Sb)		AA	2		
Zinc (Zn)		AA	5		
Bismuth (Bi)		AA	1		
Cadmium (Cd)		AA	.1		
Arsenic (As)		ICP	5		Crock and others, 1987.
Antimony (Sb)		ICP	2		
Zinc (Zn)		ICP	2		
Bismuth (Bi)		ICP	2		
Cadmium (Cd)		ICP	.1		

TABLE 3-RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH
[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
6DE0013S	39 37 18	113 25 56	1.0	5	7	.10	200	N	N	N	<10	100
6CE0014S	39 37 56	113 27 18	1.5	5	10	.10	500	N	N	N	10	200
6CE0015S	39 38 59	113 27 48	3.0	7	10	.20	1,000	N	N	N	50	300
6CE0016S	39 39 59	113 28 7	1.0	5	7	.10	300	N	N	N	<10	100
6CE0017S	39 40 44	113 27 52	2.0	7	10	.10	500	N	N	N	20	200
6CE0018S	39 41 23	113 28 11	2.0	7	10	.10	700	N	N	N	50	200
6CE0019S	39 42 12	113 28 29	2.0	5	7	.10	300	N	N	N	<10	150
6CE0020S	39 43 6	113 28 40	2.0	10	10	.10	300	N	N	N	<10	150
6CE0021S	39 44 14	113 28 9	2.0	5	10	.10	500	N	N	N	50	150
6CE0023S	39 38 36	113 24 23	2.0	5	20	.10	300	N	N	N	20	200
6CE0024S	39 39 44	113 24 25	2.0	5	10	.10	200	N	N	N	10	150
6CE0025S	39 40 45	113 24 19	2.0	7	10	.10	500	N	N	N	20	200
6CE0026S	39 42 34	113 24 12	2.0	7	10	.10	500	N	N	N	15	150
6CE0027S	39 43 36	113 24 33	2.0	2	10	.10	200	N	N	N	10	100
6CE0028S	39 44 12	113 25 16	2.0	5	7	.07	200	N	N	N	<10	70
6BE0029S	39 47 45	113 25 45	1.5	5	10	.10	200	N	N	N	<10	100
6BE0030S	39 48 32	113 25 56	2.0	5	10	.10	500	N	N	N	100	200
6BE0031S	39 49 11	113 25 2	5.0	5	15	.15	500	N	N	N	100	500
6BE0032S	39 49 29	113 24 50	2.0	5	7	.10	500	N	N	N	20	150
6BE0033S	39 50 29	113 24 47	1.5	10	7	.10	500	N	N	N	20	200
6BE0034S	39 50 43	113 25 40	2.0	3	7	.15	300	N	N	N	50	150
6BE0035S	39 51 25	113 25 41	2.0	10	10	.10	500	N	N	N	50	300
6BE0036S	39 50 57	113 26 4	5.0	7	10	.15	1,000	N	N	N	50	200
6BE0037S	39 52 10	113 24 54	2.0	10	10	.10	500	N	N	N	50	200
6AE0038S	39 52 32	113 24 57	2.0	7	10	.10	500	N	N	N	50	300
6AE0039S	39 53 26	113 25 24	2.0	10	10	.10	500	N	N	N	50	500
6AE0040S	39 53 6	113 26 56	2.0	10	15	.10	500	N	N	N	50	200
6BE0041S	39 52 12	113 27 39	2.0	10	10	.10	300	N	N	N	15	150
6BE1024S	39 51 10	113 27 48	1.0	7	7	.07	300	N	N	N	20	70
6BE1025S	39 50 5	113 27 27	2.0	10	7	.10	700	N	N	N	100	100
6BE1026S	39 49 29	113 28 4	2.0	10	10	.10	300	N	N	N	<10	150
6BE1027S	39 48 36	113 28 47	.5	10	10	.02	200	N	N	N	<10	50
6BE1028S	39 48 5	113 29 5	1.5	10	10	.07	300	N	N	N	20	150
6BE1029S	39 47 51	113 28 29	2.0	10	10	.10	500	N	N	N	10	200
6BE1030S	39 47 13	113 28 25	3.0	7	7	.10	500	N	N	N	30	100
6BE1031S	39 46 44	113 28 19	2.0	10	10	.07	300	N	N	N	<10	100
6BE1032S	39 45 39	113 28 0	1.5	10	7	.07	300	N	N	N	100	100
6CE1033S	39 44 50	113 25 31	2.0	10	7	.10	500	N	N	N	50	200
6BE1034S	39 45 30	113 25 28	2.0	10	10	.07	500	N	N	N	50	200
6BE1035S	39 46 43	113 25 37	3.0	10	10	.15	500	N	N	N	100	300
6DE1051S	39 37 16	113 24 55	1.0	7	10	.05	700	N	N	N	20	500
6DE1052S	39 37 14	113 24 51	2.0	3	10	.10	500	N	N	N	20	300
6CE1060S	39 37 35	113 26 54	2.0	10	10	.07	500	N	N	N	<10	200

TABLE 3-RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s
6DE0013S	N	N	N	<5	30	5	N	N	N	7	<10	N	N
6CE0014S	N	N	N	<5	20	10	N	N	N	5	<10	N	N
6CE0015S	1	N	N	10	30	20	N	N	N	20	20	N	7
6CE0016S	N	N	N	<5	20	10	N	N	N	10	10	N	N
6CE0017S	<1	N	N	10	30	15	N	N	N	15	20	N	5
6CE0018S	<1	N	N	7	30	15	N	N	N	15	20	N	5
6CE0019S	N	N	N	5	20	10	N	N	N	10	15	N	N
6CE0020S	<1	N	N	5	20	10	N	N	N	10	20	N	<5
6CE0021S	<1	N	N	5	30	15	N	N	N	10	15	N	5
6CE0023S	<1	N	N	5	20	10	N	N	N	10	10	N	5
6CE0024S	N	N	N	10	20	10	N	N	N	15	10	N	<5
6CE0025S	<1	N	N	5	30	15	N	N	N	10	15	N	5
6CE0026S	<1	N	N	7	30	10	N	N	N	15	<10	N	<5
6CE0027S	N	N	N	5	30	7	N	N	N	10	<10	N	<5
6CE0028S	N	N	N	5	15	10	N	N	N	10	10	N	N
6BE0029S	N	N	N	5	20	10	N	N	N	10	10	N	<5
6BE0030S	<1	N	N	10	30	15	N	N	N	15	20	N	<5
6BE0031S	1	N	N	10	15	15	<20	N	N	20	20	N	7
6BE0032S	N	N	N	10	50	15	N	N	N	20	15	N	<5
6BE0033S	<1	N	N	5	50	15	N	N	N	10	20	N	<5
6BE0034S	N	N	N	10	50	15	N	N	N	20	10	N	<5
6BE0035S	<1	N	N	10	30	20	N	N	N	15	20	N	<5
6BE0036S	<1	N	N	10	70	15	N	N	N	30	30	N	<5
6BE0037S	<1	N	N	5	30	15	N	N	N	15	20	N	<5
6AE0038S	<1	N	N	7	30	15	N	N	N	20	15	N	<5
6AE0039S	<1	N	N	5	30	10	N	N	N	10	20	N	<5
6AE0040S	N	N	N	5	30	10	N	N	N	15	20	N	<5
6BE0041S	<1	N	N	5	30	10	N	N	N	15	20	N	5
6BE1024S	N	N	N	<5	20	10	N	N	N	10	100	N	N
6BE1025S	<1	N	N	10	50	10	N	N	N	10	20	N	<5
6BE1026S	<1	N	N	5	20	10	N	N	N	7	20	N	<5
6BE1027S	1	N	N	<5	10	7	N	N	N	7	10	N	<5
6BE1028S	N	N	N	5	30	10	N	N	N	10	20	N	<5
6BE1029S	N	N	N	7	30	10	N	N	N	10	15	N	5
6BE1030S	<1	N	N	7	30	10	N	N	N	15	15	N	<5
6BE1031S	N	N	N	7	30	10	N	N	N	10	10	N	<5
6BE1032S	<1	N	N	5	20	10	N	N	N	10	15	N	<5
6CE1033S	<1	N	N	10	30	15	N	N	N	15	20	N	5
6BE1034S	<1	N	N	5	30	10	N	N	N	10	20	N	5
6BE1035S	<1	N	N	10	50	10	<20	N	N	20	20	N	7
6DE1051S	<1	N	N	<5	20	10	N	N	N	5	50	N	5
6DE1052S	<1	N	N	5	30	15	N	N	N	10	20	N	<5
6CE1060S	<1	N	N	7	30	10	N	N	N	7	15	N	<5

TABLE 3-RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm icp	Bi-ppm icp	Cd-ppm icp	Sb-ppm icp	Zn-ppm icp
6DE0013S	N	150	20	N	<10	<200	100	N	N	21	<2	.2	<2	9
6CE0014S	N	200	10	N	<10	N	100	N	N	16	<2	.3	<2	14
6CE0015S	N	500	100	N	15	<200	150	N	N	62	<2	.3	2	15
6CE0016S	N	<100	10	N	<10	<200	100	N	N	26	<2	.4	<2	14
6CE0017S	N	200	50	N	10	<200	150	N	N	7	<2	.3	<2	13
6CE0018S	N	200	20	N	10	<200	100	N	N	14	<2	.5	<2	16
6CE0019S	N	150	20	N	<10	N	70	N	N	6	<2	.4	<2	17
6CE0020S	N	100	50	N	<10	<200	100	N	N	<5	<2	.3	<2	9
6CE0021S	N	200	30	N	15	<200	100	N	N	8	<2	.3	<2	10
6CE0023S	N	700	20	N	10	N	100	N	N	24	<2	.4	<2	17
6CE0024S	N	200	50	N	10	<200	100	N	N	13	<2	.5	<2	18
6CE0025S	N	200	50	N	10	<200	100	N	N	16	<2	.4	<2	11
6CE0026S	N	100	50	N	10	<200	70	N	N	12	<2	.5	<2	14
6CE0027S	N	100	30	N	<10	<200	70	N	N	8	<2	.3	<2	16
6CF0028S	N	100	30	N	<10	<200	50	N	N	15	<2	.3	<2	7
6BE0029S	N	300	20	N	10	<200	70	N	N	5	<2	.4	<2	9
6BE0030S	N	<100	50	N	10	<200	100	N	N	11	<2	.4	<2	13
6BE0031S	N	300	70	N	20	<200	150	N	N	6	<2	.4	<2	18
6BE0032S	N	<100	50	N	<10	<200	100	N	N	9	<2	.5	<2	16
6BE0033S	N	100	20	N	<10	<200	70	N	N	7	<2	.5	<2	16
6BE0034S	N	100	50	N	<10	N	70	N	N	11	<2	.6	<2	21
6BE0035S	N	200	50	N	10	<200	150	N	N	5	<2	.4	<2	17
6BE0036S	N	N	50	N	10	<200	100	N	N	21	<2	.6	2	34
6BE0037S	N	200	50	N	10	<200	150	N	N	9	<2	.3	<2	14
6AE0038S	N	500	50	N	10	<200	150	N	N	6	<2	.4	<2	16
6AE0039S	N	1,000	30	N	10	<200	100	N	N	<5	<2	.3	<2	13
6AE0040S	N	300	30	N	<10	N	100	N	N	5	<2	.3	<2	10
6BE0041S	N	200	20	N	<10	<200	100	N	N	8	<2	.4	2	14
6BE1024S	N	<100	20	N	<10	<200	100	N	N	30	<2	.9	2	73
6BE1025S	N	N	50	N	<10	<200	100	N	N	18	<2	.4	<2	13
6BE1026S	N	<100	30	N	<10	<200	150	N	N	<5	<2	.2	<2	7
6BE1027S	N	N	20	N	<10	<200	10	N	N	<5	<2	.2	<2	3
6BE1028S	N	200	20	N	10	<200	50	N	N	<5	<2	.3	<2	11
6BE1029S	N	100	50	N	10	N	100	N	N	9	<2	.3	<2	13
6BE1030S	N	<100	70	N	10	<200	100	N	N	8	<2	.3	<2	17
6BE1031S	N	100	20	N	10	<200	100	N	N	7	<2	.3	<2	14
6BE1032S	N	N	20	N	10	<200	100	N	N	5	<2	.2	<2	4
6CE1033S	N	150	50	N	10	<200	100	N	N	25	<2	.3	<2	16
6BE1034S	N	200	30	N	10	<200	100	N	N	9	<2	.4	<2	11
6BE1035S	N	500	50	N	15	<200	200	N	N	24	<2	.4	<2	17
6DE1051S	N	700	15	N	10	<200	100	N	N	13	<2	.4	<2	19
6DE1052S	N	1,000	30	N	10	N	100	N	N	13	<2	.4	<2	25
6CE1060S	N	500	30	N	10	N	100	N	N	14	<2	.2	2	8

TABLE 4-RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
6DE0013C	39 37 18	113 25 56	.5	10	15	.10	500	N	N	N	20	>10,000
6CE0014C	39 37 56	113 27 18	.5	15	20	.05	700	N	N	N	20	7,000
6CE0016C	39 39 59	113 28 7	.3	15	20	.03	500	N	N	N	20	500
6CE0017C	39 40 44	113 27 52	.3	15	20	.05	500	N	N	N	20	1,500
6CE0018C	39 41 23	113 28 11	.5	10	20	.05	500	N	N	N	20	7,000
6CE0019C	39 42 12	113 28 29	.3	15	15	.10	500	N	N	N	20	700
6CE0020C	39 43 6	113 28 40	.3	15	20	.05	300	N	N	N	20	2,000
6CE0021C	39 44 14	113 28 9	1.0	10	20	.10	1,000	N	N	N	100	>10,000
6CE0023C	39 38 36	113 24 23	.3	10	20	.15	300	N	N	N	50	7,000
6CE0024C	39 39 44	113 24 25	.3	10	20	.15	300	N	N	N	20	2,000
6CE0025C	39 40 45	113 24 19	.5	10	15	.03	500	N	N	N	20	5,000
6CE0026C	39 42 34	113 24 12	.3	10	20	.05	500	N	N	N	50	>10,000
6CE0027C	39 43 36	113 24 33	.5	10	20	.05	300	N	N	N	50	>10,000
6CE0028C	39 44 12	113 25 16	.2	10	10	.07	200	N	N	N	20	1,000
6BE0029C	39 47 45	113 25 45	.7	10	15	.15	300	N	N	N	70	7,000
6BE0030C	39 48 32	113 25 56	1.0	10	20	.07	700	N	N	N	100	2,000
6BE0031C	39 49 11	113 25 2	.5	10	20	.10	500	N	N	N	70	>10,000
6BE0032C	39 49 29	113 24 50	.5	7	30	.03	1,000	N	N	N	100	1,000
6BE0033C	39 50 29	113 24 47	.5	10	20	.05	200	N	N	N	50	10,000
6BE0034C	39 50 43	113 25 40	2.0	7	20	.10	500	<1	N	N	100	>10,000
6BE0035C	39 51 25	113 25 41	.7	15	20	.07	300	N	N	N	30	200
6BE0036C	39 50 57	113 26 4	2.0	5	20	.10	1,000	<1	N	N	50	>10,000
6BE0037C	39 52 10	113 24 54	2.0	7	50	.07	1,000	N	N	N	70	3,000
6AE0038C	39 52 32	113 24 57	2.0	5	50	.10	1,000	N	N	N	100	5,000
6AE0039C	39 53 26	113 25 24	1.0	10	50	.10	300	N	N	N	20	>10,000
6AE0040C	39 53 6	113 26 56	2.0	10	50	.05	1,000	N	N	N	50	2,000
6BE0041C	39 52 12	113 27 39	2.0	15	50	.10	1,000	N	N	N	100	1,000
6BE1024C	39 51 10	113 27 48	2.0	7	50	.10	1,500	50	2,000	N	70	5,000
6BE1025C	39 50 5	113 27 27	3.0	10	50	.07	1,500	N	N	N	100	1,500
6BE1026C	39 49 29	113 28 4	.7	20	50	.20	500	N	N	N	20	200
6BE1027C	39 48 36	113 28 47	.2	15	50	.10	300	N	N	N	50	7,000
6BE1028C	39 48 5	113 29 5	1.0	20	50	.15	500	N	N	N	50	7,000
6BE1029C	39 47 51	113 28 29	1.0	20	50	.20	500	10	N	N	50	500
6BE1030C	39 47 13	113 28 25	1.0	20	50	.05	500	N	N	N	30	1,000
6BE1031C	39 46 44	113 28 19	2.0	15	50	.07	1,000	N	N	N	70	300
6BE1032C	39 45 39	113 28 0	3.0	5	50	.07	1,500	N	N	N	100	1,500
6CE1033C	39 44 50	113 25 31	1.0	7	50	.05	700	N	N	N	70	>10,000
6BE1034C	39 45 30	113 25 28	1.0	7	50	.05	500	N	N	N	50	>10,000
6BE1035C	39 46 43	113 25 37	2.0	7	50	.05	700	N	N	N	70	>10,000
6DE1051C	39 37 16	113 24 55	2.0	3	7	1.50	1,000	N	N	N	50	>10,000
6DE1052C	39 37 14	113 24 51	.3	5	10	2.00	200	N	N	N	50	>10,000
6CE1060C	39 37 35	113 26 54	.5	10	50	.10	300	N	N	N	50	>10,000

TABLE 4-RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s
6DE0013C	<2	N	N	N	<20	10	100	N	N	N	<20	N	<10
6CE0014C	<2	N	N	N	<20	10	200	N	N	N	<20	N	<10
6CE0016C	<2	N	N	N	<20	<10	50	N	N	N	<20	N	N
6CE0017C	<2	N	N	N	<20	<10	<50	N	N	N	<20	N	N
6CE0018C	<2	N	N	N	<20	<10	100	N	N	N	100	N	N
6CE0019C	<2	N	N	N	<20	<10	N	N	N	N	<20	N	N
6CE0020C	<2	N	N	N	<20	<10	N	N	N	N	20	N	N
6CE0021C	<2	N	N	<10	20	30	100	N	N	N	30	N	N
6CE0023C	<2	N	N	N	20	<10	N	N	N	N	30	N	N
6CE0024C	<2	N	N	N	<20	<10	50	N	N	N	<20	N	N
6CE0025C	<2	N	N	N	<20	<10	50	N	N	N	N	N	N
6CE0026C	<2	N	N	N	<20	<10	50	N	N	N	N	N	N
6CE0027C	<2	N	N	N	<20	<10	50	N	N	N	<20	N	N
6CE0028C	<2	N	N	N	<20	<10	<50	N	N	N	<20	N	N
6BE0029C	<2	N	N	N	20	10	70	N	N	N	200	N	<10
6BE0030C	<2	N	N	15	<20	30	100	<10	N	N	500	N	<10
6BE0031C	<2	N	N	<10	<20	<10	100	N	N	N	N	N	<10
6BE0032C	<2	N	N	<10	<20	20	100	N	N	N	<20	N	<10
6BE0033C	N	N	N	N	<20	<10	N	N	N	N	50	N	N
6BE0034C	<2	N	N	10	30	20	300	N	N	N	100	N	10
6BE0035C	N	N	N	N	<20	10	70	N	N	N	100	N	N
6BE0036C	2	N	N	20	20	30	200	N	N	<10	1,000	N	10
6BE0037C	<2	N	N	20	20	30	200	N	N	<10	70	N	15
6AE0038C	<2	N	N	20	20	30	500	N	N	<10	200	N	10
6AE0039C	N	N	N	N	<20	<10	<50	N	N	N	200	N	N
6AE0040C	<2	N	N	20	20	50	300	N	N	<10	300	N	10
6BE0041C	<2	N	N	10	20	20	100	N	N	N	300	N	<10
6BE1024C	<2	N	<50	20	20	100	300	10	N	<10	30,000	N	<10
6BE1025C	<2	N	N	30	20	50	300	N	N	10	1,000	N	10
6BE1026C	N	N	N	N	<20	10	<50	N	N	N	150	N	N
6BE1027C	N	N	N	N	<20	<10	100	N	N	N	150	N	N
6BE1028C	N	N	N	<10	<20	10	50	N	N	N	100	N	N
6BE1029C	N	N	N	N	20	10	200	N	N	N	500	N	<10
6BE1030C	N	N	N	N	<20	<10	50	N	N	N	<20	N	N
6BE1031C	N	N	N	20	20	20	100	N	N	N	20	N	<10
6BE1032C	N	N	N	20	<20	30	200	N	N	<10	20	N	<10
6CE1033C	N	N	N	N	<20	10	1,000	N	N	N	<20	N	<10
6BE1034C	N	N	N	<10	<20	10	100	N	N	N	<20	N	N
6BE1035C	<2	N	N	15	<20	30	100	N	N	<10	50	N	<10
6DE1051C	<2	N	N	<10	50	15	300	50	50	N	2,000	N	20
6DE1052C	2	N	N	N	50	<10	50	N	N	N	1,000	N	50
6CE1060C	N	N	N	N	20	<10	70	N	N	N	50	N	<10

TABLE 4-RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
6DE0013C	N	2,000	20	N	200	N	>2,000	N
6CE0014C	N	1,500	20	N	300	N	2,000	N
6CE0016C	N	1,000	20	N	100	N	700	N
6CE0017C	N	500	30	N	70	N	700	N
6CE0018C	N	1,000	30	N	150	N	>2,000	N
6CE0019C	N	<200	20	N	50	N	>2,000	N
6CE0020C	N	200	20	N	50	N	>2,000	N
6CE0021C	N	2,000	20	N	300	N	2,000	N
6CE0023C	N	1,000	30	N	50	N	>2,000	N
6CE0024C	N	500	30	N	100	N	>2,000	N
6CE0025C	N	500	20	N	100	N	1,000	N
6CE0026C	N	700	20	N	100	N	700	N
6CE0027C	N	2,000	20	N	70	N	500	N
6CE0028C	N	<200	<20	N	50	N	1,500	N
6BE0029C	N	1,500	20	N	100	N	>2,000	N
6BE0030C	N	2,000	30	N	200	N	>2,000	N
6BE0031C	N	2,000	30	N	150	N	2,000	N
6BE0032C	N	2,000	20	N	200	N	500	N
6BE0033C	N	300	20	N	50	N	500	N
6BE0034C	N	2,000	30	N	300	N	2,000	<200
6BE0035C	N	500	20	N	100	N	>2,000	N
6BE0036C	N	2,000	30	N	500	500	2,000	N
6BE0037C	N	2,000	70	N	300	N	2,000	N
6AE0038C	N	1,500	100	N	500	N	>2,000	N
6AE0039C	N	10,000	50	N	100	N	>2,000	N
6AE0040C	N	1,000	50	N	300	N	>2,000	N
6BE0041C	N	700	50	N	200	N	>2,000	N
6BE1024C	N	1,500	50	N	500	5,000	>2,000	N
6BE1025C	N	1,500	30	N	500	N	>2,000	N
6BE1026C	N	<200	30	N	100	N	>2,000	N
6BE1027C	N	500	20	N	200	N	>2,000	N
6BE1028C	N	500	50	N	200	N	>2,000	N
6BE1029C	N	700	50	N	200	N	>2,000	N
6BE1030C	N	300	50	N	150	N	>2,000	N
6BE1031C	N	2,000	30	N	300	N	>2,000	N
6BE1032C	N	2,000	30	N	300	N	>2,000	N
6CE1033C	N	2,000	20	N	300	N	>2,000	N
6BE1034C	N	3,000	20	N	200	N	>2,000	N
6BE1035C	N	2,000	20	N	200	N	2,000	N
6DE1051C	N	5,000	200	N	500	N	>2,000	N
6DE1052C	N	2,000	100	N	700	N	>2,000	N
6CE1060C	N	2,000	20	N	100	N	>2,000	N

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
6BE5030A	39 51 37	113 27 54	15.00	3.00	5.00	.010	1,000	50.0	1,000	N	50	70	<1
6BE5030B	39 51 37	113 27 54	20.00	1.00	3.00	.005	200	15.0	5,000	N	30	50	<1
6BE5030C	39 51 37	113 27 54	.70	>10.00	>20.00	.010	2,000	5.0	N	N	N	20	<1
6AE5041	39 53 2	113 24 52	5.00	10.00	10.00	.100	500	1.0	N	N	100	<20	<1
6BE5042	39 49 57	113 28 56	15.00	7.00	10.00	.050	2,000	150.0	1,000	N	50	300	<1
6BE5043A	39 49 59	113 28 46	2.00	.20	.50	.050	200	500.0	700	N	50	200	1
6BE5043B	39 49 59	113 28 46	20.00	.50	.10	.100	500	200.0	10,000	N	150	100	5
6DE5045A	39 37 27	113 25 11	1.50	5.00	>20.00	.010	2,000	3.0	N	N	N	20	N
6DE5045B	39 37 27	113 25 11	.50	>10.00	>20.00	.007	500	N	N	N	<10	150	<1
6DE5045C	39 37 27	113 25 11	5.00	>10.00	>20.00	.010	2,000	N	N	N	N	20	<1
6DE5046	39 37 22	113 25 12	.50	1.00	>20.00	N	700	N	N	N	N	N	N
6CE5053	39 39 28	113 25 6	1.00	1.00	>20.00	.020	700	N	N	N	N	<20	<1
6CE5054	39 39 22	113 25 18	2.00	1.00	>20.00	.070	1,000	N	N	N	<10	100	5
6CE5055	39 38 49	113 25 25	1.00	10.00	>20.00	.050	2,000	N	N	N	N	200	<1
6CE5056	39 38 43	113 25 31	3.00	1.00	>20.00	.100	1,000	N	N	N	10	200	<1
6CE5057	39 38 27	113 25 29	.50	10.00	>20.00	.020	2,000	N	N	N	N	N	1
6BE5015A	39 51 26	113 27 28	1.00	.20	.20	.300	150	5.0	N	N	30	2,000	3
6BE5015B	39 51 26	113 27 28	>20.00	.02	.05	.005	3,000	7.0	N	N	<10	50	<1
6BE5016	39 51 26	113 27 15	.50	10.00	20.00	.007	1,000	2.0	N	N	<10	50	N
6BE5017A	39 51 28	113 27 10	5.00	5.00	10.00	.020	1,000	3.0	N	N	30	100	N
6BE5017B	39 51 28	113 27 10	<.05	.05	1.00	.007	100	N	N	N	30	200	N
6BE5018	39 51 26	113 27 5	.10	10.00	20.00	<.002	200	N	N	N	<10	<20	N
6BE5020	39 51 23	113 26 59	.50	>10.00	>20.00	.050	500	N	N	N	N	20	N
6BE5021A	39 51 21	113 27 7	10.00	.50	1.00	.010	>5,000	70.0	500	N	<10	<20	N
6BE5021B	39 51 21	113 27 7	10.00	2.00	5.00	.005	>5,000	300.0	10,000	N	20	500	<1
6BE5022	39 51 14	113 26 49	.50	10.00	20.00	.020	1,500	1.0	N	N	<10	<20	N
6BE5023	39 51 7	113 26 53	15.00	7.00	10.00	.100	1,500	.5	N	N	100	20	N
6BE5024	39 51 4	113 26 58	5.00	10.00	20.00	.020	1,000	1.0	N	N	10	20	N
6BE5025	39 51 2	113 26 59	.70	10.00	>20.00	.003	5,000	200.0	1,500	N	N	N	N
6BE5026A	39 51 0	113 27 11	.10	10.00	>20.00	.005	1,000	3.0	N	N	<10	N	N
6BE5026B	39 51 0	113 27 11	>20.00	5.00	20.00	.015	2,000	200.0	500	N	<10	20	1
6BE5027A	39 51 6	113 27 11	5.00	5.00	20.00	.005	>5,000	1,000.0	5,000	N	10	N	<1
6BE5027B	39 51 6	113 27 11	2.00	3.00	20.00	.002	5,000	1,000.0	7,000	N	N	N	<1
6BE5028B	39 51 21	113 27 37	5.00	10.00	>20.00	.007	5,000	100.0	700	N	<10	N	N
6BE5029A	39 51 26	113 27 40	.70	>10.00	>20.00	.015	1,500	50.0	N	N	N	N	N
6BE5029B	39 51 26	113 27 40	2.00	1.00	.20	.200	200	5.0	1,000	N	50	700	3
6CE1060R	39 37 35	113 26 54	.15	7.00	20.00	.030	500	N	N	N	N	20	<1
6BE1024R	39 51 10	113 27 48	.15	10.00	>20.00	.007	200	2.0	N	N	70	50	N
6BE1026R	39 49 29	113 28 4	.20	>10.00	>20.00	.010	300	N	N	N	<10	30	N
6BE1027R	39 48 36	113 28 47	.05	1.00	3.00	.010	20	N	N	N	70	300	<1
6BE1028R	39 48 5	113 29 5	.20	10.00	20.00	.005	150	N	N	N	<10	20	N
6BE1029R	39 47 51	113 28 29	1.00	10.00	10.00	.010	300	N	N	N	20	100	<1
6BE1030R	39 47 13	113 28 25	.10	5.00	5.00	.005	70	N	N	N	30	30	N
6BE1034R	39 45 30	113 25 28	20.00	2.00	5.00	.070	200	N	N	N	20	100	1
6BE1035R	39 46 43	113 25 37	>20.00	.50	7.00	.050	100	N	>10,000	N	30	2,000	<1

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s
6BE5030A	100	N	N	<10	100	N	50	N	20	2,000	<100	N	N	300
6BE5030B	15	N	N	<10	200	N	10	N	<5	2,000	100	N	N	N
6BE5030C	N	N	N	<10	20	N	5	N	<5	500	N	N	N	N
6AE5041	N	N	30	20	30	N	10	N	50	200	N	<5	N	N
6BE5042	N	N	N	<10	200	N	50	N	5	>20,000	200	5	N	<100
6BE5043A	N	N	<5	10	100	20	100	N	10	>20,000	300	<5	N	300
6BE5043B	N	N	5	20	300	100	100	N	30	>20,000	1,500	7	N	N
6DE5045A	N	N	N	<10	<5	N	N	N	N	100	N	N	N	100
6DE5045B	N	N	N	<10	<5	N	N	N	N	70	N	<5	N	1,500
6DE5045C	N	N	N	<10	<5	N	N	N	<5	100	N	<5	N	N
6DE5046	N	N	N	N	<5	N	N	N	N	50	N	<5	N	100
6CE5053	N	N	N	10	<5	N	N	N	<5	50	N	N	N	500
6CE5054	N	N	N	15	<5	N	N	N	5	50	N	7	N	500
6CE5055	N	N	5	10	5	N	N	N	5	30	N	N	N	300
6CE5056	N	N	10	20	10	N	N	N	10	50	N	7	N	500
6CE5057	N	N	<5	<10	<5	N	N	N	<5	50	N	5	N	<100
6BE5015A	N	N	N	10	<5	50	N	N	5	50	N	<5	N	N
6BE5015B	N	50	N	N	5,000	N	N	N	5	15,000	<100	N	N	N
6BE5016	N	N	N	<10	50	N	N	N	5	100	N	N	N	N
6BE5017A	N	N	N	50	70	N	10	N	30	100	N	N	N	N
6BE5017B	N	N	N	<10	5	N	N	N	<5	<10	N	N	N	N
6BE5018	N	N	N	<10	5	N	N	N	5	10	N	N	N	N
6BE5020	N	N	N	<10	7	N	N	N	10	30	N	N	N	<100
6BE5021A	N	500	N	<10	10	N	100	N	<5	5,000	500	<5	N	1,000
6BE5021B	N	>500	N	<10	50	N	50	N	5	>20,000	700	N	N	N
6BE5022	N	N	N	<10	5	N	N	N	7	200	N	N	N	N
6BE5023	N	N	7	20	20	N	5	N	30	500	N	<5	N	N
6BE5024	N	N	N	<10	5	N	N	N	10	150	N	N	N	N
6BE5025	N	200	N	<10	20	N	<5	N	<5	>20,000	100	N	N	N
6BE5026A	N	N	N	<10	<5	N	N	N	<5	500	N	N	N	N
6BE5026B	N	>500	<5	<10	2,000	N	<5	N	5	20,000	1,000	N	N	N
6BE5027A	N	>500	N	<10	2,000	N	10	N	5	>20,000	2,000	N	N	N
6BE5027B	N	>500	N	<10	700	N	10	N	<5	20,000	1,000	N	N	N
6BE5028B	N	>500	100	<10	1,000	N	200	N	10	>20,000	500	N	N	N
6BE5029A	N	100	N	<10	500	N	10	N	5	7,000	100	N	N	N
6BE5029B	N	N	<5	<10	5	50	N	N	7	500	N	<5	N	N
6CE1060R	N	N	N	<10	<5	N	N	N	<5	<10	N	N	N	N
6BE1024R	N	N	N	<10	<5	N	N	N	7	<10	N	N	N	N
6BE1026R	N	N	N	<10	5	N	N	N	5	<10	N	N	N	<100
6BE1027R	N	N	N	<10	15	N	N	N	7	<10	N	N	N	N
6BE1028R	N	N	N	<10	10	N	N	N	5	<10	N	N	N	<100
6BE1029R	N	N	N	10	20	N	5	N	15	<10	N	N	N	N
6BE1030R	N	N	N	<10	5	N	N	N	7	N	N	N	N	N
6BE1034R	N	N	<5	<10	10	N	10	N	10	200	N	<5	N	N
6BE1035R	N	N	<5	10	15	N	20	N	10	20	N	N	N	500

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa/icp	Bi-ppm aa/icp	Cd-ppm aa/icp	Sb-ppm aa/icp	Zn-ppm aa/icp
6BE5030A	100	N	<10	1,000	20	N	.30	580.000	47	4.2	16.000	960.00
6BE5030B	100	200	10	1,000	50	N	.20	2,300.000	13	8.3	51.000	430.00
6BE5030C	10	N	10	<200	<10	N	<.10	34.000	<2	1.5	5.000	100.00
6AE5041	50	N	10	N	500	N	<.10	100.000	<2	.6	7.000	<2.00
6BE5042	150	N	<10	2,000	200	N	<.10	720.000	<2	11.0	100.000	2,100.00
6BE5043A	70	N	10	200	500	N	<.10	570.000	<2	1.4	280.000	220.00
6BE5043B	200	50	50	1,000	>1,000	N	1.80	5,300.000	<2	4.7	560.000	2,900.00
6DE5045A	20	N	<10	N	10	N	<.10	8.000	<2	.4	<2.000	53.00
6DE5045B	10	N	N	<200	<10	N	<.10	<5.000	<2	.1	<2.000	58.00
6DE5045C	30	N	<10	<200	<10	N	<.10	80.000	<2	.8	<2.000	130.00
6DE5046	10	N	N	N	N	N	<.10	14.000	<2	.5	<2.000	14.00
6CE5053	30	N	10	<200	10	N	<.10	19.000	<2	.3	16.000	2.00
6CE5054	30	N	10	<200	30	N	<.10	72.000	<2	.6	17.000	13.00
6CE5055	20	N	<10	<200	30	N	<.10	26.000	<2	.3	2.000	<2.00
6CE5056	70	N	20	<200	300	N	<.10	64.000	<2	.6	3.000	3.00
6CE5057	20	N	<10	<200	<10	N	<.10	12.000	<2	.2	3.000	<2.00
6BE5015A	50	N	20	200	200	N	N	55.000	<2	.7	<2.000	28.00
6BE5015B	20	N	N	>10,000	20	N	N	210.000	11	43.0	56.000	20,000.00
6BE5016	20	N	N	<200	N	N	N	<5.000	<2	.6	<2.000	71.00
6BE5017A	100	N	N	200	15	N	N	79.000	<2	.3	14.000	75.00
6BE5017B	10	N	N	<200	<10	N	N	<5.000	<2	<.1	<2.000	7.00
6BE5018	20	N	N	<200	N	N	N	<5.000	<2	<.1	<2.000	<2.00
6BE5020	30	N	N	N	20	N	N	7.000	<2	.2	3.000	23.00
6BE5021A	200	N	N	>10,000	<10	N	N	630.000	56	170.0	280.000	4,800.00
6BE5021B	50	N	N	>10,000	N	N	N	4,900.000	5	360.0	320.000	38,000.00
6BE5022	10	N	N	700	15	N	N	10.000	<2	5.6	7.000	640.00
6BE5023	100	N	N	5,000	20	N	N	18.000	<2	4.6	4.000	1,500.00
6BE5024	30	N	N	<200	10	N	N	25.000	<2	.6	5.000	120.00
6BE5025	<10	N	N	10,000	N	N	N	1,500.000	<2	83.0	67.000	4,500.00
6BE5026A	<10	N	N	N	N	N	N	15.000	<2	1.9	4.000	87.00
6BE5026B	20	N	N	>10,000	10	N	N	490.000	<2	1,100.0	370.000	21,000.00
6BE5027A	10	N	<10	>10,000	N	N	.17	4,100.000	<2	1,800.0	410.000	150,000.00
6BE5027B	10	N	<10	>10,000	N	N	.15	6,600.000	<2	780.0	820.000	85,000.00
6BE5028B	50	N	<10	>10,000	N	N	N	340.000	<2	1,100.0	240.000	45,000.02
6BE5029A	50	N	<10	3,000	<10	N	N	100.000	<2	63.0	72.000	2,300.00
6BE5029B	50	N	30	200	200	N	N	38.000	<2	2.0	6.000	140.00
6CE1060R	<10	N	<10	<200	N	N	N	7.000	<2	<.1	<2.000	<2.00
6BE1024R	10	N	N	200	<10	N	N	<5.000	<2	.2	<2.000	41.00
6BE1026R	10	N	<10	<200	<10	N	N	<5.000	<2	<.1	2.000	<2.00
6BE1027R	10	N	N	<200	<10	N	N	<5.000	<2	<.1	<2.000	3.00
6BE1028R	10	N	N	<200	<10	N	N	<5.000	<2	.1	<2.000	<2.00
6BE1029R	15	N	<10	200	<10	N	N	<5.000	<2	.1	<2.000	<2.00
6BE1030R	10	N	N	<200	<10	N	N	<5.000	<2	<.1	<2.000	<2.00
6BE1034R	100	N	20	5,000	100	N	N	57.000	<2	14.0	4.000	5,900.00
6BE1035R	70	N	N	300	30	N	N	15,000.000	<2	.3	21.000	21.00

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
6DE1050R	39 37 19	113 24 57	1.00	.20	10.00	.050	700	N	N	N	70	100	<1
6DE0013	39 37 18	113 25 56	1.50	1.50	20.00	.070	500	N	N	N	<10	100	<1
6DE0014	39 37 56	113 27 17	5.00	.30	>20.00	.070	1,000	N	N	N	10	100	1
6CE0015	39 38 59	113 27 48	1.00	.50	>20.00	.020	2,000	N	N	N	N	<20	N
6CE0017	39 40 44	113 27 52	1.50	3.00	>20.00	.020	700	N	N	N	N	300	<1
6CE0018	39 41 23	113 28 11	3.00	2.00	>20.00	.100	1,500	N	N	N	20	150	1
6CE0019	39 42 12	113 28 29	1.00	3.00	>20.00	.020	500	N	N	N	50	50	<1
6CE0021	39 44 14	113 28 9	2.00	.50	>20.00	.020	500	N	N	N	50	70	N
6CE0023	39 38 36	113 24 23	1.50	.50	>20.00	.050	300	N	N	N	N	<20	N
6CE0024	39 39 44	113 24 25	.15	1.50	>20.00	.070	150	N	N	N	30	20	<1
6CE0025	39 40 45	113 24 19	1.00	.50	20.00	.100	500	N	N	N	20	100	1
6CE0027	39 43 36	113 24 33	5.00	.70	>20.00	.020	500	N	N	N	N	<20	<1
6CE0028	39 44 12	113 25 16	2.00	5.00	20.00	.100	700	N	N	N	<10	100	<1
6BE0029	39 47 45	113 25 45	.70	10.00	20.00	.010	200	N	N	N	N	<20	<1
6BE0030	39 48 32	113 25 56	5.00	1.50	2.00	.300	500	N	N	N	70	700	5
6BE0032	39 49 29	113 24 50	.20	7.00	10.00	.030	150	N	N	N	20	50	N
6BE0033	39 50 29	113 24 47	.20	10.00	10.00	.007	150	N	N	N	10	<20	N
6BE0035	39 51 25	113 25 41	2.00	7.00	10.00	.050	150	N	N	N	30	70	N
6BE0036	39 50 57	113 26 4	3.00	1.00	20.00	.050	500	N	<200	N	50	70	N
6BE0037	39 52 10	113 24 54	1.00	7.00	15.00	.020	150	N	N	N	50	50	N
6AE0038	39 52 32	113 24 57	2.00	5.00	15.00	.030	100	N	N	N	50	50	N
6AE0039	39 53 26	113 25 24	.15	7.00	>20.00	.015	200	N	N	N	<10	200	N
6AE0040	39 53 6	113 26 56	.70	7.00	20.00	.050	300	N	N	N	50	50	N
6BE0041	39 52 12	113 27 39	.50	2.00	5.00	.070	50	<.5	N	N	70	70	N
7BE5203	39 46 8	113 25 18	1.00	>10.00	20.00	.020	500	N	N	N	<10	100	N
7BE5204B	39 46 4	113 25 21	.50	.70	20.00	.050	700	N	N	N	N	70	<1
7BE5209	39 46 53	113 26 37	2.00	.70	20.00	.050	2,000	N	N	N	10	100	N
7BE5204C	39 46 4	113 25 21	1.00	1.00	20.00	.300	1,000	N	N	N	20	150	<1
7BE5208	39 46 53	113 26 35	20.00	.50	1.50	.010	20	N	N	N	50	100	<1
7BE5207	39 46 55	113 26 25	2.00	1.00	20.00	.050	500	N	N	N	10	100	N
7BE5205	39 46 49	113 25 49	.70	10.00	20.00	.003	70	N	N	N	N	<20	<1
7BE5204D	39 46 4	113 25 21	.70	1.00	>20.00	.010	500	N	N	N	N	<20	N
7BE5206	39 46 51	113 25 51	--	--	--	--	--	--	--	--	--	--	--
7BE5204A	39 46 4	113 25 21	.20	1.00	20.00	.020	300	N	N	N	N	<20	N
7BE5374A	39 51 21	113 26 59	5.00	1.00	1.00	.500	1,000	N	N	N	30	5,000	3
7BE5374B	39 51 21	113 26 59	.20	10.00	>20.00	.010	5,000	N	N	N	20	100	N
7BE5375A	39 51 38	113 26 53	5.00	.50	5.00	1.000	1,000	<.5	N	N	100	500	<1
7BE5375B	39 51 38	113 26 53	.20	>10.00	>20.00	.010	500	N	N	N	20	50	N
7BE5376	39 51 41	113 26 52	5.00	5.00	20.00	.500	500	N	N	N	50	700	1
7BE5377A	39 51 40	113 26 37	.20	>10.00	>20.00	.030	300	N	N	N	<10	100	N
7BE5377B	39 51 40	113 26 37	10.00	3.00	10.00	1.000	700	N	N	N	50	5,000	2
7BE5377C	39 51 40	113 26 37	7.00	3.00	7.00	1.000	700	N	N	N	20	5,000	1
7BE5378A	39 51 26	113 26 45	2.00	2.00	2.00	.020	3,000	2.0	N	N	50	150	10
7BE5378B	39 51 26	113 26 45	2.00	3.00	2.00	.015	3,000	1.0	N	N	50	150	10
7BE5380A	39 51 5	113 27 10	>20.00	.50	.50	.200	100	100.0	500	N	500	100	<1

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s
6DE1050R	N	N	<5	<10	15	N	N	N	<5	<10	N	N	N	N
6DE0013	N	N	N	<10	<5	N	N	N	5	<10	N	5	N	500
6DE0014	N	N	7	15	<5	N	N	N	7	<10	N	7	N	300
6CE0015	N	N	N	<10	<5	N	N	N	<5	N	N	<5	N	500
6CE0017	N	N	N	<10	<5	N	N	N	5	10	N	<5	N	200
6CE0018	N	N	<5	<10	5	<20	N	N	5	20	N	7	N	300
6CE0019	N	N	N	<10	5	N	N	N	15	<10	N	N	N	100
6CE0021	N	N	N	<10	<5	N	N	N	20	<10	N	<5	N	100
6CE0023	N	N	N	<10	<5	N	N	N	7	N	N	N	N	500
6CE0024	N	N	N	<10	<5	N	N	N	<5	N	N	N	N	N
6CE0025	N	N	<5	<10	<5	N	N	N	10	<10	N	<5	N	<100
6CE0027	N	N	<5	<10	7	N	N	N	10	<10	N	5	N	200
6CE0028	N	N	<5	10	<5	<20	N	N	5	<10	N	5	N	150
6BE0029	N	N	N	<10	<5	N	N	N	7	10	N	N	N	N
6BE0030	N	N	15	50	15	50	N	N	50	30	N	7	N	500
6BE0032	N	N	N	<10	<5	N	N	N	10	N	N	N	N	N
6BE0033	N	N	N	<10	<5	N	N	N	10	N	N	N	N	N
6BE0035	N	N	N	<10	5	N	N	N	10	N	N	N	N	N
6BE0036	N	N	N	10	10	N	15	N	15	10	N	N	N	<100
6BE0037	N	N	N	10	10	N	N	N	10	<10	N	N	N	N
6AE0038	N	N	N	<10	<5	N	N	N	10	N	N	N	N	N
6AE0039	N	N	N	<10	5	N	N	N	5	N	N	N	N	1,000
6AE0040	N	N	N	<10	15	N	N	N	15	20	N	N	N	N
6BE0041	N	N	N	<10	5	N	N	N	10	N	N	N	N	N
7BE5203	N	N	N	10	5	N	N	N	5	10	N	N	N	N
7BE5204B	N	N	<5	20	<5	<20	N	N	<5	10	N	N	N	500
7BE5209	N	N	20	50	10	<20	N	N	15	30	N	10	N	500
7BE5204C	N	N	10	70	10	30	N	<20	10	30	N	10	N	200
7BE5208	N	N	15	N	30	N	70	N	70	10	N	N	N	N
7BE5207	N	N	5	30	<5	N	<5	N	5	20	N	<5	N	200
7BE5205	N	N	N	<10	<5	N	N	N	5	20	N	N	N	N
7BE5204D	N	N	N	<10	<5	N	N	N	<5	<10	N	<5	N	200
7BE5206	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7BE5204A	N	N	N	20	<5	N	N	N	<5	N	N	N	N	500
7BE5374A	N	N	5	20	5	200	10	50	5	200	N	10	<10	100
7BE5374B	N	N	N	N	<5	N	N	N	N	100	N	N	N	N
7BE5375A	30	N	20	30	20	N	N	<20	20	100	N	<5	N	N
7BE5375B	N	N	N	N	<5	N	N	N	N	10	N	N	N	N
7BE5376	N	N	10	70	10	<20	N	N	30	20	N	15	N	N
7BE5377A	N	N	N	N	<5	N	N	N	N	<10	N	N	N	500
7BE5377B	N	N	30	150	30	200	N	30	70	100	N	50	N	2,000
7BE5377C	N	N	20	150	20	100	N	20	5	100	N	20	N	1,000
7BE5378A	N	N	N	N	<5	N	N	200	<5	150	N	10	500	N
7BE5378B	N	N	N	<10	<5	N	N	200	<5	100	N	15	500	N
7BE5380A	N	20	N	N	100	N	50	N	<5	>20,000	>10,000	<5	N	N

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa/icp	Bi-ppm aa/icp	Cd-ppm aa/icp	Sb-ppm aa/icp	Zn-ppm aa/icp
6DE1050R	20	N	10	<200	100	N	N	21.000	<2	.2	4.000	8.00
6DE0013	20	N	15	N	100	N	N	120.000	<2	.3	<2.000	3.00
6DE0014	20	N	30	N	150	N	N	68.000	<2	.6	<2.000	3.00
6CE0015	15	N	10	N	20	N	N	51.000	<2	.2	6.000	2.00
6CE0017	15	N	10	N	20	N	N	43.000	<2	.3	15.000	<2.00
6CE0018	30	N	50	N	200	N	N	35.000	<2	.5	<2.000	<2.00
6CE0019	15	N	10	<200	30	N	N	<5.000	<2	.2	<2.000	<2.00
6CE0021	20	N	<10	<200	70	N	N	7.000	<2	.3	<2.000	11.00
6CE0023	10	N	N	<200	20	N	N	33.000	<2	.4	<2.000	6.00
6CE0024	10	N	<10	<200	1,000	N	N	<5.000	<2	<.1	<2.000	<2.00
6CE0025	15	N	20	N	150	N	N	71.000	<2	.4	4.000	<2.00
6CE0027	15	N	10	N	20	N	N	30.000	<2	.9	18.000	7.00
6CE0028	20	N	20	N	200	N	N	77.000	<2	.5	<2.000	<2.00
6BE0029	10	N	N	<200	15	N	N	<5.000	<2	.3	3.000	<2.00
6BE0030	150	N	20	<200	200	N	N	<5.000	<2	.2	<2.000	10.00
6BE0032	20	N	<10	200	20	N	N	<5.000	<2	.1	<2.000	<2.00
6BE0033	10	N	N	200	10	N	N	<5.000	<2	<.1	<2.000	<2.00
6BE0035	20	N	N	200	10	N	N	6.000	<2	.3	<2.000	10.00
6BE0036	30	N	<10	<200	100	N	N	230.000	<2	.6	35.000	21.00
6BE0037	30	N	N	200	30	N	N	<5.000	<2	.5	8.000	16.00
6AE0038	15	N	N	<200	30	N	N	11.000	<2	.3	5.000	<2.00
6AE0039	10	N	N	<200	<10	N	N	<5.000	<2	<.1	2.000	<2.00
6AE0040	30	N	<10	<200	500	N	N	6.000	<2	.1	3.000	<2.00
6BE0041	30	N	<10	<200	200	N	N	5.000	<2	.1	<2.000	3.00
7BE5203	15	N	<10	<200	10	N	N	10.000	N	.1	N	N
7BE5204B	20	N	10	N	50	N	N	20.000	2	N	N	5.00
7BE5209	20	N	30	N	70	N	N	N	N	N	N	10.00
7BE5204C	150	N	20	N	200	N	N	70.000	N	N	2.000	15.00
7BE5208	100	N	10	1,000	<10	N	N	80.000	1	N	N	180.00
7BE5207	20	N	15	N	70	N	N	20.000	N	N	N	25.00
7BE5205	10	N	N	<200	<10	N	N	N	N	.1	N	N
7BE5204D	20	N	<10	N	20	N	N	40.000	N	N	N	N
7BE5206	--	--	--	--	--	N	--	--	--	--	--	--
7BE5204A	20	N	N	N	20	N	N	10.000	N	N	2.000	N
7BE5374A	100	N	100	<200	300	N	N	30.000	N	N	N	40.00
7BE5374B	10	N	N	<200	N	N	N	10.000	N	N	N	10.00
7BE5375A	1,500	<50	<10	<200	100	N	N	40.000	26	N	50.000	25.00
7BE5375B	10	N	N	<200	N	N	N	<10.000	N	N	N	<5.00
7BE5376	200	N	20	200	150	N	N	90.000	N	N	6.000	40.00
7BE5377A	20	N	N	N	10	N	N	20.000	N	N	N	5.00
7BE5377B	200	N	100	<200	500	N	N	10.000	N	N	N	45.00
7BE5377C	200	N	50	<200	300	N	N	10.000	N	N	N	50.00
7BE5378A	10	N	100	<200	70	N	N	<10.000	N	.1	N	75.00
7BE5378B	<10	N	70	<200	70	N	N	10.000	N	N	N	65.00
7BE5380A	50	N	<10	2,000	200	N	N	550.000	N	13.0	>1,000.000	>2,000.00

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
7BE5380B	39 51 5	113 27 10	7.00	1.00	20.00	.150	1,000	20.0	N	N	100	100	1
7BE5380C	39 51 5	113 27 10	20.00	1.00	2.00	.200	200	100.0	2,000	N	500	200	2
7BE5381	39 51 46	113 27 32	.50	10.00	>20.00	.020	1,500	2.0	N	N	10	100	N
7BE5383	39 51 56	113 27 39	3.00	5.00	>20.00	.005	>5,000	150.0	1,000	N	70	5,000	N
7AE5384A	39 53 1	113 24 53	15.00	10.00	>20.00	.020	500	N	N	N	200	70	N
7AE5384B	39 53 1	113 24 53	10.00	10.00	>20.00	.020	700	<.5	N	N	100	70	N
7BE5385B	39 49 57	113 28 47	15.00	1.00	.10	.100	700	100.0	1,500	N	500	100	3
7BE5385C	39 49 57	113 28 47	.50	>10.00	>20.00	.020	2,000	5.0	N	N	<10	20	N
7BE5385D	39 49 57	113 28 47	2.00	3.00	20.00	.100	3,000	10.0	200	N	100	100	N
7BE5385E	39 49 57	113 28 47	1.00	.50	.50	.100	500	20.0	N	N	100	150	<1
7BE5385F	39 49 57	113 28 47	15.00	.50	.50	.050	500	1,000.0	2,000	N	500	200	N
7BE5385G	39 49 57	113 28 47	1.00	.20	.20	.050	1,000	500.0	<200	N	20	100	N
7BE5385H	39 49 57	113 28 47	5.00	.30	2.00	.050	500	1,000.0	2,000	N	50	500	<1
7BE5386A	39 50 8	113 28 34	1.50	.20	1.00	.050	300	100.0	3,000	N	50	200	<1
7BE5386B	39 50 8	113 28 34	5.00	.30	1.00	.050	300	200.0	300	N	70	200	N
7BE5386C	39 50 8	113 28 34	.20	>10.00	>20.00	.005	2,000	10.0	N	N	<10	150	N
7BE5387A	39 49 57	113 28 52	5.00	1.00	1.00	.050	500	5.0	N	N	70	100	N
7BE5387B	39 49 57	113 28 52	1.00	.20	.20	.100	300	50.0	N	N	50	100	N
7BE5387C	39 49 57	113 28 52	1.00	.30	.30	.050	300	100.0	N	N	50	70	N
7BE5387D	39 49 57	113 28 52	3.00	.20	.30	.050	1,000	700.0	N	N	70	100	N
7BE5387E	39 49 57	113 28 52	5.00	>10.00	>20.00	.020	>5,000	70.0	N	N	20	500	N
7BE5387F	39 49 57	113 28 52	7.00	>10.00	>20.00	.010	>5,000	100.0	N	N	20	200	<1
7BE5388A	39 48 42	113 26 17	7.00	5.00	7.00	.700	2,000	1.5	N	N	20	5,000	2
7BE5388B	39 48 42	113 26 17	7.00	7.00	10.00	1.000	2,000	1.0	N	N	50	5,000	2
7BE5388C	39 48 42	113 26 17	1.50	1.50	>20.00	.050	3,000	.5	N	N	20	200	N
7BE5388D	39 48 42	113 26 17	5.00	2.00	>20.00	.100	3,000	5.0	N	N	100	1,000	N
7BE5388E	39 48 42	113 26 17	7.00	7.00	>20.00	.050	1,500	<.5	N	N	100	200	<1
7BE5347A	39 50 55	113 26 36	15.00	.30	.10	.050	150	N	N	N	500	200	5
7BE5347B	39 50 55	113 26 36	20.00	.50	.50	.100	200	N	3,000	N	700	1,000	2
7BE5347C	39 50 55	113 26 36	>20.00	.50	.50	.050	150	N	1,000	N	1,000	700	1
7BE5348A	39 51 10	113 26 44	7.00	10.00	>20.00	.200	200	<.5	N	N	300	200	1
7BE5348B	39 51 10	113 26 44	2.00	>10.00	>20.00	.070	1,500	N	N	N	50	50	<1
7BE5349A	39 51 13	113 26 41	3.00	>10.00	>20.00	.150	700	N	N	N	200	100	<1
7BE5349B	39 51 13	113 26 41	.15	>10.00	>20.00	.010	1,000	N	N	N	N	20	N
7BE5350A	39 51 2	113 26 52	1.00	.10	2.00	.020	150	N	N	N	70	100	1
7BE5350B	39 51 2	113 26 52	3.00	.20	3.00	.070	500	N	500	N	100	5,000	<1
7BE5351A	39 50 59	113 26 49	2.00	.10	.50	.020	200	N	N	N	50	100	<1
7BE5352	39 50 58	113 26 53	7.00	5.00	10.00	.020	>5,000	1.0	N	N	20	>5,000	<1
7BE5353A	39 50 47	113 25 30	7.00	1.00	.70	.700	2,000	N	N	N	500	700	1
7BE5353B	39 50 47	113 25 30	3.00	>10.00	>20.00	.070	700	N	N	N	20	50	<1
7AE5355A	39 54 19	113 25 53	2.00	2.00	>20.00	.005	1,000	N	500	N	30	70	7
7AE5355B	39 54 19	113 25 53	3.00	2.00	>20.00	.010	2,000	N	700	N	50	150	10
7AE5355C	39 54 19	113 25 53	3.00	7.00	>20.00	.100	300	N	200	N	200	1,000	10
7AE5356A	39 52 36	113 27 29	1.00	7.00	>20.00	.030	700	N	N	N	<10	70	N
7AE5356B	39 52 36	113 27 29	2.00	>10.00	>20.00	.070	2,000	N	N	N	10	300	<1

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s
7BE5380B	N	N	N	N	50	N	30	N	<5	7,000	200	<5	N	N
7BE5380C	N	100	N	N	70	N	20	N	5	>20,000	>10,000	5	N	N
7BE5381	N	N	N	N	<5	N	N	N	<5	1,000	N	N	N	100
7BE5383	N	500	N	<10	20	N	10	N	10	>20,000	100	20	200	N
7AE5384A	N	N	N	N	10	N	20	N	20	7,000	N	N	N	N
7AE5384B	N	N	N	<10	10	N	5	N	20	500	N	<5	N	N
7BE5385B	N	N	<5	20	150	N	100	N	20	>20,000	1,000	7	N	N
7BE5385C	N	N	N	N	<5	N	N	N	<5	2,000	N	N	N	N
7BE5385D	N	N	N	<10	10	N	10	N	<5	10,000	N	<5	N	N
7BE5385E	N	N	N	<10	10	N	30	N	15	10,000	N	N	N	N
7BE5385F	N	N	N	<10	100	N	20	N	10	>20,000	500	N	N	500
7BE5385G	N	N	N	N	20	N	5	N	<5	>20,000	<100	<5	N	500
7BE5385H	N	N	N	N	70	N	20	N	10	>20,000	200	<5	N	500
7BE5386A	N	N	N	N	20	N	N	N	<5	>20,000	200	<5	N	N
7BE5386B	N	N	N	N	20	N	100	N	5	>20,000	100	<5	N	N
7BE5386C	N	N	<5	N	15	N	10	N	5	5,000	N	N	N	N
7BE5387A	N	N	N	N	10	N	N	N	<5	2,000	N	5	N	N
7BE5387B	N	N	N	N	10	N	N	N	<5	>20,000	N	5	N	N
7BE5387C	N	N	N	N	20	N	N	N	<5	>20,000	N	N	N	N
7BE5387D	N	N	N	N	50	N	N	N	<5	>20,000	N	N	N	N
7BE5387E	N	20	N	N	5	N	10	N	15	10,000	N	<5	N	100
7BE5387F	N	500	N	N	20	<20	15	N	20	15,000	N	N	N	N
7BE5388A	N	N	20	100	10	100	N	<20	30	500	N	20	N	2,000
7BE5388B	N	N	20	150	10	70	N	20	50	300	N	30	N	2,000
7BE5388C	N	N	10	10	5	N	<5	N	<5	300	N	5	N	500
7BE5388D	N	N	7	30	10	<20	N	N	20	200	N	7	N	500
7BE5388E	N	N	5	20	15	N	10	N	20	200	N	5	N	<100
7BE5347A	N	N	10	<10	10	N	5	N	20	20	N	10	N	<100
7BE5347B	N	N	7	10	15	N	15	N	20	50	N	10	N	100
7BE5347C	N	N	<5	<10	10	N	10	N	15	50	N	7	N	500
7BE5348A	N	N	20	100	50	20	5	N	70	70	N	20	N	100
7BE5348B	N	N	5	20	10	N	5	N	30	70	N	7	N	<100
7BE5349A	N	N	7	50	15	N	5	N	30	50	N	10	N	<100
7BE5349B	N	N	N	<10	5	N	N	N	<5	30	N	N	N	<100
7BE5350A	N	N	<5	<10	5	N	N	N	10	10	N	N	N	N
7BE5350B	N	N	N	10	10	N	20	N	10	50	<100	N	N	<100
7BE5351A	N	N	<5	10	7	N	N	N	7	15	N	N	N	N
7BE5352	N	N	N	<10	10	N	100	N	10	100	<100	5	N	500
7BE5353A	N	N	10	20	15	N	10	30	20	70	100	7	N	N
7BE5353B	N	N	<5	<10	10	N	20	N	10	200	N	5	N	N
7AE5355A	N	N	N	<10	7	N	N	N	5	20	N	N	N	3,000
7AE5355B	N	N	N	N	<5	N	N	N	<5	20	N	N	N	3,000
7AE5355C	N	N	7	30	10	N	<5	N	15	50	N	10	N	>5,000
7AE5356A	N	N	N	10	5	N	N	N	5	20	N	N	N	700
7AE5356B	N	N	N	20	10	N	N	N	5	20	N	5	N	200

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa/icp	Bi-ppm aa/icp	Cd-ppm aa/icp	Sb-ppm aa/icp	Zn-ppm aa/icp
7BE5380B	30	N	<10	1,000	70	N	N	110.000	N	5.5	110.000	400.00
7BE5380C	50	N	10	5,000	70	N	N	1,400.000	N	69.0	>1,000.000	>2,000.00
7BE5381	<10	N	<10	N	<10	N	N	40.000	N	.2	12.000	20.00
7BE5383	>10,000	<50	20	>10,000	N	700	.10	1,400.000	N	90.0	18.000	>2,000.00
7AE5384A	500	N	N	200	50	N	N	160.000	N	.2	24.000	50.00
7AE5384B	100	N	N	N	<10	N	N	120.000	N	.1	10.000	25.00
7BE5385B	2,000	N	20	2,000	1,000	N	.35	1,300.000	N	2.1	480.000	>2,000.00
7BE5385C	50	N	N	N	<10	N	N	10.000	N	.8	2.000	65.00
7BE5385D	200	N	N	<200	700	N	<.05	280.000	N	.9	14.000	190.00
7BE5385E	50	N	<10	N	1,000	N	N	80.000	N	.4	10.000	90.00
7BE5385F	50	N	N	1,500	200	N	.20	950.000	N	15.0	340.000	1,100.00
7BE5385G	20	N	N	N	200	N	N	250.000	N	.8	58.000	120.00
7BE5385H	20	N	N	200	100	N	N	900.000	N	2.9	180.000	380.00
7BE5386A	100	N	N	N	200	N	<.05	1,200.000	N	.7	70.000	70.00
7BE5386B	50	N	<10	200	300	N	<.05	410.000	N	.8	80.000	360.00
7BE5386C	10	N	N	N	N	N	N	20.000	N	1.7	6.000	70.00
7BE5387A	20	N	N	<200	200	N	N	40.000	N	.7	2.000	210.00
7BE5387B	50	N	<10	<200	200	N	N	80.000	N	.1	14.000	75.00
7BE5387C	20	N	N	<200	200	N	N	80.000	N	.7	32.000	230.00
7BE5387D	20	N	N	<200	150	N	N	160.000	N	.7	92.000	120.00
7BE5387E	15	N	N	1,000	20	N	N	140.000	N	37.0	10.000	>2,000.00
7BE5387F	50	N	<10	>10,000	<10	N	<.05	100.000	N	>100.0	4.000	>2,000.00
7BE5388A	100	N	50	200	300	N	N	10.000	N	.7	N	90.00
7BE5388B	200	N	50	N	500	N	N	10.000	N	.5	N	60.00
7BE5388C	20	N	50	<200	200	N	N	140.000	N	.1	N	20.00
7BE5388D	30	N	70	N	300	N	N	10.000	N	1.0	N	10.00
7BE5388E	50	N	20	N	100	N	N	100.000	N	.1	20.000	60.00
7BE5347A	100	N	15	200	50	N	N	200.000	N	.3	20.000	75.00
7BE5347B	200	N	10	500	70	N	N	1,500.000	N	.2	12.000	40.00
7BE5347C	100	N	10	500	20	N	N	900.000	N	.1	16.000	50.00
7BE5348A	70	N	30	<200	150	N	N	10.000	N	N	2.000	55.00
7BE5348B	50	N	10	<200	50	N	N	20.000	N	N	4.000	5.00
7BE5349A	50	N	20	<200	100	N	N	10.000	N	N	N	15.00
7BE5349B	10	N	10	<200	<10	N	N	N	N	N	N	10.00
7BE5350A	20	N	<10	<200	150	N	N	100.000	N	N	20.000	30.00
7BE5350B	30	N	<10	<200	150	N	N	200.000	N	.2	50.000	20.00
7BE5351A	15	N	<10	<200	50	N	N	110.000	N	N	12.000	N
7BE5352	200	N	<10	300	50	N	N	400.000	N	3.4	64.000	350.00
7BE5353A	100	N	20	200	500	N	N	120.000	N	.1	68.000	190.00
7BE5353B	20	N	<10	200	70	N	N	50.000	N	.5	30.000	350.00
7AE5355A	<10	N	N	N	20	N	N	400.000	N	N	8.000	10.00
7AE5355B	<10	N	N	N	10	N	N	700.000	N	N	34.000	35.00
7AE5355C	70	N	20	N	100	N	N	400.000	N	N	14.000	25.00
7AE5356A	10	N	10	N	70	N	N	N	N	N	2.000	10.00
7AE5356B	15	N	15	<200	150	N	N	N	N	N	N	5.00

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
7BE5357	39 52 4	113 28 1	.20	10.00	>20.00	.010	1,000	N	N	N	N	50	<1
7BE5358A	39 51 55	113 27 55	N	>10.00	5.00	<.002	50	N	N	N	20	<20	<1
7BE5358B	39 51 55	113 27 55	N	>10.00	1.00	<.002	20	N	N	N	10	<20	<1
7BE5359A	39 51 56	113 27 54	N	>10.00	2.00	.002	50	N	N	N	30	20	<1
7BE5359B	39 51 56	113 27 54	<.05	10.00	>20.00	.002	200	N	N	N	<10	50	N
7BE5359C	39 51 56	113 27 54	N	>10.00	2.00	.002	50	N	N	N	20	<20	<1
7AE5360	39 53 29	113 24 55	.10	5.00	>20.00	.010	100	N	N	N	30	3,000	N
7BE5361	39 51 32	113 28 17	2.00	10.00	>20.00	.100	2,000	5.0	N	N	20	20	<1
7BE5362A	39 51 29	113 28 5	10.00	3.00	10.00	.020	1,500	700.0	>10,000	N	200	700	N
7BE5362B	39 51 29	113 28 5	20.00	1.00	5.00	.010	500	500.0	7,000	N	500	1,000	<1
7BE5363A	39 51 29	113 28 9	1.00	1.50	10.00	.010	300	7.0	N	N	20	200	2
7BE5363B	39 51 29	113 28 9	1.50	5.00	20.00	.010	500	10.0	N	N	10	300	1
7BE5364A	39 51 34	113 27 49	1.50	10.00	>20.00	.070	1,500	10.0	N	N	N	500	N
7BE5364B	39 51 34	113 27 49	2.00	1.50	2.00	.300	500	3.0	N	N	20	5,000	2
7BE5365A	39 51 35	113 27 51	2.00	1.00	.50	.200	200	2.0	N	N	20	5,000	?
7BE5365B	39 51 35	113 27 51	2.00	1.00	.50	.200	300	1.5	N	N	15	5,000	5
7BE5365C	39 51 35	113 27 51	.50	>10.00	>20.00	.005	1,500	2.0	N	N	N	<20	N
7BE5365D	39 51 35	113 27 51	2.00	1.00	.50	.300	200	3.0	N	N	10	3,000	3
7BE5366A	39 51 36	113 27 53	20.00	1.00	.50	.020	700	2.0	3,000	N	500	100	2
7BE5366B	39 51 36	113 27 53	>20.00	1.00	.50	.010	1,000	10.0	2,000	N	500	50	<1
7BE5367A	39 51 29	113 27 41	20.00	.50	5.00	.010	200	100.0	3,000	N	500	50	<1
7BE5367B	39 51 29	113 27 41	7.00	.50	.50	.150	700	50.0	200	N	20	3,000	<1
7BE5368	39 51 27	113 27 36	1.00	.70	1.50	.200	100	10.0	N	N	20	2,000	2
7BE5369A	39 51 25	113 27 26	3.00	1.50	2.00	.500	5,000	2.0	N	N	30	5,000	2
7BE5369B	39 51 25	113 27 26	7.00	10.00	20.00	.002	5,000	100.0	500	N	10	<20	N
7BE5369C	39 51 25	113 27 26	20.00	.30	.20	.005	300	70.0	>10,000	N	500	50	N
7BE5370A	39 51 24	113 27 19	20.00	2.00	5.00	.010	1,000	100.0	>10,000	N	300	50	<1
7BE5370B	39 51 24	113 27 19	10.00	5.00	10.00	.002	5,000	500.0	>10,000	N	100	<20	N
7AE5371	39 52 42	113 27 13	2.00	10.00	>20.00	.050	2,000	5.0	1,000	N	<100	200	1
7AE5373A	39 52 44	113 27 23	.50	>10.00	>20.00	.002	700	.7	N	N	N	50	<1
7AE5373B	39 52 44	113 27 23	.30	>10.00	>20.00	.005	500	N	<200	N	N	50	<1
86RY119	39 37 50	113 24 50	2.00	.30	1.00	.100	150	N	N	N	100	100	3
86RY120	39 39 49	113 27 31	>20.00	.20	.30	.050	100	N	200	N	200	300	N
86RY121	39 40 17	113 27 55	7.00	.20	5.00	.200	150	N	1,000	N	100	200	2
FS1	39 51 20	113 27 20	.50	10.00	10.00	.003	1,000	150.0	N	N	N	N	N
FS2	39 51 20	113 27 20	>20.00	.20	.50	.010	50	150.0	>10,000	N	<10	50	N
FS3	39 51 6	113 27 10	20.00	.07	.20	.005	100	5,000.0	>10,000	N	30	50	1
FS4	39 51 11	113 27 17	5.00	3.00	5.00	.002	1,000	500.0	>10,000	N	30	<20	N
FS5	39 51 0	113 27 12	1.00	5.00	10.00	<.002	1,000	7.0	500	N	N	N	<1

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s
7BE5357	N	N	N	<10	5	N	N	N	<5	70	N	N	N	200
7BE5358A	N	N	N	<10	15	N	N	N	<5	<10	N	N	N	N
7BE5358B	N	N	N	<10	<5	N	N	N	5	<10	N	N	N	N
7BE5359A	N	N	N	<10	5	N	N	N	<5	<10	N	N	N	N
7BE5359B	N	N	N	<10	5	N	N	N	<5	10	N	N	N	100
7BE5359C	N	N	N	<10	10	N	N	N	5	<10	N	N	N	N
7AE5360	N	N	N	<10	5	N	N	N	N	15	N	N	N	>5,000
7BE5361	N	N	N	50	10	N	N	N	5	10	N	10	N	200
7BE5362A	100	300	10	<10	1,000	N	50	N	7	>20,000	5,000	5	500	700
7BE5362B	20	10	<5	N	200	N	300	N	5	7,000	1,000	<5	N	500
7BE5363A	N	N	<5	<10	20	N	20	N	5	100	N	N	N	100
7BE5363B	N	N	5	<10	20	N	50	N	7	100	100	<5	N	500
7BE5364A	N	20	10	10	50	N	20	N	N	20,000	<100	<5	N	100
7BE5364B	N	N	10	30	<5	100	10	70	5	500	N	10	N	200
7BE5365A	N	N	<5	20	<5	50	10	50	<5	200	N	7	N	200
7BE5365B	N	N	N	10	<5	20	10	50	5	200	N	7	N	150
7BE5365C	N	N	N	<10	30	N	<5	N	N	1,500	N	<5	N	<100
7BE5365D	N	N	5	10	7	200	5	50	<5	100	N	7	N	200
7BE5366A	<10	N	N	N	500	N	20	N	20	10,000	100	<5	N	N
7BE5366B	70	N	N	N	100	N	30	N	20	10,000	100	N	N	N
7BE5367A	N	N	N	N	2,000	N	10	N	7	>20,000	300	N	N	N
7BE5367B	N	N	5	10	100	N	15	20	7	>20,000	N	5	<10	100
7BE5368	N	N	N	N	5	50	5	20	<5	1,000	N	5	N	<100
7BE5369A	N	N	10	20	10	150	15	30	10	300	N	10	N	200
7BE5369B	N	>500	N	<10	150	N	20	N	10	20,000	<100	N	N	N
7BE5369C	N	<20	<5	<10	1,000	N	20	N	10	>20,000	700	N	10	N
7BE5370A	N	200	<5	N	1,000	N	10	N	10	20,000	200	N	N	N
7BE5370B	N	>500	<5	10	500	N	20	N	10	>20,000	2,000	N	20	N
7AE5371	N	N	5	20	10	N	N	N	10	1,000	N	7	N	200
7AE5373A	N	N	<5	<10	5	N	N	N	<5	150	N	N	N	100
7AE5373B	N	N	<5	N	<5	N	N	N	<5	150	N	N	N	150
86RY119	N	N	5	20	20	N	N	N	5	20	N	5	N	100
86RY120	N	N	7	50	15	N	N	N	20	10	N	N	N	200
86RY121	N	N	N	50	5	N	10	<20	<5	10	<100	<5	N	200
FS1	N	200	N	<10	500	N	N	N	<5	2,000	N	N	N	N
FS2	N	100	N	<10	2,000	N	N	N	N	20,000	2,000	N	N	N
FS3	N	<20	N	<10	1,000	N	N	N	5	10,000	7,000	N	N	N
FS4	N	>500	N	<10	5,000	N	15	N	5	>20,000	1,000	N	N	N
FS5	N	>500	N	<10	700	N	N	N	N	3,000	N	N	N	N

TABLE 5-RESULTS OF ANALYSES OF ROCK SAMPLES, FISH SPRINGS RANGE WILDERNESS STUDY AREA, JUAB COUNTY, UTAH--Continued

Sample	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa/icp	Bi-ppm aa/icp	Cd-ppm aa/icp	Sb-ppm aa/icp	Zn-ppm aa/icp
7BE5357	20	N	10	<200	20	N	N	N	N	.4	4.000	40.00
7BE5358A	<10	N	<10	200	<10	N	N	N	N	N	N	5.00
7BE5358B	10	N	<10	200	10	N	N	N	N	N	N	N
7BE5359A	10	N	<10	200	10	N	N	N	N	N	2.000	N
7BE5359B	15	N	N	<200	<10	N	N	N	N	N	2.000	10.00
7BE5359C	10	N	10	<200	<10	N	N	N	N	N	N	<5.00
7AE5360	10	N	<10	N	50	N	N	N	N	N	2.000	<5.00
7BE5361	70	N	30	<200	70	N	N	150.000	N	.4	12.000	30.00
7BE5362A	200	N	<10	>10,000	N	N	2.55	>2,000.000	100	>100.0	>1,000.000	>2,000.00
7BE5362B	70	N	10	10,000	N	N	4.55	>2,000.000	37	85.0	540.000	>2,000.00
7BE5363A	50	N	10	200	<10	N	.05	90.000	2	.2	28.000	80.00
7BE5363B	100	N	10	200	10	N	.15	90.000	2	<.1	48.000	40.00
7BE5364A	100	N	10	500	100	N	N	30.000	N	20.0	38.000	450.00
7BE5364B	100	N	50	<200	500	N	N	N	N	.1	2.000	150.00
7BE5365A	70	N	30	<200	200	N	N	50.000	N	.4	4.000	25.00
7BE5365B	70	N	30	<200	300	N	N	190.000	N	.5	4.000	30.00
7BE5365C	100	N	10	<200	N	N	N	N	N	3.8	26.000	250.00
7BE5365D	70	N	50	<200	300	N	N	170.000	N	.1	14.000	80.00
7BE5366A	50	N	20	7,000	N	N	.15	>2,000.000	22	7.4	90.000	>2,000.00
7BE5366B	70	N	15	5,000	N	N	.15	1,100.000	90	4.7	58.000	>2,000.00
7BE5367A	100	N	10	10,000	N	N	.20	>2,000.000	N	50.0	280.000	>2,000.00
7BE5367B	20	N	20	2,000	200	N	N	300.000	N	4.4	8.000	750.00
7BE5368	20	N	20	N	200	N	N	40.000	1	.3	4.000	80.00
7BE5369A	500	N	70	200	500	N	N	80.000	1	1.0	6.000	150.00
7BE5369B	500	N	10	>10,000	N	N	N	400.000	N	>100.0	52.000	>2,000.00
7BE5369C	3,000	N	10	>10,000	N	N	N	>2,000.000	N	31.0	520.000	>2,000.00
7BE5370A	5,000	N	50	>10,000	<10	N	.05	>2,000.000	N	>100.0	120.000	>2,000.00
7BE5370B	1,000	N	50	>10,000	N	N	2.00	>2,000.000	N	>100.0	600.000	>2,000.00
7AE5371	300	N	10	1,000	70	N	N	30.000	N	3.1	8.000	350.00
7AE5373A	100	N	<10	N	10	N	N	N	N	.2	4.000	30.00
7AE5373B	100	N	<10	N	<10	N	N	N	N	.4	2.000	40.00
86RY119	30	N	15	N	200	N	N	10.000	N	.2	N	--
86RY120	200	N	<10	700	50	N	N	250.000	N	.6	2.000	--
86RY121	50	N	20	<200	500	N	N	540.000	N	.2	28.000	--
FS1	20	N	<10	>10,000	N	N	N	30.000	N	>100.0	8.000	--
FS2	20	N	10	>10;000	<10	N	.05	>2,000.000	N	70.0	680.000	--
FS3	10	N	N	5,000	N	N	1.10	>2,000.000	2	15.0	>1,000.000	--
FS4	15	N	N	>10,000	N	N	.25	>2,000.000	N	>100.0	400.000	--
FS5	15	N	10	>10,000	<10	N	N	300.000	N	>100.0	18.000	--

Table 6. Summary of geochemical anomalies for selected elements from rock samples, Fish Springs Wilderness Study Areas, Utah

[Selected elements (and associated minimum values considered anomalous) include: Au (.05), Ag (5), As (200), Ba (>5,000), Be (10), Bi (10), Cd (20), Cu (500), Mn (>5,000), Mo (20), Pb (500), Sb (100), Sn (10), W (50), and Zn (500)]

Field No.	Anomalous elements (values in parts per million)	Rock type
FS-1	Ag (150), Cd (200), Cu (500), Pb (2000), Zn (>10,000)	Silicified limestone.
FS-2	Au (.05), Ag (150), As (>10,000), Cd (100), Cu (2000), Pb (20,000), Sb (2000), Zn (>10,000)	Gossan.
FS-3	Au (1.1), Ag (5000), As (>10,000), Cd (10), Cu (1000), Pb (10,000), Sb (7000), Zn (5000)	Gossan.
FS-4	Au (.25), Ag (500), As (>0,000), Cd (>500), Cu (5000), Pb (>20,000), Sb (1000_, Zn (>10,000)	Quartz vein.
FS-5	Ag (7), As (500), Cd (>500), Cu (700), Pb (3000), Zn (>10,000)	Dolomite.
1034	Zn (5000)	Limestone.
1035	As (>10,000), Mo (20)	Limestone.
5015A	Ag (5)	Quart latite.
5015B	Ag (7), Cd (50), Cu (5000), Pb (15,000), Zn (>10,000)	Gossan
5021A	Ag (70), As (500), Cd (500), Mo (100), Pb (5000), Sb (500), Zn (>10,000]	Gossan.
5021B	Ag (300), As (10,000), Cd (>500), Mo (50), Pb (>20,000], Sb (700), Zn (>10,000]	Silicified limestone.
5023	Pb (500), Zn (5000)	Dolomite breccia.
5025	Ag (200), As (1500), Cd (200), Pb (>20,000), Sb (100), Zn (10,000)	Dolomite.
5026A	Pb (500)	Dolomite.
5026B	Ag (200), As (500), Cd (>500), Cu (2000), Pb (20,000), Sb (1000), Zn (>10,000)	Carbonate replacement.
5027A	Au (.17), Ag (1000), As (5000), Cd (>500), Cu (2000), Pb (>20,000), Sb (2000), Zn (>10,000)	Carbonate replacement.
5027B	Au (.15), Ag (1000), As (7000), Cd (>500), Cu (700), Pb (20,000), Sb (1000), Zn (>10,000)	Dolomite.

Table 6. Summary of geochemical anomalies for selected elements from rock samples, Fish Springs Wilderness Study Areas, Utah--Continued

Field No.	Anomalous elements (values in parts per million)	Rock type
5028B	Ag (100), As (700), Cd (>500), Cu (1000), Mo (200), Pb (>20,000), Sb (500), Zn (>10,000]	Dolomite.
5029A	Ag (50), Cd (100), Cu (500), Pb (7000), Sb (100), Zn (3000)	Dolomite.
5029B	Ag (5), As (1000), Pb (500)	Quartz latite.
5030A	Au (.3), Ag (50), As (1000), Bi (100), Mo (50), Pb (2000), Zn (1000)	Gossan.
5030B	Au (.2), Ag (15), As (5000), Bi (15), Pb (2000), Sb (100), W (200), Zn (1000)	Gossan.
5030C	Ag (5), Pb (500)	Quartzite.
5042	Ag (150), As (1000), Mo (50), Pb (>20,000), Sb (200), Zn (2000)	Breccia.
5043A	Ag (500), As (700), Mo (100), Pb (>20,000), Sb (300)	Breccia.
5043B	Au (1.8), Ag (200), As (10,000) Mo (100), Pb (>20,000), Sb (1500), W (50), Zn (1000)	Gossan
5208	Mo (70), Zn (1000)	Hematite nodules.
5347B	As (3000), Zn (500)	Carbonate replacement
5347C	As (1000), Zn (500)	Jasperoid.
5350B	As (500), Mo (20)	Quartzite breccia.
5351B	As (10,000), Sb (200)	Carbonate replacement.
5351C	As (2000), Mo (20), Sb (150), Zn (2000)	Carbonate replacement.
5352	Ba (>5000), Mo (100)	Carbonate replacement.
5353A	Sb (100)	Limestone breccia.
5353B	Mo (20)	Limestone breccia.
5361	Ag (5)	Marble.
5362A	Au (2.55), Ag (700), As (>10,000), Bi (100), Cd (300), Cu (1000), Mo (50), Pb (>20,000), Sb (5000), Sn (500), Zn (>10,000)	Carbonate replacement.
5362B	Au (4.55), Ag (500), As (7000), Bi (20), Cd (10), Mo (300), Pb (7000), Sb (1000), Zn (10,000)	Carbonate replacement.
5363A	Au (.05), Ag (7), Mo (20)	Dolomite replacement.
5363B	Au (.15), Ag (10), Mo (50), Sb (100)	Dolomite replacement.
5364A	Ag (10), Cd (20), Mo (20), Pb (20,000), Zn (500)	Marble breccia.
5364B	Pb (500)	Quartz latite.
5365C	Pb (1500)	Breccia.

Table 6. Summary of geochemical anomalies for selected elements from rock samples, Fish Springs Wilderness Study Areas, Utah--Continued

Field No.	Anomalous elements (values in parts per million)	Rock type
5366A	Au (.15), As (3000), Cu (500), Mo (20), Pb (10,000), Sb (100), Zn (7000)	Carbonate replacement.
5366B	Au (.15), Ag (10), As (2000), Bi (70), Mo (30), Pb (10,000), Sb (100), Zn (5000)	Carbonate replacement.
5367A	Au (.20), Ag (100), As (3000), Cu (2000), Pb (>20,000), Sb (300), Zn (10,000)	Carbonate replacement.
5367B	Ag (50), As (200), Pb (>20,000), Zn (2000)	Quartz latite.
5368	Ag (10), Pb (1000)	Quartz latite.
5369B	Ag (100), As (500), Cd (>500), Mo (20), Pb (20,000), Zn (>10,000)	Breccia.
5369C	Ag (70), As (>10,000), Cu (1000), Mo (20), Pb (>20,000), Sb (700), Sn (10), Zn (>10,000)	Carbonate replacement.
5370A	Au (.05), Ag (100), As (10,000), Cd (200), Cu (1000), Pb (20,000), Sb (200), Zn (>10,000)	Carbonate replacement.
5370B	Au (2.0), Ag (500), As (>10,000), Cd (>500), Cu (500), Mo (20), Pb (>20,000), Sb (2000), Sn (20), Zn (>10,000)	Carbonate replacement.
5371	Ag (5), As (1000), Pb (1000), Zn (1000)	Limestone breccia.
5372	As (700)	Dolomite breccia.
5375A	Bi (30)	Jasperoid.
5378A	Be (10), Sn (500)	Quartz latite.
5378B	Be (10), Sn (500)	Quartz latite.
5379A	Au (1.0), Ag (500), As (>10,000), Cd (>500), Cu (1000), Mo (50), Pb (>20,000], Sb (1000), Zn (>10,000)	Dolomite breccia.
5379B	Au (1.25), Ag (200), As (10,000), Cd (>500), Cu (1000), Mo (20), Pb (>20,000), Sb (500), Zn (>10,000)	Dolomite breccia.
5380A	Ag (100), As (500), Cd (20), Mo (500), Pb (>20,000), Sb (>10,000), Zn (2000)	Jasperoid.
5380B	Ag (20), Mo (30), Pb 7000), Sb (200, Zn (1000)	Jasperoid.
5380C	Ag (100), As (500), Cd (100), Mo (20), Pb (>20,000), Sb (>10,000), Zn (5000)	Jasperoid.
5381	Pb (1000)	Marble.
5382A	Au (.35), Ag (100)	Dolomite.

Table 6. Summary of geochemical anomalies for selected elements from rock samples, Fish Springs Wilderness Study Areas, Utah--Continued

Field No.	Anomalous elements (values in parts per million)	Rock type
5383	Au (.10), Ag (150), As (1000), Cd (500), Pb (>20000), Sb (100, Sn (200, Zn (>10,000)	Carbonate replacement.
5384A	Mo (20), Pb (7000)	Dolomite.
5384B	Pb (500)	Dolomite.
5385A	Au (.50), Ag (1000), As (1500), Mo (200), Pb (>20,000), Sb (500) Zn (500)	Carbonate replacement
5385B	Au (.35), Ag (100), As (1500), Mo (100), Pb (>20,000), Sb (1000), Zn (2000)	Carbonate replacement.
5385C	Ag (5), Pb (2000)	Dolomite breccia.
5385D	Ag (10), As (200), Pb (10,000)	Quartzite breccia.
5385E	Ag (20), Mo (30), Pb (10,000)	Quartzite breccia.
5385F	Au (.20), Ag (1000), As (2000), Mo (20) Pb (>20,000), Sb (500), Zn (1500)	Quartzite breccia.
5385G	Ag (500), Pb (>20,000)	Quartzite breccia.
5385H	Au (.20), Ag (1000), As (2000) Mo (20), Pb (>20,000), Sb (200)	Quartzite breccia.
5386A	Ag (100), As (3000), Pb (>20,000) Sb (200)	Quartzite breccia.
5386B	Ag (200), As (300), Mo (100), Pb (>20,000), SB (100)	Quartzite breccia.
5386C	Ag (10), Pb (5000)	Dolomite breccia.
5387A	Ag (5), Pb (2000)	Quartzite breccia.
5387B	Ag (50), Pb (>20,000)	Quartzite breccia.
5387C	Ag (100), Pb (>20,000)	Quartzite breccia.
5387D	Ag (700), Pb (>20,000)	Quartzite breccia.
5387E	Ag (70), Cd (20), Pb (10,000), Zn (1000)	Dolomite breccia.
5387F	Ag (100), Cd (500), Pb (15,000), Zn (>10,000)	Quartzite breccia.
5388A	Pb (500)	Andesite.
5388D	Ag (5)	Dolomite.