UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality maps of stream-sediment, heavy-mineral-concentrate, magnetic concentrate, and rock samples from in and adjacent to the Wah Wah Mountains Wilderness Study Area (UT-050-073/040-205), Beaver and Millard Counties, Utah

By

B. M. Adrian*, J. D. Gaccetta*,

R. T. Hopkins*, D. L. Fey*, and K. A. Duttweiler*

Open-File Report 88-535

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

*U.S. Geological Survey, DFC, Box 25046, MS 973, Denver, CO 80225

1988

CONTENTS

ILLUSTRATIONS

TABLES

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 Wah Wah Mountains Wilderness Study Area (WSA) (UT-050-073/040-205), Beaver and Millard Counties, Utah.

INTRODUCTION

In May, 1986, we conducted a reconnaissance geochemical survey of the Wah Wah Mountains Study Area (UT-050-073/040-205), Beaver and Millard Counties, Utah.

The Wah Wah Mountains WSA is comprised of 36,382 acres (56.6 mi^2) (146.6 km^2); the WSA straddles the county line between Millard and Beaver Counties with the greatest portion of the area located in the southwest corner of Millard County (fig. 1). Access on the north is provided by Garrison Black Rock Road. The west is accessible by a light duty road that bears north from State Highway 21 approximately 8.5 miles west of Wah Wah Summit. This road crosses the Pine Valley Hardpan and terminates to the north with the Garrison Black Rock Road. Several unimproved roads extend eastward toward the mountain range from the improved road. Access on the east is provided by a light duty road that bears north from State Highway 21 approximately 8 miles east of Wah Wah Summit. This road extends through the Wah Wah Valley and terminates at the north with the Garrison Black Rock Road. Several unimproved roads extend west from this light duty road toward the mountain range.

The Wah Wah Mountains are an eastward tilted fault block in the Basin and Range structural province. Exposed bedrock within the study area consists of gently-dipping Cambrian and Ordovician sedimentary rocks with exposures of Tertiary volcanic and intrusive rock. The western edge of the study area contains large areas of pediment and alluvial fan surfaces. Three intrusive stocks straddle the boundary at the southern end of the study area. The composition of these stocks range from dioritic to quartz dioritic with orthoclase and quartz increasing eastward. Marble and skarn rock are present in a metamorphic zone which surrounds these stocks (Erickson, 1966). The geology of the area is described by Erickson (1966), Hintze (1974a), Hintze (1974b), and Hintze and others (1984).

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

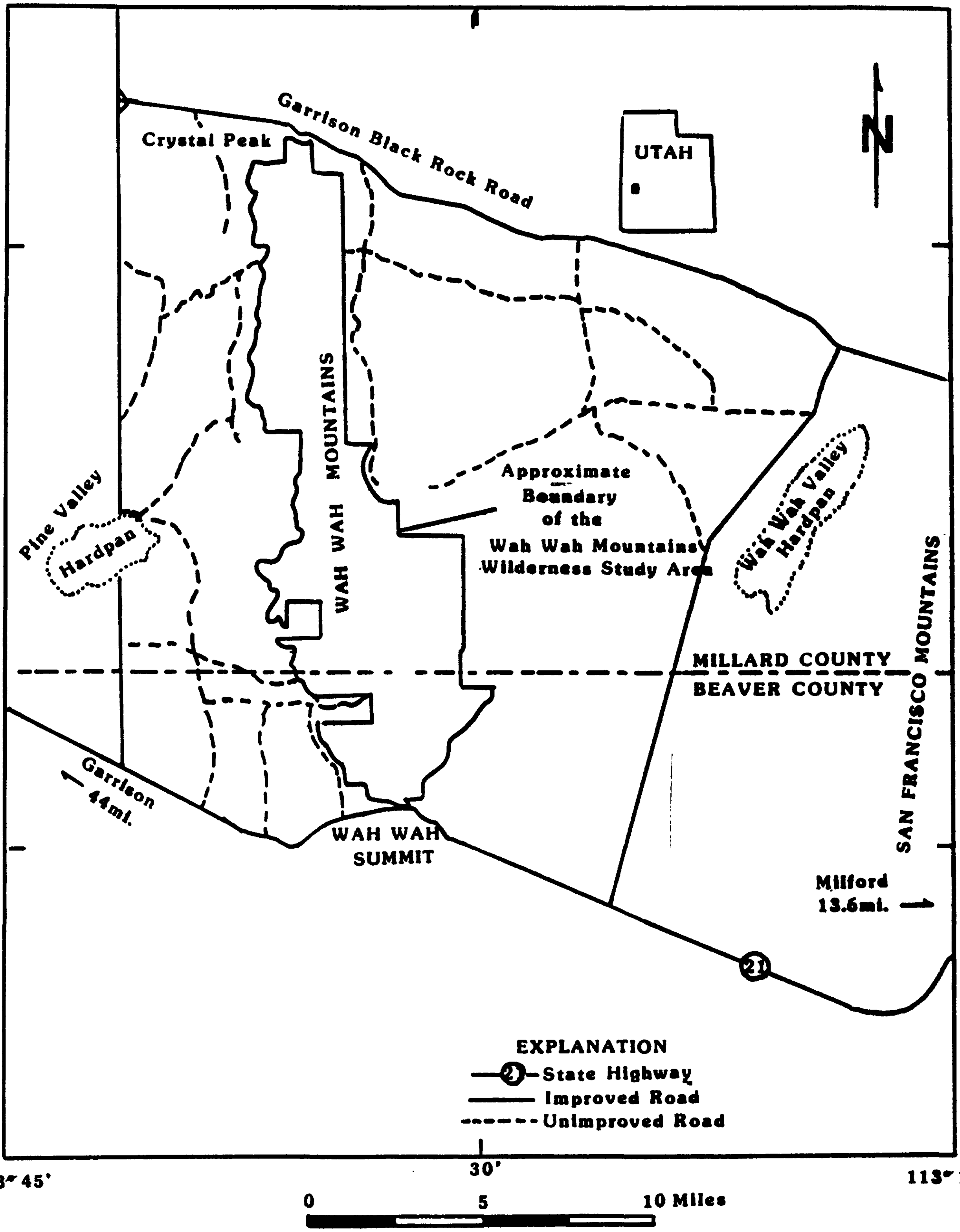

Figure 1. Location map of the Wah Wah Mountains Wilderness Study Area (UT-050-073/040-205), Beaver and Millard Counties, Utah.

detected in stream-sediment samples. Magnetic concentrate samples composed predominantly of magnetite have been used in similar terranes which have revealed base-metal mineralizations as well as trace-element associations (Lovering and Hedal, 1987; Overstreat and Day, 1985).

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

We collected samples at 80 sites (plate 1). We collected stream-sediment samples at 48 sites, heavy-mineral-concentrate samples at 49 sites, magnetic concentrates at 64 sites, and rock samples at 65 sites. An additional 93 rocks were collected at 77 sites from traverses in the Wah Wah Summit area across the three intrusive stocks (plate 2). Sampling density was about one sample per 1.4 mi^2 for stream-sediments and heavy-mineral concentrates.

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 = 1:62,500). Each sample was composited from several localities within an area that may extend as much as 20 ft from the site plotted on the map.

Minus 80-mesh stream-sediment samples contain relatively fine material whereas plus 80-mesh, minus 30-mesh stream sediments contain coarse material. The minus 30-mesh sediments are useful in arid environments because they do not contain the very fine material deposited by wind, which may possibly contaminate the sample.

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 or altered and/or mineralized rocks.

Magnetic-concentrate samples

Magnetic-concentrate samples were collected from soil and stream sediments. A hand magnet was passed through the soil or stream sediment until approximately 1 to 2 grams of magnetic material was collected.

Sample Preparation

The stream-sediment samples were air dried, then sieved using a stainless-steel 80-mesh (0.17-mm) screen. The minus 80-mesh fraction passing through the sieve was stored. The plus 80-mesh fraction was then sieved using a 30-mesh (.59-mm) screen. The minus 30-mesh fraction 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 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. Magnetic-concentrate samples were hand ground.

Sample Analysis

Spectrographic method

The stream-sediment, heavy-mineral-concentrate, magnetic-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 Wah Wah Mountains WSA are listed in tables 3-7.

Chemical methods

Stream-sediment samples from this study area were analyzed by a spectrophotometric method (c - colorimetry) for tungsten (W). Rocks and stream-sediment samples were also analyzed by an inductively coupled plasma-atomic emission spectroscopy (ICP) method. Elements determined by this method were arsenic (As), antimony (Sb), zinc (Zn), bismuth (Bi), and cadmium (Cd). Rocks were also analyzed for gold (Au) by atomic absorption methods (aa). See table 2 for a more detailed summary of these other chemical methods used.

Analytical results for stream-sediment, heavy-mineral-concentrate, magnetic-conentrate, and rock samples are listed in tables 3, 4, 5, 6, and 7, respectively. Descriptions of rock samples are given in table 8.

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 3-7 list the results of analyses for the samples of stream sediment, heavy-mineral concentrate, magnetic concentrate and rock, respectively. For the five 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 (plate 1). Columns in which the element headings show the letter "s" below the element symbol are emission spectrographic analyses; "icp" indicates inductively coupled plasma-atomic emission spectroscopic analyses; "aa" indicates atomic absorption analyses; and "c" indicates colorimetric analyses. 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. Because of the formatting used in the computer program that produced tables 3-6, 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.

Erickson, M. P., 1966, Igneous complex at Wah Wah Pass, Beaver County, Utah: Utah Geological and Mineralogical Survey Special Studies, 17, 14 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.

Hintze, L. G., 1974a, Preliminary geologic map of the Crystal Peak Quadrangle, Millard County Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-635, 2 sheets.

Hintze, L. F., 1974b, Prelimary geologic map of the Wah Wah Summit Quadrangle, Millard and Beaver Counties, Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-637, 2 sheets.
Hintze, L. F., Lemmon, D. M., and Morris, H. T., 1984, Geologic map of the Frisco Peak Quadrangle, Millard and Beaver Counties, Utah: U.S. Geological Survey Miscellaneous Field Studies Map I-1573.
Lovering, T.G., and Hedal, J.A., 1987, Concentrates from stream seadiments in southwestern New Mexico--a potential tool for reconnaissance geochemical exploration in arid lands: U.S. Geological Survey Bulletin 1566, p. 33.
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.
Overstreet, W.C., and Day, G.W., 1985, Review of the use of magnetic concentrates in geochemical exploration: U.S. Geological Survey Technical Record USGS-TR-05-4, p. 38.
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.
Wilson, S. A., Kane, J. S., Crock, J. G., and Hatfield, D. B., 1987, Chemical methods of separation for optical emission, atomic absorption spectrometry, and colorimetry: U.S. Geological Survey Bulletin 1770D, p. D1-D11.

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 and magnetic-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.--Chemical methods used

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

Element determined	Method	Determination limit (micrograms/ gram or ppm)	Reference
Arsenic (As)	ICP	5[a]	Crock and others, 1987.
Antimony (Sb)	ICP	2[a]	
Zinc (Zn)	ICP	2[a]	
Bismuth (Bi)	ICP	2[a]	
Cadmium (Cd)	ICP	0.1[a]	
Gold (Au)	AA	0.1[b]	Crock and others, 1987.
Tungsten (W)	C	0.1[c]	Wilson and others, 1987.

[a]Based on a 0.15-gm sample.

[b]Based on a 10-gm sample.

[c]Based on a 500-mg sample.

TABLE 3. RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES

[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
CTWW001S	38 31 55	113 32 32	1.5	3	>20	.07	300	N	N	N	15	70	<1
CTWW002S	38 34 30	113 30 38	.7	1.5	>20	.07	300	N	N	N	15	70	<1
CTWW003S	38 34 53	113 30 50	1.5	2	>20	.1	300	N	N	N	15	150	<1
CTWW004S	38 35 52	113 29 48	2	2	7	.2	500	N	N	N	30	200	1
CTWW005S	38 36 2	113 29 50	.7	3	20	.05	200	N	N	N	10	100	<1
CTWW006S	38 33 5	113 30 42	1	2	15	.07	200	N	N	N	20	70	<1
CTWW007S	38 36 30	113 28 15	.5	1	20	.05	150	N	N	N	N	70	N
CTWW008S	38 37 42	113 29 52	1	1.5	20	.07	300	N	N	N	30	150	1
CTWW009S	38 37 48	113 31 0	.7	3	20	.07	150	N	N	N	10	70	<1
CTWW010S	38 38 41	113 31 40	1	5	20	.07	300	N	N	N	20	100	1
CTWW011S	38 37 24	113 33 30	.3	3	20	.05	200	N	N	N	<10	30	<1
CTWW012S	38 37 18	113 33 40	.7	3	20	.07	200	N	N	N	15	70	<1
CTWW013S	38 39 8	113 33 40	.7	1	20	.05	300	N	N	N	<10	70	<1
CTWW014S	38 39 58	113 34 25	1	1	15	.1	200	N	N	N	<10	150	<1
CTWW015S	38 41 5	113 34 29	.5	1	20	.05	150	N	N	N	<10	100	<1
CTWW016S	38 42 32	113 34 40	.7	.3	20	.07	200	N	N	N	10	300	<1
CTWW017S	38 43 50	113 34 15	1.5	.3	5	.07	300	N	N	N	10	300	2
JGWW001S	38 33 10	113 30 30	1.5	.7	20	.15	500	N	N	N	15	300	<1
JGWW002S	38 35 25	113 29 48	1	2	20	.1	300	N	N	N	30	200	1
JGWW003S	38 35 5	113 30 55	1.5	2	20	.1	700	N	N	N	15	300	<1
JGWW004S	38 35 40	113 30 3	10	1	3	.7	700	N	N	N	15	700	<1
JGWW005S	38 36 8	113 30 42	1.5	5	15	.07	300	N	N	N	15	300	<1
JGWW006S	38 35 25	113 28 30	3	1.5	10	.2	300	N	N	N	15	700	1
JGWW007S	38 37 58	113 28 20	.3	.7	20	.05	200	N	N	N	<10	50	N
JGWW009S	38 38 30	113 31 10	.7	7	15	.05	200	N	N	N	10	70	<1
JGWW010S	38 38 29	113 33 40	.5	.7	20	.05	300	N	N	N	<10	50	<1
JGWW011S	38 37 45	113 33 47	1.5	3	15	.07	300	N	N	N	20	150	1
JGWW012S	38 39 32	113 33 50	1	.7	20	.07	500	N	N	N	15	150	<1
JGWW013S	38 41 20	113 34 30	.7	1	15	.07	200	N	N	N	15	300	<1
JGWW014S	38 42 39	113 34 47	.7	.5	20	.07	200	N	N	N	10	150	1
KDWW001S	38 33 30	113 34 35	.7	3	>20	.07	200	N	N	N	10	70	N
KDWW002S	38 34 15	113 33 30	1.5	3	>20	.07	200	N	N	N	10	150	<1
KDWW003S	38 40 42	113 37 30	2	7	3	.2	300	N	N	N	20	700	1.5
KDWW004S	38 35 40	113 28 0	2	7	3	.2	500	N	N	N	20	1,000	1.5
KDWW005S	38 36 30	113 27 48	.3	1.5	>20	.05	150	N	N	N	N	50	N
KDWW006S	38 42 35	113 37 8	1	1	10	.07	150	N	N	N	10	300	1
KDWW007S	38 44 50	113 36 40	1.5	.3	7	.1	150	N	N	N	15	500	1
KDWW008S	38 46 2	113 39 52	1.5	.7	20	.1	300	N	N	N	30	150	<1
TDWW001S	38 31 55	113 34 2	1	5	>20	.07	200	N	N	N	10	50	<1
TDWW002S	38 34 15	113 33 30	1	3	>20	.07	300	N	N	N	20	100	<1
TDWW003S	38 37 52	113 35 22	.7	3	>20	.07	150	N	N	N	10	100	<1
TDWW004S	38 40 2	113 36 22	.7	1.5	20	.07	150	N	N	N	15	100	<1
TDWW005S	38 42 3	113 37 20	1	.7	5	.1	150	N	N	N	15	300	1
TDWW006S	38 44 50	113 37 20	1.5	.3	7	.2	200	N	N	N	20	500	1
TDWW007S	38 47 10	113 33 23	1	.3	3	.07	150	N	N	N	20	300	1.5
TDWW008S	38 48 10	113 36 50	.7	.5	3	.07	150	N	N	N	30	500	1
TDWW009S	38 46 47	113 35 8	2	.5	10	.1	300	N	N	N	20	300	<1
TDWW010S	38 46 15	113 34 28	2	.3	5	.1	200	N	N	N	15	500	1

TABLE 3. RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES--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
CTWW001S	N	N	N	50	5	20	N	N	7	15	N	<5	N	300
CTWW002S	N	N	5	30	7	20	N	N	10	15	N	N	N	300
CTWW003S	N	N	5	50	7	20	N	N	10	15	N	<5	N	300
CTWW004S	N	N	7	50	10	20	N	N	10	30	N	5	N	300
CTWW005S	N	N	N	10	<5	<20	N	N	<5	20	N	N	N	300
CTWW006S	N	N	N	20	5	20	N	N	5	10	N	<5	N	300
CTWW007S	N	N	N	10	<5	<20	N	N	<5	10	N	N	N	500
CTWW008S	N	N	N	20	7	20	N	N	5	20	N	<5	N	300
CTWW009S	N	N	N	15	5	20	N	N	<5	15	N	N	N	300
CTWW010S	N	N	N	30	7	20	N	N	5	30	N	<5	N	300
CTWW011S	N	N	N	10	<5	20	N	N	<5	15	N	N	N	200
CTWW012S	N	N	N	10	<5	20	N	N	<5	20	N	N	N	300
CTWW013S	N	N	N	15	<5	20	N	N	<5	20	N	N	N	300
CTWW014S	N	N	<5	20	<5	20	N	N	<5	20	N	N	N	300
CTWW015S	N	N	N	15	<5	20	N	N	N	15	N	N	N	300
CTWW016S	N	N	N	10	<5	20	N	N	<5	20	N	<5	N	300
CTWW017S	N	N	N	15	7	100	N	N	<5	20	N	<5	N	300
J6WW001S	N	N	7	30	5	20	N	N	7	20	N	5	N	500
J6WW002S	N	N	<5	30	7	20	N	N	7	30	N	<5	N	300
J6WW003S	N	N	20	20	5	20	N	N	10	30	N	<5	N	500
J6WW004S	N	N	15	50	7	20	N	N	15	30	N	5	N	500
J6WW005S	N	N	5	30	7	<20	N	N	7	20	N	5	N	300
J6WW006S	N	N	7	20	7	50	N	N	10	30	N	5	N	700
J6WW007S	N	N	N	10	<5	<20	N	N	<5	10	N	N	N	500
J6WW009S	N	N	N	10	5	20	N	N	<5	20	N	N	N	150
J6WW010S	N	N	N	<10	5	20	N	N	N	15	N	N	N	300
J6WW011S	N	N	<5	20	7	20	N	N	7	30	N	<5	N	200
J6WW012S	N	N	N	20	5	20	N	N	5	20	N	<5	N	300
J6WW013S	N	N	N	20	7	<20	N	N	<5	30	N	<5	N	300
J6WW014S	N	N	N	10	7	<20	N	N	<5	30	N	N	N	300
KDWW001S	N	N	N	10	5	20	N	N	<5	15	N	N	N	300
KDWW002S	N	N	N	15	7	<20	N	N	<5	15	N	N	N	300
KDWW003S	N	N	7	30	7	20	N	N	7	20	N	<5	N	300
KDWW004S	N	N	7	30	7	30	N	N	10	30	N	<5	N	700
KDWW005S	N	N	N	20	<5	<20	N	N	N	<10	N	N	N	300
KDWW006S	N	N	<5	20	30	20	N	N	<5	30	N	<5	N	300
KDWW007S	N	N	<5	15	5	20	N	N	<5	20	N	N	N	300
KDWW008S	N	N	5	30	7	<20	N	N	7	20	N	<5	N	300
TDWW001S	N	N	N	20	5	<20	N	N	<5	10	N	<5	N	300
TDWW002S	N	N	N	20	5	20	N	N	<5	15	N	<5	N	300
TDWW003S	N	N	N	20	5	<20	N	N	<5	10	N	N	N	300
TDWW004S	N	N	N	15	5	20	N	N	<5	10	N	N	N	300
TDWW005S	N	N	<5	10	5	20	N	N	<5	20	N	<5	N	300
TDWW006S	N	N	7	30	7	20	N	N	5	20	N	<5	N	300
TDWW007S	N	N	N	10	7	20	N	N	<5	20	N	<5	N	300
TDWW008S	N	N	N	15	<5	<20	N	N	<5	30	N	<5	N	200
TDWW009S	N	N	N	20	7	20	N	N	5	30	N	<5	N	300
TDWW010S	N	N	<5	20	7	20	N	N	5	20	N	<5	N	300

TABLE 3. RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES--Continued

Sample	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	As-ppm icp	Bi-ppm icp	Cd-ppm icp	Sb-ppm icp	Zn-ppm icp	W-ppm
CTWW001S	20	N	<10	N	30	N	N	N	.5	7	14	N
CTWW002S	10	N	<10	N	20	N	N	N	.5	5	17	N
CTWW003S	20	N	<10	N	30	N	N	N	.5	7	19	N
CTWW004S	70	N	10	N	70	N	N	N	1	5	41	N
CTWW005S	10	N	15	N	20	N	N	N	.5	9	10	N
CTWW006S	20	N	10	N	20	N	N	N	.4	5	9	N
CTWW007S	<10	N	<10	N	20	N	N	N	.4	3	12	N
CTWW008S	15	N	15	N	20	N	N	N	.7	5	29	N
CTWW009S	15	N	10	N	30	N	N	N	.5	7	18	N
CTWW010S	20	N	15	N	50	N	N	N	.5	9	15	N
CTWW011S	10	N	<10	N	10	N	N	N	.3	8	16	N
CTWW012S	15	N	10	N	20	N	N	2	.4	7	15	N
CTWW013S	10	N	15	N	20	N	N	N	.4	3	16	N
CTWW014S	30	N	15	N	20	N	N	N	.6	3	15	N
CTWW015S	10	N	15	N	30	N	N	N	.3	3	10	N
CTWW016S	15	N	10	N	30	N	N	N	.4	N	20	N
CTWW017S	70	N	10	N	20	N	N	N	.7	N	33	N
JGWW001S	30	N	15	N	150	N	6	N	.5	2	24	1.2
JGWW002S	30	N	15	N	50	N	7	N	.5	6	27	1.2
JGWW003S	30	N	15	N	50	N	N	N	.6	5	13	N
JGWW004S	300	N	20	200	200	N	N	N	1.4	N	98	1.7
JGWW005S	30	N	10	N	30	N	N	N	.5	9	18	N
JGWW006S	70	N	15	N	100	N	N	N	.8	N	29	N
JGWW007S	15	N	10	N	20	N	N	N	.3	4	7	N
JGWW009S	15	N	15	N	20	N	N	N	.4	12	9	N
JGWW010S	15	N	15	N	30	N	N	N	.4	N	12	N
JGWW011S	20	N	15	N	50	N	N	N	.6	8	26	N
JGWW012S	15	N	15	N	30	N	6	N	.6	N	22	N
JGWW013S	20	N	15	N	30	N	N	N	.5	N	22	N
JGWW014S	15	N	15	N	20	N	N	N	.4	N	22	N
KDWW001S	15	N	10	N	30	N	N	N	.4	7	13	N
KDWW002S	30	N	<10	N	30	N	5	N	.6	5	11	N
KDWW003S	70	N	15	N	50	N	N	N	.4	N	19	N
KDWW004S	50	N	15	N	200	N	N	N	.4	N	17	N
KDWW005S	15	N	10	N	20	N	N	N	.4	3	16	N
KDWW006S	20	N	15	N	30	N	N	N	.4	2	16	N
KDWW007S	30	N	<10	N	30	N	N	N	.3	N	16	N
KDWW008S	20	N	10	N	70	N	N	N	.5	N	21	N
TDWW001S	15	N	<10	N	20	N	N	N	.4	9	3	N
TDWW002S	15	N	<10	N	30	N	N	N	.5	5	11	N
TDWW003S	15	N	<10	N	20	N	N	N	.4	7	9	N
TDWW004S	15	N	N	N	20	N	N	N	.3	4	8	N
TDWW005S	30	N	10	N	30	N	N	N	.3	N	15	N
TDWW006S	70	N	15	N	100	N	N	N	.3	N	18	N
TDWW007S	30	N	<10	N	70	N	N	N	.3	N	18	N
TDWW008S	15	N	<10	N	30	N	N	N	.2	N	15	N
TDWW009S	70	N	15	N	150	N	N	N	.5	N	25	N
TDWW010S	70	N	10	N	150	N	N	N	.4	N	22	N

TABLE 4. RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES

[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
CTWW001C	38 31 55	113 32 32	1	10	20	.15	300	N	N	N
CTWW002C	38 34 30	113 30 38	.3	10	20	.15	70	N	N	N
CTWW003C	38 34 53	113 30 50	.5	10	20	.5	100	N	N	N
CTWW004C	38 35 52	113 29 48	.5	10	10	.2	100	N	N	N
CTWW005C	38 36 2	113 29 50	.7	10	15	.1	150	N	N	N
CTWW006C	38 33 5	113 30 42	.5	10	15	.1	100	N	N	N
CTWW007C	38 36 30	113 58 15	.5	7	10	1	150	N	N	N
CTWW008C	38 37 42	113 29 52	.3	7	15	.2	100	N	N	N
CTWW009C	38 37 48	113 31 0	.5	10	15	.15	100	N	N	N
CTWW010C	38 38 41	113 31 40	.2	10	20	.5	70	N	N	N
CTWW011C	38 37 24	113 33 30	.7	10	20	1	200	N	N	N
CTWW012C	38 37 18	113 33 40	.3	10	20	.05	100	N	N	N
CTWW013C	38 39 8	113 33 40	.7	7	15	1.5	300	N	N	N
CTWW014C	38 39 58	113 34 25	.3	5	15	.15	100	N	N	N
CTWW015C	38 41 5	113 34 29	1	7	10	1	200	N	N	N
CTWW016C	38 42 32	113 34 40	.5	1.5	10	1.5	150	N	N	N
CTWW017C	38 43 50	113 34 15	.5	1	10	1.5	100	N	N	N
JGWW001C	38 33 10	113 30 30	1	2	10	2	500	N	N	N
JGWW002C	38 35 25	113 29 48	1	10	15	1	300	N	N	N
JGWW003C	38 35 5	113 30 55	.5	10	20	.5	150	N	N	N
JGWW004C	38 35 40	113 30 3	.5	5	10	.1	150	N	N	N
JGWW005C	38 36 8	113 30 42	.5	10	15	1	200	N	N	N
JGWW006C	38 35 25	113 28 30	.3	7	15	.2	200	N	N	N
JGWW007C	38 37 58	113 28 20	2	3	15	2	700	N	N	N
JGWW008C	38 34 57	113 31 10	.7	15	20	1	200	N	N	N
JGWW009C	38 38 30	113 31 10	.2	15	20	.2	150	N	N	N
JGWW010C	38 38 29	113 33 40	.5	5	5	1.5	200	N	N	N
JGWW011C	38 37 45	113 33 47	1	7	7	2	500	N	N	N
JGWW012C	38 39 32	113 33 50	.5	2	7	1.5	300	N	N	N
JGWW013C	38 41 20	113 34 30	.5	10	10	1	300	N	N	N
JGWW014C	38 42 39	113 34 47	.5	1.5	10	1.5	300	N	N	N
KDWW001C	38 33 30	113 34 35	.5	10	15	.7	150	N	N	N
KDWW002C	38 34 15	113 33 30	.5	10	20	.05	150	N	N	N
KDWW003C	38 40 42	113 37 30	.3	5	10	.7	150	N	N	N
KDWW004C	38 35 40	113 28 0	.5	2	10	.2	200	N	N	N
KDWW005C	38 36 30	113 27 48	.7	5	10	2	200	N	N	N
KDWW006C	38 42 35	113 37 8	.7	7	10	2	300	N	N	N
KDWW007C	38 44 50	113 36 40	.5	2	10	1	200	N	N	N
KDWW008C	38 46 2	113 39 52	.5	1.5	10	1	300	N	N	N
TDWW001C	38 31 55	113 34 2	.2	7	10	1	100	N	N	N
TDWW002C	38 34 15	113 33 30	.3	10	10	.5	100	N	N	N
TDWW003C	38 37 52	113 35 22	.3	7	10	1	100	N	N	N
TDWW004C	38 40 2	113 36 22	.3	7	15	1	150	N	N	N
TDWW005C	38 42 3	113 37 20	.3	7	10	.3	150	N	N	N
TDWW006C	38 44 50	113 37 20	.5	2	7	2	300	N	N	N
TDWW007C	38 47 10	113 33 23	.5	2	5	1	150	N	N	N
TDWW008C	38 48 10	113 36 50	.5	5	10	.5	1,000	N	N	N
TDWW009C	38 46 47	113 35 8	.3	1.5	10	.5	200	N	N	N
TDWW010C	38 46 15	113 34 28	.7	1	15	2	500	N	N	N

TABLE 4. RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES--Continued

Sample	B-ppm s	Ba-ppm s	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
CTWW001C	30	2,000	N	N	N	N	<20	<10	<50	N	N
CTWW002C	30	500	N	N	N	N	N	N	N	N	N
CTWW003C	20	500	<2	N	N	<10	N	N	<50	N	N
CTWW004C	30	150	N	N	N	N	N	N	<50	N	N
CTWW005C	20	300	N	N	N	N	N	N	<50	N	N
CTWW006C	30	200	N	N	N	N	N	N	<50	N	N
CTWW007C	30	300	2	N	N	N	N	N	100	N	N
CTWW008C	30	150	N	N	N	N	N	N	<50	N	N
CTWW009C	30	200	N	N	N	N	N	N	<50	N	N
CTWW010C	20	<50	<2	N	N	N	N	N	<50	N	N
CTWW011C	30	150	<2	N	N	N	<20	N	200	N	50
CTWW012C	30	N	N	N	N	N	N	N	N	N	N
CTWW013C	30	200	N	N	N	<10	N	N	300	N	<50
CTWW014C	50	500	N	N	N	N	N	N	<50	N	N
CTWW015C	30	300	<2	N	N	N	N	N	150	N	N
CTWW016C	30	300	3	N	N	N	N	N	150	N	N
CTWW017C	30	1,500	3	N	N	10	N	N	200	N	<50
J6WW001C	50	5,000	3	N	N	<10	N	N	150	N	N
J6WW002C	50	2,000	<2	N	N	N	<20	N	100	N	<50
J6WW003C	50	2,000	<2	N	N	N	N	30	<50	N	N
J6WW004C	30	7,000	N	N	N	N	N	N	N	N	N
J6WW005C	20	1,500	<2	N	N	N	30	N	100	N	N
J6WW006C	30	5,000	N	N	N	N	N	N	100	N	N
J6WW007C	70	500	2	N	N	10	20	N	300	N	<50
J6WW008C	50	150	N	N	N	N	N	N	100	N	<50
J6WW009C	30	N	N	N	N	N	N	N	<50	N	N
J6WW010C	30	500	3	N	N	N	N	N	<50	N	N
J6WW011C	50	200	3	N	N	<10	<20	N	200	N	50
J6WW012C	50	500	3	N	N	N	N	N	150	N	N
J6WW013C	30	200	2	N	N	N	N	N	100	N	N
J6WW014C	50	500	3	N	N	<10	N	N	200	N	<50
KDWW001C	30	300	N	N	N	N	N	N	N	N	N
KDWW002C	20	150	N	N	N	N	N	N	N	N	N
KDWW003C	30	300	2	N	N	N	N	N	N	N	N
KDWW004C	30	>10,000	2	N	N	N	N	N	200	N	N
KDWW005C	50	700	3	N	N	N	N	N	150	N	N
KDWW006C	30	200	N	N	N	<10	N	N	200	N	50
KDWW007C	30	500	5	N	N	N	N	N	100	N	N
KDWW008C	50	1,000	2	N	N	<10	N	N	150	N	N
TDWW001C	30	1,500	2	N	N	N	N	N	N	N	N
TDWW002C	30	1,000	2	N	N	N	N	N	N	N	N
TDWW003C	30	1,500	2	N	N	N	N	<10	150	N	N
TDWW004C	30	500	2	N	N	N	N	<10	150	N	N
TDWW005C	30	300	<2	N	N	<10	N	N	100	N	N
TDWW006C	50	300	2	N	N	N	N	N	300	N	50
TDWW007C	30	500	2	N	N	N	N	N	100	N	N
TDWW008C	70	3,000	<2	N	N	N	N	N	200	N	N
TDWW009C	50	1,000	N	N	N	N	N	N	100	N	<50
TDWW010C	30	2,000	2	N	N	N	N	N	500	N	100

TABLE 4. RESULTS OF ANALYSES OF HEAVY-MINERAL-CONCENTRATE SAMPLES--Continued

Sample	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
CTWW001C	10	100	N	N	N	300	70	N	50	N	>2,000	N
CTWW002C	<10	N	500	N	N	200	20	N	70	N	>2,000	N
CTWW003C	15	<20	3,000	N	N	200	50	N	150	N	>2,000	N
CTWW004C	10	70	N	N	N	200	50	N	100	N	>2,000	N
CTWW005C	10	N	N	N	N	200	50	100	70	N	>2,000	N
CTWW006C	10	N	N	N	N	200	50	N	70	N	>2,000	N
CTWW007C	10	N	N	20	N	300	50	N	300	N	>2,000	N
CTWW008C	10	N	N	N	N	200	50	N	70	N	>2,000	N
CTWW009C	10	N	N	N	N	200	50	N	100	N	>2,000	N
CTWW010C	10	N	N	N	N	200	20	N	100	N	>2,000	N
CTWW011C	10	30	N	<10	20	200	70	N	300	N	>2,000	N
CTWW012C	<10	N	N	N	N	200	20	N	20	N	>2,000	N
CTWW013C	10	<20	N	<10	<20	300	70	N	200	N	>2,000	N
CTWW014C	<10	<20	N	N	N	500	20	N	150	N	>2,000	N
CTWW015C	10	N	N	<10	N	200	70	N	200	N	>2,000	N
CTWW016C	10	N	N	30	N	500	50	N	300	N	>2,000	N
CTWW017C	<10	N	N	<10	N	500	50	N	300	N	>2,000	N
JGWW001C	<10	<20	N	50	N	500	70	N	700	N	>2,000	N
JGWW002C	10	N	N	<10	N	200	70	N	200	N	>2,000	N
JGWW003C	10	N	3,000	<10	N	200	30	N	200	N	>2,000	N
JGWW004C	<10	N	N	N	N	1,000	20	N	50	N	>2,000	N
JGWW005C	10	N	N	30	N	<200	50	N	200	N	>2,000	N
JGWW006C	<10	N	N	N	N	700	20	N	200	N	>2,000	N
JGWW007C	15	300	N	30	20	300	100	N	500	N	>2,000	N
JGWW008C	<10	N	N	<10	N	<200	50	N	200	N	>2,000	N
JGWW009C	<10	50	N	N	N	200	20	N	70	N	>2,000	N
JGWW010C	15	N	N	30	N	200	50	N	300	N	>2,000	N
JGWW011C	10	N	N	30	<20	200	70	N	500	N	>2,000	<200
JGWW012C	10	N	N	20	N	500	50	N	300	N	>2,000	N
JGWW013C	<10	N	N	20	N	200	50	N	200	N	>2,000	N
JGWW014C	10	50	N	30	N	500	70	N	500	N	>2,000	N
KDWW001C	<10	N	N	<10	N	200	30	N	100	N	>2,000	N
KDWW002C	<10	<20	N	N	N	200	20	N	<20	N	>2,000	N
KDWW003C	<10	N	N	N	N	500	20	N	150	N	>2,000	N
KDWW004C	<10	N	N	N	N	1,000	20	N	70	N	>2,000	N
KDWW005C	10	N	N	50	N	300	70	N	500	N	>2,000	N
KDWW006C	<10	N	N	<10	N	300	70	N	300	N	>2,000	N
KDWW007C	10	N	N	20	N	500	30	N	300	N	>2,000	N
KDWW008C	10	N	N	<10	N	500	50	N	200	N	>2,000	N
TDWW001C	10	N	N	30	70	<200	30	N	300	N	>2,000	N
TDWW002C	10	N	N	30	N	200	20	N	300	N	>2,000	N
TDWW003C	10	N	N	30	N	200	50	N	300	N	>2,000	N
TDWW004C	<10	N	N	20	N	300	50	N	200	N	>2,000	N
TDWW005C	<10	N	N	<10	N	500	30	N	150	N	>2,000	N
TDWW006C	10	N	N	20	20	500	70	N	500	N	>2,000	N
TDWW007C	<10	N	N	20	N	700	20	N	200	N	>2,000	N
TDWW008C	10	N	N	<10	N	500	20	N	500	N	>2,000	N
TDWW009C	<10	<20	N	<10	N	700	30	N	100	N	>2,000	N
TDWW010C	10	N	N	<10	<20	700	70	N	500	N	>2,000	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES
[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
CTMS001M	38 30 52	113 34 8	50	1	1.5	2	5,000	N	N	N
CTMS002M	38 30 57	113 33 58	>50	1.5	1.5	2	5,000	N	N	N
CTMS003M	38 31 3	113 33 50	50	2	2	1.5	3,000	N	N	N
CTMS004M	38 31 8	113 33 31	50	2	2	2	3,000	N	N	N
CTMS005M	38 31 12	113 33 31	30	2	3	2	3,000	N	N	N
CTMS006M	38 31 24	113 33 20	30	2	2	2	3,000	N	N	N
CTMS007M	38 31 29	113 33 5	50	3	7	1.5	2,000	N	N	N
CTWW001M	38 31 40	113 32 32	15	2	7	.15	1,000	N	N	N
CTWW002M	38 32 30	113 31 4	20	1	1.5	1.5	2,000	N	N	N
CTWW003M	38 34 30	113 30 38	30	1.5	5	1.5	2,000	N	N	N
CTWW004M	38 34 38	113 29 42	50	2	3	2	3,000	N	N	N
CTWW005M	38 35 52	113 29 48	30	1.5	2	1.5	2,000	N	N	N
CTWW006M	38 36 8	113 30 42	20	1.5	3	1.5	3,000	N	N	N
CTWW007M	39 35 25	113 28 30	30	1	1	1.5	3,000	N	N	N
CTWW008M	38 35 40	113 28 0	70	1.5	2	1.5	5,000	N	N	N
CTWW009M	38 36 30	113 27 48	70	1.5	5	2	5,000	N	N	N
CTWW010M	38 37 58	113 28 20	50	1.5	3	2	5,000	N	N	N
CTWW011M	38 37 42	113 29 52	50	2	2	2	2,000	N	N	N
CTWW012M	38 38 41	113 31 40	30	2	3	.7	2,000	N	N	N
CTWW013M	38 38 28	113 33 40	50	.5	1	2	3,000	N	N	N
CTWW014M	38 37 24	113 33 30	50	1.5	3	2	3,000	N	N	N
CTWW015M	38 37 18	113 33 40	30	2	3	2	3,000	N	N	N
CTWW016M	38 42 32	113 34 40	50	1	2	2	3,000	N	N	N
CTWW017M	38 39 8	113 33 40	30	.7	5	1.5	2,000	N	N	N
CTWW018M	38 39 58	113 34 25	30	.3	.7	.2	3,000	N	N	N
CTWW019M	38 41 5	113 34 29	50	1	3	2	3,000	N	N	N
JGWS001M	38 31 2	113 35 10	50	2	2	2	3,000	N	N	N
JGWS002M	38 31 8	113 35 12	50	2	1.5	2	2,000	N	N	N
JGWW001M	38 31 50	113 32 0	30	2	3	1.5	3,000	1.5	N	N
JGWW002M	38 34 38	113 29 42	50	.7	1.5	2	5,000	N	N	N
JGWW003M	38 35 5	113 30 55	30	2	5	2	5,000	N	N	N
JGWW004M	38 35 40	113 30 3	>50	.5	.5	2	7,000	N	N	N
JGWW005M	38 36 2	113 29 50	50	1	.5	2	3,000	N	N	N
JGWW006M	38 37 57	113 30 10	50	1.5	2	2	3,000	N	N	N
JGWW007M	38 37 48	113 31 0	50	.7	1	2	2,000	N	N	N
JGWW008M	38 38 30	113 31 10	50	1.5	1	2	3,000	N	N	N
JGWW009M	38 37 45	113 33 47	50	.5	1	2	3,000	N	N	N
JGWW010M	38 42 39	113 34 47	50	.2	2	1.5	5,000	N	N	N
JGWW011M	38 43 50	113 34 15	50	.2	.3	2	3,000	N	N	N
JGWW012M	38 41 20	113 34 30	50	1	2	1.5	3,000	N	N	N
JGWW013M	38 39 32	113 33 50	50	.7	2	2	3,000	N	N	N
KDWW001M	38 33 30	113 34 35	50	.7	1	>2	3,000	N	N	N
KDWW002M	38 34 35	113 33 30	50	1.5	1	2	2,000	N	N	N
KDWW003M	38 40 2	113 36 22	50	.3	.3	2	3,000	N	N	N
KDWW004M	38 33 5	113 30 42	50	2	1.5	>2	2,000	N	N	N
KDWW005M	38 36 30	113 28 15	50	.3	.2	2	2,000	N	N	N
KDWW006M	38 42 35	113 37 8	50	.2	.2	2	2,000	N	N	N
KDWW007M	38 44 50	113 36 40	50	.2	.2	2	2,000	N	N	N
KDWW008M	38 46 2	113 39 52	50	.2	.5	2	2,000	N	N	N
KDWW009M	38 48 10	113 36 50	50	.2	.1	2	7,000	N	N	N
TDWS001M	38 30 34	113 35 19	50	.7	1.5	2	2,000	N	N	N
TDWS002M	38 30 52	113 35 36	>50	1	2	2	3,000	N	N	N
TDWS003M	38 30 58	113 30 8	30	2	2	1.5	2,000	N	N	N
TDWW001M	38 31 52	113 34 32	50	1	.5	2	3,000	N	N	N
TDWW002M	38 31 55	113 34 2	50	2	.3	2	3,000	N	N	N
TDWW003M	38 34 15	113 33 30	30	2	3	1.5	3,000	N	N	N
TDWW004M	38 34 35	113 35 38	50	.3	1	2	3,000	N	N	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES--Continued

Sample	B-ppm s	Ba-ppm s	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
CTMS001M	<20	500	N	N	N	70	1,000	30	<50	N	<50
CTMS002M	<20	200	N	N	N	100	1,000	30	<50	N	<50
CTMS003M	<20	1,500	<2	N	N	50	150	10	100	N	<50
CTMS004M	<20	700	N	N	N	70	200	10	100	N	50
CTMS005M	<20	1,500	<2	N	N	70	200	15	100	N	<50
CTMS006M	<20	1,500	N	N	N	70	300	15	100	N	<50
CTMS007M	<20	1,000	N	N	N	50	200	50	100	N	N
CTWW001M	70	500	2	N	N	30	100	50	<50	10	N
CTWW002M	20	2,000	N	N	N	30	150	<10	100	N	<50
CTWW003M	20	200	N	N	N	50	300	20	<50	N	N
CTWW004M	20	500	N	N	N	100	700	30	100	N	N
CTWW005M	20	500	N	N	N	50	150	10	<50	N	N
CTWW006M	20	1,500	N	N	N	30	100	15	100	N	N
CTWW007M	20	1,500	N	N	N	30	200	10	150	N	N
CTWW008M	20	2,000	<2	N	N	30	200	10	100	N	N
CTWW009M	50	700	5	N	N	70	500	50	<100	N	N
CTWW010M	20	300	N	N	N	100	500	20	<50	N	<50
CTWW011M	20	500	N	N	N	100	500	20	<50	N	<50
CTWW012M	20	500	<2	N	N	70	300	30	<50	N	N
CTWW013M	20	200	<2	N	N	100	500	20	<50	N	<50
CTWW014M	20	300	2	N	N	100	300	50	<50	15	N
CTWW015M	20	500	<2	N	N	100	500	30	<50	N	N
CTWW016M	20	500	N	N	N	100	300	20	<50	N	<50
CTWW017M	30	500	2	N	N	70	200	15	<50	15	<50
CTWW018M	20	300	N	N	N	70	300	10	<50	N	N
CTWW019M	20	500	2	N	N	70	300	15	<50	10	N
JGWS001M	50	500	N	N	N	70	300	15	100	N	N
JGWS002M	<20	500	N	N	N	70	700	10	100	N	N
JGWW001M	70	1,500	2	N	N	20	200	30	100	N	N
JGWW002M	30	500	N	N	N	100	300	15	N	N	<50
JGWW003M	20	1,500	<2	N	N	70	200	20	<50	N	N
JGWW004M	<20	200	N	N	N	150	300	<10	<50	N	N
JGWW005M	20	300	<2	N	N	100	500	30	100	N	<50
JGWW006M	30	300	2	N	N	100	500	70	100	15	N
JGWW007M	20	300	<2	N	N	70	500	20	100	N	N
JGWW008M	20	200	N	N	N	100	500	20	100	N	<50
JGWW009M	20	200	N	N	N	70	500	20	<50	N	<50
JGWW010M	20	150	N	N	N	70	300	10	<50	N	N
JGWW011M	20	300	N	N	N	100	300	15	100	N	N
JGWW012M	30	500	N	N	N	70	300	15	100	N	<50
JGWW013M	30	200	N	N	N	100	300	15	<50	N	<50
KDWW001M	30	300	N	N	N	200	700	20	N	N	<50
KDWW002M	30	200	N	N	N	150	300	15	N	N	N
KDWW003M	30	200	N	N	N	100	500	15	N	N	N
KDWW004M	30	500	N	N	N	150	500	15	N	N	N
KDWW005M	30	200	N	N	N	70	300	10	N	N	N
KDWW006M	30	300	N	N	N	100	500	15	N	N	N
KDWW007M	30	300	N	N	N	150	500	15	N	N	N
KDWW008M	30	100	N	N	N	150	700	15	N	N	N
KDWW009M	30	100	N	N	N	20	150	<10	1,000	N	70
TDWS001M	<20	500	N	N	N	150	500	30	<50	N	N
TDWS002M	<20	200	N	N	N	150	500	20	<50	N	<50
TDWS003M	<20	1,000	N	N	N	20	150	15	100	N	N
TDWW001M	30	200	N	N	N	150	700	15	200	<10	N
TDWW002M	30	2,000	N	N	N	70	150	15	N	N	50
TDWW003M	30	2,000	N	N	N	100	200	15	100	N	N
TDWW004M	30	100	N	N	N	70	500	15	N	N	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES--Continued

Sample	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
CTMS001M	100	<20	N	30	N	200	2,000	N	20	500	150	N
CTMS002M	200	50	N	30	N	200	3,000	N	20	500	200	N
CTMS003M	30	<20	N	30	N	500	2,000	N	70	<500	200	N
CTMS004M	70	<20	N	50	N	300	3,000	N	50	500	200	N
CTMS005M	70	30	N	50	N	500	2,000	N	50	<500	200	N
CTMS006M	100	20	N	30	N	500	2,000	N	50	<500	200	N
CTMS007M	70	100	N	<10	N	500	1,500	N	30	<500	500	N
CTWW001M	70	1,000	N	N	<20	200	100	N	<20	N	100	N
CTWW002M	20	30	N	N	N	300	1,000	N	50	<500	500	N
CTWW003M	50	100	N	N	N	200	2,000	N	20	500	150	N
CTWW004M	100	20	N	50	N	300	2,000	N	50	<500	200	N
CTWW005M	30	20	N	20	N	300	1,500	N	20	500	150	N
CTWW006M	20	70	N	20	N	700	1,000	N	30	N	150	N
CTWW007M	20	20	N	<10	N	500	1,500	N	70	<500	500	N
CTWW008M	30	50	N	<10	N	500	700	N	50	N	1,000	N
CTWW009M	100	100	N	N	N	500	3,000	N	50	N	500	N
CTWW010M	100	50	N	50	N	200	3,000	N	30	700	200	N
CTWW011M	100	200	N	<10	N	<200	2,000	N	20	700	200	N
CTWW012M	100	100	N	N	N	200	1,000	N	<20	500	70	N
CTWW013M	150	30	N	20	N	<200	2,000	N	20	700	150	N
CTWW014M	150	70	N	N	N	N	2,000	N	20	500	150	N
CTWW015M	100	100	N	20	N	200	1,500	N	30	500	150	N
CTWW016M	100	50	N	<10	N	200	2,000	N	30	500	200	N
CTWW017M	100	100	N	<10	N	200	1,500	N	30	500	100	N
CTWW018M	70	20	N	N	N	200	2,000	N	30	500	150	N
CTWW019M	100	50	N	N	N	200	2,000	N	30	500	150	N
JGWS001M	50	<20	N	50	N	300	2,000	N	50	<500	300	N
JGWS002M	200	<20	N	50	N	200	3,000	N	50	500	100	N
JGWW001M	70	200	N	<10	N	300	700	N	70	<500	2,000	N
JGWW002M	70	30	N	20	N	200	2,000	N	50	700	700	N
JGWW003M	70	200	N	<10	N	300	1,000	N	50	500	500	N
JGWW004M	70	N	N	20	N	N	3,000	N	50	N	2,000	N
JGWW005M	100	50	N	20	N	N	2,000	N	20	700	200	N
JGWW006M	100	100	N	20	N	<200	2,000	N	20	500	300	N
JGWW007M	100	50	N	<10	N	<200	2,000	N	20	500	200	N
JGWW008M	100	30	N	20	N	N	2,000	N	20	500	200	N
JGWW009M	100	30	N	20	N	N	2,000	N	20	500	200	N
JGWW010M	70	50	N	<10	N	N	2,000	N	20	N	200	N
JGWW011M	70	30	N	20	N	<200	2,000	N	30	500	300	N
JGWW012M	50	50	N	<10	N	200	1,500	N	30	500	150	N
JGWW013M	70	50	N	<10	N	200	2,000	N	20	500	150	N
KDWW001M	200	50	N	30	N	N	2,000	N	20	<500	300	N
KDWW002M	70	N	N	20	N	N	1,500	N	<20	<500	150	N
KDWW003M	70	70	N	20	N	N	2,000	N	20	<500	200	N
KDWW004M	150	50	N	50	N	<200	2,000	N	30	<500	200	N
KDWW005M	70	30	N	<10	N	N	1,500	N	<20	500	700	N
KDWW006M	100	30	N	20	N	N	3,000	N	<20	<500	150	N
KDWW007M	100	<20	N	20	N	<200	2,000	N	20	500	200	N
KDWW008M	100	<20	N	<10	N	N	3,000	N	<20	<500	200	N
KDWW009M	20	N	N	70	20	N	500	N	500	1,000	2,000	<200
TDWS001M	150	100	N	<10	N	200	2,000	N	20	1,000	200	N
TDWS002M	150	20	N	<10	N	200	2,000	N	<20	500	200	N
TDWS003M	20	<20	N	30	N	500	2,000	N	50	<500	300	N
TDWW001M	150	<20	N	30	N	N	2,000	N	20	700	300	N
TDWW002M	70	30	N	30	N	N	1,000	N	30	<500	500	N
TDWW003M	70	100	N	20	N	500	1,500	N	30	<500	300	N
TDWW004M	100	70	N	20	N	N	2,000	N	<20	700	150	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES--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
TDWW005M	38 37 52	113 35 22	50	.5	1	2	3,000	N	N	N
TDWW006M	38 40 42	113 37 30	50	.3	.5	2	3,000	N	N	N
TDWW007M	38 42 5	113 37 20	50	.2	.5	1.5	3,000	N	N	N
TDWW008M	38 44 50	113 37 20	50	.2	.7	2	3,000	N	N	N
TDWW009M	38 47 10	113 33 23	50	.2	.5	1.5	3,000	N	N	N
TDWW010M	38 46 47	113 35 8	50	.2	.3	2	5,000	N	N	N
TDWW011M	38 46 15	113 34 28	50	.7	.2	2	5,000	N	N	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES--Continued

Sample	B-ppm s	Ba-ppm s	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
TDWW005M	30	200	N	N	N	150	700	15	N	N	<50
TDWW006M	30	500	N	N	N	100	300	15	<50	N	N
TDWW007M	30	700	N	N	N	70	300	10	100	N	<50
TDWW008M	30	300	N	N	N	100	500	15	<50	N	N
TDWW009M	30	300	N	N	N	50	500	15	150	N	N
TDWW010M	30	150	N	N	N	70	300	10	500	N	50
TDWW011M	30	200	N	N	N	100	300	15	100	N	N

TABLE 5. RESULTS OF ANALYSES OF MAGNETIC-CONCENTRATE SAMPLES--Continued

Sample	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
TDWW005M	150	30	N	30	N	N	3,000	N	<20	700	100	N
TDWW006M	70	20	N	<10	N	<200	2,000	N	30	<500	200	N
TDWW007M	50	30	N	<10	N	200	1,500	N	30	<500	500	N
TDWW008M	70	20	N	20	N	<200	3,000	N	20	700	300	N
TDWW009M	50	20	N	<10	N	<200	2,000	N	50	500	200	N
TDWW010M	50	<20	N	50	N	N	2,000	N	150	700	1,000	N
TDWW011M	70	70	N	30	N	<200	2,000	N	30	500	100	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown; s, emission spectrographic analyses; aa, atomic absorption; icp, inductively coupled plasma]

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
CTWW001R	38 31 40	113 32 32	1	2	>20	.1	700	N	N	N	N	20
CTWW002R	38 31 50	113 32 0	.15	.3	>20	.05	100	N	N	N	N	N
CTWW003R	38 32 50	113 31 10	5	1.5	5	.7	700	N	N	N	N	700
CTWW004R	38 32 45	113 31 15	3	1.5	3	.5	500	N	N	N	10	1,000
CTWW005R	38 33 10	113 30 30	.2	1	>20	.03	70	N	N	N	N	N
CTWW006R	38 33 10	113 30 30	2	.07	1	.015	5,000	N	N	N	15	200
CTWW007R	38 34 30	113 30 38	.5	.5	>20	.07	200	N	N	N	10	50
CTWW008R	38 34 53	113 30 50	<.05	1.5	>20	.003	30	N	N	N	N	N
CTWW009R	38 34 53	113 30 50	.2	.3	>20	.03	300	N	N	N	N	N
CTWW010R	38 35 52	113 29 48	.1	.3	>20	.015	150	N	N	N	N	N
CTWW011R	38 36 8	113 28 30	.3	1	3	.3	700	N	N	N	10	700
CTWW012R	38 38 0	113 35 22	.2	5	>20	.05	50	N	N	N	N	70
CTWW013R	38 38 0	113 35 32	.2	.7	>20	.05	70	N	N	N	N	<20
CTWW014R	38 38 0	113 35 32	1.5	.3	3	.01	1,500	N	N	N	20	<20
CTWW015R	38 35 47	113 28 22	1	.1	1	.015	700	N	N	N	30	70
CTWW016R	38 35 47	113 28 22	3	.7	1.5	.3	700	N	N	N	30	700
CTWW017R	38 35 47	113 28 22	3	.7	1.5	.3	500	N	N	N	30	1,000
CTWW018R	38 36 30	113 36 30	.2	1.5	>20	.03	50	N	N	N	N	<20
CTWW019R	38 37 58	113 37 58	.1	.7	>20	.03	30	N	N	N	N	<20
CTWW020R	38 38 41	113 38 41	<.05	7	15	.002	10	N	N	N	<10	N
CTWW021R	38 38 28	113 38 28	<.05	7	15	N	30	N	N	N	N	N
CTWW022R	38 37 24	113 37 24	.15	.3	20	.02	150	N	N	N	<10	<20
CTWW023R	38 39 32	113 39 32	.3	.2	7	.015	100	N	N	N	20	<20
CTWW024R	38 41 20	113 34 30	.07	7	10	.003	30	N	N	N	N	N
CTWW025R	38 42 32	113 34 40	<.05	.7	15	N	10	N	N	N	N	N
J6WW001R	38 31 50	113 32 0	.1	10	20	.01	200	N	N	N	<10	<20
J6WW002R	38 32 42	113 31 10	5	.3	.7	.007	>5,000	N	N	N	10	5,000
J6WW003R	38 32 42	113 31 10	.7	.2	1	.03	700	N	N	N	20	300
J6WW004R	38 34 38	113 29 42	.7	2	>20	.07	150	N	N	N	N	<20
J6WW005R	38 34 38	113 29 42	.15	2	7	.003	150	N	N	N	10	<20
J6WW006R	38 34 38	113 29 42	.2	.07	.7	.015	200	N	N	N	70	200
J6WW007R	38 35 5	113 30 55	.07	.3	>20	.02	15	N	N	N	<10	N
J6WW008R	38 35 40	113 30 3	3	.7	1.5	.3	300	N	N	N	20	1,000
J6WW009R	38 37 57	113 30 10	1	.7	>20	.07	2,000	N	N	N	N	3,000
J6WW010R	38 37 48	113 31 0	.07	1	2	.002	70	N	N	N	10	<20
J6WW011R	38 38 30	113 31 10	N	7	10	<.002	30	N	N	N	N	N
J6WW012R	38 37 45	113 33 47	.1	.2	3	.005	100	N	N	N	20	N
J6WW013R	38 39 10	113 33 50	.2	.2	10	.02	150	N	N	N	20	<20
J6WW014R	38 39 58	113 34 25	.05	.07	7	<.002	30	N	N	N	20	N
J6WW015R	38 39 58	113 34 29	<.05	7	10	.002	30	N	N	N	N	N
J6WW016R	39 42 39	113 34 47	.3	.3	20	.002	700	N	N	N	10	N
J6WW017R	38 43 50	113 34 15	.5	.3	15	.015	150	N	N	N	10	<20
J6WW018R	38 41 5	113 34 29	.2	.07	10	.002	50	N	N	N	20	N
KDWW001R	38 31 22	113 31 9	1	.07	.7	.01	5,000	N	N	N	30	500
KDWW002R	38 31 38	113 32 38	N	.7	20	.005	20	N	N	N	N	N
KDWW003R	38 31 38	113 32 38	1.5	1	3	.005	500	N	N	N	15	70
KDWW004R	38 30 58	113 35 20	1	10	2	.03	100	N	N	N	50	N
KDWW005R	38 30 58	113 35 20	.5	2	3	.7	500	N	N	N	<10	700
KDWW006R	38 30 58	113 35 20	1.5	2	10	.15	150	N	N	N	10	200
KDWW007R	38 31 43	113 34 10	.15	.3	20	.015	700	N	N	N	N	N
KDWW008R	38 31 43	113 34 10	20	.2	.7	.1	150	N	N	N	20	500
KDWW009R	38 31 52	113 34 32	3	.07	.1	.002	200	N	N	N	15	N
KDWW010R	38 31 30	113 34 35	1	.7	>20	.003	150	N	N	N	N	N
KDWW011R	38 34 35	113 28 30	3	1	3	.5	500	N	N	N	10	1,000
KDWW012R	38 34 35	113 33 30	.7	.07	15	.03	300	N	N	N	20	30
KDWW013R	38 34 35	113 33 30	.15	.3	>20	.02	70	N	N	N	N	N
KDWW014R	38 34 35	113 35 38	.3	3	20	.07	150	N	N	N	15	20
KDWW015R	38 38 0	113 35 22	.7	1.5	>20	.1	150	N	N	N	10	<20
KDWW016R	38 38 5	113 35 22	1	.7	>20	.07	700	N	N	N	<10	30
KDWW017R	38 40 2	113 36 22	.3	2	>20	.015	100	N	N	N	N	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA--Continued

Sample	Be-ppm	Bi-ppm	Cd-ppm	Co-ppm	Cr-ppm	Cu-ppm	La-ppm	Mo-ppm	Nb-ppm	Ni-ppm	Pb-ppm	Sb-ppm	Sc-ppm
	s	s	s	s	s	s	s	s	s	s	s	s	s
CTWW001R	N	N	N	N	15	<5	<20	N	N	<5	15	N	<5
CTWW002R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW003R	<1	N	N	50	700	30	20	N	N	150	15	N	30
CTWW004R	<1	N	N	30	50	20	30	N	N	30	30	N	15
CTWW005R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW006R	<1	N	N	N	<10	7	N	N	N	10	N	N	N
CTWW007R	<1	N	N	N	<10	<5	N	N	N	N	<10	N	N
CTWW008R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW009R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW010R	N	N	N	N	N	N	<20	N	N	N	N	N	N
CTWW011R	1.5	N	N	15	<10	7	20	N	N	5	50	N	10
CTWW012R	N	N	N	N	N	<5	<20	N	N	N	N	N	N
CTWW013R	N	N	N	N	10	<5	N	N	N	N	N	N	N
CTWW014R	<1	N	N	N	50	30	N	10	N	20	N	N	N
CTWW015R	<1	N	N	N	30	15	N	N	N	7	N	N	N
CTWW016R	2	N	N	7	15	<5	20	N	N	<5	50	N	5
CTWW017R	2	N	N	7	30	10	20	N	N	20	30	N	7
CTWW018R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW019R	N	N	N	N	<10	<5	N	N	N	N	N	N	N
CTWW020R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW021R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW022R	N	N	N	N	N	N	N	N	N	N	N	N	N
CTWW023R	<1	N	N	N	<10	<5	N	N	N	<5	<10	N	N
CTWW024R	<1	N	N	N	N	N	<20	N	N	N	<10	N	N
CTWW025R	N	N	N	N	<10	N	N	N	N	N	N	N	N
JGWW001R	N	N	N	N	<10	<5	N	N	N	N	10	N	N
JGWW002R	10	N	N	10	<10	10	N	N	N	200	<10	N	N
JGWW003R	1	N	N	N	10	<5	N	N	N	7	10	N	N
JGWW004R	N	N	N	N	<10	N	N	N	N	<5	10	N	N
JGWW005R	N	N	N	N	N	<5	<20	N	N	<5	<10	N	N
JGWW006R	<1	N	N	N	<10	<5	N	N	N	<5	N	N	N
JGWW007R	N	N	N	N	N	N	N	N	N	N	N	N	N
JGWW008R	1	N	N	7	15	7	20	N	N	7	30	N	5
JGWW009R	N	N	N	<5	10	5	<20	N	N	N	20	N	N
JGWW010R	N	N	N	N	N	N	N	N	N	5	N	N	N
JGWW011R	N	N	N	N	N	N	N	N	N	N	N	N	N
JGWW012R	N	N	N	N	<10	<5	N	N	N	<5	N	N	N
JGWW013R	N	N	N	N	<10	<5	N	N	N	<5	N	N	N
JGWW014R	N	N	N	N	N	N	N	N	N	<5	N	N	N
JGWW015R	<1	N	N	N	<10	N	<20	N	N	N	N	N	N
JGWW016R	N	N	N	N	N	<5	N	N	N	<5	N	N	N
JGWW017R	N	N	N	N	N	N	<20	N	N	<5	<10	N	N
JGWW018R	N	N	N	N	15	<5	N	N	N	<5	N	N	N
KDWW001R	1	N	N	N	30	7	<20	5	N	5	N	N	N
KDWW002R	N	N	N	N	N	N	N	N	N	N	N	N	N
KDWW003R	1.5	N	N	<5	<10	5	N	N	N	7	<10	N	N
KDWW004R	N	N	N	5	15	N	N	N	N	20	15	N	<5
KDWW005R	N	N	N	50	30	<5	20	N	N	15	20	N	30
KDWW006R	<1	N	N	7	50	5	<20	N	N	<5	10	N	<5
KDWW007R	<1	N	N	N	10	N	N	N	N	N	N	N	N
KDWW008R	<1	N	N	N	<10	5	N	N	N	N	15	N	5
KDWW009R	15	N	N	<5	10	<5	N	30	N	30	N	N	N
KDWW010R	N	N	N	N	N	N	N	N	N	<5	N	N	N
KDWW011R	<1	N	N	15	20	10	20	N	N	7	30	N	7
KDWW012R	<1	N	N	N	15	<5	N	N	N	5	<10	N	N
KDWW013R	N	N	N	N	<10	N	N	N	N	N	N	N	N
KDWW014R	N	N	N	N	<10	<5	<20	N	N	<5	<10	N	N
KDWW015R	N	N	N	N	10	<5	N	N	N	N	15	N	<5
KDWW016R	N	N	N	5	<10	5	N	N	N	<5	N	N	N
KDWW017R	N	N	N	N	<10	N	N	N	N	N	N	N	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA--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
CTWW001R	N	1,500	15	N	<10	N	20	N	N	N	N	.3	4	11
CTWW002R	N	300	10	N	N	N	20	N	N	N	N	.1	N	N
CTWW003R	N	700	150	N	30	N	150	N	N	N	N	.4	N	48
CTWW004R	N	700	150	N	30	N	150	N	N	N	N	.2	N	18
CTWW005R	N	500	<10	N	N	N	15	N	N	N	N	.2	2	8
CTWW006R	N	N	100	N	N	N	<10	N	N	15	N	.3	N	5
CTWW007R	N	700	10	N	10	N	30	N	N	N	N	.2	N	4
CTWW008R	N	300	<10	N	N	N	N	N	N	N	N	.1	4	N
CTWW009R	N	300	10	N	N	N	15	N	N	N	N	.2	N	4
CTWW010R	N	500	<10	N	N	N	N	N	N	N	N	.1	N	10
CTWW011R	N	700	100	N	20	N	100	N	N	N	N	.3	N	35
CTWW012R	N	300	10	N	<10	N	15	N	N	N	N	N	8	21
CTWW013R	N	200	10	N	N	N	<10	N	N	N	2	.1	N	4
CTWW014R	N	N	15	N	N	N	30	N	N	N	N	.1	N	N
CTWW015R	N	N	10	N	N	N	N	N	N	N	N	N	N	N
CTWW016R	N	700	70	N	15	N	100	N	N	N	N	.3	N	41
CTWW017R	N	700	70	N	20	N	15	N	N	N	N	N	N	11
CTWW018R	N	300	10	N	N	N	10	N	N	N	N	.1	5	N
CTWW019R	N	300	<10	N	N	N	N	N	N	N	N	N	2	N
CTWW020R	N	N	<10	N	N	N	<10	N	N	N	N	N	2	N
CTWW021R	N	N	<10	N	N	N	150	N	N	N	N	N	16	N
CTWW022R	N	200	<10	N	N	N	200	N	N	N	N	.1	N	N
CTWW023R	N	100	<10	N	N	N	20	N	N	N	N	N	N	N
CTWW024R	N	N	<10	N	N	N	N	N	N	N	N	N	16	N
CTWW025R	N	300	<10	N	N	N	N	N	N	N	N	N	N	N
JGWW001R	N	N	15	N	N	N	N	N	N	N	N	N	13	N
JGWW002R	N	200	300	N	10	200	10	N	N	66	N	4.5	3	350
JGWW003R	N	N	30	N	N	N	20	N	N	7	N	N	N	6
JGWW004R	N	300	15	N	N	N	30	N	N	5	N	.3	7	N
JGWW005R	N	N	<10	N	N	N	N	N	N	N	N	N	5	N
JGWW006R	N	N	15	N	N	N	<10	N	N	6	N	N	N	N
JGWW007R	N	300	10	N	N	N	N	N	N	N	N	.1	N	N
JGWW008R	N	700	50	N	15	N	200	N	N	N	N	.2	N	32
JGWW009R	N	700	15	N	20	N	150	N	N	N	N	.2	2	9
JGWW010R	N	N	<10	N	N	N	N	N	N	N	N	N	4	N
JGWW011R	N	N	<10	N	N	N	N	N	N	N	N	N	16	N
JGWW012R	N	N	<10	N	N	N	N	N	N	N	N	N	N	N
JGWW013R	N	N	<10	N	N	N	15	N	N	N	N	N	N	N
JGWW014R	N	N	<10	N	N	N	<10	N	N	N	N	N	N	N
JGWW015R	N	N	<10	N	N	N	N	N	N	N	N	N	16	N
JGWW016R	N	200	<10	N	N	N	N	N	N	N	N	N	N	N
JGWW017R	N	300	<10	N	N	N	10	N	N	N	N	.2	N	6
JGWW018R	N	N	<10	N	N	N	10	N	N	N	N	N	N	N
KDWW001R	N	N	30	N	N	N	N	N	N	10	N	N	N	37
KDWW002R	N	200	<10	N	N	N	N	N	N	N	N	N	3	N
KDWW003R	N	N	70	N	N	N	N	N	N	34	N	.3	6	9
KDWW004R	N	N	70	N	N	N	N	N	N	40	N	.1	13	7
KDWW005R	N	700	300	N	20	N	70	N	N	N	N	.7	3	50
KDWW006R	N	500	70	N	10	N	50	N	N	N	N	.4	6	7
KDWW007R	N	100	30	N	20	N	<10	N	N	25	N	.2	3	47
KDWW008R	N	N	150	N	15	N	30	N	N	29	N	2.6	N	26
KDWW009R	N	N	50	N	50	200	N	N	N	32	N	.8	N	630
KDWW010R	N	500	15	N	<10	N	N	N	N	N	N	.4	N	27
KDWW011R	N	700	100	N	20	N	150	N	N	N	N	.4	N	30
KDWW012R	N	100	10	N	N	N	<10	N	N	N	N	N	N	6
KDWW013R	N	300	<10	N	N	N	N	N	N	N	N	.2	N	3
KDWW014R	N	100	10	N	10	N	30	N	N	13	N	.2	18	N
KDWW015R	N	500	15	N	10	N	30	N	N	N	N	.3	4	N
KDWW016R	N	300	10	N	10	N	30	N	N	15	N	.4	4	5
KDWW017R	N	300	<10	N	N	N	N	N	N	N	N	.2	6	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA--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
KDWW018R	38 40 2	113 36 22	1.5	2	20	.1	700	N	N	N	20	70
KDWW019R	38 40 2	113 36 22	N	5	10	<.002	30	N	N	N	N	N
KDWW020R	38 32 40	113 31 0	2	.15	.7	.015	>5,000	N	N	N	10	1,000
KDWW021R	38 32 40	113 31 0	.07	.3	>20	.015	300	N	N	N	N	N
KDWW022R	38 32 40	113 31 0	.07	.5	20	.015	150	N	N	N	N	N
KDWW023R	38 42 35	113 37 8	.3	.5	>20	.05	200	N	N	N	10	<20
KDWW024R	38 44 50	113 36 40	.15	.5	>20	.015	200	N	N	N	N	N
KDWW025R	38 46 35	113 34 53	.15	1	20	.03	100	N	N	N	10	N
KDWW026R	38 46 28	113 34 52	.3	3	10	.02	150	N	N	N	30	<20
KDWW027R	38 46 2	113 39 52	.1	.5	20	.02	150	N	N	N	N	N
KDWW028R	38 48 10	113 36 50	.5	.7	>20	.03	150	N	N	N	10	<20
KDWW029R	38 48 10	113 36 50	<.05	.05	.7	.003	10	N	N	N	<10	N
KDWW030R	38 47 42	113 35 34	.7	1	2	.05	300	N	N	N	30	300
KDWW031R	38 47 50	113 35 48	.5	1	1	.05	300	N	N	N	<10	300
TDWW001R	38 31 43	113 34 35	15	.5	.3	.07	700	N	N	N	70	<20
TDWW002R	38 31 43	113 34 10	1.5	.07	.5	.03	1,500	N	N	N	50	300
TDWW003R	38 31 42	113 34 10	15	.15	.2	.02	150	N	N	N	30	N
TDWW004R	38 34 15	113 33 30	.5	.2	20	.02	150	N	N	N	<10	<20
TDWW005R	38 34 8	113 33 22	.7	.7	1.5	.002	200	N	N	N	10	50
TDWW006R	38 37 52	113 35 22	.15	.1	10	.01	150	N	N	N	10	N
TDWW007R	38 40 42	113 37 30	.7	.7	>20	.015	1,000	N	N	N	N	N
TDWW008R	38 42 3	113 37 20	.2	.1	7	.015	70	N	N	N	15	N
TDWW009R	38 44 50	113 37 20	1.5	.3	20	.015	70	N	N	N	N	N
TDWW010R	38 44 50	113 37 20	.2	.5	>20	.02	70	N	N	N	<10	N
TDWW011R	38 46 32	113 34 50	<.05	.02	.5	.005	15	N	N	N	10	N
TDWW012R	38 46 47	113 35 8	.5	.7	20	.015	200	N	N	N	N	N
TDWW013R	38 46 47	113 35 8	.07	<.02	.3	.01	100	N	N	N	10	N
TDWW014R	38 46 15	113 34 28	.3	.5	>20	.015	100	N	N	N	N	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA--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
KDWW018R	N	N	N	<5	20	7	<20	N	N	5	20	N	N
KDWW019R	N	N	N	N	<10	N	N	N	N	N	N	N	N
KDWW020R	1.5	N	N	10	20	10	N	5	N	15	<10	N	N
KDWW021R	N	N	N	N	<10	N	N	N	N	N	N	N	N
KDWW022R	N	N	N	N	<10	N	N	N	N	N	N	N	N
KDWW023R	<1	N	N	N	15	<5	<20	N	N	<5	15	N	N
KDWW024R	N	N	N	N	10	N	<20	N	N	N	<10	N	N
KDWW025R	N	N	N	N	N	N	N	N	N	N	<10	N	N
KDWW026R	N	N	N	N	N	<5	<20	N	N	N	<10	N	N
KDWW027R	N	N	N	N	N	N	N	N	N	N	N	N	N
KDWW028R	N	N	N	N	<10	<5	<20	N	N	N	<10	N	N
KDWW029R	N	N	N	N	N	N	N	N	N	<5	N	N	N
KDWW030R	2	N	N	N	N	<5	<20	N	N	<5	30	N	N
KDWW031R	3	N	N	N	N	N	<20	N	N	<5	30	N	N
TDWW001R	20	N	N	<5	<10	7	N	N	N	30	<10	N	<5
TDWW002R	2	N	N	N	<10	5	N	N	N	7	N	N	N
TDWW003R	1.5	N	N	<5	<10	<5	N	N	N	20	<10	N	N
TDWW004R	<1	N	N	N	N	<5	<20	N	N	<5	N	N	N
TDWW005R	<1	N	N	N	15	<5	N	N	N	5	N	N	N
TDWW006R	N	N	N	N	N	<5	N	N	N	<5	N	N	N
TDWW007R	N	N	N	N	N	<5	N	N	N	5	20	N	N
TDWW008R	<1	N	N	N	<10	<5	N	N	N	<5	N	N	N
TDWW009R	N	N	N	N	N	N	N	<5	N	N	N	N	N
TDWW010R	N	N	N	N	<10	<5	N	N	N	<5	N	N	N
TDWW011R	N	N	N	N	N	N	N	N	N	5	N	N	N
TDWW012R	N	N	N	N	<10	<5	N	N	N	N	N	N	N
TDWW013R	N	N	N	N	N	<5	N	N	N	<5	N	N	N
TDWW014R	N	N	N	N	N	N	<20	N	N	N	N	N	N

TABLE 6. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WILDERNESS STUDY AREA--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
KDWW018R	N	300	15	N	15	N	100	N	N	N	N	.5	5	7
KDWW019R	N	N	10	N	N	N	N	N	N	N	N	N	16	N
KDWW020R	N	200	100	N	N	N	N	N	N	9	N	.3	N	6
KDWW021R	N	300	<10	N	<10	N	N	N	N	N	N	N	N	N
KDWW022R	N	300	<10	N	N	N	50	N	N	N	N	.1	N	N
KDWW023R	N	300	10	N	N	N	20	N	N	N	N	.1	2	9
KDWW024R	N	500	<10	N	N	N	<10	N	N	N	N	.1	N	4
KDWW025R	N	300	10	N	N	N	30	N	N	N	N	N	3	N
KDWW026R	N	N	10	N	N	N	150	N	N	N	N	.2	10	N
KDWW027R	N	300	<10	N	N	N	<10	N	N	13	N	N	2	4
KDWW028R	N	300	15	N	N	N	50	N	N	N	N	.2	2	N
KDWW029R	N	N	<10	N	N	N	70	N	N	N	N	N	N	N
KDWW030R	N	200	10	N	20	N	30	N	N	N	N	N	3	16
KDWW031R	N	200	<10	N	10	N	30	N	N	N	N	N	N	23
TDWW001R	N	<100	100	N	200	3,000	15	N	N	47	N	1.6	N	2,000
TDWW002R	N	N	70	N	N	N	10	N	N	16	N	.2	N	29
TDWW003R	N	N	70	N	N	700	<10	N	N	59	N	1.3	N	510
TDWW004R	N	200	15	N	N	N	<10	N	N	6	N	.3	N	8
TDWW005R	N	N	10	N	N	N	10	N	N	N	N	.2	N	15
TDWW006R	N	100	<10	N	N	N	<10	N	N	N	N	N	N	2
TDWW007R	N	300	10	N	<10	N	<10	N	N	25	N	.3	5	14
TDWW008R	N	100	<10	N	N	N	<10	N	N	10	N	.1	N	6
TDWW009R	N	300	15	N	N	N	N	N	N	20	N	.8	N	10
TDWW010R	N	300	<10	N	N	N	<10	N	N	N	N	.1	N	6
TDWW011R	N	N	<10	N	N	N	30	N	N	N	N	N	N	N
TDWW012R	N	300	10	N	N	N	<10	N	N	N	N	.3	N	12
TDWW013R	N	N	<10	N	N	N	30	N	N	N	N	N	N	N
TDWW014R	N	300	<10	N	N	N	10	N	N	N	N	.1	N	7

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown; s, emission spectrographic analyses; icp, inductively coupled plasma; aa, atomic absorption]

*	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
1	CTES001R	38 31 4	113 30 55	3	.7	1.5	.3	1,000	N	N	N	10	700
2	CTES002R	38 31 4	113 30 55	3	3	3	.7	1,500	N	N	N	10	700
3	CTES003R	38 31 4	113 30 55	5	.1	1.5	.005	>5,000	N	200	N	10	70
4	CTES004R	38 31 4	113 30 55	.2	7	10	<.002	500	N	N	N	N	N
5	CTES005R	38 31 4	113 30 55	.07	3	20	<.002	700	N	N	N	N	N
6	CTES006R	38 30 53	113 31 8	2	5	7	<.002	>5,000	N	N	N	<10	N
7	CTES007R	38 30 53	113 31 8	<.05	.7	1.5	.3	1,000	N	N	N	15	500
8	CTES008R	38 30 52	113 30 55	2	3	15	.3	2,000	N	N	N	10	150
9	CTES009R	38 30 50	113 30 50	.15	7	15	.002	1,000	N	N	N	10	<20
10	KDES001R	38 30 31	113 31 10	3	1.5	2	.3	500	N	N	N	N	700
11	KDES002R	38 30 35	113 31 22	3	1	1.5	.3	200	N	N	N	15	700
12	KDES003R	38 30 40	113 31 30	2	1	2	.3	500	N	N	N	N	700
13	KDES004R	38 30 35	113 31 43	2	.7	1	.3	100	N	N	N	10	700
14	KDES005R	38 30 20	113 31 21	.2	.1	.3	.03	200	N	N	N	15	70
15	KDES006R	38 31 3	113 32 8	2	3	>20	.3	500	N	N	N	300	70
16	KDES007R	38 30 55	113 32 18	2	.7	1.5	.3	200	N	N	N	10	700
17	KDES008R	38 30 47	113 32 20	2	5	20	.15	1,000	N	N	N	N	50
18	KDES009R	38 30 44	113 32 18	3	1.5	2	.5	300	N	N	N	N	500
19	KDES010R	38 30 44	113 32 3	.1	7	20	.07	300	N	N	N	20	N
20	KDES011R	38 30 42	113 32 3	2	.7	1.5	.3	500	N	N	N	<10	700
21	KDES012R	38 30 40	113 32 0	3	1	1.5	.3	300	N	N	N	20	700
22	KDES013R	38 30 40	113 31 55	2	.7	1	.3	200	N	N	N	10	1,000
23	KDES014R	38 31 20	113 30 20	.07	1	>20	.02	50	N	N	N	N	<20
24	KDES015R	38 31 33	113 30 11	2	.07	.3	.03	2,000	N	N	N	15	700
25	KDES016R	38 31 35	113 30 10	20	.1	.15	.03	300	N	N	N	N	30
26	KDES017R	38 31 35	113 30 10	.2	.2	>20	.007	300	N	N	N	N	N
27	KDES018R	38 31 35	113 30 10	2	.15	1.5	.05	>5,000	N	N	N	20	5,000
28	KDES019R	38 31 33	113 30 18	.3	.1	.5	.015	500	N	N	N	15	100
29	JGES021R	38 30 50	113 31 38	3	2	3	.7	700	N	N	N	10	700
30	JGES022R	38 30 50	113 31 42	.5	10	15	.07	150	N	N	N	30	N
31	JGES023R	38 31 0	113 32 29	.05	7	20	.007	150	N	N	N	N	N
32	JGES024R	38 31 35	113 30 45	1.5	1	1.5	N	>5,000	N	N	N	10	2,000
33	JGES025R	38 31 32	113 31 38	.7	.5	20	.07	3,000	N	N	N	N	150
34	TDES001R	38 31 0	113 32 25	1.5	1.5	20	.005	1,000	N	N	N	N	<20
35	TDES002R	38 31 0	113 32 25	.07	2	>20	.02	200	N	N	N	N	N
36	TDES003R	38 31 0	113 32 25	.15	1.5	>20	.03	300	N	N	N	N	N
37	TDES004R	38 31 0	113 32 22	3	.7	20	.002	2,000	N	N	N	N	<20
38	TDES005R	38 30 58	113 32 22	3	2	3	.7	500	N	N	N	<10	500
39	CTMS001R	38 30 49	113 34 10	.7	.2	.5	.3	200	N	N	N	30	700
40	CTMS002R	38 30 50	113 33 57	.7	.2	.3	.3	30	N	N	N	50	200
41	CTMS003R	38 30 52	113 34 0	3	2	2	.5	700	N	N	N	15	1,000
42	CTMS004R	38 30 55	113 33 42	.2	1.5	>20	.07	100	N	N	N	N	<20
43	CTMS005R	38 30 54	113 33 45	.7	.3	1	.2	100	N	N	N	10	700
44	CTMS006R	38 31 0	113 33 45	2	1.5	20	.2	300	N	N	N	N	20
45	CTMS007R	38 31 0	113 33 40	<.05	5	20	.003	30	N	N	N	15	N

* numbers preceeding field sample number correspond to samples on plate 2

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA--Continued

Sample	Be-ppm	Bi-ppm	Cd-ppm	Co-ppm	Cr-ppm	Cu-ppm	La-ppm	Mo-ppm	Nb-ppm	Ni-ppm	Pb-ppm	Sb-ppm	Sc-ppm
	s	s	s	s	s	s	s	s	s	s	s	s	s
1 CTES001R	1	N	N	10	20	7	30	N	N	15	30	N	7
2 CTES002R	<1	N	N	50	500	30	20	N	N	100	30	N	15
3 CTES003R	1	N	N	N	N	5	N	50	N	7	15	N	N
4 CTES004R	<1	N	N	N	<10	N	<20	N	N	N	N	N	N
5 CTES005R	N	N	N	N	N	N	N	N	N	N	N	N	N
6 CTES006R	N	N	N	N	30	<5	20	N	N	N	<10	N	N
7 CTES007R	<1	N	N	N	15	10	20	N	N	5	30	N	5
8 CTES008R	<1	N	N	10	<10	<5	20	N	N	<5	20	N	7
9 CTES009R	N	N	N	N	N	N	<20	N	N	N	<10	N	N
10 KDES001R	<1	N	N	15	50	30	20	N	N	30	20	N	10
11 KDES002R	<1	N	N	15	50	30	20	N	N	15	30	N	10
12 KDES003R	1.5	N	N	10	20	10	20	N	N	5	30	N	7
13 KDES004R	1.5	N	N	N	10	7	20	N	N	5	30	N	7
14 KDES005R	N	N	N	N	20	<5	N	N	N	<5	N	N	N
15 KDES006R	<1	N	N	10	70	30	20	N	N	20	20	N	7
16 KDES007R	1.5	N	N	10	50	20	20	N	N	15	30	N	5
17 KDES008R	<1	N	N	10	50	20	<20	N	N	15	30	N	<5
18 KDES009R	<1	N	N	15	70	30	20	N	N	30	20	N	10
19 KDES010R	N	N	N	N	10	N	<20	N	N	N	<10	N	N
20 KDES011R	1.5	N	N	7	15	10	20	N	N	5	30	N	7
21 KDES012R	1	N	N	10	15	7	20	N	N	7	30	N	7
22 KDES013R	<1	<10	N	5	15	15	20	N	N	5	50	N	7
23 KDES014R	N	N	N	N	<10	N	<20	N	N	N	N	N	N
24 KDES015R	<1	N	N	7	20	<5	N	N	N	15	<10	N	N
25 KDES016R	10	N	N	30	15	15	N	15	N	70	10	N	<5
26 KDES017R	N	N	N	N	N	N	N	N	N	N	N	N	N
27 KDES018R	1	N	N	50	10	20	20	10	N	10	30	N	N
28 KDES019R	<1	N	N	N	<10	<5	N	N	N	7	N	N	N
29 JGES021R	N	N	N	30	150	20	30	N	N	50	30	N	15
30 JGES022R	N	N	N	N	50	<5	N	N	N	<5	<10	N	<5
31 JGES023R	N	N	N	N	10	N	N	N	N	N	N	N	N
32 JGES024R	N	N	N	5	100	<5	30	50	N	15	N	N	N
33 JGES025R	N	N	N	N	15	N	N	N	N	<5	N	N	N
34 TDES001R	<1	N	N	10	<10	5	<20	N	N	5	20	N	N
35 TDES002R	N	N	N	N	N	N	<20	N	N	N	10	N	N
36 TDES003R	N	N	N	N	N	N	N	N	N	N	<10	N	N
37 TDES004R	<1	N	N	50	<10	5	N	N	N	20	10	N	N
38 TDES005R	<1	N	N	50	100	30	30	N	N	30	20	N	20
39 CTMS001R	1.5	N	N	7	<10	<5	30	N	N	5	30	N	<5
40 CTMS002R	2	N	N	N	N	<5	30	N	N	<5	50	N	5
41 CTMS003R	<1	N	N	30	150	30	30	N	N	50	30	N	20
42 CTMS004R	N	N	N	N	N	<5	N	N	N	N	<10	N	N
43 CTMS005R	2	N	N	N	<10	<5	20	N	N	<5	30	N	<5
44 CTMS006R	<1	N	N	15	50	<5	70	N	N	7	20	N	15
45 CTMS007R	N	N	N	N	N	N	<20	N	N	N	<10	N	N

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA--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
1 CTES001R	N	500	70	N	20	N	100	N	N	N	N	N	N	79
2 CTES002R	N	500	150	N	20	N	150	N	N	N	N	.3	N	62
3 CTES003R	N	N	10	N	N	N	N	N	N	260	N	.9	N	40
4 CTES004R	N	N	<10	N	N	N	N	N	N	N	N	.1	17	N
5 CTES005R	N	N	<10	N	N	N	N	N	N	N	N	.1	8	N
6 CTES006R	N	300	30	N	N	N	N	N	N	45	N	.7	16	35
7 CTES007R	N	300	70	N	15	N	150	N	N	N	N	N	N	48
8 CTES008R	N	100	100	N	15	N	50	N	N	N	N	.2	4	N
9 CTES009R	N	150	20	N	N	N	N	N	N	7	N	N	16	15
10 KDES001R	N	500	100	N	15	N	150	N	N	N	N	N	N	45
11 KDES002R	N	500	100	N	20	N	150	N	N	6	3	N	N	27
12 KDES003R	N	500	70	N	20	N	150	N	N	N	N	N	N	45
13 KDES004R	N	500	100	N	15	N	150	N	N	N	N	N	N	29
14 KDES005R	N	N	15	N	N	N	10	N	N	N	N	N	N	3
15 KDES006R	N	N	70	N	15	N	150	N	N	27	N	.2	N	42
16 KDES007R	N	500	70	N	15	N	150	N	N	N	N	.1	N	50
17 KDES008R	N	N	70	N	15	N	100	N	N	N	N	N	3	56
18 KDES009R	N	500	100	N	15	N	150	N	N	N	N	.2	N	56
19 KDES010R	N	<100	15	N	N	N	20	N	N	N	N	N	14	N
20 KDES011R	N	500	100	N	15	N	100	N	N	N	N	.2	N	76
21 KDES012R	N	500	100	N	15	N	150	N	N	N	N	N	N	67
22 KDES013R	N	500	100	N	20	N	150	N	N	N	6	N	N	44
23 KDES014R	N	300	10	N	N	N	30	N	N	N	N	N	4	18
24 KDES015R	N	N	100	N	<10	N	20	N	N	11	N	.2	N	9
25 KDES016R	N	N	200	N	15	<200	20	N	N	75	N	N	N	110
26 KDES017R	N	200	<10	N	N	N	N	N	N	N	N	.2	N	N
27 KDES018R	N	N	150	N	20	N	30	N	N	19	N	.3	N	20
28 KDES019R	N	N	15	N	N	N	10	N	N	N	N	N	N	13
29 JGES021R	N	700	100	N	20	N	150	N	N	N	N	.2	N	47
30 JGES022R	N	N	20	N	N	N	30	N	N	28	N	.1	16	5
31 JGES023R	N	N	<10	N	N	N	N	N	N	N	N	N	17	N
32 JGES024R	N	2,000	150	N	N	N	N	N	N	91	N	N	6	20
33 JGES025R	N	200	10	N	<10	N	20	N	N	N	N	.2	N	3
34 TDES001R	N	150	15	N	<10	N	N	N	N	15	N	.6	5	110
35 TDES002R	N	200	10	N	N	N	10	N	N	N	N	N	4	2
36 TDES003R	N	300	<10	N	N	N	50	N	N	N	N	N	3	7
37 TDES004R	N	200	30	N	20	<200	<10	N	N	57	3	1.9	N	340
38 TDES005R	N	500	150	N	20	N	150	N	N	N	N	.1	N	45
39 CTMS001R	N	500	30	N	N	N	100	N	N	5	N	.1	N	29
40 CTMS002R	N	500	70	N	<10	N	100	N	N	N	N	.1	N	4
41 CTMS003R	N	700	150	N	20	N	150	N	N	N	N	.4	N	59
42 CTMS004R	N	300	30	N	N	N	10	N	N	N	N	.1	2	3
43 CTMS005R	N	500	50	N	15	N	70	N	N	N	2	N	N	13
44 CTMS006R	N	300	70	N	20	N	150	N	N	26	N	.1	N	19
45 CTMS007R	N	N	<10	N	N	N	N	N	N	N	N	N	11	N

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA--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
46 CTMS008R	38 31 0	113 33 38	1.5	2	20	.15	200	N	N	N	50	70
47 CTMS009R	38 31 0	113 33 38	1.5	.7	1.5	.15	200	N	N	N	30	500
48 CTMS010R	38 31 0	113 33 38	1.5	10	20	.15	300	N	N	N	N	N
49 CTMS011R	38 31 3	113 33 38	2	1	7	.2	300	N	N	N	20	1,500
50 CTMS012R	38 31 5	113 33 27	3	1	1.5	.3	500	N	N	N	15	700
51 CTMS013R	38 31 20	113 33 22	.7	.05	.5	.3	150	N	N	N	15	100
52 CTMS014R	38 31 24	113 33 20	2	1	1.5	.2	300	N	N	N	10	500
53 CTMS015R	38 31 24	113 33 10	.7	3	20	.2	100	N	N	N	10	N
54 CTMS016R	38 31 22	113 33 7	1.5	3	20	.2	150	N	N	N	50	N
55 CTMS017R	38 31 22	113 33 7	3	2	3	.3	500	N	N	N	10	700
56 CTMS018R	38 31 24	113 33 7	.05	5	15	.003	70	N	N	N	N	N
57 CTMS019R	38 31 24	113 33 7	.2	1.5	20	.05	300	N	N	N	N	N
58 TDMS001R	38 31 0	113 32 58	2	.7	15	.1	300	N	N	N	70	150
59 JGWS001R	38 30 40	113 35 10	3	1.5	2	.5	500	N	N	N	15	1,000
60 JGWS002R	38 30 47	113 35 10	1	.5	1	.15	300	N	N	N	<10	700
61 JGWS003R	38 30 50	113 35 10	3	1	2	.5	700	N	N	N	10	700
62 JGWS004R	38 30 50	113 35 10	3	1.5	2	.5	700	N	N	N	10	1,000
63 JGWS005R	38 31 0	113 35 21	3	1.5	3	.5	500	N	N	N	10	700
64 JGWS006R	38 31 3	113 35 21	2	1	2	.3	500	N	N	N	15	500
65 JGWS007R	38 31 10	113 35 5	1.5	3	20	.07	150	N	N	N	30	150
66 JGWS008R	38 31 11	113 35 1	2	7	20	.1	300	N	N	N	N	N
67 JGWS009R	38 31 11	113 34 50	.05	1	>20	.01	15	N	N	N	N	N
68 JGWS010R	38 31 25	113 34 50	3	1.5	3	.5	500	N	N	N	10	1,000
69 JGWS011R	38 31 25	113 34 50	2	5	20	.3	300	N	N	N	30	30
70 JGWS012R	38 31 15	113 34 50	3	1.5	3	.5	500	N	N	N	15	1,000
71 JGWS013R	38 31 15	113 35 10	2	1	20	.2	500	N	N	N	15	150
72 JGWS014R	38 31 20	113 35 22	<.05	.7	20	.003	10	N	N	N	N	N
73 JGWS015R	38 31 20	113 35 20	3	.7	2	.5	500	N	N	N	20	700
74 JGWS016R	38 31 15	113 35 22	.7	5	15	.1	100	N	N	N	15	20
75 JGWS017R	38 31 32	113 34 58	20	.3	1	.02	150	N	N	N	20	<20
76 JGWS018R	38 31 32	113 34 58	1.5	.5	>20	.03	200	N	N	N	N	N
77 JGWS019R	38 31 20	113 34 35	2	.7	.7	.2	200	N	N	N	20	700
78 JGWS020R	38 31 11	113 34 28	1.5	.5	1.5	.15	300	N	N	N	20	500
79 TDWS001R	38 30 30	113 35 10	<.05	.3	20	.002	10	N	N	N	N	N
80 TDWS002R	38 30 38	113 35 10	N	.15	15	N	N	N	N	N	N	N
81 TDWS003R	38 30 52	113 35 10	2	.7	1.5	.2	500	N	N	N	<10	1,000
82 TDWS004R	38 30 50	113 35 8	<.05	7	15	.003	10	N	N	N	10	N
83 TDWS005R	38 30 51	113 35 15	.5	10	15	.03	70	N	N	N	20	N
84 TDWS006R	38 30 48	113 35 16	N	.7	20	.002	<10	N	N	N	N	N
85 TDWS007R	38 30 40	113 35 20	N	.5	20	<.002	<10	N	N	N	N	N
86 TDWS008R	38 30 50	113 35 31	N	.5	20	<.002	10	N	N	N	N	N
87 TDWS009R	38 30 51	113 35 30	.2	7	20	.005	50	N	N	N	N	N
88 TDWS010R	38 31 0	113 35 15	3	1.5	2	.5	500	N	N	N	10	700
89 TDWS011R	38 31 10	113 35 9	<.05	2	>20	.01	50	N	N	N	N	N
90 TDWS012R	38 31 10	113 35 20	.07	1	>20	.015	70	N	N	N	N	N
91 TDWS013R	38 31 9	113 35 31	5	1.5	3	.5	700	N	N	N	10	700
92 TDWS014R	38 30 51	113 34 8	1	.7	.5	.3	100	N	N	N	30	500
93 TDWS015R	38 30 57	113 34 0	3	1	1	.3	300	N	N	N	20	700

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA--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
46 CTMS008R	<1	N	N	5	20	<5	20	N	N	<5	<10	N	7
47 CTMS009R	2	N	N	7	20	20	20	N	N	10	30	N	5
48 CTMS010R	<1	N	N	5	20	N	20	N	N	15	<10	N	N
49 CTMS011R	<1	N	N	10	30	30	20	N	N	15	20	N	7
50 CTMS012R	1.5	N	N	10	20	15	20	N	N	7	30	N	10
51 CTMS013R	<1	N	N	N	20	<5	N	7	N	<5	<10	N	<5
52 CTMS014R	1.5	N	N	10	50	20	30	N	N	20	30	N	7
53 CTMS015R	<1	N	N	N	50	<5	20	N	N	<5	<10	N	7
54 CTMS016R	<1	N	N	10	30	<5	20	N	N	<5	<10	N	20
55 CTMS017R	N	N	N	20	100	5	30	N	N	20	30	N	15
56 CTMS018R	N	N	N	N	10	<5	20	N	N	N	<10	N	10
57 CTMS019R	N	N	N	N	<10	<5	N	N	N	<5	N	N	7
58 TDMS001R	<1	10	N	7	<10	15	20	N	N	<5	70	N	7
59 JGWS001R	<1	N	N	15	15	5	20	N	N	5	30	N	15
60 JGWS002R	2	N	N	5	<10	<5	20	N	N	<5	30	N	<5
61 JGWS003R	<1	N	N	20	30	20	30	N	N	15	20	N	15
62 JGWS004R	<1	N	N	20	30	7	30	N	N	10	30	N	15
63 JGWS005R	<1	N	N	20	30	15	20	N	N	15	30	N	15
64 JGWS006R	1	N	N	10	30	15	20	N	N	20	30	N	10
65 JGWS007R	<1	N	N	<5	50	<5	<20	N	N	<5	10	N	<5
66 JGWS008R	<1	N	N	7	20	N	<20	N	N	7	<10	N	5
67 JGWS009R	N	N	N	N	15	N	N	N	N	N	N	N	N
68 JGWS010R	<1	N	N	15	30	10	20	N	N	7	30	N	15
69 JGWS011R	<1	N	N	10	30	15	20	N	N	10	N	N	N
70 JGWS012R	<1	N	N	20	50	7	20	N	N	15	30	N	15
71 JGWS013R	N	N	N	10	50	15	30	N	N	5	10	N	10
72 JGWS014R	N	N	N	N	10	N	N	N	N	N	<10	N	N
73 JGWS015R	<1	N	N	10	30	5	30	N	N	<5	30	N	10
74 JGWS016R	<1	N	N	N	20	N	<20	N	N	<5	<10	N	5
75 JGWS017R	5	N	N	5	15	7	N	N	N	15	15	N	N
76 JGWS018R	1	N	N	10	10	7	20	N	N	15	50	N	N
77 JGWS019R	1.5	N	N	N	10	5	20	N	N	<5	20	N	<5
78 JGWS020R	1.5	N	N	7	<10	<5	20	N	N	5	30	N	<5
79 TDWS001R	N	N	N	N	<10	N	N	N	N	N	N	N	N
80 TDWS002R	N	N	N	N	<10	N	N	N	N	N	N	N	N
81 TDWS003R	1.5	N	N	7	<10	<5	20	N	N	<5	30	N	5
82 TDWS004R	N	N	N	N	10	N	N	N	N	N	<10	N	N
83 TDWS005R	N	N	N	N	15	<5	N	N	N	N	<10	N	N
84 TDWS006R	7	N	N	N	10	N	N	N	N	N	N	N	N
85 TDWS007R	N	N	N	N	N	N	<20	N	N	N	N	N	N
86 TDWS008R	N	N	N	N	N	N	N	N	N	N	N	N	N
87 TDWS009R	N	N	N	N	10	<5	<20	N	N	N	<10	N	N
88 TDWS010R	<1	N	N	15	30	10	30	N	N	10	30	N	15
89 TDWS011R	N	N	N	N	10	<5	<20	N	N	N	N	N	N
90 TDWS012R	N	N	N	N	<10	<5	<20	N	N	N	N	N	N
91 TDWS013R	<1	N	N	15	30	7	30	N	N	10	20	N	20
92 TDWS014R	1.5	N	N	N	10	<5	20	N	N	<5	30	N	5
93 TDWS015R	3	N	N	10	50	20	30	N	N	70	30	N	7

TABLE 7. RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WAH WAH SUMMIT AREA--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
46	CTMS008R	N	300	30	N	15	N	50	N	N	N	N	.5	3	3
47	CTMS009R	N	300	50	N	15	N	150	N	N	N	N	.4	N	62
48	CTMS010R	N	<100	<10	N	<10	N	30	N	N	N	N	1.2	8	18
49	CTMS011R	N	700	70	N	15	N	50	N	N	N	N	.5	N	22
50	CTMS012R	N	500	100	N	15	N	150	N	N	N	N	.6	N	68
51	CTMS013R	N	N	10	N	N	N	200	N	N	N	N	.3	N	12
52	CTMS014R	N	300	70	N	15	N	150	N	N	N	N	.7	N	52
53	CTMS015R	N	300	<10	N	10	N	200	N	N	N	N	.4	6	14
54	CTMS016R	N	300	30	N	15	N	100	N	N	15	N	.6	5	55
55	CTMS017R	N	700	150	N	20	N	100	N	N	N	N	.6	N	38
56	CTMS018R	N	N	<10	N	N	N	N	N	N	N	N	.1	16	N
57	CTMS019R	N	300	10	N	N	N	20	N	N	11	N	.2	4	3
58	TDMS001R	N	200	70	N	15	N	30	N	N	22	6	.3	N	54
59	JGWS001R	N	500	150	N	20	N	150	N	N	N	N	.6	N	37
60	JGWS002R	N	300	30	N	15	N	70	N	N	N	N	.4	N	23
61	JGWS003R	N	500	150	N	20	N	150	N	N	N	N	.7	N	36
62	JGWS004R	N	500	150	N	20	N	150	N	N	N	N	.6	N	29
63	JGWS005R	N	700	150	N	20	N	150	N	N	N	N	.5	N	29
64	JGWS006R	N	700	100	N	15	N	150	N	N	N	N	.5	N	43
65	JGWS007R	N	200	<10	N	<10	N	30	N	N	N	N	.4	3	33
66	JGWS008R	N	N	<10	N	10	N	150	N	N	N	N	1.2	10	24
67	JGWS009R	N	300	<10	N	N	N	N	N	N	N	N	.8	3	15
68	JGWS010R	N	1,000	150	N	15	N	150	N	N	N	N	.4	N	22
69	JGWS011R	N	300	15	N	10	N	30	N	N	N	N	.6	5	18
70	JGWS012R	N	700	100	N	20	N	150	N	N	N	N	.6	N	49
71	JGWS013R	N	150	100	N	15	N	70	N	N	N	N	.2	N	24
72	JGWS014R	N	300	<10	N	N	N	N	N	N	N	N	.1	4	N
73	JGWS015R	N	700	100	N	15	N	150	N	N	N	N	.6	N	47
74	JGWS016R	N	300	15	N	15	N	100	N	N	N	N	N	N	N
75	JGWS017R	N	N	20	N	<10	200	N	N	N	160	N	5.9	N	420
76	JGWS018R	N	N	70	N	15	N	20	N	N	160	N	.8	35	97
77	JGWS019R	N	300	70	N	20	N	100	N	N	N	N	.3	N	47
78	JGWS020R	N	500	50	N	15	N	50	N	N	N	N	.2	N	22
79	TDWS001R	N	200	<10	N	N	N	N	N	N	N	N	N	N	4
80	TDWS002R	N	200	<10	N	N	N	N	N	N	N	N	N	N	4
81	TDWS003R	N	500	70	N	20	N	150	N	N	N	N	.2	N	21
82	TDWS004R	N	N	<10	N	N	N	N	N	N	N	N	N	15	N
83	TDWS005R	N	150	<10	N	N	N	15	N	N	8	N	.3	14	N
84	TDWS006R	N	N	<10	N	N	N	N	N	N	8	N	.2	4	210
85	TDWS007R	N	200	<10	N	N	N	N	N	N	N	N	N	N	3
86	TDWS008R	N	150	<10	N	N	N	N	N	N	N	N	.1	2	4
87	TDWS009R	N	200	<10	N	N	N	N	N	N	N	N	.1	13	N
88	TDWS010R	N	500	150	N	20	N	150	N	N	N	N	.6	N	46
89	TDWS011R	N	300	10	N	N	N	N	N	N	N	N	.6	5	N
90	TDWS012R	N	300	<10	N	N	N	N	N	N	N	N	.1	2	2
91	TDWS013R	N	500	150	N	20	N	150	N	N	N	N	.6	N	37
92	TDWS014R	N	200	70	N	15	N	100	N	N	N	N	.2	N	13
93	TDWS015R	N	300	70	N	15	<200	150	N	N	N	N	.3	N	130

TABLE 8.--Description of rock samples

Wilderness study area samples (refer to table 6 for data)

CTWW001R - Limestone, dark grey, cut by hairline quartz veins
002R - Limestone, dark grey with limonite staining cut by veinlets of calcite
003R - Rhyolite breccia, reddish, porphyritic clasts of plagioclase and hornblende
004R - Rhyolite breccia, light-gray porphyritic clasts of plagioclase and hornblende
005R - Limestone, dark gray cut by veinlets of calcite
006R - Chert, orange, black, and grey, slightly altered
007R - Limestone, light to dark grey, fine grained
008R - Limestone, dark grey, fine grained with veinlets of calcite
009R - Marble, white to light grey banded
010R - Limestone, dark grey banded with black chert
011R - Ash flow tuff, light grey, fine grained with some large clasts
012R - Limestone, light grey, brittle and stratified
013R - Limestone, dark grey, fine grained
014R - Siliceous material; clean white aphanitic
015R - Jasper, brown to black with white chalcedony bound in an opaque dirty-white silicious matrix
016R - Rhyolite, light grey to white, and fine grained
017R - Rhyolite, dark grey to black, phenocrysts of plagioclase and hornblende with thin bands of pink glass
018R - Limestone, dark grey, fine grained
019R - Limestone, light grey, fine grained, brittle with a fine grained reddish alteration
020R - Limestone, light grey with phenocrysts of calcite
021R - Limestone, dark grey with veinlets and pockets of calcite
022R - Limestone, light grey with limonite and calcite coating and vein of black chert
023R - Limestone, dark grey, fine grained with large veins of black chert
024R - Limestone, light grey, fine grained with veinlets of calcite
025R - Limestone, dark grey with veinlets of calcite and chert

JGWW001R - Jasperoid, black with limonite stain
002R - Jasperoid, dark black to brown
003R - Jasperoid, amber to reddish brown
004R - Limestone, iron stained
005R - Limestone, grey with veining
006R - Jasperoid, yellow brown
007R - Limestone, dark with caliche coating and limonite stain
008R - Dacite, reddish brown flow banding and fine grained
009R - Limestone, grey with calcite veining
010R - Chert grab sample
011R - Limestone, medium grey
012R - Jasperoid, black with chert
014R - Chert, light and dark bands
015R - Limestone, dark grey with bands of calcite
016R - Siliceous vein, white
017R - Limestone, grey white with minor chert
018R - Limestone, medium grey with black bands of silicious material

TABLE 8.--Continued

KDWW001R - Brecciated limestone limonitic alteration with veins of quartz and calcite
002R - Limestone, black and brecciated with veins of quartz and calcite
003R - Limonite and highly silicified
004R - Clay, green to yellow
005R - Diorite, with biotite, hornblende and plagioclase the major minerals
006R - Diorite, argillically altered to pinkish and white
007R - Limestone with pinkish crystals and calcite veining
008R - Flow breccia with limonite replacement
009R - Limestone, argillitically altered and brecciated; some manganese staining
010R - Limestone breccia found in float
011R - Andesite with phenocrysts of hornblende plagioclase and biotite
012R - Limestone silicified with some minor limonite alteration
013R - Limestone unaltered
014R - Limestone, unaltered with pinkish calcite
015R - Limestone, partially brecciated with red, yellow and orange clays
016R - Limestone, brecciated with an oxidized zoning
017R - Limestone, pinkish with limonitic alteration and calcite veining
018R - Limestone with a limonite coating
019R - Limesone with pink calcite and possibly barite veining
020R - Limestone, brecciated and silicified
021R - Oxidized minerals
022R - Limestone
023R - Limestone
024R - Limestone
025R - Limestone
026R - Limestone which weathers to an orangish color
027R - Limestone with limonitic alteration and calcite vining
028R - Limestone, pale red to orange staining and fossiliferous
029R - Quartzite, white
030R - Ash flow tuff
031R - Ash flow tuff phenocrysts of quartz, sanidine and minor biotite as well as pumice fragments, limestone and quartzite

TDWW001R - Alteration material within a vein
002R - Jasperoid, yellow brown to dark brown and highly altered
003R - Chips of reddish orange, soft alteration material
004R - limestone highly altered with limonite staining and calcite on surface
005R - Limestone, highly silicified with a carmel color
006R - Limestone, silicified with quartz veining
007R - Limestone, some alteration
008R - Limestone with red and black quartz veining
009R - Limestone with pink and white quartz veining
010R - Limestone with quartz veining
011R - Quartzite, white on fresh surfaces
012R - Limestone, fossiliferous with iron staining and slightly altered
013R - Marble with orange iron staining along fractures
014R - Limestone

TABLE 8.--Continued

Wah Wah Summit samples (refer to table 7 for data)

1. CTES001R - Diorite, dark grey with phenocrysts of plagioclase and biotite
2. 002R - Diorite, dark grey to black, finely crystalline
3. 003R - Limestone, black with jasper and hematite/limonite alteration
4. 004R - Limestone, light grey
5. 005R - Marble, white, medium grained
6. 006R - Marble, highly stained by hematite/limonite

7. CTES007R - Diorite, highly altered and stained
8. 008R - Skarn, whitish green, highly fractured
9. 009R - Marble, white with thin seams of grey

10. KDES001R - Diorite, unaltered, equigranular with phenocrysts of hornlende, biotite, and plugioclase
11. 002R - Diorite, porphyritic with a limonite coating
12. 003R - Diorite, greenish with phenocrysts of biotite, hornblende and plagioclase
13. 004R - Diorite, white or fresh surface with phenocrysts of sanidine quartz and minor biotite
14. 005R - Limestone, highly silicified
15. 006R - Skarn, white to green and highly altered; diopside is present
16. 007R - Diorite in contact with skarn highly altered to yellow brown
17. 008R - Skarn, green to white with dropside present
18. 009R - Diorite, dark grey, altered with abundant biotite
19. 010R - Limestone, partially marblized
20. 011R - Breccia with limonite stain
21. 012R - Diorite, purple to grey; brecciated
22. 013R - Diorite with limonite alteration
23. 014R - Limestone, partially brecciated and highly altered
24. 015R - Limestone, silicified with vugs of oxidized pyrite
25. 016R - Limestone with limonitic alteration
26. 017R - Limestone with abundant cacite and barite veining
27. 018R - Limestone with manganese coating
28. 019R - Limestone, highly silicified

29. JGES021R - Diorite, dark green, fine grained with phenocrysts of plagioclose and hornblende
30. 022R - Skarn with grossularite crystals and diorite
31. 023R - Skarn, medium grey surrounded by a highly baked limestone
32. 024R - Jasperoid, black to tan and brown
33. 025R - Jasperoid, yellow in between small bands of limestone

34. TDES001R - Limestone with calcite and quartz veining with minor brecciation
35. 002R - limestone
36. 003R - Marble, greenish
37. 004R - Marble, veining with a high degree of iron staining
38. 005R - Diorite, phenocrysts of hornblende, augite and plagioclase

TABLE 8.--Continued

39.	CTMS001R	- Rhyolite ash flow tuff with phenocryst of quartz and biotite
40.	002R	- Rhyolite ash flow tuff, highly altered with mafic phenocrysts
41.	003R	- Diorite, gray black and finely crystalline with phenocrysts of quartz plagioclase and augite
42.	004R	- Marble, dark gray and course grained
43.	005R	- Rhyolite ash flow tuff, phenocrysts of quartz, plagioclase, biotite and augite
44.	006R	- In skarn zone; altered igneous rock with phenocrysts of augite and containing secondary calcite
45.	007R	- Marble, white, fine grained with grey banding
46.	008R	- Skarn, green to black to dirty white and fine grained
47.	009R	- Diorite, with phenocrysts of quartz, plagioclase, biotite and augite
48.	010R	- Skarn, dark greenish and finely crystalline
49.	011R	- Diorite, grey to black and finely crystalline; phenocrysts of quartz plagioclase and biotite, slight alteration of biotite and also with grossularite
50.	012R	-Diorite, dark grey fine grained ground mass with phenocrysts of pyroxen, biotite and augite
51.	013R	- Grab sample of quartz float
52.	014R	- Diorite intrusive highly altered
53.	015R	- Skarn, brownish green and fine grained
54.	016R	- Skarn, greenish black and fine grained
55.	017R	- Diorite, greenish black with fine-grained crystals in quartz and plagioclase matrix
56.	018R	- Marble, white to faintly blue and medium grained
57.	019R	- Marble, blue green and fine grained
58.	TDMS001R	- Skarn containing diorite and grossularite crystals
59.	JGWS001R	- Diorite, greenish white, slight alteration
60.	002R	- Diorite grab sample
61.	003R	- Diorite, dark green, fine-grained plagioclase and biotite
62.	004R	- Diorite, dark green, stained, and altered
63.	005R	- Diorite, dark green, fine grained, slight alteration
64.	006R	- Diorite, dark green
65.	007R	- Skarn, mildly altered, green, contains grossularite
66.	008R	- Skarn with some marble, dark green to medium green
67.	009R	- Marble, pale milky white and very coarse
68.	010R	- Skarn, contains marble grossularite and intrusive diorite
69.	011R	- Marble, light grey to white with grossularite within the matrix
70.	012R	- Diorite
71.	013R	- Skarn, zoned with diorite and marble, dirty dark grey
72.	014R	- Limestone, dark grey, slightly baked
73.	015R	- Diorite, medium green, fine grained, and slightly altered
74.	016R	- Skarn, dark to light green, dropside and grossularite phenocrysts
75.	017R	- Skarn, dark black with iron and manganese staining and possibly marcasite
76.	018R	- Jasperoid, brown to tan
77.	019R	- Rhyolite, light grey to white, and fine grained
78.	020R	- Diorite, dark green, fine grained with phenocrysts of plagioclase and hornblende

TABLE 8.--Continued

79. TDWS001R - Limestone, altered with calcite and chloritic veining along fractures
80. 002R - Limestone, slightly altered with some iron staining
81. 003R - Diorite, coarse grained
82. 004R - Limestone
83. 005R - Limestone, altered
84. 006R - Skarn and marble
85. 007R - Limestone, medium grained with calcite veining
86. 008R - Limestone, iron stained with abundant calcite veinlets
87. 009R - Marble, light grey and very fine grained with a slight iron staining
88. 010R - Diorite, unaltered
89. 011R - Diorite, phenocrysts of biotite, augite with the plagioclase altering to clays
90. 012R - Limestone, coarse grained and slight alteration
91. 013R - Limestone, very fine grained with calcite veining and iron staining
92. 014R - Rhyolite tuff, highly altered; phenocrysts of quartz and sanadine
93. 015R - Diorite alteration of the hornblende and augite