

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

**Analytical results and sample locality map
of stream-sediment, heavy-mineral-concentrate, and rock samples
from the Warm Springs Wilderness Study Area (AZ-020-028/029),
Mohave County, Arizona**

By

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Open-File Report 90-296

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1990

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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 resource potential. 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 Warm Springs Wilderness Study Area (AZ-020-028/029), Mohave County, Arizona.

INTRODUCTION

In February and April of 1987, the U.S. Geological Survey conducted a reconnaissance geochemical survey of the Warm Springs Wilderness Study Area, Mohave County, Arizona.

The Warm Springs Wilderness Study Area (WSA) comprises about 150.5 mi² (389.7 km², 96,000 acres) in the southern part of the Black Mountains in southwestern Mohave County, Arizona. The Warm Springs WSA is 15 mi southwest of Kingman, one mile southeast of Oatman, and one mile west of Yucca, Arizona (fig. 1). A paved road extending from Interstate Highway 40 to Oatman provides access to the northern and northwestern parts of the WSA. Unimproved roads accessible from Oatman and Yucca provide access to the rest of the area. Topographic features include dissected mesas with steep sides. Elevations range from 4,360 ft near Oatman to 1,000 ft near the southern boundary.

The WSA is underlain by Precambrian granite, gneiss, and schist that host pegmatite dikes and quartz veins and crop out in the northeastern part of the area. Throughout the rest of the WSA, the Precambrian rocks are extensively overlain by thick mid-Tertiary and Quaternary volcanic sequences (Great Basin GEM joint venture, 1983).

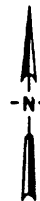
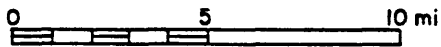
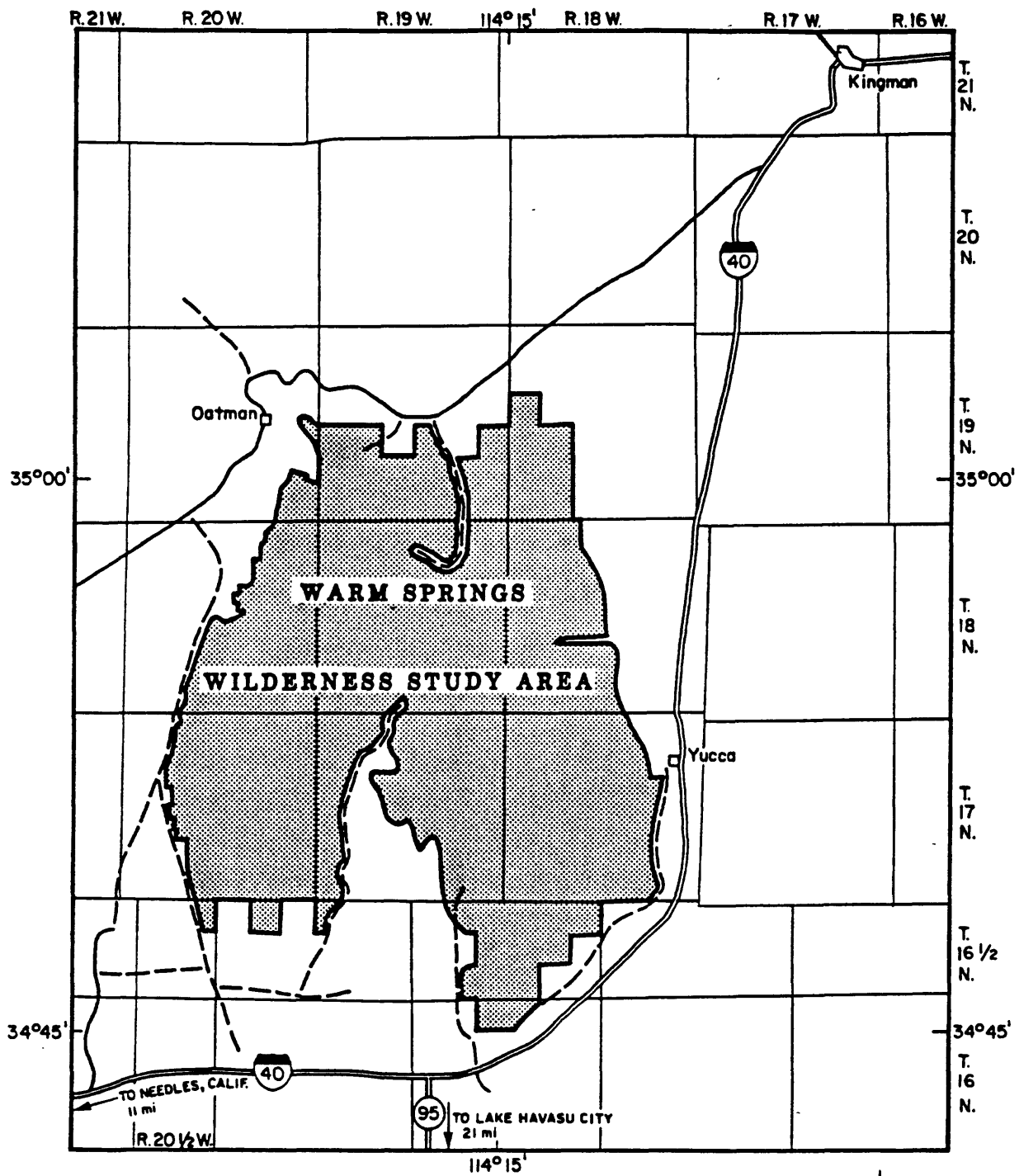
In the northwestern corner of the WSA, the Miocene volcanic formations are the Oatman Latite, Gold Road Latite, and an unnamed olivine basalt (Durning and Buchanan, 1984). These formations are exposed along a steep escarpment of Black Mesa adjacent to the Oatman district. Olivine basalt caps the mesas throughout the study area.

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.

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.



EXPLANATION

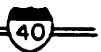



-  INTERSTATE HIGHWAY
-  STATE HIGHWAY
-  IMPROVED ROAD
-  UNIMPROVED ROAD

Figure 1.--Index map of the Warm Springs Wilderness Study Area, Mohave County, Arizona

Sample Collection

Heavy-mineral-concentrate and stream-sediment samples were collected at 151 sites (plate 1). Rock samples were collected at 70 sites. Sampling density was about one sample site per 1.0 mi² for the stream sediments and heavy-mineral concentrates. The area of the drainage basins sampled ranged from 0.2 mi² to 2.0 mi².

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 various types of occurrences in the vicinity of the plotted site location. Descriptions of rock samples are 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.

Samples that had been panned in the field were air dried and sieved to -35 mesh; bromoform (specific gravity 2.85) was used to remove the remaining quartz and feldspar. The resultant heavy-mineral sample was separated into three fractions using a large electromagnet by placing the sample in contact with the face of the magnet (in this case a modified Frantz Isodynamic Separator). The most magnetic material (removed at a setting of 0.25 ampere), primarily magnetite, was not analyzed. The second fraction (removed at a setting of 1.75 ampere), largely ferromagnesian silicates and iron oxides, was saved for archival storage. The third fraction (the nonmagnetic 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 mineralogic 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 Warm Springs Wilderness Study Area are listed in tables 3, 4, and 5.

Chemical methods

Rock and stream-sediment samples were also analyzed by atomic absorption emission spectroscopy (AA). Samples were analyzed for arsenic (As), antimony (Sb), bismuth (Bi), cadmium (Cd), and zinc (Zn) using AA, for gold (Au) using flame AA, and for mercury (Hg) using cold vapor AA. Limits of determination and references are listed in table 2.

Analytical results using these methods 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 stream-sediment, heavy-mineral-concentrate, and rock samples, 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 map (plate 1). (For table 5, the 87 was removed from the beginning of each sample number.) Columns in which the element headings show the letter "s" below the element symbol are emission spectrographic analyses; "aa" indicates atomic absorption 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 tables 1 and 2. For emission spectrographic analyses and AA analyses of As, Sb, Bi, Cd, and Zn, a "less

than" symbol (<) entered in the tables in front of the lower limit of determination indicates that an element was observed but was below the lowest reporting value. For AA analyses of Au and Hg, an "N" entered in the tables indicates that the element was below the lowest reporting value. 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) may 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.

ACKNOWLEDGMENTS

A number of our colleagues also participated in the collection, preparation, and analyses of these samples: collection, Janet Jones, Sigurd Jaunarajs, and Tracey Delaney; preparation, Ted Sparks and John Unruh; and analyses, Bryan Anderson and Olga Erlich.

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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 emission spectroscopy]

Element or constituent determined	Sample type	Method	Determination limit (micrograms/gram or ppm)	Reference
Gold (Au)	rock/str-sed	AA	.1	<u>Modification of Thompson and others, 1968.</u>
Mercury (Hg)	rock/str-sed	AA	0.02	Koirtyohann and Khalil, 1976.
Arsenic (As)	rock/str-sed	AA	10	O'Leary and Viets, 1986.
Antimony (Sb)	rock/str-sed	AA	2	
Zinc (Zn)	rock/str-sed	AA	5	
Bismuth (Bi)	rock/str-sed	AA	1	
Cadmium (Cd)	rock/str-sed	AA	0.1	

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.

[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
87WS002S	34 52 34	114 20 22	3	1.5	1.0	.7	700	N	N	N	30	700
87WS003S	34 52 33	114 20 21	5	2.0	1.5	>1.0	700	N	N	N	50	700
87WS004S	34 53 9	114 11 16	5	1.5	1.0	1.0	500	N	N	N	30	700
87WS005S	34 53 25	114 11 19	15	3.0	2.0	>1.0	2,000	N	N	N	<10	500
87WS006S	34 53 48	114 11 46	10	5.0	3.0	>1.0	1,500	N	N	N	10	700
87WS007S	34 54 10	114 12 17	10	3.0	2.0	>1.0	1,000	N	N	N	10	300
87WS008S	34 54 36	114 12 7	7	2.0	1.5	1.0	1,000	N	N	N	20	700
87WS009S	34 54 58	114 12 35	7	2.0	1.5	1.0	1,000	N	N	N	15	500
87WS010S	34 55 29	114 13 6	10	3.0	2.0	>1.0	1,500	N	N	N	20	500
87WS011S	34 55 45	114 13 25	10	5.0	2.0	>1.0	1,500	N	N	N	30	300
87WS012S	34 56 6	114 13 9	10	5.0	2.0	>1.0	1,000	N	N	N	20	700
87WS013S	34 56 48	114 14 7	5	2.0	1.5	1.0	700	N	N	N	15	500
87WS014S	34 56 13	114 14 58	7	5.0	2.0	>1.0	1,000	N	N	N	20	500
87WS015S	34 56 7	114 15 46	7	3.0	3.0	1.0	700	N	N	N	10	500
87WS016S	34 56 8	114 16 13	10	5.0	5.0	>1.0	1,000	N	N	N	15	500
87WS017S	34 57 12	114 17 36	7	3.0	2.0	>1.0	700	N	N	N	20	1,000
87WS018S	34 57 18	114 17 11	7	3.0	3.0	>1.0	1,000	N	N	N	<10	700
87WS019S	34 56 57	114 16 21	10	2.0	2.0	>1.0	1,000	N	N	N	10	300
87WS020S	34 57 47	114 15 15	7	3.0	3.0	1.0	1,000	N	N	N	10	1,000
87WS021S	34 58 37	114 16 49	10	7.0	3.0	>1.0	1,500	N	N	N	10	200
87WS022S	34 59 36	114 17 51	10	5.0	3.0	>1.0	1,000	N	N	N	<10	150
87WS023S	35 0 8	114 17 7	7	5.0	5.0	>1.0	1,500	N	N	N	10	200
87WS024S	35 0 38	114 17 3	10	5.0	3.0	>1.0	1,000	N	N	N	<10	150
87WS025S	35 0 49	114 18 25	7	5.0	2.0	>1.0	1,000	N	N	N	15	300
87WS026S	35 1 2	114 19 6	10	7.0	3.0	>1.0	1,500	N	N	N	10	300
87WS027S	35 0 55	114 19 34	5	1.0	1.0	.7	700	N	N	N	30	500
87WS028S	35 0 18	114 19 25	7	3.0	2.0	1.0	1,000	N	N	N	20	300
87WS029S	35 0 18	114 20 7	5	1.5	1.0	1.0	700	N	N	N	20	300
87WS030S	35 0 41	114 20 20	5	2.0	1.5	>1.0	700	N	N	N	30	700
87WS031S	35 0 45	114 20 24	7	1.5	1.0	>1.0	1,000	N	N	N	15	500
87WS032S	35 0 5	114 21 49	5	3.0	2.0	1.0	1,000	N	N	N	15	700
87WS033S	34 57 33	114 20 7	5	3.0	3.0	>1.0	1,500	N	N	N	10	1,000
87WS034S	34 57 10	114 20 10	7	5.0	2.0	>1.0	1,500	N	N	N	50	700
87WS035S	34 57 13	114 20 27	7	5.0	3.0	>1.0	1,000	N	N	N	50	500
87WS036S	34 57 13	114 20 54	5	7.0	2.0	1.0	1,500	N	N	N	20	700
87WS037S	34 57 27	114 20 57	5	7.0	3.0	>1.0	1,000	N	N	N	20	500
87WS038S	34 58 15	114 21 21	5	7.0	1.5	1.0	1,000	N	N	N	15	1,000
87WS039S	34 58 19	114 21 24	7	7.0	2.0	>1.0	1,000	N	N	N	10	700
87WS040S	34 59 7	114 20 0	5	5.0	3.0	1.0	700	N	N	N	20	700
87WS041S	34 59 11	114 20 24	5	2.0	1.0	1.0	700	N	N	N	20	700
87WS042S	34 58 44	114 18 38	7	5.0	2.0	>1.0	700	N	N	N	15	300
87WS043S	34 57 57	114 17 37	5	5.0	3.0	.7	700	N	N	N	<10	100
87WS044S	34 57 55	114 18 20	10	7.0	3.0	>1.0	1,000	N	N	N	10	500
87WS045S	34 57 52	114 19 4	10	7.0	5.0	>1.0	1,500	N	N	N	15	700
87WS046S	34 57 54	114 19 3	7	5.0	2.0	1.0	1,000	N	N	N	20	200

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
87WS002S	2.0	N	N	10	50	15	100	N	<20	20	30	N	10	N
87WS003S	1.5	N	N	20	100	70	70	N	N	50	30	N	15	N
87WS004S	1.5	N	N	10	100	50	70	N	N	30	20	N	10	N
87WS005S	1.0	N	N	70	150	70	300	N	N	150	30	N	50	10
87WS006S	1.0	N	N	50	200	100	150	N	<20	100	30	N	30	<10
87WS007S	1.0	N	N	30	150	70	30	N	N	70	20	N	15	N
87WS008S	1.5	N	N	20	70	50	100	N	<20	30	20	N	20	N
87WS009S	1.0	N	N	30	70	30	30	N	N	30	10	N	20	N
87WS010S	1.5	N	N	50	100	50	150	N	<20	70	15	N	30	<10
87WS011S	1.0	N	N	50	200	70	50	N	N	100	20	N	30	N
87WS012S	1.0	N	N	30	150	50	30	N	N	70	20	N	20	N
87WS013S	1.5	N	N	20	50	10	30	N	N	30	10	N	7	N
87WS014S	1.0	N	N	30	100	50	200	N	N	50	10	N	20	N
87WS015S	1.0	N	N	30	100	50	<20	N	N	50	15	N	15	N
87WS016S	1.0	N	N	50	150	70	<20	N	N	100	15	N	30	N
87WS017S	2.0	N	N	20	150	70	50	N	<20	70	15	N	15	N
87WS018S	1.0	N	N	30	150	70	30	N	N	70	30	N	20	N
87WS019S	1.0	N	N	50	200	50	200	N	N	150	<10	N	30	<10
87WS020S	1.5	N	N	30	150	50	30	N	N	50	15	N	20	N
87WS021S	<1.0	N	N	70	100	100	<20	N	N	70	10	N	50	<10
87WS022S	<1.0	N	N	70	100	100	N	N	N	70	<10	N	30	N
87WS023S	<1.0	N	N	50	100	70	N	N	N	50	<10	N	30	N
87WS024S	<1.0	N	N	50	100	100	N	N	N	50	10	N	30	N
87WS025S	1.0	N	N	50	150	70	30	N	N	70	10	N	30	N
87WS026S	<1.0	N	N	70	100	70	20	N	N	100	<10	N	30	N
87WS027S	1.0	N	N	15	30	10	30	N	N	15	20	N	7	N
87WS028S	<1.0	N	N	30	100	50	70	N	N	50	<10	N	20	N
87WS029S	1.0	N	N	10	10	10	30	N	N	20	30	N	5	N
87WS030S	1.0	N	N	15	20	15	50	N	<20	20	15	N	7	N
87WS031S	<1.0	N	N	30	50	20	30	N	<20	30	20	N	10	N
87WS032S	<1.0	N	N	50	100	30	100	N	N	50	15	N	10	N
87WS033S	<1.0	N	N	50	30	50	70	N	<20	30	20	N	20	N
87WS034S	<1.0	N	N	30	70	50	30	N	N	30	10	N	15	N
87WS035S	<1.0	N	N	30	50	50	20	N	N	70	15	N	10	N
87WS036S	<1.0	N	N	30	100	50	20	N	N	50	15	N	15	N
87WS037S	<1.0	N	N	50	70	70	<20	N	N	70	15	N	20	N
87WS038S	<1.0	N	N	30	100	30	20	N	N	50	30	N	15	N
87WS039S	<1.0	N	N	50	150	50	30	N	N	70	20	N	20	N
87WS040S	<1.0	N	N	20	50	30	50	N	<20	30	20	N	10	N
87WS041S	<1.0	N	N	20	20	20	50	N	<20	20	50	N	10	N
87WS042S	<1.0	N	N	50	100	70	<20	N	N	70	15	N	20	N
87WS043S	<1.0	N	N	30	70	50	N	N	N	70	<10	N	15	N
87WS044S	<1.0	N	N	50	100	100	70	N	N	100	10	N	20	N
87WS045S	<1.0	N	N	50	150	100	50	N	N	100	15	N	30	N
87WS046S	<1.0	N	N	50	70	50	20	N	N	100	<10	N	15	N

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
87ws002s	150	70	N	50	N	700	N	N	.04	N	N	.2	N	15
87ws003s	200	100	N	50	N	500	N	N	.02	N	N	.1	N	15
87ws004s	300	70	N	30	N	500	N	N	.02	N	N	.2	N	15
87ws005s	300	300	N	100	N	>1,000	N	N	N	N	N	.1	N	25
87ws006s	700	200	N	150	N	300	N	N	.02	N	N	.1	N	15
87ws007s	500	200	N	30	N	700	N	N	N	N	N	.1	N	15
87ws008s	300	100	N	50	N	1,000	N	N	N	N	N	.1	N	20
87ws009s	200	150	N	50	N	300	N	N	N	N	N	.1	N	20
87ws010s	700	200	N	50	N	500	N	N	N	N	N	.1	N	20
87ws011s	500	200	N	30	N	200	N	N	N	<10	N	.1	N	25
87ws012s	1,000	200	N	30	N	200	N	N	.02	N	N	.2	N	20
87ws013s	700	100	N	30	N	200	N	N	N	20	N	.1	N	20
87ws014s	300	150	N	20	N	200	N	N	N	N	N	.2	N	25
87ws015s	300	100	N	30	N	100	N	N	.02	N	N	.2	N	30
87ws016s	500	200	N	30	N	500	N	N	.02	<10	N	.2	N	25
87ws017s	700	100	N	30	N	300	N	N	.16	N	<1	.2	N	15
87ws018s	700	200	N	30	N	300	N	N	.08	<10	<1	.2	N	20
87ws019s	300	300	N	30	N	500	N	N	.06	N	1	.2	N	20
87ws020s	1,000	100	N	50	N	300	N	N	.04	N	<1	.2	N	20
87ws021s	200	300	N	30	N	500	N	3.20	.02	<10	N	.1	N	25
87ws022s	300	200	N	30	N	50	N	N	.02	N	N	.1	N	25
87ws023s	500	200	N	30	N	150	N	N	.02	N	N	.1	N	25
87ws024s	200	200	N	30	N	300	N	N	.02	N	N	.2	N	25
87ws025s	300	200	N	30	N	300	N	N	.06	<10	N	.2	N	20
87ws026s	700	200	N	30	N	200	N	N	.04	<10	N	.1	N	30
87ws027s	300	100	N	20	N	1,000	N	N	.04	N	N	.2	N	10
87ws028s	700	150	N	20	N	200	N	N	.02	N	N	.2	N	20
87ws029s	500	150	N	20	N	200	N	N	.06	<10	N	.1	N	10
87ws030s	700	150	N	30	N	1,000	N	N	.06	<10	N	.1	N	5
87ws031s	300	200	N	30	N	700	N	N	.14	N	N	.1	N	20
87ws032s	700	150	N	20	N	200	N	N	.08	50	N	.1	2	15
87ws033s	1,000	150	N	30	N	300	N	N	.02	<10	N	.2	N	25
87ws034s	700	200	N	20	N	300	N	N	.04	<10	N	.2	N	25
87ws035s	200	200	N	20	N	300	N	N	.02	<10	N	.1	N	15
87ws036s	300	150	N	30	N	200	N	N	.04	<10	N	.2	N	20
87ws037s	200	200	N	30	N	700	N	N	.04	<10	N	.2	N	20
87ws038s	500	150	N	30	N	300	N	N	.02	<10	N	.2	N	15
87ws039s	300	200	N	30	N	300	N	N	.02	N	N	.2	N	20
87ws040s	300	150	N	50	N	500	N	N	N	N	N	.2	N	15
87ws041s	500	150	N	30	N	500	N	3.00	.02	N	N	.2	N	15
87ws042s	500	200	N	30	N	200	N	N	.02	N	N	.1	N	20
87ws043s	500	150	N	15	N	100	N	N	N	N	N	.1	N	20
87ws044s	500	200	N	30	N	200	N	N	.02	N	N	.1	N	25
87ws045s	700	300	N	30	<200	300	N	N	.02	N	<1	.2	N	25
87ws046s	200	150	N	20	N	200	N	N	.02	N	<1	.2	N	20

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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
87WS047S	34 58 0	114 19 0	10	7.0	2.0	>1.0	1,500	N	N	N	10	300
87WS048S	34 58 47	114 22 50	5	2.0	1.5	.7	1,000	N	N	N	15	300
87WS049S	34 57 44	114 22 50	5	2.0	1.5	.7	700	N	N	N	<10	300
87WS050S	34 56 10	114 24 50	7	3.0	3.0	1.0	1,000	N	N	N	10	500
87WS051S	34 55 45	114 23 57	5	1.5	1.5	.7	700	N	N	N	<10	500
87WS052S	34 56 49	114 23 48	5	2.0	2.0	.7	700	N	<200	N	10	500
87WS053S	34 56 42	114 23 26	5	1.5	1.0	1.0	700	N	N	N	10	500
87WS054S	34 55 54	114 22 54	5	1.5	1.5	1.0	1,000	N	N	N	10	1,000
87WS055S	34 56 0	114 22 53	5	1.5	1.5	1.0	700	N	N	N	10	700
87WS056S	34 55 34	114 21 56	7	1.5	1.0	>1.0	1,000	N	N	N	10	500
87WS057S	34 55 37	114 21 53	3	1.5	1.5	.5	500	N	N	N	20	300
87WS058S	34 54 49	114 25 6	10	1.5	1.5	>1.0	1,000	N	200	N	30	700
87WS059S	34 54 47	114 23 47	5	1.0	1.5	.7	500	N	<200	N	15	500
87WS060S	34 54 3	114 24 24	5	1.0	2.0	.5	500	N	N	N	15	700
87WS061S	34 54 5	114 22 47	3	1.5	1.5	.5	500	N	N	N	15	700
87WS062S	34 53 57	114 22 39	3	1.5	1.0	.7	300	N	N	N	<10	300
87WS063S	34 53 41	114 22 59	3	1.5	1.0	.7	300	N	N	N	20	300
87WS064S	34 53 9	114 23 43	5	2.0	2.0	1.0	1,000	N	N	N	20	500
87WS065S	34 52 58	114 26 0	7	2.0	1.5	>1.0	1,500	N	N	N	50	300
87WS066S	34 52 54	114 25 58	5	2.0	2.0	1.0	1,000	N	N	N	10	1,000
87WS067S	34 52 3	114 23 17	7	3.0	1.5	>1.0	1,500	N	N	N	10	500
87WS068S	34 52 0	114 22 43	7	3.0	2.0	1.0	1,500	N	N	N	10	700
87WS069S	34 51 26	114 22 41	7	2.0	2.0	1.0	1,500	N	N	N	20	1,000
87WS070S	34 51 2	114 23 24	10	1.5	1.0	>1.0	1,500	N	N	N	30	500
87WS071S	34 50 33	114 24 7	5	1.5	1.5	1.0	700	N	N	N	20	700
87WS072S	34 51 2	114 24 57	5	1.0	1.5	1.0	500	N	N	N	20	700
87WS073S	34 51 33	114 21 3	7	1.5	1.0	1.0	1,000	N	N	N	10	500
87WS074S	34 52 38	114 20 55	10	2.0	1.0	>1.0	1,000	N	N	N	20	500
87WS075S	34 53 15	114 20 11	10	3.0	2.0	>1.0	1,000	N	N	N	20	1,000
87WS076S	34 53 2	114 20 29	5	2.0	2.0	1.0	1,000	N	N	N	15	1,000
87WS077S	34 53 8	114 19 11	5	1.5	1.5	1.0	700	N	N	N	10	1,000
87WS078S	34 53 28	114 18 48	7	3.0	3.0	>1.0	1,000	N	N	N	15	700
87WS079S	34 54 41	114 18 12	5	3.0	2.0	.7	700	N	N	N	20	500
87WS080S	34 55 14	114 19 29	20	5.0	1.0	>1.0	2,000	N	N	N	<10	300
87WS081S	34 55 56	114 20 19	10	3.0	2.0	>1.0	1,500	N	N	N	15	500
87WS082S	34 53 31	114 18 7	7	7.0	3.0	>1.0	1,000	N	N	N	20	300
87WS083S	34 53 13	114 17 8	7	3.0	2.0	>1.0	1,000	N	N	N	30	300
87WS084S	34 53 33	114 17 15	7	5.0	3.0	>1.0	1,000	N	N	N	20	700
87WS085S	34 53 57	114 16 9	10	7.0	2.0	>1.0	1,000	N	N	N	10	200
87WS086S	34 54 16	114 16 30	7	5.0	3.0	1.0	1,000	N	N	N	30	700
87WS087S	34 54 19	114 16 26	5	3.0	2.0	1.0	1,000	N	N	N	30	500
87WS088S	34 55 3	114 16 56	7	5.0	3.0	>1.0	1,500	N	N	N	20	1,000
87WS089S	34 54 23	114 14 38	10	7.0	3.0	>1.0	1,000	N	N	N	10	200
87WS090S	34 53 9	114 15 54	10	5.0	2.0	>1.0	2,000	N	N	N	30	700
87WS091S	34 53 24	114 15 41	10	7.0	3.0	>1.0	1,500	N	N	N	50	500

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
87WS047S	<1.0	N	N	50	150	70	30	N	N	70	<10	N	30	N
87WS048S	1.5	N	N	30	70	20	20	N	N	50	20	N	15	N
87WS049S	1.5	N	N	20	70	20	100	N	N	30	15	N	15	N
87WS050S	1.5	N	N	30	100	30	30	N	N	30	15	N	20	N
87WS051S	1.5	N	N	20	50	15	30	N	N	20	15	<100	7	N
87WS052S	2.0	N	N	20	30	30	70	N	N	20	15	<100	10	N
87WS053S	1.5	N	N	30	100	30	30	N	N	50	15	N	7	N
87WS054S	1.0	N	N	30	50	30	50	N	N	20	20	N	15	20
87WS055S	1.0	N	N	20	70	20	30	N	N	20	15	N	7	N
87WS056S	1.0	N	N	50	100	50	150	N	<20	30	15	N	15	N
87WS057S	1.0	N	N	10	70	20	20	N	N	15	10	N	10	N
87WS058S	1.0	N	N	50	150	70	30	N	N	70	15	N	20	N
87WS059S	1.0	N	N	15	100	20	30	N	N	20	15	N	7	N
87WS060S	1.0	N	N	10	50	15	20	N	N	20	10	N	7	N
87WS061S	1.0	N	N	15	50	20	50	N	N	15	15	N	7	N
87WS062S	1.0	N	N	15	50	15	30	N	N	15	15	N	7	N
87WS063S	1.0	N	N	15	50	20	70	N	N	20	10	N	7	N
87WS064S	1.5	N	N	20	100	50	200	N	N	30	20	N	20	N
87WS065S	1.0	N	N	50	70	50	100	N	<20	50	20	N	20	N
87WS066S	1.0	N	N	10	50	20	50	N	N	20	20	N	10	N
87WS067S	1.0	N	N	30	100	30	50	N	N	30	20	N	15	N
87WS068S	1.0	N	N	30	150	50	150	N	N	50	20	N	20	N
87WS069S	1.0	N	N	20	200	20	100	N	N	50	20	N	20	N
87WS070S	<1.0	N	N	50	100	30	20	N	N	50	10	N	15	N
87WS071S	<1.0	N	N	15	100	15	20	N	N	15	15	N	15	N
87WS072S	<1.0	N	N	7	70	15	30	N	N	10	15	N	7	N
87WS073S	2.0	N	N	20	100	20	100	N	<20	30	20	N	15	N
87WS074S	1.5	N	N	30	100	50	200	N	<20	50	20	N	20	N
87WS075S	1.0	N	N	20	100	50	150	N	N	50	20	N	20	N
87WS076S	1.5	N	N	10	70	15	30	N	N	20	20	N	15	N
87WS077S	1.0	N	N	15	50	15	30	N	N	20	30	N	10	N
87WS078S	1.0	N	N	50	100	70	50	N	N	30	15	N	20	N
87WS079S	1.0	N	N	20	50	20	50	N	N	20	15	N	10	N
87WS080S	1.0	N	N	70	150	50	200	N	N	70	10	N	30	N
87WS081S	1.5	N	N	30	100	50	500	N	N	70	20	N	30	N
87WS082S	<1.0	N	N	50	150	70	20	N	N	100	10	N	30	N
87WS083S	1.0	N	N	30	100	70	30	N	N	70	15	N	30	N
87WS084S	<1.0	N	N	50	70	70	30	N	N	100	15	N	30	N
87WS085S	<1.0	N	N	70	100	100	<20	N	N	150	<10	N	50	N
87WS086S	1.0	N	N	30	70	70	50	N	N	70	15	N	20	N
87WS087S	<1.0	N	N	20	70	50	30	N	N	50	10	N	20	N
87WS088S	1.0	N	N	30	70	70	50	N	N	50	15	N	20	N
87WS089S	<1.0	N	N	50	100	100	30	N	<20	150	<10	N	50	N
87WS090S	1.5	N	N	70	100	70	30	N	N	70	10	N	30	N
87WS091S	<1.0	N	N	70	100	100	30	N	N	100	10	N	30	N

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
87WS047S	300	200	N	30	N	150	N	N	.02	<10	N	.2	N	25
87WS048S	300	70	N	20	N	500	N	N	.10	<10	N	.1	2	20
87WS049S	500	100	N	30	N	300	N	N	.08	20	N	.1	2	20
87WS050S	500	150	N	20	N	500	N	N	.02	<10	N	.1	<2	20
87WS051S	1,000	100	N	15	N	200	N	N	N	150	N	.1	4	15
87WS052S	700	70	N	30	N	300	N	N	.10	170	N	.1	12	20
87WS053S	300	100	N	10	<200	200	N	N	.10	60	N	.1	6	25
87WS054S	700	70	N	30	N	500	N	N	.04	210	N	.1	4	15
87WS055S	500	70	N	15	N	300	N	N	.04	200	N	.1	12	15
87WS056S	500	150	N	20	200	700	N	N	.04	400	N	.1	6	25
87WS057S	300	70	N	30	N	300	N	N	.04	160	N	.1	2	20
87WS058S	500	150	N	20	200	500	N	N	.10	330	N	.1	8	20
87WS059S	700	100	N	20	<200	200	N	N	.08	390	N	.1	8	15
87WS060S	700	70	N	20	N	500	N	N	.04	530	N	.1	8	15
87WS061S	1,000	70	N	20	N	200	N	N	.02	150	N	.1	6	15
87WS062S	500	70	N	20	<200	200	N	N	.04	10	N	.1	2	10
87WS063S	500	70	N	20	N	300	N	N	.04	<10	N	.1	2	15
87WS064S	500	100	N	50	N	1,000	N	N	.02	N	N	.1	2	20
87WS065S	200	200	N	30	<200	500	N	N	.02	40	N	.1	4	25
87WS066S	1,000	100	N	50	N	200	N	N	N	60	N	.1	4	10
87WS067S	500	150	N	30	<200	300	N	N	.02	N	N	.1	2	20
87WS068S	700	100	N	50	N	300	N	N	.02	N	N	.1	2	20
87WS069S	500	150	N	30	N	1,000	N	N	.02	N	N	.1	<2	15
87WS070S	200	200	N	20	200	1,000	N	N	.02	N	N	<.1	<2	20
87WS071S	300	70	N	20	N	700	N	N	N	N	N	.1	<2	10
87WS072S	200	70	N	20	N	200	<100	N	N	N	N	.1	<2	15
87WS073S	300	150	N	50	N	500	N	N	.02	N	N	.1	N	20
87WS074S	300	200	N	70	N	1,000	N	N	.02	N	N	<.1	N	20
87WS075S	1,000	200	N	50	<200	500	N	N	--	N	N	<.1	N	10
87WS076S	1,500	50	N	20	N	500	N	N	.02	N	N	.1	N	10
87WS077S	1,500	150	N	20	N	300	N	N	.04	N	N	.1	N	15
87WS078S	500	200	N	30	<200	500	N	N	N	N	N	.1	N	20
87WS079S	300	70	N	20	N	200	N	N	.02	N	N	.2	N	30
87WS080S	300	700	N	30	200	700	N	N	.04	N	N	.2	<2	20
87WS081S	500	1,000	N	50	<200	>1,000	N	N	.06	20	N	.1	2	25
87WS082S	500	1,000	N	20	N	300	N	N	.02	N	N	.1	N	30
87WS083S	500	700	N	30	N	1,000	N	N	.02	N	N	.1	N	20
87WS084S	500	700	N	30	N	200	N	N	.02	N	N	.1	N	25
87WS085S	500	700	N	20	N	200	N	N	N	N	N	.1	N	30
87WS086S	700	700	N	50	N	300	N	N	.04	N	N	.2	N	30
87WS087S	500	700	N	30	N	300	N	N	.02	N	N	.2	N	25
87WS088S	700	1,000	N	20	N	700	N	N	.02	N	N	.2	N	25
87WS089S	300	1,000	N	100	N	500	N	N	.02	N	N	.1	N	25
87WS090S	700	1,000	N	30	<200	500	N	N	N	N	N	.2	N	20
87WS091S	500	1,000	N	30	<200	300	N	N	.02	N	N	.2	N	20

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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
87WS092S	34 53 33	114 15 18	7	5.0	2.0	>1.0	1,500	N	N	N	10	300
87WS093S	34 53 23	114 15 9	5	3.0	1.5	1.0	1,000	N	N	N	10	300
87WS094S	34 52 50	114 14 9	7	5.0	3.0	>1.0	2,000	N	N	N	10	700
87WS095S	34 52 55	114 14 10	7	5.0	3.0	>1.0	1,500	N	N	N	30	700
87WS096S	34 51 33	114 10 16	10	3.0	2.0	>1.0	1,000	N	N	N	10	500
87WS097S	34 50 54	114 10 9	7	2.0	2.0	>1.0	1,000	N	N	N	20	500
87WS098S	34 53 10	114 18 39	10	3.0	3.0	>1.0	1,500	N	N	N	20	300
87WS099S	34 53 12	114 18 19	5	2.0	1.5	1.0	700	N	N	N	20	1,500
87WS100S	34 50 10	114 12 0	5	3.0	2.0	>1.0	700	N	N	N	20	500
87WS101S	34 50 39	114 12 3	5	3.0	2.0	>1.0	1,000	N	N	N	50	500
87WS102S	34 50 35	114 11 52	5	2.0	2.0	1.0	700	N	N	N	20	500
87WS103S	34 49 55	114 11 48	5	2.0	1.5	.5	500	N	N	N	10	300
87WS104S	34 49 26	114 12 23	7	1.5	1.0	>1.0	700	N	N	N	20	300
87WS105S	34 49 54	114 13 37	7	5.0	2.0	>1.0	1,500	N	N	N	10	700
87WS106S	34 50 7	114 13 38	15	1.5	1.5	>1.0	2,000	N	N	N	<10	500
87WS107S	34 50 11	114 13 31	7	3.0	3.0	>1.0	1,000	N	N	N	<10	1,000
87WS108S	34 50 42	114 13 23	5	2.0	2.0	1.0	700	N	N	N	<10	700
87WS109S	34 50 45	114 13 4	5	2.0	2.0	1.0	700	N	N	N	10	700
87WS110S	34 48 23	114 13 27	15	3.0	1.5	>1.0	1,500	N	N	N	<10	200
87WS111S	34 48 25	114 13 30	5	1.5	1.5	1.0	1,000	N	N	N	20	500
87WS112S	34 48 40	114 14 15	5	1.5	1.5	1.0	700	N	N	N	30	700
87WS113S	34 48 4	114 12 48	3	1.5	2.0	.7	700	N	N	N	30	1,000
87WS114S	34 48 17	114 12 53	7	1.5	1.5	>1.0	1,000	N	N	N	50	500
87WS115S	34 48 19	114 12 52	5	1.5	1.5	>1.0	1,000	N	N	N	20	700
87WS116S	34 48 34	114 10 35	5	1.5	1.0	>1.0	1,000	N	N	N	20	500
87WS117S	34 49 12	114 11 2	3	1.0	1.0	1.0	500	N	N	N	20	300
87WS118S	34 49 22	114 10 58	5	1.0	1.0	1.0	700	N	N	N	20	500
87WS119S	34 46 47	114 12 54	5	2.0	1.5	.7	700	N	N	N	15	500
87WS120S	34 47 8	114 13 48	10	1.0	1.0	>1.0	1,500	N	N	N	10	200
87WS121S	34 46 29	114 13 48	3	2.0	3.0	1.0	700	N	N	N	20	500
87WS122S	34 47 26	114 14 40	3	2.0	2.0	1.0	700	N	N	N	15	200
87WS123S	34 48 14	114 14 59	5	2.0	3.0	>1.0	700	N	N	N	10	500
87WS124S	34 48 16	114 14 56	7	2.0	1.5	>1.0	2,000	N	N	N	20	300
87WS125S	34 49 53	114 15 3	5	2.0	1.5	1.0	1,000	N	N	N	30	700
87WS126S	34 49 54	114 15 9	5	2.0	2.0	>1.0	1,000	N	N	N	50	1,000
87WS127S	34 46 8	114 15 56	5	2.0	3.0	>1.0	700	N	N	N	30	500
87WS128S	34 47 5	114 15 27	5	2.0	2.0	1.0	700	N	N	N	20	500
87WS129S	34 47 7	114 15 33	7	3.0	3.0	>1.0	1,500	N	N	N	10	500
87WS130S	34 59 55	114 22 49	5	5.0	2.0	>1.0	1,000	N	N	N	<10	1,000
87WS131S	34 56 10	114 23 18	7	3.0	1.5	>1.0	700	N	N	N	10	700
87WS132S	34 51 48	114 18 52	3	1.5	1.5	.5	500	N	N	N	10	700
87WS133S	34 51 23	114 18 31	5	2.0	1.5	>1.0	1,500	N	N	N	10	1,000
87WS134S	34 51 7	114 17 59	7	1.0	2.0	>1.0	2,000	N	N	N	30	1,000
87WS135S	34 51 7	114 17 15	5	2.0	1.5	1.0	1,000	N	N	N	20	500
87WS136S	34 50 52	114 16 35	10	1.5	1.0	>1.0	1,000	N	N	N	15	300

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
87WS092S	<1.0	N	N	70	500	100	20	N	N	150	<10	N	30	N
87WS093S	<1.0	N	N	30	50	50	<20	N	N	70	<10	N	20	N
87WS094S	<1.0	N	N	30	100	70	30	N	N	70	10	N	20	N
87WS095S	1.0	N	N	30	50	70	50	N	N	70	15	N	20	N
87WS096S	1.0	N	N	30	50	50	100	N	N	30	15	N	15	N
87WS097S	2.0	N	N	20	50	50	50	<5	<20	30	30	N	15	N
87WS098S	1.0	N	N	30	70	50	20	N	N	50	15	N	20	N
87WS099S	1.0	N	N	10	15	15	50	N	N	20	30	N	7	N
87WS100S	1.5	N	N	30	70	50	20	N	N	50	30	N	15	N
87WS101S	1.5	N	N	30	50	70	70	<5	N	50	20	N	15	N
87WS102S	1.5	N	N	30	50	50	50	<5	N	30	30	N	15	N
87WS103S	1.0	N	N	20	50	70	20	<5	N	20	<10	N	15	N
87WS104S	1.5	N	N	20	70	30	30	N	N	20	20	N	7	N
87WS105S	1.5	N	N	30	100	30	150	N	N	50	10	N	20	N
87WS106S	1.5	N	N	70	200	70	700	N	N	150	30	N	30	N
87WS107S	1.0	N	N	30	150	50	70	N	N	70	10	N	20	N
87WS108S	1.0	N	N	20	100	30	50	N	N	50	15	N	20	N
87WS109S	1.0	N	N	20	70	50	50	N	<20	50	15	N	20	N
87WS110S	1.0	N	N	70	150	70	70	N	N	100	10	N	30	N
87WS111S	1.5	N	N	50	50	30	150	N	<20	15	20	N	15	N
87WS112S	2.0	N	N	10	50	30	50	<5	<20	15	30	N	10	N
87WS113S	2.0	N	N	20	50	50	20	N	N	15	30	N	15	N
87WS114S	2.0	N	N	30	70	50	20	<5	N	30	50	N	15	N
87WS115S	2.0	N	N	10	50	30	20	N	<20	20	30	N	10	N
87WS116S	2.0	N	N	15	50	30	70	N	<20	20	20	N	10	N
87WS117S	2.0	N	N	10	10	10	50	<5	<20	15	30	N	7	N
87WS118S	2.0	N	N	10	20	20	30	<5	N	30	30	N	7	N
87WS119S	2.0	N	N	20	70	30	30	N	N	30	20	N	10	N
87WS120S	2.0	N	N	50	50	50	20	N	<20	50	15	N	20	N
87WS121S	1.5	N	N	20	70	20	50	N	N	50	15	N	15	N
87WS122S	1.5	N	N	20	70	30	30	N	N	30	10	N	15	N
87WS123S	2.0	N	N	20	70	50	150	N	N	20	30	N	15	N
87WS124S	2.0	N	N	30	100	50	150	N	N	20	30	N	20	N
87WS125S	2.0	N	N	20	70	30	50	<5	N	30	20	N	10	N
87WS126S	2.0	N	N	20	70	50	50	N	<20	30	20	N	10	N
87WS127S	1.0	N	N	20	50	50	50	N	<20	20	20	N	15	N
87WS128S	1.5	N	N	20	70	50	30	N	N	30	20	N	10	N
87WS129S	2.0	N	N	50	100	70	50	N	N	70	30	N	20	N
87WS130S	N	N	N	30	70	50	100	N	N	50	30	N	15	N
87WS131S	N	N	N	50	70	50	<20	N	N	70	20	N	10	N
87WS132S	<1.0	N	N	20	10	15	20	N	N	20	10	N	5	N
87WS133S	N	N	N	30	100	50	100	N	N	50	15	N	15	N
87WS134S	<1.0	N	N	20	70	50	150	<5	20	20	30	N	15	N
87WS135S	N	N	N	20	70	30	150	<5	N	30	20	N	15	N
87WS136S	N	N	N	50	100	50	50	N	<20	100	20	N	20	N

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
87WS092S	300	1,000	N	30	<200	200	N	N	.02	N	N	.1	N	20
87WS093S	200	700	N	20	N	200	N	N	.04	N	N	.1	N	20
87WS094S	700	1,000	N	20	N	200	N	N	.02	N	N	.2	N	20
87WS095S	500	700	N	30	N	300	N	N	.02	N	N	.2	N	15
87WS096S	200	1,000	N	50	N	700	N	N	.04	N	N	.2	N	20
87WS097S	300	700	N	30	N	500	N	N	.02	N	N	.1	N	10
87WS098S	500	1,000	N	50	N	700	N	N	.04	N	N	.1	<2	20
87WS099S	700	500	N	20	N	300	N	N	.08	N	N	.1	<2	20
87WS100S	500	70	N	20	N	200	N	N	.02	N	N	.2	N	30
87WS101S	500	100	N	30	N	300	N	--	.02	--	--	--	--	--
87WS102S	300	100	N	20	N	500	N	N	.02	N	N	.2	N	25
87WS103S	200	70	N	20	N	200	N	N	.12	<10	N	.2	N	30
87WS104S	300	100	N	20	N	200	N	N	.02	N	N	.1	N	20
87WS105S	1,000	100	N	30	N	300	N	N	.02	<10	<1	.1	N	15
87WS106S	200	300	N	150	N	1,000	N	N	N	N	1	.1	N	45
87WS107S	1,000	100	N	30	N	300	N	N	N	N	N	.1	N	25
87WS108S	1,000	70	N	30	N	200	N	--	N	N	N	.1	N	25
87WS109S	1,000	70	N	20	N	300	N	N	N	N	N	.1	N	15
87WS110S	300	200	N	50	N	700	N	N	N	N	N	.1	N	35
87WS111S	300	100	N	30	N	500	N	N	N	N	N	.1	N	20
87WS112S	700	100	N	30	N	300	N	N	.02	N	1	.1	N	20
87WS113S	700	70	N	30	N	200	N	N	.02	<10	N	.2	N	20
87WS114S	700	100	N	30	N	200	N	N	.02	N	1	.2	N	25
87WS115S	300	50	N	20	N	200	N	--	.04	N	N	.2	N	10
87WS116S	150	70	N	50	N	700	N	--	.04	<10	N	.2	N	10
87WS117S	150	50	N	20	N	300	N	--	.04	N	N	.1	N	5
87WS118S	150	70	N	30	N	200	N	--	.04	N	1	.2	N	20
87WS119S	300	100	N	30	N	200	N	--	.04	N	N	.1	N	15
87WS120S	100	150	N	30	N	300	N	N	.06	N	N	.1	N	30
87WS121S	700	100	N	50	N	300	N	N	.02	<10	N	.1	N	15
87WS122S	700	100	N	20	N	300	N	N	.06	<10	N	.1	N	20
87WS123S	500	100	N	50	N	300	N	N	.08	N	N	.1	N	20
87WS124S	200	150	N	70	N	500	N	N	.06	<10	N	.1	N	15
87WS125S	700	150	N	20	N	150	N	N	.06	N	N	.1	N	15
87WS126S	700	150	N	30	N	500	N	N	.10	N	<1	.1	N	15
87WS127S	500	150	N	50	N	300	N	N	.04	<10	N	.1	N	10
87WS128S	500	100	N	20	N	200	N	N	.06	<10	N	.1	N	10
87WS129S	700	200	N	50	N	200	N	N	.06	N	N	.1	N	25
87WS130S	1,000	150	N	30	N	200	N	N	.10	N	N	N	N	65
87WS131S	300	150	N	15	<200	100	N	N	.13	240	N	.1	N	105
87WS132S	500	50	N	15	N	150	N	N	.08	N	N	.1	N	50
87WS133S	1,000	100	N	50	N	700	N	N	.02	N	N	<.1	N	45
87WS134S	500	100	N	100	N	>1,000	N	N	.04	N	N	.1	N	70
87WS135S	500	100	N	50	N	500	N	N	.08	N	N	.1	N	70
87WS136S	300	150	N	50	N	>1,000	N	N	.06	N	N	.1	N	105

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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
87WS137S	34 48 44	114 18 40	7	2.0	2.0	>1.0	2,000	N	N	N	10	1,000
87WS138S	34 49 17	114 18 49	10	1.5	1.0	>1.0	2,000	N	N	N	15	300
87WS139S	34 50 34	114 19 12	3	2.0	2.0	.3	500	N	N	N	50	300
87WS140S	34 50 17	114 19 11	7	1.5	1.0	>1.0	1,500	N	N	N	10	500
87WS141S	34 50 5	114 16 26	5	3.0	1.5	1.0	500	N	N	N	<10	300
87WS142S	34 49 39	114 16 23	5	2.0	1.5	1.0	700	N	N	N	<10	500
87WS143S	34 49 12	114 16 24	15	2.0	2.0	>1.0	3,000	N	N	N	<10	1,000
87WS144S	34 49 7	114 16 27	7	1.5	2.0	1.0	1,000	N	N	N	20	1,500
87WS145S	34 49 34	114 17 16	10	1.5	1.5	>1.0	1,500	N	N	N	15	1,000
87WS146S	34 48 30	114 17 54	10	1.5	1.0	>1.0	2,000	N	N	N	10	1,000
87WS147S	34 47 7	114 17 20	5	2.0	1.5	>1.0	1,500	N	N	N	50	1,000
87WS148S	34 47 13	114 17 44	5	3.0	2.0	1.0	500	N	N	N	20	500
87WS149S	34 46 31	114 17 42	7	2.0	1.0	>1.0	1,000	N	N	N	<10	300
87WS150S	34 45 47	114 17 32	10	1.0	1.5	>1.0	3,000	N	N	N	70	500
87WS151S	35 1 54	114 19 28	5	2.0	1.5	.7	1,000	N	N	N	50	700
87WS152S	35 2 11	114 20 19	5	2.0	1.0	1.0	700	N	N	N	10	500

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
87WS137S	N	N	N	20	100	30	70	N	N	50	20	N	15	N
87WS138S	N	N	N	30	100	50	150	N	<20	30	<10	N	20	N
87WS139S	N	N	N	15	20	30	20	N	N	20	30	N	7	N
87WS140S	N	N	N	20	100	30	100	<5	<20	30	20	N	20	N
87WS141S	N	N	N	15	30	20	20	N	N	20	15	N	7	N
87WS142S	N	N	N	20	20	20	50	N	N	30	10	N	10	N
87WS143S	N	N	N	30	50	50	150	N	N	20	20	N	20	N
87WS144S	1.0	N	N	10	10	20	70	N	N	20	20	N	5	N
87WS145S	N	N	N	30	15	30	50	<5	<20	20	20	N	15	N
87WS146S	N	N	N	30	50	30	70	<5	N	30	30	N	10	N
87WS147S	N	N	N	20	70	20	100	N	<20	30	10	N	15	N
87WS148S	<1.0	N	N	20	70	30	50	N	N	50	20	N	15	N
87WS149S	N	N	N	20	100	30	100	N	N	20	20	N	10	N
87WS150S	N	N	N	30	150	30	200	N	N	20	20	N	15	N
87WS151S	1.0	N	N	7	70	15	20	<5	N	15	10	N	7	N
87WS152S	<1.0	N	N	15	20	10	30	N	N	20	10	N	7	N

TABLE 3.--RESULTS OF ANALYSES OF STREAM-SEDIMENT SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
87WS137S	1,000	100	N	50	N	500	N	N	.14	N	N	.1	N	75
87WS138S	300	150	N	70	200	700	N	N	.14	N	N	.1	N	135
87WS139S	200	50	N	20	N	300	N	N	.02	N	N	.2	N	50
87WS140S	300	150	N	30	N	700	N	N	.04	N	N	.2	N	105
87WS141S	500	100	N	20	N	200	N	N	.12	N	N	.1	N	50
87WS142S	500	70	N	30	N	500	N	N	.08	N	N	.2	N	55
87WS143S	300	200	N	70	N	>1,000	N	N	.06	N	N	.2	N	90
87WS144S	500	100	N	30	N	200	N	N	.14	N	N	.2	N	55
87WS145S	200	150	N	70	N	>1,000	N	N	.02	N	N	.2	N	75
87WS146S	300	150	N	30	200	300	N	N	.10	N	N	.2	N	115
87WS147S	500	100	N	70	N	300	N	N	.02	N	N	.2	N	50
87WS148S	700	100	N	20	N	200	N	N	.04	N	N	.2	N	75
87WS149S	200	100	N	50	N	500	N	N	.14	N	N	.2	N	80
87WS150S	300	300	N	50	N	>1,000	N	N	.02	N	N	.1	N	115
87WS151S	200	70	N	30	N	500	N	N	.04	N	N	.1	N	50
87WS152S	200	100	N	20	N	300	N	N	.06	N	N	.1	N	75

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.

[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
87WS002H	34 52 34	114 20 22	1.0	.15	1.5	>2.00	150	N	N	N
87WS003H	34 52 33	114 20 21	.7	.10	1.0	1.50	100	N	N	N
87WS004H	34 53 9	114 11 16	1.5	.20	1.5	2.00	150	N	N	N
87WS005H	34 53 25	114 11 19	.7	.15	1.0	1.50	150	N	N	N
87WS006H	34 53 48	114 11 46	.5	.20	1.5	2.00	150	N	N	N
87WS007H	34 54 10	114 12 17	1.0	.30	1.0	1.00	100	N	N	N
87WS008H	34 54 36	114 12 7	.5	.10	1.0	1.00	100	N	N	N
87WS009H	34 54 58	114 12 35	.5	.15	2.0	.50	150	N	N	N
87WS010H	34 55 29	114 13 6	.3	.15	1.0	.70	100	N	N	N
87WS011H	34 55 45	114 13 25	1.0	.50	1.5	2.00	200	N	N	N
87WS012H	34 56 6	114 13 9	.5	.30	.7	.50	100	N	N	N
87WS013H	34 56 48	114 14 7	.2	.20	1.0	.10	150	N	N	N
87WS014H	34 56 13	114 14 58	.7	.30	.7	.70	70	N	N	N
87WS015H	34 56 7	114 15 46	1.0	.20	1.0	1.00	150	N	N	N
87WS016H	34 56 8	114 16 13	.7	.50	1.5	2.00	200	N	N	N
87WS017H	34 57 12	114 17 36	.5	.70	1.5	.70	100	N	N	N
87WS018H	34 57 18	114 17 11	.5	.50	1.5	1.00	100	N	N	N
87WS019H	34 56 57	114 16 21	.5	.50	1.0	.20	50	N	N	N
87WS020H	34 57 47	114 15 15	.3	.15	1.5	.70	150	N	N	N
87WS021H	34 58 37	114 16 49	.5	.50	.5	.20	150	N	N	N
87WS022H	34 59 36	114 17 51	.5	.70	1.0	.15	100	N	N	N
87WS023H	35 0 8	114 17 9	2.0	.70	2.0	1.00	150	N	N	N
87WS024H	35 0 38	114 17 3	.3	.15	.7	.50	70	N	N	N
87WS025H	35 0 49	114 18 25	1.5	.50	2.0	.20	70	N	N	N
87WS026H	35 1 2	114 19 6	2.0	.70	3.0	.50	100	N	N	N
87WS027H	35 0 55	114 19 34	1.5	.30	1.5	1.50	150	N	N	N
87WS028H	34 55 37	114 19 25	2.0	1.00	2.0	1.00	150	N	N	N
87WS029H	35 0 18	114 20 7	1.0	.20	.5	.30	50	N	N	N
87WS030H	35 0 41	114 20 20	1.0	.30	1.0	.70	70	N	N	N
87WS031H	38 0 45	114 20 24	1.5	.50	2.0	.50	100	N	N	N
87WS032H	38 0 5	114 21 49	1.5	1.50	7.0	.50	200	N	10,000	N
87WS033H	34 57 33	114 20 7	2.0	.50	5.0	2.00	300	N	N	N
87WS034H	34 57 10	114 20 10	1.5	.70	3.0	1.50	100	N	N	N
87WS035H	34 57 13	114 20 27	1.0	.50	2.0	1.50	70	N	N	N
87WS036H	34 57 13	114 20 54	1.0	.50	2.0	1.00	70	N	N	N
87WS037H	34 57 27	114 20 57	1.5	.70	3.0	1.50	100	N	N	N
87WS038H	34 58 15	114 21 21	1.5	.70	2.0	1.50	100	N	N	N
87WS039H	34 58 19	114 21 24	1.5	.70	2.0	.70	70	N	N	N
87WS040H	34 59 7	114 20 0	.7	.50	1.5	2.00	50	N	N	N
87WS041H	34 59 11	114 20 24	1.0	.50	1.5	2.00	100	N	N	N
87WS042H	34 58 44	114 18 38	1.5	.70	3.0	1.00	50	N	N	N
87WS043H	34 57 57	114 17 37	2.0	2.00	7.0	.70	100	N	N	N
87WS044H	34 57 55	114 18 20	2.0	1.50	7.0	1.00	100	N	N	N
87WS045H	34 57 52	114 19 4	1.0	.50	5.0	.70	70	N	N	N
87WS046H	34 57 54	114 19 3	1.5	.70	3.0	1.00	70	N	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS002H	50	700	<2	N	N	N	N	N	200	N	70
87WS003H	<20	150	<2	N	N	N	N	<10	200	N	<50
87WS004H	50	500	N	N	N	N	N	N	150	N	50
87WS005H	<20	300	3	N	N	N	N	10	300	N	N
87WS006H	20	1,000	<2	N	N	N	N	N	300	N	N
87WS007H	30	700	<2	N	N	N	N	N	50	N	N
87WS008H	20	300	N	N	N	N	N	N	<50	N	N
87WS009H	<20	200	<2	N	N	N	N	N	50	N	N
87WS010H	50	1,500	<2	N	N	N	N	N	100	N	N
87WS011H	<20	3,000	2	N	N	N	N	N	50	N	<50
87WS012H	20	300	N	N	N	N	N	N	<50	N	N
87WS013H	<20	1,000	3	N	N	N	N	N	70	N	N
87WS014H	30	150	N	N	N	N	N	N	<50	N	<50
87WS015H	50	200	N	N	N	N	<20	10	50	N	50
87WS016H	30	500	N	N	N	N	20	<10	50	N	<50
87WS017H	20	700	N	N	N	N	50	<10	50	N	<50
87WS018H	30	300	N	N	N	N	20	<10	70	N	<50
87WS019H	30	200	N	N	N	N	50	N	N	N	N
87WS020H	30	700	<2	N	N	N	<20	N	100	N	<50
87WS021H	20	200	<2	N	N	N	N	<10	N	N	N
87WS022H	20	150	N	N	N	<10	<20	<10	N	N	N
87WS023H	20	700	<2	N	N	<10	<20	N	N	N	N
87WS024H	20	700	2	N	N	N	N	10	<50	N	<50
87WS025H	<20	300	N	N	N	<10	N	<10	<50	N	N
87WS026H	20	700	<2	N	N	<10	N	<10	50	N	N
87WS027H	20	300	<2	N	N	N	N	<10	200	N	50
87WS028H	150	200	N	N	N	<10	20	10	50	N	N
87WS029H	20	200	<2	N	N	N	N	N	50	N	N
87WS030H	20	1,000	<2	N	N	N	N	N	100	N	N
87WS031H	30	700	<2	N	N	N	<20	N	150	N	N
87WS032H	<20	10,000	<2	N	N	N	N	<10	200	N	N
87WS033H	20	700	<2	N	N	N	N	N	70	N	N
87WS034H	<20	500	N	N	N	N	N	N	70	N	<50
87WS035H	20	300	N	N	N	N	N	N	70	N	N
87WS036H	20	300	N	N	N	N	N	N	50	N	<50
87WS037H	20	500	<2	N	N	N	<20	N	70	N	<50
87WS038H	30	500	<2	N	N	N	<20	N	100	N	N
87WS039H	20	500	<2	N	N	N	N	N	50	N	N
87WS040H	20	200	N	N	N	N	20	N	50	N	N
87WS041H	30	500	<2	N	N	N	<20	N	70	N	50
87WS042H	<20	300	N	N	N	<10	N	N	N	N	N
87WS043H	20	200	N	N	N	10	<20	10	N	N	N
87WS044H	20	500	N	N	N	<10	<20	<10	<50	N	N
87WS045H	20	300	<2	N	N	<10	N	N	N	N	N
87WS046H	20	300	N	N	N	<10	N	<10	N	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS002H	N	300	N	30	20	200	70	N	500	N	>2,000	<200
87WS003H	N	<20	N	30	<20	N	30	N	500	N	>2,000	N
87WS004H	<10	20	N	10	50	500	30	N	300	N	>2,000	<200
87WS005H	N	<20	N	50	N	200	30	N	700	N	>2,000	<200
87WS006H	N	20	N	20	N	300	30	N	500	N	>2,000	N
87WS007H	<10	<20	N	10	N	500	<20	N	150	N	>2,000	N
87WS008H	<10	50	N	20	<20	N	20	N	500	N	>2,000	N
87WS009H	N	70	N	15	N	N	<20	N	500	N	>2,000	N
87WS010H	N	50	N	20	N	300	<20	N	500	N	>2,000	N
87WS011H	<10	70	N	30	N	300	50	N	70	N	>2,000	<200
87WS012H	N	<20	N	N	N	500	<20	N	150	N	>2,000	N
87WS013H	N	30	N	30	<20	500	20	N	700	N	>2,000	N
87WS014H	20	<20	N	N	N	200	20	N	100	N	>2,000	N
87WS015H	15	<20	N	20	N	200	20	N	200	N	>2,000	N
87WS016H	<10	20	N	20	70	200	30	N	200	N	>2,000	N
87WS017H	10	N	N	10	N	300	20	N	100	N	>2,000	N
87WS018H	<10	N	N	<10	N	300	20	N	150	N	>2,000	N
87WS019H	10	N	N	N	N	200	<20	N	50	N	>2,000	N
87WS020H	N	30	N	20	N	300	30	N	300	N	>2,000	N
87WS021H	<10	20	N	20	N	300	<20	N	200	N	>2,000	N
87WS022H	<10	N	N	N	N	200	<20	N	50	N	>2,000	N
87WS023H	10	<20	N	<10	N	500	20	N	50	N	>2,000	N
87WS024H	<10	<20	N	20	N	200	20	N	150	N	>2,000	N
87WS025H	<10	50	N	10	N	500	20	N	150	N	>2,000	N
87WS026H	<10	50	N	<10	N	200	20	N	100	N	>2,000	N
87WS027H	N	1,000	N	30	<20	200	30	N	300	N	>2,000	N
87WS028H	<10	30	N	20	N	200	50	N	200	N	>2,000	N
87WS029H	N	N	N	20	N	200	20	N	150	N	>2,000	N
87WS030H	N	N	N	30	N	500	30	N	300	N	>2,000	N
87WS031H	<10	70	N	10	N	700	30	N	200	N	>2,000	N
87WS032H	<10	N	N	15	N	300	30	N	150	N	>2,000	N
87WS033H	N	30	N	50	<20	300	30	N	300	N	>2,000	N
87WS034H	<10	<20	N	20	N	200	30	N	150	N	>2,000	N
87WS035H	<10	<20	N	20	N	200	30	N	150	N	>2,000	N
87WS036H	<10	<20	N	20	N	300	30	N	150	N	>2,000	N
87WS037H	N	<20	N	20	N	200	50	N	150	N	>2,000	N
87WS038H	N	<20	N	30	N	300	30	N	200	N	>2,000	N
87WS039H	N	N	N	20	N	200	20	N	100	N	>2,000	N
87WS040H	N	N	N	20	N	200	20	N	150	N	>2,000	N
87WS041H	N	<20	N	30	N	200	30	N	200	N	>2,000	N
87WS042H	<10	<20	N	<10	N	200	30	N	150	N	>2,000	N
87WS043H	15	N	N	10	<20	700	20	N	100	N	>2,000	N
87WS044H	10	100	N	10	N	500	30	N	100	N	>2,000	N
87WS045H	<10	N	N	10	N	300	20	N	100	N	>2,000	N
87WS046H	<10	<20	N	15	N	300	20	N	100	N	>2,000	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS047H	34 58 0	114 19 0	2.0	.70	5.0	.70	70	N	N	N
87WS048H	34 58 47	114 22 50	2.0	.70	5.0	1.50	200	N	N	N
87WS049H	34 57 44	114 23 20	1.0	1.50	7.0	.50	500	N	>20,000	N
87WS050H	34 56 10	114 24 50	2.0	1.00	5.0	2.00	200	N	N	N
87WS051H	34 55 45	114 23 57	.5	2.00	2.0	.20	500	N	>20,000	N
87WS052H	34 56 49	114 23 48	1.5	2.00	5.0	.50	500	N	>20,000	N
87WS053H	34 56 42	114 23 26	2.0	3.00	20.0	.50	1,500	N	>20,000	N
87WS054H	34 55 54	114 22 54	1.5	5.00	10.0	.70	1,500	N	>20,000	N
87WS055H	34 56 0	114 22 53	1.5	10.00	10.0	.20	3,000	N	>20,000	N
87WS056H	34 55 34	114 21 56	1.0	2.00	3.0	.20	700	N	>20,000	N
87WS057H	34 55 37	114 21 53	2.0	2.00	5.0	1.50	700	N	>20,000	N
87WS058H	34 54 49	114 25 6	1.5	2.00	7.0	1.00	700	N	>20,000	N
87WS059H	34 54 47	114 23 47	2.0	2.00	5.0	2.00	700	N	>20,000	N
87WS060H	34 54 3	114 24 24	1.5	20.00	20.0	2.00	7,000	N	>20,000	N
87WS061H	34 54 5	114 22 47	1.5	2.00	10.0	2.00	700	N	20,000	N
87WS062H	34 53 57	114 22 39	2.0	1.00	20.0	>2.00	1,000	N	500	N
87WS063H	34 53 41	114 22 59	1.5	.70	3.0	>2.00	150	N	N	N
87WS064H	34 53 9	114 23 43	1.0	.70	2.0	1.50	70	N	N	N
87WS065H	34 52 58	114 26 0	1.0	.70	2.0	2.00	100	N	700	N
87WS066H	34 52 54	114 25 58	.7	1.00	3.0	>2.00	100	N	1,000	N
87WS067H	34 52 3	114 23 17	3.0	1.50	7.0	2.00	700	N	N	N
87WS068H	34 52 0	114 22 43	.3	.30	1.5	1.50	20	N	<500	N
87WS069H	34 51 26	114 22 41	.5	.70	2.0	>2.00	50	N	N	N
87WS070H	34 51 2	114 23 24	1.0	.50	.7	1.00	70	N	N	N
87WS071H	34 50 33	114 24 7	1.0	.70	2.0	>2.00	100	N	N	N
87WS072H	34 51 2	114 24 57	1.5	.50	2.0	>2.00	150	N	N	N
87WS073H	34 51 33	114 21 3	.5	.20	2.0	1.00	50	N	N	N
87WS074H	34 52 38	114 20 55	1.0	.30	2.0	1.50	70	N	N	N
87WS075H	34 53 15	114 20 11	2.0	1.00	7.0	2.00	200	N	N	N
87WS076H	34 53 2	114 20 29	1.5	1.00	5.0	>2.00	150	N	N	N
87WS077H	34 53 8	114 19 11	2.0	.70	7.0	>2.00	300	N	N	N
87WS078H	34 53 28	114 18 48	1.5	.50	5.0	2.00	200	N	N	N
87WS079H	34 54 41	11 42 21	2.0	1.50	7.0	>2.00	300	N	N	N
87WS080H	34 55 14	114 19 29	1.5	1.00	3.0	2.00	100	N	N	N
87WS081H	34 55 56	114 20 19	.7	1.00	5.0	.70	150	N	N	N
87WS082H	34 53 31	114 18 7	1.0	1.00	5.0	2.00	70	N	N	N
87WS083H	34 53 13	114 17 8	1.5	1.00	2.0	1.50	70	N	N	N
87WS084H	34 53 33	114 17 15	2.0	1.50	5.0	>2.00	100	N	N	N
87WS085H	34 53 57	114 16 9	1.5	.70	2.0	>2.00	150	N	N	N
87WS086H	34 54 16	114 16 30	3.0	1.00	5.0	>2.00	200	N	N	N
87WS087H	34 54 19	114 16 26	2.0	.70	3.0	>2.00	150	N	N	N
87WS088H	34 55 3	114 16 56	2.0	.70	2.0	>2.00	100	N	N	N
87WS089H	34 51 23	114 14 38	1.5	.70	2.0	2.00	50	3	N	N
87WS090H	34 53 9	114 15 54	1.0	.50	2.0	1.50	150	<1	N	N
87WS091H	34 53 24	114 15 41	.3	.20	.5	2.00	50	N	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS047H	20	200	N	N	N	<10	N	N	N	N	N
87WS048H	20	10,000	<2	N	N	N	N	10	200	N	N
87WS049H	<20	5,000	2	N	N	N	N	10	300	N	N
87WS050H	<20	2,000	N	N	N	N	<20	N	200	N	N
87WS051H	<20	2,000	<2	N	N	N	N	N	<50	N	N
87WS052H	<20	2,000	5	N	N	N	N	10	100	N	N
87WS053H	<20	10,000	3	N	N	N	N	10	100	N	N
87WS054H	<20	1,000	5	N	N	N	N	10	200	N	N
87WS055H	20	3,000	50	N	N	N	N	15	300	N	N
87WS056H	20	1,000	2	N	N	N	N	<10	70	N	N
87WS057H	20	700	2	N	N	N	N	20	100	N	N
87WS058H	20	500	2	N	N	N	N	N	150	N	N
87WS059H	20	3,000	<2	N	N	N	N	N	70	N	N
87WS060H	20	2,000	20	N	N	N	N	15	150	N	N
87WS061H	20	1,000	N	N	N	N	N	<10	200	N	N
87WS062H	20	5,000	N	N	N	N	N	N	1,000	N	N
87WS063H	20	1,000	N	N	N	N	<20	N	100	N	N
87WS064H	20	700	N	N	N	N	N	N	50	N	N
87WS065H	<20	500	N	N	N	N	N	N	70	N	N
87WS066H	20	700	N	N	N	N	N	N	100	N	N
87WS067H	<20	7,000	<2	N	N	N	20	<10	300	N	N
87WS068H	<20	1,500	N	N	N	N	N	N	<50	N	N
87WS069H	20	500	N	N	N	N	N	N	100	N	N
87WS070H	50	2,000	N	N	N	N	N	N	100	N	<50
87WS071H	20	1,500	N	N	N	N	N	N	100	N	<50
87WS072H	20	5,000	<2	N	N	N	20	N	150	N	50
87WS073H	20	700	<2	N	N	N	N	N	100	N	N
87WS074H	20	700	<2	N	N	N	N	N	150	N	50
87WS075H	20	500	<2	N	N	N	<20	N	300	N	N
87WS076H	20	700	<2	N	N	N	N	N	300	N	N
87WS077H	20	5,000	<2	N	N	N	N	N	500	N	N
87WS078H	20	500	2	N	N	N	N	N	200	N	N
87WS079H	20	200	N	N	N	N	20	N	100	N	100
87WS080H	20	700	<2	N	N	N	N	<10	150	N	N
87WS081H	20	700	2	N	N	N	N	N	100	N	N
87WS082H	20	500	N	N	N	N	N	<10	50	N	N
87WS083H	20	200	N	N	N	N	N	N	50	N	N
87WS084H	20	300	N	N	N	N	N	<10	70	N	<50
87WS085H	<20	150	N	N	N	N	N	N	50	N	70
87WS086H	<20	1,000	N	N	N	N	100	N	150	N	100
87WS087H	20	500	N	N	N	N	N	N	100	N	N
87WS088H	<20	500	N	N	N	N	N	N	70	N	50
87WS089H	<20	300	N	N	N	N	N	N	<50	N	N
87WS090H	<20	5,000	3	N	N	N	N	N	200	N	<50
87WS091H	<20	700	N	N	N	N	N	N	50	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS047H	<10	20	N	20	N	300	20	N	150	N	>2,000	N
87WS048H	<10	20	N	20	N	2,000	30	N	200	N	>2,000	N
87WS049H	N	N	N	10	N	1,500	30	N	150	N	>2,000	N
87WS050H	N	20	N	20	N	1,500	50	N	150	N	>2,000	N
87WS051H	N	30	N	10	N	200	20	N	150	N	>2,000	N
87WS052H	N	20	N	10	N	>10,000	30	N	100	N	>2,000	N
87WS053H	N	<20	N	10	N	2,000	30	N	70	N	>2,000	N
87WS054H	N	20	N	15	50	1,000	70	N	200	N	>2,000	N
87WS055H	N	<20	N	20	N	1,000	100	N	200	N	>2,000	N
87WS056H	N	30	N	30	300	200	20	N	300	N	>2,000	N
87WS057H	N	20	N	20	N	500	50	N	200	N	>2,000	N
87WS058H	N	20	N	20	N	1,000	20	N	200	N	>2,000	N
87WS059H	<10	<20	N	10	N	700	50	N	100	N	>2,000	N
87WS060H	N	<20	N	70	N	2,000	150	N	200	N	>2,000	N
87WS061H	N	<20	N	20	N	1,000	30	N	200	N	>2,000	N
87WS062H	N	20	N	20	N	3,000	30	N	300	N	>2,000	N
87WS063H	<10	20	N	30	N	500	50	N	300	N	>2,000	N
87WS064H	N	50	N	10	N	200	20	N	100	N	>2,000	N
87WS065H	N	N	N	20	N	500	20	N	200	N	>2,000	N
87WS066H	N	<20	N	30	N	200	30	N	200	N	>2,000	N
87WS067H	<10	30	N	20	N	5,000	30	N	200	N	>2,000	N
87WS068H	N	20	N	10	N	500	20	N	70	N	>2,000	N
87WS069H	N	<20	N	20	N	300	30	N	200	N	>2,000	N
87WS070H	N	<20	N	30	N	200	30	N	200	N	>2,000	N
87WS071H	N	N	N	50	N	200	50	N	300	N	>2,000	N
87WS072H	N	<20	N	70	N	200	70	N	500	N	>2,000	N
87WS073H	N	N	N	N	<20	500	30	N	150	N	>2,000	N
87WS074H	N	<20	N	30	N	500	30	N	200	N	>2,000	N
87WS075H	<10	<20	N	20	N	700	30	N	200	N	>2,000	N
87WS076H	N	<20	N	30	20	700	50	N	300	N	>2,000	N
87WS077H	<10	20	N	50	N	700	70	N	700	N	>2,000	N
87WS078H	N	<20	N	50	N	500	50	N	500	N	>2,000	N
87WS079H	<10	20	N	30	N	500	70	N	300	N	>2,000	N
87WS080H	<10	N	N	20	N	300	30	N	200	N	>2,000	N
87WS081H	<10	<20	N	20	N	500	20	N	300	N	>2,000	N
87WS082H	<10	N	N	15	N	300	20	N	100	N	>2,000	N
87WS083H	N	<20	N	20	<20	300	20	N	150	N	>2,000	N
87WS084H	<10	20	N	30	N	300	50	N	200	N	>2,000	N
87WS085H	N	50	N	50	<20	200	30	N	500	N	>2,000	N
87WS086H	10	50	N	70	20	500	50	N	700	N	>2,000	N
87WS087H	<10	20	N	50	N	200	50	N	300	N	>2,000	N
87WS088H	<10	N	N	20	N	300	30	N	150	N	>2,000	N
87WS089H	<10	<20	N	20	N	300	30	N	150	N	>2,000	N
87WS090H	<10	200	N	70	N	700	70	N	500	N	>2,000	N
87WS091H	N	20	N	50	N	200	30	N	300	N	>2,000	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS092H	34 53 33	114 15 18	.7	.70	3.0	>2.00	100	N	N	N
87WS093H	34 53 23	114 15 9	1.5	1.00	2.0	1.50	70	N	N	N
87WS094H	34 52 50	114 14 9	.5	.20	2.0	>2.00	70	N	N	N
87WS095H	34 52 55	114 14 10	1.0	.50	2.0	>2.00	100	N	N	N
87WS096H	34 51 33	114 10 16	.2	.15	.3	1.00	20	N	N	N
87WS097H	34 50 54	114 10 9	1.5	.70	3.0	>2.00	300	N	N	N
87WS098H	34 53 10	114 18 39	2.0	1.00	3.0	>2.00	150	N	N	N
87WS099H	34 53 12	114 18 19	2.0	.70	5.0	1.50	300	N	N	N
87WS100H	34 50 10	114 12 0	1.0	.20	3.0	2.00	200	N	N	N
87WS101H	34 50 39	114 12 3	.7	.20	3.0	2.00	150	N	N	N
87WS102H	34 50 35	114 11 52	1.5	.70	3.0	>2.00	150	N	N	N
87WS103H	34 49 55	114 11 48	.3	.30	3.0	>2.00	150	N	N	N
87WS104H	34 49 26	114 12 23	.5	.15	3.0	1.50	100	N	N	N
87WS105H	34 49 54	114 13 37	1.0	.70	10.0	>2.00	500	N	N	N
87WS106H	34 50 7	114 13 38	.3	.30	2.0	.10	50	N	N	N
87WS107H	34 50 11	114 13 31	1.0	.50	3.0	.70	100	N	N	N
87WS108H	34 50 42	114 13 23	1.0	.30	5.0	2.00	150	N	N	N
87WS109H	34 50 45	114 13 4	1.0	.30	2.0	1.50	50	N	N	N
87WS110H	34 48 23	113 13 27	.7	.50	3.0	1.00	70	N	N	N
87WS111H	34 48 25	113 13 30	.7	.50	3.0	1.50	100	N	N	N
87WS112H	34 48 40	113 14 15	.5	.50	2.0	1.00	70	N	N	N
87WS113H	34 48 8	114 12 48	.2	.70	5.0	2.00	70	N	N	N
87WS114H	34 48 17	114 12 53	.7	.20	1.5	1.00	50	N	N	N
87WS115H	34 48 19	114 12 52	2.0	.50	3.0	>2.00	200	N	N	N
87WS116H	34 48 34	114 10 35	1.5	.30	2.0	>2.00	150	N	N	N
87WS117H	34 49 12	114 11 2	1.5	.50	3.0	2.00	150	N	N	N
87WS118H	34 49 22	114 10 58	2.0	.50	5.0	>2.00	300	N	N	N
87WS119H	34 46 47	114 12 54	1.5	.70	5.0	1.50	100	N	N	N
87WS120H	34 47 8	114 13 48	.7	.20	5.0	1.00	100	N	N	N
87WS121H	34 46 29	114 13 48	.7	.30	5.0	2.00	100	N	N	N
87WS122H	34 47 26	114 14 40	1.0	.30	7.0	2.00	150	N	N	N
87WS123H	34 48 14	114 14 59	1.0	.50	10.0	1.50	500	N	N	N
87WS124H	34 48 16	114 14 56	1.0	.30	5.0	2.00	300	N	N	N
87WS125H	34 49 53	114 15 3	.5	.10	3.0	.15	30	N	N	N
87WS126H	34 49 54	114 15 9	1.0	.30	7.0	1.50	500	N	N	N
87WS127H	34 46 8	114 15 56	.7	.50	2.0	.50	50	N	N	N
87WS128H	34 47 5	114 15 27	.7	.50	10.0	.70	200	N	N	N
87WS129H	34 47 7	114 15 33	.7	.70	7.0	2.00	300	N	N	N
87WS130C	34 59 55	114 22 49	1.5	2.00	15.0	1.00	500	<1	N	N
87WS131C	34 56 10	114 23 18	1.0	5.00	10.0	.50	500	2	>20,000	N
87WS132C	34 51 48	114 51 43	.7	.30	5.0	2.00	200	N	700	N
87WS133C	34 51 23	114 18 52	1.0	.50	7.0	2.00	300	N	N	N
87WS134C	34 51 7	114 17 54	1.5	.50	2.0	>2.00	500	N	N	N
87WS135C	34 51 7	114 17 15	1.0	.50	2.0	1.50	300	N	N	N
87WS136C	34 50 52	114 16 35	1.0	.50	5.0	2.00	150	N	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS092H	<20	100	<2	N	N	N	N	N	70	N	N
87WS093H	<20	200	N	N	N	N	50	N	70	N	N
87WS094H	<20	150	N	N	N	N	N	N	70	N	<50
87WS095H	<20	150	N	N	N	N	100	N	100	N	50
87WS096H	<20	500	<2	N	N	N	N	N	50	N	<50
87WS097H	<20	1,000	<2	N	N	N	<20	N	200	N	150
87WS098H	<20	700	N	N	N	N	<20	N	150	N	N
87WS099H	<20	>10,000	N	N	N	N	<20	N	200	N	N
87WS100H	20	500	2	N	N	N	N	N	70	N	N
87WS101H	20	1,500	<2	N	N	N	N	N	100	N	<50
87WS102H	20	700	<2	N	N	N	<20	N	100	N	<50
87WS103H	20	300	N	N	N	N	<20	N	70	N	50
87WS104H	20	1,500	<2	N	N	N	N	N	150	N	<50
87WS105H	20	500	N	N	N	N	<20	N	100	N	N
87WS106H	20	3,000	N	N	N	N	N	N	<50	N	N
87WS107H	20	700	<2	N	N	N	N	N	100	N	N
87WS108H	20	300	2	N	N	N	N	N	150	N	N
87WS109H	20	1,000	<2	N	N	N	N	<10	<50	N	N
87WS110H	20	1,000	<2	N	N	N	N	N	150	N	N
87WS111H	20	1,000	<2	N	N	N	N	N	70	N	N
87WS112H	20	700	N	N	N	N	N	N	50	N	N
87WS113H	30	1,000	<2	N	N	N	N	N	50	N	50
87WS114H	20	500	N	N	N	N	N	N	<50	N	N
87WS115H	20	1,000	<2	N	N	N	<20	N	70	N	150
87WS116H	20	500	N	N	N	N	N	N	100	N	<50
87WS117H	20	700	N	N	N	N	N	N	50	N	50
87WS118H	20	1,000	N	N	N	N	<20	N	100	N	100
87WS119H	20	500	N	N	N	N	N	<10	70	N	N
87WS120H	20	700	<2	N	N	N	N	N	50	N	N
87WS121H	20	500	<2	N	N	N	N	N	100	N	N
87WS122H	20	200	N	N	N	N	N	N	200	N	N
87WS123H	20	>10,000	N	N	N	N	N	N	2,000	N	N
87WS124H	20	2,000	N	N	N	N	N	N	150	N	N
87WS125H	20	1,000	<2	N	N	N	N	N	70	N	N
87WS126H	20	500	N	N	N	N	N	N	1,000	N	N
87WS127H	20	2,000	N	N	N	N	N	N	200	N	N
87WS128H	20	1,000	N	N	N	N	N	N	300	N	N
87WS129H	20	1,500	N	N	N	N	N	<10	500	N	N
87WS130C	N	150	<2	N	N	<10	30	10	300	20	<50
87WS131C	<20	10,000	30	N	N	N	30	30	100	<10	<50
87WS132C	20	>10,000	3	N	N	N	20	N	300	N	50
87WS133C	N	>10,000	7	N	N	N	70	N	300	N	<50
87WS134C	<20	1,500	5	N	N	N	50	N	300	N	70
87WS135C	N	2,000	2	N	N	N	50	N	200	N	50
87WS136C	N	200	2	N	N	N	20	N	300	N	<50

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS092H	N	20	N	30	N	200	30	N	500	N	>2,000	N
87WS093H	<10	<20	N	10	N	300	30	N	100	N	>2,000	N
87WS094H	N	20	N	30	N	200	50	N	300	N	>2,000	N
87WS095H	N	30	N	50	20	200	50	N	700	N	>2,000	N
87WS096H	N	<20	N	10	N	200	20	N	100	N	>2,000	N
87WS097H	<10	20	N	30	<20	200	70	N	500	N	>2,000	N
87WS098H	<10	20	N	50	N	200	50	N	300	N	>2,000	N
87WS099H	10	N	N	20	N	10,000	20	N	200	N	>2,000	N
87WS100H	<10	20	N	50	N	200	70	N	200	N	>2,000	300
87WS101H	<10	30	N	30	N	300	30	N	150	N	>2,000	N
87WS102H	10	<20	N	20	20	200	70	N	150	N	>2,000	N
87WS103H	<10	30	N	20	30	<200	100	N	200	N	>2,000	<200
87WS104H	<10	20	N	10	N	700	30	N	70	N	>2,000	N
87WS105H	<10	<20	N	20	N	1,000	50	N	500	N	>2,000	N
87WS106H	N	50	N	20	N	200	20	N	200	N	>2,000	N
87WS107H	N	<20	N	10	N	500	20	N	100	N	>2,000	N
87WS108H	N	20	N	30	N	200	50	N	300	N	>2,000	N
87WS109H	<10	N	N	10	N	300	30	N	150	N	>2,000	N
87WS110H	<10	30	N	20	N	700	30	N	150	N	>2,000	N
87WS111H	N	20	N	20	N	500	30	N	100	N	>2,000	N
87WS112H	N	20	N	<10	N	300	20	N	100	N	>2,000	N
87WS113H	N	30	N	20	<20	300	50	N	150	N	>2,000	N
87WS114H	<10	70	N	N	<20	200	30	N	70	N	>2,000	N
87WS115H	N	70	N	50	20	200	70	N	500	N	>2,000	N
87WS116H	<10	50	N	30	N	<200	50	N	300	N	>2,000	N
87WS117H	<10	50	N	20	N	200	30	<100	300	N	>2,000	N
87WS118H	<10	50	N	30	20	200	70	N	500	N	>2,000	N
87WS119H	<10	20	N	10	N	500	20	N	200	N	>2,000	N
87WS120H	N	50	N	20	<20	300	20	200	300	N	>2,000	N
87WS121H	<10	N	N	15	N	300	30	N	200	N	>2,000	N
87WS122H	N	<20	N	15	<20	300	30	N	300	N	>2,000	N
87WS123H	N	70	N	50	N	1,000	30	N	1,000	N	>2,000	N
87WS124H	N	50	N	30	N	300	50	N	500	N	>2,000	N
87WS125H	N	N	N	N	N	1,500	<20	N	50	N	>2,000	N
87WS126H	N	<20	N	20	N	1,000	50	N	300	N	>2,000	N
87WS127H	<10	20	N	10	N	300	20	N	150	N	>2,000	N
87WS128H	<10	20	N	20	N	300	30	N	500	N	>2,000	N
87WS129H	10	30	N	30	N	500	30	N	500	N	>2,000	N
87WS130C	<10	50	N	10	N	500	30	N	300	N	>2,000	N
87WS131C	<10	150	N	N	20	700	50	N	150	N	>2,000	N
87WS132C	N	50	N	10	<20	1,500	50	N	500	N	>2,000	N
87WS133C	<10	20	N	15	N	300	70	N	700	N	>2,000	N
87WS134C	N	30	N	20	20	<200	70	N	700	N	>2,000	N
87WS135C	N	20	N	10	N	500	30	N	200	N	>2,000	N
87WS136C	N	<20	N	<10	N	300	50	N	500	N	>2,000	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS137C	34 48 44	114 18 40	.5	.20	10.0	1.00	100	N	N	N
87WS138C	34 49 17	114 18 44	.7	.30	2.0	2.00	150	N	N	N
87WS139C	34 50 34	114 19 12	.7	.50	1.5	1.00	30	N	N	N
87WS140C	34 50 17	114 19 11	.3	.20	1.5	.50	30	<1	N	N
87WS141C	34 50 5	114 16 26	.7	.50	7.0	.50	100	<1	N	N
87WS142C	34 49 39	114 16 23	1.0	.70	10.0	1.00	200	N	N	N
87WS143C	34 49 12	114 16 24	.3	.10	5.0	.30	20	<1	N	N
87WS144C	34 49 7	114 16 27	.7	.20	10.0	.50	200	N	N	N
87WS145C	34 49 34	114 17 16	.5	.10	5.0	1.00	70	N	N	N
87WS146C	34 48 30	114 17 54	.7	.30	7.0	1.50	300	N	N	N
87WS147C	34 47 7	114 17 20	2.0	.50	15.0	>2.00	700	N	N	N
87WS148C	34 47 13	114 17 44	1.5	1.00	10.0	2.00	200	N	N	N
87WS149C	34 46 31	114 17 42	1.0	.50	7.0	1.50	200	N	N	N
87WS150C	34 45 47	114 17 32	1.0	.50	3.0	>2.00	500	N	N	N
87WS151C	35 1 54	114 19 28	3.0	1.00	5.0	>2.00	1,000	N	N	N
87WS152C	35 2 11	114 20 19	2.0	1.00	3.0	>2.00	700	N	N	N

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS137C	N	2,000	2	N	N	N	<20	N	300	N	<50
87WS138C	N	500	5	N	N	N	30	N	200	N	<50
87WS139C	N	3,000	5	N	N	N	50	N	50	N	<50
87WS140C	N	300	3	N	N	N	<20	N	50	N	<50
87WS141C	N	700	2	N	N	N	20	N	300	N	<50
87WS142C	N	1,000	3	N	N	N	20	N	200	N	<50
87WS143C	N	10,000	2	N	N	N	N	N	<50	N	N
87WS144C	N	>10,000	N	N	N	N	N	30	500	N	<50
87WS145C	N	>10,000	N	N	N	N	N	N	100	N	N
87WS146C	N	>10,000	3	N	N	N	<20	N	200	N	<50
87WS147C	100	1,500	5	N	N	N	100	N	1,000	N	100
87WS148C	N	500	<2	N	N	N	70	N	300	N	70
87WS149C	20	700	2	N	N	N	30	N	300	N	50
87WS150C	50	300	5	N	N	N	100	N	1,000	N	70
87WS151C	N	300	3	N	N	N	70	N	1,000	N	100
87WS152C	20	200	N	N	N	N	70	N	700	N	70

TABLE 4.--RESULTS OF ANALYSES OF HEAVY-MINERAL CONCENTRATE SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA,
MOHAVE COUNTY, ARIZONA.--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
87WS137C	N	30	N	N	N	500	30	N	500	N	>2,000	N
87WS138C	N	30	N	<10	<20	500	30	N	300	N	>2,000	N
87WS139C	N	30	N	10	N	300	50	N	150	N	>2,000	N
87WS140C	N	20	N	N	30	500	20	N	70	N	>2,000	N
87WS141C	N	<20	N	N	N	1,000	50	N	150	N	>2,000	N
87WS142C	N	20	N	10	<20	500	50	N	300	N	>2,000	N
87WS143C	N	20	N	N	N	200	20	N	500	N	>2,000	N
87WS144C	N	<20	N	N	N	1,500	30	N	200	N	>2,000	N
87WS145C	N	<20	N	10	N	1,000	50	N	700	N	>2,000	N
87WS146C	N	20	N	10	N	700	30	<100	500	N	>2,000	N
87WS147C	<10	<20	N	15	20	300	100	N	1,000	N	>2,000	N
87WS148C	10	<20	N	10	N	300	70	N	200	N	>2,000	N
87WS149C	N	30	N	<10	N	200	50	N	500	N	>2,000	<200
87WS150C	N	50	N	20	30	<200	100	N	700	N	>2,000	<200
87WS151C	<10	<20	N	20	50	<200	150	N	1,500	N	>2,000	N
87WS152C	<10	70	N	10	30	200	70	N	1,000	N	>2,000	N

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.
 [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
WS002R1	34 52 34	114 20 22	1.50	.50	1.00	.200	500	N	N	N	10	200
WS002R2	34 52 34	114 20 22	5.00	7.00	2.00	.300	700	N	N	N	10	100
WS003R	34 52 33	114 20 21	7.00	5.00	2.00	.500	700	N	N	N	10	300
WS005R	34 53 25	114 11 19	1.00	.70	.15	.150	500	N	N	N	20	70
WS006R	34 53 48	114 11 46	5.00	5.00	2.00	.500	700	N	N	N	10	1,500
WS007R	34 54 10	114 12 17	.20	.10	.20	.005	100	N	N	N	10	1,000
WS008R	34 54 36	114 12 7	3.00	1.50	1.50	.300	700	<.5	N	N	<10	200
WS009R	34 54 58	114 12 35	1.50	1.00	.50	.200	500	N	N	N	20	50
WS013R1	34 56 48	114 14 7	7.00	.70	2.00	.015	500	N	1,000	N	<10	300
WS013R2	34 56 48	114 14 7	2.00	5.00	10.00	.070	20	N	N	N	<10	200
WS018R	34 57 18	114 17 11	5.00	2.00	1.50	.300	700	N	N	N	10	700
WS021R	34 58 37	114 16 49	1.00	.20	2.00	.100	200	N	N	N	20	200
WS022R	34 59 36	114 17 51	7.00	7.00	5.00	.500	1,000	N	N	N	10	150
WS025R	35 0 49	114 18 25	1.50	.50	1.00	.100	200	N	N	N	15	700
WS031R	35 0 45	114 20 24	3.00	1.00	1.00	.300	200	N	N	N	10	500
WS032R1	35 0 5	114 21 49	.30	.10	20.00	.010	2,000	20.0	N	N	<10	50
WS032R2	35 0 5	114 21 49	5.00	.50	.20	.500	70	1.5	N	N	<10	1,500
WS036R	34 57 13	114 20 54	5.00	2.00	1.50	.500	500	<.5	N	N	10	1,000
WS044R	34 57 55	114 18 20	7.00	3.00	3.00	.700	700	N	N	N	<10	1,000
WS050R	34 56 10	114 24 50	7.00	2.00	2.00	.700	700	N	N	N	10	1,000
WS055R1	34 56 0	114 22 53	3.00	1.50	1.00	.700	500	N	N	N	10	1,000
WS055R2	34 56 0	114 22 53	1.00	.30	.10	.150	100	N	N	N	20	500
WS056R	34 55 34	114 21 56	2.00	.70	1.50	.300	700	N	N	N	10	1,500
WS066R	34 52 54	114 25 58	5.00	7.00	3.00	.700	1,000	N	N	N	<10	1,500
WS074R	34 52 38	114 20 55	3.00	1.50	1.50	.500	300	N	N	N	10	1,000
WS075R	34 53 15	114 20 11	2.00	.50	.70	.200	500	N	N	N	30	200
WS076R	34 53 2	114 20 29	3.00	1.50	1.50	.500	200	N	N	N	10	1,500
WS078R	34 53 28	114 18 48	3.00	2.00	1.50	.500	500	N	N	N	15	1,000
WS083R	34 53 13	114 17 8	7.00	5.00	3.00	.700	700	N	N	N	<10	700
WS086R	34 54 16	114 16 30	.70	1.00	>20.00	.020	10	N	N	N	N	100
WS094R	34 52 50	114 14 9	10.00	5.00	3.00	.700	1,000	N	N	N	10	500
WS096R1	34 51 33	114 10 16	3.00	.07	.20	.100	150	N	N	N	10	1,000
WS096R2	34 51 33	114 10 16	2.00	.30	2.00	.200	200	N	N	N	<10	<20
WS098R	34 53 10	114 18 39	5.00	2.00	1.50	.500	500	N	N	N	10	1,500
WS099R1	34 53 12	114 18 19	7.00	2.00	1.00	.700	300	N	N	N	10	3,000
WS099R2	34 53 12	114 18 19	2.00	.50	.70	.300	700	N	N	N	15	200
WS100R	34 50 10	114 12 0	3.00	2.00	2.00	>1.000	1,000	N	N	N	50	3,000
WS106R	34 50 7	114 13 38	3.00	.50	1.50	.200	700	N	N	N	<10	2,000
WS109R1	34 50 45	114 13 4	20.00	10.00	3.00	>1.000	5,000	N	N	N	20	>5,000
WS109R2	34 50 45	114 13 4	7.00	5.00	3.00	>1.000	700	N	N	N	30	700
WS111R1	34 48 25	114 13 30	1.00	.50	.70	.200	700	N	N	N	100	300
WS111R2	34 48 25	114 13 30	10.00	1.50	2.00	>1.000	2,000	N	N	N	<10	700
WS121R	34 46 29	114 13 48	1.00	1.50	5.00	.300	500	N	N	N	20	3,000
WS123R1	34 48 14	114 14 59	15.00	3.00	2.00	>1.000	500	N	N	N	70	700
WS123R2	34 48 14	114 14 59	1.00	1.00	20.00	.100	70	N	N	N	20	2,000

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
WS002R1	2.0	N	N	N	N	<5	N	N	<20	<5	50	N	5	N
WS002R2	N	N	N	70	70	70	N	N	N	200	N	N	20	N
WS003R	1.0	N	N	50	70	50	20	N	N	100	10	N	20	N
WS005R	3.0	N	N	N	N	N	50	7	<20	<5	100	N	<5	N
WS006R	2.0	N	N	50	100	70	100	N	N	150	20	N	20	N
WS007R	N	N	N	N	N	N	N	N	N	N	100	N	N	N
WS008R	2.0	N	N	10	<10	N	20	N	N	20	20	N	15	N
WS009R	5.0	N	N	N	N	N	N	5	20	<5	50	N	<5	N
WS013R1	15.0	N	N	5	20	5	<20	5	N	50	10	N	<5	N
WS013R2	3.0	N	N	<5	N	<5	20	N	N	10	<10	N	5	N
WS018R	2.0	N	N	30	50	30	70	N	<20	50	20	N	10	N
WS021R	2.0	N	N	N	N	<5	50	<5	20	<5	50	N	N	N
WS022R	<1.0	N	N	70	50	70	<20	N	N	150	N	N	30	N
WS025R	2.0	N	N	N	N	N	20	N	N	5	10	N	N	N
WS031R	2.0	N	N	10	10	7	50	N	<20	15	30	N	15	N
WS032R1	5.0	N	N	N	N	5	N	N	N	<5	100	N	N	N
WS032R2	1.5	N	N	<5	10	10	100	10	N	10	30	N	10	N
WS036R	2.0	N	N	30	20	7	100	<5	20	30	30	N	10	N
WS044R	1.0	N	N	50	100	70	70	N	20	150	<10	N	20	N
WS050R	2.0	N	N	50	20	70	100	N	<20	70	20	N	20	N
WS055R1	1.0	N	N	15	10	10	50	N	N	20	50	N	7	N
WS055R2	1.5	N	N	N	N	<5	20	N	N	5	15	100	N	N
WS056R	1.0	N	N	5	30	10	50	N	N	20	30	N	7	N
WS066R	<1.0	N	N	70	150	70	N	N	N	200	<10	N	30	N
WS074R	1.5	N	N	5	<10	5	70	<5	N	20	20	N	7	N
WS075R	5.0	N	N	N	N	<5	70	5	30	<5	50	N	5	N
WS076R	1.5	N	N	20	50	10	50	N	N	70	15	N	7	N
WS078R	1.0	N	N	20	50	10	50	N	N	50	15	N	10	N
WS083R	<1.0	N	N	50	70	100	20	N	N	70	<10	<100	30	N
WS086R	N	N	N	N	N	<5	N	N	N	10	<10	N	N	N
WS094R	<1.0	N	N	70	10	70	<20	N	N	100	<10	N	30	N
WS096R1	3.0	N	N	N	N	5	30	N	<20	<5	15	N	<5	N
WS096R2	<1.0	N	N	N	N	N	20	N	N	N	N	N	15	N
WS098R	1.5	N	N	20	50	10	50	N	N	70	30	N	10	N
WS099R1	1.0	N	N	7	20	30	50	<5	N	50	20	N	7	N
WS099R2	2.0	N	N	N	N	<5	100	5	20	N	50	N	<5	N
WS100R	1.0	N	N	10	N	15	150	5	<20	20	50	N	10	N
WS106R	1.5	<10	N	<5	N	5	30	N	N	<5	15	N	5	N
WS109R1	N	N	N	50	300	30	150	<5	<20	100	20	N	50	N
WS109R2	N	N	N	30	150	15	100	N	N	70	15	N	20	N
WS111R1	1.5	N	N	N	N	N	70	<5	<20	N	50	N	N	N
WS111R2	1.0	N	N	20	70	10	50	N	N	15	30	N	30	N
WS121R	<1.0	N	N	N	N	5	100	N	N	N	50	N	<5	N
WS123R1	N	N	N	20	30	10	20	N	N	5	30	N	20	N
WS123R2	N	N	N	<5	<10	5	70	N	N	N	100	N	5	N

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
WS002R1	<100	10	N	30	N	200	N	N	.04	N	N	N	N	15
WS002R2	300	100	N	15	<200	50	N	N	.04	N	N	N	N	50
WS003R	500	100	N	20	<200	100	N	N	.06	N	N	.1	N	25
WS005R	N	10	N	20	N	150	N	N	.04	N	N	N	N	20
WS006R	2,000	150	N	20	<200	300	N	N	.04	N	N	N	N	65
WS007R	<100	<10	N	N	N	N	N	N	N	N	N	N	<2	<5
WS008R	100	100	N	30	<200	150	N	N	N	N	N	N	N	30
WS009R	N	10	N	30	N	200	N	N	N	N	N	N	N	10
WS013R1	200	1,000	N	30	<200	20	N	N	.04	>2,000	N	.6	2	55
WS013R2	1,500	15	N	20	N	10	N	N	.02	40	N	.1	N	45
WS018R	1,000	50	N	20	N	300	N	N	.02	N	N	.1	N	35
WS021R	100	10	N	20	N	100	N	N	N	N	N	.1	4	15
WS022R	700	100	N	30	<200	100	N	N	N	N	N	N	N	45
WS025R	1,000	15	N	10	N	50	N	N	.06	<10	N	N	N	5
WS031R	700	70	N	20	<200	200	N	N	.16	N	N	N	N	70
WS032R1	1,000	10	N	N	N	<10	N	1.80	.10	<10	N	.8	N	15
WS032R2	700	100	N	20	N	300	N	.15	.12	40	N	.3	N	45
WS036R	700	70	N	30	N	700	N	N	.02	N	N	N	N	25
WS044R	1,000	100	N	30	N	200	N	N	N	N	N	<.1	N	35
WS050R	1,500	100	N	30	N	500	N	N	.04	40	N	<.1	6	70
WS055R1	700	30	N	10	N	200	N	N	.02	20	N	N	12	35
WS055R2	N	15	N	N	N	100	N	N	N	10	N	N	12	10
WS056R	1,500	100	N	15	N	200	N	N	N	10	N	N	6	40
WS066R	1,000	150	N	30	<200	200	N	N	N	60	N	N	<2	45
WS074R	1,000	50	N	15	N	150	N	N	N	<10	N	N	<2	20
WS075R	100	15	N	30	N	300	N	N	N	N	N	<.1	<2	20
WS076R	1,500	70	N	20	N	500	N	N	N	N	N	N	<2	45
WS078R	1,000	50	N	20	N	300	N	N	N	N	N	N	N	50
WS083R	1,000	150	N	30	<200	150	N	N	N	<10	N	N	N	35
WS086R	500	<10	N	10	N	10	N	N	.08	10	N	.1	<2	5
WS094R	700	200	N	30	<200	150	N	N	N	N	N	N	N	45
WS096R1	N	10	N	50	N	300	N	N	N	N	N	N	N	20
WS096R2	1,000	100	N	20	N	70	N	N	N	N	N	N	N	N
WS098R	1,500	100	N	20	N	200	N	N	N	N	N	N	N	40
WS099R1	1,000	100	N	15	N	300	N	N	.04	<10	N	N	N	50
WS099R2	N	10	N	50	N	500	N	N	N	N	N	<.1	N	25
WS100R	1,500	70	N	30	N	500	N	N	.02	N	N	<.1	N	10
WS106R	150	15	N	20	N	50	N	N	.02	N	4	<.1	N	10
WS109R1	3,000	500	N	50	N	1,000	N	N	.02	N	N	.1	N	65
WS109R2	1,000	200	N	20	N	300	N	N	.06	N	N	.3	N	50
WS111R1	100	<10	N	10	N	100	N	N	.02	N	N	N	N	5
WS111R2	100	200	N	70	N	300	N	N	.02	N	N	.1	N	55
WS121R	200	10	N	20	N	200	N	N	.06	N	N	.1	N	10
WS123R1	100	300	N	30	N	200	N	N	.02	N	N	N	N	55
WS123R2	300	15	N	20	N	20	N	N	.02	N	N	N	N	<5

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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
WS123R3	34 48 14	114 14 59	.10	.10	.50	N	20	N	N	N	20	2,000
WS124R1	34 48 16	114 14 56	20.00	7.00	10.00	>1.000	5,000	N	N	N	20	200
WS131R	34 56 10	114 23 18	15.00	5.00	10.00	>1.000	5,000	N	N	N	15	5,000
WS132R	34 51 48	114 18 52	3.00	3.00	3.00	1.000	700	N	N	N	70	3,000
WS136R	34 50 52	114 16 35	7.00	5.00	15.00	>1.000	3,000	N	N	N	50	2,000
WS142R	34 49 39	114 16 23	.50	2.00	>20.00	.050	500	N	N	N	<10	200
WS143R	34 49 12	114 16 24	7.00	5.00	2.00	1.000	1,500	N	N	N	10	1,500
WS144R1	34 49 7	114 16 27	7.00	.50	.05	.700	50	N	N	N	20	200
WS144R2	34 49 7	114 16 27	10.00	3.00	2.00	>1.000	1,000	N	N	N	20	1,000
WS147R	34 47 7	114 17 20	3.00	2.00	1.50	.500	500	N	N	N	N	2,000
WS151R1	35 1 54	114 19 28	5.00	2.00	2.00	1.000	1,000	N	N	N	30	1,500
WS151R2	35 1 54	114 19 28	2.00	1.50	1.00	.500	700	N	N	N	70	700
WS152R	35 2 11	114 20 19	.50	.70	.70	.030	70	N	N	N	N	150
WS160R1	34 55 36	114 22 38	.20	.10	1.00	.020	500	N	1,000	N	10	100
WS160R2	34 55 36	114 22 38	7.00	5.00	2.00	.500	1,000	N	N	N	<10	2,000
WS161R1	34 56 0	114 22 25	3.00	2.00	1.00	.300	200	<.5	N	N	50	1,500
WS161R2	34 56 0	114 22 25	1.00	2.00	2.00	.200	1,000	N	>10,000	N	10	200
WS161R3	34 56 0	114 22 25	.50	.20	.30	.070	70	N	N	N	15	300
WS161R4	34 56 0	114 22 25	.05	.03	.05	.015	10	N	N	N	10	<20
WS162R	34 56 4	114 22 19	1.00	.30	.20	.150	70	N	N	N	20	300
WS163R1	34 56 37	114 22 32	3.00	1.00	.70	.700	300	.5	N	N	10	1,000
WS163R2	34 56 37	114 22 32	7.00	2.00	.50	1.000	70	.7	N	N	<10	1,000
WS163R3	34 56 37	114 22 32	.20	.02	<.05	.100	10	20.0	N	N	10	50
WS164R	34 53 37	114 18 15	3.00	3.00	3.00	.300	500	N	N	N	10	1,000
WS165R	34 53 50	114 18 31	3.00	1.00	.70	.300	700	N	N	N	15	70

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--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	Sn-ppm s
WS123R3	N	N	N	N	N	N	<20	N	N	N	70	N	N	N
WS124R1	1.5	N	N	70	700	5	20	N	N	200	N	N	50	N
WS131R	N	N	N	20	500	15	200	N	N	70	50	N	30	N
WS132R	1.0	N	N	5	<10	7	100	<5	N	5	30	N	7	N
WS136R	1.5	N	N	10	50	20	150	<5	30	10	50	N	15	N
WS142R	N	N	N	N	N	10	<20	N	N	<5	20	N	N	N
WS143R	<1.0	N	N	10	20	7	70	N	N	15	10	N	10	N
WS144R1	<1.0	N	N	N	<10	10	70	N	N	<5	15	N	7	N
WS144R2	N	N	N	20	30	30	150	5	<20	30	30	N	15	N
WS147R	1.0	N	N	<5	N	<5	100	N	N	5	30	N	5	N
WS151R1	1.5	N	N	5	<10	10	100	N	<20	5	30	N	7	N
WS151R2	<1.0	N	N	<5	N	5	70	5	N	<5	50	N	5	N
WS152R	<1.0	N	N	N	N	<5	N	N	N	<5	N	N	N	N
WS160R1	2.0	N	N	N	N	10	N	N	N	<5	N	100	N	N
WS160R2	1.5	N	N	20	50	50	100	<5	<20	70	20	N	15	N
WS161R1	1.0	N	N	10	10	7	30	N	N	20	20	N	5	N
WS161R2	7.0	N	N	15	N	70	20	N	N	10	10	300	N	N
WS161R3	<1.0	N	N	N	N	<5	<20	N	N	<5	20	<100	N	N
WS161R4	<1.0	N	N	N	N	<5	N	N	N	N	N	N	N	N
WS162R	1.5	N	N	N	N	<5	<20	N	<20	N	50	N	N	N
WS163R1	1.0	N	N	10	<10	5	50	N	N	20	20	N	5	N
WS163R2	2.0	N	N	20	150	50	70	N	N	70	30	N	15	N
WS163R3	5.0	N	N	N	N	7	N	N	N	N	10	150	N	N
WS164R	1.0	N	N	5	N	5	30	N	N	15	20	N	5	N
WS165R	3.0	N	N	N	N	<5	100	N	20	N	50	N	5	N

TABLE 5.--RESULTS OF ANALYSES OF ROCK SAMPLES FROM THE WARM SPRINGS WILDERNESS STUDY AREA, MOHAVE COUNTY, ARIZONA.--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	Hg-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
WS123R3	150	N	N	N	N	N	N	N	N	N	N	N	N	N
WS124R1	200	500	N	50	N	150	N	N	.02	N	N	.1	N	25
WS131R	2,000	300	N	50	N	500	N	N	.06	N	N	<.1	6	35
WS132R	1,500	50	N	30	N	200	N	N	.02	N	N	.1	N	20
WS136R	1,500	100	N	150	N	1,000	N	N	.06	N	N	<.1	N	25
WS142R	500	10	N	15	N	70	N	N	N	N	N	.4	N	5
WS143R	700	50	N	20	N	200	N	N	N	N	N	.2	2	35
WS144R1	500	100	N	10	N	300	N	N	.22	N	N	N	N	5
WS144R2	1,000	150	N	50	N	500	N	N	.04	N	N	.1	N	60
WS147R	700	20	N	20	N	200	N	N	.04	N	N	N	N	10
WS151R1	700	50	N	30	N	300	N	N	.12	N	N	N	N	15
WS151R2	200	20	N	15	N	300	N	N	N	N	N	N	N	10
WS152R	150	10	N	N	N	200	N	N	.02	N	N	N	N	5
WS160R1	<100	10	N	N	N	20	N	N	N	2,000	N	.1	10	5
WS160R2	1,500	150	N	30	N	700	N	N	N	<10	N	.1	N	50
WS161R1	500	50	N	10	N	70	N	N	N	10	N	N	2	30
WS161R2	200	20	N	15	N	100	N	N	.02	>2,000	N	.5	28	10
WS161R3	N	10	N	N	N	50	N	N	N	80	N	<.1	4	<5
WS161R4	<100	N	N	N	N	N	N	N	N	50	N	N	2	N
WS162R	100	15	N	N	N	70	N	N	N	20	N	N	2	<5
WS163R1	700	70	N	10	N	150	N	N	.02	20	N	N	2	40
WS163R2	100	200	N	20	N	300	N	N	.68	600	N	.1	24	60
WS163R3	<100	N	N	N	N	N	N	.30	.04	40	N	.1	6	10
WS164R	1,000	50	N	10	N	100	N	N	N	20	N	<.1	N	20
WS165R	N	20	N	50	N	300	N	N	.04	<10	N	N	N	15

Table 6. Description of rock samples

SAMPLE	DESCRIPTION
87WS002R1	welded tuff
87WS002R2	porphyry basalt
87WS003R	basalt
87WS005R	basalt
87WS006R	basalt
87WS007R	granite
87WS008R	schist
87WS009R	welded tuff
87WS013R1	ash tuff
87WS013R2	sedimentary volcanic
87WS018R	ash tuff
87WS021R	ash tuff
87WS022R	andesite-basalt
87WS025R	chert
87WS031R	welded tuff
87WS032R1	tailings
87WS032R2	andesite
87WS036R	welded tuff
87WS044R	breccia
87WS050R	welded tuff
87WS055R1	tuff
87WS055R2	volcanic
87WS056R	tuff
87WS066R	volcanic
87WS074R	volcanic
87WS075R	silicified volcanic
87WS076R	chloritized welded tuff
87WS078R	andesite
87WS083R	basalt
87WS086R	silicified volcanic
87WS094R	andesite
87WS096R1	quartzite
87WS096R2	quartz vein
87WS098R	welded tuff
87WS099R1	volcanic
87WS099R2	volcanic
87WS100R	tuff
87WS106R	basalt
87WS109R1	andesite
87WS109R2	andesite
87WS111R1	metamorphosed granite
87WS111R2	silicified andesite
87WS121R	ash tuff
87WS123R1	gouge material
87WS123R2	gouge material
87WS123R3	granite
87WS124R1	schist
87WS131R	chloritized latite

Table 6.--continued

87WS132R	tuff
87WS136R	tuff
87WS142R	latite with quartz veins
87WS143R	oxidized latite
87WS144R1	volcanic
87WS144R2	volcanic
87WS147R	altered latite
87WS151R1	granite
87WS151R2	quartz monzonite
87WS152R	latite
87WS160R1	quartz vein
87WS160R2	intermediate volcanic
87WS161R1	clay gouge
87WS161R2	breccia
87WS161R3	intermediate volcanic
87WS161R4	quartz vein
87WS162R	ash tuff
87WS163R1	andesite
87WS163R2	iron stained andesite
87WS163R3	quartz vein
87WS164R	andesite
87WS165R	volcanic
