UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality map for heavy-mineral-concentrate and stream-sediment samples from the Desatoya Mountains Wilderness Study Area, Churchill and Lander Counties, Nevada

By

Harlan N. Barton*, Gordon W. Day*, and M. J. Malcolm*

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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 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 Desatoya Mountains Wilderness Study Area, Churchill and Lander Counties, Nevada.

INTRODUCTION

In August 1985, the U.S. Geological Survey conducted a reconnaissance geochemical survey of the Desatoya Mountains Wilderness Study Area (NV-030-110), Churchill and Lander Counties, Nevada.

The Desatoya Mountains Wilderness Study Area comprises about 43,053 acres in the southeastern Churchill County and southwestern Lander County, Nevada, and lies about 120 mi east of Reno. The western boundary is a mile east of Cold Springs, Nevada (fig. 1).

The wilderness study area is bounded on the south by Nevada Highway 2 and by U.S. Highway 50 along a small part of the northwest boundary of the area. Unimproved dirt roads reach the mouths of most of the canyons on the west side of the wilderness study area and a few four-wheel-drive trails from the north, east, and south reach high points in the area. The topographic and geologic setting of the area is described by McKee and others, (1987). The terrain is rugged and the relief is as much as 4,500 ft. Elevation ranges from 9,973 ft above sea level at Desatoya Peak to about 5,400 ft in Edwards Creek Valley at the north end of the area. The climate is semiarid and the vegetation is typical of the transition climate zone that supports pinon pine, juniper, and mountain mahogany. Perennial riparian vegetation includes willow, aspen, wild rose, and grasses and wildflowers. The study area is underlain by a thick sequence of rhyolite welded tuffs and intrusive rocks mostly of Tertiary age. These rocks are the products of a volcano that collapsed to form a large caldera in the central part of what is now the Desatoya Mountains. This caldera subsequently filled with volcanic material before being greatly modified by basin and range faulting and by erosion.

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 a limited number of minerals in rock material eroded from the drainage basin upstream from each sample site. The selective concentration of minerals, many of which may be ore related, permits determination of some elements that are not easily detected in stream-sediment samples.

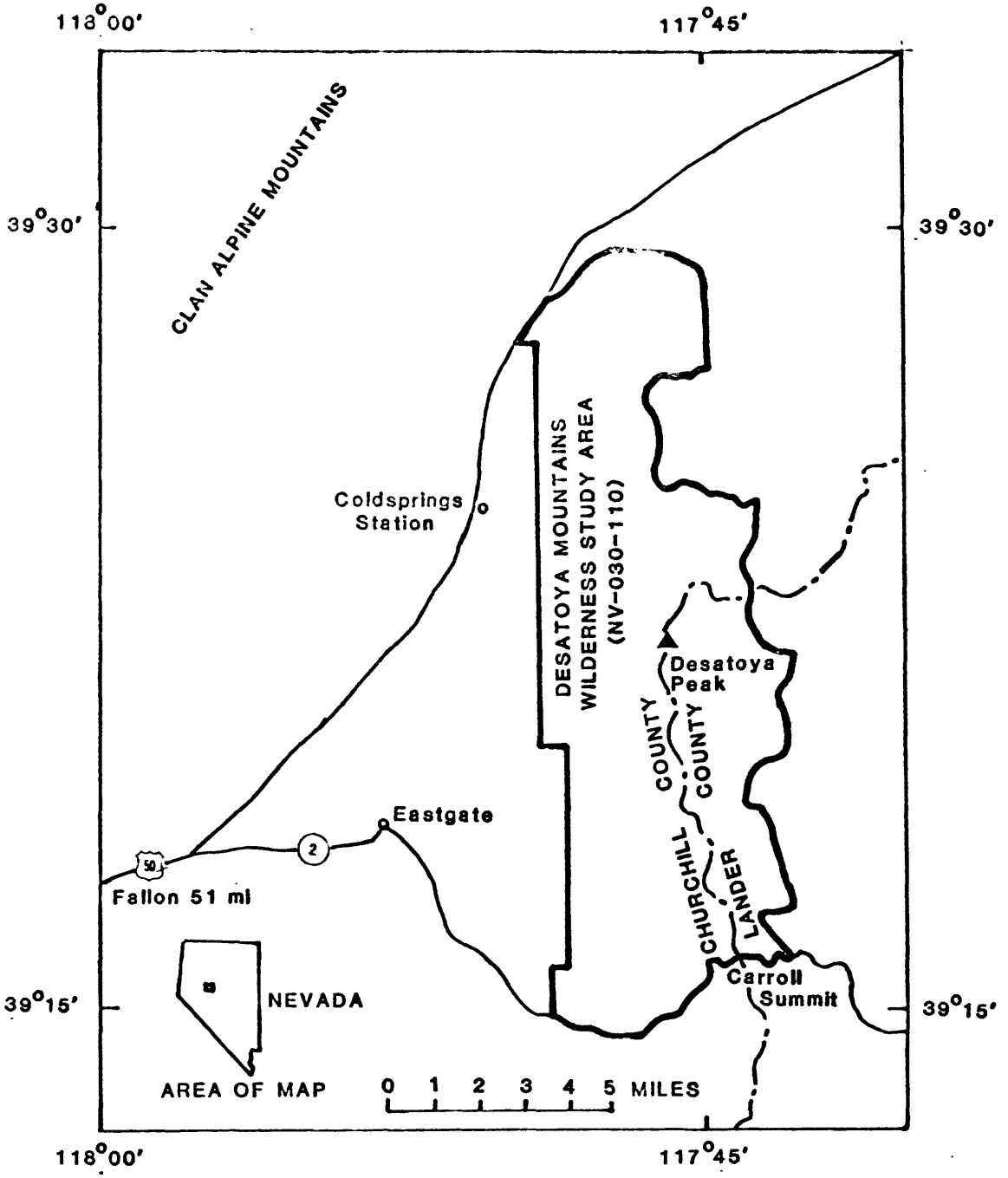

Figure 1. Index map showing location of the Desatoya Mountains Wilderness Study Area, Churchill and Lander Counties, Nevada

Sample Collection

Samples were collected at 115 sites (plate 1). At nearly all of those sites, both a stream-sediment sample and a heavy-mineral-concentrate sample were collected. Sampling density was about one sample site per 0.7 mi^2 for stream sediments and heavy-mineral concentrates. The area of the drainage basins sampled ranged from 0.2 mi^2 to 1 mi^2.

Sufficient heavy-mineral concentrate for spectrographic analysis was (5 mg) recovered from the separation steps for only 50 of the 115 sites sampled.

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.

Sample Preparation

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

After air drying, bromoform (specific gravity 2.8) was used to remove the remaining quartz and feldspar from the heavy-mineral-concentrate samples that had been panned in the field. The resultant heavy-mineral sample was separated into three fractions using a large electromagnet (in this case a modified Frantz Isodynamic Separator). The most magnetic material, primarily magnetite, was not analyzed. The second fraction, largely ferromagnesian silicates and iron oxides, was saved for 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 0.1 ampere to remove the magnetite and ilmenite, and a current of 1.0 ampere to split the remainder of the sample into paramagnetic and nonmagnetic fractions.

Sample Analysis

Spectrographic method

Stream-sediment and heavy-mineral-concentrate samples were analyzed for 31 elements using semiquantitative, direct-current arc emission spectrographic methods, that of Grimes and Marranzino (1968) for heavy-mineral concentrates

and that described by Crock and others (1987) for stream sediments. The elements analyzed and their lower and upper limits of determination for both sample types 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, thereby giving six reporting intervals over an order of magnitude. 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 (ppm) (micrograms/gram). Analytical data for stream-sediment samples from the Desatoya Mountains Wilderness Study Area are listed in table 2. Data for heavy-mineral-concentrate samples are listed in table 3.

Inductaively coupled plasma method

Another method of analysis used on stream-sediment samples from the Desatoya Mountains Wilderness Study Area was by inductively coupled plasma atomic emission spectroscopy (ICP) using the method described in Crock and others (1987). Limits of detection for elements determined by ICP are As, 5 ppm; Sb, 2 ppm; Zn, 2 ppm; Bi, 2 ppm; and Cd 0.1 ppm.

Analytical results for stream-sediment samples by ICP are listed in table 2 along with the spectrographic data.

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 2 and 3 list the results of analyses for the samples of stream sediment and heavy-mineral concentrate, respectively. For the two 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 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. If an element was not sought in a sample, two dashes (--) are entered in tables 3-6 in place of an analytical value. Because of the formatting used in

the computer program that produced tables 2 and 3, 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.

No detectable amounts of As, Au, Bi, Cd, Sb, W, Sn, and Th in stream-sediment samples nor As, Cd, Co, Mo, Ni, Sb, W, Zn, and Th in heavy-mineral-concentrate samples were found, consequently, the columns for these elements have been deleted from tables 2 and 3, respectively. All heavy-mineral-concentrate samples analyzed contained more than the upper determination limit for zirconium and have been deleted from table 3.

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TABLE 1.--Limits of determination for the spectrographic analysis of stream-sediment and heavy-mineral-concentrate samples

Elements	Stream sediment		Heavy-mineral concentrate	
	Lower determination limit	Upper determination limit	Lower determination limit	Upper determination limit
	Percent			
Iron (Fe)	0.05	20	0.1	50
Magnesium (Mg)	.02	10	.05	20
Calcium (Ca)	.05	20	.1	50
Titanium (Ti)	.002	1	.005	2
	Parts per million			
Manganese (Mn)	10	5,000	20	10,000
Silver (Ag)	0.5	5,000	1	10,000
Arsenic (As)	700	10,000	500	20,000
Gold (Au)	15	500	20	1,000
Boron (B)	10	2,000	20	5,000
Barium (Ba)	20	5,000	50	10,000
Beryllium (Be)	1	1,000	2	2,000
Bismuth (Bi)	10	1,000	20	2,000
Cadmium (Cd)	30	500	50	1,000
Cobalt (Co)	5	2,000	10	5,000
Chromium (Cr)	10	5,000	20	10,000
Copper (Cu)	5	20,000	10	50,000
Lanthanum (La)	30	1,000	50	2,000
Molybdenum (Mo)	5	2,000	10	5,000
Niobium (Nb)	20	2,000	50	5,000
Nickel (Ni)	5	5,000	10	10,000
Lead (Pb)	10	20,000	20	50,000
Antimony (Sb)	100	10,000	200	20,000
Scandium (Sc)	5	100	10	200
Tin (Sn)	10	1,000	20	2,000
Strontium (Sr)	100	5,000	200	10,000
Vanadium (V)	10	10,000	20	20,000
Tungsten (W)	50	10,000	100	20,000
Yttrium (Y)	10	2,000	20	5,000
Zinc (Zn)	200	10,000	500	20,000
Zirconium (Zr)	10	1,000	20	2,000
Thorium (Th)	200	2,000	200	5,000

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA

[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	B-ppm s
DB001S	39 18 46	117 44 0	2.0	.3	1.5	.30	300	N	<10
DB002S	39 23 15	117 43 16	1.5	.3	1.5	.20	300	N	10
DB003S	39 23 7	117 43 17	1.5	.5	1.5	.20	300	N	10
DB004S	39 21 52	117 43 5	1.5	.3	2.0	.30	300	N	<10
DB005S	39 21 2	117 48 48	1.5	.3	1.5	.15	300	N	10
DB006S	39 22 0	117 48 15	1.5	.5	1.5	.20	300	N	10
DB007S	39 22 4	117 47 27	3.0	.3	1.5	.30	700	N	10
DB008S	39 23 8	117 47 13	1.5	.3	1.5	.20	300	N	<10
DB009S	39 24 24	117 48 53	3.0	.3	2.0	.20	300	N	10
DB010S	39 24 37	117 48 25	2.0	.5	1.5	.20	500	N	10
DB011S	39 25 14	117 48 30	2.0	.5	1.5	.30	300	N	10
DB012S	39 25 33	117 47 57	1.5	.5	2.0	.15	300	N	10
DB013S	39 25 50	117 48 31	2.0	.5	2.0	.20	500	N	10
DB014S	39 26 34	117 48 39	1.5	.5	1.5	.20	300	N	10
DB015S	39 26 30	117 48 39	1.5	.3	1.5	.20	300	N	10
DB016S	39 28 20	117 48 16	2.0	.7	1.5	.20	500	N	15
DB017S	39 28 33	117 46 22	1.5	.5	1.5	.20	300	N	10
DB018S	39 27 44	117 44 58	1.5	.5	1.5	.20	300	N	10
DH001S	39 20 49	117 43 57	3.0	.3	1.5	.30	300	N	<10
DH002S	39 20 56	117 43 56	2.0	.3	1.5	.30	500	N	10
DH003S	39 20 59	117 42 38	2.0	.3	1.5	.30	300	N	<10
DH004S	39 21 7	117 42 28	2.0	.5	1.5	.30	500	N	15
DH005S	39 20 10	117 43 29	2.0	.5	1.5	.20	300	N	10
DH006S	39 19 48	117 43 57	3.0	.3	1.5	.50	300	N	<10
DH007S	39 19 44	117 43 54	2.0	.3	1.5	.30	300	N	10
DH008S	39 18 50	117 43 55	3.0	.5	1.5	.30	300	N	<10
DH009S	39 18 31	117 43 24	2.0	.3	1.5	.30	300	N	10
DH010S	39 24 42	117 45 42	2.0	.5	1.5	.20	300	N	10
DH011S	39 24 43	117 45 47	1.5	.5	1.5	.30	300	N	15
DH012S	39 25 24	117 45 49	1.5	.3	1.5	.30	300	N	<10
DH013S	39 25 31	117 45 51	1.5	.5	1.5	.15	300	N	10
DH014S	39 26 0	117 45 49	1.5	.3	1.5	.20	300	N	<10
DH015S	39 26 19	117 46 4	2.0	.7	1.5	.20	500	1.5	15
DH016S	39 26 58	117 45 59	2.0	.5	1.5	.30	300	N	10
DH018S	39 25 22	117 44 47	1.5	.5	1.5	.15	300	N	10
DH019S	39 24 40	117 44 25	1.5	.3	1.5	.15	300	N	10
DH020S	39 24 36	117 44 0	2.0	.3	1.5	.30	300	N	<10
DH021S	39 24 30	117 43 13	1.5	.3	1.5	.50	300	N	<10
DH022S	39 24 22	117 42 51	2.0	.5	1.5	.20	500	N	10
DH023S	39 23 5	117 45 44	2.0	.3	1.5	.30	300	N	10
DH024S	39 23 10	117 45 41	2.0	.3	1.5	.30	300	N	10
DH025S	39 23 33	117 45 47	1.5	.5	1.5	.20	300	N	10
DH026S	39 23 43	117 46 5	1.5	.3	1.5	.20	300	N	<10
DH027S	39 23 43	117 46 28	1.5	.3	1.5	.15	300	N	15
DH028S	39 23 34	117 46 33	1.5	.3	1.5	.15	300	N	<10

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Ba-ppm s	Be-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
DB001S	1,500	1.0	<5	15	5	200	N	<20	<5	15
DB002S	700	1.5	<5	15	7	70	N	<20	<5	15
DB003S	700	1.0	<5	15	10	30	N	<20	<5	15
DB004S	1,000	1.5	<5	15	7	70	N	<20	<5	15
DB005S	1,500	1.5	5	15	7	30	N	<20	<5	15
DB006S	1,000	1.5	5	20	7	30	N	<20	5	15
DB007S	1,500	1.5	5	15	7	150	N	20	<5	15
DB008S	2,000	1.5	<5	15	<5	70	5	<20	5	15
DB009S	1,000	1.5	5	20	7	70	N	<20	<5	15
DB010S	1,000	1.5	7	30	7	30	N	<20	5	15
DB011S	1,500	1.0	5	20	7	50	<5	<20	5	15
DB012S	1,000	1.5	5	30	7	30	N	<20	5	15
DB013S	1,500	1.5	5	20	7	30	N	<20	5	15
DB014S	1,000	1.5	<5	15	5	<30	N	<20	15	15
DB015S	1,500	1.5	<5	15	5	70	N	<20	<5	15
DB016S	1,000	1.5	5	30	7	30	N	<20	5	15
DB017S	1,500	1.5	7	15	7	30	N	<20	<5	15
DB018S	700	1.5	7	30	7	<30	N	<20	5	15
DH001S	1,500	1.5	5	15	7	70	<5	<20	<5	15
DH002S	1,500	1.5	<5	15	5	70	N	<20	<5	15
DH003S	1,500	1.5	5	20	7	100	<5	<20	5	15
DH004S	1,000	1.5	7	20	7	50	N	<20	5	15
DH005S	1,500	1.5	<5	15	7	70	N	<20	<5	15
DH006S	2,000	1.0	5	15	<5	150	<5	<20	<5	15
DH007S	1,500	1.0	<5	15	7	70	N	<20	5	15
DH008S	1,500	1.5	5	15	7	70	N	<20	<5	15
DH009S	1,500	1.5	5	20	5	70	N	<20	<5	15
DH010S	1,000	1.5	7	15	7	30	N	<20	<5	15
DH011S	1,000	1.5	5	15	7	30	N	<20	<5	15
DH012S	1,000	1.5	<5	30	7	<30	N	<20	<5	15
DH013S	700	1.5	<5	20	10	50	N	<20	5	15
DH014S	1,500	1.5	<5	10	5	<30	N	<20	<5	15
DH015S	1,000	1.5	5	20	15	30	N	<20	5	20
DH016S	1,000	1.5	5	20	7	<30	N	<20	5	20
DH018S	700	1.5	5	15	10	<30	N	<20	5	20
DH019S	1,000	2.0	<5	15	7	30	<5	<20	5	15
DH020S	1,000	1.5	5	15	7	70	N	<20	<5	15
DH021S	1,000	1.5	<5	10	5	150	N	30	<5	15
DH022S	1,000	1.5	5	15	7	30	N	<20	7	15
DH023S	1,500	1.5	<5	15	7	150	<5	<20	<5	15
DH024S	1,500	1.5	<5	<10	<5	150	N	20	<5	15
DH025S	700	1.5	5	15	7	30	N	<20	5	15
DH026S	1,000	1.5	<5	10	<5	70	N	<20	<5	15
DH027S	700	1.5	<5	15	7	<30	N	<20	<5	15
DH028S	1,000	1.5	<5	15	7	30	N	<20	<5	15

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Sc-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S	Zr-ppm S	As-ppm ICP	Bi-ppm ICP	Cd-ppm ICP	Sb-ppm ICP	Zn-ppm ICP
DB001S	7	500	50	10	N	150	<5	<2	.4	<2	55
DB002S	7	500	30	10	N	150	<5	<2	.3	<2	42
DB003S	7	300	30	10	N	150	<5	<2	.4	<2	60
DB004S	7	500	50	<10	N	200	<5	<2	.4	<2	46
DB005S	7	700	30	10	N	100	<5	<2	.1	<2	26
DB006S	7	700	70	15	N	150	<5	<2	.5	<2	46
DB007S	7	500	70	15	N	300	<5	<2	.7	<2	80
DB008S	7	700	30	10	N	150	<5	<2	.3	<2	46
DB009S	7	700	100	15	N	200	<5	<2	.4	<2	50
DB010S	7	500	70	10	N	150	5	<2	.4	<2	53
DB011S	7	700	70	10	N	200	<5	<2	.5	<2	63
DB012S	7	500	50	10	N	150	8	<2	.5	<2	53
DB013S	7	700	70	15	N	200	<5	<2	.5	<2	44
DB014S	7	500	50	<10	N	150	6	<2	.6	<2	45
DB015S	7	500	30	10	N	150	<5	2	.4	<2	46
DB016S	7	700	70	15	N	150	<5	<2	.3	<2	48
DB017S	7	500	50	10	N	150	8	2	.4	<2	42
DB018S	7	500	50	10	N	150	6	<2	.5	<2	56
DH001S	7	700	70	15	N	200	<5	<2	.5	<2	90
DH002S	7	700	70	15	N	300	<5	3	.3	<2	71
DH003S	7	700	50	15	N	150	<5	<2	.5	<2	74
DH004S	7	500	70	15	N	150	<5	<2	.4	<2	63
DH005S	7	500	50	10	N	200	<5	<2	.6	<2	54
DH006S	7	700	100	15	N	300	<5	<2	.5	<2	110
DH007S	7	700	70	15	N	300	<5	<2	.8	<2	73
DH008S	7	500	70	15	N	300	<5	3	.6	<2	80
DH009S	7	700	50	10	N	200	<5	<2	.3	<2	67
DH010S	7	500	70	10	N	150	<5	<2	.5	<2	68
DH011S	7	500	70	15	N	150	<5	<2	.4	<2	49
DH012S	7	500	50	10	N	150	<5	<2	1.2	<2	50
DH013S	7	300	50	10	N	100	<5	<2	.8	<2	68
DH014S	7	500	30	<10	N	200	<5	<2	.3	<2	36
DH015S	7	500	30	10	N	100	<5	<2	.7	<2	84
DH016S	7	300	50	10	N	150	6	<2	.6	<2	55
DH018S	7	300	30	10	N	70	<5	<2	.5	<2	67
DH019S	7	500	30	15	N	200	<5	<2	.4	<2	47
DH020S	7	500	50	15	N	300	<5	<2	.4	<2	65
DH021S	7	300	30	15	N	500	<5	<2	.3	<2	46
DH022S	7	300	30	15	N	200	<5	<2	.5	<2	60
DH023S	7	700	70	15	N	200	<5	<2	.5	<2	70
DH024S	7	500	30	10	N	300	<5	<2	.3	<2	66
DH025S	7	500	50	10	N	100	9	<2	.6	<2	71
DH026S	5	500	30	<10	N	200	<5	<2	.3	<2	41
DH027S	7	300	30	10	N	70	6	<2	.5	<2	60
DH028S	7	500	30	10	N	150	<5	<2	.5	<2	53

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s
DH029S	39 23 32	117 47 30	1.5	.5	1.5	.20	300	N	10
DH030S	39 23 30	117 48 27	2.0	.3	1.5	.30	300	N	<10
DH031S	39 26 19	117 49 3	1.5	.7	2.0	.15	300	N	10
DH032S	39 27 7	117 48 33	1.5	.5	1.5	.30	300	N	10
DH033S	39 28 22	117 47 11	1.5	.5	1.5	.20	300	N	10
DH034S	39 28 30	117 47 2	1.5	.5	1.5	.30	500	N	<10
DH035S	39 28 5	117 45 24	1.5	.5	1.5	.20	300	N	10
DJ001S	39 16 47	117 42 7	1.5	.5	1.5	.15	300	N	10
DJ002S	39 15 54	117 44 14	1.5	.3	1.5	.15	300	N	10
DJ003S	39 14 47	117 45 25	1.5	.3	1.5	.15	300	N	10
DJ004S	39 14 27	117 46 43	1.5	.5	1.5	.20	500	N	10
DJ005S	39 14 38	117 48 2	2.0	.3	1.5	.30	300	N	10
DJ006S	39 17 19	117 42 43	1.5	.5	1.5	.15	300	N	15
DJ007S	39 17 22	117 42 40	1.5	.5	1.5	.15	500	N	10
DJ008S	39 16 30	117 44 48	1.5	.3	1.5	.15	300	N	10
DJ009S	39 15 42	117 45 42	2.0	.3	1.5	.15	300	N	10
DJ010S	39 15 33	117 47 57	3.0	.5	1.5	.30	500	N	10
DJ011S	39 16 23	117 47 50	7.0	.5	1.5	1.00	700	N	<10
DJ012S	39 17 15	117 46 15	1.5	.3	1.5	.15	200	N	10
DJ013S	39 19 59	117 47 17	1.5	.3	1.5	.30	300	N	<10
DJ014S	39 20 29	117 47 36	3.0	.3	1.5	.30	500	N	10
DJ015S	39 25 58	117 49 7	1.5	.5	1.5	.15	300	N	15
DJ016S	39 27 13	117 48 16	1.5	.5	1.5	.20	300	N	10
DJ017S	39 27 9	117 48 16	1.5	.5	1.5	.20	500	N	10
DJ018S	39 28 19	117 47 22	1.5	.5	1.5	.20	300	N	20
DJ019S	39 28 3	117 45 44	2.0	.5	2.0	.30	300	N	10
DJ020S	39 28 3	117 45 47	1.5	.7	1.5	.15	300	N	15
DJ021S	39 27 45	117 44 47	1.5	.5	1.5	.15	500	N	10
DK001S	39 15 56	117 42 44	1.5	.7	1.5	.15	300	N	10
DK002S	39 16 1	117 42 42	2.0	.3	1.5	.15	300	N	10
DK003S	39 14 55	117 45 8	1.0	.3	1.5	.15	500	N	<10
DK004S	39 14 43	117 45 38	1.5	.3	1.5	.15	300	N	10
DK005S	39 14 32	117 47 16	3.0	.3	2.0	.30	500	N	<10
DK006S	39 17 59	117 43 7	1.5	.3	1.5	.30	500	N	10
DK007S	39 17 50	117 43 26	1.5	.3	1.5	.20	300	N	10
DK008S	39 17 45	117 43 22	2.0	.5	1.5	.20	500	N	10
DK009S	39 16 26	117 44 47	1.5	.5	1.5	.15	300	N	10
DK010S	39 15 43	117 46 7	1.5	.5	1.5	.15	300	N	10
DK011S	39 15 37	117 46 10	1.5	.5	1.5	.15	300	N	10
DK012S	39 15 51	117 47 13	3.0	.7	2.0	.30	300	N	<10
DK013S	39 15 13	117 47 40	2.0	.3	1.5	.20	300	N	10
DK014S	39 16 37	117 47 45	5.0	.5	2.0	.30	500	N	<10
DK015S	39 17 34	117 45 25	2.0	.3	1.5	.30	500	N	<10
DK016S	39 17 32	117 45 23	2.0	.5	1.5	.30	500	N	10
DK017S	39 17 49	117 46 36	3.0	.3	1.5	.50	500	N	10

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Ba-ppm s	Be-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
DH029S	1,500	1.5	5	20	7	30	N	<20	5	15
DH030S	1,500	1.5	<5	7	5	70	N	<20	<5	15
DH031S	1,000	1.5	5	30	7	30	N	<20	5	15
DH032S	700	1.5	<5	15	7	30	N	<20	<5	15
DH033S	700	1.5	5	30	7	<30	N	<20	<5	15
DH034S	1,500	1.5	5	15	7	30	N	<20	<5	15
DH035S	1,000	1.5	5	30	7	30	N	<20	5	15
DJ001S	700	1.5	<5	15	7	30	N	<20	<5	15
DJ002S	1,000	1.5	5	15	7	50	N	<20	<5	15
DJ003S	1,000	1.0	5	20	7	30	N	<20	5	15
DJ004S	1,000	1.5	5	15	7	<30	N	<20	5	15
DJ005S	1,500	1.5	<5	<10	7	30	N	<20	<5	15
DJ006S	700	1.5	5	30	7	<30	N	<20	5	15
DJ007S	1,000	1.5	<5	15	7	<30	N	<20	<5	15
DJ008S	1,000	1.5	5	20	7	30	N	<20	<5	15
DJ009S	1,000	1.5	5	15	7	30	N	<20	<5	15
DJ010S	1,500	1.5	5	15	7	<30	N	<20	<5	15
DJ011S	700	1.5	15	30	7	<30	N	20	10	15
DJ012S	1,000	1.0	5	30	7	<30	N	<20	5	15
DJ013S	1,500	1.5	<5	<10	<5	70	N	<20	<5	15
DJ014S	1,000	1.5	5	20	7	30	N	<20	5	15
DJ015S	1,000	1.5	5	20	7	<30	N	<20	5	15
DJ016S	1,000	1.5	<5	15	7	30	<5	<20	7	15
DJ017S	1,000	1.5	5	15	7	30	N	<20	<5	15
DJ018S	1,000	1.5	7	15	7	30	N	<20	<5	15
DJ019S	1,000	1.5	7	30	15	30	N	<20	10	15
DJ020S	700	1.5	5	15	7	30	N	<20	<5	15
DJ021S	1,000	1.5	5	15	7	30	N	<20	<5	15
DK001S	1,000	1.5	5	20	7	50	N	<20	5	15
DK002S	1,000	1.5	5	30	7	70	N	<20	5	15
DK003S	1,500	1.5	<5	5	<5	30	N	<20	<5	15
DK004S	1,000	1.5	<5	15	7	<30	N	<20	5	15
DK005S	1,000	1.0	5	10	10	<30	N	<20	<5	15
DK006S	1,500	1.0	5	20	7	50	<5	<20	5	15
DK007S	1,000	1.5	<5	15	7	30	N	<20	<5	15
DK008S	1,000	1.5	5	15	7	<30	N	<20	5	15
DK009S	700	1.5	5	15	7	30	N	<20	<5	15
DK010S	700	1.5	<5	20	10	30	<5	<20	5	20
DK011S	1,500	1.5	5	15	7	50	N	<20	<5	15
DK012S	1,000	1.5	7	30	7	50	N	<20	15	15
DK013S	1,500	1.0	5	15	7	30	N	<20	5	15
DK014S	1,000	1.5	10	30	7	30	N	<20	7	15
DK015S	2,000	1.5	<5	<10	<5	50	N	<20	<5	15
DK016S	2,000	1.5	<5	15	7	30	N	<20	<5	15
DK017S	1,500	1.5	5	15	7	30	N	20	<5	15

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Sc-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	As-ppm ICP	Bi-ppm ICP	Cd-ppm ICP	Sb-ppm ICP	Zn-ppm ICP
DH029S	7	700	70	10	N	150	6	<2	.5	<2	52
DH030S	7	500	30	10	N	150	<5	<2	.3	<2	55
DH031S	7	700	70	10	N	100	<5	<2	.3	<2	37
DH032S	7	500	30	10	N	150	<5	<2	.4	<2	51
DH033S	7	500	30	15	N	150	6	<2	.4	<2	47
DH034S	7	500	30	10	N	150	<5	<2	.6	<2	49
DH035S	7	500	70	10	N	100	7	<2	.5	<2	55
DJ001S	7	300	30	10	N	100	5	<2	.4	<2	46
DJ002S	7	500	50	10	N	150	9	<2	.4	<2	50
DJ003S	7	500	70	10	N	100	<5	<2	.3	<2	43
DJ004S	7	500	50	15	N	100	6	<2	.3	<2	48
DJ005S	7	500	50	10	N	100	<5	<2	.3	<2	47
DJ006S	7	500	30	10	N	100	5	<2	.4	<2	47
DJ007S	7	300	50	10	N	150	7	<2	.4	<2	54
DJ008S	7	500	50	15	N	150	5	<2	.4	<2	62
DJ009S	7	500	50	10	N	150	<5	<2	.3	<2	55
DJ010S	7	500	70	<10	N	150	5	<2	.5	<2	64
DJ011S	10	500	200	10	200	300	<5	5	1.2	<2	190
DJ012S	7	500	50	15	N	100	<5	<2	.4	<2	60
DJ013S	7	500	30	10	N	300	<5	2	.2	<2	52
DJ014S	7	700	70	15	N	200	<5	<2	.5	<2	72
DJ015S	7	700	50	10	N	150	<5	<2	.5	<2	54
DJ016S	7	300	50	10	N	150	7	<2	.7	2	53
DJ017S	7	500	50	10	N	150	<5	<2	.5	<2	43
DJ018S	7	700	50	10	N	100	<5	<2	.4	<2	47
DJ019S	10	700	70	20	N	150	<5	<2	.6	<2	58
DJ020S	7	500	30	15	N	150	7	<2	.5	<2	52
DJ021S	7	700	30	10	N	150	5	<2	.7	<2	46
DK001S	7	500	50	10	N	100	8	<2	.4	<2	57
DK002S	7	500	70	10	N	150	5	<2	.5	<2	56
DK003S	5	500	30	<10	N	150	8	<2	.2	<2	28
DK004S	7	500	30	<10	N	100	<5	<2	.3	<2	58
DK005S	7	500	70	15	N	100	<5	<2	.5	<2	48
DK006S	7	500	30	10	N	200	5	<2	.7	<2	58
DK007S	7	500	50	15	N	200	<5	<2	.5	<2	62
DK008S	7	500	70	10	N	150	6	<2	.4	<2	56
DK009S	7	300	30	10	N	150	6	<2	.5	<2	58
DK010S	7	300	50	10	N	100	<5	<2	.7	<2	69
DK011S	7	500	50	10	N	150	7	<2	.5	<2	63
DK012S	7	700	150	10	N	150	<5	<2	1.0	<2	69
DK013S	7	700	70	10	N	150	<5	<2	.3	<2	37
DK014S	7	700	150	10	N	100	<5	<2	.6	<2	69
DK015S	10	500	50	20	N	300	<5	<2	.3	<2	62
DK016S	7	300	30	15	N	150	<5	<2	.6	<2	80
DK017S	10	700	70	20	N	300	7	3	.4	<2	90

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s
DK018S	39 18 7	117 46 40	2.0	.7	2.0	.20	300	N	10
DK019S	39 18 24	117 46 53	3.0	.3	1.5	.30	300	N	10
DK021S	39 19 10	117 46 22	1.5	.3	1.5	.20	300	N	10
DK022S	39 18 37	117 47 23	2.0	.5	1.5	.30	500	N	10
DK023S	39 19 7	117 47 14	2.0	.3	1.5	.20	500	N	10
DK024S	39 19 29	117 47 9	2.0	.5	1.5	.20	500	N	10
DK025S	39 19 42	117 47 15	2.0	.5	2.0	.20	500	N	10
DK026S	39 20 22	117 46 27	1.5	.3	1.5	.30	300	N	<10
DK027S	39 20 17	117 46 25	3.0	.3	1.5	.70	700	N	<10
DK028S	39 22 21	117 44 2	1.5	.3	1.5	.15	300	N	10
DK029S	39 22 25	117 44 3	3.0	.3	1.5	.30	700	N	<10
DK030S	39 21 41	117 42 44	1.5	.5	1.5	.20	300	N	15
DK031S	39 20 37	117 49 8	1.5	.5	1.5	.20	300	N	10
DK032S	39 21 17	117 48 48	1.5	.5	1.5	.15	500	N	<10
DK033S	39 21 53	117 48 41	1.5	.5	1.5	.20	300	N	<10
DK034S	39 21 30	117 47 20	2.0	.5	1.5	.30	500	N	10
DK035S	39 21 33	117 47 17	3.0	.3	1.5	.50	500	N	<10
DK036S	39 22 26	117 48 26	1.5	.5	1.5	.20	300	N	10
DK037S	39 22 43	117 48 27	2.0	.5	1.5	.15	300	N	<10
DK038S	39 23 7	117 48 30	1.5	.3	1.5	.15	300	N	<10
DK039S	39 23 4	117 47 13	1.5	.3	1.5	.20	300	N	<10
DK040S	39 23 55	117 49 5	2.0	.3	1.5	.30	300	N	<10
DK041S	39 24 43	117 48 24	1.5	.5	2.0	2.00	300	N	10
DK042S	39 25 12	117 48 34	5.0	.5	1.5	.30	700	N	<10
DK043S	39 25 29	117 47 58	1.5	.5	1.5	.20	500	N	10

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Ba-ppm s	Be-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
DK018S	1,000	1.5	5	20	7	<30	<5	<20	7	15
DK019S	1,500	1.5	<5	15	5	70	N	<20	<5	15
DK021S	1,500	1.5	<5	7	5	100	N	<20	<5	15
DK022S	1,000	1.0	5	15	7	150	N	<20	5	15
DK023S	1,500	1.5	<5	20	7	70	N	<20	10	15
DK024S	1,000	1.5	5	30	7	<30	N	<20	5	15
DK025S	1,000	1.5	<5	15	10	<30	N	<20	5	15
DK026S	2,000	1.0	<5	<10	<5	150	N	<20	<5	15
DK027S	1,500	1.0	<5	<10	<5	100	<5	30	<5	15
DK028S	1,000	1.5	<5	15	7	70	N	<20	<5	15
DK029S	1,500	1.5	<5	15	7	50	N	<20	<5	15
DK030S	700	1.5	5	30	10	30	N	<20	5	15
DK031S	1,500	1.5	5	15	7	30	N	<20	5	15
DK032S	1,000	1.5	<5	15	7	70	N	<20	<5	15
DK033S	1,500	1.5	5	30	7	30	N	<20	<5	15
DK034S	1,000	1.5	<5	15	7	50	N	<20	<5	15
DK035S	1,500	1.0	<5	<10	<5	150	N	20	<5	15
DK036S	1,000	1.5	<5	15	7	<30	N	<20	<5	15
DK037S	1,000	1.5	7	30	7	30	N	<20	5	15
DK038S	1,500	1.5	<5	<10	<5	50	N	<20	<5	15
DK039S	1,500	1.5	<5	<10	<5	70	N	<20	<5	15
DK040S	1,500	1.0	5	15	5	70	<5	<20	<5	15
DK041S	1,000	1.5	5	20	7	30	N	<20	5	15
DK042S	1,500	1.0	7	30	7	150	<5	<20	5	15
DK043S	1,500	1.0	5	20	7	50	N	<20	5	15

TABLE 2.--SPECTROGRAPHIC & ICP ANALYSIS OF STREAM SEDIMENT SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Sc-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	As-ppm ICP	Bi-ppm ICP	Cd-ppm ICP	Sb-ppm ICP	Zn-ppm ICP
DK018S	7	500	50	<10	N	100	<5	<2	.7	<2	64
DK019S	10	700	30	15	N	150	<5	<2	.5	<2	110
DK021S	7	300	30	10	N	150	<5	<2	.3	<2	51
DK022S	7	500	70	10	N	150	<5	<2	.5	<2	54
DK023S	7	700	30	15	N	150	<5	<2	.4	<2	62
DK024S	7	700	70	<10	N	100	6	<2	.8	<2	60
DK025S	7	500	30	10	N	150	<5	<2	.7	<2	67
DK026S	7	700	30	15	N	200	<5	<2	.3	<2	58
DK027S	10	500	30	15	N	200	<5	<2	.4	<2	100
DK028S	7	300	30	10	N	100	<5	<2	.7	<2	67
DK029S	7	300	50	10	N	150	<5	<2	.6	<2	84
DK030S	7	500	50	15	N	150	8	<2	.5	<2	59
DK031S	7	500	30	10	N	150	<5	<2	.3	<2	38
DK032S	7	500	50	10	N	100	6	<2	.6	<2	51
DK033S	7	700	50	10	N	150	<5	<2	.6	<2	51
DK034S	7	300	50	10	N	200	<5	<2	.6	<2	57
DK035S	10	500	70	15	N	500	<5	<2	.4	<2	86
DK036S	7	500	50	<10	N	150	<5	<2	.4	<2	50
DK037S	7	700	70	10	N	100	<5	<2	.4	<2	51
DK038S	7	500	30	10	N	150	<5	<2	.2	<2	37
DK039S	7	500	30	10	N	150	<5	<2	.3	<2	45
DK040S	7	700	70	10	N	150	<5	<2	.4	<2	69
DK041S	7	700	50	10	N	150	<5	<2	.5	<2	52
DK042S	7	700	150	15	N	200	<5	<2	.8	<2	120
DK043S	7	700	70	10	N	150	<5	<2	.7	<2	63

TABLE 3.--SPECTROGRAPHIC ANALYSIS OF HEAVY-MINERAL-CONCENTRATE SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA

[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	Au-ppm s	B-ppm s	Ba-ppm s
DB008H	39 23 8	117 47 13	.20	.05	1.0	1.00	70	N	N	N	300
DB009H	39 24 24	117 48 53	.70	.15	1.5	>2.00	300	N	N	20	150
DB010H	39 24 37	117 48 25	.70	.15	3.0	>2.00	300	N	N	20	200
DB011H	39 25 14	117 48 30	.30	.15	1.5	.70	200	N	N	N	700
DB014H	39 26 34	117 48 39	.30	<.05	1.0	>2.00	70	N	N	N	150
DB016H	39 28 20	117 48 16	.10	<.05	10.0	1.50	70	N	N	N	2,000
DB017H	39 28 33	117 46 22	.10	.50	1.0	>2.00	300	N	N	N	300
DH001H	39 20 49	117 43 57	.10	<.05	.7	.70	50	N	N	N	200
DH002H	39 20 56	117 43 56	.20	.05	.7	.50	50	N	N	<20	1,500
DH003H	39 20 59	117 42 38	.30	.05	.7	1.00	70	N	N	N	300
DH004H	39 21 7	117 42 28	.30	.05	.7	.70	70	N	N	N	150
DH005H	39 20 10	117 43 29	.15	<.05	.7	.30	50	N	N	N	300
DH006H	39 19 48	117 43 57	.20	.07	.7	.30	50	N	N	N	1,500
DH007H	39 19 44	117 43 54	.20	.05	1.0	.50	70	N	N	N	1,500
DH008H	39 18 50	117 43 55	.30	.10	1.0	.30	70	N	N	<20	1,000
DH010H	39 24 42	117 45 42	.70	.07	.7	1.00	150	N	N	N	1,500
DH011H	39 24 43	117 45 47	.70	<.05	.5	2.00	50	N	N	N	200
DH014H	39 26 0	117 45 49	.20	<.05	.7	>2.00	70	N	N	N	150
DH020H	39 24 36	117 44 0	.50	.05	.7	>2.00	100	100	100	N	200
DH022H	39 24 22	117 42 51	.70	.15	.7	>2.00	100	N	N	N	150
DH023H	39 23 5	117 45 44	.30	.07	1.5	1.00	100	N	N	20	700
DH031H	39 26 19	117 49 3	.20	<.05	1.0	1.50	70	N	N	N	2,000
DH032H	39 27 7	117 48 33	.10	.05	7.0	>2.00	100	N	N	N	200
DH035H	39 28 5	117 45 24	.30	.05	1.5	>2.00	70	N	N	N	300
DJ001H	39 16 47	117 42 7	.70	.15	1.0	2.00	150	50	30	20	5,000
DJ006H	39 17 19	117 42 43	.10	<.05	.5	.70	30	N	N	N	150
DJ007H	39 17 22	117 42 40	.30	.05	1.5	1.50	150	N	N	N	70
DJ010H	39 15 33	117 47 57	.20	.05	1.5	.15	70	N	N	<20	1,500
DJ011H	39 16 23	117 47 50	.15	<.05	2.0	.03	70	N	N	N	1,500
DJ013H	39 19 59	117 47 17	.70	.10	1.5	1.00	300	N	N	N	500
DJ014H	39 20 29	117 47 36	.20	<.05	.7	.70	70	N	N	N	700
DJ016H	39 27 13	117 48 16	.30	<.05	10.0	>2.00	100	N	N	N	70
DK002H	39 16 1	117 42 42	.15	.15	1.5	.30	200	N	N	N	>10,000
DK004H	39 14 43	117 45 38	.50	.10	3.0	1.50	200	N	N	<20	300
DK007H	39 17 50	117 43 26	.50	.07	1.0	1.50	150	30	N	N	150
DK008H	39 17 45	117 43 22	.50	.07	2.0	2.00	200	N	N	N	700
DK010H	39 15 43	117 46 7	.10	.05	.3	1.50	70	N	N	N	70
DK011H	39 15 37	117 46 10	.30	.07	3.0	1.00	300	N	N	<20	7,000
DK012H	39 15 51	117 47 13	.50	.20	3.0	>2.00	500	N	N	<20	300
DK014H	39 16 37	117 47 45	.30	.07	3.0	1.00	100	N	N	<20	700
DK015H	39 17 34	117 45 25	.20	<.05	.7	.50	50	N	N	N	700
DK016H	39 17 32	117 45 23	.70	.15	1.0	1.50	200	N	N	<20	1,500
DK017H	39 17 49	117 46 36	.50	.07	1.5	1.00	150	N	N	<20	500
DK022H	39 18 37	117 47 23	.15	<.05	1.0	.70	30	N	N	N	700
DK023H	39 19 7	117 47 14	.70	.10	1.5	1.00	200	N	N	N	500

TABLE 3.--SPECTROGRAPHIC ANALYSIS OF HEAVY-MINERAL-CONCENTRATE SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Be-ppm s	Bi-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Nb-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s
DB008H	<2	N	<20	N	<50	N	70	30	N	N	<20	500
DB009H	5	N	20	N	300	N	N	70	N	N	100	700
DB010H	5	N	50	N	500	N	100	50	30	N	150	700
DB011H	5	N	<20	N	70	N	100	<10	N	N	20	500
DB014H	2	N	N	N	70	70	<20	30	N	N	30	500
DB016H	<2	N	<20	N	300	150	50	20	N	N	<20	150
DB017H	3	N	<20	N	70	<50	<20	100	N	N	50	1,000
DH001H	7	N	N	N	<50	N	50	70	N	N	<20	1,500
DH002H	3	N	20	N	70	N	30	20	N	N	<20	300
DH003H	3	N	N	<10	70	N	N	70	N	N	50	1,000
DH004H	5	N	N	N	50	N	1,500	100	N	N	30	1,500
DH005H	5	N	N	N	50	N	500	70	N	N	<20	700
DH006H	3	N	<20	N	50	N	50	30	N	300	20	500
DH007H	5	N	N	N	70	N	30	30	N	N	20	500
DH008H	3	N	30	N	70	N	50	20	N	N	20	300
DH010H	3	N	<20	300	500	N	100	20	N	N	20	700
DH011H	3	300	N	7,000	50	N	N	70	N	N	30	700
DH014H	2	N	20	N	70	N	30	100	N	N	20	1,000
DH020H	<2	N	<20	N	70	N	N	150	N	N	50	1,000
DH022H	2	N	30	<10	70	150	<20	30	N	N	30	500
DH023H	7	N	<20	N	70	N	<20	30	N	N	30	700
DH031H	3	N	N	N	70	N	<20	30	N	N	70	500
DH032H	3	N	<20	N	50	200	300	50	N	N	20	200
DH035H	3	N	N	N	150	50	N	30	N	N	70	700
DJ001H	<2	N	<20	N	1,000	N	N	200	N	N	70	1,000
DJ006H	<2	N	<20	N	100	N	N	30	N	N	20	500
DJ007H	3	N	30	N	700	N	30	150	N	N	70	1,500
DJ010H	2	N	<20	N	<50	N	<20	<10	N	700	<20	70
DJ011H	<2	N	N	N	N	N	30	<10	N	700	<20	50
DJ013H	10	N	<20	20	70	N	1,500	70	300	N	50	1,000
DJ014H	10	N	20	N	70	N	N	30	N	N	30	700
DJ016H	3	N	<20	N	100	200	50	50	N	N	30	700
DK002H	<2	N	N	100	300	N	30	50	N	700	<20	700
DK004H	3	N	30	N	500	N	100	100	300	N	70	1,000
DK007H	2	100	N	N	70	N	N	70	70	N	70	1,000
DK008H	7	N	20	N	500	N	50	150	N	N	70	1,500
DK010H	3	N	<20	N	200	N	<20	15	N	N	<20	500
DK011H	<2	N	<20	N	1,000	N	N	70	N	N	30	1,000
DK012H	2	N	50	N	700	N	70	50	N	N	150	700
DK014H	<2	N	N	N	70	N	50	N	N	700	30	500
DK015H	3	N	50	N	50	N	<20	30	200	N	20	500
DK016H	7	N	<20	N	200	N	N	50	100	N	70	1,000
DK017H	10	N	30	N	100	N	70	50	100	N	70	1,000
DK022H	3	N	20	N	<50	N	100	10	N	N	<20	200
DK023H	7	N	100	<10	70	N	150	30	N	N	70	500

TABLE 3.--SPECTROGRAPHIC ANALYSIS OF HEAVY-MINERAL-CONCENTRATE SAMPLES FROM THE DESATOYA MOUNTAINS WILDERNESS STUDY AREA, CHURCHILL AND LANDER COUNTIES, NEVADA--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
DK027H	39 20 17	117 46 25	2.00	.20	1.5	1.50	500	N	N	20	700
DK033H	39 21 53	117 48 41	.50	.15	1.0	1.50	150	N	N	<20	500
DK037H	39 22 43	117 48 27	.30	.05	3.0	>2.00	100	N	N	N	300
DK041H	39 24 43	117 48 24	.50	.20	3.0	1.50	200	30	20	30	500
DK042H	39 25 12	117 48 34	.10	<.05	1.0	.50	50	N	N	N	2,000