UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality map of stream-sediment, heavy-mineral-concentrate, rock, vegetation, lake-sediment, and evaporite samples from the Diablo Mountain Wilderness Study Area (OR-001-058), Lake County, Oregon

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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, if any. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the Diablo Mountain Wilderness Study Area (OR-001-058), Lake County, Oregon.

INTRODUCTION

In 1986, 1988, and 1989 the U.S. Geological Survey conducted a reconnaissance geochemical survey of the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

The Diablo Mountain Wilderness Study Area comprises about 133.5 mi^2 (347 km^2) in the central part of Lake County, Oregon, and is situated about 45 mi (72 km) north of Lakeview and about 4 mi (6.4 km) north of Paisley (see figure 1). Access to the region is by Oregon State Route 31. Access to the study area is by 2-wheel drive dirt roads leading off State Highway 31. Various dirt roads and jeep trails adjoin these dirt roads and provide access within the study area.

The study area lies on the west edge of the Basin and Range physiographic province in the volcanic plateau region south of the Blue Mountains and east of the High Cascades. It is bounded on the west by Summer Lake, which occupies a topographically closed basin. Tertiary sedimentary rocks, chiefly light-colored lacustrine and fluvial tuffaceous sandstone and siltstone, underlie much of the study area; the high country of the study area is largely underlain by dark gray basalt. Red and reddish-black basaltic cinders and altered basalt crop out in the area of Tenmile Butte. Tertiary rocks of the study area also include tuff and dolomitic limestone. Quaternary deposits predominate in the western valley part of the study area and consist of alluvium, sand dune, playa, lacustrine, fluvial, and claystone. The study area is within the area of a geologic map of the region at 1:250,000 scale by Walker (1963). The geology of the study area was mapped at 1:24,000 by Diggles and others (1990) as part of the current mineral resources study.

Topographic relief in the western portion of the study area is only a few hundred feet (a few hundred km) ranging from about 4,100 ft (1,250 m) on the alkali flat adjacent to Summer Lake to about 4,400 ft (1,341 m) among the sand dunes just west of the mountain front. The highest elevation in the study area is 6,147 ft (1,874 m) at the summit of Diablo Peak, giving the mountainous portion of the study area a relief of about 1,747 ft (532 m). The climate is semi-arid with rainfall of about 12 in. per year.

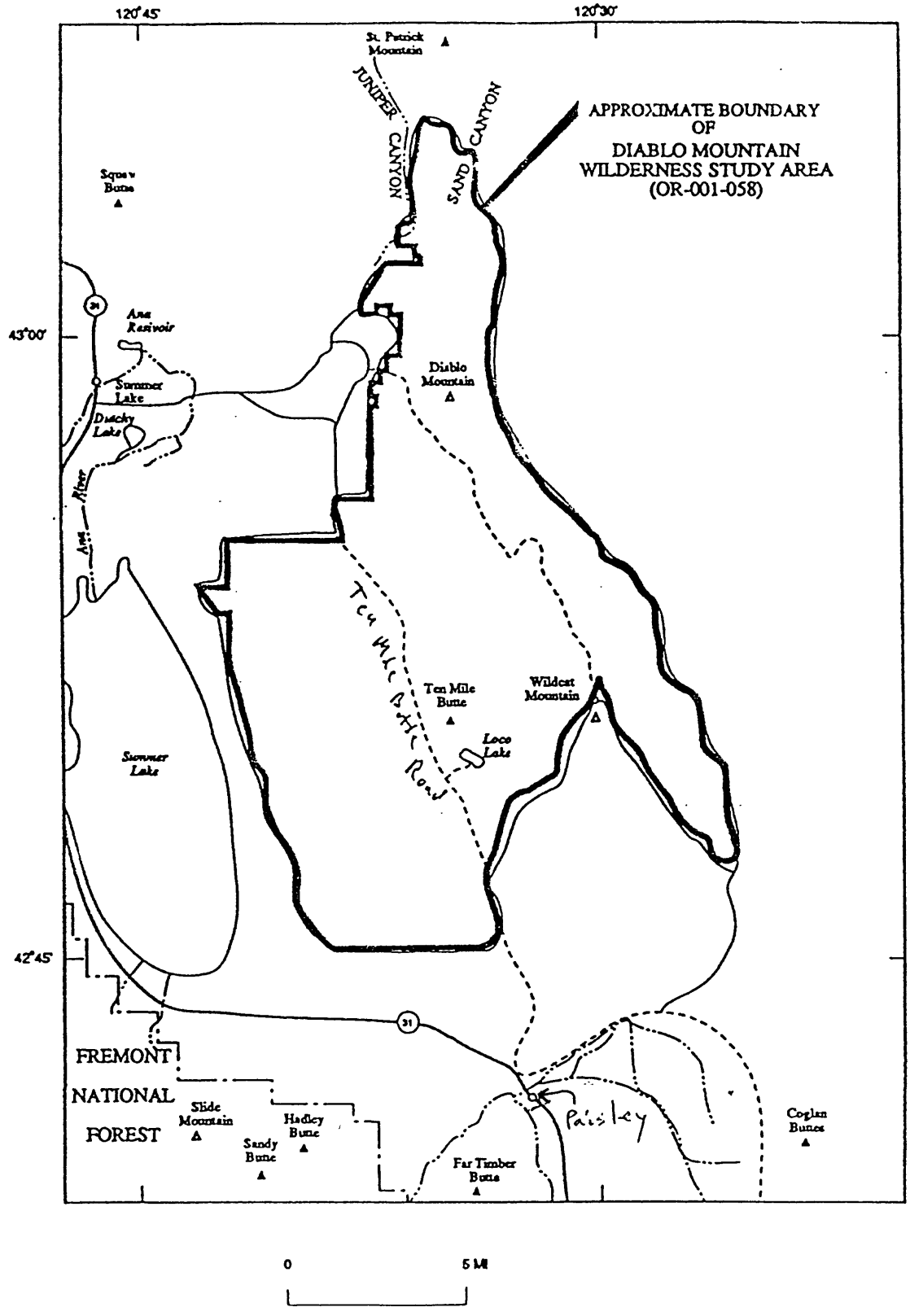

Figure 1. Location of the Diablo Mountain Wilderness Study Area (OR-001-058), Lake County, Oregon.

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.

Plants growing over, or in the vicinity of, concealed mineral deposits may take up elements related to those deposits, via their root systems. Elements are translocated to various parts of the plants, whereupon sampling and analysis of those plant parts may provide information indicating the presence of the concealed deposits. The vegetation samples, along with rock samples, were used as sample media in the valley area of the western part of the study area where appropriate sediment for stream-sediment or heavy-mineral-concentrate sampling was not available.

Sample Collection

Samples were collected from a total of 158 sites and included 71 minus-0.18-mm (80-mesh) stream sediments, 17 plus-0.18-mm/minus-1.0-mm stream sediments, 70 nonmagnetic heavy-mineral concentrates from stream sediments, 61 rocks, 29 big sagebrush (*Artemisia tridentata* Nutt.), 38 greasewood (*Sarcobatus vermiculatus* [Hook.] Torr.), 4 lake-sediment, and 5 evaporite samples (plate 1). The stream sediments and heavy-mineral concentrates were collected only within the eastern mountainous portion of the study area, an area of about 80 mi^2. Sampling density for those samples within the 80 mi^2 area is approximately 1 sample site per mi^2. Sampling density values for the other sample types are not considered meaningful because of uneven sample site distribution. Figure 2 shows the location of 16 sample sites which are outside of the area shown on plate 1. The sites are south of 42° 45' latitude, which is south of the southern boundary of the study area. These samples are part of a sampling traverse extending southwestward from near Fivemile Point.

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 = 1:48,000).

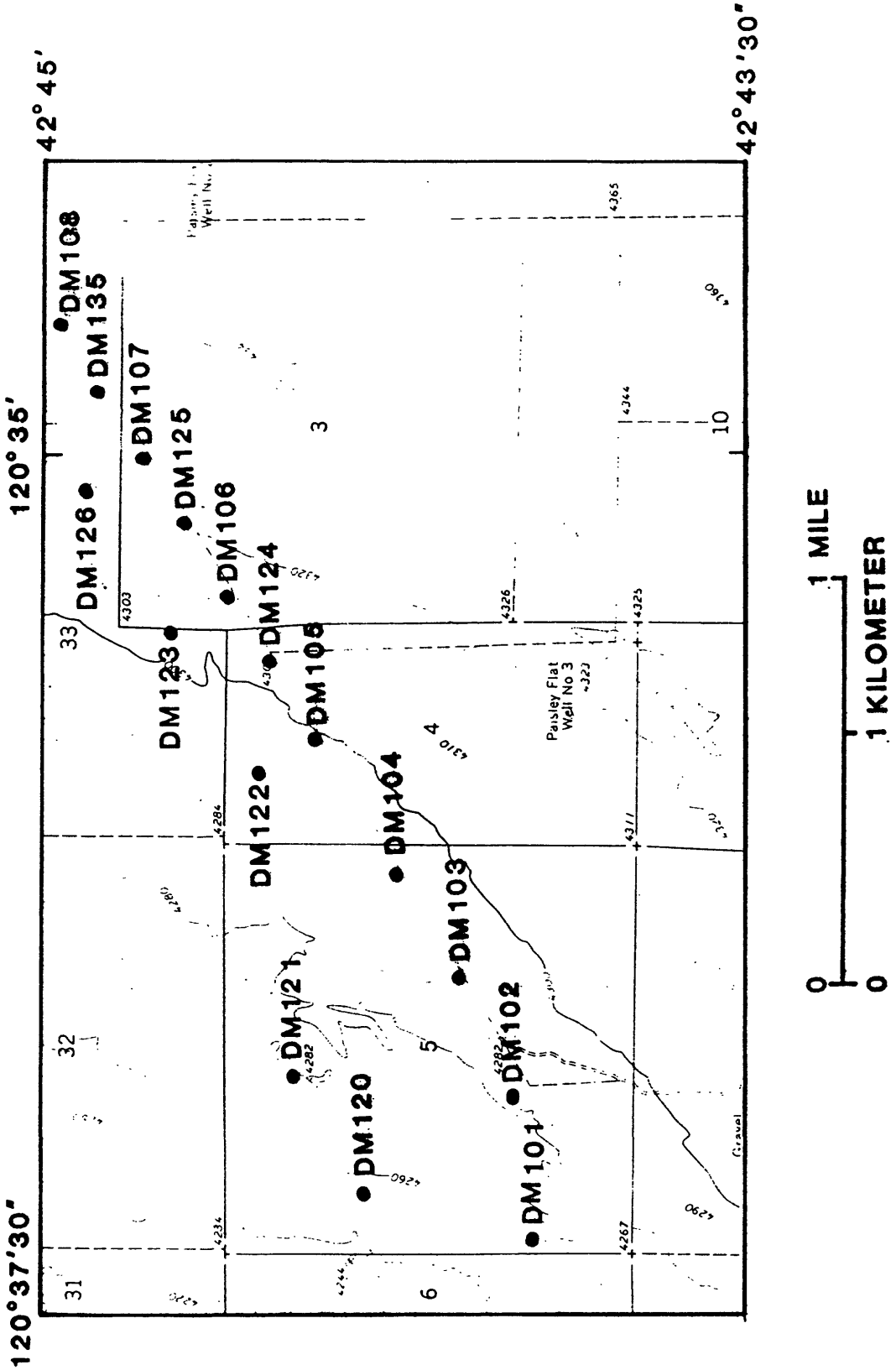

Figure 2. Localities of sample sites south of 42° 45' latitude which is south of the southern boundary of the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

Heavy-mineral-concentrate samples

Heavy-mineral-concentrate samples were collected form 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 10.

Vegetation samples

Big-sagebrush and greasewood samples were collected by clipping, with pruning shears, new growth, including stems with attached leaves, from three to six of the healthiest and most robust plants within an area of up to about 50 ft. in diameter. Samples were collected in 11 x 17 in. cloth sample bags which were filled over half full for each sample. The plants sampled were generally about 3 ft. tall, but ranged from about 2 ft. up to 6 ft.

Lake-sediment and evaporite samples

Lake-sediment samples were collected from four sites on the large playa adjacent to Summer Lake. Samples of evaporite or efflorescence were also taken at these sites. At the sample sites the light gray evaporite layer ranged from about 0.5 to 3 in. (1.3-7.6 cm) in thickness. The lake-sediment samples were taken from beneath the evaporite layer down to a depth of about 8 in. (20 cm).

Sample Preparation

The lake-sediment, evaporite, and 71 stream-sediment samples were air dried, then sieved using 80-mesh (0.18-mm) stainless-steel sieves. The portion of the sediment passing through the sieve was pulverized and saved for analysis. Seventeen stream-sediment samples were sieved to greater than 80-mesh (0.18-mm) and less than 16-mesh (1.0-mm). The portion of the sediment passing through the sieve was pulverized and saved for analysis.

Samples that had been panned in the field were air dried and sieved to minus-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 (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 mineralogical analysis. (The 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.

Vegetation samples were washed in tap water, dried in an oven at 40°C, and then pulverized in a Wiley mill. Splits of the dry, pulverized plant material were ashed in a muffle furnace during a 24-hour period with a maximum temperature of 450°C.

Sample Analysis

Spectrographic method

The minus-80-mesh stream-sediment, heavy-mineral-concentrate, and rock samples collected during the 1986 geochemical survey were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (modification of Grimes and Marranzino, 1968). The stream-sediment (both fractions), rock, lake-sediment, and evaporite samples collected during the 1988 and 1989 geochemical surveys were analyzed for four additional elements with some minor changes in limits of determination for several elements using a semiquantitative, direct-current arc emission spectrographic method (modification of Grimes and Marranzino, 1968). The heavy-mineral-concentrate samples collected during the 1988 and 1989 geochemical surveys were analyzed for six additional elements with some minor changes in limits of determination for several elements using a semiquantitative, direct-current arc emission spectrographic method (modification of Grimes and Marranzino, 1968). The 31 elements analyzed and their lower limits of determination are listed in table 1; the 35/37 elements analyzed and their lower limits of determination are listed in table 2. 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 Diablo Mountain Wilderness Study Area are listed in tables 5, 6, 7, 8, and 9.

Chemical methods

Samples from this study area, with the exception of the concentrates, were also analyzed for antimony, arsenic, bismuth, cadmium, and zinc by inductively coupled plasma-atomic emission spectroscopy (ICP-AES) (Crock and others, 1987) and for gold and mercury by atomic absorption spectroscopy (modification of Thompson and others, 1968, and Koirtyohann and Khalil, 1976, respectively). The lake-sediment and evaporite samples were also analyzed for lithium by ICP-AES (Lichte and others, 1987) and for thorium and uranium

by delayed neutron analyses (McKown and Millard, 1987). See table 3 for a more detailed summary of these other chemical methods.

Vegetation samples were analyzed for 40 elements by the ICP-AES method by Lichte and others, 1987. These samples were also analyzed by another ICP-AES method (Motooka, 1988) for arsenic, gold, silver, bismuth, cadmium, copper, molybdenum, lead, antimony, and zinc. This method was used to obtain lower limits of determination than the Lichte and others' method. Gold was analyzed in the plant ash samples by flameless atomic absorption spectrophotometry with a graphite furnace atomizer, using a slightly modified version of the method described in O'Leary and Meier (1986). This method provided a lower limit of determination of 0.001 ppm (parts per million) gold. Unashed material of 24 sagebrush samples and 16 greasewood samples were also analyzed by hydride generation-atomic absorption for arsenic and selenium by modified versions of methods described by Crock and Lichte (1982) and Sanzolone and Chao (1987). The 40 elements analyzed by the Lichte and others' method and their lower limits of determination are listed in table 4.

Analytical results for stream-sediment, rock, big sagebrush/greasewood, and lake-sediment/evaporite samples are listed in tables 5, 7, 8, and 9, respectively.

DATA STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into the Branch of Geochemistry's computer data base. 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 5-9 list the results of analyses for the samples of stream sediment, heavy-mineral concentrate, rock, vegetation, lake-sediment/evaporite, respectively. For the five tables, the data are arranged so that column 1 contains the USGS-assigned sample numbers. These numbers correspond to the numbers shown on the site location map (plate 1). Columns in which the element headings show the letter "s" indicates the analyses are emission spectrographic analyses; "aa" indicates atomic absorption spectrophotometric analyses; "icp" indicates inductively coupled plasma-atomic emission spectroscopic analyses; and "dn" indicates delayed neutron 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 1-4. For emission spectrographic analyses, 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 and ICP analyses, a "less than" symbol (<) entered in the tables in front of the lower limit of determination indicates that an 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 5-9 in place of an analytical value.

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A number of our colleagues also participated in the collection, preparation, and/or analyses of these samples. We would like to extend our appreciation to these people--P.H. Briggs, M.S. Erickson, C.A. Gent, R.T. Hopkins, K.R. Kennedy, J.L. Peace, S.M., Smith, F.W. Tippitt, and E.P. Welsch.

REFERENCES CITED

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

Crock, J.G, and Lichte, F.E., 1982, An improved method for the determination of trace levels of arsenic and antimony in geologic materials by automated hydride generation-atomic absorption spectroscopy: Analitica Chimica Acta, 144:223-233.

Diggles, M.F., Conrad, J.E., and Andrews, G.S., 1990, Geologic map of the Diablo Mountain Wilderness Study Area, Lake County, Oregon: U.S. Geologic Survey Miscellaneous Field Studies Map MF- , scale 1:24,000.

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

Koirtyohann, S.R., and Khalil, Moheb, 1976, Variables in the determination of mercury by cold vapor atomic absorption: Analytical Chemistry, 48, p. 136-139.

Lichte, F.E., Golightly D.W., and Lamothe, P.J., 1987, Inductively coupled plasma-atomic emission spectrometry, in Baedecker, P.A., ed., Methods for Geochemical Analysis, p. B1-B10: U.S. Geological Survey Bulletin 1770.

McKown, D.M., and Millard, H.T., Jr., 1987, Determination of uranium and thorium by delayed neutron counting, in Baedecker, P.A., ed., Methods for Geochemical Analysis, p. I1-I12: U.S. Geological Survey Bulletin 1770.

Motooka, J.M., 1988, An exploration geochemical technique for the determination of preconcentrated organometallic halides by ICP-AES: Applied Spectroscopy, v. 42, no. 7, p. 1293-1296.

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

Myers, A.T., Havens, R.G., and Dunton, P.J., 1961, A spectrochemical method for the semiquantitative analyses of rocks, minerals, and ores: U.S. Geological Survey Bulletin 1084-I, p. 1207-1229.

O'Leary, R. M., and Meier A.L., 1986, Analytical methods used in geochemical exploration, 1984: U.S. Geological Survey Circular 948, 48 p.

Sanzolone, R. F., and Chao, T. T., 1987, Determination of selenium in thirty-two geochemical reference materials by continuous-flow hydride generation atomic absorption spectrophotometry: Geostandards Newsletter, vol. 11, p. 81-85.

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

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

Walker, G.W., 1963, Reconnaissance geologic map of the eastern half of the Klamath Falls (AMS) quadrangle, Lake and Klamath Counties, Oregon: U.S. Geological Survey Miscellaneous Field Studies Map MF-260, scale 1:250,000.

Table 1.--Limits of determination for six-step optical emission spectrographic analysis of rocks and stream sediments collected during 1986

[The values shown are the lower limits of determination assigned by the Grimes and Marranzino (1968) method, except for those values in parentheses, which are the lower values assigned by the Myers and others (1961) method. 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.]

Elements	Lower determination limit	Upper determination limit
	Percent	
Calcium (Ca)	.05	20
Iron (Fe)	0.05	20
Magnesium (Mg)	.02	10
Titanium (Ti)	.002	1
	Parts per million	
Silver (Ag)	0.5	5,000
Arsenic (As)	200 (700)	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 (30)	500
Cobalt (Co)	5	2,000
Chromium (Cr)	10	5,000
Copper (Cu)	5	20,000
Lanthanum (La)	20 (30)	1,000
Manganese (Mn)	10	5,000
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
Thorium (Th)	100 (200)	2,000
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

Table 2.--Limits of determination for six-step optical emission spectrographic analysis of rocks and stream sediments collected during 1988 and 1989

[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	
Calcium (Ca)	.05	20
Iron (Fe)	0.05	20
Magnesium (Mg)	.02	10
Sodium (Na)	0.2	5
Phosphorus (P)	0.2	10
Titanium (Ti)	.002	1
	Parts per million	
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)	10	2,000
Chromium (Cr)	10	5,000
Copper (Cu)	5	20,000
Gallium (Ga)	5	100
Germanium (Ge)	10	1,000
Lanthanum (La)	50	1,000
Manganese (Mn)	10	5,000
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
Thorium (Th)	100	2,000
Vanadium (V)	10	10,000
Tungsten (W)	20	10,000
Yttrium (Y)	10	2,000
Zinc (Zn)	200	10,000
Zirconium (Zr)	10	1,000
Palladium (Pd)*	5	1,000
Platinum (Pt)*	20	1,000

*Determined in heavy-mineral-concentrate samples only. Limits are for heavy-mineral-concentrate samples.

Table 3.--Chemical methods used

[AA=flame atomic absorption spectroscopy; FAA=flameless atomic absorption spectroscopy; ICP=inductively coupled plasma spectroscopy; DN=delayed neutron; and HG=hydride generation-atomic absorption]

Element or constituent determined	Sample type	Method	Determination limit (micrograms/ gram or ppm)	Reference
Gold (Au)	rocks, stream sediments, and lake sediments/ evaporites	AA	.05	Modification of Thompson and others, 1968.
Gold (Au)	plants	FAA	.001	Modification of O'Leary and Meier, 1986.
Mercury (Hg)	rocks, stream sediments, and lake sediments/ evaporites	AA	0.02	Koirtyohann and Khalil, 1976.
Arsenic (As)	rocks,	ICP	5	Crock and others,
Antimony (Sb)	stream	ICP	2	1987.
Zinc (Zn)	sediments,	ICP	2	
Bismuth (Bi)	and	ICP	2	
Cadmium (Cd)	lake sediments/ evaporites	ICP	0.1	
Arsenic (As)	plants	ICP	.60	Motooka, 1988.
Gold (Au)		ICP	.15	
Silver (Ag)		ICP	.045	
Antimony (Sb)		ICP	.60	
Zinc (Zn)		ICP	.050	
Bismuth (Bi)		ICP	.60	
Cadmium (Cd)		ICP	.030	
Copper (Cu)		ICP	.050	
Molybdenum (Mo)		ICP	.090	
Lead (Pb)		ICP	.60	

Table 3.--Chemical methods used (continued)

[AA=flame atomic absorption spectroscopy; FAA=flameless atomic absorption spectroscopy; ICP=inductively coupled plasma spectroscopy; DN=delayed neutron; and HG=hydride generation-atomic absorption]

Element or constituent determined	Sample type	Method	Determination limit (micrograms/ gram or ppm)	Reference
Lithium (Li)	lake sediments/ evaporites	ICP		Lichte and others, 1987.
Thorium (Th)	lake sediments/ evaporites	DN		McKown and others, 1987.
Uranium (U)	lake sediments/ evaporites	DN		McKown and others, 1987.
Arsenic (As) Selenium (Se)	plant ash	HG	.05 .05	Modification of Crock and Lichte, 1982, and Sanzolone and Chao, 1987.

Table 4.--Limits of determination for the inductively coupled plasma-atomic emission spectroscopic (ICP) analysis of ashed sage and greasewood samples, based on a .1000-g sample.

Elements	Lower determination limit	Upper determination limit
	Percent	
Aluminum (Al)	0.01	100
Calcium (Ca)	0.01	100
Iron (Fe)	0.01	50
Potassium (K)	0.10	100
Magnesium (Mg)	0.01	10
Sodium (Na)	0.01	100
Phosphorus (P)	0.01	100
Titanium (Ti)	0.01	50
	Parts per million	
Silver (Ag)	4.0	20,000
Arsenic (As)	20.	100,000
Gold (Au)	20.	100,000
Barium (Ba)	2.0	70,000
Beryllium (Be)	2.0	10,000
Bismuth (Bi)	20.	100,000
Cadmium (Cd)	4.0	50,000
Cerium (Ce)	8.0	100,000
Cobalt (Co)	2.0	50,000
Chromium (Cr)	2.0	100,000
Copper (Cu)	2.0	30,000
Europium (Eu)	4.0	10,000
Gallium (Ga)	8.0	100,000
Holium (Ho)	8.0	10,000
Lanthanum (La)	4.0	100,000
Lithium (Li)	4.0	100,000
Manganese (Mn)	8.0	100,000
Molybdenum (Mo)	4.0	100,000
Neodymium (Nd)	8.0	100,000
Niobium (Nb)	8.0	100,000
Nickel (Ni)	4.0	100,000
Lead (Pb)	8.0	100,000
Scandium (Sc)	4.0	100,000
Tin (Sn)	20.	100,000
Strontium (Sr)	4.0	30,000
Tantalum (Ta)	80.	100,000
Uranium (U)	200.	200,000
Vanadium (V)	4.0	60,000
Yttrium (Y)	4.0	50,000
Ytterbium (Yb)	2.0	10,000
Zinc (Zn)	4.0	30,000

Table 5A. Results of analyses of minus-0.18-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

[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	Na-pct. s	P-pct. s	Mn-ppm s	Ag-ppm s
DM001SS	42 48 3	120 26 42	5	2	3	>1	--	--	2,000	N
DM002HS	42 44 21	120 28 7	2	2	3	.7	--	--	1,000	N
DM003SS	42 50 8	120 28 47	10	2	2	>1	--	--	2,000	N
DM004HS	42 50 5	120 26 45	15	3	2	>1	--	--	3,000	N
DM005SS	42 51 14	120 27 42	10	3	2	>1	--	--	3,000	N
DM006SS	42 50 20	120 31 18	15	2	3	>1	--	--	2,000	N
DM007SS	42 52 11	120 31 46	10	3	5	>1	--	--	3,000	N
DM008	42 48 57	120 33 1	20	2	1.5	>1	--	--	3,000	N
DM009HS	42 50 1	120 33 21	20	5	3	>1	--	--	3,000	N
DM010SS	42 50 45	120 33 46	5	3	2	1	--	--	700	N
DM011SS	42 50 43	120 33 33	5	2	2	>1	--	--	1,000	N
DM012HS	42 51 43	120 34 50	10	3	3	>1	--	--	1,500	N
DM013HS	42 52 32	120 35 50	7	3	2	>1	--	--	1,000	N
DM014SS	42 50 12	120 35 45	20	3	2	>1	--	--	5,000	N
DM015HS	42 53 17	120 36 21	20	5	3	>1	--	--	3,000	N
DM016SS	42 54 52	120 36 47	10	5	5	>1	--	--	2,000	N
DM017HS	42 56 46	120 36 27	5	2	2	>1	--	--	700	N
DM018SS	42 55 48	120 35 22	7	3	2	>1	--	--	1,000	N
DM019HS	42 56 18	120 36 17	5	3	3	1	--	--	500	N
DM020SS	42 58 47	120 36 10	5	5	5	>1	--	--	1,000	N
DM021SS	42 58 56	120 35 58	3	2	2	1	--	--	700	N
DM022SS	42 58 36	120 33 22	7	2	2	>1	--	--	1,500	N
DM023HS	42 57 32	120 33 8	5	1.5	2	>1	--	--	700	N
DM024SS	42 56 8	120 32 17	10	5	3	>1	--	--	1,500	N
DM025HS	42 55 48	120 31 32	7	2	2	>1	--	--	1,000	N
DM026SS	42 50 22	120 33 30	15	3	2	>1	--	--	2,000	N
DM027HS	42 51 24	120 34 32	20	3	2	>1	--	--	2,000	N
DM028SS	42 51 28	120 32 54	10	2	2	>1	--	--	1,000	N
DM029HS	42 51 13	120 35 19	10	2	3	>1	--	--	1,500	N
DM030SS	42 52 8	120 34 28	10	3	5	>1	--	--	1,500	N
DM031HS	42 52 56	120 34 31	7	5	5	>1	--	--	1,500	N
DM032SS	42 53 27	120 35 16	5	3	5	1	--	--	1,000	N
DM033HS	42 54 6	120 36 9	7	3	2	>1	--	--	1,500	N
DM034SS	42 54 51	120 33 40	7	5	2	>1	--	--	1,500	N
DM035SS	42 54 40	120 32 48	7	2	2	1	--	--	1,500	N
DM036HS	42 54 10	120 31 37	10	2	2	>1	--	--	1,500	N
DM037SS	42 53 13	120 30 17	7	2	2	>1	--	--	1,500	N
DM038SS	42 56 33	120 34 27	15	3	2	>1	--	--	1,500	N
DM039HS	42 56 14	120 34 18	5	2	2	1	--	--	700	N
DM040SS	42 57 52	120 35 31	3	1.5	2	1	--	--	700	N
DM041HS	43 0 37	120 35 1	7	2	2	>1	--	--	1,000	N
DM042SS	43 2 40	120 34 42	7	2	2	>1	--	--	700	N
DM043HS	43 2 44	120 36 0	10	3	2	>1	--	--	1,000	N
DM044SS	43 3 55	120 35 59	7	3	2	>1	--	--	1,000	N
DM045HS	43 4 53	120 35 55	5	2	2	1	--	--	700	N
DM046SS	43 4 12	120 33 40	5	1.5	2	>1	--	--	1,000	N
DM047SS	43 4 9	120 33 37	7	2	2	>1	--	--	1,500	N
DM048HS	43 5 13	120 35 7	5	1.5	2	1	--	--	1,000	N
DM049SS	43 2 2	120 32 51	20	2	2	>1	--	--	1,500	N
DM050HS	43 0 32	120 33 15	5	1.5	3	.3	--	--	700	N
DM051SS	43 1 37	120 33 54	15	3	2	>1	--	--	1,500	N
DM052HS	42 51 38	120 33 18	5	5	5	>1	1.5	N	2,000	N
DM053HS	42 51 32	120 32 56	5	5	3	>1	2	N	2,000	N
DM054HS	42 51 32	120 32 53	5	5	3	1	1	N	1,500	N
DM062 S1	42 56 20	120 32 30	15	2	2	>1	2	<.2	2,000	N
DM065 S1	42 49 18	120 31 47	15	2	1.5	>1	1	<.2	2,000	N
DM066 S1	42 52 19	120 33 3	15	3	2	>1	1.5	<.2	2,000	N
DM067 S1	42 53 2	120 33 7	10	3	3	>1	2	<.2	2,000	N
DM068 S1	42 52 46	120 31 57	15	2	2	>1	2	<.2	2,000	N
DM069 S1	42 51 5	120 30 56	20	2	2	>1	1.5	<.2	3,000	N

Table 5A. Results of analyses of minus-0.18-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	Ga-ppm s	Ge-ppm s
DM001SS	N	N	20	500	1	N	N	20	50	20	--	--
DM002HS	N	N	50	500	1	N	N	15	20	15	--	--
DM003SS	N	N	30	300	<1	N	N	20	200	50	--	--
DM004HS	N	N	20	300	N	N	N	30	200	70	--	--
DM005SS	N	N	50	500	<1	N	N	50	150	70	--	--
DM006SS	N	N	50	300	<1	N	N	50	100	70	--	--
DM007SS	N	N	50	500	<1	N	N	30	100	50	--	--
DM008	N	N	100	300	N	N	N	50	100	100	--	--
DM009HS	N	N	100	300	<1	N	N	50	100	70	--	--
DM010SS	N	N	50	200	<1	N	N	20	70	50	--	--
DM011SS	N	N	50	300	<1	N	N	20	50	70	--	--
DM012HS	N	N	30	300	<1	N	N	50	150	70	--	--
DM013HS	N	N	50	200	<1	N	N	50	200	70	--	--
DM014SS	N	N	30	300	<1	N	N	50	100	70	--	--
DM015HS	N	N	50	200	<1	N	N	50	100	70	--	--
DM016SS	N	N	50	300	<1	N	N	30	200	70	--	--
DM017HS	N	N	50	300	<1	N	N	20	100	50	--	--
DM018SS	N	N	100	500	<1	N	N	20	100	50	--	--
DM019HS	N	N	100	300	<1	N	N	20	70	50	--	--
DM020SS	N	N	70	300	<1	N	N	30	100	70	--	--
DM021SS	N	N	70	300	<1	N	N	20	100	20	--	--
DM022SS	N	N	70	500	1	N	N	20	100	30	--	--
DM023HS	N	N	50	500	1	N	N	20	100	30	--	--
DM024SS	N	N	30	300	<1	N	N	50	200	70	--	--
DM025HS	N	N	100	300	<1	N	N	20	70	50	--	--
DM026SS	N	N	50	200	<1	N	N	30	100	70	--	--
DM027HS	N	N	50	200	<1	N	N	50	150	100	--	--
DM028SS	N	N	50	300	<1	N	N	30	100	70	--	--
DM029HS	N	N	50	500	<1	N	N	20	70	50	--	--
DM030SS	N	N	50	300	<1	N	N	20	150	50	--	--
DM031HS	N	N	50	300	1	N	N	30	200	70	--	--
DM032SS	N	N	50	500	<1	N	N	20	150	50	--	--
DM033HS	N	N	30	300	<1	N	N	20	100	50	--	--
DM034SS	N	N	30	500	<1	N	N	20	100	50	--	--
DM035SS	N	N	50	500	1	N	N	20	100	50	--	--
DM036HS	N	N	30	500	<1	N	N	30	150	50	--	--
DM037SS	N	N	30	500	1	N	N	20	100	30	--	--
DM038SS	N	N	50	300	<1	N	N	30	150	50	--	--
DM039HS	N	N	70	500	1	N	N	20	100	30	--	--
DM040SS	N	N	50	500	1	N	N	20	70	30	--	--
DM041HS	N	N	20	300	<1	N	N	20	150	30	--	--
DM042SS	N	N	20	500	1	N	N	20	200	50	--	--
DM043HS	N	N	50	500	<1	N	N	30	150	50	--	--
DM044SS	N	N	50	500	<1	N	N	20	150	30	--	--
DM045HS	N	N	50	500	1	N	N	20	70	20	--	--
DM046SS	N	N	50	500	1	N	N	20	100	30	--	--
DM047SS	N	N	30	300	<1	N	N	20	150	30	--	--
DM048HS	N	N	50	500	1	N	N	20	100	30	--	--
DM049SS	N	N	20	500	<1	N	N	30	150	50	--	--
DM050HS	N	N	100	500	1	N	N	20	50	20	--	--
DM051SS	N	N	50	500	<1	N	N	30	150	50	--	--
DM052HS	N	N	30	150	N	N	N	30	150	50	15	N
DM053HS	N	N	50	300	N	N	N	30	100	50	10	N
DM054HS	N	N	30	150	N	N	N	20	100	50	15	N
DM062 S1	N	N	50	1,000	<1	N	N	50	70	100	50	N
DM065 S1	N	N	15	700	<1	N	N	50	70	100	50	N
DM066 S1	N	N	20	1,000	<1	N	N	50	150	100	50	N
DM067 S1	N	N	50	1,000	1	N	N	30	100	100	50	N
DM068 S1	N	N	30	1,000	<1	N	N	50	70	100	50	N
DM069 S1	N	N	20	1,000	<1	N	N	70	100	100	50	N

Table 5A. Results of analyses of minus-0.18-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s
DM001SS	N	N	N	15	10	N	20	N	700	200	N
DM002HS	30	N	N	20	15	N	15	N	500	100	N
DM003SS	N	N	N	15	15	N	20	N	500	300	N
DM004HS	N	N	N	20	10	N	20	N	500	500	N
DM005SS	N	5	<20	30	15	N	20	N	500	200	N
DM006SS	N	N	<20	30	15	N	20	N	300	200	N
DM007SS	N	N	<20	30	30	N	20	N	500	200	N
DM008	150	N	20	30	20	N	30	N	150	300	N
DM009HS	N	N	<20	50	20	N	30	N	500	200	N
DM010SS	N	N	N	50	<10	N	15	N	500	150	N
DM011SS	N	N	N	50	10	N	20	N	700	150	N
DM012HS	N	N	N	50	<10	N	20	N	500	200	N
DM013HS	N	N	N	70	<10	N	15	N	500	200	N
DM014SS	N	N	<20	20	<10	N	50	N	500	300	N
DM015HS	N	N	<20	50	<10	N	20	N	300	200	N
DM016SS	N	N	N	50	<10	N	30	N	700	200	N
DM017HS	N	N	N	50	<10	N	20	N	500	150	N
DM018SS	N	N	N	30	20	N	20	N	500	150	N
DM019HS	N	N	N	50	15	N	20	N	500	100	N
DM020SS	N	N	N	70	15	N	20	N	700	150	N
DM021SS	N	N	N	30	10	N	20	N	500	100	N
DM022SS	N	N	N	30	10	N	20	N	500	150	N
DM023HS	N	N	N	20	10	N	15	N	500	100	N
DM024SS	N	N	N	70	20	N	30	N	500	150	N
DM025HS	N	N	<20	30	20	N	20	N	300	150	N
DM026SS	N	N	<20	20	10	N	20	N	300	200	N
DM027HS	N	N	N	30	<10	N	20	N	300	200	N
DM028SS	N	N	N	30	<10	N	20	N	300	200	N
DM029HS	N	N	N	15	10	N	20	N	700	200	N
DM030SS	N	N	N	50	10	N	20	N	500	150	N
DM031HS	N	N	N	50	20	N	20	N	500	150	N
DM032SS	N	N	N	50	15	N	20	N	500	150	N
DM033HS	N	N	N	30	15	N	20	N	300	150	N
DM034SS	N	N	N	30	15	N	30	N	500	200	N
DM035SS	N	N	N	30	20	N	20	N	700	150	N
DM036HS	N	N	N	50	15	N	30	N	500	200	N
DM037SS	N	N	N	30	20	N	30	N	700	150	N
DM038SS	N	N	N	50	10	N	30	N	500	200	N
DM039HS	30	N	N	30	20	N	20	N	700	100	N
DM040SS	N	N	N	30	15	N	15	N	500	100	N
DM041HS	N	N	N	50	20	N	20	N	500	150	N
DM042SS	N	N	N	50	20	N	20	N	700	150	N
DM043HS	N	N	N	50	20	N	20	N	500	150	N
DM044SS	N	N	N	50	20	N	20	N	700	150	N
DM045HS	N	N	N	30	15	N	15	N	500	100	N
DM046SS	30	N	N	50	<10	N	20	N	500	150	N
DM047SS	N	N	<20	50	10	N	20	N	500	200	N
DM048HS	N	N	N	50	15	N	15	N	500	100	N
DM049SS	N	N	<20	50	<10	N	20	N	500	200	N
DM050HS	30	N	N	15	15	N	15	N	700	100	N
DM051SS	N	N	N	30	20	N	20	N	500	200	N
DM052HS	N	N	N	50	<10	N	20	N	700	200	N
DM053HS	<50	N	N	50	10	N	20	N	1,000	300	N
DM054HS	N	N	N	30	10	N	20	N	500	300	N
DM062 S1	N	N	N	50	<10	N	20	N	500	200	N
DM065 S1	N	N	N	50	<10	N	20	N	300	300	N
DM066 S1	N	N	<20	70	<10	N	20	N	500	300	N
DM067 S1	N	N	N	50	20	N	20	N	500	200	N
DM068 S1	N	N	<20	50	<10	N	20	N	500	200	N
DM069 S1	N	N	<20	50	<10	N	30	N	500	500	N

Table 5A. Results of analyses of minus-0.18-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	As-ppm icp	Bi-ppm icp	Cd-ppm icp	Sb-ppm icp	Zn-ppm icp	Hg-ppm aa	Au-ppm aa
DM001SS	15	<200	100	N	<5	<2	.6	<2	58	N	N
DM002HS	20	<200	70	N	<5	<2	.9	<2	75	.06	N
DM003SS	15	<200	300	N	<5	<2	.8	<2	66	.06	N
DM004HS	15	<200	100	N	<5	<2	1.6	<2	110	.04	N
DM005SS	15	<200	150	N	<5	<2	2.2	<2	160	.04	N
DM006SS	15	<200	100	N	<5	<2	.9	<2	67	N	N
DM007SS	20	<200	100	N	<5	<2	.9	<2	64	.02	N
DM008	20	<200	150	N	<5	<2	2.8	<2	170	N	N
DM009HS	20	<200	100	N	<5	<2	2	<2	100	N	N
DM010SS	15	<200	100	N	<5	<2	1.2	<2	53	N	N
DM011SS	15	<200	50	N	<5	<2	1.5	<2	76	.02	N
DM012HS	15	<200	50	N	<5	<2	1.9	<2	88	N	N
DM013HS	10	<200	100	N	<5	<2	1.5	<2	61	N	N
DM014SS	20	<200	150	N	<5	<2	2.9	<2	140	N	N
DM015HS	15	<200	50	N	<5	<2	2.9	<2	130	N	N
DM016SS	20	<200	200	N	<5	<2	1.5	<2	65	N	N
DM017HS	20	<200	100	N	<5	<2	1	<2	54	N	N
DM018SS	20	<200	150	N	<5	<2	1	<2	56	.02	N
DM019HS	15	<200	100	N	<5	<2	.8	<2	44	N	N
DM020SS	15	<200	100	N	<5	<2	1	<2	44	N	N
DM021SS	20	<200	100	N	<5	<2	.7	<2	42	N	N
DM022SS	20	<200	100	N	<5	<2	.9	<2	59	N	N
DM023HS	10	<200	70	N	<5	<2	.8	<2	48	N	N
DM024SS	20	<200	100	N	<5	<2	1	<2	52	N	N
DM025HS	20	<200	100	N	<5	<2	.9	<2	60	N	N
DM026SS	20	<200	150	N	<5	<2	3.1	<2	160	N	N
DM027HS	20	<200	100	N	<5	<2	2.3	<2	110	N	N
DM028SS	15	<200	100	N	<5	<2	1.8	<2	94	N	N
DM029HS	20	<200	100	N	7	<2	1.4	<2	69	N	N
DM030SS	15	<200	50	N	<5	<2	1.6	<2	78	N	N
DM031HS	20	<200	100	N	<5	<2	1.9	<2	81	N	N
DM032SS	20	<200	100	N	<5	<2	1.1	<2	50	.02	N
DM033HS	15	<200	100	N	<5	<2	1.4	<2	78	.02	N
DM034SS	20	<200	100	N	<5	<2	1.3	<2	77	N	N
DM035SS	15	<200	70	N	<5	<2	1.2	<2	72	.02	N
DM036HS	20	<200	100	N	<5	<2	2.2	<2	110	.02	N
DM037SS	20	<200	100	N	<5	<2	1.2	<2	82	N	N
DM038SS	15	<200	100	N	<5	<2	1.9	<2	110	N	N
DM039HS	20	<200	100	N	<5	<2	.9	<2	54	N	N
DM040SS	20	<200	50	N	<5	<2	.7	<2	47	.02	N
DM041HS	15	<200	70	N	<5	<2	1.1	<2	64	.02	N
DM042SS	20	<200	100	N	<5	<2	1	<2	54	.02	N
DM043HS	20	<200	100	N	<5	<2	1.3	<2	80	.02	N
DM044SS	20	<200	100	N	<5	<2	1.1	<2	65	N	N
DM045HS	20	<200	50	N	<5	<2	.7	<2	42	N	N
DM046SS	20	<200	100	N	<5	<2	.9	<2	56	N	N
DM047SS	20	<200	100	N	<5	<2	1.4	<2	80	N	N
DM048HS	20	<200	100	N	<5	<2	.8	<2	45	.02	N
DM049SS	15	<200	70	N	<5	<2	2.4	<2	140	.02	N
DM050HS	20	<200	50	N	<5	<2	.6	<2	39	.02	N
DM051SS	20	<200	70	N	<5	<2	1.3	<2	76	N	N
DM052HS	20	<200	100	N	<5	3	.5	<2	100	N	N
DM053HS	20	<200	100	N	<5	3	.5	<2	93	N	N
DM054HS	20	<200	100	N	<5	<2	.5	<2	74	N	N
DM062 S1	20	<200	150	N	<5	<2	.6	<2	68	N	N
DM065 S1	20	200	150	N	<5	<2	1.2	<2	120	N	N
DM066 S1	20	200	150	N	<5	<2	1.3	<2	110	N	N
DM067 S1	20	<200	150	N	<5	<2	.7	<2	68	N	N
DM068 S1	20	<200	200	N	<5	<2	.8	<2	85	N	N
DM069 S1	20	500	200	N	<5	<2	2.2	<2	160	N	N

Table 5A. Results of analyses of minus-0.18-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Na-pct. s	P-pct. s	Mn-ppm s	Ag-ppm s
DM070 S1	42 54 54	120 35 53	10	3	3	.7	2	<.2	2,000	N
DM071 S1	42 55 3	120 34 57	10	3	2	1	1.5	<.2	2,000	N
DM072 S1	42 55 51	120 33 58	15	3	2	1	2	<.2	2,000	N
DM073 S1	42 55 24	120 34 23	7	2	1.5	.7	2	.2	1,500	N
DM074 S1	42 51 11	120 33 2	15	3	2	1	1.5	.2	2,000	N
DM075 S1	42 51 7	120 32 59	15	2	2	>1	2	<.2	2,000	N
DM077 S1	42 55 52	120 36 14	20	3	2	>1	2	<.2	3,000	N
DM078 S1	42 48 4	120 36 23	20	3	3	>1	2	<.2	2,000	N
DM081 S1	42 48 40	120 36 37	15	3	3	1	2	<.2	2,000	N
DM084 S1	42 50 47	120 36 25	20	5	3	>1	2	<.2	3,000	N
DM085 S1	42 52 18	120 36 30	15	5	3	>1	2	<.2	3,000	N

Sample	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	Ga-ppm s	Ge-ppm s
DM070 S1	N	N	20	1,000	1	N	N	30	100	100	50	N
DM071 S1	N	N	50	1,000	<1	N	N	50	150	70	50	N
DM072 S1	N	N	70	1,000	<1	N	N	50	70	100	50	N
DM073 S1	N	N	70	1,000	1	N	N	15	50	70	50	N
DM074 S1	N	N	15	700	<1	N	N	50	50	100	30	N
DM075 S1	N	N	30	1,000	<1	N	N	70	50	150	30	N
DM077 S1	N	N	20	1,000	<1	N	N	70	30	150	50	N
DM078 S1	N	N	50	1,000	<1	N	N	50	50	100	30	N
DM081 S1	N	N	50	1,000	1	N	N	30	20	70	30	N
DM084 S1	N	N	20	1,500	<1	N	N	70	50	150	50	N
DM085 S1	N	N	15	700	1	N	N	50	70	100	50	N

Sample	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s
DM070 S1	N	N	N	50	<10	N	30	N	500	200	N
DM071 S1	N	N	N	50	<10	N	20	N	500	300	N
DM072 S1	N	N	N	50	<10	N	20	N	500	300	N
DM073 S1	N	N	N	20	10	N	15	N	500	150	N
DM074 S1	N	N	N	50	<10	N	20	N	500	300	N
DM075 S1	N	N	N	70	<10	N	30	N	500	500	N
DM077 S1	N	N	N	30	<10	N	30	N	500	700	N
DM078 S1	N	N	N	50	<10	N	30	N	700	500	N
DM081 S1	N	N	N	20	<10	N	15	N	500	300	N
DM084 S1	N	N	N	70	<10	N	30	N	500	500	N
DM085 S1	N	N	N	50	<10	N	20	N	500	300	N

Sample	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	As-ppm icp	Bi-ppm icp	Cd-ppm icp	Sb-ppm icp	Zn-ppm icp	Hg-ppm aa	Au-ppm aa
DM070 S1	20	<200	100	N	<5	<2	.3	<2	46	N	N
DM071 S1	20	300	150	N	<5	<2	.9	<2	84	N	N
DM072 S1	20	200	200	N	<5	<2	.6	<2	71	N	N
DM073 S1	20	<200	150	N	<5	<2	.3	<2	40	N	N
DM074 S1	30	<200	200	N	<5	<2	.7	<2	70	N	N
DM075 S1	20	200	150	N	<5	<2	.9	<2	94	N	N
DM077 S1	30	300	150	N	<5	<2	1.4	<2	90	N	N
DM078 S1	30	200	150	N	<5	<2	1.2	<2	85	N	N
DM081 S1	20	<200	150	N	<5	<2	.7	<2	58	N	N
DM084 S1	30	300	150	N	<5	<2	1.7	<2	110	N	N
DM085 S1	20	<200	150	N	<5	<2	1.4	<2	98	N	N

Table 5B. Results of analyses of plus-0.18-mm/minus-1.0-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

[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	Na-pct. s	P-pct. s	Mn-ppm s	Ag-ppm s
DM062 S2	42 56 20	120 32 30	10	2	2	1	5	<.2	1,500	N
DM065 S2	42 49 18	120 31 47	20	5	2	>1	5	<.2	3,000	N
DM066 S2	42 52 19	120 33 3	20	5	2	1	2	<.2	2,000	N
DM067 S2	42 53 2	120 33 7	10	5	2	1	3	<.2	2,000	N
DM068 S2	42 52 46	120 31 57	10	3	2	1	3	<.2	2,000	N
DM069 S2	42 51 5	120 30 56	20	5	2	>1	3	<.2	2,000	N
DM070 S2	42 54 54	120 35 53	10	5	5	1	3	<.2	2,000	N
DM071 S2	42 55 3	120 34 57	20	5	5	>1	3	<.2	1,500	N
DM072 S2	42 55 51	120 33 58	20	7	5	>1	3	<.2	2,000	N
DM073 S2	42 55 24	120 34 23	10	2	2	1	2	<.2	1,500	N
DM074 S2	42 51 11	120 33 2	20	5	5	>1	3	<.2	1,500	N
DM075 S2	42 51 7	120 32 59	20	5	5	>1	3	<.2	2,000	N
DM077 S2	42 55 52	120 36 14	20	5	5	>1	3	<.2	2,000	N
DM078 S2	42 48 4	120 36 23	10	3	5	.7	3	<.2	1,500	N
DM081 S2	42 48 40	120 36 37	15	3	5	1	3	<.2	2,000	N
DM084 S2	42 50 47	120 36 25	15	5	7	1	3	<.2	2,000	N
DM085 S2	42 52 18	120 36 30	20	7	7	>1	3	<.2	2,000	N

Sample	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	Ga-ppm s	Ge-ppm s
DM062 S2	N	N	50	1,500	<1	N	N	50	150	100	50	N
DM065 S2	N	N	20	1,500	<1	N	N	70	30	100	50	N
DM066 S2	N	N	20	1,000	<1	N	N	50	100	100	50	N
DM067 S2	N	N	50	1,000	<1	N	N	50	70	100	50	N
DM068 S2	N	N	50	1,500	1	N	N	30	20	70	50	N
DM069 S2	N	N	20	1,000	<1	N	N	70	30	100	50	N
DM070 S2	N	N	50	1,000	<1	N	N	50	20	100	50	N
DM071 S2	N	N	20	1,000	<1	N	N	70	100	70	50	N
DM072 S2	N	N	30	1,500	<1	N	N	70	100	100	50	N
DM073 S2	N	N	70	1,500	1	N	N	30	20	100	50	N
DM074 S2	N	N	20	1,000	<1	N	N	70	20	150	70	N
DM075 S2	N	N	30	1,000	<1	N	N	70	20	150	70	N
DM077 S2	N	N	20	1,000	<1	N	N	70	10	150	50	N
DM078 S2	N	N	50	1,500	1	N	N	30	30	50	50	N
DM081 S2	N	N	50	1,000	<1	N	N	50	30	70	50	N
DM084 S2	N	N	50	1,000	<1	N	N	50	10	100	50	N
DM085 S2	N	N	30	1,000	<1	N	N	70	100	100	50	N

Table 5B. Results of analyses of plus-0.18-mm/minus-1.0-mm stream-sediment samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s
DM062 S2	N	<5	N	100	<10	N	30	N	700	300	N
DM065 S2	<50	<5	N	100	<10	N	30	N	500	500	N
DM066 S2	N	<5	N	100	<10	N	30	N	500	200	N
DM067 S2	N	<5	N	100	<10	N	30	N	1,000	200	N
DM068 S2	<50	<5	N	50	<10	N	20	N	1,000	200	N
DM069 S2	N	<5	N	70	<10	N	30	N	1,000	300	N
DM070 S2	N	<5	N	70	<10	N	20	N	1,000	300	N
DM071 S2	N	<5	N	100	<10	N	30	N	700	300	N
DM072 S2	<50	<5	N	150	<10	N	50	N	1,000	300	N
DM073 S2	<50	<5	N	50	<10	N	20	N	700	200	N
DM074 S2	N	<5	N	100	<10	N	50	N	1,000	500	N
DM075 S2	N	<5	N	70	<10	N	50	N	1,000	500	N
DM077 S2	N	<5	N	30	<10	N	30	N	1,000	500	N
DM078 S2	50	7	N	20	<10	N	20	N	1,000	200	N
DM081 S2	50	7	N	50	<10	N	20	N	1,000	200	N
DM084 S2	N	7	N	30	<10	N	30	N	1,000	300	N
DM085 S2	N	5	N	100	<10	N	50	N	700	300	N

Sample	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	As-ppm icp	Bi-ppm icp	Cd-ppm icp	Sb-ppm icp	Zn-ppm icp	Hg-ppm aa	Au-ppm aa
DM062 S2	30	<200	150	N	<5	<2	<.1	<2	44	N	N
DM065 S2	30	<200	150	N	<5	<2	.4	<2	73	N	N
DM066 S2	20	<200	100	N	<5	<2	.3	<2	43	.32	N
DM067 S2	30	<200	100	N	<5	<2	.2	<2	34	N	N
DM068 S2	30	<200	200	N	<5	<2	.2	<2	35	N	N
DM069 S2	20	<200	200	N	<5	<2	.5	<2	59	N	N
DM070 S2	30	<200	150	N	<5	<2	.4	<2	33	N	N
DM071 S2	30	<200	150	N	<5	<2	.7	<2	59	N	N
DM072 S2	50	<200	200	N	<5	<2	.4	<2	45	N	N
DM073 S2	30	<200	200	N	<5	<2	.2	<2	35	N	N
DM074 S2	50	<200	150	N	<5	<2	.4	<2	42	N	N
DM075 S2	30	200	150	N	<5	<2	.7	<2	60	N	N
DM077 S2	30	200	150	N	<5	<2	.9	<2	55	N	N
DM078 S2	50	<200	200	N	<5	<2	.3	<2	34	N	N
DM081 S2	50	<200	200	N	<5	<2	.6	<2	47	N	N
DM084 S2	30	<200	100	N	6	<2	.9	<2	51	N	N
DM085 S2	30	<200	100	N	<5	<2	.5	<2	39	N	N

Table 6. Results of analyses of heavy-mineral-concentrate samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

[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	Na-pct s	P-pct s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
DM001SC3	42 48 3	120 26 42	.5	.15	7	.15	--	--	200	N	N	N
DM002HC3	42 44 21	120 28 7	.7	.2	10	.15	--	--	200	N	N	N
DM003SC3	42 50 8	120 28 47	.5	.15	10	.1	--	--	150	N	N	N
DM004HC3	42 50 5	120 26 45	.5	.3	7	.1	--	--	200	N	N	N
DM005SC3	42 51 14	120 27 42	.5	.2	7	.15	--	--	200	N	N	N
DM006SC3	42 50 20	120 31 18	.5	.5	10	.1	--	--	200	N	N	N
DM007SC3	42 52 11	120 31 46	.7	.2	7	.1	--	--	150	N	N	N
DM008SC3	42 48 57	120 33 1	.7	.3	10	.2	--	--	200	N	N	N
DM009HC3	42 50 1	120 33 21	.7	.5	7	.1	--	--	200	N	N	N
DM010SC3	42 50 45	120 33 46	.7	.5	7	.1	--	--	200	N	N	N
DM011SC3	42 50 43	120 33 33	.7	.7	10	.2	--	--	200	N	N	N
DM012HC3	42 51 43	120 34 50	.7	.5	10	.15	--	--	150	N	N	N
DM013HC3	42 52 32	120 35 50	.7	1	10	.15	--	--	200	N	N	N
DM014SC3	42 50 12	120 35 45	.7	1	10	.2	--	--	300	N	N	N
DM015HC3	42 53 17	120 36 21	.5	.5	15	.1	--	--	200	N	N	N
DM016SC3	42 54 52	120 36 47	1	1.5	10	.15	--	--	500	N	N	N
DM017HC3	42 56 46	120 36 27	.7	1	10	.15	--	--	300	N	N	N
DM018SC3	42 55 48	120 35 22	1	1	10	.15	--	--	300	N	N	N
DM019HC3	42 56 18	120 36 17	1	1	10	.15	--	--	300	N	N	N
DM020SC3	42 58 47	120 36 10	1	1	10	.15	--	--	300	N	N	N
DM021SC3	42 58 56	120 35 58	.7	1	20	.2	--	--	500	N	N	N
DM022SC3	42 58 36	120 33 22	.7	.5	7	.15	--	--	200	N	N	N
DM023HC3	42 57 32	120 33 8	.5	.2	10	.15	--	--	200	N	N	N
DM024SC3	42 56 8	120 32 17	1	.7	7	.2	--	--	200	N	N	N
DM025HC3	42 55 48	120 31 32	.7	.2	10	.15	--	--	150	N	N	N
DM026SC3	42 50 22	120 33 30	.7	.5	10	.15	--	--	200	N	N	N
DM027HC3	42 51 24	120 34 32	.7	.7	5	.15	--	--	200	N	N	N
DM028SC3	42 51 28	120 32 54	.7	.5	7	.15	--	--	300	50	N	N
DM029HC3	42 51 13	120 35 19	.5	.5	10	.15	--	--	200	N	N	N
DM030SC3	42 52 8	120 34 28	.7	.5	10	.15	--	--	200	N	N	N
DM031HC3	42 52 56	120 34 31	.3	.5	10	.1	--	--	150	N	N	N
DM032SC3	42 53 27	120 35 16	1	2	15	.7	--	--	700	N	N	N
DM033HC3	42 54 6	120 36 9	.5	.5	10	.1	--	--	200	N	N	N
DM034SC3	42 54 51	120 33 40	.3	.2	7	.1	--	--	150	N	N	N
DM035SC3	42 54 40	120 32 48	.3	.3	5	.1	--	--	150	N	N	N
DM036HC3	42 54 10	120 31 37	.3	.2	5	.1	--	--	150	N	N	N
DM037SC3	42 53 13	120 30 17	.3	.2	5	.1	--	--	150	N	N	N
DM038SC3	42 56 33	120 34 27	.5	.2	7	.1	--	--	150	N	N	N
DM039HC3	42 56 14	120 34 18	.5	.3	7	.07	--	--	200	N	N	N
DM041HC3	43 0 37	120 35 1	.5	.3	10	.15	--	--	200	N	N	N
DM042SC3	43 2 40	120 34 42	.5	.1	7	.05	--	--	100	N	N	N
DM043HC3	43 2 44	120 36 0	.3	.15	5	.05	--	--	100	N	N	N
DM044SC3	43 3 55	120 35 59	.5	.3	10	.1	--	--	200	N	N	N
DM045HC3	43 4 53	120 35 55	.5	.3	7	.07	--	--	100	N	N	N
DM046SC3	43 4 12	120 33 40	.5	.3	5	.15	--	--	150	N	N	N
DM047SC3	43 4 9	120 33 37	.5	.2	10	.15	--	--	150	<1	N	N
DM048HC3	43 5 13	120 35 7	.5	.2	7	.07	--	--	150	N	N	N
DM049SC3	43 2 2	120 35 7	.5	.15	7	.1	--	--	100	N	N	N
DM050HC3	43 0 32	120 33 15	.5	.2	7	.1	--	--	150	N	N	N
DM051SC3	43 1 37	120 33 54	.5	.2	10	.1	--	--	150	N	N	N
DM052HC3	42 51 38	120 33 18	.3	.5	5	.2	2	7	300	N	N	N
DM053HC3	42 51 32	10 32 56	.2	.2	15	.15	5	10	500	N	N	N
DM054HC3	42 51 32	120 32 53	.5	.5	10	.5	5	7	500	N	N	N
DM062 C	42 56 20	120 32 10	1	.7	2	.3	2	1	300	N	N	N
DM065 C	42 49 18	120 31 47	.7	.2	2	.2	2	1	200	N	N	N
DM066 C	42 52 19	120 33 3	.7	.2	2	.3	2	1.5	200	N	N	N
DM067 C	42 53 2	120 33 7	.5	.2	3	.2	2	1.5	200	N	N	N
DM068 C	42 52 46	120 30 57	.7	.3	3	.3	2	2	200	N	N	N
DM069 C	42 51 5	120 30 56	.5	.2	1.5	.2	2	.7	150	N	N	N
DM070 C	42 54 54	120 35 53	1	1	3	.5	1.5	3	500	N	N	N

Table 6. Results of analyses of heavy-mineral-concentrate samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--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	Ga-ppm s	Ge-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s
DM001SC3	50	700	5	N	N	N	<20	N	--	--	100	N	N
DM002HC3	50	700	3	N	N	N	<20	N	--	--	70	N	N
DM003SC3	30	700	5	N	N	N	<20	N	--	--	50	N	N
DM004HC3	30	500	7	N	N	N	<20	N	--	--	50	N	N
DM005SC3	70	500	5	N	N	N	<20	N	--	--	<50	N	N
DM006SC3	50	700	10	N	N	N	<20	N	--	--	70	N	N
DM007SC3	50	500	5	N	N	N	<20	N	--	--	100	N	N
DM008SC3	50	1,500	5	N	N	N	<20	N	--	--	100	N	N
DM009HC3	70	500	7	N	N	N	<20	N	--	--	70	N	N
DM010SC3	50	500	7	N	N	N	<20	N	--	--	50	N	N
DM011SC3	50	500	2	N	N	N	<20	N	--	--	<50	N	N
DM012HC3	70	700	7	N	N	N	<20	N	--	--	<50	N	N
DM013HC3	70	700	5	N	N	N	20	N	--	--	<50	N	N
DM014SC3	70	500	10	N	N	N	30	N	--	--	100	N	N
DM015HC3	70	700	<2	N	N	N	20	N	--	--	100	N	N
DM016SC3	70	500	<2	N	N	N	<20	N	--	--	70	N	N
DM017HC3	70	700	<2	N	N	N	<20	N	--	--	70	N	N
DM018SC3	50	700	3	N	N	N	<20	N	--	--	70	N	N
DM019HC3	50	700	<2	N	N	N	<20	N	--	--	100	N	N
DM020SC3	50	500	2	N	N	N	<20	N	--	--	70	N	N
DM021SC3	30	500	5	N	N	N	50	N	--	--	150	N	N
DM022SC3	30	700	3	N	N	N	<20	N	--	--	50	N	N
DM023HC3	30	700	20	N	N	N	<20	N	--	--	70	N	N
DM024SC3	70	700	3	N	N	N	30	N	--	--	50	N	N
DM025HC3	30	1,000	10	N	N	N	<20	N	--	--	70	N	N
DM026SC3	30	700	7	N	N	N	<20	N	--	--	70	N	N
DM027HC3	50	500	10	N	N	N	30	N	--	--	70	N	N
DM028SC3	30	700	10	N	N	N	<20	N	--	--	70	N	N
DM029HC3	70	700	20	N	N	N	20	N	--	--	100	N	N
DM030SC3	50	700	3	N	N	N	<20	N	--	--	70	N	N
DM031HC3	50	700	3	N	N	<10	20	<10	--	--	N	N	N
DM032SC3	50	500	5	N	N	10	200	<10	--	--	200	N	N
DM033HC3	50	700	2	N	N	N	20	<10	--	--	50	N	N
DM034SC3	30	700	2	N	N	N	<20	<10	--	--	50	N	N
DM035SC3	50	700	<2	N	N	N	20	<10	--	--	N	N	N
DM036HC3	30	700	2	N	N	N	20	<10	--	--	N	N	N
DM037SC3	30	700	5	N	N	N	20	<10	--	--	<50	N	N
DM038SC3	50	700	2	N	N	N	20	<10	--	--	50	N	N
DM039HC3	100	700	2	N	N	N	20	<10	--	--	<50	N	N
DM041HC3	30	500	2	100	N	N	30	<10	--	--	70	N	N
DM042SC3	30	500	<2	N	N	N	20	<10	--	--	N	N	N
DM043HC3	50	700	<2	N	N	N	20	<10	--	--	N	N	N
DM044SC3	50	500	3	N	N	N	20	<10	--	--	150	N	N
DM045HC3	30	500	<2	N	N	N	20	<10	--	--	N	N	N
DM046SC3	50	500	5	N	N	N	50	<10	--	--	<50	N	N
DM047SC3	30	700	<2	N	N	N	<20	<10	--	--	70	N	N
DM048HC3	30	500	<2	N	N	N	20	<10	--	--	N	N	N
DM049SC3	30	700	<2	N	N	N	20	<10	--	--	<50	N	N
DM050HC3	30	500	<2	N	N	N	20	<10	--	--	50	N	N
DM051SC3	30	500	<2	N	N	N	20	<10	--	--	N	N	N
DM052HC3	50	500	30	N	N	N	30	<10	20	30	100	N	N
DM053HC3	20	1,000	20	N	N	N	30	<10	30	N	150	N	N
DM054HC3	30	700	30	N	N	N	50	15	30	30	100	N	N
DM062 C	<20	1,000	3	N	N	<20	100	<10	20	N	N	N	N
DM065 C	<20	1,000	3	N	N	N	50	<10	50	N	N	N	N
DM066 C	<20	700	3	N	N	N	20	<10	30	N	N	N	N
DM067 C	<20	700	2	N	N	N	<20	<10	50	N	N	N	N
DM068 C	<20	700	3	N	N	N	20	<10	20	N	<100	N	N
DM069 C	<20	700	3	N	N	N	<20	<10	30	N	N	N	N
DM070 C	30	700	2	N	N	<20	200	10	20	N	100	N	N

Table 6. Results of analyses of heavy-mineral-concentrate samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Ni-ppm s	Pb-ppm s	Pd-ppm s	Pt-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
DM001SC3	20	N	--	--	N	<10	N	2,000	30	<100	200	N	>2,000	N
DM002HC3	20	N	--	--	N	<10	N	2,000	50	<100	200	N	>2,000	N
DM003SC3	20	N	--	--	N	<10	N	3,000	30	<100	200	N	>2,000	N
DM004HC3	20	N	--	--	N	<10	20	2,000	30	<100	300	N	>2,000	N
DM005SC3	20	N	--	--	N	<10	N	2,000	50	<100	200	N	>2,000	N
DM006SC3	20	N	--	--	N	<10	100	5,000	50	<100	500	N	>2,000	N
DM007SC3	20	N	--	--	N	<10	N	2,000	30	<100	300	N	>2,000	N
DM008SC3	20	N	--	--	N	<10	N	2,000	50	<100	500	N	>2,000	N
DM009HC3	20	N	--	--	N	<10	N	2,000	20	<100	500	N	>2,000	N
DM010SC3	20	N	--	--	N	<10	N	2,000	20	100	500	N	>2,000	N
DM011SC3	20	N	--	--	N	<10	N	3,000	50	<100	200	N	>2,000	N
DM012HC3	20	N	--	--	N	<10	N	3,000	30	<100	200	N	>2,000	N
DM013HC3	20	N	--	--	N	<10	200	3,000	30	<100	300	N	>2,000	N
DM014SC3	30	N	--	--	N	<10	N	3,000	50	<100	500	N	>2,000	N
DM015HC3	<10	N	--	--	N	<10	N	3,000	20	<100	150	N	>2,000	N
DM016SC3	<10	N	--	--	N	<10	N	2,000	50	<100	150	N	>2,000	N
DM017HC3	<10	N	--	--	N	<10	N	2,000	50	<100	200	N	>2,000	N
DM018SC3	<10	N	--	--	N	<10	N	2,000	50	<100	200	N	>2,000	N
DM019HC3	15	N	--	--	N	<10	N	2,000	50	<100	200	N	>2,000	N
DM020SC3	15	N	--	--	N	<10	N	2,000	30	<100	150	N	>2,000	N
DM021SC3	15	N	--	--	N	<10	N	3,000	50	<100	500	N	>2,000	N
DM022SC3	15	N	--	--	N	<10	N	2,000	30	<100	200	N	>2,000	N
DM023HC3	<10	N	--	--	N	<10	N	5,000	30	<100	1,000	N	>2,000	N
DM024SC3	<10	30	--	--	N	<10	N	2,000	50	<100	150	N	>2,000	N
DM025HC3	15	N	--	--	N	<10	150	3,000	20	<100	200	N	>2,000	N
DM026SC3	20	N	--	--	N	<10	N	3,000	30	<100	300	N	>2,000	N
DM027HC3	<10	N	--	--	N	<10	200	3,000	30	<100	500	N	>2,000	N
DM028SC3	<10	N	--	--	N	<10	500	3,000	30	<100	500	N	>2,000	N
DM029HC3	<10	N	--	--	N	<10	100	5,000	50	<100	700	N	>2,000	N
DM030SC3	<10	N	--	--	N	<10	N	3,000	50	<100	150	N	>2,000	N
DM031HC3	15	N	--	--	N	<10	N	1,500	20	<100	300	N	>2,000	N
DM032SC3	30	N	--	--	N	50	N	1,500	100	<100	700	N	>2,000	N
DM033HC3	10	N	--	--	N	<10	N	2,000	30	<100	200	N	>2,000	N
DM034SC3	<10	N	--	--	N	<10	N	2,000	20	<100	200	N	>2,000	N
DM035SC3	<10	N	--	--	N	<10	N	1,500	20	<100	100	N	>2,000	N
DM036HC3	<10	N	--	--	N	<10	50	2,000	20	<100	150	N	>2,000	N
DM037SC3	<10	N	--	--	N	<10	N	2,000	20	<100	300	N	>2,000	N
DM038SC3	<10	N	--	--	N	<10	N	2,000	20	<100	200	N	>2,000	N
DM039HC3	<10	N	--	--	N	<10	N	1,500	20	<100	200	N	>2,000	N
DM041HC3	10	N	--	--	N	<10	N	1,500	20	<100	150	N	>2,000	N
DM042SC3	<10	N	--	--	N	<10	N	1,500	20	<100	N	N	1,000	N
DM043HC3	<10	N	--	--	N	<10	<20	1,500	20	<100	<20	N	2,000	N
DM044SC3	<10	70	--	--	N	<10	N	2,000	30	<100	300	N	>2,000	N
DM045HC3	<10	N	--	--	N	<10	N	2,000	20	<100	N	N	20	N
DM046SC3	10	N	--	--	N	<10	N	1,500	30	<100	300	N	>2,000	N
DM047SC3	<10	N	--	--	N	<10	N	2,000	30	<100	200	N	>2,000	N
DM048HC3	<10	N	--	--	N	<10	N	2,000	<20	<100	N	N	300	N
DM049SC3	<10	N	--	--	N	<10	N	1,500	20	<100	70	N	>2,000	N
DM050HC3	<10	N	--	--	N	<10	N	2,000	30	100	100	N	1,500	N
DM051SC3	<10	N	--	--	N	<10	N	2,000	20	<100	20	N	>2,000	N
DM052HC3	<10	N	--	--	N	20	500	1,000	50	<50	700	N	>2,000	N
DM053HC3	<10	N	--	--	N	20	N	7,000	20	<50	1,000	N	>2,000	N
DM054HC3	10	N	--	--	N	<10	N	7,000	50	<50	1,000	N	>2,000	N
DM062 C	20	N	N	N	N	<10	N	1,000	70	N	200	N	>2,000	N
DM065 C	<10	<20	N	N	N	N	100	1,000	30	N	150	N	>2,000	N
DM066 C	<10	N	N	N	N	N	N	1,000	20	N	150	N	>2,000	N
DM067 C	<10	N	N	N	N	N	50	1,000	20	N	150	N	>2,000	N
DM068 C	<10	N	N	N	N	N	50	1,000	30	N	200	N	>2,000	N
DM069 C	<10	N	N	N	N	N	20	700	<20	N	150	N	>2,000	N
DM070 C	30	N	N	N	N	10	N	1,000	100	N	200	N	>2,000	N

Table 6. Results of analyses of heavy-mineral-concentrate samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Na-pct s	P-pct s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
DM071 C	42 55 3	120 34 57	.5	.2	3	.2	2	1	200	N	N	N
DM072 C	42 55 51	120 33 58	.5	.3	2	.3	2	.7	200	N	N	N
DM073 C	42 55 24	120 34 23	1	.7	3	.5	1.5	5	500	N	N	N
DM074 C	42 51 11	120 33 2	.7	.5	2	.5	1.5	2	300	N	N	N
DM075 C	42 51 7	120 32 59	.5	.2	1.5	.2	1.5	1.5	200	N	N	N
DM077 C	42 50 52	120 36 14	.7	.5	2	.3	2	1	300	N	N	N
DM078 C	42 48 4	120 36 23	.5	.2	2	.2	2	1.5	300	N	N	N
DM081 C	42 48 40	120 36 37	.5	.15	2	.15	2	1	200	N	N	N
DM084 C	42 50 47	120 36 25	.5	.5	2	.3	2	1.5	300	N	N	N
DM085 C	42 52 18	120 36 30	.7	.3	2	.2	2	1	200	N	N	N

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	Ga-ppm s	Ge-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s
DM071 C	<20	700	<2	N	N	N	N	<10	20	N	N	N	N
DM072 C	<20	700	<2	N	N	N	30	10	50	N	N	N	N
DM073 C	20	700	2	N	N	<20	150	10	20	N	200	N	N
DM074 C	<20	700	3	N	N	<20	100	10	20	N	<100	N	N
DM075 C	<20	700	3	N	N	N	<20	<10	20	N	<100	N	N
DM077 C	<20	700	2	N	N	<20	N	10	30	N	N	N	N
DM078 C	20	700	<2	N	N	N	20	<10	30	N	<100	N	N
DM081 C	<20	700	<2	N	N	N	N	<10	30	N	N	N	N
DM084 C	<20	700	2	N	N	N	N	<10	30	N	<100	N	N
DM085 C	20	700	2	N	N	N	20	10	50	N	<100	N	N

Sample	Ni-ppm s	Pb-ppm s	Pd-ppm s	Pt-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
DM071 C	<10	N	N	N	N	N	N	1,000	20	N	70	N	>2,000	N
DM072 C	<10	<20	N	N	N	<10	30	1,000	20	N	100	N	>2,000	N
DM073 C	30	N	N	N	N	15	N	700	100	N	300	N	>2,000	N
DM074 C	30	N	N	N	N	10	50	700	50	N	200	N	>2,000	N
DM075 C	20	N	N	N	N	10	100	700	20	N	300	N	>2,000	N
DM077 C	10	N	N	N	N	10	N	1,000	30	N	150	N	>2,000	N
DM078 C	<10	N	N	N	N	N	N	1,000	20	N	100	N	>2,000	N
DM081 C	<10	N	N	N	N	N	30	1,000	<20	N	100	N	>2,000	N
DM084 C	<10	N	N	N	N	<10	N	1,000	20	N	150	N	>2,000	N
DM085 C	15	N	N	N	N	<10	N	1,000	20	N	150	N	>2,000	N

Table 7. Results of analyses of rock samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

[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	Na-pct s	P-pct s	Ag-ppm s	As-ppm s
DM004HR	42 50 5	120 26 45	10	7	7	>1	--	--	N	N
DM005SR	42 51 14	120 27 42	5	7	5	1	--	--	N	N
DM015HR	42 53 17	120 36 21	5	2	5	.7	--	--	N	N
DM043HR	43 2 44	120 36 0	5	5	5	1	--	--	N	N
DM117R	42 46 27	120 33 35	5	2	1.5	.5	2	.2	N	N
DM130D	42 46 58	120 38 32	1	1	20	.15	1	.3	N	N
DM055R	42 48 27	120 26 0	7	2	2	1	1.5	.3	N	N
DM056R	42 49 34	120 26 12	15	7	5	1	1.5	<.2	N	N
DM057R	42 50 37	120 26 50	10	7	3	1	1.5	<.2	N	N
DM058R	42 52 6	120 28 5	1.5	.7	2	.5	2	<.2	N	N
DM059R	42 53 6	120 28 17	10	5	3	1	2	<.2	N	N
DM060R	42 54 3	120 28 50	10	7	3	1	1	<.2	N	N
DM061R	42 54 39	120 29 54	10	7	5	.7	1.5	.2	N	N
DM062R1	42 56 20	120 32 10	10	7	5	.7	2	<.2	N	N
DM062R2	42 56 20	120 32 10	10	5	5	1	2	<.2	N	N
DM063R	42 58 8	120 33 23	10	7	5	.7	1	<.2	N	N
DM064R	42 59 57	120 33 24	10	7	3	1	1.5	.2	N	N
DM066R	42 52 19	120 33 3	10	7	3	>1	1.5	<.2	N	N
DM067R	42 53 2	120 33 7	2	1.5	20	.3	.5	.5	N	N
DM068R	42 52 46	120 31 57	10	7	3	1	1	<.2	N	N
DM076R1	42 50 32	120 34 31	1	>10	20	.03	<.2	<.2	N	N
DM076R2	42 50 32	120 34 31	5	10	15	1	.7	.3	N	N
DM077R1	42 50 52	120 36 14	10	5	2	>1	1.5	<.2	N	N
DM077R2	42 50 52	120 36 14	7	10	15	1	1	.2	.5	N
DM078R	42 48 4	120 36 23	10	10	5	>1	1.5	<.2	N	N
DM079R	42 47 18	120 37 36	.5	2	>20	.07	1	<.2	2	N
DM080R1	42 48 56	120 36 52	.15	2	>20	.03	<.2	<.2	N	N
DM080R2	42 48 56	120 36 52	10	3	3	>1	1.5	<.2	N	N
DM082R1	42 49 48	120 36 7	7	>10	15	.7	1	<.2	N	N
DM082R2	42 49 48	120 36 7	7	10	15	1	.7	.5	N	N
DM083R1	42 50 28	120 36 20	10	5	5	>1	2	<.2	N	N
DM083R2	42 50 28	120 36 20	5	10	15	.3	1	.5	N	N
DM084R	42 50 47	120 36 25	10	10	10	1	1.5	.3	N	N
DM086R	42 53 11	120 36 37	7	3	5	.5	1.5	<.2	N	N
DM087R	42 53 38	120 36 42	7	2	5	.5	2	N	N	N
DM088R1	42 49 8	120 37 8	10	2	5	1	2	<.2	N	N
DM088R2	42 49 8	120 37 8	5	1.5	20	.3	2	.7	N	N
DM088R3	42 49 8	120 37 8	.3	1.5	>20	.015	.7	.2	N	N
DM089R1	42 49 7	120 37 15	7	2	5	1	2	<.2	N	N
DM089R2	42 49 7	120 37 15	1.5	.05	.2	.003	N	N	N	N
DM090R1	42 49 28	120 37 11	5	2	3	.7	2	.2	N	N
DM090R2	42 49 28	120 37 16	3	2	20	.3	2	<.2	N	N
DM091R1	42 49 40	120 37 25	7	2	3	.7	2	<.2	N	N
DM091R2	42 49 40	120 37 25	.7	1.5	>20	.05	1	<.2	N	N
DM092R1	42 49 54	120 37 42	7	2	3	1	2	<.2	N	N
DM092R2	42 49 54	120 37 42	1	.2	1.5	.07	2	.2	N	N
DM093R1	42 50 32	120 36 27	3	5	15	.3	3	<.2	N	N
DM093R2	42 50 32	120 36 27	5	5	10	.3	2	<.2	N	N
DM094R1	42 50 34	120 36 50	10	3	3	1	2	<.2	N	N
DM094R2	42 50 34	120 36 50	.2	7	15	.005	.7	.5	N	N
DM095R	42 50 48	120 37 8	7	2	3	1	2	<.2	N	N
DM096R1	42 51 5	120 37 27	7	2	5	.7	2	<.2	N	N
DM096R2	42 51 5	120 37 27	.3	1	>20	.015	.7	<.2	N	N
DM097R	42 50 12	120 36 43	7	1.5	5	1	2	<.2	N	N
DM098R1	42 50 10	120 36 40	5	2	15	.3	2	.7	N	N
DM098R2	42 50 10	120 36 40	5	7	15	.3	2	.3	N	N
DM099R	42 50 3	120 36 22	5	7	15	.5	3	<.2	N	N
DM100R	42 50 26	120 35 39	5	7	15	.3	3	N	N	N
DM138R	42 53 5	120 37 18	7	5	7	.7	1.5	<.2	N	N
DM141R	42 53 7	120 38 0	2	1.5	20	.15	2	.7	N	N

Table 7. Results of analyses of rock samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	Ga-ppm s	Ge-ppm s
DM004HR	N	<10	500	N	N	N	50	150	70	--	--
DM005SR	N	20	200	N	N	N	50	200	70	--	--
DM015HR	N	50	200	N	N	N	50	100	50	--	--
DM043HR	N	10	200	N	N	N	30	200	50	--	--
DM117R	N	10	700	1	N	N	50	70	150	50	N
DM130D	N	70	1,000	<1	N	N	<10	<10	15	15	N
DM055R	N	<10	1,000	1.5	N	N	50	70	100	20	N
DM056R	N	<10	700	N	N	N	70	200	150	20	N
DM057R	N	<10	700	N	N	N	70	200	150	20	N
DM058R	N	70	1,000	2	N	N	10	10	50	30	N
DM059R	N	<10	700	N	N	N	70	100	150	30	N
DM060R	N	10	500	N	N	N	70	200	150	30	N
DM061R	N	<10	700	N	N	N	70	150	200	30	N
DM062R1	N	<10	500	N	N	N	70	150	150	30	N
DM062R2	N	10	500	N	N	N	70	100	100	50	N
DM063R	N	<10	200	N	N	N	70	500	150	30	N
DM064R	N	10	1,000	N	N	N	70	70	150	30	N
DM066R	N	<10	500	N	N	N	70	100	100	30	N
DM067R	N	50	300	<1	N	N	10	30	20	10	N
DM068R	N	10	500	<1	N	N	70	150	150	30	N
DM076R1	N	15	200	N	N	N	N	<10	5	N	N
DM076R2	N	70	300	1	N	N	20	<10	30	20	N
DM077R1	N	20	500	N	N	N	70	<10	150	50	N
DM077R2	N	20	500	N	N	N	30	<10	50	30	N
DM078R	N	100	700	N	N	N		<10	150	50	N
DM079R	N	200	1,500	N	N	N	N	<10	7	N	N
DM080R1	N	50	700	N	N	N	N	<10	7	N	N
DM080R2	N	15	700	N	N	N	70	<10	100	50	N
DM082R1	N	200	300	N	N	N	30	<10	100	30	N
DM082R2	N	150	700	<1	N	N	30	<10	100	30	N
DM083R1	N	<10	700	<1	N	N	30	<10	100	50	N
DM083R2	N	50	500	N	N	N	15	<10	30	10	N
DM084R	N	150	500	N	N	N	30	<10	70	30	N
DM086R	N	N	500	<1	N	N	30	150	50	20	N
DM087R	N	10	500	<1	N	N	50	70	50	30	N
DM088R1	N	10	700	<1	N	N	70	<10	50	30	N
DM088R2	N	70	1,000	<1	N	N	20	50	50	30	N
DM088R3	N	20	700	N	N	N	N	30	10	N	N
DM089R1	N	10	700	<1	N	N	50	<10	50	50	N
DM089R2	N	20	50	<1	N	N	N	10	20	N	N
DM090R1	N	<10	500	<1	N	N	30	<10	50	30	N
DM090R2	N	20	700	<1	N	N	20	<10	30	20	N
DM091R1	N	N	500	<1	N	N	50	<10	50	30	N
DM091R2	N	30	500	N	N	N	N	<10	20	N	N
DM092R1	N	<10	500	<1	N	N	70	N	50	30	N
DM092R2	N	70	300	3	N	N	N	<10	7	30	N
DM093R1	N	30	500	<1	N	N	20	<10	30	30	N
DM093R2	N	70	500	<1	N	N	20	<10	30	20	N
DM094R1	N	N	700	<1	N	N	50	N	30	50	N
DM094R2	N	20	300	N	N	N	N	<10	30	N	N
DM095R	N	N	700	<1	N	N	50	N	30	50	N
DM096R1	N	N	700	<1	N	N	30	<10	30	50	N
DM096R2	N	30	1,000	N	N	N	N	<10	15	N	N
DM097R	N	N	700	<1	N	N	50	N	50	30	N
DM098R1	N	30	700	<1	N	N	20	10	50	30	N
DM098R2	N	70	700	<1	N	N	20	N	30	30	N
DM099R	N	20	700	<1	N	N	30	N	50	30	N
DM100R	N	30	500	N	N	N	20	<10	30	30	N
DM138R	N	<10	500	<1	N	N	70	200	70	20	N
DM141R	N	70	1,000	<1	N	N	15	30	30	20	N

Table 7. Results of analyses of rock samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	La-ppm s	Mn-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s
DM004HR	N	700	N	N	100	<10	N	20	N	1,000	150	N
DM005SR	N	700	N	N	100	<10	N	20	N	500	200	N
DM015HR	N	500	N	N	70	<10	N	15	N	300	70	N
DM043HR	N	1,000	N	N	70	<10	N	15	N	300	100	N
DM117R	<50	700	N	N	100	10	N	20	N	700	150	N
DM130D	N	2,000	N	N	10	15	N	7	N	2,000	50	N
DM055R	N	1,500	N	N	70	<10	N	20	N	1,000	200	N
DM056R	N	1,500	N	N	200	<10	N	30	N	700	300	N
DM057R	N	1,500	N	N	150	<10	N	30	N	1,000	300	N
DM058R	50	700	N	N	15	5	N	10	N	200	30	N
DM059R	N	2,000	N	N	150	<10	N	30	N	700	300	N
DM060R	N	2,000	N	N	150	<10	N	30	N	700	300	N
DM061R	N	1,500	N	N	150	<10	N	30	N	1,000	300	N
DM062R1	N	2,000	N	N	150	<10	N	30	N	1,000	500	N
DM062R2	N	2,000	N	N	70	<10	N	30	N	700	300	N
DM063R	N	2,000	N	N	300	<10	N	30	N	200	300	N
DM064R	N	2,000	N	N	150	<10	N	20	N	700	300	N
DM066R	N	1,500	N	N	150	<10	N	30	N	500	200	N
DM067R	N	300	N	N	15	<10	N	7	N	1,000	70	N
DM068R	N	2,000	N	N	200	<10	N	20	N	700	200	N
DM076R1	N	1,000	N	N	<5	N	N	5	N	3,000	30	N
DM076R2	N	1,000	N	N	7	N	N	15	N	1,500	100	N
DM077R1	N	1,500	N	N	30	N	N	20	N	700	300	N
DM077R2	N	3,000	N	N	5	N	N	20	N	1,000	200	N
DM078R	N	2,000	N	N	20	N	N	20	N	1,000	200	N
DM079R	50	1,500	N	N	7	N	N	5	N	5,000	15	N
DM080R1	N	300	N	N	7	N	N	<5	N	2,000	<10	N
DM080R2	N	1,500	N	N	50	N	N	30	N	1,000	500	N
DM082R1	N	1,500	N	N	30	N	N	15	N	1,500	500	N
DM082R2	N	2,000	N	N	50	N	N	20	N	1,000	200	N
DM083R1	N	1,500	N	N	5	N	N	20	N	1,000	200	N
DM083R2	N	1,500	N	N	10	N	N	7	N	1,000	1,000	N
DM084R	N	1,500	N	N	10	N	N	20	N	1,500	300	N
DM086R	N	1,000	N	N	70	<10	N	20	N	500	200	N
DM087R	N	1,000	N	N	50	15	N	20	N	700	200	N
DM088R1	N	1,500	N	N	15	15	N	30	N	700	300	N
DM088R2	<50	1,500	N	N	10	20	N	15	N	1,000	150	N
DM088R3	N	500	N	N	N	N	N	N	N	700	15	N
DM089R1	N	1,000	N	N	20	20	N	30	N	700	200	N
DM089R2	N	300	N	N	<5	<10	N	N	N	N	70	N
DM090R1	N	1,000	N	N	10	10	N	20	N	700	200	N
DM090R2	<50	700	N	N	5	15	N	15	N	1,000	150	N
DM091R1	N	1,000	N	N	15	15	N	30	N	700	300	N
DM091R2	N	700	N	N	<5	15	N	<5	N	1,000	20	N
DM092R1	N	1,000	N	N	20	15	N	30	N	700	300	N
DM092R2	<50	1,000	5	<20	<5	50	N	7	N	200	15	N
DM093R1	N	1,000	N	N	5	20	N	20	N	700	150	N
DM093R2	N	1,000	5	N	5	15	N	10	N	700	200	N
DM094R1	<50	1,500	N	<20	<5	20	N	30	N	700	300	N
DM094R2	N	1,500	N	N	<5	N	N	N	N	700	300	N
DM095R	<50	1,000	N	<20	<5	15	N	30	N	700	200	N
DM096R1	<50	1,500	N	N	<5	15	N	30	N	700	300	N
DM096R2	N	1,000	N	N	N	<10	N	5	N	1,000	15	N
DM097R	<50	1,500	N	<20	<5	15	N	30	N	700	300	N
DM098R1	N	1,500	N	N	10	10	N	20	N	1,000	200	N
DM098R2	<50	1,500	N	N	<5	15	N	15	N	1,500	200	N
DM099R	N	1,000	N	N	5	15	N	20	N	1,000	150	N
DM100R	N	1,000	<5	N	<5	15	N	15	N	1,000	300	N
DM138R	N	1,000	N	<20	100	<10	N	30	N	500	200	N
DM141R	<50	1,500	N	N	20	20	N	15	N	1,000	70	N

Table 7. Results of analyses of rock samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Hg-ppm inst	Au-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
DM004HR	15	N	50	N	<.02	N	<5	<2	1.2	<2	62
DM005SR	15	N	50	N	<.02	N	<5	<2	1.4	<2	60
DM015HR	20	N	70	N	<.02	N	<5	<2	1.6	<2	57
DM043HR	20	N	50	N	<.02	N	<5	<2	2.2	<2	62
DM117R	30	N	150	N	--	--	<5	<2	.6	16	64
DM130D	70	N	30	N	--	--	7	<2	.4	7	8
DM055R	20	<200	150	N	<.02	<.05	<5	<2	.2	<2	71
DM056R	50	<200	100	N	<.02	<.05	<5	<2	.6	<2	55
DM057R	30	<200	100	N	<.02	<.05	<5	<2	.6	<2	50
DM058R	50	<200	500	N	<.02	<.05	<5	<2	<.1	<2	21
DM059R	30	<200	100	N	<.02	<.05	<5	<2	.6	<2	45
DM060R	20	<200	100	N	<.02	<.05	<5	<2	.6	<2	57
DM061R	30	<200	100	N	<.02	<.05	<5	<2	.5	<2	39
DM062R1	20	<200	100	N	<.02	<.05	<5	<2	.5	<2	48
DM062R2	20	<200	100	N	<.02	<.05	<5	<2	.4	<2	28
DM063R	20	<200	30	N	<.02	<.05	<5	<2	.5	<2	39
DM064R	20	<200	50	N	<.02	<.05	<5	<2	.7	<2	54
DM066R	30	<200	70	N	<.02	<.05	<5	<2	.7	<2	61
DM067R	15	<200	50	N	<.02	<.05	<5	<2	.3	<2	13
DM068R	30	<200	100	N	<.02	<.05	<5	<2	.5	<2	56
DM076R1	10	<200	<10	N	<.02	<.05	<5	<2	.2	<2	<2
DM076R2	15	<200	50	N	<.02	<.05	6	<2	.7	<2	25
DM077R1	30	<200	50	N	<.02	<.05	<5	<2	.9	<2	77
DM077R2	20	<200	50	N	.02	<.05	<5	<2	.8	<2	38
DM078R	30	<200	70	N	<.02	<.05	<5	<2	.9	<2	54
DM079R	150	<200	20	N	<.02	<.05	<5	<2	.2	<2	6
DM080R1	30	<200	N	N	<.02	<.05	<5	<2	.1	<2	<2
DM080R2	30	<200	100	N	<.02	<.05	<5	<2	.8	<2	62
DM082R1	15	<200	30	N	<.02	<.05	17	<2	.9	<2	26
DM082R2	50	<200	50	N	<.02	<.05	13	<2	1	<2	42
DM083R1	30	<200	100	N	<.02	<.05	<5	<2	.5	<2	52
DM083R2	15	<200	50	N	<.02	<.05	57	<2	.5	2	8
DM084R	20	<200	70	N	<.02	<.05	14	<2	.9	<2	46
DM086R	20	N	70	N	N	N	<5	<2	.4	<2	41
DM087R	30	N	70	N	N	N	<5	<2	.4	<2	49
DM088R1	50	N	150	N	N	N	<5	<2	.5	<2	74
DM088R2	30	N	100	N	N	N	8	<2	.6	<2	48
DM088R3	70	N	15	N	N	N	<5	<2	<.1	<2	<2
DM089R1	50	N	100	N	N	N	<5	<2	.8	<2	73
DM089R2	<10	N	<10	N	N	N	10	<2	.1	<2	5
DM090R1	30	N	100	N	N	N	<5	<2	.6	<2	70
DM090R2	50	N	70	N	N	N	<5	<2	.4	<2	16
DM091R1	50	N	150	N	N	N	<5	<2	.9	<2	55
DM091R2	30	N	50	N	N	N	<5	<2	<.1	<2	<2
DM092R1	50	N	100	N	N	N	<5	<2	.7	<2	71
DM092R2	50	N	100	N	N	N	<5	<2	<.1	<2	14
DM093R1	20	N	50	N	N	N	<5	<2	.7	<2	37
DM093R2	20	N	50	N	N	N	77	<2	1.3	2	37
DM094R1	50	N	150	N	N	N	<5	<2	.5	<2	72
DM094R2	N	N	10	N	N	N	<5	<2	.1	<2	<2
DM095R	50	N	150	N	N	N	<5	<2	.6	<2	63
DM096R1	50	N	150	N	N	N	<5	<2	.6	<2	67
DM096R2	70	N	15	N	N	N	<5	<2	<.1	<2	<2
DM097R	30	N	150	N	N	N	<5	<2	.6	<2	30
DM098R1	20	N	70	N	.02	N	9	<2	1	<2	24
DM098R2	20	N	50	N	N	N	17	<2	.8	<2	34
DM099R	30	N	70	N	N	N	<5	<2	.8	<2	40
DM100R	10	N	70	N	N	N	8	<2	.8	<2	26
DM138R	50	N	150	N	N	N	<5	<2	.7	<2	65
DM141R	20	N	100	N	.02	N	<5	<2	.3	<2	12

Table 7. Results of analyses of rock samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Na-pct	P-pct	Ag-ppm s	As-ppm s
DM142PD	42 53 7	120 38 28	3	1	1.5	.15	>5	<.2	N	N
DM148R	42 48 34	120 33 10	3	5	15	.3	2	.3	N	N

Sample	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	Ga-ppm s	Ge-ppm s
DM142PD	N	1,500	500	<1	N	N	15	20	30	30	N
DM148R	N	20	700	<1	N	N	30	150	50	20	N

Sample	La-ppm s	Mn-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s
DM142PD	<50	700	7	N	10	30	N	7	N	500	100	N
DM148R	<50	1,500	N	N	50	15	N	20	N	1,000	300	N

Sample	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Hg-ppm inst	Au-ppm aa	As-ppm aa	Bi-ppm aa	Cd-ppm aa	Sb-ppm aa	Zn-ppm aa
DM142PD	15	N	50	N	N	N	27	<2	<.1	<2	22
DM148R	20	N	70	N	N	N	18	<2	.8	<2	45

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

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

Sample	Latitude	Longitude	Ba ppm-s icp	Fe %-s icp	Mg %-s icp	Ca %-s icp	Ti %-s icp	Mn ppm-s icp	Ag ppm-s icp	As ppm-s icp
DM136GW	42 53 5	120 36 56	28	.09	.83	2.64	.01	527	<4	<20
DM137GW	42 53 5	120 36 10	31	.11	1.11	2.97	.01	509	<4	<20
DM138GW	42 53 5	120 37 18	44	.13	.92	2.34	.01	473	<4	<20
DM139GW	42 53 5	120 37 22	105	.2	1.28	2.93	.02	496	<4	<20
DM140GW	42 53 7	120 37 47	67	.13	1.11	3.05	.01	736	<4	<20
DM141GW	42 53 7	120 38 0	60	.13	1.1	4.04	.01	969	<4	<20
DM142GW	42 53 7	120 38 28	34	.05	.89	2.9	<.01	922	<4	<20
DM143GW	42 45 37	120 33 13	24	.06	.9	3.11	<.01	875	<4	<20
DM144GW	42 47 18	120 33 41	14	.04	.63	2.46	<.01	511	<4	<20
DM145GW	42 47 38	120 33 31	27	.03	.75	3.91	<.01	880	<4	<20
DM146GW	42 47 58	120 33 20	32	.05	.76	3.51	<.01	1,140	<4	<20
DM147GW	42 48 17	120 33 11	13	.04	.85	3.54	<.01	892	<4	<20
DM148GW	42 48 34	120 33 10	15	.04	.81	4.4	<.01	1,010	<4	<20
DM149GW	42 47 17	120 34 4	29	.05	.77	3.65	<.01	997	<4	<20
DM150GW	42 48 5	120 34 32	20	.04	.59	2.31	<.01	496	<4	<20
DM151GW	42 48 29	120 34 40	20	.04	.76	2.7	<.01	590	<4	<20
DM152GW	42 48 52	120 34 56	12	.04	.48	2.43	<.01	621	<4	<20
DM153GW	42 45 35	120 34 19	46	.02	.74	2.82	<.01	955	<4	<20
DM154GW	42 46 23	120 34 40	41	.03	.73	3.71	<.01	1,030	<4	<20
DM155GW	42 45 46	120 33 26	36	.04	.81	3.64	<.01	871	<4	<20
DM156GW	42 45 34	120 33 35	26	.03	.84	3.26	<.01	946	<4	<20
DM157GW	42 45 25	120 34 21	35	.06	.79	3.41	<.01	1,110	<4	<20
DM158GW	42 45 25	120 34 28	35	.03	.65	3.72	<.01	655	<4	<20
DM101GW	42 43 57	120 37 18	36	.04	.66	2.6	<.01	700	<4	<20
DM102GW	42 44 0	120 36 52	14	.03	.88	2.4	<.01	530	<4	<20
DM103GW	42 44 7	120 36 32	21	.03	.96	3.9	<.01	570	<4	<20
DM104GW	42 44 15	120 36 14	23	.05	.93	2.9	<.01	980	<4	<20
DM105GW	42 44 25	120 35 50	27	.04	.73	3.4	<.01	400	<4	<20
DM106GW	42 44 37	120 35 25	30	.03	.74	4.2	<.01	540	<4	<20
DM107GW	42 44 47	120 35 0	54	.05	.75	3	<.01	680	<4	<20
DM108GW	42 44 53	120 34 38	26	.05	.73	2.4	<.01	530	<4	<20
DM109GW	42 45 8	120 34 12	20	.04	.71	3.3	<.01	700	<4	<20
DM110GW	42 45 20	120 33 48	46	.04	.73	4	<.01	520	<4	<20
DM111GW	42 45 32	120 33 20	32	.05	.8	3.6	<.01	780	<4	<20
DM112GW	42 45 58	120 34 28	36	.04	.72	3.5	<.01	460	<4	<20
DM113GW	42 46 48	120 34 50	23	.03	.5	2.4	<.01	510	<4	<20
DM114GW	42 47 38	120 35 22	11	.04	.37	2	<.01	360	<4	<20
DM115GW	42 47 39	120 34 19	14	.04	.78	3.5	<.01	580	<4	<20
DM116GW	42 47 0	120 33 55	37	.05	.77	3.9	<.01	510	<4	<20

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Au ppm icp	Ni ppm icp	Be ppm icp	Bi ppm icp	Cd ppm icp	Co ppm icp	Cr ppm icp	Cu ppm icp	La ppm icp
DM136GW	<20	<4	<2	<20	<4	<2	7	25	<4
DM137GW	<20	<4	<2	<20	<4	<2	4	35	<4
DM138GW	<20	<4	<2	<20	<4	<2	10	35	<4
DM139GW	<20	<4	<2	<20	<4	<2	4	38	<4
DM140GW	<20	<4	<2	<20	<4	<2	3	38	<4
DM141GW	<20	<4	<2	<20	<4	<2	4	26	<4
DM142GW	<20	<4	<2	<20	<4	<2	<2	41	<4
DM143GW	<20	<4	<2	<20	<4	<2	2	53	<4
DM144GW	<20	<4	<2	<20	<4	<2	<2	33	<4
DM145GW	<20	<4	<2	<20	<4	<2	<2	23	<4
DM146GW	<20	<4	<2	<20	<4	<2	<2	36	<4
DM147GW	<20	<4	<2	<20	<4	<2	<2	41	<4
DM148GW	<20	<4	<2	<20	<4	<2	<2	29	<4
DM149GW	<20	<4	<2	<20	<4	<2	3	31	<4
DM150GW	<20	<4	<2	<20	<4	<2	2	33	<4
DM151GW	<20	<4	<2	<20	<4	<2	3	33	<4
DM152GW	<20	<4	<2	<20	<4	<2	<2	21	<4
DM153GW	<20	<4	<2	<20	<4	<2	<2	27	<4
DM154GW	<20	<4	<2	<20	<4	<2	<2	30	<4
DM155GW	<20	<4	<2	<20	<4	<2	<2	30	<4
DM156GW	<20	<4	<2	<20	<4	<2	<2	46	<4
DM157GW	<20	<4	<2	<20	<4	<2	<2	38	<4
DM158GW	<20	<4	<2	<20	<4	<2	<2	38	<4
DM101GW	<20	<4	<2	<20	<4	<2	4	28	<4
DM102GW	<20	4	<2	<20	<4	<2	2	47	<4
DM103GW	<20	5	<2	<20	<4	<2	3	42	4
DM104GW	<20	<4	<2	<20	<4	<2	2	23	<4
DM105GW	<20	<4	<2	<20	<4	<2	3	24	<4
DM106GW	<20	<4	<2	<20	<4	<2	2	38	<4
DM107GW	<20	<4	<2	<20	<4	<2	3	50	<4
DM108GW	<20	<4	<2	<20	<4	<2	3	56	<4
DM109GW	<20	<4	<2	<20	<4	<2	3	43	<4
DM110GW	<20	<4	<2	<20	<4	<2	3	48	<4
DM111GW	<20	<4	<2	<20	<4	<2	2	27	<4
DM112GW	<20	<4	<2	<20	<4	<2	2	11	<4
DM113GW	<20	<4	<2	<20	<4	<2	3	9	<4
DM114GW	<20	<4	<2	<20	<4	<2	6	13	<4
DM115GW	<20	<4	<2	<20	<4	<2	2	24	<4
DM116GW	<20	<4	<2	<20	<4	<2	2	21	<4

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Mo ppm icp	Nb ppm icp	V ppm icp	Pb ppm icp	Sc ppm icp	Sn ppm icp	Sr ppm icp	U ppm icp	Ce ppm icp
DM136GW	4	<8	<4	<8	<4	<20	341	<200	<8
DM137GW	<4	<8	<4	<8	<4	<20	362	<200	<8
DM138GW	<4	<8	<4	<8	<4	<20	394	<200	<8
DM139GW	<4	<8	5	<8	<4	<20	489	<200	<8
DM140GW	<4	<8	<4	<8	<4	<20	320	<200	<8
DM141GW	<4	<8	<4	<8	<4	<20	437	<200	<8
DM142GW	<4	<8	<4	<8	<4	<20	298	<200	<8
DM143GW	<4	<8	<4	<8	<4	<20	138	<200	<8
DM144GW	<4	<8	<4	<8	<4	<20	89	<200	<8
DM145GW	4	<8	<4	<8	<4	<20	200	<200	<8
DM146GW	5	<8	<4	<8	<4	<20	236	<200	<8
DM147GW	5	<8	<4	<8	<4	<20	136	<200	<8
DM148GW	4	<8	<4	<8	<4	<20	236	<200	<8
DM149GW	5	<8	<4	<8	<4	<20	206	<200	<8
DM150GW	<4	<8	<4	<8	<4	<20	210	<200	<8
DM151GW	<4	<8	<4	<8	<4	<20	201	<200	<8
DM152GW	4	<8	<4	<8	<4	<20	169	<200	<8
DM153GW	<4	<8	<4	<8	<4	<20	172	<200	<8
DM154GW	<4	<8	<4	<8	<4	<20	198	<200	<8
DM155GW	<4	<8	<4	<8	<4	<20	219	<200	<8
DM156GW	<4	<8	<4	<8	<4	<20	151	<200	<8
DM157GW	<4	<8	<4	18	<4	<20	235	<200	<8
DM158GW	<4	<8	<4	<8	<4	<20	253	<200	<8
DM101GW	<4	<8	<4	<8	<4	<20	270	<200	<8
DM102GW	<4	<8	<4	<8	<4	<20	120	<200	<8
DM103GW	<4	<8	<4	<8	<4	<20	150	<200	9
DM104GW	<4	<8	<4	<8	<4	<20	110	<200	<8
DM105GW	<4	<8	<4	<8	<4	<20	180	<200	<8
DM106GW	5	<8	<4	<8	<4	<20	190	<200	<8
DM107GW	<4	<8	<4	<8	<4	<20	340	<200	<8
DM108GW	4	<8	<4	<8	<4	<20	140	<200	<8
DM109GW	<4	<8	<4	<8	<4	<20	190	<200	<8
DM110GW	<4	<8	<4	<8	<4	<20	290	<200	<8
DM111GW	<4	<8	<4	<8	<4	<20	230	<200	<8
DM112GW	<4	<8	<4	<8	<4	<20	220	<200	<8
DM113GW	5	<8	<4	<8	<4	<20	210	<200	<8
DM114GW	<4	<8	<4	13	<4	<20	160	<200	<8
DM115GW	6	<8	<4	<8	<4	<20	160	<200	<8
DM116GW	5	<8	<4	<8	<4	<20	230	<200	<8

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Y ppm icp	Zn ppm icp	Al % icp	Na % icp	K % icp	P % icp	Yb ppm icp	Ga ppm icp
DM136GW	<4	29	.11	28.5	5.7	1.03	<2	<8
DM137GW	<4	43	.14	26.6	8.7	1.23	<2	<8
DM138GW	<4	49	.17	25.8	8.4	1.1	<2	<8
DM139GW	<4	53	.24	25.4	10.1	1.43	<2	<8
DM140GW	<4	71	.17	25	11.2	1.31	<2	<8
DM141GW	<4	31	.17	25.3	9.9	.94	<2	<8
DM142GW	<4	41	.06	25	9.9	1.3	<2	<8
DM143GW	<4	48	.04	26.2	10.8	1.22	<2	<8
DM144GW	<4	45	.03	25.8	10	1.36	<2	<8
DM145GW	<4	32	.03	27.1	8.7	1	<2	<8
DM146GW	<4	34	.03	27.3	8.8	1.01	<2	<8
DM147GW	<4	48	.03	27.5	8.5	1.34	<2	<8
DM148GW	<4	35	.05	26.5	8.2	1	<2	<8
DM149GW	<4	35	.04	26.3	8.4	1.1	<2	<8
DM150GW	<4	32	.05	25.8	8.5	1.15	<2	<8
DM151GW	<4	30	.06	27.8	6.7	1.12	<2	<8
DM152GW	<4	21	.04	27.3	6.6	.74	<2	<8
DM153GW	<4	36	.03	27.8	8.3	1.02	<2	<8
DM154GW	<4	34	.03	27.8	7.6	1.17	<2	<8
DM155GW	<4	37	.03	27.1	9.8	.91	<2	<8
DM156GW	<4	64	.03	24	11.8	1.26	<2	<8
DM157GW	<4	120	.04	27	9.1	.93	<2	<8
DM158GW	<4	41	.02	26	9.4	.95	<2	<8
DM101GW	<4	22	.05	31	6.5	.69	<2	<8
DM102GW	<4	51	.03	27	9.1	.77	<2	<8
DM103GW	<4	50	.03	21	18	1.4	<2	<8
DM104GW	<4	74	.06	24	12	.73	<2	<8
DM105GW	<4	26	.04	25	11	.7	<2	<8
DM106GW	<4	41	.03	23	16	.99	<2	<8
DM107GW	<4	38	.05	26	11	.91	<2	<8
DM108GW	<4	43	.05	27	10	.9	<2	<8
DM109GW	<4	30	.03	26	12	.81	<2	<8
DM110GW	<4	30	.04	25	12	1.1	<2	<8
DM111GW	<4	31	.07	26	11	.65	<2	<8
DM112GW	<4	16	.03	28	8.2	.59	<2	<8
DM113GW	<4	13	.04	31	5.3	.51	<2	<8
DM114GW	<4	9	.04	30	4.2	.47	<2	<8
DM115GW	<4	17	.04	29	7.3	.8	<2	<8
DM116GW	<4	19	.05	26	10	.71	<2	<8

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Li ppm icp	Ta ppm icp	Th ppm icp	Nd ppm icp	Eu ppm icp	Ho ppm icp	Au ppm faa	As/p ppm icp	Bi/p ppm icp	Cd/p ppm icp
DM136GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.13
DM137GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.15
DM138GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.14
DM139GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.21
DM140GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.32
DM141GW	4	<80	<8	<8	<4	<8	N	<.6	<.6	.16
DM142GW	5	<80	<8	<8	<4	<8	N	<.6	<.6	.21
DM143GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.43
DM144GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.31
DM145GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.18
DM146GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.23
DM147GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.32
DM148GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.24
DM149GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.15
DM150GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.15
DM151GW	4	<80	<8	<8	<4	<8	N	<.6	<.6	.19
DM152GW	4	<80	<8	<8	<4	<8	.001	<.6	<.6	.21
DM153GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.19
DM154GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.28
DM155GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.2
DM156GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.29
DM157GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.26
DM158GW	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.22
DM101GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.14
DM102GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.15
DM103GW	5	<80	<8	<8	<4	<8	<.001	N	N	.27
DM104GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.24
DM105GW	<4	<80	<8	<8	<4	<8	.003	N	N	.19
DM106GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.37
DM107GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.21
DM108GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.34
DM109GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.27
DM110GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.38
DM111GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.28
DM112GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.16
DM113GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.12
DM114GW	6	<80	<8	<8	<4	<8	<.001	N	N	.13
DM115GW	5	<80	<8	<8	<4	<8	<.001	N	N	.30
DM116GW	<4	<80	<8	<8	<4	<8	<.001	N	N	.27

Table 8A. Results of analyses of ashed greasewood samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Sb/p ppm icp	Zn/p ppm icp	Ash %	Cu/p ppm icp	Pb/p ppm icp	Ag/p ppm icp	Mo/p ppm icp	Au/p ppm icp	As-ppm aa	Se-ppm aa
DM136GW	<.6	22	16.4	17	.7	<.05	3.7	<.15	--	--
DM137GW	<.6	35	14.3	26	1	<.05	3.6	<.15	--	--
DM138GW	<.6	32	16.1	23	.61	<.05	3.7	<.15	--	--
DM139GW	<.6	41	14.4	32	1.2	<.05	3.2	<.15	--	--
DM140GW	<.6	50	15.2	27	.83	<.05	3.3	<.15	--	--
DM141GW	<.6	23	17.7	17	.64	<.05	2.5	<.15	--	--
DM142GW	<.6	31	17.8	31	<.6	<.05	2	<.15	--	--
DM143GW	<.6	33	17.8	36	.61	<.05	3.2	<.15	--	--
DM144GW	<.6	31	19.2	24	<.6	<.05	2.8	<.15	--	--
DM145GW	<.6	21	21	16	<.6	<.05	4	<.15	--	--
DM146GW	<.6	24	20.5	23	<.6	<.05	4.4	<.15	--	--
DM147GW	<.6	29	19.1	23	<.6	<.05	3.9	<.15	--	--
DM148GW	<.6	22	19.7	17	<.6	<.05	3.4	<.15	--	--
DM149GW	<.6	25	18.6	20	<.6	<.05	4.7	<.15	--	--
DM150GW	<.6	19	18.8	17	<.6	<.05	2	<.15	--	--
DM151GW	<.6	17	21.2	16	<.6	<.05	2.5	<.15	--	--
DM152GW	<.6	12	22.7	10	<.6	<.05	3.3	<.15	--	--
DM153GW	<.6	24	21.9	19	<.6	<.05	2.1	<.15	--	--
DM154GW	<.6	24	18.7	22	<.6	<.05	3.8	<.15	--	--
DM155GW	<.6	22	19.7	18	<.6	<.05	2.9	<.15	--	--
DM156GW	<.6	31	19.2	25	<.6	<.05	2.2	<.15	--	--
DM157GW	<.6	22	20	24	<.6	<.05	3.3	<.15	--	--
DM158GW	<.6	24	20.4	22	<.6	<.05	3	<.15	--	--
DM101GW	N	4.7	20	32	N	N	2.3	N	<.05	.14
DM102GW	N	23	22	43	N	N	1.2	N	<.05	.36
DM103GW	N	27	16	41	N	N	1.4	N	<.05	.09
DM104GW	N	48	17	25	N	N	1.8	N	<.05	<.05
DM105GW	N	4.5	21	23	N	N	2.8	N	<.05	.14
DM106GW	N	17	18	41	N	N	5.2	N	<.05	.1
DM107GW	N	12	15	47	N	N	2.8	N	<.05	.1
DM108GW	N	20	19	54	N	N	4.9	N	<.05	.23
DM109GW	N	26	21	41	N	N	2.6	N	<.05	.09
DM110GW	N	29	17	51	N	N	3.7	N	<.05	.08
DM111GW	N	29	21	33	N	N	3.4	N	<.05	.05
DM112GW	N	14	22	14	N	N	2.6	N	<.05	.09
DM113GW	N	13	24	13	N	N	5.4	N	<.05	<.05
DM114GW	N	8.8	26	13	8.9	N	2.4	N	.07	.05
DM115GW	N	18	19	24	N	N	6.4	N	<.05	<.05
DM116GW	N	16	19	22	N	N	5.2	N	<.05	.07

Table 88. Results of analyses of ashed big-sagebrush samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

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

Sample	Latitude	Longitude	Ba ppm-s icp	Fe %-s icp	Mg %-s icp	Ca %-s icp	Ti %-s icp	Mn ppm-s icp	Ag ppm-s icp	As ppm-s icp
DM143AT	42 45 37	120 33 13	131	.27	2.86	8.4	<.01	2,040	<4	<20
DM155AT	42 45 46	120 33 26	150	.39	2.24	8.64	.03	1,710	<4	<20
DM156AT	42 45 34	120 33 35	121	.28	2.48	9.24	.02	1,760	<4	<20
DM157AT	42 45 25	120 34 21	111	.22	2.18	7.56	.01	1,500	<4	<20
DM158AT	42 45 25	120 34 28	111	.22	2.53	8.44	.01	1,560	<4	<20
DM101AT	42 43 57	120 37 18	140	.44	2.6	12	.02	1,600	<4	<20
DM102AT	42 44 0	120 36 52	100	.25	2.9	9	.01	1,700	<4	<20
DM103AT	42 44 7	120 36 32	120	.32	2.8	9.6	.02	1,200	<4	<20
DM104AT	42 44 15	120 36 14	130	.33	2.7	8.9	.02	1,600	<4	<20
DM105AT	42 44 25	120 35 50	150	.44	2.9	8.4	.02	1,400	<4	<20
DM106AT	42 44 37	120 35 25	150	.3	2.9	10	.01	1,500	<4	<20
DM107AT	42 44 47	120 35 0	160	.26	3	9.6	.01	1,100	<4	<20
DM108AT	42 44 53	120 34 38	130	.34	2.5	9	.02	1,100	<4	<20
DM109AT	42 45 8	120 34 12	130	.33	2.9	9.2	.02	1,400	<4	<20
DM110AT	42 45 20	120 33 48	130	.3	3	9.4	.02	1,600	<4	<20
DM111AT	42 45 32	120 33 20	110	.33	2.6	8.4	.02	1,600	<4	<20
DM119AT	42 46 0	120 33 33	130	.28	2.8	12	.01	1,600	<4	<20
DM120AT	42 44 18	120 37 9	120	.28	2.5	9.4	.01	990	<4	<20
DM121AT	42 44 27	120 36 48	130	.34	2.5	10	.02	1,600	<4	<20
DM122AT	42 44 33	120 35 56	110	.29	2.8	8.7	.01	1,200	<4	<20
DM123AT	42 44 44	120 35 31	130	.29	2.8	10	.01	2,100	<4	<20
DM124AT	42 44 31	120 35 35	190	.37	3.1	9.8	.02	1,300	<4	<20
DM125AT	42 44 42	120 35 2	100	.29	3	10	.02	1,700	<4	<20
DM126AT	43 44 55	120 35 6	140	.31	3.1	10	.02	1,600	<4	<20
DM131AT	42 45 26	120 33 33	110	.31	2.6	10	.02	990	<4	<20
DM132AT	42 45 14	120 33 58	120	.34	2.9	9.8	.02	1,300	<4	<20
DM133AT	42 45 20	120 34 13	98	.25	3	9.9	.01	1,800	<4	<20
DM134AT	42 45 5	120 34 21	130	.26	2.8	11	.02	1,100	<4	<20
DM135AT	42 44 54	120 34 50	120	.27	2.6	10	.02	1,200	<4	<20

Sample	Au ppm icp	Ni ppm icp	Be ppm icp	Bi ppm icp	Cd ppm icp	Co ppm icp	Cr ppm icp	Cu ppm icp	La ppm icp
DM143AT	<20	16	<2	<20	<4	2	5	84	5
DM155AT	<20	14	<2	<20	<4	2	8	103	6
DM156AT	<20	25	<2	<20	<4	4	7	127	5
DM157AT	<20	31	<2	<20	<4	5	6	100	4
DM158AT	<20	23	<2	<20	<4	3	5	90	5
DM101AT	<20	18	<2	<20	<4	4	12	120	7
DM102AT	<20	21	<2	<20	<4	4	9	110	5
DM103AT	<20	26	<2	<20	<4	4	8	94	5
DM104AT	<20	20	<2	<20	<4	3	9	110	6
DM105AT	<20	28	<2	<20	<4	5	11	91	9
DM106AT	<20	22	<2	<20	<4	4	8	120	6
DM107AT	<20	24	<2	<20	<4	4	9	130	6
DM108AT	<20	24	<2	<20	<4	4	8	100	5
DM109AT	<20	26	<2	<20	<4	4	9	110	5
DM110AT	<20	20	<2	<20	<4	4	8	100	5
DM111AT	<20	17	<2	<20	<4	3	8	91	<4
DM119AT	<20	22	<2	<20	<4	4	8	100	8
DM120AT	<20	11	<2	<20	<4	3	7	100	4
DM121AT	<20	15	<2	<20	<4	4	8	130	7
DM122AT	<20	21	<2	<20	<4	3	7	130	5
DM123AT	<20	25	<2	<20	<4	3	7	120	<4
DM124AT	<20	29	<2	<20	<4	4	9	110	4
DM125AT	<20	26	<2	<20	<4	3	7	98	6
DM126AT	<20	25	<2	<20	<4	3	7	120	6
DM131AT	<20	19	<2	<20	<4	4	8	110	5
DM132AT	<20	21	<2	<20	<4	3	8	110	5
DM133AT	<20	37	<2	<20	<4	3	8	120	5
DM134AT	<20	24	<2	<20	<4	4	9	120	5
DM135AT	<20	20	<2	<20	<4	4	7	110	4

Table 88. Results of analyses of ashed big-sagebrush samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Mo ppm icp	Nb ppm icp	V ppm icp	Pb ppm icp	Sc ppm icp	Sn ppm icp	Sr ppm icp	U ppm icp	Ce ppm icp
DM143AT	6	<8	5	<8	<4	<20	642	<200	<8
DM155AT	8	<8	9	<8	<4	<20	670	<200	<8
DM156AT	6	<8	5	22	<4	<20	571	<200	<8
DM157AT	6	<8	4	19	<4	<20	568	<200	<8
DM158AT	5	<8	<4	11	<4	<20	575	<200	<8
DM101AT	10	<8	11	<8	<4	<20	660	<200	<8
DM102AT	6	<8	6	<8	<4	<20	690	<200	<8
DM103AT	8	<8	7	<8	<4	<20	650	<200	<8
DM104AT	6	<8	9	<8	<4	<20	710	<200	<8
DM105AT	7	<8	13	<8	<4	<20	730	<200	13
DM106AT	9	<8	7	<8	<4	<20	780	<200	<8
DM107AT	9	<8	7	<8	<4	<20	910	<200	<8
DM108AT	9	<8	8	<8	<4	<20	630	<200	<8
DM109AT	8	<8	8	<8	<4	<20	890	<200	<8
DM110AT	7	<8	8	<8	<4	<20	930	<200	<8
DM111AT	7	<8	8	<8	<4	<20	630	<200	<8
DM119AT	11	<8	6	<8	<4	<20	820	<200	<8
DM120AT	<4	<8	7	<8	<4	<20	640	<200	<8
DM121AT	7	<8	8	<8	<4	<20	720	<200	<8
DM122AT	4	<8	7	<8	<4	<20	720	<200	<8
DM123AT	7	<8	7	<8	<4	<20	870	<200	<8
DM124AT	11	<8	11	<8	<4	<20	920	<200	<8
DM125AT	10	<8	6	<8	<4	<20	730	<200	<8
DM126AT	9	<8	7	<8	<4	<20	840	<200	<8
DM131AT	6	<8	7	<8	<4	<20	700	<200	<8
DM132AT	10	<8	8	<8	<4	<20	940	<200	<8
DM133AT	6	<8	6	<8	<4	<20	730	<200	<8
DM134AT	12	<8	7	<8	<4	<20	990	<200	8
DM135AT	6	<8	6	<8	<4	<20	870	<200	<8

Sample	Y ppm icp	Zn ppm icp	Al % icp	Na % icp	K % icp	P % icp	Yb ppm icp	Ga ppm icp
DM143AT	<4	263	.41	.58	32	5.61	<2	<8
DM155AT	<4	347	.64	.53	30.5	6.06	<2	<8
DM156AT	<4	299	.4	.35	29.6	6.68	<2	<8
DM157AT	<4	413	.3	.36	29.8	6.87	<2	<8
DM158AT	<4	261	.29	.33	30.9	5.52	<2	<8
DM101AT	<4	290	.65	.55	25	6.5	<2	<8
DM102AT	<4	320	.33	.95	26	7.5	<2	<8
DM103AT	<4	180	.47	.75	25	6.2	<2	<8
DM104AT	<4	300	.49	1	25	6.4	<2	<8
DM105AT	<4	260	.68	1.6	26	6.5	<2	<8
DM106AT	<4	350	.45	.98	24	6.6	<2	<8
DM107AT	<4	310	.35	1	29	7.2	<2	<8
DM108AT	<4	280	.44	1.3	24	7	<2	<8
DM109AT	<4	250	.5	1	24	6.4	<2	<8
DM110AT	<4	230	.45	.85	24	5.9	<2	<8
DM111AT	<4	280	.5	.83	27	6.3	<2	<8
DM119AT	<4	330	.37	.6	25	7.2	<2	<8
DM120AT	<4	240	.4	.93	26	6.4	<2	<8
DM121AT	<4	330	.5	1.1	25	7.2	<2	<8
DM122AT	<4	370	.38	.95	24	7	<2	<8
DM123AT	<4	330	.37	1.2	22	7.2	<2	<8
DM124AT	<4	230	.57	1.2	24	6.7	<2	<8
DM125AT	<4	420	.39	.73	20	6.3	<2	<8
DM126AT	<4	320	.46	.85	19	6.8	<2	<8
DM131AT	<4	250	.49	.54	19	5.9	<2	<8
DM132AT	<4	270	.52	.71	19	6.9	<2	<8
DM133AT	<4	380	.33	.65	18	7.3	<2	<8
DM134AT	<4	230	.34	.62	18	7.5	<2	9
DM135AT	<4	230	.4	.62	17	6.7	<2	<8

Table 8B. Results of analyses of ashed big-sagebrush samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.--Continued

Sample	Li ppm icp	Ta ppm icp	Th ppm icp	Nd ppm icp	Eu ppm icp	Ho ppm icp	Au ppm faa	As/p ppm icp	Bi/p ppm icp	Cd/p ppm icp
DM143AT	<4	<80	<8	<8	<4	<8	N	<.6	<.6	1.1
DM155AT	5	<80	<8	<8	<4	<8	.001	<.6	<.6	.69
DM156AT	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.88
DM157AT	<4	<80	<8	9	<4	<8	.001	<.6	<.6	.55
DM158AT	<4	<80	<8	<8	<4	<8	N	<.6	<.6	.75
DM101AT	7	<80	<8	<8	<4	<8	.01	N	N	.57
DM102AT	<4	<80	<8	<8	<4	<8	.001	N	N	.69
DM103AT	<4	<80	<8	<8	<4	<8	.011	N	N	.65
DM104AT	<4	<80	<8	<8	<4	<8	.009	N	N	.58
DM105AT	6	<80	<8	<8	<4	<8	.036	N	N	.98
DM106AT	<4	<80	<8	<8	<4	<8	.005	N	N	.83
DM107AT	<4	<80	<8	<8	<4	<8	.005	N	N	.72
DM108AT	<4	<80	<8	<8	<4	<8	.005	N	N	1.1
DM109AT	<4	<80	8	<8	<4	<8	.032	N	N	1.0
DM110AT	<4	<80	<8	<8	<4	<8	.006	N	N	1.2
DM111AT	<4	<80	<8	<8	<4	<8	.012	N	N	1.1
DM119AT	4	<80	<8	<8	<4	<8	.004	N	N	.93
DM120AT	5	<80	<8	<8	<4	<8	.002	N	N	.51
DM121AT	6	<80	<8	<8	<4	<8	.002	N	N	.61
DM122AT	5	<80	<8	<8	<4	<8	.001	N	N	.65
DM123AT	<4	<80	<8	<8	<4	<8	.002	N	N	.81
DM124AT	4	<80	<8	<8	<4	<8	.003	N	N	.88
DM125AT	<4	<80	<8	<8	<4	<8	.011	2.3	N	1.4
DM126AT	4	<80	<8	<8	<4	<8	.001	2.9	N	.93
DM131AT	<4	<80	<8	<8	<4	<8	.002	N	N	.82
DM132AT	<4	<80	<8	<8	<4	<8	.002	N	N	.80
DM133AT	<4	<80	<8	<8	<4	<8	.001	N	N	.95
DM134AT	4	<80	10	15	<4	<8	.002	3.2	N	.56
DM135AT	<4	<80	<8	<8	<4	<8	.003	N	N	.63

Sample	Sb/p ppm icp	Zn/p ppm icp	Ash %	Cu/p ppm icp	Pb/p ppm icp	Ag/p ppm icp	Mo/p ppm icp	Au/p ppm icp	As-ppm aa	Se-ppm aa
DM143AT	<.6	200	6.01	78	2.1	<.05	7.3	<.15	--	--
DM155AT	<.6	260	5.69	94	3.6	<.05	8.3	<.15	--	--
DM156AT	<.6	200	6.85	110	.9	<.05	7	<.15	--	--
DM157AT	<.6	220	6.16	95	1.2	<.05	6.3	<.15	--	--
DM158AT	<.6	190	6.37	84	1	<.05	5.9	<.15	--	--
DM101AT	N	261	5.5	119	N	N	9.7	N	.06	<.05
DM102AT	N	290	5.5	111	N	N	6.9	N	.08	<.05
DM103AT	N	182	5.4	98	N	N	8.4	N	<.05	.05
DM104AT	N	275	5.8	115	N	N	7.1	N	.07	<.05
DM105AT	N	243	5.3	94	N	N	7.0	N	.07	<.05
DM106AT	N	324	5.6	121	N	N	9.7	N	<.05	<.05
DM107AT	N	284	5.3	130	N	N	10.6	N	<.05	<.05
DM108AT	N	254	5.2	107	N	N	9.7	N	.05	<.05
DM109AT	N	236	5.8	111	N	N	9.5	N	.05	<.05
DM110AT	N	227	5.4	107	N	N	8.0	N	<.05	<.05
DM111AT	N	267	5.6	92	2.9	N	8.9	N	.06	<.05
DM119AT	N	301	4.9	103	N	N	12	N	<.05	<.05
DM120AT	N	232	5.8	103	N	N	4.7	N	.05	<.05
DM121AT	N	297	5.5	124	N	N	7.3	N	.06	<.05
DM122AT	N	325	5.0	121	N	N	4.7	N	.05	<.05
DM123AT	N	292	5.2	122	N	N	7.8	N	.07	<.05
DM124AT	N	211	5.4	105	N	N	12	N	.07	.05
DM125AT	N	380	5.0	99	N	N	11	N	<.05	<.05
DM126AT	N	305	5.1	126	N	N	10	N	<.05	<.05
DM131AT	N	228	5.5	107	2.2	N	6.8	N	<.05	<.05
DM132AT	N	252	5.3	112	N	N	11	N	<.05	<.05
DM133AT	N	319	4.9	116	N	N	6.7	N	.05	<.05
DM134AT	N	211	5.0	117	N	N	12	N	.05	.05
DM135AT	N	213	5.2	106	N	N	6.8	N	<.05	<.05

Table 9. Results of analyses of lake-sediment and evaporite samples from the Diablo Mountain Wilderness Study Area, Lake County, Oregon.

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

Sample	Latitude	Longitude	Ba ppm-s	Fe %-s	Mg %-s	Ca %-s	Ti %-s	Mn ppm-s	Ag ppm-s
DM118LB	42 55 33	120 40 37	700	2	.7	2	.3	500	N
DM118WL	42 55 33	120 40 37	150	.2	.15	.5	.1	150	N
DM127DL1	42 47 0	120 39 6	500	3	.7	1	.3	500	N
DM127DL2	42 47 0	120 39 6	700	3	1	1.5	.3	1,000	N
DM128DL1	42 47 0	120 39 10	300	2	.7	.7	.2	500	N
DM128DL2	42 47 0	120 39 10	300	2	.5	.7	.2	500	N
DM129DL1	42 47 0	120 39 19	200	2	.7	.5	.2	500	N
DM129DL2	42 47 0	120 39 19	300	2	.7	1	.2	500	N

Sample	As ppm-s	Au ppm-s	B ppm-s	Ni ppm-s	Be ppm-s	Bi ppm-s	Cd ppm-s	Co ppm-s	Cr ppm-s
DM118LB	N	N	100	20	1	N	N	15	20
DM118WL	N	N	2,000	<5	<1	N	N	N	N
DM127DL1	N	N	500	20	1.5	N	N	15	20
DM127DL2	N	N	150	30	1.5	N	N	20	50
DM128DL1	N	N	700	15	<1	N	N	15	10
DM128DL2	N	N	500	15	1.5	N	N	15	10
DM129DL1	N	N	500	15	1	N	N	10	10
DM129DL2	N	N	700	15	1.5	N	N	15	10

Sample	Cu ppm-s	La ppm-s	Mo ppm-s	Nb ppm-s	V ppm-s	Pb ppm-s	Sb ppm-s	Sc ppm-s	Sn ppm-s	Sr ppm-s
DM118LB	30	<50	N	N	70	20	N	10	N	700
DM118WL	7	N	20	N	70	N	N	<5	N	100
DM127DL1	50	<50	5	N	100	15	N	10	N	300
DM127DL2	100	<50	N	N	150	30	N	15	N	700
DM128DL1	30	N	15	N	100	15	N	10	N	200
DM128DL2	30	N	N	N	100	15	N	10	N	200
DM129DL1	30	N	<5	N	100	20	N	10	N	200
DM129DL2	30	N	N	N	100	15	N	10	N	200

Sample	W ppm-s	Y ppm-s	Zn ppm-s	Zr ppm-s	Na %-s	P %-s	Ga ppm-s	Ge ppm-s	Th ppm-s
DM118LB	N	20	N	70	3	<.2	50	N	N
DM118WL	N	N	N	50	>5	.2	15	N	N
DM127DL1	N	20	N	100	5	<.2	20	N	N
DM127DL2	N	30	N	100	5	.2	50	N	N
DM128DL1	N	15	N	70	>5	<.2	30	N	N
DM128DL2	N	20	N	100	2	<.2	15	N	N
DM129DL1	N	20	N	70	>5	<.2	30	N	N
DM129DL2	N	20	N	70	5	<.2	50	N	N

Sample	Li ppm icp	Th ppm dn	U ppm dn	Au ppm aa	As/p ppm icp	Bi/p ppm icp	Cd/p ppm icp	Sb/p ppm icp	Zn/p ppm icp
DM118LB	27	6.1	1.6	N	8	<2	.3	4	22
DM118WL	6	6.1	2.41	N	83	<2	<.1	<2	5
DM127DL1	49	4.8	1.62	N	25	<2	.3	3	36
DM127DL2	30	7.66	2.14	N	13	<2	.5	4	41
DM128DL1	32	5.6	1.39	N	37	<2	.1	3	21
DM128DL2	60	4.4	1.36	N	11	<2	.4	4	39
DM129DL1	39	3.9	1.4	N	24	<2	.2	3	25
DM129DL2	52	5	1.28	N	20	<2	.4	4	34

Table 10. Description of rock samples

O, outcrop; F, float or loose surface material; most float samples are considered to be from close to their outcrop source.

DM004HR	F	Basalt, medium gray
DM005SR	F	Basalt, medium dark gray
DM015HR	O	Basaltic cinder, pale to moderate red
DM043HR	F	Tuffaceous sandstone, light brown
DM055R	O	Basalt, dark gray
DM056R	O	Basalt, dark gray
DM057R	F	Basalt, dark gray
DM058R	O	Tuffaceous sandstone, light brown
DM059R	F	Basalt, dark gray
DM060R	F	Basalt, dark gray
DM061R	F	Basalt, dark gray
DM062R1	F	Basalt, dark gray
DM062R2	F	Basalt, dark gray
DM063R	F	Basalt, dark gray
DM064R	F	Basalt, dark gray
DM066R	O	Basalt, dark gray
DM067R	F	Travertine, white
DM068R	O	Basalt, dark gray
DM076R1	F	Travertine, white
DM076R2	F	Basaltic cinders, pale red, minor disseminated calcium carbonate
DM077R1	F	Basalt, dark gray
DM077R2	O	Basalt, dark gray
DM078R	O	Basaltic cinder gravel, brownish gray, with carbonate matrix
DM079	F	Travertine, light to very light gray
DM080R1	F	Travertine, white to very light gray, curved plate about 2-cm thick
DM080R2	O	Basalt, dark gray
DM082R1	O	Travertine, white to light gray, varying quantities of impurities
DM082R2	F	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM083R1	O	Basalt, medium to dark gray
DM083R2	O	Travertine, white to light gray, varying quantities of impurities, contains basaltic cinders
DM084R	F	Travertine, white to light gray, varying quantities of impurities
DM086R	O	Basalt, medium to dark gray
DM087R	F	Basalt, medium to dark gray
DM088R1	O	Basalt, medium to dark gray
DM088R2	O	Tuffaceous sandstone
DM088R3	F	Travertine, white to light gray, varying quantities of impurities
DM089R1	O	Basalt, medium to dark gray
DM089R2	F	Travertine, white to light gray, varying quantities of impurities, moderate yellowish brown
DM090R1	O	Basalt, medium to dark gray
DM090R2	F	Travertine, white to light gray, varying quantities of impurities, contains basalt pebbles
DM091R1	O	Basalt, medium to dark gray
DM091R2	F	Travertine, white to light gray, varying quantities of impurities
DM092R1	F	Basalt, medium to dark gray
DM092R2	F	Travertine, white to light gray, varying quantities of impurities

Table 10. Description of rock samples (continued)

O, outcrop; F, float or loose surface material; most float samples are considered to be from close to their outcrop source.

DM093R1	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM093R2	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM094R1	O	Travertine, white to light gray, varying quantities of impurities
DM094R2	F	Travertine, white to light gray, varying quantities of impurities
DM095R	O	Basalt, medium to dark gray
DM096R1	O	Basalt, medium to dark gray
DM096R2	F	Travertine, white to light gray, varying quantities of impurities
DM097R	O	Basalt, medium to dark gray
DM098R1	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM098R2	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM099R	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM100R	O	Basaltic cinders, pale to moderate reddish brown, fine to coarse scoriaceous, oxidized basaltic cinders and near-vent flows, disseminated calcium carbonate (note Ca content)
DM117R	O	Basalt, medium to dark gray
DM130R	F	Travertine, white to light gray, varying quantities of impurities
DM138R	F	Basalt, medium to dark gray
DM141R	F	Travertine, white to light gray, varying quantities of impurities
DM148R	O	Conglomerate, basaltic, small pebbles