U.S. DEPARTMENT OF THE INTERIOR

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ANALYTICAL RESULTS AND SAMPLE LOCALITY MAPS FOR ROCK AND STREAM-SEDIMENT SAMPLES, CHOCOLATE MOUNTAIN AERIAL GUNNERY RANGE, IMPERIAL AND RIVERSIDE COUNTIES, CALIFORNIA

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

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INTRODUCTION

This report contains analytical data for 62 rock samples, and 122 stream-sediment samples collected by the U.S. Geological Survey (USGS), and 57 soil, and 10 stream-sediment samples collected during the National Uranium Resource Evaluation (NURE) program. The NURE samples were re-analyzed for the present study. All samples are from the Chocolate Mountain Aerial Gunnery Range and vicinity, Riverside and Imperial Counties, California. The analyses of these samples can be used for baseline, mineral resource, and environmental geochemical studies.

The location of the Chocolate Mountain Aerial Gunnery Range is shown in figure 1. The Chocolate Mountain Aerial Gunnery Range occupies most of the area of the northwest-trending Chocolate Mountains, and includes a part of the Little Mule Mountains. The Salton Sea and Imperial Valley lie to the west, and the Orocopia and Chuckwalla Mountains are to the north. Elevation ranges from sea level along the west side up to 2,990 ft (911 m) at the highest point. The Salton Sea sheet (Jennings, 1967) of the Geologic Map of California includes the area of the Chocolate Mountains Aerial Gunnery Range. The geologic map of Imperial County (Morton, 1977) includes the part of the gunnery range that is within that county, at a scale of 1:125,000. Brief descriptions of the geology of the Chocolate Mountains are given by Dillon (1986), and by Powell, and others (1994).

This report consists of two parts. Part A is this printed report. Part B is an IBM-compatible digital version of most of Part A on an 1.44 MB diskette. The diskette includes this text in Corel WordPerfect, version 6.1, as well as an ASCII "readme" file, and the complete data for tables 3 through 6 in both "dbf" and "wk1" formats. The "dbf" files are similar to the tables in part A. The "wk1" files are more complete and include the specific limits for elements with more than one lower limit of determination. The wk1 file for table 3 also includes the rock descriptions. The four figures are not included in the diskette version.

SAMPLE COLLECTION AND PREPARATION

A total of 62 rock samples were collected from 60 sites. The samples consisted of composited chips from several outcrops, or of a composite of several grab samples from a mine or prospect dump, all of which were collected from within a 30-meter radius of each sample site plotted on figure 2.

Samples of bulk stream sediment were collected from 122 sites. All samples were taken from dry stream beds, and most were from stream beds with gentle to moderate gradients. The bulk stream sediment at each site was composited from several localities extending across what appeared to be the most recently active stream channel. The localitites were within a 30-meter radius of each site plotted on figure 3.

Selected soil and stream-sediment samples previously collected for the NURE program study of the Salton Sea 1 x 2 degree quadrangle were obtained from USGS archives in Denver, CO, for re-analysis. NURE sampling (Heffner, 1980) was done in 1979 in the southern half of the Chocolate Mountain Aerial Gunnery Range, southeast of the proximity of Surveyors Pass,

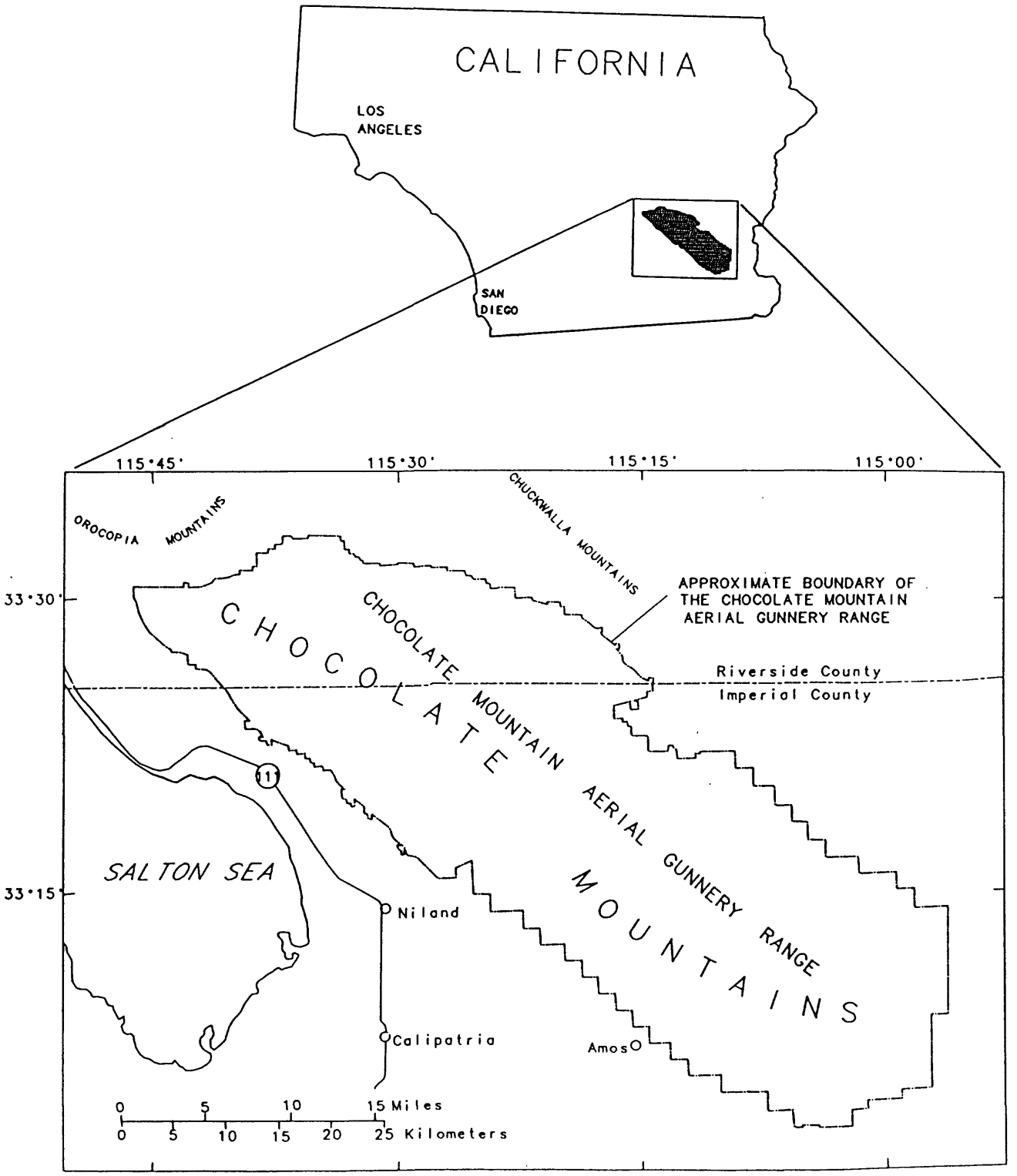

Figure 1. Maps showing location of Chocolate Mountain Aerial Gunnery Range, California.

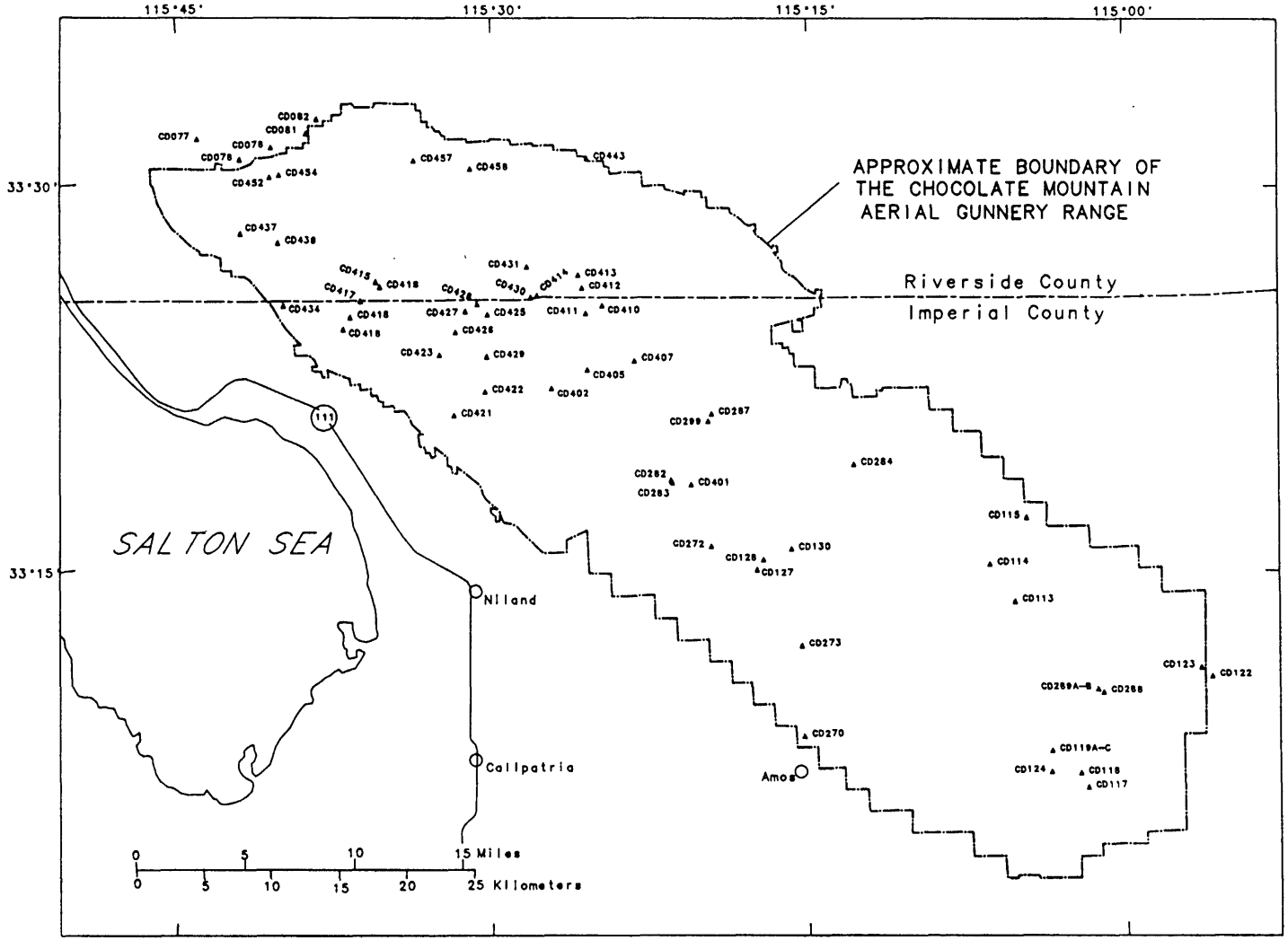

Figure 2. Site locality map for USGS rock samples.

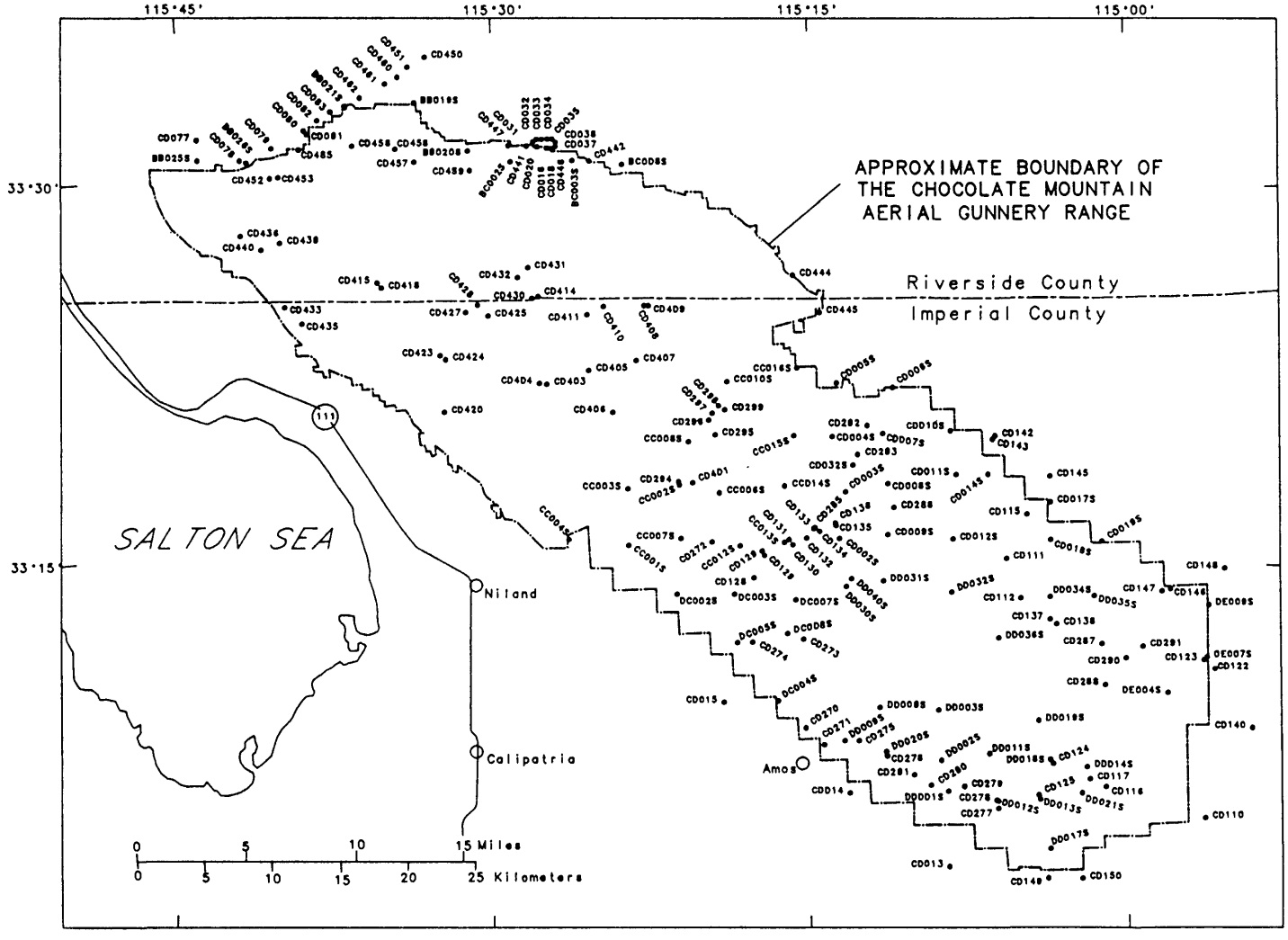

Figure 3. Site locality map for USGS stream-sediment samples, and NURE stream-sediment and soil samples.

and along the northern fringes of the gunnery range. NURE sampling methods are described in Price and Jones (1979). Locations of the NURE sample sites are shown on figure 3.

The rock and stream-sediment samples collected during the present study were prepared and analyzed by Enzyme Laboratories, Inc. Enzyme Laboratories (formerly ACTLABS, Inc.) routinely crushed the entire rock sample to minus-10-mesh (2 mm), mechanically split the rock sample, and pulverized a split to at least minus-150-mesh for analysis. The stream-sediment samples were sieved at the sample site to minus-10-mesh (2 mm) with stainless-steel sieves. These samples were further sieved in the laboratory and the minus-80-mesh (0.189-mm) fraction was retained for analysis and pulverized as described for the rock samples.

The NURE stream-sediment and soil samples had previously been prepared. The samples were sieved to minus-100-mesh, and pulverized to a fine powder that was also approximately minus 150-mesh. These samples were analyzed by XRAL Laboratories.

ANALYTICAL METHODS

All samples were submitted to the laboratories in a random sequence and generally in groups of 40 samples. Duplicate samples and internal standards were submitted with the samples to check the accuracy and reproducibility of the analyses. Enzyme Laboratories analyzed samples for 29 elements (As, Au, Ba, Br, Ce, Co, Cr, Cs, Eu, Fe, Hf, Hg, Ir, La, Lu, Na, Nd, Rb, Sb, Sc, Se, Sm, Sn, Ta, Tb, Th, U, W, and Yb) by instrumental neutron activation (INAA), and for 19 elements (Ag, Al, Be, Bi, Ca, Cd, Cu, K, Mg, Mn, Mo, Ni, P, Pb, Sr, Ti, V, Y, and Zn) by inductively coupled plasma-atomic emission spectrometry (ICP-AES) after a hot-acid extraction technique. The elements analyzed and lower limits of determination are listed in table 1.

XRAL analyzed samples using two methods of ICP-AES, a partial-extraction method, and a hot-acid extraction method. The methods are similar to those described by Motooka (1990), and by Briggs (1990), respectively. Nine elements (Ag, As, Bi, Cd, Cu, Mo, Pb, Sb, and Zn) were analyzed by the partial-extraction method of ICP-AES, and 37 elements (Ag, Al, Au, Ba, Be, Ca, Cd, Ce, Co, Cr, Cu, Eu, Fe, Ga, Ho, K, La, Li, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Sc, Sr, Ta, Th, Ti, U, V, Y, Yb, and Zn) were analyzed by the hot-acid extraction method. The elements analyzed and lower limits of determination are given in table 2.

The results for all elements analyzed by the two laboratiories are listed in tables 3-6 of part A and are included as digital files in part B of this report. Elements with no reported values have been omitted from tables 3-6 included in part A of this report. Thus, of the original 48 elements determined by ACTLABS, three elements determined by INAA (Hg, Ir, and Sn), and one element determined by ICP-AES (Bi), were deleted from the rock data set (table 3), and three elements determined by INAA (Hg, Ir, and Sn), were deleted from the stream-sediment data set (table 4). Of the original 46 elements determined by XRAL, one element determined by the partial extraction method of ICP-AES (Ag), and six elements determined by the hot-acid extraction method of ICP-AES (Ag, Au, Cd, Ho, Ta, and U), were deleted from the stream-sediment and soil data sets presented in tables 5 and 6. One additional element determined by the hot-acid extraction method of ICP-AES (Mo), was also deleted from the soil data set in table 6. Analyses for the remaining elements for each sample type are listed in tables 3-6.

Table 1. Lower limits of determination for instrumental neutron activation analysis (INAA), and inductively coupled plasma-atomic emission spectrometric analysis (ICP-AES), methods used by Enzyme Laboratories.

Instrumental neutron activation analysis (INAA)

Element	Lower limit	Element	Lower limit
Antimony (Sb)	0.1 ppm	Mercury (Hg)	1 ppm
Arsenic (As)	0.5 ppm	Neodymium (Nd)	5 ppm
Barium (Ba)	50 ppm*	Rubidium (Rb)	15 ppm
Bromine (Br)	0.5 ppm	Samarium (Sm)	0.1 ppm
Cerium (Ce)	3 ppm	Scandium (Sc)	0.1 ppm
Cesium (Cs)	1 ppm	Selenium (Se)	3 ppm
Chromium (Cr)	5 ppm	Sodium (Na)	0.01 %
Cobalt (Co)	1 ppm	Tantalum (Ta)	0.5 ppm*
Europium (Eu)	0.2 ppm	Terbium (Tb)	0.5 ppm
Gold (Au)	2 ppb*	Thorium (Th)	0.2 ppm
Hafnium (Hf)	1 ppm	Tin (Sn)	100 ppm*
Iridium (Ir)	5 ppb	Tungsten (W)	1 ppm*
Iron (Fe)	0.01 %	Uranium (U)	0.5 ppm
Lanthanum (La)	0.5 ppm	Ytterbium (Yb)	0.2 ppm
Lutetium (Lu)	0.05 ppm		

Inductively coupled plasma-atomic emission spectrometric analysis (ICP-AES)

Element	Lower limit	Element	Lower limit
Alumium (Al)	0.01 %	Nickel (Ni)	1 ppm
Beryllium (Be)	2 ppm	Phosphorus (P)	0.001 %
Bismuth (Bi)	5 ppm	Potassium (K)	0.01 %
Cadmium (Cd)	0.5 ppm	Silver (Ag)	0.5 ppm*
Calcium (Ca)	0.01 %	Strontium (Sr)	1 ppm
Copper (Cu)	1 ppm	Titanium (Ti)	0.01 %
Lead (Pb)	5 ppm	Vanadium (V)	2 ppm
Magnesium (Mg)	0.01 %	Yttrium (Y)	2 ppm
Manganese (Mn)	1 ppm	Zinc (Zn)	1 ppm
Molybdenum (Mo)	2 ppm		

* Some additional lower limits were used for these elements, as shown in the "wk1" files in part B of this report.

Table 2. Lower limits of determination for inductively coupled plasma-atomic emission spectrometry (ICP-AES), methods used by XRAL Laboratories

ICP-AES, partial-extraction method

Element	Lower limit	Element	Lower limit
Antimony (Sb)	1 ppm	Lead (Pb)	1 ppm
Arsenic (As)	1 ppm	Molybdenum (Mo)	0.1 ppm
Bismuth (Bi)	1 ppm	Silver (Ag)	0.08 ppm
Cadmium (Cd)	0.05 ppm	Zinc (Zn)	0.05 ppm
Copper (Cu)	0.05 ppm		

ICP-AES, hot-acid extraction method

Element	Lower limit	Element	Lower limit
Aluminum (Al)	0.005 %	Molybdenum (Mo)	2 ppm
Barium (Ba)	1 ppm	Neodymium (Nd)	9 ppm
Beryllium (Be)	1 ppm	Nickel (Ni)	3 ppm
Cadmium (Cd)	2 ppm	Niobium (Nb)	4 ppm
Calcium (Ca)	0.005 %	Phosphorus (P)	0.005 %
Cerium (Ce)	5 ppm	Potassium (K)	0.01 %
Chromium (Cr)	2 ppm	Scandium (Sc)	2 ppm
Cobalt (Co)	2 ppm	Silver (Ag)	2 ppm
Copper (Cu)	2 ppm	Sodium (Na)	0.005 %
Europium (Eu)	2 ppm	Strontium (Sr)	2 ppm
Gallium (Ga)	4 ppm	Tantalum (Ta)	40 ppm
Gold (Au)	8 ppm	Thorium (Th)	6 ppm
Holmium (Ho)	4 ppm	Titanium (Ti)	0.005 %
Iron (Fe)	0.02 %	Uranium (U)	100 ppm
Lanthanum (La)	2 ppm	Vanadium (V)	2 ppm
Lead (Pb)	4 ppm	Ytterbium (Yb)	1 ppm
Lithium (Li)	2 ppm	Yttrium (Y)	2 ppm
Magnesium (Mg)	0.005 %	Zinc (Zn)	2 ppm
Manganese (Mn)	4 ppm		

DESCRIPTION OF DATA TABLES FOR PART A

The analyses are listed in tables 3-6. Information on the column headings and sample numbers is given below.

Sample--For each sample in tables 3 and 4, the first two letters, CD, identify the current project. For each sample in tables 5 and 6, the first two letters, SS, identify samples originally collected as part of the NURE study of the Salton Sea 1 x 2 degree quadrangle. For tables 5 and 6 the next two letters identify the 15' quadrangle from which the samples were collected (Heffner, 1980, p. 13). The three digits following letters in all tables give the site number. For tables 5 and 6, the site numbers given are for sites within the 15' quadrangle indicated by the previous two letters. For samples listed in tables 3 and 4, the letters following the site numbers indicate the sample type as follows: "RK" for rock and "SS" for stream sediment. For samples listed in tables 5 and 6, the site numbers are followed by the letter "S"; for these tables the sample type is identified by the title of the table.

In table 3, a sample ID with "RK" followed by an "A", "B", or "C" and with the sample number duplicated, indicates additional samples at the same site.

Latitude and longitude--The next two columns give the latitude and longitude, in degrees, minutes, and seconds, for each sample.

AG PPM, or AL PCT, through ZN PPM--These columns of analyses list the element symbol, whether the concentrations are in parts per million (PPM), parts per billion (PPB), or percent (PCT), and the analytical method. An "ICP" below the element symbol indicates inductively coupled plasma-atomic emission spectrometry (ICP-AES), with total digestion; an "INAA" below the element symbol indicates instrumental neutron activation analysis (tables 3 and 4, ACTLABS analyses); and "ICP-P" indicates a partial-extraction method of ICP-AES was used; an "ICP-T" indicates a hot-acid extraction method of ICP-AES was used.

Rock descriptions--The rock descriptions given in table 3a are field terms based on identification with a hand lens. The list also includes locality comments, where appropriate.

OTHER INFORMATION

More than one lower limit of determination was reported for some of the elements analyzed by ACTLABS. The elements with more than one lower limit are Ag by ICP-AES, and Au, Ba, Ta, and W, by INAA. The "wk1" files in part B of this report show the correct lower limits for each censored value. Although the lower limit of determination is not shown for each qualified analysis in the tables of analyses in this part of the report, most lower limits for these elements are as shown in tables 1 and 2. These differences in lower limits resulted from the use of a smaller than standard sample aliquot for a given analysis because of insufficient available sample material, or from sample matrix differences.

Because of the formatting in the computer programs used to produce the data in the "dbf" and "wk1" files on the diskette, the elements listed in the tables may carry one or more nonsignificant zeros to the right of the significant digits. The analysts did not determine these elements to the accuracy suggested by the extra zeros shown. In general, the elements shown in percentage, are correct to two decimal places (P is correct to three places). For other elements, values to the left of the decimal point generally do not contain more than two or three significant digits.

Sample numbers have been modified for the sample location maps (figures 2-4). The first two letters of the prefix for NURE samples have been removed. For samples collected during the current study ("CD" prefix), the letter suffixes were removed.

ACKNOWLEDGEMENTS

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Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity

[PPB, parts per billion; PPM, parts per million; PCT, percent; INAA, instrumental neutron activation analysis; ICP, inductively coupled plasma-atomic emission spectrometry; N, not detected, or below the limit of determination]

Sample	LATITUDE	LONGITUDE	Ag PPM ICP	Al PCT ICP	As PPM INAA	Au PPB INAA	Ba PPM INAA	Be PPM ICP	Br PPM INAA
CD077RK	33 31 51	115 43 59	N	6.64	6.1	8	1,100	N	N
CD078RK	33 31 3	115 41 56	N	7.66	7.9	7	1,500	N	N
CD079RK	33 31 32	115 40 27	N	4.95	12	9	1,100	N	N
CD081RK	33 32 7	115 38 47	N	6.72	1.7	N	750	N	N
CD082RK	33 32 40	115 38 17	N	5.17	25	N	770	N	N
CD113RK	33 13 49	115 5 18	N	8.11	3.3	9	1,200	N	N
CD114RK	33 15 19	115 6 29	N	6.42	2.4	4	550	N	N
CD115RK	33 17 9	115 4 45	N	6.37	2.6	20	330	2	N
CD117RK	33 6 19	115 1 52	N	6.39	7.7	N	N	3	N
CD118RK	33 6 52	115 2 12	N	9.45	8.7	7	590	N	N
CD119RKA	33 7 48	115 3 33	24.5	1.54	49	3,420	280	N	N
CD119RKB	33 7 48	115 3 33	N	6.26	8.9	15	1,200	N	N
CD119RKC	33 7 48	115 3 33	N	6.91	18	8	790	N	N
CD122RK	33 10 49	114 55 57	N	8.08	1.8	N	280	N	N
CD123RK	33 11 11	114 56 29	.8	8.34	21	N	1,100	N	1.8
CD124RK	33 6 56	115 3 35	2.5	.29	390	5	N	N	N
CD127RK	33 15 4	115 17 26	N	7.19	1.1	N	840	N	N
CD129RK	33 15 29	115 17 8	N	8.5	2	13	400	N	N
CD130RK	33 15 56	115 15 47	N	7.5	2.6	14	570	N	N
CD270RK	33 8 23	115 15 14	N	8.59	2.5	14	1,200	N	N
CD272RK	33 16 3	115 19 38	N	6.97	1.8	N	670	2	N
CD273RK	33 12 3	115 15 20	N	8.39	2	N	1,100	N	N
CD284RK	33 19 10	115 12 51	.7	7.38	11	7	1,700	N	N
CD288RK	33 10 10	115 1 6	N	6.88	4.1	15	890	N	N
CD289RKA	33 10 18	115 1 22	2.2	1.85	47	61	170,000	N	N
CD289RKB	33 10 18	115 1 22	N	6.89	4.9	19	1,500	N	N
CD292RK	33 18 34	115 21 31	N	5.49	1.9	3	230	N	N
CD293RK	33 18 29	115 21 28	N	4.37	3.3	N	550	N	N
CD296RK	33 20 52	115 19 46	N	6.04	5.4	N	240	2	N
CD297RK	33 21 9	115 19 36	N	9.09	N	3	1,900	N	N
CD401RK	33 18 24	115 20 35	N	7	2.9	N	890	N	N
CD402RK	33 22 7	115 27 7	N	3.13	1	3	510	N	N
CD405RK	33 22 50	115 25 27	N	9.01	2.4	N	870	N	N
CD407RK	33 23 13	115 23 14	N	8.11	N	N	1,200	N	N
CD410RK	33 25 21	115 24 46	.6	7.22	2.1	5	840	2	N
CD411RK	33 25 1	115 25 32	N	7.28	1.6	N	820	N	N
CD412RK	33 26 0	115 25 41	N	3.91	9.3	N	710	N	N
CD413RK	33 26 31	115 25 52	1	5.37	5.8	N	980	N	N
CD414RK	33 25 44	115 27 48	N	8.03	N	8	700	N	N
CD415RK	33 26 14	115 35 29	N	7.66	1.7	N	1,400	N	N
CD416RK	33 26 3	115 35 17	N	9.91	6.9	4	1,400	N	N
CD417RK	33 25 29	115 36 11	N	6.94	2	N	770	N	N
CD418RK	33 24 52	115 36 41	N	7.37	4.2	3	1,000	N	N
CD419RK	33 24 24	115 37 0	N	6.14	2.3	N	160	3	N
CD421RK	33 21 3	115 31 47	N	6.77	2.6	N	1,100	N	N
CD422RK	33 22 0	115 30 17	N	7.26	1.5	N	910	N	N
CD423RK	33 23 26	115 32 29	N	7.15	1.6	N	170	N	N
CD425RK	33 24 59	115 30 11	N	6.11	1.7	N	210	3	N
CD426RK	33 24 17	115 31 44	1.6	1.3	11	306	200	3	N
CD427RK	33 25 6	115 31 15	1.7	4.15	58	250	490	N	N
CD428RK	33 25 23	115 30 42	N	6.31	11	N	200	3	N
CD429RK	33 23 21	115 30 14	.7	7.68	4.7	N	970	N	N
CD430RK	33 25 40	115 28 7	N	7.21	1.4	4	550	N	N
CD431RK	33 26 53	115 28 18	N	7.81	2.8	N	1,300	N	N
CD434RK	33 25 18	115 39 51	N	6.46	2.7	5	340	2	N
CD437RK	33 28 9	115 41 53	N	6.93	1.7	N	740	2	N
CD439RK	33 27 47	115 40 5	N	7.59	28	N	970	N	N
CD443RK	33 31 8	115 25 28	N	7.18	.9	5	940	N	N
CD452RK	33 30 20	115 40 30	N	6.16	35	N	N	N	N
CD454RK	33 30 26	115 40 3	N	8.98	2.6	N	4,100	N	N

Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity--Continued

Sample	Ca PCT ICP	Cd PPM ICP	Ce PPM INAA	Co PPM INAA	Cr PPM INAA	Cs PPM INAA	Cu PPM ICP	Eu PPM INAA	Fe PCT INAA
CD077RK	1.05	N	59	10	180	N	31	1.2	2.96
CD078RK	.59	N	260	3	N	N	16	3.7	3.72
CD079RK	1.06	N	220	3	N	3	9	4.7	8.2
CD081RK	.39	N	35	2	8	N	289	1	1.16
CD082RK	1.26	N	82	5	28	2	15	1.3	2.44
CD113RK	1.83	N	64	7	330	3	16	1.1	2.2
CD114RK	.76	N	57	2	200	3	N	.5	1.35
CD115RK	.42	N	80	2	150	2	6	.4	1.33
CD117RK	.33	N	100	N	90	3	7	N	1.42
CD118RK	3.93	N	52	25	54	10	62	1.9	6.68
CD119RKA	1.08	1.3	12	1	580	1	75	.2	.9
CD119RKB	4.83	N	84	5	280	2	40	1.2	1.82
CD119RKC	.65	N	54	N	230	1	6	.9	1.12
CD122RK	2.37	N	5	N	280	2	4	.3	.63
CD123RK	2.76	N	80	18	23	12	15	1.8	4.42
CD124RK	32.54	N	4	N	21	1	2	N	1.18
CD127RK	1.52	N	64	5	200	5	N	1.2	2.36
CD129RK	5.5	N	31	27	68	3	45	1.4	6.97
CD130RK	1.13	N	78	4	200	4	10	.9	2.01
CD270RK	3.52	N	96	14	160	3	19	1.6	4.05
CD272RK	.73	N	100	4	300	9	5	.9	2.07
CD273RK	2.67	N	42	5	210	N	11	.7	2.09
CD284RK	4.21	N	53	14	100	2	23	1.5	3.7
CD288RK	4.89	N	41	25	130	6	56	2	7.94
CD289RKA	.14	.6	12	2	500	3	60	N	3.25
CD289RKB	2.85	N	66	7	290	4	11	1.1	2.88
CD292RK	.11	N	87	N	370	3	5	.5	1.35
CD293RK	.93	N	61	2	260	3	570	.5	.9
CD296RK	.39	N	71	N	230	2	3	.6	1.27
CD297RK	3.31	N	74	12	76	3	10	2.5	5.43
CD401RK	.95	N	87	3	190	4	13	.8	1.3
CD402RK	1.16	N	30	4	550	1	10	.7	1.6
CD405RK	3.72	N	51	19	61	6	18	1.8	5
CD407RK	1.62	N	29	4	140	3	16	.7	1.48
CD410RK	1.63	N	77	5	180	4	12	1.5	2.62
CD411RK	.98	N	58	3	190	5	6	.8	1.58
CD412RK	.84	N	61	N	470	1	16	1.2	2.52
CD413RK	8.2	4.3	87	N	100	2	12	1.5	1.7
CD414RK	2.41	N	70	10	200	6	11	1.2	3
CD415RK	.78	N	5	2	220	1	4	N	.65
CD416RK	.32	N	89	18	220	2	5	2	5.59
CD417RK	1.78	N	40	4	89	2	5	1	1.79
CD418RK	1.51	N	35	7	130	4	21	1	2.23
CD419RK	.3	N	65	1	260	2	5	N	1.15
CD421RK	.81	N	130	N	190	1	54	1.3	1.09
CD422RK	1.26	N	140	2	170	2	7	1.4	2.05
CD423RK	6.77	N	29	39	140	N	5	1.4	6.21
CD425RK	.43	N	73	N	210	4	4	.5	1.22
CD426RK	16.63	N	9	3	210	N	17	.3	.9
CD427RK	.46	N	34	8	340	4	7	1	2.41
CD428RK	.29	N	72	2	240	3	4	.4	.9
CD429RK	1.65	N	80	10	70	6	12	1.7	4.07
CD430RK	3.08	N	46	14	210	3	14	1.4	3.87
CD431RK	1.31	N	110	5	190	8	57	1.7	2.61
CD434RK	.45	N	120	N	150	3	10	N	.99
CD437RK	.83	N	74	3	100	5	11	.8	1.39
CD439RK	1.44	N	76	5	160	5	11	1.3	2.54
CD443RK	.09	N	160	3	370	N	3	1.9	2.17
CD452RK	.27	N	10	N	170	2	54	N	.78
CD454RK	2.04	N	29	N	220	3	10	.8	1.4

Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity--Continued

Sample	Hf PPM INAA	K PCT ICP	La PPM INAA	Lu PPM INAA	Mg PCT ICP	Mn PPM ICP	Mo PPM ICP	Na PCT INAA	Nd PPM INAA	Ni PPM ICP
CD077RK	5	2.11	33	.4	1.81	456	N	1.59	25	83
CD078RK	20	2.9	160	.95	.18	574	4	2.65	110	N
CD079RK	36	2.02	110	1.51	.18	1,771	N	2.33	120	N
CD081RK	3	4.18	20	.19	.08	141	N	1.32	16	1
CD082RK	13	2.28	49	.68	.39	433	8	.98	36	24
CD113RK	6	2.11	36	.32	.65	663	2	3.14	22	15
CD114RK	5	3.35	35	.33	.17	229	3	3.18	17	11
CD115RK	7	4.01	44	.62	.13	228	19	2.58	22	58
CD117RK	9	3.96	46	.94	.24	254	N	3.05	30	5
CD118RK	4	2.41	29	.46	3.14	1,043	N	1.99	24	30
CD119RKA	N	1	6.8	.09	.05	146	4	.05	N	11
CD119RKB	4	3.93	47	.63	.45	785	N	2.04	26	7
CD119RKC	4	4.05	32	.36	.15	179	N	2.51	18	6
CD122RK	1	.41	2.6	N	.07	105	2	3.8	N	6
CD123RK	7	3.87	43	.44	.56	757	N	2.59	25	2
CD124RK	N	.07	2.9	N	.22	610	23	.1	N	2
CD127RK	6	2.99	39	.39	.37	382	5	3.35	21	20
CD129RK	3	1.24	N	.54	3.38	1,228	N	3	19	20
CD130RK	7	3.54	47	.42	.31	399	4	2.88	24	8
CD270RK	7	2.34	50	.57	1.22	890	N	2.79	43	8
CD272RK	8	3.99	59	.54	.19	239	4	2.87	30	8
CD273RK	4	1.42	27	.17	.64	490	N	3.27	12	11
CD284RK	5	2.05	29	.46	1.54	824	6	2.77	23	49
CD288RK	3	1.67	18	.72	1.95	1,339	N	1.9	19	16
CD289RKA	N	.63	9.2	.11	.12	91	18	.07	N	12
CD289RKB	6	2.29	36	.38	1	623	N	2.08	25	16
CD292RK	6	2.6	47	.59	.03	192	5	.21	32	8
CD293RK	5	1.84	34	.46	.12	210	28	.13	18	8
CD296RK	8	3.51	36	.56	.08	122	3	3.17	23	6
CD297RK	16	1.95	44	.42	1.19	669	N	3.77	31	7
CD401RK	6	4.07	52	.31	.22	173	N	2.79	35	10
CD402RK	2	.86	18	.16	.41	218	3	1.28	10	15
CD405RK	7	1.64	26	.41	1.88	932	N	3.25	22	13
CD407RK	4	2.39	17	.15	.57	313	2	3.41	9	11
CD410RK	9	2.43	42	.57	.61	472	N	3.65	28	21
CD411RK	6	3.18	34	.31	.32	225	N	3.3	16	8
CD412RK	6	1.95	34	.52	.19	274	7	1.79	27	10
CD413RK	8	2.91	63	.89	.14	1,285	3	2.45	44	9
CD414RK	6	2.57	40	.36	.96	494	N	3.18	24	11
CD415RK	N	2.75	1.4	.08	.08	130	N	3.56	N	5
CD416RK	8	3.74	51	.79	1.33	964	2	.83	27	42
CD417RK	5	2.52	26	.25	.56	306	N	2.61	20	10
CD418RK	4	2.18	19	.2	.86	404	N	3.82	17	21
CD419RK	6	3.62	33	.68	.06	175	2	3.11	23	7
CD421RK	8	3.76	71	.75	.08	268	3	3.15	46	7
CD422RK	8	4.13	78	.58	.33	489	N	2.88	49	6
CD423RK	2	.48	12	.37	5.8	962	N	2.39	16	105
CD425RK	7	3.46	42	.55	.05	92	4	3.04	25	7
CD426RK	N	.85	4.7	.12	.26	593	N	.37	N	7
CD427RK	3	2.95	19	.22	.53	237	8	1.04	17	12
CD428RK	9	3.69	36	.71	.04	72	2	3.12	20	6
CD429RK	7	3.22	42	.41	.84	538	3	2.51	27	12
CD430RK	5	1.71	23	.56	1.59	614	N	2.78	12	15
CD431RK	10	3.51	62	.56	.41	583	3	3.52	39	16
CD434RK	8	3.72	68	.65	.09	66	10	2.95	37	9
CD437RK	6	3.85	42	.41	.19	242	4	2.6	23	7
CD439RK	8	3.49	43	.44	.55	372	N	3.05	28	20
CD443RK	14	3.1	82	1.16	2.24	642	3	.27	61	9
CD452RK	8	2.94	3.5	.69	.02	35	10	3.59	N	16
CD454RK	5	2.85	16	.43	.18	926	N	4.47	11	9

Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity--Continued

Sample	P PCT ICP	Pb PPM ICP	Rb PPM INAA	Sb PPM INAA	Sc PPM INAA	Se PPM INAA	Sm PPM INAA	Sr PPM ICP	Ta PPM INAA
CD077RK	.056	8	76	.4	8.8	N	4.1	172	1.1
CD078RK	.05	16	79	.4	7.8	N	17	150	2.6
CD079RK	.143	15	66	8.7	18	N	21	157	3.6
CD081RK	.066	37	190	N	2.1	N	3.4	79	N
CD082RK	.058	22	91	.6	6.4	N	6.2	159	1.8
CD113RK	.048	28	89	N	6.3	N	4.5	502	3
CD114RK	.017	28	160	N	2.3	N	3.8	103	2.2
CD115RK	.014	38	160	.5	2.2	N	5.5	56	2.8
CD117RK	.007	26	260	1	3.1	N	8	40	5
CD118RK	.205	32	160	4.4	29	N	5.5	567	N
CD119RKA	.006	67	50	18	.9	N	1	35	N
CD119RKB	.038	46	140	.7	5.6	N	6.1	300	N
CD119RKC	.029	34	150	.7	3.2	N	3.9	128	N
CD122RK	.005	13	N	.2	.5	N	.2	766	N
CD123RK	.143	19	190	4	14	N	6.3	364	N
CD124RK	.008	N	N	17	1	N	.3	2,204	N
CD127RK	.052	25	160	.5	4.8	N	4.7	258	N
CD129RK	.123	11	N	1	29	N	4.3	437	N
CD130RK	.051	30	160	.6	4.1	N	4.8	186	N
CD270RK	.11	22	120	.3	14	N	7.6	529	N
CD272RK	.045	27	190	1.5	4.3	N	5.8	111	N
CD273RK	.069	21	N	.3	4.1	N	2	642	N
CD284RK	.139	26	75	.3	11	N	4.8	768	N
CD288RK	.131	16	N	2.2	28	N	5.3	349	N
CD289RKA	.027	1,034	42	9.2	3.7	16	1	795	N
CD289RKB	.054	19	110	.4	8.7	N	4.8	360	1.7
CD292RK	.009	66	130	2	2.6	N	6.2	51	1.6
CD293RK	.019	39	94	6.4	2.7	N	4.1	101	1.1
CD296RK	.009	28	160	N	1.9	N	5.1	31	N
CD297RK	.157	16	66	N	15	N	6.1	444	N
CD401RK	.025	89	160	.3	3.3	N	5.2	148	1.6
CD402RK	.032	7	36	1.8	7.3	N	1.6	179	N
CD405RK	.109	18	85	.9	16	N	4.6	482	2.3
CD407RK	.036	31	86	N	3.7	N	2.2	617	N
CD410RK	.046	21	120	.3	6.5	N	5.7	278	N
CD411RK	.022	20	150	.3	3.5	N	3.5	162	N
CD412RK	.029	14	91	.8	3.7	N	4.6	117	1.4
CD413RK	.013	42	73	1	4.2	N	8.2	119	2.6
CD414RK	.062	144	120	.3	9	N	5.1	275	2.3
CD415RK	.008	42	N	.4	3.4	N	.3	325	N
CD416RK	.014	25	140	.8	22	N	7.1	123	N
CD417RK	.039	17	110	1.2	5.3	N	3.1	344	N
CD418RK	.05	20	98	.6	7	N	3	528	N
CD419RK	.006	27	150	.2	1.6	N	5.9	27	2.6
CD421RK	.022	27	130	.6	5.8	N	8	99	N
CD422RK	.048	28	83	.5	6	N	9	170	N
CD423RK	.018	7	N	.4	56	N	4.4	595	N
CD425RK	.012	26	170	.6	2.3	N	5.6	42	3.6
CD426RK	.017	17	41	18	2.8	N	.9	197	N
CD427RK	.052	12	130	10	6.6	N	2.8	136	.7
CD428RK	.011	28	170	.4	2.1	N	5.7	37	2.8
CD429RK	.109	21	150	1.8	10	N	6.1	307	1.6
CD430RK	.059	17	41	N	15	N	4.7	279	N
CD431RK	.054	26	150	.5	6.3	N	7.1	300	N
CD434RK	.006	21	180	.6	2.1	N	8.1	36	3
CD437RK	.027	31	150	.5	3.4	N	4.5	102	2.2
CD439RK	.05	22	190	1.1	6.2	N	5.4	276	N
CD443RK	.009	12	150	.4	7.1	N	12	20	N
CD452RK	.005	23	180	1.7	1.2	N	1.3	21	N
CD454RK	.025	33	N	.7	1.3	N	2.5	992	N

Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity--Continued

Sample	Tb PPM INAA	Th PPM INAA	Ti PCT ICP	U PPM INAA	V PPM ICP	W PPM INAA	Y PPM ICP	Yb PPM INAA	Zn PPM ICP
CD077RK	1.1	11	.18	1.6	80	N	12	2.5	53
CD078RK	2	11	.2	N	9	N	66	6	126
CD079RK	2.6	8.4	.4	1.9	24	7	66	10.1	141
CD081RK	N	9.1	.07	4.2	6	N	16	1.3	20
CD082RK	.9	18	.29	3.1	50	N	18	4.3	31
CD113RK	N	14	.2	2.9	47	N	9	1.9	66
CD114RK	N	16	.07	5	5	N	16	1.9	58
CD115RK	1.1	25	.06	6.7	7	N	22	3.6	75
CD117RK	N	31	.06	8.3	10	3	37	6.2	53
CD118RK	1	4.9	.54	3.4	275	3	20	2.7	119
CD119RKA	N	1.9	.02	N	6	N	2	.4	63
CD119RKB	N	11	.1	N	25	N	23	3.8	71
CD119RKC	N	8.8	.08	1.8	14	N	10	2.1	30
CD122RK	N	N	.02	1	6	N	N	N	13
CD123RK	N	12	.61	4.2	82	N	23	2.8	91
CD124RK	N	.6	N	8.7	7	2	2	.2	6
CD127RK	N	14	.21	2.8	20	N	18	2.5	49
CD129RK	.8	1.4	.52	N	230	N	25	3.1	83
CD130RK	1.1	18	.19	5.2	21	N	23	2.6	79
CD270RK	1.8	12	.34	3.6	114	N	28	3.2	78
CD272RK	N	25	.18	7	21	N	21	3.1	53
CD273RK	N	5	.14	N	34	N	6	.9	52
CD284RK	N	4.8	.42	1.9	97	N	23	2.8	77
CD288RK	1.1	1.3	.51	N	160	N	30	4.7	114
CD289RKA	N	3	.06	N	37	N	N	.6	134
CD289RKB	N	13	.25	3.4	65	5	18	2.2	71
CD292RK	1	24	.05	7.7	6	N	23	3.9	58
CD293RK	.6	16	.06	39	11	N	19	2.7	57
CD296RK	.6	25	.06	6	4	N	23	3.7	49
CD297RK	N	5.3	.6	2.1	89	N	20	2.5	110
CD401RK	N	20	.1	7.3	13	N	17	2	65
CD402RK	N	1.4	.06	N	25	N	7	1	24
CD405RK	N	6.7	.58	3.1	108	N	21	2.6	95
CD407RK	N	5.7	.13	3.1	29	N	8	.9	105
CD410RK	N	16	.2	4.4	33	N	24	3.3	113
CD411RK	N	19	.12	5.9	16	N	15	2	42
CD412RK	N	10	.11	2.5	14	N	19	3.1	68
CD413RK	1.1	13	.07	4.4	8	N	48	6.1	92
CD414RK	N	24	.34	6.5	60	N	19	2.3	59
CD415RK	N	.3	.01	N	N	N	N	.5	42
CD416RK	N	13	.37	1.6	110	N	20	5.1	94
CD417RK	N	11	.15	5.6	37	N	12	1.6	55
CD418RK	N	6.2	.19	3.9	49	N	11	1.3	65
CD419RK	1	25	.04	7.2	3	N	27	4.4	72
CD421RK	N	12	.09	2	14	N	18	4.8	29
CD422RK	N	13	.17	1.7	19	N	24	3.4	82
CD423RK	N	1.1	.46	N	272	N	20	2.4	71
CD425RK	N	24	.06	6.1	5	N	22	3.9	53
CD426RK	N	1	.07	2.2	12	N	5	.5	40
CD427RK	N	5.4	.21	3.1	33	N	8	1.1	44
CD428RK	N	28	.05	6.8	3	N	26	4.8	40
CD429RK	N	13	.36	5.7	71	N	18	2.8	89
CD430RK	N	13	.35	3.2	86	N	26	3.3	69
CD431RK	N	26	.22	5.9	24	N	28	3.4	100
CD434RK	1.3	28	.03	11	3	N	24	4.4	50
CD437RK	N	19	.09	6.6	12	N	18	2.4	56
CD439RK	N	15	.14	3.8	34	N	19	2.6	93
CD443RK	2.1	30	.11	6.5	5	N	12	7.4	82
CD452RK	N	20	.03	5.7	N	N	22	4.4	61
CD454RK	N	2.3	.1	N	15	N	13	2.4	42

Table 3. Results of analysis of rock samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity--Continued

Sample	LATITUDE	LONGITUDE	Ag PPM ICP	Al PCT ICP	As PPM INAA	Au PPB INAA	Ba PPM INAA	Be PPM ICP	Br PPM INAA
CD457RK	33 31 1	115 33 42	N	6.5	42	5	290	3	N
CD459RK	33 30 42	115 31 1	N	7.55	2.2	N	380	N	N

Sample	Ca PCT ICP	Cd PPM ICP	Ce PPM INAA	Co PPM INAA	Cr PPM INAA	Cs PPM INAA	Cu PPM ICP	Eu PPM INAA	Fe PCT INAA
CD457RK	.39	N	130	N	86	3	4	.5	1.3
CD459RK	7.6	N	33	36	170	N	31	1.9	12

Sample	Hf PPM INAA	K PCT ICP	La PPM INAA	Lu PPM INAA	Mg PCT ICP	Mn PPM ICP	Mo PPM ICP	Na PCT INAA	Nd PPM INAA	Ni PPM ICP
CD457RK	10	4.17	73	.7	.15	328	3	2.96	45	4
CD459RK	2	.41	16	.24	3.32	1,304	N	1.43	18	41

Sample	P PCT ICP	Pb PPM ICP	Rb PPM INAA	Sb PPM INAA	Sc PPM INAA	Se PPM INAA	Sm PPM INAA	Sr PPM ICP	Ta PPM INAA
CD457RK	.011	27	200	7.5	3.4	N	8.1	40	3.5
CD459RK	.396	11	N	.3	29	N	4.7	908	N

Sample	Tb PPM INAA	Th PPM INAA	Ti PCT ICP	U PPM INAA	V PPM ICP	W PPM INAA	Y PPM ICP	Yb PPM INAA	Zn PPM ICP
CD457RK	1.3	28	.08	8.5	24	N	30	4.6	70
CD459RK	N	2.2	.8	2	281	N	15	1.7	122

Table 3a. Descriptions of rock samples.

SAMPLE	SAMPLE DESCRIPTION
CD077RK	Gneiss
CD078RK	Granite
CD079RK	Granite, Fe oxide stained
CD081RK	Biotite granite, with Fe oxides
CD082RK	Arkose
CD113RK	Schist
CD114RK	Granite
CD115RK	Granite
CD117RK	Welded tuff
CD118RK	Metasiltstone, prospect adit
CD119RKA	Quartz, with Fe oxides, dump, Mary Lode mine
CD119RKB	Metasiltstone, Mary Lode mine area
CD119RKC	Granite, Mary Lode mine area
CD122RK	Quartz, minor schist
CD123RK	Basalt
CD124RK	Silty limestone, Fe staining
CD127RK	Granite
CD129RK	Basalt
CD130RK	Granite
CD270RK	Gneiss
CD272RK	Granite
CD273RK	Gneiss
CD284RK	Basalt
CD288RK	Gneiss
CD289RKA	Quartz, with Fe oxides, prospect dump
CD289RKB	Gneiss
CD292RK	Granite, prospect adit
CD293RK	Granite, with Fe oxides, mine dump
CD296RK	Biotite granite, intensely shattered
CD297RK	Biotite diorite
CD401RK	Granite
CD402RK	Quartz and gneiss, dump, Imperial Buttes mine
CD405RK	Biotite diorite, epidotized
CD407RK	Dacite
CD410RK	Granodiorite porphyry
CD411RK	Dacite
CD412RK	Diorite porphyry
CD413RK	Biotite diorite porphyry
CD414RK	Quartz diorite, shattered
CD415RK	Calcareous metachert

Table 3a. Descriptions of rock samples.--Continued

SAMPLE	SAMPLE DESCRIPTION
CD416RK	Biotite gneiss
CD417RK	Andesite porphyry
CD418RK	Andesite porphyry
CD419RK	Rhyolite porphyry dike
CD421RK	Granite
CD422RK	Biotite quartz monzonite
CD423RK	Propylitized gneiss
CD425RK	Granite
CD426RK	Metalimestone
CD427RK	Silicified andesite porphyry
CD428RK	Biotite granite
CD429RK	Propylitized andesite porphyry
CD430RK	Biotite diorite
CD431RK	Diorite porphyry
CD434RK	Latite
CD437RK	Quartz latite porphyry
CD439RK	Quartz dacite porphyry
CD443RK	Muscovite gneiss
CD452RK	Quartz latite porphyry
CD454RK	Rhyolite dike
CD457RK	Rhyolite porphyry
CD459RK	Propylitized diorite

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity

[PPM, parts per million; PCT, percent; PPB, parts per billion; ICP, inductively coupled plasma-atomic emission spectrometry; INAA, instrumental neutron activation analysis; N, not detected, or less than the lower limit of determination]

Sample	LATITUDE	LONGITUDE	Ag PPM ICP	Al PCT ICP	As PPM INAA	Au PPB INAA	Ba PPM INAA	Be PPM ICP	Bi PPM ICP
CD013SS	33 2 44	115 8 33	N	4.49	16	5	570	N	N
CD014SS	33 5 46	115 13 10	N	4.31	9.5	N	670	N	N
CD015SS	33 9 28	115 19 7	N	4.24	7.6	6	470	N	N
CD018SS	33 31 35	115 27 10	N	6.37	12	N	561	2	N
CD019SS	33 31 36	115 27 24	N	5.56	6.5	N	490	2	N
CD020SS	33 31 39	115 27 50	N	5.42	8.1	N	510	N	N
CD031SS	33 31 50	115 28 1	N	5.94	7.1	4	480	2	6
CD032SS	33 31 57	115 27 51	N	5.39	9	N	330	N	N
CD033SS	33 31 57	115 27 38	N	6.26	12	N	480	2	N
CD034SS	33 31 58	115 27 21	N	5.42	9.4	8	450	2	N
CD035SS	33 31 58	115 27 7	N	4.68	10	N	640	N	N
CD036SS	33 31 50	115 26 59	N	4.72	7.5	8	520	N	N
CD037SS	33 31 40	115 26 59	N	5.75	14	4	640	2	N
CD077SS	33 31 51	115 43 59	.66	6.64	45	N	1,100	N	N
CD078SS	33 31 3	115 41 56	N	6.04	6.2	7	830	N	N
CD079SS	33 31 32	115 40 27	N	7.16	65	3	730	N	N
CD080SS	33 32 16	115 38 55	.73	6.51	38	N	790	N	N
CD081SS	33 32 7	115 38 47	N	6.28	5	N	730	N	5.9
CD082SS	33 32 40	115 38 17	N	6.49	28	N	900	N	N
CD083SS	33 33 1	115 37 39	.73	6.96	30	N	820	N	N
CD110SS	33 4 42	114 56 30	N	4.86	12	N	540	N	N
CD111SS	33 15 20	115 5 44	N	3.95	7.9	9	1,000	N	N
CD112SS	33 13 42	115 5 3	N	3.83	10	N	1,000	N	N
CD115SS	33 17 9	115 4 45	N	4.35	10	N	1,200	N	N
CD116SS	33 5 59	115 1 6	N	5.56	11	8	770	N	N
CD117SS	33 6 19	115 1 52	N	5.06	37	11	1,000	N	N
CD122SS	33 10 49	114 55 57	N	5.88	17	N	1,200	N	N
CD123SS	33 11 11	114 56 29	N	4.48	12	N	820	N	N
CD124SS	33 6 56	115 3 35	N	5.08	100	6	750	N	N
CD125SS	33 5 39	115 4 16	N	4.83	23	N	530	N	N
CD126SS	33 14 33	115 17 39	N	5.53	5.9	4	630	N	N
CD128SS	33 15 39	115 17 16	N	5.36	4.8	N	640	N	N
CD129SS	33 15 29	115 17 8	N	5.2	6.7	2	620	N	N
CD130SS	33 15 56	115 15 47	N	5.44	4.1	12	630	N	N
CD131SS	33 16 9	115 15 58	N	4.72	5.1	N	520	N	N
CD132SS	33 16 13	115 15 9	N	5.01	10	N	620	N	N
CD133SS	33 16 36	115 14 48	N	4.6	6.9	14	620	N	N
CD134SS	33 16 30	115 14 31	N	5.74	13	19	830	N	N
CD135SS	33 16 43	115 13 45	N	7.01	9.7	9	970	N	N
CD136SS	33 16 50	115 13 48	N	4.24	9.4	N	730	N	N
CD137SS	33 12 51	115 3 41	N	5.08	21	N	900	N	N
CD138SS	33 12 38	115 3 21	N	5.01	19	9	800	N	N
CD140SS	33 8 21	114 54 11	N	5.59	6.1	N	670	N	N
CD142SS	33 20 13	115 6 15	N	4.85	11	N	990	N	N
CD143SS	33 20 5	115 6 23	N	4.56	10	8	980	N	N
CD145SS	33 18 38	115 3 40	N	4.23	12	N	1,100	N	N
CD146SS	33 14 3	114 58 0	N	4.62	24	N	1,100	N	N
CD147SS	33 13 59	114 58 24	N	5.89	24	N	790	N	N
CD148SS	33 14 55	114 55 27	N	4.59	27	N	900	N	N
CD149SS	33 2 14	115 3 51	N	3.99	6	N	660	N	N
CD150SS	33 2 13	115 2 13	N	4.2	7.1	N	660	N	N
CD270SS	33 8 23	115 15 14	N	5.12	5.1	N	560	N	N
CD271SS	33 7 42	115 14 23	N	5.18	16	3	590	N	N
CD272SS	33 16 3	115 19 38	N	5.15	6.7	N	340	N	N
CD273SS	33 12 3	115 15 20	N	5.9	12	6	590	N	N
CD274SS	33 11 56	115 17 44	N	5	7.6	6	540	N	N
CD275SS	33 7 53	115 12 46	N	4.84	18	N	470	N	N
CD276SS	33 7 15	115 11 26	N	4.38	6.8	N	450	N	N
CD277SS	33 5 8	115 6 12	N	4.55	19	N	470	N	N
CD278SS	33 5 27	115 6 16	N	5.08	26	5	550	N	N

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Br PPM INAA	Ca PCT ICP	Cd PPM ICP	Ce PPM INAA	Co PPM INAA	Cr PPM INAA	Cs PPM INAA	Cu PPM ICP	Eu PPM INAA	Fe PCT INAA
CD013SS	N	2.28	N	74	10	61	3	28	1.3	3.11
CD014SS	N	2.28	N	83	12	56	2	55	1.5	3.51
CD015SS	N	2.64	N	95	13	83	2	36	1.5	4.31
CD018SS	N	3.84	.5	269	13	44	5	17	1.7	5.07
CD019SS	N	3.31	N	200	8	21	2	16	1	3.12
CD020SS	N	3.18	N	250	12	41	3	26	1.6	4.62
CD031SS	N	3.22	N	200	11	41	3	21	1.4	4.44
CD032SS	N	3.03	N	200	9	39	3	19	1.4	4.24
CD033SS	N	3.32	N	210	12	42	3	22	1.6	5.4
CD034SS	N	2.61	N	180	8	42	3	21	1.8	4.81
CD035SS	N	2.52	N	310	14	68	4	27	2.6	8.41
CD036SS	N	2.59	.5	270	12	68	3	28	2.2	9.47
CD037SS	N	2.84	.5	400	13	49	2	19	2.2	7.09
CD077SS	N	3.57	N	100	16	74	2	36	2.3	5.12
CD078SS	N	3.96	N	160	15	49	2	24	3.7	6.63
CD079SS	N	3.8	N	100	16	79	2	22	1.9	4.34
CD080SS	N	3.41	N	87	20	110	3	22	1.9	5.11
CD081SS	N	3.59	N	130	10	40	2	18	2.3	4.89
CD082SS	N	2.25	N	120	13	72	2	20	1.9	4.42
CD083SS	N	3.36	N	97	18	78	2	25	2	4.47
CD110SS	N	2.56	N	100	6	41	3	10	1.3	2.38
CD111SS	N	2.51	N	110	10	52	3	20	1.4	3.6
CD112SS	N	2.54	N	100	12	77	5	17	1.9	4.4
CD115SS	N	3.08	N	96	14	85	4	27	1.7	4.67
CD116SS	N	3.42	N	92	11	56	3	30	1.5	3.35
CD117SS	N	3.99	N	220	22	110	4	38	4.2	6.72
CD122SS	N	3.33	N	140	7	41	4	19	1.4	2.72
CD123SS	N	2.57	N	77	6	42	4	14	1.1	2.21
CD124SS	N	2.94	N	84	11	67	9	24	1.5	2.96
CD125SS	N	2.3	N	150	16	91	2	16	3.4	5.5
CD126SS	N	2.78	N	100	9	39	4	19	1.5	3.13
CD128SS	N	3.38	N	250	7	29	6	23	1.8	3.07
CD129SS	N	3.32	N	130	10	56	4	20	1.5	3.38
CD130SS	N	2.79	N	62	12	40	3	29	1.3	3.02
CD131SS	N	2.43	N	150	9	53	5	17	1.4	3.45
CD132SS	1.2	3.15	N	96	10	52	3	24	1.9	3.68
CD133SS	2.2	3.02	N	110	9	70	3	18	1.5	3.17
CD134SS	N	2.11	N	240	15	100	4	15	3.6	6.25
CD135SS	N	2.02	N	110	12	64	2	17	2.2	3.89
CD136SS	N	3.03	N	130	11	58	2	22	1.4	5.26
CD137SS	N	3.28	N	88	17	130	3	32	2	4.16
CD138SS	N	3.11	N	130	18	130	5	24	2	4.65
CD140SS	N	2.45	N	150	5	42	3	15	1.5	2.33
CD142SS	N	2.45	N	140	10	57	2	15	1.8	4.9
CD143SS	N	2.25	N	67	8	41	2	14	1.2	2.75
CD145SS	N	2.29	N	160	13	73	2	16	1.9	5.95
CD146SS	N	3.05	N	60	9	44	5	19	1.3	3.16
CD147SS	N	3.33	N	82	9	62	3	27	1.8	3.02
CD148SS	N	3.19	N	92	12	66	4	19	1.7	5.07
CD149SS	N	2.45	N	60	7	38	2	16	1.1	2.16
CD150SS	.9	2.55	N	53	7	48	2	18	1.1	2.25
CD270SS	N	3.16	N	59	12	55	2	17	1.1	3.15
CD271SS	N	3.57	N	85	13	54	N	17	1.9	3.42
CD272SS	1.3	2.13	N	82	6	24	6	8	.8	2.79
CD273SS	N	3.42	N	53	13	86	3	17	1.1	3.52
CD274SS	N	3.17	N	86	13	62	2	21	1.7	3.66
CD275SS	N	2.99	N	80	16	61	2	20	1.5	5.12
CD276SS	N	2.45	N	51	7	41	3	9	1.1	2.49
CD277SS	N	2.69	N	66	9	49	2	15	1.3	3.28
CD278SS	N	3.11	N	81	13	64	3	18	1.7	4.05

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Hf PPM INAA	K PCT ICP	La PPM INAA	Lu PPM INAA	Mg PCT ICP	Mn PPM ICP	Mo PPM ICP	Na PCT INAA	Nd PPM INAA
CD013SS	21	1.75	42	.57	.82	473	N	1.23	31
CD014SS	24	1.57	46	.64	.78	465	N	1.32	28
CD015SS	26	1.45	56	.65	.96	627	N	1.23	38
CD018SS	46	2.19	164	1.13	1.26	1,028	N	2.12	82
CD019SS	31	1.94	150	.69	1.04	944	N	1.57	52
CD020SS	67	1.9	180	1.1	1.11	1,347	N	1.54	64
CD031SS	47	2.03	140	.89	1.1	1,106	N	1.66	59
CD032SS	44	1.88	140	.88	.96	1,012	N	1.78	53
CD033SS	42	2.08	150	.98	1	1,153	2	1.86	61
CD034SS	51	2	130	1.05	.92	955	N	1.49	66
CD035SS	80	1.64	210	1.64	.81	1,265	N	1.43	100
CD036SS	86	1.72	180	1.62	.85	1,116	N	1.27	93
CD037SS	102	1.88	250	1.98	.97	1,578	2	1.85	120
CD077SS	17	1.85	59	.68	1.49	849	N	2.17	52
CD078SS	35	1.89	90	1.12	1.2	1,164	N	1.64	77
CD079SS	16	1.42	55	.81	1.69	739	6	2.01	41
CD080SS	13	1.71	48	.77	1.85	755	N	2.27	36
CD081SS	20	1.38	68	.94	1.19	735	2	2.31	53
CD082SS	24	2.26	65	1.16	1.12	561	N	2.35	51
CD083SS	14	2.13	50	.88	1.52	661	N	1.97	36
CD110SS	20	1.66	59	.66	.74	449	N	1.33	42
CD111SS	52	1.71	62	1.25	.48	565	N	1.58	32
CD112SS	19	1.44	53	.77	.72	423	N	1.91	46
CD115SS	19	1.57	50	.73	1.2	588	N	1.37	34
CD116SS	13	1.69	46	.55	1.29	630	N	1.51	35
CD117SS	54	1.34	120	1.56	1.13	961	N	1.51	84
CD122SS	23	1.59	80	.82	1.39	722	N	1.59	53
CD123SS	18	1.84	43	.64	.8	466	N	1.16	27
CD124SS	16	1.74	45	.54	1.21	520	2	1.26	32
CD125SS	47	1.77	82	1.15	.78	625	N	1.36	67
CD126SS	17	1.81	56	.64	1.11	575	N	1.52	34
CD128SS	39	1.74	150	1.25	1.16	609	N	1.94	83
CD129SS	21	1.73	82	.83	1.04	701	N	1.74	37
CD130SS	7	1.7	32	.45	1.65	1,577	N	1.47	29
CD131SS	26	1.7	91	.91	.83	555	N	1.98	42
CD132SS	24	1.73	54	.91	1.17	710	N	1.41	33
CD133SS	23	1.71	66	.79	1.03	515	N	1.41	42
CD134SS	71	1.78	120	2.75	.92	1,025	2	1.57	87
CD135SS	12	2.12	59	.86	1.06	923	N	1.61	42
CD136SS	43	1.53	80	1.03	.89	1,031	N	1.06	39
CD137SS	14	1.64	48	.7	1.66	690	N	1.52	33
CD138SS	18	1.69	72	.79	1.33	666	N	1.98	60
CD140SS	40	1.79	86	.96	.79	671	N	1.07	51
CD142SS	39	1.79	83	1.23	.77	690	N	1.53	56
CD143SS	13	1.8	41	.52	.78	419	N	1.48	22
CD145SS	44	1.67	91	1.27	.78	800	N	1.55	55
CD146SS	15	1.75	36	.55	.91	538	N	1.23	21
CD147SS	16	1.7	43	.61	1.96	1,347	N	1.59	33
CD148SS	20	1.57	51	.7	.86	557	N	1.5	31
CD149SS	14	1.47	37	.49	.75	435	N	1.05	24
CD150SS	11	1.54	32	.46	.91	468	N	1.16	19
CD270SS	13	1.61	34	.44	1.21	608	9	1.23	20
CD271SS	11	1.38	56	.61	1.19	675	16	1.39	35
CD272SS	14	1.95	48	.55	.72	598	3	1.53	31
CD273SS	7	1.84	31	.37	1.6	657	4	1.48	18
CD274SS	16	1.57	56	.8	1.14	730	4	1.36	31
CD275SS	22	1.48	46	.56	1.04	734	6	1.12	27
CD276SS	16	1.65	33	.54	.89	446	4	1.02	19
CD277SS	21	1.59	44	.64	.93	668	8	1.08	28
CD278SS	12	1.5	46	.53	1.08	690	N	1.41	31

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Ni PPM ICP	P PCT ICP	Pb PPM ICP	Rb PPM INAA	Sb PPM INAA	Sc PPM INAA	Se PPM INAA	Sm PPM INAA	Sr PPM ICP	Ta PPM INAA
CD013SS	16	.047	15	66	1.8	9	N	5.3	232	1.4
CD014SS	14	.054	16	57	2.3	9.3	N	5.5	226	1
CD015SS	19	.053	11	65	1.6	13	N	6.8	227	1.9
CD018SS	15	.041	18	116	1.2	13	N	11.5	243	4.7
CD019SS	16	.035	21	63	.8	9.7	N	8.9	228	3.5
CD020SS	15	.043	21	N	.9	12	N	11	223	5.3
CD031SS	13	.04	22	63	1	12	N	9.7	228	3.1
CD032SS	13	.038	24	84	1.1	11	N	9.7	223	3.3
CD033SS	15	.064	28	54	1.5	12	N	12	248	3.5
CD034SS	14	.093	20	N	1.2	12	N	13	243	2.8
CD035SS	13	.12	27	N	1.5	15	N	21	211	N
CD036SS	16	.106	24	42	1.4	13	N	19	211	2.7
CD037SS	11	.058	27	48	1.6	13	N	16	223	9.1
CD077SS	35	.268	12	64	1.1	13	N	8.2	440	1.7
CD078SS	14	.471	20	90	.7	15	N	13	393	1.9
CD079SS	31	.137	20	84	.7	14	N	7.8	476	1.7
CD080SS	34	.114	15	97	.5	16	N	7	389	N
CD081SS	13	.086	19	68	.5	12	N	8.6	301	2.2
CD082SS	19	.103	18	110	.6	13	N	9.1	282	1.5
CD083SS	29	.116	18	110	.9	13	N	7.2	340	1.9
CD110SS	13	.066	22	73	1.1	6.8	N	6.4	202	1
CD111SS	16	.054	16	110	1.4	8.8	N	7.2	153	3.2
CD112SS	21	.072	13	110	1.7	14	N	7.4	207	N
CD115SS	24	.075	17	99	1.7	12	N	6.6	221	2.2
CD116SS	23	.138	17	85	1.6	12	N	6.1	353	.7
CD117SS	24	.219	15	70	5.3	23	N	16	446	1.4
CD122SS	21	.09	13	110	1.6	7.9	N	8.5	461	1.1
CD123SS	13	.076	14	78	1.6	6.8	N	5.3	210	.8
CD124SS	20	.112	14	73	9.5	10	N	5.9	426	1.3
CD125SS	10	.064	20	48	2.3	21	N	12	187	N
CD126SS	18	.085	20	110	1.3	10	N	6.3	309	2.2
CD128SS	17	.076	19	98	.9	9.1	N	12	254	3.1
CD129SS	16	.094	19	110	1.4	9.6	N	7.5	263	2.3
CD130SS	26	.114	24	62	1.6	11	N	5.3	191	N
CD131SS	13	.075	16	97	1.1	9.1	N	8.1	207	2
CD132SS	18	.123	15	76	1.3	12	N	7.3	257	N
CD133SS	14	.1	15	110	1.3	9.5	N	7.6	226	1.4
CD134SS	18	.112	25	N	2.3	28	N	16	254	3.2
CD135SS	14	.108	22	100	1.5	16	N	8.5	343	1.4
CD136SS	19	.075	20	53	1.8	8.9	N	7.7	213	2.2
CD137SS	62	.082	18	71	1.2	14	N	7.3	247	N
CD138SS	35	.087	13	90	1.6	15	N	9.2	259	2.8
CD140SS	9	.076	22	71	.7	7.6	N	9	316	1.5
CD142SS	15	.075	17	81	2	10	N	10	233	3
CD143SS	13	.057	11	79	1.6	7.9	N	4.8	226	1.3
CD145SS	14	.058	17	71	2.3	12	5	11	210	2.3
CD146SS	16	.084	15	86	3.4	8.4	N	4.6	223	N
CD147SS	26	.31	13	98	1.8	12	N	6.3	262	2.5
CD148SS	14	.07	19	87	4.6	11	N	6.5	247	N
CD149SS	13	.081	12	57	1.1	7.2	N	4.6	249	1
CD150SS	17	.079	25	69	1.4	8.2	N	4.2	256	.7
CD270SS	48	.11	9	60	2.1	9.6	N	4	300	N
CD271SS	98	.166	12	47	2.6	15	N	7	347	1.3
CD272SS	16	.067	24	98	1.6	6.9	N	5.3	183	N
CD273SS	54	.101	16	72	1.8	12	N	4	284	N
CD274SS	28	.116	13	50	1.3	14	N	6.8	263	N
CD275SS	32	.128	10	43	4.6	10	N	5.1	293	N
CD276SS	24	.07	11	63	1.4	7.7	N	4.1	210	1.2
CD277SS	33	.09	12	40	1.9	9.3	N	5.2	261	N
CD278SS	24	.107	11	71	3.1	13	N	5.4	336	1

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Tb PPM INAA	Th PPM INAA	Ti PCT ICP	U PPM INAA	V PPM ICP	W PPM INAA	Y PPM ICP	Yb PPM INAA	Zn PPM ICP
CD013SS	.9	13	.36	3.3	77	N	20	3.6	42
CD014SS	.7	21	.38	4.8	76	N	19	3.9	45
CD015SS	N	13	.46	2.9	91	N	24	4.2	57
CD018SS	1	85	1.08	17	84	N	35	6.8	92
CD019SS	N	41	.98	6.2	75	N	35	4.3	85
CD020SS	N	84	1.57	14	96	N	46	6.9	107
CD031SS	N	77	1.2	14	87	N	36	5.9	84
CD032SS	N	57	1.09	10	83	N	37	5.5	83
CD033SS	N	53	1.11	7.8	98	N	46	6.5	89
CD034SS	N	46	.87	7.1	94	N	49	7.1	88
CD035SS	3.8	85	1.24	12	129	N	68	10.7	99
CD036SS	3.7	92	1.08	15	165	13	65	10	96
CD037SS	1.5	140	1.72	29	109	7	54	11	107
CD077SS	1.4	16	.48	3.9	111	N	35	4.3	85
CD078SS	2.1	26	.64	4.4	110	N	69	7.2	90
CD079SS	1.2	19	.49	5.4	118	N	41	4.9	79
CD080SS	N	16	.57	3.9	128	N	30	4.8	67
CD081SS	1.7	60	.53	9.4	123	8	59	6.1	57
CD082SS	1.3	25	.43	5.8	105	N	29	7.6	60
CD083SS	.8	18	.54	4.5	118	N	36	5.4	73
CD110SS	1	23	.31	5.6	64	N	30	3.8	51
CD111SS	1	42	.29	13	72	N	20	7.1	47
CD112SS	N	19	.25	7	57	N	17	4.1	39
CD115SS	1.1	13	.37	5.4	116	N	19	4.3	56
CD116SS	.9	13	.3	3.9	88	N	23	3.4	57
CD117SS	1.8	35	.56	6.9	143	N	37	8.4	51
CD122SS	N	36	.53	8.1	166	5	32	4.5	50
CD123SS	.9	18	.3	5.4	57	N	20	3.9	42
CD124SS	.9	12	.33	3.8	76	3	20	3.7	48
CD125SS	N	19	.41	4.8	51	N	33	7.4	79
CD126SS	N	21	.38	5.7	83	N	29	3.8	66
CD128SS	N	69	.36	16	74	N	23	7.7	77
CD129SS	.9	25	.44	6.8	78	N	28	5.1	65
CD130SS	N	6.9	.84	2.2	106	N	74	2.5	91
CD131SS	1.2	33	.34	8.7	57	N	24	5.3	66
CD132SS	1.1	18	.45	5.8	89	5	26	5.6	68
CD133SS	N	31	.33	7.9	67	3	19	4.8	60
CD134SS	N	47	.46	16	98	N	54	17.1	71
CD135SS	1.3	14	.37	4.4	64	N	32	5.4	104
CD136SS	1.2	29	.81	8.1	156	N	26	6.2	67
CD137SS	1.3	16	.42	4.2	96	25	23	4.5	64
CD138SS	1.4	29	.35	6.6	92	19	22	5	49
CD140SS	1.4	39	.44	9.7	82	N	32	5.6	53
CD142SS	1.6	33	.62	6.9	115	N	28	7.6	51
CD143SS	.6	12	.36	3.2	66	1	17	2.9	42
CD145SS	1.6	36	.69	7.5	130	N	25	8	60
CD146SS	.6	11	.35	4.2	84	N	16	3.1	44
CD147SS	N	14	.71	4.3	137	N	89	4.1	133
CD148SS	1	15	.46	4.6	105	3	18	4.3	43
CD149SS	.7	11	.24	2.9	59	N	17	3	38
CD150SS	.6	9.8	.26	3	62	N	16	2.9	41
CD270SS	N	8.6	.35	2	93	N	17	2.5	53
CD271SS	1.2	8.5	.39	2	102	N	22	3.6	44
CD272SS	N	19	.31	4.3	51	N	26	4	70
CD273SS	N	6.8	.33	1.4	95	N	19	2.5	64
CD274SS	1.1	8.7	.35	2.1	95	N	25	4.2	56
CD275SS	N	11	.49	2.7	139	N	20	3.5	51
CD276SS	.7	11	.26	2	75	N	15	2.6	44
CD277SS	N	9.6	.43	1.8	112	N	22	3.3	47
CD278SS	1.1	9.6	.44	2.3	104	N	23	3.2	48

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	LATITUDE	LONGITUDE	Ag PPM ICP	Al PCT ICP	As PPM INAA	Au PPB INAA	Ba PPM INAA	Be PPM ICP	Bi PPM ICP
CD279SS	33 6 2	115 7 50	N	5.07	16	N	420	N	N
CD280SS	33 6 5	115 9 24	N	5.12	23	N	520	N	N
CD281SS	33 6 29	115 10 11	.8	5.29	23	8	640	N	N
CD282SS	33 20 39	115 12 18	N	3.1	21	N	550	N	N
CD283SS	33 19 31	115 12 43	N	5.69	7.8	6	520	N	N
CD285SS	33 16 39	115 14 44	N	5.06	11	4	410	N	N
CD286SS	33 17 26	115 11 3	N	5.75	11	5	540	N	N
CD287SS	33 11 50	115 1 14	N	4.88	18	74	510	N	N
CD288SS	33 10 10	115 1 6	N	4.61	27	4	440	N	N
CD290SS	33 11 17	115 0 6	N	4.85	20	11	490	N	N
CD291SS	33 11 45	114 59 18	N	5.11	25	N	640	N	N
CD294SS	33 18 26	115 21 15	N	5.41	5.6	N	500	N	N
CD295SS	33 20 17	115 19 29	N	6.4	5.2	N	680	N	N
CD296SS	33 20 52	115 19 46	N	6.02	8.4	N	570	N	N
CD297SS	33 21 9	115 19 36	N	5.82	8.4	N	540	N	N
CD298SS	33 21 26	115 19 18	N	5.67	8.2	N	540	N	N
CD299SS	33 21 16	115 19 0	N	5.87	13	6	620	N	N
CD401SS	33 18 24	115 20 35	N	5.83	7.4	6	520	N	N
CD403SS	33 22 18	115 27 24	N	5.27	11	N	650	N	N
CD404SS	33 22 21	115 27 46	N	5.31	9.8	N	680	N	N
CD405SS	33 22 50	115 25 27	N	6.36	19	5	760	N	N
CD406SS	33 21 11	115 24 20	N	5.86	11	N	630	N	N
CD407SS	33 23 13	115 23 14	N	6.08	13	2	520	N	N
CD408SS	33 25 23	115 22 52	N	5.98	17	N	720	N	N
CD409SS	33 25 23	115 22 39	N	5.52	11	60	640	N	N
CD410SS	33 25 21	115 24 46	N	6.34	32	N	590	N	N
CD411SS	33 25 1	115 25 32	N	6.52	16	N	620	N	N
CD414SS	33 25 44	115 27 48	N	6.14	9.2	N	760	N	N
CD415SS	33 26 14	115 35 29	N	6.28	31	N	580	N	N
CD416SS	33 26 3	115 35 17	N	5.68	79	2	620	N	N
CD420SS	33 21 11	115 32 17	N	5.56	6.8	N	640	N	N
CD423SS	33 23 26	115 32 29	N	5.08	37	N	560	N	N
CD424SS	33 23 16	115 32 12	N	4.84	51	N	610	N	N
CD425SS	33 24 59	115 30 11	N	5.82	5.7	N	360	2	N
CD427SS	33 25 6	115 31 15	N	6.21	11	N	500	N	N
CD428SS	33 25 23	115 30 42	N	6.27	6.2	N	670	N	N
CD430SS	33 25 40	115 28 7	N	6.39	7.8	N	640	N	N
CD431SS	33 26 53	115 28 18	N	6.22	8.7	N	650	N	N
CD432SS	33 26 29	115 28 48	N	6.32	3.7	N	630	N	N
CD433SS	33 25 17	115 39 49	.5	5.5	5.8	5	580	N	N
CD435SS	33 24 38	115 39 1	N	5.63	10	N	530	N	N
CD436SS	33 28 5	115 41 54	N	5.82	9.9	N	670	N	N
CD438SS	33 27 50	115 40 3	N	6.72	14	N	790	N	N
CD440SS	33 27 33	115 40 55	N	5.13	6.4	9	840	N	N
CD441SS	33 31 41	115 28 21	N	5.3	12	7	600	N	N
CD442SS	33 31 5	115 25 23	N	5.67	12	N	510	N	N
CD444SS	33 26 35	115 15 47	N	5.68	10	5	660	N	N
CD445SS	33 25 6	115 14 31	N	5.55	14	N	630	N	N
CD446SS	33 31 32	115 27 6	N	5.84	11	N	590	N	N
CD447SS	33 31 41	115 29 12	N	5.05	25	N	500	N	N
CD450SS	33 35 8	115 33 11	N	5.27	6.5	N	670	N	N
CD451SS	33 34 45	115 34 2	N	6.14	7.7	N	690	N	N
CD452SS	33 30 20	115 40 30	N	6.49	25	N	650	N	N
CD453SS	33 30 24	115 40 6	N	6.65	70	N	720	N	N
CD455SS	33 31 30	115 39 10	N	6.12	81	N	520	N	N
CD456SS	33 31 40	115 36 39	N	6.14	6.3	N	570	N	N
CD457SS	33 31 1	115 33 42	N	6.28	11	4	700	N	N
CD458SS	33 31 32	115 34 36	N	6.26	8.1	N	550	N	N
CD459SS	33 30 42	115 31 1	N	5.71	25	5	700	N	N
CD460SS	33 34 23	115 34 29	N	5.8	11	N	640	N	N

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Br PPM INAA	Ca PCT ICP	Cd PPM ICP	Ce PPM INAA	Co PPM INAA	Cr PPM INAA	Cs PPM INAA	Cu PPM ICP	Eu PPM INAA	Fe PCT INAA
CD279SS	N	3.08	N	71	15	74	2	22	1.3	5.06
CD280SS	N	3.45	N	86	16	83	3	25	2	5.34
CD281SS	N	3.39	N	95	19	76	3	20	2.2	4.71
CD282SS	N	2.08	N	200	22	140	N	8	1.7	16.8
CD283SS	N	3.73	N	72	8	36	4	16	1	2.99
CD285SS	N	3.3	N	100	8	43	3	10	1.2	3.84
CD286SS	N	3.75	N	59	9	43	2	14	1.1	3.09
CD287SS	N	3.17	N	67	12	84	3	22	1.3	3.75
CD288SS	.8	2.72	N	54	8	56	3	15	1.2	2.55
CD290SS	N	2.75	N	55	8	50	3	14	1.1	2.63
CD291SS	N	2.92	N	50	10	36	6	20	1	3.01
CD294SS	N	2.28	N	260	6	29	4	15	1.1	2.84
CD295SS	N	3.42	N	110	13	68	6	32	1.8	4.34
CD296SS	N	3.94	N	130	16	45	4	17	1.9	5.26
CD297SS	N	3.54	N	100	11	46	4	21	1.9	3.99
CD298SS	N	3.46	N	100	11	44	4	18	1.7	3.72
CD299SS	N	4.05	N	98	10	41	5	22	1.8	3.94
CD401SS	N	3.34	N	130	12	54	4	23	1.7	4.06
CD403SS	N	2.69	N	110	10	58	4	17	1.5	4.25
CD404SS	N	2.54	N	120	9	44	4	16	1.8	4.08
CD405SS	N	3.32	N	140	11	46	7	19	2	4.37
CD406SS	N	3.35	N	110	14	59	3	21	1.9	4.67
CD407SS	N	3.68	N	110	15	40	3	25	1.5	5.1
CD408SS	N	3.41	N	79	11	50	8	19	1.4	3.6
CD409SS	N	3.93	N	90	12	51	4	25	1.9	4.31
CD410SS	.9	2.94	N	90	9	31	10	19	1.4	2.98
CD411SS	1.7	3.34	N	130	11	48	7	23	1.7	3.85
CD414SS	N	3.32	N	150	13	36	7	18	1.8	4.35
CD415SS	N	3.33	N	92	12	53	6	22	2	3.39
CD416SS	N	3.5	N	90	11	51	6	23	1.9	3.26
CD420SS	N	2.56	N	240	8	42	4	20	1.6	3.75
CD423SS	N	3.28	N	93	13	60	5	27	1.9	4.21
CD424SS	N	3.08	N	82	10	48	4	19	1.8	3.36
CD425SS	N	1.95	N	120	4	17	4	13	1.3	2.05
CD427SS	N	2.91	N	200	8	23	6	20	1.2	3.76
CD428SS	N	2.94	N	240	9	35	7	14	2	4.37
CD430SS	N	3.36	N	210	11	32	6	15	2	4.28
CD431SS	N	3.37	N	150	14	47	7	18	2.2	4.89
CD432SS	N	2.65	N	300	7	30	5	12	2.1	3.57
CD433SS	N	2.78	N	94	5	25	3	20	1.2	1.95
CD435SS	N	2.45	N	99	6	43	4	28	1.4	2.44
CD436SS	N	3.41	N	89	12	52	4	17	1.8	3.47
CD438SS	N	4	N	86	13	50	5	20	1.8	3.4
CD440SS	N	2.62	N	85	7	38	4	25	1.5	2.68
CD441SS	N	3.15	N	160	8	44	3	16	1.3	3.47
CD442SS	N	3.09	N	150	8	44	3	22	1.7	5
CD444SS	N	2.85	N	110	9	42	3	24	1.8	3.67
CD445SS	N	3	N	140	12	55	3	22	2	5.96
CD446SS	N	3.77	N	290	10	36	2	16	1.9	4.95
CD447SS	N	2.85	N	250	11	47	4	28	1.8	6
CD450SS	N	2.58	N	240	8	46	2	29	2.9	5.1
CD451SS	N	3.1	N	170	8	34	2	20	1.8	3.48
CD452SS	N	4.15	N	73	15	53	8	19	1.5	3.46
CD453SS	N	4.04	N	85	14	36	6	21	1.6	3.24
CD455SS	N	3.47	N	73	18	140	6	29	1.1	4.52
CD456SS	N	4.1	N	110	20	79	6	24	1.6	4.96
CD457SS	N	3.69	N	94	13	41	8	22	1.7	3.84
CD458SS	N	3.44	N	150	12	54	6	21	1.5	3.82
CD459SS	1.1	2.94	N	92	9	32	8	17	1.5	3.1
CD460SS	1.6	3.56	N	140	9	33	3	23	1.8	3.42

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Hf PPM INAA	K PCT ICP	La PPM INAA	Lu PPM INAA	Mg PCT ICP	Mn PPM ICP	Mo PPM ICP	Na PCT INAA	Nd PPM INAA
CD279SS	38	1.44	48	.73	1.28	852	N	1.1	31
CD280SS	18	1.36	56	.76	1.29	825	N	1.36	43
CD281SS	13	1.53	62	.69	1.23	733	12	1.81	41
CD282SS	110	.91	140	1.84	.62	2,113	N	.81	43
CD283SS	10	2	40	.39	1.19	537	N	1.27	20
CD285SS	24	1.77	67	.7	1.05	861	4	1.11	38
CD286SS	9	1.76	34	.39	1.18	575	7	1.47	21
CD287SS	25	1.58	40	.61	1.13	666	3	1.07	25
CD288SS	14	1.62	35	.5	.93	559	4	1.07	22
CD290SS	9	1.76	31	.4	.92	518	6	1.16	22
CD291SS	8	1.76	29	.37	.96	521	4	1.13	20
CD294SS	42	1.93	210	1.02	.85	631	N	1.57	130
CD295SS	17	2.02	67	.72	1.57	902	7	1.8	39
CD296SS	23	1.6	74	.74	1.58	1,128	N	2.01	42
CD297SS	20	1.89	61	.73	1.24	684	3	1.82	39
CD298SS	21	2	58	.69	1.1	632	N	1.64	33
CD299SS	23	1.92	56	.77	1.14	1,085	N	1.61	33
CD401SS	22	1.85	76	.82	1.25	776	22	1.82	38
CD403SS	32	1.98	60	1.04	1.08	1,262	N	1.55	39
CD404SS	31	1.92	68	1.14	1.09	874	N	1.6	37
CD405SS	29	2.02	87	.86	1.3	999	3	2.26	54
CD406SS	22	1.72	65	.71	1.54	985	N	1.85	37
CD407SS	26	1.69	70	.6	1.45	1,039	5	1.73	37
CD408SS	15	2.12	43	.56	1.27	720	N	1.52	32
CD409SS	15	1.8	51	.65	1.21	706	N	1.44	30
CD410SS	17	2.42	51	.73	.83	692	3	2.18	33
CD411SS	20	1.96	75	.75	1.35	868	24	2.13	38
CD414SS	22	1.9	84	.74	1.43	890	N	1.99	50
CD415SS	17	2.05	49	.65	1.14	692	3	1.89	30
CD416SS	21	1.9	49	.75	1.03	722	N	1.71	31
CD420SS	37	1.86	140	.82	.87	791	N	2.25	71
CD423SS	18	1.65	51	.68	1.23	745	N	1.61	30
CD424SS	17	1.67	46	.65	.96	663	2	1.64	27
CD425SS	56	2.65	64	2.04	.4	535	2	2.27	41
CD427SS	30	2.06	170	.88	.89	829	10	2.09	86
CD428SS	33	2.05	160	.93	1.22	959	N	2.4	82
CD430SS	38	1.94	130	.98	1.26	1,000	N	2.14	70
CD431SS	26	1.85	88	.83	1.45	1,068	4	2.2	39
CD432SS	38	2.18	180	1.03	.99	859	N	2.37	95
CD433SS	23	2.25	51	.99	.56	555	3	1.97	29
CD435SS	32	2.29	55	1.07	.92	744	5	1.76	38
CD436SS	15	1.93	49	.65	1.18	717	N	1.99	33
CD438SS	11	2.12	49	.53	1.31	800	N	2.06	28
CD440SS	14	2.04	45	.65	.89	589	N	1.73	32
CD441SS	33	1.79	100	.98	1.04	898	N	1.52	49
CD442SS	31	1.92	88	.99	.99	831	4	1.45	55
CD444SS	18	1.88	64	.86	1.01	719	8	1.75	45
CD445SS	31	1.94	82	1.02	1.04	763	N	1.71	54
CD446SS	55	1.81	190	1.1	1.17	1,043	N	1.83	89
CD447SS	76	1.74	140	1.31	.91	1,033	11	1.51	63
CD450SS	49	1.76	130	1.64	.84	1,086	N	1.63	88
CD451SS	21	2.12	90	1.75	1.04	1,371	N	2.1	52
CD452SS	10	1.87	40	.49	1.42	821	N	2.18	29
CD453SS	10	2.24	44	.57	1.13	757	2	2.35	40
CD455SS	13	1.72	45	.34	2.28	946	N	1.86	26
CD456SS	12	1.78	62	.64	2.28	951	N	1.85	38
CD457SS	14	1.96	54	.59	1.4	896	27	1.92	32
CD458SS	16	1.95	86	.63	1.39	911	3	1.84	46
CD459SS	18	2.15	50	.73	.81	753	N	2	31
CD460SS	17	2.06	72	1.26	1.08	865	N	1.96	51

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Ni PPM ICP	P PCT ICP	Pb PPM ICP	Rb PPM INAA	Sb PPM INAA	Sc PPM INAA	Se PPM INAA	Sm PPM INAA	Sr PPM ICP	Ta PPM INAA
CD279SS	33	.121	9	55	1.9	12	N	5.8	277	N
CD280SS	33	.133	12	24	3	18	N	7.4	299	N
CD281SS	46	.129	9	N	7.3	17	N	7.7	316	N
CD282SS	30	.062	18	N	3.2	12	N	9	160	6.4
CD283SS	27	.075	15	76	1.2	8.4	N	4.4	250	1.3
CD285SS	23	.082	16	73	1.3	8.6	N	7.3	240	1.7
CD286SS	37	.07	14	54	1.1	9.2	N	4.1	285	1.1
CD287SS	48	.089	14	51	1.4	11	N	4.8	227	.9
CD288SS	37	.093	15	36	1.1	10	N	4.6	210	1.3
CD290SS	55	.076	17	68	1.3	8.7	N	3.9	230	1.2
CD291SS	28	.094	11	67	3	9	N	3.7	208	N
CD294SS	14	.074	32	70	.7	9.1	N	14	198	3
CD295SS	52	.105	27	100	1.4	14	N	7.3	264	2.3
CD296SS	15	.089	21	76	.8	16	N	7.6	272	3.4
CD297SS	26	.091	22	69	1.2	12	N	7.1	250	N
CD298SS	17	.081	23	83	1.7	11	N	6.6	256	N
CD299SS	19	.12	29	91	1.6	12	N	6.6	295	1.6
CD401SS	84	.086	34	98	1.8	13	N	8.1	248	2.3
CD403SS	17	.081	27	84	1.2	12	N	7.4	205	3.6
CD404SS	13	.07	25	72	1	12	N	7.8	202	3.2
CD405SS	21	.082	29	110	1.7	13	N	8.6	271	4.7
CD406SS	24	.103	22	79	2.1	15	N	7.1	275	2.2
CD407SS	30	.102	23	66	1.3	14	N	7.5	266	2.2
CD408SS	16	.08	23	85	5.6	11	N	5.7	262	N
CD409SS	19	.114	12	80	2.5	12	N	6.5	254	N
CD410SS	18	.06	34	98	3	8.5	N	6.1	328	3
CD411SS	89	.074	28	100	1.4	12	N	7.6	241	2.8
CD414SS	15	.079	26	110	1.2	14	N	8.4	259	4.1
CD415SS	29	.101	30	110	3.7	12	N	6.6	294	2.3
CD416SS	21	.097	40	65	2.3	11	N	6.8	269	2
CD420SS	14	.08	11	75	1.5	9.8	N	9.8	221	3.3
CD423SS	21	.089	28	70	3	14	N	7	259	2
CD424SS	18	.09	25	85	2	11	N	6.2	227	N
CD425SS	6	.032	40	120	.7	5.1	N	8.9	116	3.1
CD427SS	44	.074	32	85	1.2	8.8	N	10	215	3
CD428SS	15	.07	24	90	1.1	13	N	13	212	3.4
CD430SS	14	.079	25	76	1.1	13	N	10	245	4.7
CD431SS	18	.087	23	110	1	15	N	8.8	266	4.3
CD432SS	16	.084	23	70	1.3	12	N	13	213	3.6
CD433SS	10	.047	36	110	1	6	N	6.9	153	2.2
CD435SS	20	.066	55	89	1.1	8.3	N	7.3	185	1.9
CD436SS	22	.089	29	64	2.9	12	N	6.4	252	N
CD438SS	21	.091	36	100	4.5	12	N	6.3	278	N
CD440SS	13	.073	37	100	2.1	9.2	N	6.2	192	2.5
CD441SS	14	.065	23	60	1	9.7	N	9.3	235	2.4
CD442SS	20	.106	31	72	1.3	9.9	N	12	276	1.8
CD444SS	54	.093	46	120	1.2	11	4	8.6	276	2.1
CD445SS	22	.1	13	90	2.9	12	N	10	262	N
CD446SS	14	.055	29	53	1.3	12	N	12	242	5
CD447SS	70	.08	10	50	2.3	11	N	12	250	3.8
CD450SS	15	.118	33	67	1.1	13	N	17	234	N
CD451SS	14	.078	34	120	1.9	12	N	12	246	4.5
CD452SS	19	.087	28	79	2.1	12	N	5.6	308	N
CD453SS	15	.093	37	96	4.6	11	N	6.3	303	N
CD455SS	60	.092	N	71	4.8	13	N	6.3	297	1.6
CD456SS	34	.104	10	94	2.2	17	N	7.2	273	N
CD457SS	95	.078	24	88	2.3	12	N	6.4	282	2.1
CD458SS	21	.074	26	85	1.4	12	N	8.1	261	N
CD459SS	15	.082	19	98	4.9	9.4	N	6	264	2.1
CD460SS	17	.086	12	97	2.2	11	N	11	254	3.6

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Tb PPM INAA	Th PPM INAA	Ti PCT ICP	U PPM INAA	V PPM ICP	W PPM INAA	Y PPM ICP	Yb PPM INAA	Zn PPM ICP
CD279SS	N	9.1	.37	1.6	143	N	21	3.5	58
CD280SS	1.4	9.1	.48	1.9	166	4	28	4	54
CD281SS	1.1	10	.51	2.3	138	N	25	3.9	51
CD282SS	N	68	2.37	16	655	N	35	7.9	125
CD283SS	N	11	.34	1.8	80	N	19	2.5	64
CD285SS	N	27	.54	7.9	106	N	22	3.8	65
CD286SS	N	9.3	.39	N	98	N	22	2.5	53
CD287SS	N	12	.37	3	105	78	21	4	54
CD288SS	1	8.3	.3	1.5	78	2	21	2.9	49
CD290SS	N	8.5	.25	1.7	66	N	18	2.5	48
CD291SS	.8	7.4	.3	2.2	73	N	16	2.3	45
CD294SS	1.8	51	.33	8.3	59	N	36	5.6	82
CD295SS	1.7	18	.45	4.7	98	N	25	4.3	102
CD296SS	N	18	.89	4.3	121	N	29	4.6	157
CD297SS	N	21	.49	6.3	85	N	23	4.4	75
CD298SS	N	17	.47	4.3	88	N	22	4	70
CD299SS	N	16	.54	5.1	103	N	24	4.4	79
CD401SS	N	24	.47	6.8	86	N	24	4.8	82
CD403SS	N	21	.97	7.5	84	N	28	6.4	99
CD404SS	N	28	.59	8.3	68	N	26	7	94
CD405SS	1.2	34	.59	9.7	81	N	28	4.9	92
CD406SS	N	18	.65	4.8	108	N	26	4.1	84
CD407SS	N	21	.79	5.3	117	N	27	3.8	98
CD408SS	1.2	13	.45	4.4	84	N	22	3.7	76
CD409SS	1.1	13	.53	3	114	N	25	4	66
CD410SS	N	17	.36	5.1	56	N	22	3.6	68
CD411SS	1.4	26	.46	7.9	75	N	26	4.5	92
CD414SS	1.9	30	.51	6.2	87	N	27	4.6	97
CD415SS	1	13	.35	3.6	72	N	23	4.2	72
CD416SS	N	13	.27	3	66	N	25	4.9	84
CD420SS	1	48	.53	11	72	N	29	5.8	78
CD423SS	N	14	.41	3	89	N	23	4.3	71
CD424SS	N	13	.33	3.6	69	N	23	3.8	242
CD425SS	1.7	52	.17	20	28	N	48	13	86
CD427SS	1.3	38	.49	6	72	N	33	4.6	95
CD428SS	1.6	54	.55	11	74	N	35	6.3	106
CD430SS	N	48	.64	9.7	78	N	33	5.8	105
CD431SS	N	42	.71	9.7	94	2	29	4.9	93
CD432SS	N	58	.4	11	60	N	40	6.7	103
CD433SS	2	27	.18	8.6	36	N	25	6	86
CD435SS	1.7	28	.24	9.4	52	N	25	6.5	169
CD436SS	1	14	.36	4.8	72	N	20	3.8	72
CD438SS	1.4	14	.39	4.6	73	N	22	3.5	75
CD440SS	1.2	16	.22	4	54	N	20	4.2	92
CD441SS	1	35	.75	6.8	85	N	27	5.1	79
CD442SS	1.7	29	.56	4.5	111	N	36	5.3	88
CD444SS	1.9	23	.42	4.7	87	1	28	5.5	64
CD445SS	N	31	.6	6.2	152	N	30	6.5	75
CD446SS	1.4	70	.81	15	82	N	30	7	91
CD447SS	1.7	77	.92	18	129	N	29	8	85
CD450SS	2.9	49	.77	7.3	110	N	54	9.8	91
CD451SS	2.1	52	.39	7.2	72	N	44	10.6	86
CD452SS	N	11	.36	2.8	79	N	20	3.3	80
CD453SS	1.2	12	.32	4.4	67	N	24	3.3	78
CD455SS	.9	14	.54	4.2	103	3	23	2.9	88
CD456SS	N	15	.6	4	122	N	25	3.8	90
CD457SS	1.2	18	.53	4.2	86	N	25	3.8	82
CD458SS	2.3	22	.5	5.3	78	N	25	4.4	112
CD459SS	N	18	.41	5.6	72	2	26	4.2	61
CD460SS	N	35	.3	6.8	74	N	35	8.1	74

Table 4. Results of analysis of stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	LATITUDE	LONGITUDE	Ag PPM ICP	Al PCT ICP	As PPM INAA	Au PPB INAA	Ba PPM INAA	Be PPM ICP	Bi PPM ICP
CD461SS	33 34 7	115 35 5	N	5.77	15	N	810	N	N
CD462SS	33 33 33	115 36 16	N	6.13	26	N	700	N	N

Sample	Br PPM INAA	Ca PCT ICP	Cd PPM ICP	Ce PPM INAA	Co PPM INAA	Cr PPM INAA	Cs PPM INAA	Cu PPM ICP	Eu PPM INAA	Fe PCT INAA
CD461SS	N	3.03	N	120	8	35	3	18	1.8	3.28
CD462SS	N	2.89	N	110	9	43	2	21	1.9	3.54

Sample	Hf PPM INAA	K PCT ICP	La PPM INAA	Lu PPM INAA	Mg PCT ICP	Mn PPM ICP	Mo PPM ICP	Na PCT INAA	Nd PPM INAA
CD461SS	18	2.1	66	1.19	.93	624	3	2.16	41
CD462SS	23	2.28	60	1	1.05	575	6	1.96	43

Sample	Ni PPM ICP	P PCT ICP	Pb PPM ICP	Rb PPM INAA	Sb PPM INAA	Sc PPM INAA	Se PPM INAA	Sm PPM INAA	Sr PPM ICP	Ta PPM INAA
CD461SS	18	.07	31	86	1.3	11	N	9.5	220	N
CD462SS	36	.11	29	85	1.4	11	N	8.5	239	N

Sample	Tb PPM INAA	Th PPM INAA	Ti PCT ICP	U PPM INAA	V PPM ICP	W PPM INAA	Y PPM ICP	Yb PPM INAA	Zn PPM ICP
CD461SS	2.1	31	.27	5.9	60	N	28	7.1	67
CD462SS	1.2	23	.31	5.9	71	N	28	6.2	74

Table 5. Results of re-analysis of NURE soil samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity

[PCT, percent; PPM, parts per million; ICP-P, inductively coupled plasma-atomic emission spectrometry (ICP-AES), partial extraction method; ICP-T, hot acid extraction method of ICP-AES; N, not detected, or less than the lower limit of determination]

Sample	LATITUDE	LONGITUDE	Al PCT ICP-T	As PPM ICP-P	Ba PPM ICP-T	Be PPM ICP-T	Bi PPM ICP-P	Ca PCT ICP-T	Cd PPM ICP-P	Ce PPM ICP-T	Co PPM ICP-T	Cr PPM ICP-T
SSBB019S	33 33 23	115 33 42	6.679	6	654	2	N	6.076	.27	95	10	14
SSBB020S	33 31 29	115 31 9	6.841	5	655	2	N	2.908	.18	91	9	28
SSBB021S	33 33 12	115 36 59	6.866	17	697	2	N	3.579	.15	116	11	21
SSBB025S	33 31 3	115 43 57	7.165	12	760	2	N	3.219	.14	110	13	31
SSBB026S	33 30 58	115 41 38	6.837	6	777	2	N	3.487	.15	105	12	44
SSBC002S	33 31 3	115 29 7	6.598	8	641	2	N	5.348	.13	87	10	18
SSBC003S	33 31 6	115 26 12	6.438	4	633	2	N	5.183	.16	102	9	29
SSBC006S	33 30 57	115 23 53	6.753	N	648	2	N	3.513	.14	161	11	28
SSCC001S	33 15 55	115 23 36	5.886	4	598	2	N	3.525	.18	124	9	12
SSCC004S	33 16 9	115 26 23	5.503	5	582	1	N	3.101	.18	114	8	7
SSCC007S	33 16 12	115 21 8	5.954	3	636	2	N	3.557	.19	114	8	21
SSCC008S	33 20 2	115 20 46	5.848	2	625	2	N	3.245	.19	110	8	15
SSCC010S	33 22 25	115 18 55	5.892	3	622	2	N	3.896	.18	98	8	21
SSCC015S	33 20 15	115 15 45	5.919	4	606	2	N	5.263	.17	94	9	21
SSCD002S	33 16 12	115 13 36	5.927	2	605	1	N	4.643	.18	87	9	34
SSCD003S	33 18 3	115 13 20	5.801	N	503	1	N	5.045	.19	91	8	16
SSCD004S	33 20 14	115 13 56	5.729	4	607	1	N	4.031	.17	97	8	20
SSCD005S	33 22 22	115 13 44	6.148	3	609	2	N	3.542	.19	95	8	8
SSCD006S	33 22 11	115 11 6	5.66	6	603	1	N	3.389	.85	127	10	31
SSCD007S	33 20 21	115 11 34	5.63	5	656	1	N	3.673	.49	88	8	20
SSCD008S	33 18 23	115 11 21	5.907	4	626	1	N	3.548	.37	91	8	15
SSCD009S	33 16 22	115 11 21	5.49	2	649	1	N	3.349	.15	73	8	13
SSCD010S	33 20 27	115 8 24	5.923	1	643	2	N	3.536	.14	79	9	13
SSCD011S	33 18 44	115 8 8	5.696	1	604	1	N	2.837	.18	75	7	19
SSCD012S	33 16 10	115 8 18	5.731	3	645	1	N	3.872	.14	64	8	33
SSCD014S	33 18 44	115 6 37	4.708	4	509	1	N	2.248	.17	98	7	12
SSCD017S	33 17 38	115 3 39	4.712	5	543	1	N	2.857	.1	113	10	18
SSCD018S	33 16 8	115 3 39	5.344	N	609	1	N	2.983	.14	81	7	12
SSCD019S	33 16 4	115 1 13	5.372	1	594	1	N	2.82	.12	60	6	10
SSCD032S	33 19 7	115 12 58	5.943	3	742	2	N	4.288	.2	78	8	17
SSDC002S	33 13 53	115 21 20	5.145	4	632	1	N	3.31	.16	75	6	11
SSDC003S	33 13 53	115 18 35	5.818	1	635	2	N	3.696	.16	100	8	11
SSDC004S	33 9 32	115 16 33	5.659	4	648	1	N	3.264	.14	79	9	12
SSDC005S	33 11 56	115 18 28	5.43	N	603	1	N	3.562	.18	102	8	18
SSDC006S	33 12 17	115 16 4	5.296	5	648	1	N	3.795	.16	76	8	11
SSDD001S	33 5 51	115 8 36	5.582	6	640	1	N	3.621	.16	94	8	8
SSDD002S	33 7 5	115 8 54	5.254	4	592	1	N	3.113	.13	64	7	7
SSDD003S	33 9 8	115 9 2	4.71	3	555	1	N	2.855	.15	71	6	11
SSDD008S	33 9 15	115 11 46	5.738	2	612	1	N	3.599	.11	91	7	23
SSDD009S	33 7 53	115 13 25	4.75	3	606	1	N	2.731	.12	70	6	11
SSDD011S	33 7 21	115 6 37	4.863	4	606	1	N	2.779	.19	71	7	5
SSDD012S	33 5 26	115 6 13	5.551	4	614	1	N	4.094	.18	74	8	17
SSDD013S	33 5 30	115 4 13	5.431	6	621	1	N	3.563	.16	80	8	22
SSDD014S	33 6 48	115 1 59	5.921	6	706	1	N	4.028	.19	70	8	20
SSDD016S	33 7 6	115 3 44	5.018	8	619	1	N	3.176	.19	74	7	10
SSDD017S	33 3 28	115 3 44	5.442	4	582	1	N	3.575	.21	77	8	21
SSDD020S	33 7 26	115 11 29	5.324	4	594	1	N	3.454	.11	62	7	14
SSDD021S	33 5 45	115 2 13	6.189	4	640	2	N	3.756	.19	78	8	17
SSDD031S	33 14 26	115 11 34	5.304	5	617	1	N	3.898	.19	74	8	8
SSDD032S	33 13 58	115 8 23	5.709	3	641	1	N	3.302	.17	73	8	24
SSDD034S	33 13 46	115 3 41	5.501	2	649	1	N	3.401	.13	74	8	16
SSDD035S	33 13 48	115 1 35	5.364	5	634	1	N	3.363	.15	74	8	10
SSDD036S	33 12 6	115 6 8	5.453	4	634	1	N	3.057	.14	76	9	21
SSDD040S	33 14 31	115 13 4	5.889	3	617	1	2	3.31	.2	93	8	13
SSDE004S	33 9 51	114 58 11	5.205	4	612	1	N	3.065	.17	75	7	11
SSDE007S	33 11 18	114 56 20	5.857	17	597	1	N	6.187	.22	77	6	10
SSDE009S	33 13 25	114 56 14	6.326	3	592	2	N	2.929	.17	93	9	14

Table 5. Results of re-analysis of NURE soil samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Cu PPM ICP-P	Cu PPM ICP-T	Eu PPM ICP-T	Fe PCT ICP-T	Ga PPM ICP-T	K PCT ICP-T	La PPM ICP-T	Li PPM ICP-T	Mg PCT ICP-T	Mn PPM ICP-T	Mo PPM ICP-P	Na PCT ICP-T	Nb PPM ICP-T	Nd PPM ICP-T
SSBB019S	21.4	23	N	3.23	14	2.24	50	38	1.635	524	.8	1.226	23	44
SSBB020S	16.2	15	N	3.1	19	2.37	48	32	1.266	575	1	1.528	23	44
SSBB021S	17.6	18	N	3.72	18	2.34	62	38	1.397	610	1.3	1.67	23	60
SSBB025S	21.1	21	2	3.82	17	2.27	59	31	1.515	675	1.4	1.819	20	56
SSBB026S	18.9	18	3	4.32	16	2.4	54	32	1.483	787	1.3	1.688	16	59
SSBC002S	18.1	21	N	3.13	19	2.2	48	36	1.33	489	.8	1.221	23	44
SSBC003S	19.4	21	N	3.25	15	2.21	55	33	1.363	526	.9	1.129	24	51
SSBC006S	17.3	18	2	4.06	20	2.16	84	26	1.35	732	.7	1.404	23	76
SSCC001S	13.6	15	N	3.08	14	2.06	68	27	1.192	586	1	1.381	22	59
SSCC004S	13.2	14	N	2.78	14	1.96	67	24	1.038	536	.8	1.188	20	53
SSCC007S	13.6	15	N	2.63	12	2.06	61	27	1.169	518	.9	1.381	20	53
SSCC008S	13.9	15	N	2.63	17	2.02	61	27	1.131	505	.7	1.25	18	53
SSCC010S	14.9	17	N	2.95	17	2.13	53	27	1.258	535	.8	1.232	19	52
SSCC015S	15.4	19	N	2.85	15	2.05	50	33	1.364	488	.8	1.121	23	47
SSCD002S	18.9	20	N	2.82	13	2.05	46	30	1.351	482	.8	1.093	19	43
SSCD003S	14.6	16	N	2.5	12	1.76	39	30	1.286	409	1.3	.961	16	32
SSCD004S	14.2	16	N	2.7	19	2.06	52	27	1.211	471	.8	1.141	18	48
SSCD005S	16.7	18	N	2.94	15	2.15	50	31	1.249	473	.9	1.145	19	46
SSCD006S	11.9	13	N	4.09	15	1.96	69	23	.985	595	1.1	1.367	24	61
SSCD007S	14.2	15	N	3	15	2.12	46	27	1.123	493	.9	1.307	20	43
SSCD008S	14.2	16	N	2.68	15	2.16	48	28	1.183	463	.9	1.202	16	48
SSCD009S	13.6	15	N	2.43	11	2.01	40	25	1.154	462	.6	1.091	15	35
SSCD010S	10.6	14	N	3.08	12	2.01	45	25	.994	486	1.3	1.478	21	40
SSCD011S	11.5	12	N	2.15	12	1.91	35	24	.98	426	1.1	1.115	17	27
SSCD012S	14.6	16	N	2.53	15	2.04	33	28	1.354	490	.7	1.183	16	32
SSCD014S	14.7	14	N	2.43	13	1.77	54	23	.937	418	.8	.879	18	50
SSCD017S	13.5	16	N	3.42	8	1.8	60	20	.949	536	.8	1.092	16	56
SSCD018S	13.3	13	N	2.43	15	1.98	43	23	.957	441	.7	1.149	17	38
SSCD019S	11.1	13	N	2.03	8	1.89	28	23	1.008	403	1	1.077	13	22
SSCD032S	15	18	N	2.66	16	2.11	42	32	1.257	486	.8	1.144	19	36
SSDC002S	11.8	14	N	2.24	12	2.08	39	25	.995	417	.8	1.226	16	33
SSDC003S	11.6	15	N	2.66	14	2.08	58	27	1.046	534	1.5	1.451	22	45
SSDC004S	17.3	19	N	2.62	13	2	41	26	1.183	481	.7	1.308	17	39
SSDC005S	12.5	16	N	2.66	13	1.93	58	24	1.097	522	1.4	1.17	18	48
SSDC006S	15.5	18	N	2.47	11	2.02	39	26	1.162	457	.7	1.172	16	36
SSDD001S	15.9	18	N	2.74	13	2.13	49	29	1.234	484	.7	1.034	16	45
SSDD002S	14.3	16	N	2.44	15	2.04	35	26	1.102	433	.6	.988	15	32
SSDD003S	12.6	14	N	2.15	11	1.86	37	22	1.011	410	.7	.942	14	33
SSDD008S	12.7	16	N	2.59	16	1.92	50	24	1.114	528	1.4	1.268	17	41
SSDD009S	10.7	12	N	2.2	13	1.92	36	20	.901	415	.6	.985	13	35
SSDD011S	11.5	13	N	2.26	10	1.96	38	22	1.008	424	.7	1.064	14	36
SSDD012S	16.7	18	N	2.46	15	1.97	39	28	1.076	437	.7	1.11	14	35
SSDD013S	15.1	18	N	2.61	13	2.08	43	29	1.173	465	.8	.961	17	42
SSDD014S	17.6	19	N	2.59	15	2.26	37	29	1.297	492	.8	1.184	14	32
SSDD016S	13.5	15	N	2.24	12	1.97	39	25	1.114	416	.8	.947	14	34
SSDD017S	14.6	17	N	2.49	16	2.07	41	28	1.22	455	.8	.958	14	38
SSDD020S	12.7	14	N	2.29	10	2.02	33	23	1.044	429	.6	1.1	16	31
SSDD021S	19.9	20	N	2.76	13	2.11	41	33	1.258	465	.7	.996	17	32
SSDD031S	15.9	17	N	2.32	11	2.01	39	25	1.155	415	.7	.962	15	36
SSDD032S	13.9	16	N	2.51	13	2.16	40	27	1.221	482	.8	1.16	16	37
SSDD034S	13.9	16	N	2.47	14	2.14	39	27	1.203	463	.7	1.139	17	35
SSDD035S	13.7	16	N	2.47	13	2.22	40	26	1.174	460	.6	.966	16	38
SSDD036S	16.7	18	N	2.64	13	2.11	41	26	1.172	486	.7	.991	18	39
SSDD040S	63.9	60	N	2.83	12	2.08	51	29	1.241	497	1	1.042	18	49
SSDE004S	11.3	14	N	2.24	13	2.1	41	25	1.073	415	.7	1.02	17	40
SSDE007S	12.5	16	N	2.3	14	2.15	40	51	1.29	443	.8	.87	18	36
SSDE009S	16.4	19	N	2.92	15	2.19	52	35	1.195	506	1.5	1.019	19	46

Table 5. Results of re-analysis of NURE soil samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity --Continued

Sample	Ni PPM ICP-T	P PCT ICP-T	Pb PPM ICP-P	Pb PPM ICP-T	Sb PPM ICP-P	Sc PPM ICP-T	Sr PPM ICP-T	Th PPM ICP-T	Ti PCT ICP-T	V PPM ICP-T	Y PPM ICP-T	Yb PPM ICP-T	Zn PPM ICP-P	Zn PPM ICP-T
SSBB019S	21	.073	14	26	N	11	274	12	.478	97	26	2	64.4	66
SSBB020S	18	.108	12	27	N	10	262	16	.484	83	25	2	82.2	65
SSBB021S	21	.12	11	30	N	12	290	21	.54	102	31	3	66.9	70
SSBB025S	28	.183	12	27	N	12	306	18	.525	102	29	3	69.3	72
SSBB026S	22	.254	13	29	N	13	293	14	.663	101	30	3	81.7	79
SSBC002S	19	.065	10	26	N	11	272	11	.473	92	25	2	58.6	65
SSBC003S	20	.073	11	24	N	10	244	20	.524	92	27	3	61.2	64
SSBC006S	21	.126	9	29	N	15	237	35	.64	110	41	4	65.3	71
SSCC001S	17	.11	11	26	N	9	235	26	.586	93	28	3	48.3	57
SSCC004S	16	.088	9	25	N	8	217	37	.518	82	25	2	47.5	53
SSCC007S	16	.095	11	23	N	8	243	24	.458	77	23	2	53.3	59
SSCC008S	15	.094	11	25	N	9	217	31	.432	77	26	2	57.3	59
SSCC010S	17	.097	11	26	N	9	247	18	.508	87	25	2	51.8	59
SSCC015S	18	.087	9	24	N	10	274	13	.476	90	26	3	52.2	58
SSCD002S	18	.088	11	24	N	9	274	12	.443	87	23	2	57.6	59
SSCD003S	14	.07	18	24	N	8	213	12	.398	81	20	2	50.6	52
SSCD004S	16	.09	10	23	N	9	245	15	.437	84	24	2	50.5	53
SSCD005S	18	.094	12	24	N	9	243	15	.46	91	24	2	60.1	63
SSCD006S	16	.102	10	30	1	10	248	22	.779	134	27	3	46.5	55
SSCD007S	16	.08	9	26	N	8	225	22	.511	92	22	2	49.7	53
SSCD008S	17	.09	11	23	N	9	235	15	.428	81	22	2	50.3	56
SSCD009S	20	.083	8	20	N	8	212	9	.403	76	20	2	47.1	49
SSCD010S	15	.093	12	24	N	9	244	11	.568	97	23	2	45	51
SSCD011S	13	.077	10	20	N	7	206	12	.367	70	18	2	48.4	53
SSCD012S	24	.093	6	16	N	9	259	8	.373	80	18	2	47.7	51
SSCD014S	15	.068	10	18	N	7	174	23	.399	76	21	2	48	44
SSCD017S	19	.091	7	23	N	9	218	19	.542	119	23	2	39.5	41
SSCD018S	16	.08	8	20	N	8	219	15	.416	76	21	2	49.4	48
SSCD019S	19	.074	9	18	N	7	213	8	.321	65	16	2	40.7	48
SSCD032S	19	.093	11	26	N	9	277	10	.415	80	21	2	50.6	57
SSDC002S	15	.072	9	20	N	7	214	10	.352	67	19	2	43.5	48
SSDC003S	15	.092	13	25	N	8	238	22	.458	75	25	2	49.3	56
SSDC004S	21	.096	11	21	N	9	231	11	.422	83	20	2	51.6	52
SSDC005S	15	.101	15	25	N	8	221	16	.464	82	22	2	48.1	53
SSDC006S	17	.086	9	21	N	8	241	11	.382	79	19	2	46.6	49
SSDD001S	19	.09	9	23	N	9	222	16	.41	88	21	2	47.5	53
SSDD002S	17	.08	8	21	N	8	201	8	.362	75	18	2	44.8	49
SSDD003S	16	.084	9	21	N	7	207	8	.344	68	19	2	42.1	50
SSDD008S	14	.088	11	23	N	8	242	12	.413	80	22	2	44.7	50
SSDD009S	13	.08	8	20	N	6	204	9	.361	66	16	2	35.5	42
SSDD011S	15	.086	9	18	N	7	213	12	.375	71	19	2	39.6	42
SSDD012S	17	.09	30	38	3	8	222	9	.363	78	19	2	51.9	50
SSDD013S	18	.088	9	21	N	8	219	12	.387	81	20	2	46.8	53
SSDD014S	17	.081	10	23	N	8	239	10	.333	80	18	2	59.4	60
SSDD016S	16	.096	9	22	N	7	226	11	.355	72	19	2	41.2	48
SSDD017S	17	.093	10	22	N	8	223	10	.383	77	20	2	49.9	51
SSDD020S	15	.081	6	17	N	8	258	8	.334	72	18	2	41.5	46
SSDD021S	19	.078	11	20	N	9	207	10	.383	89	20	2	60.9	59
SSDD031S	18	.07	11	22	N	8	206	9	.365	72	19	2	46.6	49
SSDD032S	17	.093	9	23	N	8	240	10	.391	78	20	2	47.6	56
SSDD034S	19	.09	7	19	N	8	234	10	.375	76	20	2	47	51
SSDD035S	23	.085	7	22	N	8	221	9	.404	76	21	2	45.7	50
SSDD036S	21	.086	9	23	N	9	217	11	.406	85	21	2	47.3	50
SSDD040S	19	.094	12	26	N	9	221	16	.46	84	25	2	57.3	59
SSDE004S	15	.087	8	20	N	7	208	12	.352	68	20	2	45.3	48
SSDE007S	15	.082	14	24	N	7	446	9	.336	66	20	2	47.6	52
SSDE009S	20	.09	16	25	N	10	187	16	.445	87	23	2	57.3	68

Table 6. Results of re-analysis of NURE stream-sediment samples from the Chocolate Mountain Aerial Gunnery Range, and vicinity

[PCT, percent; PPM, parts per million; ICP-P, inductively coupled plasma-atomic emission spectrometry (ICP-AES), partial extraction method; ICP-T, hot acid extraction method of ICP-AES; N, not detected, or less than the lower limit of determination]

Sample	LATITUDE	LONGITUDE	Al PCT ICP-T	As PPM ICP-P	Ba PPM ICP-T	Be PPM ICP-T	Bi PPM ICP-P	Ca PCT ICP-T	Cd PPM ICP-P
SSCC002S	33 18 20	115 21 13	6.319	2	558	2	N	2.794	.2
SSCC003S	33 18 10	115 23 38	5.783	2	628	2	N	3.154	.14
SSCC006S	33 18 1	115 19 17	6.928	3	473	5	2	2.549	.12
SSCC012S	33 15 53	115 18 18	5.606	N	626	2	N	2.796	.15
SSCC013S	33 16 2	115 16 12	6.242	2	570	2	N	3.316	.41
SSCC014S	33 18 17	115 16 11	6.161	N	627	2	N	3.52	.17
SSCC016S	33 22 57	115 15 36	6.17	3	2,060	2	N	2.778	.36
SSDC007S	33 13 39	115 15 41	5.89	N	638	N	N	3.823	.11
SSDD019S	33 8 41	115 4 16	5.515	5	646	1	N	3.329	.85
SSDD030S	33 14 12	115 13 18	5.399	N	586	1	N	3.227	.12

Sample	Ce PPM ICP-T	Co PPM ICP-T	Cr PPM ICP-T	Cu PPM ICP-P	Cu PPM ICP-T	Eu PPM ICP-T	Fe PCT ICP-T	Ga PPM ICP-T	K PCT ICP-T	La PPM ICP-T	Li PPM ICP-T
SSCC002S	129	7	10	16	13	N	2.57	18	1.97	69	31
SSCC003S	175	6	8	12	12	N	2.51	11	2.06	96	26
SSCC006S	659	5	5	9	9	N	2.32	16	2.19	359	29
SSCC012S	126	7	16	13	13	N	2.59	13	1.98	68	25
SSCC013S	245	9	13	19	19	N	3.56	17	1.99	138	31
SSCC014S	100	10	16	15	16	N	3.27	15	1.98	51	30
SSCC016S	574	23	99	48	43	2	3.44	17	1.83	108	36
SSDC007S	97	13	32	25	22	2	3.73	16	1.72	53	25
SSDD019S	106	10	22	25	22	N	3.2	14	1.8	54	26
SSDD030S	99	9	13	15	15	N	2.9	10	1.8	53	24

Sample	Mg PCT ICP-T	Mn PPM ICP-T	Mo PPM ICP-P	Mo PPM ICP-T	Na PCT ICP-T	Nb PPM ICP-T	Nd PPM ICP-T	Ni PPM ICP-T	P PCT ICP-T	Pb PPM ICP-P	Pb PPM ICP-T
SSCC002S	.878	491	.9	N	1.553	26	54	12	.072	123	110
SSCC003S	.968	516	.7	N	1.411	23	68	12	.081	10	26
SSCC006S	.606	565	.7	N	2.154	47	250	9	.059	19	36
SSCC012S	.916	547	1.2	N	1.302	25	48	13	.078	13	29
SSCC013S	.964	792	1.7	N	1.558	50	87	13	.106	40	62
SSCC014S	1.303	574	.7	N	1.331	22	42	21	.103	10	27
SSCC016S	1.364	1,340	6.8	4	1.111	20	243	71	.073	18	31
SSDC007S	1.342	707	.9	N	1.079	12	45	27	.132	9	23
SSDD019S	1.047	544	.9	N	1.128	11	46	21	.153	12	24
SSDD030S	1.027	629	.7	N	1.031	14	43	18	.089	10	27

Sample	Sb PPM ICP-P	Sc PPM ICP-T	Sr PPM ICP-T	Th PPM ICP-T	Ti PCT ICP-T	V PPM ICP-T	Y PPM ICP-T	Yb PPM ICP-T	Zn PPM ICP-P	Zn PPM ICP-T
SSCC002S	6	8	196	60	.426	69	35	4	74	60
SSCC003S	N	8	217	52	.467	73	27	3	52	56
SSCC006S	N	8	166	293	.492	59	73	8	74	71
SSCC012S	N	8	208	21	.462	71	24	2	57	59
SSCC013S	N	11	208	49	.689	82	43	4	103	99
SSCC014S	N	11	236	22	.553	94	28	3	58	57
SSCC016S	3	13	339	50	.399	89	73	8	999	544
SSDC007S	1	15	274	10	.514	115	29	3	56	57
SSDD019S	2	10	260	23	.471	98	24	2	50	48
SSDD030S	N	11	217	13	.466	86	27	3	50	50

OF 99-368-A
Analytical results and sample locality maps for rock and stream-sediment samples, Chocolate Mountain Aerial Gunnery Range, Imperial and Riverside Counties, California. By H.D. King and M.A. Chaffee. 32 p. Describes methods of study and presents results of analyses.

OF 99-368-B
Analytical results and sample locality maps for rock and stream-sediment samples, Chocolate Mountain Aerial Gunnery Range, Imperial and Riverside Counties, California. By H.D. King and M.A. Chaffee. One 3.5 inch DS/HD IBM compatible computer diskette.

The text file is in ASCII format and also in COREL WordPerfect 6.1 format. The data files are in database file (.dbf) and also in Lotus 123 (.wk1) format. Requirements: an IBM compatible computer capable of reading 3.5 inch diskettes, and a spreadsheet product capable of importing the data files.