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Analyses of A-horizon soil and outcrop
samples from the Vermillion District,
Northeastern Minnesota

by

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CONTENTS

	Page
Introduction-----	1
Sample collection-----	1
Sample preparation-----	2
Analytical methods-----	2
Explanation of tables-----	3
References cited-----	4

TABLES

Table 1.--A-horizon soil samples-----	5
2.--Outcrop samples-----	53

INTRODUCTION

This report lists the results of semiquantitative spectrographic analyses of 754 A-horizon soil samples and 91 outcrop samples collected in the Vermillion district, northeastern Minnesota, in 1970 and 1971 by members of the U.S. Geological Survey and Minnesota Geological Survey.

The Vermillion district, as referred to in this report, encompasses an irregularly shaped area some 66 km (41 mi) long and ranging in width from 5.0 km (3 mi) to 16 km (10 mi); it extends from Vermillion lake in the southwest to Moose lake in the northeast. The area sampled encompasses some 568 km² (226 mi²) and is centered on the Ely Greenstone (Archean) belt.

The analytical data were entered into and stored in the U.S. Geological Survey computer storage system (RASS) (VanTrump and Miesch, 1977).

SAMPLE COLLECTION

Samples were collected at 754 localities using roads and some traversing along river and lakeshores. In all instances only undisturbed soils were sampled. The outcrop samples were collected within 6.7 m (20 ft) of soil sites and have the same latitudinal and longitudinal parameters as the corresponding soils.

The A-horizon soils were collected immediately below the turf at an average depth of 10 cm (4 in.). This soils is generally a fine, organic-rich material containing few rock fragments and ranging in color from black through brown to dark red.

Outcrops were collected as grab samples and generally incorporated substantial weathered surface areas.

SAMPLE PREPARATION

The soil samples were oven-dried overnight at 100°C in the original Kraft paper containers. Extremely clay-rich samples were disaggregated in a jaw crusher, using a wide jaw setting. All of the soils were then sieved through an 80-mesh (177-micrometer opening) sieve, and an 84 g (3 oz) container of the fine fraction was saved for analysis.

Outcrop samples were crushed in a jaw crusher and ground in a vertical grinder to approximately 105 micrometers.

ANALYTICAL METHODS

Element concentrations were determined by a semiquantitative spectrographic method described by Grimes and Marranzino (1968). Results of these spectrographic analyses are reported within geometric intervals having the boundaries of 1,200, 830, 560, 380, 260, 180, 120, and 70 on, in parts per million, but are shown in the histograms by approximate geometric midpoints, such as 1,000, 700, 500, 300, 200, 150, and 100 (Mosier, 1972). Precision of a reported value is approximately plus or minus one interval at the 68 percent confidence level, or plus or minus two intervals at the 95 percent confidence level (Motooka and Grimes, 1976). The following elements, shown with their detection limits, were analyzed for: Fe, 0.5 percent; Mg, 0.02 percent; Ca, 0.05 percent; Ti, 0.002 percent; Mn, 10 ppm; Ag, 0.5 ppm; As, 200 ppm; Au, 10 ppm; B, 10 ppm; Ba, 20 ppm; Be, 1 ppm; Bi, 10 ppm; Cd, 20 ppm; Co, 5 ppm; Cr, 10 ppm; Cu, 5 ppm; La, 20 ppm; Mo, 5 ppm; Nb, 20 ppm; Ni, 5 ppm; Pb, 10 ppm; Sb, 100 ppm; Sc, 5 ppm; Sn, 10 ppm; Sr, 100 ppm; V, 10 ppm; W, 50 ppm; Y, 10 ppm; Zn, 200 ppm; Zr, 10 ppm; and Th, 100 ppm.

Explanation of tables

Iron, magnesium, calcium, and titanium values are reported in percent; all other elements are reported in parts per million. The letter S preceding chemical symbols indicates that the method of analysis was the 6-step semiquantitative spectrographic method. Other symbols shown on the tables are as follows; N, not detected, <, amount detected is below the lowest limit of determination, which is the value shown; and >, amount detected is above the highest limit of determination, which is the value shown.

REFERENCES CITED

- Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating spark emission spectrographic field methods for the semiquantitative analyses of geologic materials: U.S. Geological Survey Circular 591, 6 p.
- Mosier, E. L., 1972, A method for semiquantitative spectrographic analysis of plant ash for use in biogeochemical and environmental studies: Applied Spectroscopy, v. 26, p. 636-641.
- Motooka, J. M., and Grimes, D. J., 1976. Analytical precision of one-sixth order semiquantitative spectrographic analysis: U.S. Geological Survey Circular 738, 25 p.
- VanTrump, George, Jr., and Miesch, A. T., 1977, U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geoscience, v. 3, p. 475-488.

TABLE 1.--A-HORIZON SAMPLES FROM THE VERMILLION DISTRICT, NORTHEASTERN MINNESOTA

Sample	LATITUDE	LONGITUDE	S-FPX	S-NGZ	S-CXZ	S-TT°	S-MN	S-AG	S-AS	S-AU	S-B
71V930A	47 45 53	92 22 30	5.0	1.0	.50	.30	300	N	N	N	15
71V929A	47 46 2	92 22 21	5.0	1.0	.50	.30	1,000	N	N	N	15
71V928A	47 46 32	92 22 12	3.0	1.0	.50	.20	500	N	N	N	10
71V927A	47 46 46	92 22 6	2.0	.7	.50	.20	500	N	N	N	10
71V919A	47 45 52	92 19 52	3.0	1.0	.50	.20	500	N	N	N	10
71V926A	47 47 7	92 21 52	3.0	1.0	1.00	.20	500	N	N	N	10
71V905A	47 47 8	92 16 40	5.0	1.5	1.00	.30	700	N	N	N	20
71V994A	47 47 11	92 11 52	7.0	1.5	1.00	.50	2,000	N	N	N	10
71V938A	47 47 12	92 21 51	5.0	1.0	.50	.30	700	N	N	N	10
71V991A	47 47 16	92 12 46	5.0	1.0	1.00	.50	1,000	N	N	N	15
71V992A	47 47 18	92 12 31	5.0	1.5	1.50	.50	1,000	N	N	N	10
71V990A	47 47 19	92 13 17	7.0	1.5	1.00	.50	700	N	N	N	10
71V925A	47 47 20	92 21 23	5.0	1.0	.70	.30	700	N	N	N	10
71V989A	47 47 24	92 13 44	5.0	1.0	1.00	.30	5,000	N	N	N	10
71V924A	47 47 26	92 21 6	5.0	1.0	.70	.30	700	N	N	N	15
71V939A	47 47 26	92 22 0	5.0	1.5	1.00	.30	2,000	N	N	N	10
71V986A	47 47 28	92 14 59	3.0	1.0	.70	.30	300	N	N	N	10
71V916A	47 47 29	92 18 26	2.0	1.0	.50	.30	200	N	N	N	10
71V982A	47 47 30	92 14 3	5.0	1.0	1.00	.30	700	N	N	N	10
71V927A	47 47 32	92 14 39	7.0	1.0	.70	.30	1,000	N	N	N	20
71V993A	47 47 38	92 12 11	5.0	1.0	1.00	.50	1,000	N	N	N	10
71V923A	47 47 38	92 21 28	3.0	.7	.50	.20	500	N	N	N	10
71V940A	47 47 40	92 22 11	5.0	1.0	.70	.30	500	N	N	N	15
71V922A	47 47 46	92 20 15	3.0	1.0	.70	.20	500	N	N	N	15
71V917A	47 47 50	92 18 3	2.0	1.0	.70	.30	200	N	N	N	15
71V920A	47 47 51	92 19 23	5.0	1.5	.50	.30	300	N	N	N	20
71V918A	47 47 52	92 18 27	3.0	1.0	.50	.20	500	N	N	N	10
71V921A	47 47 54	92 19 51	2.0	.7	.50	.20	500	N	N	N	10
71V985A	47 48 0	92 15 37	7.0	1.0	1.00	.20	700	N	N	N	10
71V915A	47 48 4	92 17 21	5.0	1.5	.70	.30	700	N	N	N	15
71V996A	47 48 9	92 16 49	3.0	1.0	.70	.30	500	N	N	N	15
71V947A	47 48 16	92 21 5	3.0	1.5	.50	.30	1,000	N	N	N	10
71V942A	47 48 18	92 22 19	5.0	1.5	.50	.20	500	N	N	N	10
71V949A	47 48 24	92 21 14	3.0	1.0	.50	.20	500	N	N	N	10
71V948A	47 48 26	92 21 16	3.0	1.0	.50	.30	700	N	N	N	15
71V944A	47 48 30	92 21 47	2.0	.7	.50	.20	300	N	N	N	10
71V945A	47 48 31	92 22 12	3.0	1.0	.30	.30	300	N	N	N	20
71V1000A	47 48 33	92 15 27	5.0	1.5	.70	.30	1,000	N	N	N	15
71V958A	47 48 45	92 22 19	7.0	1.0	.70	.50	700	N	N	N	15
71V1002A	47 49 47	92 14 21	3.0	1.0	.50	.20	500	N	N	N	15
71V1001A	47 48 47	92 14 52	5.0	1.0	.50	.30	1,000	N	N	N	15
71V1003A	47 48 52	92 13 42	5.0	1.0	.70	.30	700	N	N	N	15
71V950A	47 48 54	92 20 35	5.0	1.5	.70	.50	500	N	N	N	10
71V959A	47 48 58	92 22 11	3.0	1.0	.70	.30	500	N	N	N	10
71V951A	47 48 59	92 20 12	3.0	1.0	.70	.30	300	N	N	N	10
71V1004A	47 49 0	92 17 17	3.0	1.0	.70	.30	1,000	1.5	N	N	15
71V953A	47 49 2	92 19 27	3.0	1.0	1.00	.50	500	N	N	N	10
71V975A	47 49 5	92 14 55	5.0	.7	.50	.50	500	N	N	N	10
71V1005A	47 49 9	92 12 21	7.0	1.5	.70	.30	500	N	N	N	15
71V960A	47 49 9	92 22 14	5.0	1.5	1.50	.50	1,500	N	N	N	10

A-horizon Soil Samples

Sample	S-PA	S-RE	S-9J	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NR	S-NI
71V810A	500	1.0	N	N	7	70	10	20	N	<20	30
71V829A	700	1.0	V	N	10	100	20	20	N	<20	30
71V828A	500	1.0	V	N	7	70	15	20	N	<20	20
71V827A	300	1.0	N	N	7	50	15	20	N	<20	50
71V819A	300	<1.0	N	N	5	50	5	20	N	<20	20
71V826A	300	1.0	N	N	7	70	15	20	N	<20	30
71V995A	500	1.5	N	N	10	100	30	20	N	<20	50
71V994A	500	1.0	N	N	10	150	20	20	N	<20	50
71V438A	500	1.0	N	N	10	70	20	20	N	20	30
71V991A	700	1.0	N	N	10	100	10	20	N	<20	50
71V992A	500	1.0	V	N	10	150	20	20	N	<20	50
71V990A	500	1.0	N	N	15	100	30	20	N	<20	20
71V825A	500	1.0	N	N	10	100	15	20	N	20	50
71V989A	700	1.0	N	N	10	150	50	20	N	<20	50
71V824A	500	2.0	N	N	15	70	15	30	S	20	50
71V439A	700	1.0	N	N	15	150	50	20	N	<20	70
71V986A	500	1.0	N	N	10	70	10	20	N	<20	50
71V816A	500	1.0	N	N	5	50	10	20	N	<20	15
71V988A	300	1.0	N	N	10	70	20	20	N	<20	50
71V987A	300	1.0	N	N	10	100	10	20	N	<20	50
71V993A	500	1.0	N	N	10	100	15	20	N	<20	50
71V823A	300	<1.0	N	N	7	50	10	20	N	<20	20
71V440A	500	1.0	N	N	10	50	30	20	N	20	30
71V822A	500	1.0	N	N	7	50	10	20	N	<20	20
71V917A	500	1.0	N	N	5	50	10	20	N	<20	15
71V820A	500	1.5	N	N	10	100	20	20	N	<20	50
71V818A	300	1.0	N	N	5	50	15	20	N	<20	20
71V821A	300	1.0	N	N	5	50	15	20	N	<20	10
71V985A	300	1.0	N	N	10	100	50	20	N	20	50
71V815A	500	1.0	N	N	10	100	20	20	N	20	50
71V996A	500	<1.0	N	N	5	70	15	20	N	20	20
71V447A	700	1.0	N	N	15	100	20	20	N	20	50
71V442A	500	<1.0	N	N	10	100	20	20	N	20	50
71V449A	500	<1.0	V	N	7	100	70	20	N	20	30
71V448A	500	1.0	N	N	10	50	20	20	N	20	20
71V444A	500	N	N	N	5	50	50	20	N	20	10
71V443A	500	<1.0	N	N	7	50	50	20	N	20	20
71V1000A	500	1.0	N	N	10	100	20	20	N	20	20
71V453A	700	1.0	N	N	10	100	20	20	N	20	30
71V1002A	500	1.0	N	N	7	70	30	20	N	<20	20
71V1001A	500	1.5	V	N	10	70	50	20	N	20	30
71V1003A	500	1.5	N	N	10	70	15	20	N	<20	30
71V450A	700	1.0	N	N	15	70	20	20	N	20	30
71V459A	500	<1.0	N	N	7	150	15	20	N	20	30
71V451A	700	<1.0	N	N	7	100	10	20	N	20	30
71V1004A	500	1.5	V	N	7	50	15	20	N	<20	20
71V452A	500	<1.0	N	N	5	50	7	20	N	20	20
71V475A	500	1.0	N	N	7	50	10	20	N	<20	20
71V1005A	300	1.5	N	N	10	100	20	20	N	20	50
71V460A	700	<1.0	V	N	15	100	70	20	50	<20	70

A-horizon Soil Samples

Sample	S-PR	S-SR	S-SC	S-SN	S-SP	S-V	S-W	S-Y	S-ZN	S-ZR
71V830A	15	N	10	N	150	70	N	10	N	100
71V829A	15	N	10	N	150	100	N	10	N	150
71V829A	15	N	10	N	200	70	50	10	N	150
71V827A	20	N	7	N	150	30	700	N	N	70
71V819A	10	N	7	N	200	50	<50	10	N	100
71V826A	15	N	10	N	500	100	<50	10	N	150
71V925A	10	N	15	N	150	150	N	15	N	150
71V924A	10	N	15	N	200	150	N	15	N	150
71V432A	10	N	10	N	150	100	N	15	N	200
71V921A	10	N	15	N	200	100	N	15	N	200
71V922A	15	N	15	N	500	100	N	15	N	130
71V990A	15	N	10	N	200	100	N	10	N	100
71V825A	15	N	10	N	200	100	N	10	N	150
71V939A	10	N	10	N	200	70	N	10	N	150
71V824A	10	N	15	N	200	150	N	15	N	200
71V452A	20	N	15	N	300	150	N	10	200	150
71V986A	10	N	10	N	200	70	N	10	N	150
71V816A	10	N	10	N	200	50	N	N	N	150
71V988A	10	N	15	N	200	100	N	10	N	100
71V987A	10	N	15	N	150	100	N	10	N	100
71V923A	15	N	15	N	200	100	N	15	N	150
71V823A	10	N	7	N	150	70	500	N	N	100
71V460A	15	N	10	N	200	100	N	10	N	200
71V822A	10	N	7	N	200	50	50	10	<200	100
71V817A	10	N	10	N	200	70	N	15	N	200
71V820A	10	N	15	N	150	150	50	15	N	150
71V818A	10	N	10	N	200	70	N	10	N	100
71V821A	N	N	7	N	200	50	70	10	N	150
71V985A	15	N	10	N	300	100	N	10	N	70
71V815A	20	N	10	N	200	100	50	10	N	100
71V986A	10	N	10	N	150	70	N	10	N	150
71V467A	10	N	15	N	150	150	N	10	N	150
71V462A	10	N	15	N	100	150	N	<10	N	100
71V469A	10	N	10	N	200	70	N	10	N	150
71V448A	10	N	10	N	200	50	N	10	N	150
71V464A	10	N	10	N	150	70	N	N	N	70
71V463A	10	N	7	N	150	50	N	N	N	200
71V1000A	20	N	10	N	200	100	50	10	N	200
71V458A	10	N	10	N	200	150	N	15	N	200
71V1002A	50	N	10	N	200	100	<50	10	N	100
71V1001A	100	N	10	N	200	100	<50	10	N	100
71V1003A	50	N	10	N	200	100	N	<10	N	150
71V459A	10	N	10	N	100	100	N	10	N	100
71V459A	15	N	10	N	200	70	N	N	N	200
71V451A	10	N	15	N	200	100	N	10	N	150
71V1004A	20	N	10	N	150	70	N	10	N	150
71V453A	10	N	10	N	300	70	N	10	N	200
71V475A	15	N	10	N	200	100	N	10	N	200
71V1005A	10	N	10	N	150	100	150	10	N	100
71V461A	20	N	10	N	500	150	N	20	N	200

Sample	LATITUDE	LONGITUDE	S-FEZ	S-WGZ	S-C1Z	S-T1Z	S-MN	S-AG	S-AS	S-AU	S-B
71V474A	47 49 10	92 15 19	3.0	1.0	1.00	.20	5,000	N	N	N	10
71V476A	47 49 12	92 14 39	7.0	.7	.50	.20	700	N	N	N	10
71V473A	47 49 12	92 15 32	3.0	1.0	.70	.50	3,000	N	N	N	10
71V454A	47 49 13	92 19 50	3.0	1.0	1.00	.70	500	N	N	N	10
71V458A	47 49 15	92 14 16	10.0	.7	.30	.20	700.	N	N	N	10
71V1006A	47 49 17	92 11 47	3.0	.7	.70	.50	300	N	N	N	10
71V457A	47 49 22	92 19 59	7.0	2.0	1.00	.70	700	N	N	N	15
71V461A	47 49 23	92 22 17	5.0	1.5	.70	.50	1,000	N	N	N	10
71V472A	47 49 24	92 15 44	3.0	1.0	1.00	.50	1,000	N	N	N	10
71V455A	47 49 24	92 20 22	3.0	1.0	1.00	.15	300	N	N	N	<10
71V1007A	47 49 27	92 11 11	3.0	.7	.50	.50	700	N	N	N	15
71V999A	47 49 28	92 14 26	7.0	1.0	.50	.50	2,000	N	N	N	10
71V437A	47 49 30	92 16 2	3.0	.7	.50	.50	1,000	N	N	N	15
71V452A	47 49 30	92 16 17	5.0	1.0	1.00	.50	2,000	1.0	N	N	10
71V456A	47 49 31	92 20 37	3.0	1.5	1.50	.50	1,000	N	N	N	15
71V432A	47 49 32	92 17 16	3.0	1.0	.70	.30	700	N	N	N	10
71V471A	47 49 35	92 17 34	3.0	.7	.70	.20	700	N	N	N	10
71V430A	47 49 35	92 17 40	5.0	1.0	1.00	.30	1,000	N	N	N	10
71V463A	47 49 35	92 22 6	5.0	1.5	1.00	.50	700	N	N	N	10
71V1200A	47 49 36	92 14 11	3.0	1.0	.70	.30	500	N	N	N	15
71V436A	47 49 36	92 16 21	3.0	1.0	.50	.30	1,000	N	N	N	10
71V435A	47 49 36	92 16 36	3.0	.7	.50	.20	700	N	N	N	10
71V474A	47 49 39	92 16 51	2.0	.7	.50	.30	500	N	N	N	10
71V433A	47 49 39	92 17 9	3.0	.7	.50	.30	700	N	N	N	15
71V1008A	47 49 44	92 10 42	3.0	.7	.70	.50	700	N	N	N	15
71V1009A	47 49 57	92 10 13	3.0	.7	.50	.30	200	N	N	N	15
71V471A	47 50 2	92 20 43	3.0	1.0	1.00	.50	2,000	N	N	N	10
71V1271A	47 50 3	92 15 32	5.0	.5	.30	.20	200	.5	N	N	15
71V464A	47 50 3	92 22 22	3.0	1.0	.70	.50	200	N	N	N	10
71V470A	47 50 4	92 20 50	3.0	1.0	.70	.50	200	N	N	N	10
71V1265A	47 50 7	92 16 16	5.0	1.0	.70	.30	1,000	.5	N	N	30
71V618A	47 50 8	92 17 19	5.0	1.0	.70	.50	200	N	N	N	10
71V469A	47 50 14	92 21 13	3.0	1.0	.70	.30	1,000	N	N	N	10
71V617A	47 50 16	92 19 26	5.0	.7	.50	.50	150	N	N	N	10
75V5002	47 50 17	92 8 2	7.0	.7	1.50	.30	500	N	N	N	20
71V468A	47 50 18	92 21 31	3.0	1.0	1.00	.30	2,000	N	N	N	<10
71V465A	47 50 20	92 22 19	3.0	1.0	.70	.50	700	N	N	N	10
75V5005	47 50 21	92 6 55	5.0	.7	1.00	.30	700	N	N	N	20
75V5000	47 50 21	92 8 23	5.0	.7	1.00	.50	500	2.0	N	N	30
71V467A	47 50 23	92 21 57	7.0	1.0	.70	.30	500	N	N	N	10
75V5004	47 50 24	92 7 18	3.0	.7	1.50	.30	700	N	N	N	20
75V5003	47 50 24	92 7 43	3.0	.7	1.50	.50	300	N	N	N	20
71V615A	47 50 24	92 18 27	2.0	.5	.20	.50	150	1.0	N	N	15
75V5001	47 50 28	92 8 49	5.0	.7	1.00	.30	700	N	N	N	20
71V616A	47 50 29	92 18 36	3.0	.3	.30	.30	70	N	N	N	<10
71V1272A	47 50 31	92 16 11	5.0	.5	.50	.30	500	.5	N	N	15
75V5006	47 50 34	92 6 34	7.0	.7	1.00	.50	700	N	N	N	20
71V466A	47 50 35	92 22 26	5.0	1.0	.70	.70	5,000	N	N	N	10
71V1273A	47 50 37	92 16 39	3.0	.5	.50	.30	150	.5	N	N	15
71V1201A	47 50 39	92 8 55	7.0	.7	.50	.50	3,000	N	N	N	15

A-horizon Soil Samples--continued

Sample	S-BA	S-BE	S-BI	S-CD	S-FO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V474A	700	1.5	V	N	10	50	15	20	N	<20	20
71V476A	300	1.0	N	N	7	20	15	20	N	<20	30
71V473A	700	1.5	N	N	7	30	15	20	N	20	20
71V454A	500	N	N	N	7	70	15	20	N	20	20
71V998A	200	1.5	N	N	7	70	50	20	N	20	30
71V1006A	500	1.0	N	N	N	20	10	20	N	20	15
71V457A	700	<1.0	N	V	10	150	20	20	N	20	50
71V461A	500	<1.0	N	N	10	150	20	20	N	<20	70
71V472A	700	1.0	N	N	7	50	50	20	N	<20	20
71V455A	300	1.0	N	N	5	30	10	20	N	20	20
71V1007A	500	1.0	N	N	5	20	20	20	N	20	15
71V909A	500	1.5	N	N	10	70	70	20	N	<20	30
71V437A	700	<1.0	N	N	10	50	20	20	N	<20	15
71V452A	700	1.0	V	N	10	70	15	20	N	20	30
71V456A	700	1.0	V	V	10	100	10	20	N	20	30
71V432A	500	1.0	N	N	10	70	30	20	N	20	20
71V431A	500	1.0	N	N	10	30	20	20	N	20	15
71V430A	700	1.0	N	V	15	70	70	20	N	20	30
71V463A	700	<1.0	N	N	10	150	20	20	N	<20	70
71V1200A	500	1.0	V	N	5	50	30	50	N	<20	20
71V436A	500	<1.0	V	N	10	50	15	20	N	20	20
71V435A	500	<1.0	N	N	7	20	20	20	N	20	15
71V434A	500	<1.0	V	N	7	20	20	50	N	20	10
71V433A	500	1.0	N	N	7	50	15	20	N	20	20
71V1008A	500	1.0	N	N	5	70	70	20	N	20	20
71V1009A	300	1.0	V	V	5	50	10	20	N	<20	15
71V471A	700	<1.0	N	N	10	70	15	20	N	20	20
71V1271A	200	1.0	N	N	5	70	15	50	N	20	10
71V464A	500	<1.0	V	N	7	70	20	20	N	20	20
71V470A	500	<1.0	V	N	5	50	10	20	N	20	15
71V1260A	300	1.0	N	N	10	100	10	30	N	<20	30
71V618A	500	1.0	V	N	5	50	150	20	N	<20	20
71V469A	500	<1.0	N	N	10	70	20	20	N	20	20
71V617A	500	<1.0	V	N	N	50	100	20	N	<20	15
75V5202	500	1.5	V	N	15	70	30	20	S	20	50
71V468A	700	1.0	N	N	10	100	30	20	N	<20	20
71V465A	500	<1.0	V	N	10	70	20	20	N	20	30
75V5005	500	1.5	N	N	15	50	30	20	N	20	50
75V5000	700	1.5	V	N	15	50	70	20	S	20	50
71V467A	500	1.0	N	N	10	100	50	20	N	<20	50
75V5004	700	2.0	V	N	20	70	50	20	N	20	50
75V5003	700	1.5	N	N	15	50	30	20	N	20	30
71V615A	500	<1.0	N	N	N	20	100	20	N	<20	15
75V5001	700	1.0	N	N	15	50	20	20	<5	20	30
71V616A	200	<1.0	V	N	N	20	70	20	N	<20	7
71V1272A	200	1.0	V	N	7	50	20	20	N	<20	20
75V5006	700	2.0	N	N	20	50	30	20	N	20	50
71V466A	1,000	N	N	N	10	70	50	20	N	20	50
71V1273A	150	1.0	V	N	5	70	70	30	N	<20	20
71V1201A	500	1.5	N	N	10	50	50	20	N	<20	15

A-horizon Soil Samples--continued

Sample	S-PB	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V474A	20	N	10	N	200	70	N	20	N	150
71V476A	10	N	10	N	150	50	N	10	N	70
71V473A	20	N	10	N	200	100	N	20	N	300
71V454A	20	N	10	N	200	70	N	10	N	200
71V998A	20	N	10	N	150	70	150	20	N	70
71V1006A	20	N	10	N	200	70	500	10	N	200
71V457A	15	N	10	N	200	150	N	10	N	150
71V461A	20	N	10	N	200	150	N	15	N	200
71V472A	10	N	10	N	300	70	N	15	N	150
71V455A	N	N	10	N	100	50	N	10	N	30
71V1007A	15	N	10	N	100	150	50	15	N	200
71V999A	20	N	10	N	150	100	N	15	N	150
71V477A	10	N	15	N	200	100	N	15	N	300
71V452A	20	N	10	N	300	70	N	15	N	150
71V456A	30	N	15	N	300	100	N	15	N	150
71V432A	20	N	15	N	200	70	N	10	N	150
71V431A	10	N	15	N	200	50	N	10	N	150
71V430A	50	N	15	N	200	100	N	10	N	150
71V463A	15	N	10	N	300	100	N	20	N	200
71V1200A	10	N	10	N	200	70	N	15	N	150
71V436A	20	N	10	N	200	100	N	10	N	150
71V435A	10	N	10	N	200	70	N	10	N	150
71V434A	10	N	10	N	150	70	N	15	N	200
71V433A	10	N	10	N	150	70	N	15	N	300
71V1008A	20	N	10	N	100	70	N	20	N	300
71V1009A	15	N	10	N	100	70	N	10	N	200
71V471A	20	N	10	N	300	70	N	10	N	200
71V1271A	30	N	7	N	100	70	N	15	N	100
71V464A	10	N	10	N	150	70	N	10	N	200
71V470A	10	N	7	N	150	50	N	N	N	150
71V1269A	20	N	10	N	200	70	N	15	N	150
71V618A	10	N	10	N	200	100	N	15	N	150
71V469A	15	N	7	N	200	50	N	<10	N	100
71V617A	10	N	10	N	100	100	N	15	N	200
75V5002	15	N	10	N	200	100	N	15	N	150
71V468A	20	N	10	N	300	70	N	10	N	100
71V465A	15	N	10	N	200	70	N	15	N	200
75V5005	15	N	7	N	200	100	N	10	N	150
75V5000	30	N	10	N	200	100	N	15	N	200
71V467A	15	N	10	N	200	100	N	10	N	200
75V5004	15	N	10	N	300	100	N	15	N	150
75V5003	15	N	10	N	200	100	N	15	N	150
71V615A	20	N	10	N	100	70	N	10	N	200
75V5001	20	N	7	N	200	100	N	10	N	150
71V616A	10	N	7	N	100	50	N	10	N	100
71V1272A	20	N	7	N	150	70	N	10	N	100
75V5006	15	N	10	N	100	100	N	20	N	200
71V466A	15	N	10	N	150	50	N	10	N	200
71V1273A	50	N	7	N	100	50	N	15	N	100
71V1201A	10	N	10	N	100	100	N	20	N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FEX	S-WG%	S-CA%	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B
71V1203A	47 50 42	92 8 28	5.0	1.0	.50	.50	5,000	N	N	N	15
71V645A	47 50 42	92 14 52	2.0	.3	.30	.50	150	N	N	N	20
71V500A	47 50 45	92 13 19	7.0	.7	.50	.30	5,000	3.0	7.0	N	20
71V1206A	47 50 40	92 7 15	3.0	1.0	.70	.30	500	N	N	N	10
71V1206A	47 50 49	92 8 8	5.0	1.0	.70	.30	300	N	N	N	10
71V1208A	47 50 50	92 5 58	5.0	1.0	.70	.50	700	N	N	N	15
71V1205A	47 50 51	92 7 46	3.0	.7	.70	.30	1,500	N	N	N	10
71V409A	47 50 54	92 12 55	3.0	1.0	.70	.50	2,000	N	N	N	15
71V643A	47 50 54	92 17 31	5.0	1.0	.70	.50	700	N	N	N	15
71V1207A	47 50 55	92 6 45	5.0	1.0	.70	.20	1,000	N	N	N	15
71V630A	47 50 55	92 10 35	2.0	.5	.30	.50	150	N	N	N	20
71V632A	47 50 58	92 11 30	3.0	.7	.50	.50	200	N	N	N	10
71V631A	47 51 1	92 11 15	3.0	1.0	.70	.50	150	N	N	N	10
71V1209A	47 51 2	92 5 44	5.0	1.0	.50	.30	700	N	N	N	10
71V644A	47 51 2	92 13 33	2.0	.3	.50	.50	150	3.0	N	N	15
71V408A	47 51 3	92 13 3	2.0	.2	.50	.20	50	N	N	N	<10
71V501A	47 51 3	92 5 20	5.0	1.0	1.00	.50	700	N	N	N	10
75V5017	47 51 8	92 5 20	3.0	.7	1.00	.70	500	N	N	N	70
71V628A	47 51 10	92 10 47	3.0	.7	.70	.30	200	N	N	N	10
71V497A	47 51 10	92 13 3	5.0	.3	.50	.70	100	N	N	N	15
71V627A	47 51 11	92 11 19	3.0	.7	.50	.30	200	N	N	N	10
71V483A	47 51 11	92 14 29	3.0	.7	.30	.30	150	.5	N	N	<10
71V502A	47 51 12	92 5 31	5.0	1.0	.70	.50	1,000	N	N	N	10
71V629A1	47 51 12	92 10 11	5.0	1.0	.50	.30	500	N	N	N	10
71V1215A	47 51 13	92 3 3	5.0	1.5	.30	.50	1,000	N	N	N	15
71V1210A	47 51 13	92 4 59	3.0	1.0	.70	.30	700	N	N	N	15
71V481A	47 51 13	92 14 44	3.0	1.0	.70	.30	500	N	N	N	10
71V1214A	47 51 16	92 3 28	3.0	1.0	.70	.20	500	N	N	N	10
71V485A	47 51 16	92 13 43	2.0	.5	.50	.50	300	N	N	N	10
71V626A	47 51 17	92 11 24	3.0	1.0	.50	.50	200	N	N	N	15
71V503A	47 51 19	92 5 34	3.0	1.0	.70	.50	1,000	N	N	N	20
71V625A	47 51 19	92 11 30	3.0	.7	.50	.50	700	N	N	N	10
71V484A	47 51 19	92 13 52	5.0	1.0	.50	.50	500	N	N	N	10
71V483A	47 51 19	92 14 16	3.0	1.0	.50	.50	500	N	N	N	10
71V1213A	47 51 21	92 3 54	3.0	.7	.70	.30	700	N	N	N	10
71V1216A	47 51 23	92 2 41	10.0	1.5	1.00	.50	1,000	N	N	N	15
71V570A	47 51 23	92 16 6	3.0	.7	.50	.50	150	2.0	N	N	15
71V495A	47 51 24	92 13 3	5.0	1.0	.70	.50	3,000	.5	N	N	15
71V420A	47 51 25	92 14 56	3.0	1.0	1.00	.50	500	N	N	N	10
71V478A	47 51 25	92 15 29	5.0	.7	.50	.50	200	3.0	N	N	15
71V479A	47 51 26	92 15 2	2.0	.5	.30	.50	1,000	2.0	N	N	20
71V571A	47 51 26	92 16 11	3.0	.5	.15	.50	70	3.0	N	N	10
71V1211A	47 51 27	92 4 38	7.0	1.5	.70	.30	500	N	N	N	<10
71V504A	47 51 27	92 5 38	5.0	1.5	.70	.50	1,000	N	N	N	15
71V486A	47 51 27	92 14 23	3.0	.7	.50	.50	700	2.0	N	N	10
71V624A	47 51 28	92 11 37	2.0	.7	.70	.30	200	1.5	N	N	10
71V487A	47 51 28	92 14 34	5.0	.7	.50	.50	200	N	N	N	10
71V1212A	47 51 29	92 4 14	3.0	1.0	.70	.30	700	N	N	N	10
71V505A	47 51 31	92 6 19	5.0	1.0	.50	.50	1,000	N	N	N	10
71V506A	47 51 31	92 6 47	3.0	1.0	1.00	.50	700	N	N	N	10

A-horizon Soil Samples--continued

Sample	S-RF	S-SI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V1203A	500	N	N	20	70	50	20	N	20	50
71V645A	1.0	N	N	N	20	100	20	N	<20	7
71V500A	<1.0	N	N	10	50	70	20	N	<20	50
71V1206A	1.0	N	N	10	100	10	20	N	<20	30
71V1204A	1.0	N	N	7	70	20	20	N	20	20
71V1208A	1.0	N	N	7	100	15	20	N	<20	20
71V1205A	1.0	N	N	10	50	30	20	N	<20	20
71V699A	1.0	N	N	15	70	20	20	N	<20	20
71V643A	1.0	N	N	10	100	30	20	N	<20	30
71V1207A	1.0	N	N	7	100	15	20	N	<20	20
71V630A	1.0	N	N	N	20	10	20	N	20	5
71V632A	<1.0	N	N	5	50	20	20	N	<20	10
71V631A	1.0	N	N	5	50	15	20	N	<20	15
71V1209A	<1.0	N	N	10	70	15	20	N	<20	20
71V644A	1.0	N	N	5	20	70	20	N	<20	15
71V498A	1.0	N	N	5	20	70	20	N	<20	10
71V501A	1.0	N	N	10	100	20	20	N	20	30
7SV5017	1.0	N	N	15	70	15	20	N	20	30
71V638A	1.5	N	N	7	50	20	20	N	<20	15
71V497A	<1.0	N	N	5	70	100	20	N	<20	15
71V627A	1.0	N	N	7	70	15	20	N	<20	20
71V482A	N	N	N	5	50	10	20	N	20	30
71V502A	1.0	N	N	10	100	20	20	N	20	30
71V629A1	1.0	N	N	7	70	15	20	N	20	20
71V1215A	1.0	N	N	15	150	30	20	N	<20	70
71V1210A	1.0	N	N	7	70	20	20	N	<20	30
71V481A	<1.0	N	N	10	50	50	20	N	<20	20
71V1214A	1.0	N	N	7	150	15	20	N	<20	50
71V485A	1.0	N	N	5	30	30	20	N	<20	7
71V626A	1.0	N	N	7	50	20	20	N	20	20
71V503A	1.0	N	N	10	70	30	20	N	<20	20
71V625A	1.0	N	N	7	50	20	20	N	<20	15
71V484A	1.0	N	N	10	70	20	20	N	20	20
71V483A	<1.0	N	N	10	50	10	20	N	20	20
71V1213A	1.0	N	N	5	50	50	200	N	<20	15
71V1216A	1.0	N	N	20	200	70	20	N	20	100
71V520A	1.0	N	N	N	20	200	20	N	20	10
71V495A	1.0	N	N	15	70	70	20	N	<20	50
71V480A	N	N	N	10	100	30	20	N	20	20
71V478A	1.0	N	N	5	30	50	20	N	<20	15
71V479A	N	N	N	<5	20	50	20	N	<20	7
71V571A	N	N	N	N	20	200	20	N	<20	5
71V1211A	1.5	N	N	10	100	30	20	N	<20	50
71V504A	1.0	N	N	10	100	15	20	N	<20	50
71V486A	1.0	N	N	5	20	50	20	N	<20	10
71V624A	1.0	N	N	7	30	10	20	N	<20	15
71V487A	1.0	N	N	7	30	70	20	N	<20	10
71V1212A	1.0	N	N	10	50	20	20	N	<20	20
71V505A	1.0	N	N	20	70	30	20	N	<20	50
71V506A	1.0	N	N	7	100	10	20	N	<20	20

A-Horizon Soil Samples--continued

Sample	S-PP	S-Sp	S-SC	S-SH	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V1207A	10	N	15	N	150	150	N	15	300	300
71V645A	15	N	10	N	100	70	N	20	N	200
71V500A	50	N	10	N	150	100	N	15	N	200
71V1206A	10	N	15	N	200	100	50	15	<200	150
71V1204A	15	N	10	N	200	100	50	10	N	150
71V1208A	10	N	15	N	200	100	N	15	N	200
71V1205A	10	N	10	N	100	100	N	20	700	150
71V409A	15	N	15	N	150	100	N	20	<200	300
71V643A	10	N	15	N	200	150	N	20	N	200
71V1207A	10	N	10	N	200	100	N	10	N	100
71V670A	10	N	7	N	150	50	N	10	N	500
71V672A	10	N	10	N	150	70	N	10	N	200
71V631A	10	N	10	N	200	70	N	10	N	200
71V1209A	10	N	10	N	100	70	50	15	N	200
71V644A	20	N	7	N	100	50	N	10	N	200
71V498A	15	N	5	N	100	50	N	15	N	150
71V501A	15	N	10	N	200	150	N	15	N	200
75V5017	10	N	10	N	200	200	N	10	N	300
71V628A	15	N	10	N	100	70	N	10	N	150
71V497A	15	N	15	N	100	100	N	20	N	300
71V627A	15	N	10	N	100	100	N	15	N	150
71V482A	10	N	10	N	150	70	N	15	N	150
71V502A	20	N	10	N	200	100	N	15	<200	200
71V629A1	15	N	10	N	150	100	N	10	N	150
71V1215A	10	N	15	N	150	100	N	10	N	200
71V1210A	10	N	10	N	150	70	50	15	N	200
71V481A	10	N	10	N	200	100	N	N	N	150
71V1214A	N	N	10	N	200	100	N	N	N	100
71V435A	50	N	10	N	150	100	N	15	N	300
71V626A	15	N	10	N	150	100	N	15	N	200
71V503A	50	N	15	N	200	100	N	20	200	300
71V625A	10	N	10	N	100	100	N	15	N	200
71V484A	10	N	15	N	150	100	N	15	N	200
71V453A	N	N	10	N	150	70	N	10	N	300
71V1213A	20	N	7	N	150	50	N	10	N	150
71V1216A	15	N	20	N	200	50	100	10	N	200
71V570A	10	N	10	N	100	100	N	20	N	300
71V495A	15	N	10	N	200	100	N	15	500	200
71V430A	10	N	15	N	200	100	N	N	N	200
71V478A	15	N	10	N	100	100	N	20	N	300
71V479A	10	N	10	N	100	50	N	15	N	300
71V571A	10	N	7	N	<100	70	N	15	N	200
71V1211A	15	N	10	N	200	100	150	10	N	100
71V504A	10	N	15	N	200	100	N	15	N	150
71V436A	10	N	10	N	100	100	N	15	N	200
71V624A	10	N	10	N	200	70	N	20	N	200
71V487A	10	N	10	N	100	100	N	10	N	200
71V1212A	0	N	10	N	150	100	N	10	N	200
71V505A	20	N	10	N	150	100	N	15	300	200
71V506A	20	N	15	N	500	100	N	15	N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FEX	S-MGZ	S-CAZ	S-TI?	S-MN	S-AG	S-AS	S-AU	S-B
71V496A	47 51 31	92 13 7	2.0	.5	.50	.50	150	N	N	N	15
71V512A	47 51 32	92 9 49	3.0	1.0	.70	.20	500	N	N	N	10
71V622A	47 51 32	92 11 39	5.0	1.0	.50	.30	500	2.0	N	N	10
71V494A	47 51 32	92 12 17	5.0	.7	.70	.50	700	N	N	N	10
71V516A	47 51 33	92 8 27	5.0	1.0	.70	.30	1,000	N	N	N	15
71V515A	47 51 33	92 8 47	5.0	1.0	1.00	.50	1,500	N	N	N	20
71V517A	47 51 34	92 5 51	7.0	1.5	1.00	.50	1,000	N	N	N	15
71V510A	47 51 35	92 8 7	7.0	1.0	.50	.20	700	N	N	N	10
71V518A	47 51 36	92 6 12	3.0	.7	.50	.30	500	N	N	N	10
71V509A	47 51 37	92 7 33	3.0	.7	.30	.30	1,200	N	N	N	10
71V620A	47 51 37	92 11 38	3.0	.7	.50	.20	3,200	1.5	N	N	10
71V613A	47 51 37	92 17 17	3.0	.3	.30	.30	150	.5	N	N	10
71V507A	47 51 38	92 6 59	5.0	1.0	.50	.50	1,200	N	N	N	10
71V514A	47 51 38	92 8 59	3.0	1.0	.50	.50	2,200	N	N	N	20
71V513A	47 51 39	92 9 12	10.0	1.5	.50	.50	1,500	N	N	N	15
71V511A	47 51 39	92 9 29	3.0	1.0	.70	.30	700	3.0	N	N	10
71V508A	47 51 40	92 7 18	5.0	1.0	.70	.50	1,200	N	N	N	15
71V619A	47 51 41	92 11 41	3.0	1.0	.50	.50	300	N	N	N	20
71V1217A	47 51 42	92 2 23	7.0	1.5	1.00	.50	700	N	N	N	15
71V519A	47 51 42	92 6 17	3.0	.7	.70	.50	500	N	N	N	15
71V490A	47 51 42	92 12 52	3.0	1.0	.70	.50	500	N	N	N	20
71V493A	47 51 44	92 12 28	5.0	1.0	.70	.50	2,000	N	N	N	20
71V491A	47 51 46	92 12 32	3.0	.7	.30	.50	300	N	N	N	10
71V520A	47 51 50	92 6 14	7.0	1.5	.70	.70	1,500	N	N	N	20
71V488A	47 51 50	92 13 28	3.0	.7	.30	.30	500	N	N	N	<10
71V489A	47 51 51	92 13 6	5.0	1.0	.70	.50	300	N	N	N	10
71V798A	47 51 51	92 20 29	5.0	.7	.20	.30	700	.5	N	N	20
71V521A	47 51 53	92 6 44	10.0	1.0	.70	.30	5,000	N	N	N	10
71V641A	47 51 54	92 11 43	3.0	1.0	.50	.30	300	N	N	N	15
71V492A	47 51 56	92 12 26	2.0	.7	.50	.30	200	N	N	N	10
71V640A	47 51 57	92 11 45	3.0	.7	.50	.50	1,200	N	N	N	20
71V1218A	47 51 59	92 1 58	5.0	1.5	1.50	.50	1,000	N	N	N	15
71V522A	47 52 7	92 7 6	3.0	1.0	.50	.50	700	N	N	N	10
71V607A	47 52 7	92 14 52	5.0	.7	.50	.50	200	N	N	N	10
71V608A	47 52 9	92 14 39	5.0	.7	.50	.50	200	.5	N	N	15
71V523A	47 52 11	92 7 25	3.0	1.0	.50	.50	500	N	N	N	20
71V612A	47 52 11	92 17 14	3.0	.7	.30	.20	200	.5	N	N	10
71V1219A	47 52 12	92 1 43	5.0	1.5	.70	.50	1,500	N	N	N	15
71V672A	47 52 12	92 7 38	5.0	1.0	1.00	.50	700	N	N	N	10
71V524A	47 52 14	92 7 47	3.0	1.0	.70	.30	1,500	N	N	N	10
71V639A1	47 52 15	92 10 59	2.0	1.0	.70	.30	500	N	N	N	<10
71V525A	47 52 16	92 8 9	3.0	1.0	.70	.30	500	N	N	N	10
71V633A	47 52 16	92 11 26	2.0	.5	.50	.20	150	N	N	N	<10
71V671A	47 52 17	92 7 57	5.0	1.5	1.00	.50	500	N	N	N	15
71V602A	47 52 17	92 13 41	5.0	1.0	.70	.50	1,500	N	N	N	20
71V632A	47 52 18	92 10 31	5.0	1.0	1.00	.50	1,500	N	N	N	15
71V604A	47 52 19	92 14 29	2.0	.5	.70	.20	150	N	N	N	10
71V526A	47 52 20	92 8 25	3.0	1.0	.30	.30	150	N	N	N	20
71V603A	47 52 20	92 14 25	3.0	.7	.30	.50	150	2.0	N	N	15
71V1401A	47 52 21	92 19 28	7.0	2.0	1.00	.50	700	.5	N	N	30

A-horizon Soil Samples--continued

Sample	S-9A	S-FE	S-BI	S-CD	S-CC	S-CR	S-CU	S-LA	S-VO	S-NB	S-NI
71V496A	500	N	N	N	5	50	15	20	N	<20	7
71V512A	700	1.0	N	N	7	30	20	20	N	20	20
71V622A	500	1.0	N	N	5	50	50	30	N	20	20
71V494A	700	1.0	N	N	10	70	50	20	N	<20	20
71V516A	500	1.0	N	N	10	50	15	20	N	<20	30
71V515A	700	1.0	N	N	10	100	15	20	N	<20	30
71V517A	700	1.0	N	N	20	100	15	20	N	<20	70
71V510A	300	1.0	N	N	10	50	70	20	N	20	50
71V518A	500	<1.0	N	N	7	70	15	20	N	20	20
71V509A	300	<1.0	N	N	7	50	30	20	N	20	20
71V620A	300	3.0	N	N	50	50	150	50	N	20	70
71V613A	300	1.0	N	N	N	30	70	20	N	<20	10
71V507A	500	1.0	N	N	10	100	20	20	N	<20	50
71V514A	500	1.0	N	N	15	50	50	20	N	<20	30
71V513A	500	1.0	N	N	15	70	50	20	N	<20	50
71V511A	700	1.0	N	N	7	50	50	20	N	20	20
71V508A	700	1.0	N	N	10	100	20	20	N	<20	30
71V619A	700	1.0	N	N	5	50	50	30	N	20	10
71V1217A	700	1.0	N	N	20	200	100	20	N	20	100
71V519A	700	<1.0	N	N	5	50	10	20	N	20	15
71V490A	500	1.0	N	N	7	70	30	20	N	<20	20
71V493A	700	1.0	N	N	10	70	50	20	N	<20	20
71V491A	500	<1.0	N	N	5	50	20	20	N	20	10
71V520A	700	1.0	N	N	15	150	20	20	N	<20	70
71V489A	500	1.0	N	N	5	50	70	20	N	20	10
71V489A	500	1.0	N	N	7	70	50	20	N	<20	20
71V798A	300	1.0	N	N	5	100	70	30	N	<20	20
71V521A	700	1.0	N	N	15	100	70	20	N	<20	50
71V661A	500	2.0	N	N	7	70	20	20	N	<20	20
71V492A	700	1.0	N	N	5	50	20	20	N	20	10
71V640A	500	1.0	N	N	7	50	20	20	N	<20	15
71V1218A	700	1.0	N	N	10	150	20	20	N	20	50
71V522A	500	<1.0	N	N	7	70	20	20	N	<20	20
71V607A	500	1.0	N	N	5	70	100	20	N	<20	20
71V608A	500	1.0	N	N	5	50	150	20	N	20	20
71V523A	500	1.0	N	N	7	70	20	20	N	<20	20
71V612A	500	<1.0	N	N	5	30	100	20	N	<20	15
71V1219A	500	1.0	N	N	15	1,500	30	20	N	<20	100
71V672A	700	1.0	N	N	10	100	30	20	N	20	30
71V524A	700	1.0	N	N	15	70	50	20	N	<20	50
71V639A1	700	<1.0	N	N	5	70	30	20	N	<20	20
71V525A	700	3.0	N	N	7	50	15	20	N	20	20
71V633A	500	<1.0	N	N	5	20	10	20	N	20	5
71V671A	700	1.0	N	N	10	100	50	20	N	20	50
71V602A	700	1.0	N	N	20	100	50	20	N	20	50
71V639A	700	1.0	N	N	10	100	100	30	N	20	50
71V634A	700	1.0	N	N	N	20	30	20	N	20	10
71V526A	500	1.0	N	N	5	100	15	20	N	20	20
71V603A	300	1.0	N	N	7	50	70	20	N	20	20
71V1491A	500	1.0	N	N	10	150	30	30	N	<20	30

A-horizon Soil Samples--continued

Sample	S-PB	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V496A	10	N	7	N	100	50	N	15	N	300
71V512A	20	N	5	N	200	50	N	N	N	100
71V622A	20	N	10	N	100	100	N	20	N	200
71V494A	10	N	10	N	200	100	N	15	N	200
71V516A	15	N	15	N	200	100	N	20	N	200
71V515A	20	N	15	N	300	100	N	20	N	300
71V517A	20	N	20	N	200	150	N	20	N	300
71V510A	10	N	10	N	100	100	N	N	N	100
71V518A	15	N	10	N	200	70	N	10	N	200
71V509A	15	N	7	N	100	70	N	10	N	100
71V620A	15	N	10	N	<100	100	N	20	N	200
71V613A	10	N	10	N	100	70	N	15	N	150
71V507A	15	N	10	N	150	100	N	20	N	200
71V514A	15	N	10	N	150	100	N	20	N	300
71V513A	20	N	15	N	150	150	N	20	200	200
71V511A	20	N	10	N	200	70	N	10	N	200
71V508A	20	N	15	N	200	100	N	15	200	200
71V619A	20	N	10	N	<100	100	N	20	N	300
71V1217A	15	N	20	N	200	150	N	10	N	150
71V519A	15	N	10	N	200	100	N	20	N	300
71V490A	10	N	10	N	200	100	N	15	N	300
71V493A	15	N	10	N	200	100	N	15	N	200
71V491A	10	N	7	N	100	70	N	N	N	150
71V520A	20	N	20	N	300	150	N	20	N	300
71V488A	N	N	7	N	100	70	N	10	N	100
71V499A	10	N	15	N	150	150	N	20	N	200
71V798A	20	N	10	N	100	100	N	15	N	100
71V521A	50	N	15	N	150	100	N	20	N	150
71V641A	15	N	10	N	150	100	N	15	N	200
71V492A	10	N	10	N	200	70	N	10	N	200
71V640A	15	N	10	N	200	70	N	20	N	500
71V1218A	15	N	20	N	200	150	N	20	N	300
71V522A	10	N	10	N	150	70	N	10	N	200
71V607A	10	N	15	N	100	100	N	20	N	200
71V608A	15	N	10	N	100	100	N	20	N	300
71V523A	10	N	10	N	150	100	N	20	N	300
71V612A	N	N	10	N	100	70	N	15	N	150
71V1219A	15	N	15	N	200	150	N	10	N	150
71V672A	15	N	10	N	200	100	N	15	N	200
71V524A	10	N	10	N	150	100	N	15	200	150
71V639A1	10	N	10	N	200	50	N	10	N	50
71V525A	15	N	10	N	200	50	N	20	N	300
71V633A	N	N	5	N	150	30	N	N	N	70
71V671A	15	N	15	N	200	150	N	20	N	300
71V602A	20	N	15	N	150	150	N	20	200	300
71V638A	15	N	15	N	200	150	N	30	N	200
71V604A	N	N	10	N	150	50	N	10	N	70
71V526A	N	N	15	N	100	100	N	20	N	200
71V603A	10	N	10	N	100	150	N	20	N	200
71V1401A	30	N	15	N	300	150	N	20	N	100

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
71V669A	47 52 24	92 8 26	5.0	1.0	.50	.70	500	N	N	N	50
71V636A	47 52 24	92 10 30	5.0	1.0	.70	.50	300	N	N	N	10
71V799A	47 52 24	92 20 31	7.0	1.5	1.00	.30	700	.5	N	N	30
71V1220A	47 52 25	92 1 20	5.0	1.5	1.00	.30	700	N	N	N	10
71V637A	47 52 25	92 10 17	3.0	.7	.70	.50	300	N	N	N	15
71V605A	47 52 26	92 14 38	5.0	1.0	1.00	.50	700	N	N	N	15
71V667A	47 52 31	92 8 46	3.0	.7	1.00	.30	1,000	N	N	N	10
71V1228A	47 52 32	91 57 25	3.0	.7	.70	.50	500	N	N	N	20
71V668A	47 52 33	92 8 28	7.0	1.0	.50	.50	2,000	N	N	N	50
71V778A	47 52 34	91 40 37	5.0	1.0	1.00	.50	500	N	N	N	15
71V1221A	47 52 34	92 1 4	5.0	1.5	1.50	.50	700	N	N	N	10
71V1409A	47 52 36	92 17 13	7.0	2.0	1.00	.70	1,000	.5	N	N	30
71V665A	47 52 37	92 8 51	5.0	1.0	1.00	.50	1,500	N	N	N	15
71V1405A	47 52 38	92 18 2	7.0	1.5	1.00	.50	300	.5	N	N	30
71V1400A	47 52 38	92 20 13	7.0	2.0	.70	.50	1,500	N	N	N	30
71V1410A	47 52 39	92 16 42	10.0	1.0	.70	.50	700	N	N	N	30
71V1404A	47 52 39	92 18 37	5.0	1.0	1.00	.30	3,000	.5	N	N	30
71V1403A	47 52 40	92 19 18	7.0	2.0	1.00	.50	1,000	.5	N	N	50
71V1227A	47 52 42	91 57 57	3.0	1.0	1.00	.50	700	N	N	N	15
71V1402A	47 52 42	92 19 49	5.0	1.5	1.00	.30	500	.5	N	N	20
71V776A	47 52 43	91 51 32	7.0	2.0	1.50	.50	700	N	N	N	10
71V666A	47 52 44	92 8 50	3.0	1.0	.70	.30	700	N	N	N	10
71V1226A	47 52 47	91 58 23	5.0	1.0	1.00	.50	500	N	N	N	10
71V1276A	47 52 50	92 16 28	3.0	.5	.50	.20	500	N	N	N	20
71V1254A	47 52 51	92 14 19	3.0	1.0	1.00	.50	150	N	N	N	15
71V1276A	47 52 51	92 15 25	7.0	2.0	.70	.50	700	N	N	N	30
71V1406A	47 52 51	92 17 37	10.0	3.0	1.50	.30	700	N	N	N	30
71V1225A	47 52 52	91 58 52	3.0	1.0	1.00	.50	1,000	N	N	N	15
71V777A	47 52 53	91 50 56	7.0	3.0	2.00	.50	700	N	N	N	N
71V1222A	47 52 53	92 0 18	3.0	1.0	1.00	.50	500	N	N	N	15
75V5012	47 52 56	92 11 48	3.0	.7	1.50	.30	700	N	N	N	30
71V1275A	47 52 56	92 16 2	5.0	.7	.70	.50	5,000	N	N	N	30
71V1224A	47 52 57	91 50 15	2.0	.7	.70	.30	1,000	N	N	N	10
71V1252A	47 52 53	92 21 34	5.0	1.0	1.00	.50	3,000	N	N	N	15
75V5014	47 52 50	92 11 5	7.0	.7	1.00	.50	500	N	N	N	30
75V5013	47 52 50	92 11 40	2.0	.7	1.00	.30	700	N	N	N	30
71V1407A	47 52 59	92 17 46	7.0	2.0	1.50	.50	700	N	N	N	30
75V5015	47 53 0	92 11 23	2.0	.7	1.00	.30	300	N	N	N	30
71V662A	47 53 1	92 0 18	5.0	1.0	.70	.50	1,000	N	N	N	20
71V1223A	47 53 2	91 50 56	3.0	1.0	1.00	.50	700	N	N	N	20
71V1408A	47 53 2	92 17 24	7.0	1.5	1.50	.50	5,000	N	N	N	15
71V1220A	47 53 4	91 57 12	3.0	1.0	1.00	.30	1,000	N	N	N	10
75V5011A	47 53 4	92 11 37	3.0	.7	1.50	.30	1,000	N	N	N	30
71V1274A	47 53 5	92 15 8	7.0	2.0	1.00	.50	1,500	.5	N	N	50
71V527A	47 53 9	92 0 29	2.0	1.0	1.50	.30	500	N	N	N	10
75V5015	47 53 9	92 11 9	3.0	.7	1.50	.30	500	N	N	N	20
71V1255A	47 53 9	92 16 6	5.0	1.5	1.00	.70	700	N	N	N	15
71V639A	47 53 12	91 43 35	5.0	1.5	1.50	.30	700	N	N	N	10
71V 000	47 53 12	92 11 43	3.0	.7	1.50	.30	300	N	N	N	20
71V650A	47 53 16	92 0 38	7.0	1.0	1.50	.50	1,000	N	N	N	20

Sample	S-BA	S-RE	S-BI	S-CD	S-CO	S-CK	S-CU	S-LA	S-MO	S-NB	S-NI
71V669A	700	1.0	N	N	5	100	70	20	N	30	20
71V636A	700	1.0	N	N	10	70	50	20	N	<20	20
71V709A	700	1.5	N	N	7	150	30	50	N	<20	20
71V1220A	500	1.0	N	N	15	150	20	20	N	<20	70
71V637A	700	<1.0	N	N	5	70	15	20	N	<20	20
71V605A	500	1.0	N	N	10	70	50	20	N	<20	30
71V667A	500	1.0	N	N	7	50	15	20	N	<20	20
71V1228A	500	1.0	N	N	5	100	30	20	N	<20	15
71V668A	700	1.0	N	N	30	500	20	30	N	20	100
71V778A	500	1.0	N	N	10	150	15	20	N	20	50
71V1221A	700	1.0	N	N	15	150	50	20	N	<20	50
71V1409A	500	1.5	N	N	10	150	70	50	N	30	30
71V665A	700	1.5	N	N	15	100	20	20	N	20	20
71V1405A	500	2.0	N	N	5	150	150	50	N	20	20
71V1402A	700	1.0	N	N	20	150	30	30	N	<20	50
71V1410A	300	1.5	N	N	7	150	70	50	N	20	20
71V1404A	300	3.0	N	N	50	100	100	50	N	<20	50
71V1403A	500	1.0	N	N	20	150	20	50	N	20	50
71V1274A	500	1.0	N	N	5	100	15	20	N	<20	10
71V1402A	300	1.0	N	N	7	150	10	30	N	<20	20
71V776A	300	1.0	N	N	10	150	50	20	N	20	100
71V664A	700	1.5	N	N	5	50	20	20	N	20	20
71V1226A	500	<1.0	N	N	10	150	15	70	N	<20	30
71V1274A	200	1.0	N	N	10	50	20	20	N	<20	20
71V1254A	700	1.0	N	N	10	100	50	20	N	20	15
71V1276A	300	2.0	N	N	20	150	20	50	N	20	30
71V1406A	300	1.5	N	N	30	200	70	20	N	<20	70
71V1225A	500	1.0	N	N	7	100	20	20	N	<20	20
71V777A	700	1.0	N	N	20	700	20	20	N	<20	100
71V1222A	500	1.0	N	N	7	150	20	20	N	<20	20
75V5012	700	1.5	N	N	15	70	50	20	N	20	50
71V1275A	300	1.0	N	N	10	70	30	30	N	20	20
71V1224A	300	1.0	N	N	7	30	70	20	N	20	30
71V1252A	700	1.5	N	N	15	100	20	20	N	<20	30
75V5014	500	2.0	N	N	50	100	200	20	10	20	100
75V5011	700	1.5	N	N	10	50	7	20	N	20	15
71V1407A	500	1.0	N	N	10	150	15	30	N	20	30
75V5013	500	1.5	N	N	10	50	10	20	N	20	20
71V662A	700	1.5	N	N	10	100	50	20	N	20	30
71V1223A	500	1.0	N	N	7	150	30	20	N	<20	20
71V1402A	200	1.0	N	N	15	50	100	30	N	<20	10
71V1229A	300	1.0	N	N	7	70	20	20	N	20	30
75V5010	500	1.5	N	N	50	70	70	20	N	20	70
71V1277A	300	<1.0	N	N	15	150	30	50	N	20	30
71V527A	700	1.0	N	N	5	100	20	20	N	20	20
75V5015	500	1.5	N	N	15	100	10	20	N	20	50
71V1255A	500	1.0	N	N	10	70	15	20	N	20	20
71V848A	500	1.0	N	N	10	100	15	20	N	20	30
75V5009	500	2.0	N	N	15	70	15	50	N	20	30
71V660A	700	3.0	N	N	10	100	50	100	N	20	70

A-horizon Soil Samples--continued

Sample	S-PP	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V669A	50	N	20	N	100	150	N	30	N	500
71V636A	15	N	15	N	150	100	N	10	N	150
71V799A	30	N	10	N	300	100	N	15	N	150
71V1220A	10	N	10	N	200	100	50	N	N	100
71V637A	10	N	10	N	150	100	N	10	N	200
71V605A	N	N	15	N	200	150	N	20	N	300
71V667A	20	N	10	N	200	50	N	15	N	200
71V1228A	10	N	10	N	150	70	N	15	N	200
71V668A	15	N	20	N	300	200	N	20	N	300
71V773A	10	N	15	N	300	100	200	10	N	300
71V1221A	15	N	15	N	300	100	N	10	N	200
71V1409A	50	N	20	N	200	100	N	20	N	200
71V665A	20	N	15	N	200	100	N	20	N	300
71V1405A	50	N	10	N	200	150	N	20	N	200
71V1400A	20	N	10	N	300	100	N	15	200	200
71V1410A	50	N	15	N	150	150	N	20	N	200
71V1404A	30	N	10	N	200	70	N	20	200	150
71V1403A	20	N	15	N	300	150	N	20	300	300
71V1227A	10	N	15	N	200	70	N	15	N	300
71V1402A	30	N	10	N	200	100	N	20	N	200
71V776A	10	N	15	N	100	150	N	15	N	200
71V664A	20	N	10	N	200	70	N	20	N	200
71V1226A	10	N	15	N	200	100	N	10	N	150
71V1274A	15	N	5	N	150	50	N	10	N	100
71V1254A	15	N	15	N	150	100	N	20	N	200
71V1276A	50	N	15	N	300	100	N	15	<200	150
71V1406A	15	N	30	N	300	200	N	15	N	100
71V1225A	15	N	10	N	150	100	100	10	N	200
71V777A	15	N	20	N	200	150	N	10	N	100
71V1222A	10	N	10	N	200	70	100	10	N	200
75V5012	15	N	7	N	200	100	N	15	300	200
71V1275A	20	N	10	N	100	100	N	20	300	200
71V1224A	10	N	7	N	100	50	N	10	500	100
71V1252A	10	N	15	N	150	100	N	15	N	200
75V5014	30	N	10	N	<100	150	N	20	N	200
75V5011	15	N	7	N	200	100	N	15	<200	200
71V1407A	70	N	15	N	500	100	N	15	N	300
75V5013	15	N	7	N	200	100	N	15	N	300
71V662A	20	N	15	N	150	100	N	20	N	200
71V1235A	20	N	15	N	200	100	N	10	N	200
71V1408A	100	N	30	N	<100	150	N	30	N	100
71V1229A	10	N	10	N	200	70	N	10	N	150
75V5010	15	N	15	N	150	150	N	20	200	200
71V1277A	50	N	10	N	200	100	N	20	200	150
71V527A	10	N	10	N	500	70	N	10	N	150
75V5015	15	N	10	N	300	150	N	10	N	150
71V1255A	15	N	20	N	200	150	N	20	N	200
71V943A	15	N	15	N	700	100	100	15	N	300
75V5009	15	N	7	N	200	100	N	15	N	150
71V663A	20	N	20	N	150	150	N	30	N	200

Sample	LATITUDE	LONGITUDE	S-FEX	S-MGX	S-CAZ	S-TI*	S-MN	S-AG	S-AS	S-AU	S-B
71V1251A	47 53 16	92 21 52	5.0	1.5	1.00	.50	500	N	N	N	10
71V534A	47 53 17	92 2 19	3.0	1.0	1.00	.30	500	N	N	N	10
71V1278A	47 53 17	92 14 54	5.0	1.5	1.00	.30	500	N	N	N	20
75V5016	47 53 21	92 11 12	3.0	.7	1.00	.20	300	N	N	N	10
71V1019A	47 53 22	91 48 12	5.0	1.0	1.00	.30	700	N	N	N	10
71V1230A	47 53 22	91 56 31	7.0	1.0	1.00	.50	1,500	N	N	N	15
71V528A	47 53 22	92 0 24	3.0	1.0	.70	.30	500	N	N	N	<10
71V659A	47 53 22	92 9 56	5.0	1.0	.70	.30	500	N	N	N	10
75V5008	47 53 22	92 11 48	3.0	.7	1.00	.30	700	N	N	N	30
71V1256A	47 53 22	92 14 21	5.0	1.0	.70	.50	150	N	N	N	20
71V846A	47 53 24	91 44 36	7.0	1.5	1.00	.50	700	N	N	N	15
71V658A	47 53 25	92 9 52	3.0	1.0	1.00	.20	700	N	N	N	10
71V791A	47 53 25	92 17 51	2.0	.7	.70	.50	200	N	N	N	15
71V792A	47 53 25	92 17 51	2.0	.7	.70	.30	300	N	N	N	10
71V793A	47 53 25	92 17 51	3.0	1.0	1.00	.30	1,500	N	N	N	10
71V536A	47 53 26	92 3 31	5.0	1.0	.70	.30	500	N	N	N	10
71V535A	47 53 27	92 7 6	7.0	1.5	1.50	.30	700	N	N	N	15
71V656A	47 53 27	92 10 33	3.0	1.0	.70	.20	300	N	N	N	10
71V1018A	47 53 30	91 48 0	5.0	1.0	1.00	.30	500	N	N	N	10
71V529A	47 53 30	92 0 11	3.0	1.5	.70	.20	700	N	N	N	<10
71V532A	47 53 30	92 1 25	3.0	.7	.20	.20	1,000	N	N	N	10
71V533A	47 53 30	92 1 54	3.0	1.0	1.00	.50	700	N	N	N	10
71V657A	47 53 30	92 9 56	3.0	.7	.70	.20	300	N	N	N	10
75V5007	47 53 30	92 11 53	7.0	1.5	.70	.50	700	N	N	N	200
71V540A	47 53 31	92 5 14	3.0	1.0	.50	.50	1,000	N	N	N	10
71V541A	47 53 31	92 5 34	7.0	1.0	.30	.50	2,000	N	N	N	15
71V654A	47 53 31	92 10 53	3.0	.7	.50	.20	300	N	N	N	20
71V1231A	47 53 32	91 55 55	5.0	1.0	1.00	.50	1,000	N	N	N	10
71V530A	47 53 32	92 0 30	5.0	1.0	.50	.30	1,000	N	N	N	<10
71V531A	47 53 33	92 0 50	10.0	1.5	.30	.50	1,000	N	N	N	20
71V542A	47 53 33	92 5 52	5.0	1.0	.50	.30	500	N	N	N	<10
71V1262A	47 53 33	92 9 41	2.0	.5	.70	.30	300	N	N	N	15
71V800A	47 53 34	92 15 54	5.0	1.0	.70	.50	300	N	N	N	15
71V779A	47 53 34	91 50 23	5.0	1.0	1.00	.50	500	N	N	N	15
71V811A	47 53 35	91 54 51	5.0	1.0	1.00	.50	700	N	N	N	30
71V748A	47 53 35	92 3 6	5.0	1.0	.50	.50	200	N	N	N	15
71V537A	47 53 35	92 3 57	5.0	1.0	.70	.50	200	N	N	N	15
71V1250A	47 53 35	92 22 11	7.0	1.5	.70	.50	300	N	N	N	10
71V801A	47 53 36	92 3 38	2.0	.5	.20	.50	150	N	N	N	20
71V1279A	47 53 36	92 14 56	5.0	1.0	1.00	.50	1,000	N	N	N	50
71V810A	47 53 37	91 54 33	5.0	1.5	1.00	.50	1,500	N	N	N	20
71V653A	47 53 37	92 11 39	3.0	1.0	1.00	.30	1,500	N	N	N	10
71V813A	47 53 38	91 55 37	5.0	1.0	1.00	.50	500	N	N	N	10
71V747A	47 53 38	92 2 55	5.0	1.5	.70	.30	500	N	N	N	15
71V652A	47 53 38	92 11 51	3.0	1.0	1.00	.30	1,500	N	N	N	15
71V651A	47 53 38	92 12 17	3.0	1.0	.70	.30	700	N	N	N	10
71V812A	47 53 39	91 55 11	5.0	1.0	1.00	.50	700	N	N	N	15
71V539A	47 53 39	92 4 40	5.0	1.0	.30	.30	500	N	N	N	<10
71V543A	47 53 39	92 6 13	5.0	.7	.50	.50	150	N	N	N	15
71V646A	47 53 39	92 14 31	5.0	1.5	1.00	.50	2,000	N	N	N	50

A-horizon Soil Samples--continued

Sample	S-PA	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V1251A	700	N	N	10	150	20	20	N	<20	30
71V534A	700	N	N	10	100	15	20	N	20	20
71V1278A	300	N	N	5	70	10	30	N	20	20
75V5016	500	N	N	20	70	50	20	N	20	70
71V1719A	300	N	N	7	100	10	20	N	<20	30
71V1230A	500	N	N	10	700	50	20	N	<20	50
71V528A	500	N	N	7	100	15	20	N	20	50
71V659A	700	N	N	7	70	15	20	N	<20	50
75V5008	500	N	N	15	50	15	20	N	20	30
71V1256A	700	N	N	10	100	30	20	N	20	70
71V846A	500	N	N	10	100	15	20	N	20	30
71V658A	700	N	N	10	70	30	20	N	<20	20
71V791A	500	N	N	N	70	10	20	N	<20	10
71V792A	500	N	N	N	100	10	20	N	20	30
71V793A	500	N	N	15	150	20	20	N	20	70
71V533A	500	N	N	15	100	20	20	N	<20	30
71V535A	700	N	N	15	150	50	20	N	<20	70
71V656A	300	N	N	10	100	20	20	N	20	30
71V1018A	500	N	N	7	100	10	20	N	<20	30
71V529A	700	N	N	10	100	50	20	N	20	50
71V532A	500	N	N	5	70	15	20	N	20	15
71V533A	700	N	N	7	70	15	20	N	<20	15
71V657A	700	N	N	N	50	10	30	N	20	15
75V5007	500	N	N	30	500	50	20	N	20	150
71V540A	700	N	N	7	70	15	20	N	20	15
71V541A	500	N	N	15	100	70	30	N	20	50
71V654A	300	N	N	N	50	20	20	N	<20	20
71V1231A	500	N	N	7	70	10	20	N	<20	50
71V520A	700	N	N	10	100	20	20	N	<20	50
71V521A	500	N	N	20	150	100	20	N	<20	70
71V542A	500	N	N	10	100	15	20	N	20	30
71V1262A	700	N	N	<5	20	10	20	N	<20	10
71V807A	700	N	N	7	70	10	20	N	<20	30
71V779A	500	N	N	7	100	15	20	N	<20	30
71V811A	500	N	N	10	150	20	20	N	20	50
71V743A	500	N	N	5	70	15	20	N	<20	15
71V537A	700	N	N	7	100	20	20	N	<20	20
71V1259A	500	N	N	10	150	50	20	N	20	70
71V801A	300	N	N	<5	50	7	20	N	<20	7
71V1270A	500	N	N	10	150	10	50	N	20	20
71V810A	700	N	N	15	150	50	20	N	20	70
71V653A	700	N	N	10	100	30	20	N	<20	30
71V813A	500	N	N	10	150	15	20	N	20	50
71V767A	700	N	N	10	100	30	20	N	20	50
71V652A	700	N	N	10	100	50	30	N	<20	30
71V651A	700	N	N	7	100	20	20	N	<20	20
71V812A	500	N	N	10	100	20	20	N	20	30
71V539A	300	N	N	15	100	70	20	N	20	50
71V643A	500	N	N	5	70	15	20	N	20	15
71V645A	700	N	N	20	100	70	30	N	20	50

A-horizon Soil Samples--continued

Sample	S-PH	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZR	S-ZN	S-ZR
71V1251A	20	N	10	N	150	100	N	20		N	200
71V534A	15	N	10	N	300	70	N	15		N	300
71V1278A	30	N	10	N	300	70	N	20		N	150
75V5016	15	N	5	N	200	100	N	N		N	100
71V1010A	10	N	10	N	300	100	<50	N		N	100
71V1230A	20	N	15	N	200	100	<50	10		N	150
71V528A	10	N	10	N	200	50	N	N		N	200
71V659A	20	N	10	N	200	100	N	15		N	200
75V5008	15	N	7	N	200	100	N	15		N	200
71V1256A	15	N	15	N	150	150	N	20		N	200
71V246A	15	N	15	N	300	150	N	20		N	200
71V658A	30	N	10	N	200	100	N	10		N	150
71V791A	15	N	7	N	300	30	N	10		N	200
71V792A	20	N	5	N	200	30	N	N		N	100
71V793A	15	N	5	N	200	50	N	10		N	100
71V536A	10	N	10	N	200	100	N	15		N	200
71V535A	15	N	15	N	500	150	N	15		N	150
71V656A	20	N	10	N	150	70	N	N		N	70
71V1018A	10	N	10	N	300	100	50	N		N	150
71V529A	15	N	10	N	700	70	N	10		N	100
71V532A	10	N	7	N	100	100	N	15		N	200
71V533A	10	N	10	N	500	100	N	15		N	300
71V657A	30	N	7	N	200	50	N	10		N	150
75V5007	15	N	30	N	100	200	N	15		<200	150
71V540A	15	N	10	N	150	70	N	15		N	300
71V541A	30	N	15	N	150	150	N	20		N	200
71V654A	10	N	15	N	100	100	N	15		N	50
71V1231A	10	N	10	N	150	70	N	10		N	150
71V530A	15	N	10	N	200	100	N	10		<200	200
71V531A	10	N	20	N	200	200	N	20		N	150
71V542A	15	N	10	N	150	100	N	10		N	150
71V1262A	15	N	10	N	200	50	N	20		N	300
71V800A	15	N	7	N	200	70	N	15		N	100
71V779A	15	N	10	N	200	100	200	10		N	300
71V811A	20	N	15	N	200	100	50	20		N	200
71V748A	15	N	10	N	200	100	N	10		N	200
71V537A	20	N	10	N	200	150	N	20		N	300
71V1250A	15	N	15	N	150	150	N	20		N	200
71V801A	10	N	7	N	150	70	N	15		N	150
71V1279A	30	N	10	N	300	70	N	20		<200	300
71V810A	20	N	15	N	200	150	200	20		N	200
71V653A	70	N	15	N	200	100	N	15		N	200
71V813A	15	N	15	N	200	100	<50	10		N	150
71V747A	30	N	10	N	300	150	N	N		N	150
71V652A	50	N	15	N	200	70	N	15		N	200
71V651A	30	N	10	N	200	70	N	15		N	150
71V812A	15	N	15	N	200	150	50	15		N	300
71V539A	15	N	10	N	100	100	N	10		N	150
71V543A	15	N	10	N	150	100	N	10		N	200
71V646A	70	N	20	N	200	150	N	30		N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FE%	S-MGX	S-CA%	S-TT%	S-MN	S-B	S-AU	S-AS	S-AG	S-B
71V1263A	47 53 40	92 9 32	5.0	1.0	.50	.50	300	15	N	N	N	15
71V847A	47 53 41	91 46 14	5.0	1.5	1.00	.50	500	10	N	N	N	10
71V538A	47 53 41	92 4 8	3.0	1.0	1.00	.30	500	10	N	N	N	10
71V649A	47 53 41	92 12 59	5.0	1.0	1.00	.50	1,500	15	N	N	N	15
71V1021A	47 53 42	91 48 49	3.0	1.0	.70	.30	700	10	N	N	N	10
71V733A	47 53 42	91 55 33	15.0	7.0	10.00	.70	3,000	10	N	N	N	10
71V746A	47 53 42	92 2 19	7.0	1.0	.50	.30	500	10	N	N	N	10
71V544A	47 53 42	92 6 33	3.0	.7	.50	.30	500	<10	N	N	N	<10
71V650A	47 53 42	92 12 32	7.0	1.5	.70	.50	1,500	20	N	N	N	20
71V744A	47 53 43	92 1 14	5.0	1.0	.70	.30	500	10	N	N	N	10
71V309A	47 53 44	91 54 10	5.0	1.0	.70	.30	500	15	N	N	N	15
71V648A	47 53 44	92 13 30	5.0	1.5	1.00	.50	1,500	15	N	N	N	15
71V647A	47 53 44	92 14 12	5.0	1.0	1.00	.50	1,500	20	N	N	N	20
71V1234A	47 53 44	92 15 52	5.0	1.0	.70	.50	700	15	N	N	N	15
71V749A	47 53 46	92 3 17	5.0	.7	.50	.30	200	10	N	N	N	10
71V1336A	47 53 47	91 42 33	5.0	1.5	.70	.50	2,000	30	N	N	N	30
71V802A	47 53 47	92 3 46	2.0	.7	.50	.30	200	20	N	N	N	20
71V732A	47 53 48	91 55 39	7.0	3.0	2.00	.50	1,000	50	N	N	2.0	50
71V1257A	47 53 40	92 14 29	5.0	1.0	1.00	.50	700	15	N	N	N	15
71V1232A	47 53 49	92 14 55	3.0	1.5	1.00	.50	500	10	N	N	N	10
71V808A	47 53 50	91 57 34	5.0	1.0	.70	.50	500	15	N	N	N	15
71V745A	47 53 51	92 1 35	5.0	1.0	.70	.30	300	15	N	N	N	15
71V1264A	47 53 52	92 0 32	3.0	.7	.70	.50	200	15	N	N	N	15
71V1240A	47 53 52	92 22 23	5.0	1.5	1.00	.30	500	15	N	N	N	15
71V1237A	47 53 53	92 15 31	7.0	5.0	.70	.50	500	10	N	N	N	10
71V1020A	47 53 54	91 48 20	5.0	1.0	1.00	.30	1,000	10	N	N	N	10
71V807A	47 53 55	91 53 35	3.0	1.0	.70	.50	500	15	N	N	N	15
71V203A	47 53 57	92 3 41	3.0	.7	.50	.50	700	20	N	N	N	20
71V1022A	47 53 58	91 49 11	7.0	1.5	.70	.20	700	15	N	N	N	15
71V1258A	47 53 58	92 14 35	3.0	1.0	1.00	.50	200	10	N	N	N	10
71V805A	47 53 59	91 52 47	3.0	.7	.70	.50	200	20	N	N	N	20
71V814A	47 53 59	91 53 2	3.0	1.0	1.00	.50	700	10	N	N	N	10
71V545A	47 53 59	92 6 52	5.0	.7	.50	.50	300	10	N	N	N	10
71V1016A	47 54 0	91 47 11	5.0	1.0	1.00	.30	700	10	N	N	N	10
71V806A	47 54 0	91 53 13	5.0	1.0	1.00	.30	500	10	N	N	N	10
71V773A	47 54 1	92 10 25	5.0	1.5	.70	.50	700	15	N	N	N	15
71V774A	47 54 1	92 10 25	5.0	1.0	.70	.30	1,500	10	N	N	N	10
71V775A	47 54 1	92 10 25	7.0	1.5	.70	.50	700	20	N	N	N	20
71V750A	47 54 2	92 3 3	3.0	1.0	.70	.50	300	15	N	N	N	15
71V1265A	47 54 2	92 9 31	3.0	.7	.50	.30	150	10	N	N	N	10
71V734A	47 54 3	91 55 58	5.0	1.5	1.50	.70	1,500	50	N	N	.5	50
71V1249A	47 54 6	92 22 9	5.0	1.5	1.00	.50	500	10	N	N	N	10
71V904A	47 54 7	92 3 56	5.0	.7	.70	.50	1,500	20	N	N	N	20
71V735A	47 54 8	91 56 20	10.0	2.0	1.00	.70	1,000	30	N	N	N	30
71V1259A	47 54 8	92 14 41	5.0	1.0	.50	.50	300	15	N	N	N	15
71V1335A	47 54 9	91 42 44	5.0	1.5	1.00	.50	2,000	15	N	N	N	15
71V1017A	47 54 9	91 47 19	7.0	1.0	.70	.30	300	10	N	N	N	10
71V1332A	47 54 10	91 45 26	5.0	1.5	1.00	.50	500	15	N	N	N	15
71V743A	47 54 10	92 1 5	5.0	1.0	.70	.30	150	10	N	N	N	10
71V1236A	47 54 10	92 16 12	5.0	1.0	.50	.30	300	10	N	N	N	10

A-horizon Soil Samples--continued

Sample	S-PA	S-BE	S-BI	S-CD	S-CC	S-CR	S-CU	S-LA	S-MO	S-NR	S-NI
71V1263A	500	1.0	N	N	10	70	15	20	N	<20	20
71V1847A	500	1.0	N	N	10	100	15	20	N	20	30
71V538A	700	1.0	N	N	7	50	50	20	N	20	15
71V649A	700	1.0	N	N	10	100	50	20	N	<20	30
71V1021A	300	1.0	N	N	7	70	20	20	N	<20	30
71V733A	300	1.5	N	N	50	500	150	20	N	<20	70
71V746A	700	1.0	N	N	10	100	20	20	N	20	50
71V544A	500	<1.0	N	N	7	70	15	20	N	20	20
71V650A	500	1.0	N	N	30	150	70	20	N	<20	70
71V744A	500	1.5	N	N	7	100	50	20	N	20	30
71V809A	500	1.0	N	N	10	100	10	20	N	<20	50
71V648A	700	2.0	N	N	20	100	70	150	N	<20	30
71V647A	700	1.0	N	N	10	100	20	20	N	<20	20
71V1234A	500	1.0	N	N	5	70	70	20	N	20	20
71V749A	700	1.0	N	N	5	50	15	20	N	<20	20
71V1336A	700	2.0	N	N	20	100	20	20	N	20	50
71V802A	300	1.0	N	N	5	50	7	70	N	<20	10
71V732A	500	1.0	N	N	20	300	30	20	N	<20	70
71V1257A	500	1.5	N	N	15	100	20	20	N	<20	30
71V1232A	700	1.5	N	N	7	100	20	100	N	20	30
71V808A	500	1.0	N	N	10	100	70	20	N	20	70
71V745A	700	1.5	N	N	5	50	15	20	N	20	20
71V1264A	700	1.0	N	N	<5	30	7	20	N	<20	10
71V1249A	700	1.5	N	N	15	150	20	20	N	<20	70
71V1237A	500	1.0	N	N	50	2,000	15	20	N	20	1,000
71V1020A	500	1.0	N	N	10	70	15	20	N	<20	30
71V807A	500	1.0	N	N	7	150	10	20	N	<20	30
71V803A	300	1.0	N	N	7	70	15	20	N	<20	10
71V1022A	500	1.0	N	N	15	150	50	20	N	20	70
71V1258A	700	1.0	N	N	N	50	10	20	N	<20	10
71V805A	500	1.5	N	N	5	50	30	20	N	20	10
71V814A	500	1.0	N	N	10	150	20	20	N	<20	50
71V545A	500	1.0	N	N	5	50	20	20	N	20	20
71V1616A	300	1.0	N	N	10	100	20	20	N	<20	50
71V806A	700	1.0	N	N	10	300	15	20	N	20	50
71V773A	500	1.5	N	N	15	500	50	20	N	20	70
71V774A	300	<1.0	N	N	20	100	70	20	N	20	100
71V775A	700	1.5	N	N	15	150	50	20	N	20	100
71V750A	700	1.5	N	N	5	70	10	20	N	<20	20
71V1265A	500	1.5	N	N	5	20	10	20	N	<20	15
71V734A	500	1.5	N	N	10	500	20	30	N	<20	50
71V1248A	700	1.5	N	N	10	150	20	20	N	20	50
71V804A	200	1.5	N	N	10	100	20	20	N	<20	30
71V735A	300	2.0	N	N	20	300	50	30	N	<20	70
71V1259A	700	1.5	N	N	7	50	15	20	N	<20	20
71V1335A	700	1.0	N	N	10	100	15	20	N	20	30
71V1017A	300	1.0	N	N	7	100	15	20	N	20	30
71V1332A	500	1.0	N	N	10	100	10	20	N	20	20
71V742A	700	1.5	N	N	7	70	70	20	N	20	20
71V1236A	500	2.0	N	N	7	70	20	20	N	<20	20

A-horizon Soil Samples--continued

Sample	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V1267A	20	10	N	100	100	N	20	N	200
71V1847A	15	15	N	300	150	N	20	N	300
71V533A	15	7	N	200	50	N	15	N	150
71V649A	30	15	N	200	100	N	15	N	200
71V1021A	10	10	N	200	100	50	10	N	200
71V733A	15	50	N	1,000	300	N	30	N	70
71V746A	15	15	N	150	100	N	10	N	150
71V544A	10	7	N	150	70	N	10	N	150
71V650A	20	30	N	200	150	N	20	N	100
71V744A	15	15	N	300	100	50	10	N	150
71V809A	10	10	N	150	100	50	15	N	150
71V649A	70	20	N	200	150	N	30	N	150
71V647A	15	10	N	200	100	N	20	N	200
71V1236A	50	15	N	100	150	N	15	200	200
71V749A	15	10	N	150	100	50	10	N	150
71V1336A	20	20	N	200	150	50	20	N	200
71V802A	20	7	N	200	50	N	20	N	150
71V732A	30	20	N	500	150	N	20	N	200
71V1257A	20	10	N	150	100	N	20	N	200
71V1232A	15	10	N	200	100	N	15	N	200
71V808A	15	10	N	100	150	150	20	N	300
71V745A	20	10	N	300	100	100	10	N	200
71V1266A	10	7	N	200	50	N	20	N	500
71V1260A	15	10	N	700	100	N	10	N	100
71V1233A	10	15	N	100	150	N	15	N	150
71V1020A	15	10	N	300	100	200	N	N	200
71V807A	15	10	N	200	100	50	15	N	200
71V803A	20	10	N	150	70	N	15	N	200
71V1022A	15	10	N	200	100	N	15	N	100
71V1258A	20	10	N	300	70	N	20	N	200
71V805A	10	10	N	150	100	<50	20	N	500
71V814A	15	10	N	300	100	200	10	N	200
71V545A	10	7	N	150	100	N	10	N	300
71V1016A	10	10	N	300	100	100	N	N	30
71V806A	15	10	N	300	100	50	20	N	200
71V773A	10	15	N	150	150	N	20	N	200
71V774A	15	10	N	100	100	1,000	20	N	150
71V775A	15	15	N	200	150	500	15	N	300
71V750A	15	10	N	200	100	N	15	N	200
71V1265A	20	7	N	150	70	N	10	N	150
71V736A	20	10	N	500	100	N	20	N	500
71V1248A	15	15	N	300	100	N	15	N	150
71V804A	20	10	N	200	70	N	15	200	150
71V735A	20	15	N	300	150	N	20	200	150
71V1259A	15	10	N	150	100	N	20	N	150
71V1235A	15	15	N	300	100	N	20	N	200
71V1017A	50	15	N	150	100	100	10	N	100
71V1332A	10	15	N	300	100	500	15	N	200
71V743A	10	10	N	300	100	N	10	N	150
71V1236A	10	7	N	150	100	N	N	N	200

A-Horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
71V1015A	47 54 11	91 46 47	5.0	1.0	1.00	.30	500	N	N	N	10
71V736A	47 54 11	91 56 37	10.0	3.0	1.50	.50	1,200	N	N	N	50
71V912A	47 54 11	92 0 51	3.0	1.0	.70	.20	500	N	N	N	15
71V1266A	47 54 11	92 0 30	2.0	.7	.70	.50	150	N	N	N	15
71V842A	47 54 13	91 45 10	7.0	1.5	1.00	.50	1,000	N	N	N	10
71V841A	47 54 13	91 45 32	5.0	1.5	.70	.50	2,200	N	N	N	20
71V663A	47 54 13	92 16 49	7.0	1.0	.70	.50	1,200	N	N	N	15
71V1260A	47 54 17	92 14 44	5.0	1.0	1.00	.70	700	N	N	N	15
71V670A	47 54 17	92 16 56	3.0	1.0	1.00	.70	1,500	N	N	N	15
71V1037A	47 54 18	91 56 26	3.0	1.0	.70	.30	700	N	N	N	15
71V751A	47 54 19	92 3 20	3.0	1.0	.70	.50	200	N	N	N	15
71V1267A	47 54 19	92 9 27	5.0	1.0	.70	.50	500	N	N	N	15
71V839A	47 54 21	91 46 27	7.0	1.5	1.50	.50	700	N	N	N	15
71V1322A	47 54 22	91 42 20	7.0	1.5	1.00	.50	1,500	N	N	N	15
71V1033A	47 54 23	91 55 18	5.0	2.0	.70	.30	500	N	N	N	20
71V1036A	47 54 23	91 56 16	5.0	1.0	.70	.30	1,000	.5	N	N	20
71V913A	47 54 23	92 0 39	3.0	.7	.70	.50	300	N	N	N	10
71V546A	47 54 23	92 6 47	3.0	.5	.30	.50	100	N	N	N	10
71V1247A	47 54 23	92 22 3	3.0	1.0	1.00	.50	200	N	N	N	10
71V1032A	47 54 24	91 54 59	7.0	2.0	.70	.30	700	N	N	N	20
71V737A	47 54 24	91 56 43	7.0	3.0	2.00	.50	1,500	N	N	N	50
71V759A	47 54 24	92 1 45	3.0	.7	.70	.50	200	N	N	N	10
71V742A	47 54 24	92 12 7	5.0	1.0	1.00	.30	300	N	N	N	15
71V1321A	47 54 25	91 42 44	7.0	1.5	1.10	.50	700	N	N	N	15
71V1034A	47 54 25	91 55 37	7.0	1.5	.70	.30	700	N	N	N	30
71V1031A	47 54 26	91 54 47	5.0	1.0	.70	.20	300	N	N	N	15
71V1035A	47 54 26	91 55 47	5.0	1.0	.50	.30	500	.5	N	N	20
71V1268A	47 54 27	92 0 24	5.0	1.0	.70	.50	200	N	N	N	15
71V1237A	47 54 27	92 15 55	3.0	.7	.50	.20	200	N	N	N	10
71V752A	47 54 28	92 2 55	7.0	1.5	.70	.50	500	N	N	N	10
71V1245A	47 54 29	92 20 33	5.0	1.0	1.00	.50	500	N	N	N	15
71V1030A	47 54 30	91 54 40	7.0	1.0	.70	.20	300	N	N	N	20
71V1238A	47 54 30	92 15 27	3.0	.7	.50	.70	700	N	N	N	30
71V1323A	47 54 31	91 45 31	5.0	1.0	1.00	.50	700	N	N	N	15
71V834A	47 54 31	91 48 17	10.0	1.5	1.00	.50	1,200	N	N	N	15
71V1239A	47 54 31	92 15 46	5.0	1.0	.70	.50	2,000	N	N	N	30
71V1246A	47 54 31	92 21 18	3.0	.7	1.00	.50	200	N	N	N	10
71V843A	47 54 32	91 44 55	7.0	1.5	1.00	.50	1,000	N	N	N	10
71V1435A	47 54 32	91 53 8	5.0	.5	.20	.70	100	N	N	N	100
71V1435	47 54 32	91 53 8	7.0	1.5	.50	.50	700	N	N	N	100
71V1435	47 54 32	91 53 8	5.0	1.0	1.00	.30	700	N	N	N	70
71V758A	47 54 32	92 1 16	3.0	.7	.50	.50	150	N	N	N	15
71V1320A	47 54 33	91 43 10	7.0	1.5	1.50	.50	1,000	N	N	N	15
71V838A	47 54 33	91 46 37	7.0	1.5	1.00	.50	700	N	N	N	10
71V548A	47 54 33	91 50 13	5.0	1.0	.70	.50	200	N	N	N	<10
71V549A	47 54 33	91 59 13	3.0	1.0	.50	.50	200	N	N	N	<10
71V1328A	47 54 34	91 39 43	7.0	2.0	1.00	.50	700	N	N	N	15
71V1323A	47 54 35	91 42 0	7.0	1.5	1.50	.50	2,200	N	N	N	15
71V547A	47 54 35	92 6 30	7.0	1.0	.30	.50	500	N	N	N	15
71V1023A	47 54 37	91 49 55	5.0	1.5	1.00	.50	1,500	N	N	N	15

A-horizon Soil Samples--continued

Sample	S-BA	S-BE	S-BI	S-CD	S-CC	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V1015A	500	1.0	N	N	7	100	20	20	N	<20	30
71V1236A	500	1.0	N	N	30	300	70	30	N	20	70
71V0112A	500	1.5	N	N	7	100	15	50	N	<20	30
71V1266A	500	1.5	N	N	<5	20	15	20	N	<20	10
71V842A	500	1.0	N	N	10	200	30	20	N	30	70
71V841A	500	1.0	N	N	15	100	20	20	N	20	70
71V663A	500	1.0	N	N	15	70	50	20	N	20	50
71V1250A	700	1.5	N	N	10	70	10	20	N	<20	20
71V670A	700	<1.0	N	N	10	100	20	30	N	20	30
71V1037A	700	1.0	N	N	7	150	5	30	5	<20	30
71V751A	700	1.5	N	N	5	50	15	20	N	20	15
71V1267A	700	1.0	N	N	7	100	15	20	N	20	20
71V839A	500	1.0	N	N	10	100	30	20	N	20	50
71V1322A	700	1.5	N	N	10	100	20	20	N	20	50
71V1033A	300	<1.0	N	N	10	700	10	20	N	<20	70
71V1036A	200	1.0	N	N	10	150	20	50	N	<20	50
71V913A	700	<1.0	N	N	7	50	15	20	N	<20	15
71V546A	300	<1.0	N	N	5	50	20	20	N	20	10
71V1247A	1,000	1.5	N	N	5	70	20	20	N	<20	10
71V1032A	300	1.5	N	N	20	1,000	70	20	N	<20	100
71V737A	700	1.5	N	N	20	1,500	20	50	N	20	70
71V759A	700	1.0	N	N	N	20	15	20	N	<20	20
71V742A	700	1.5	N	N	7	100	15	20	N	20	30
71V1321A	500	1.5	N	N	15	200	30	20	N	30	50
71V1034A	200	1.0	N	N	20	300	70	20	N	<20	100
71V1031A	200	1.0	N	N	10	300	20	20	N	<20	100
71V1035A	200	1.5	N	N	10	100	50	20	N	<20	50
71V1268A	500	1.0	N	N	5	100	20	20	5	<20	20
71V1237A	700	1.0	N	N	N	20	10	20	N	<20	10
71V752A	500	2.0	N	N	10	150	70	20	5	20	70
71V1245A	700	1.5	N	N	5	70	15	20	N	<20	10
71V1030A	150	1.0	N	N	7	200	50	20	N	<20	50
71V1238A	700	1.0	N	N	N	20	15	20	N	20	5
71V1333A	500	1.0	N	N	10	100	15	20	N	20	20
71V874A	500	1.0	N	N	10	100	50	20	N	20	50
71V1230A	700	1.5	N	N	15	70	50	20	N	<20	20
71V1246A	1,000	1.5	N	N	5	70	7	20	N	<20	10
71V843A	500	1.0	N	N	10	100	30	20	N	30	30
71V1435A	500	2.0	N	N	7	200	20	30	N	20	50
71V1435	700	1.0	N	N	20	200	30	20	N	<20	100
71V1435	700	1.0	N	N	7	70	20	20	N	<20	50
71V758A	707	1.0	N	N	10	50	20	30	N	<20	15
71V1320A	500	1.5	N	N	15	200	20	20	N	20	70
71V838A	500	1.0	N	N	10	100	20	20	N	20	50
71V542A	700	1.0	N	N	5	70	15	20	N	<20	20
71V549A	500	<1.0	N	N	5	20	15	20	N	20	15
71V1323A	500	1.5	N	N	15	150	30	20	N	20	70
71V1323A	708	1.5	N	N	15	150	30	20	N	30	50
71V547A	706	1.5	N	N	10	100	10	20	N	<20	30
71V1023A	500	1.0	N	N	10	150	20	20	N	30	50

A-horizon Soil Samples--continued

Sample	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZR	S-ZN	S-ZR
71V1015A	20	N	10	N	300	100	50	10		N	100
71V736A	20	N	15	N	500	150	N	20		200	150
71V912A	10	N	10	N	200	100	N	10		N	150
71V1266A	20	N	10	N	200	50	N	10		N	200
71V842A	15	N	20	N	200	150	N	20		N	150
71V841A	20	N	20	N	150	150	50	20		200	200
71V663A	15	N	20	N	150	150	N	30		N	200
71V1260A	20	N	10	N	200	70	N	15		N	200
71V670A	15	N	10	N	200	100	N	20		N	500
71V1037A	50	N	10	N	200	70	N	10		N	150
71V751A	15	N	10	N	200	100	50	15		N	200
71V1267A	20	N	10	N	200	100	N	15		N	300
71V839A	15	N	20	N	500	150	N	20		N	200
71V1322A	20	N	15	N	300	150	N	15		N	200
71V1033A	20	N	10	N	300	70	N	10		N	100
71V1036A	20	N	10	N	200	70	N	20		N	150
71V913A	N	N	10	N	200	50	N	15		N	300
71V546A	10	N	7	N	100	100	N	10		N	200
71V1247A	15	N	10	N	700	70	N	15		N	500
71V1032A	20	N	15	N	300	70	N	15		N	100
71V737A	20	N	15	N	700	150	N	30		N	200
71V759A	15	N	7	N	200	70	700	10		N	150
71V742A	20	N	10	N	500	100	500	10		N	200
71V1321A	20	N	20	N	700	200	N	20		N	300
71V1034A	20	N	15	N	200	100	N	15		N	100
71V1031A	10	N	10	N	200	70	N	15		N	70
71V1035A	30	N	10	N	150	70	N	15		200	200
71V1268A	20	N	10	N	200	150	N	15		N	300
71V1237A	10	N	<5	N	200	30	N	N		N	150
71V752A	30	N	15	N	200	150	50	15		N	100
71V1245A	15	N	10	N	500	100	N	20		N	500
71V1030A	30	N	10	N	200	70	N	15		N	70
71V1238A	10	N	10	N	100	70	N	20		N	500
71V1333A	15	N	15	N	500	100	200	10		N	200
71V834A	10	N	20	N	300	200	<50	20		N	300
71V1239A	15	N	10	N	700	100	N	15		N	300
71V1246A	10	N	10	N	700	50	N	15		N	200
71V843A	20	N	20	N	500	150	200	20		300	500
71V1435A	20	N	20	N	200	150	150	20		N	200
71V1435	10	N	20	N	300	200	150	20		N	100
71V1435	N	N	10	N	150	50	N	N		N	70
71V758A	15	N	7	N	150	70	<50	10		N	200
71V1320A	15	N	15	N	300	150	N	20		N	200
71V839A	10	N	15	N	200	200	50	30		N	200
71V548A	15	N	10	N	200	100	N	10		N	200
71V549A	10	N	5	N	150	70	N	10		N	200
71V1328A	15	N	15	N	500	150	200	20		N	200
71V1323A	20	N	20	N	500	150	500	20		N	200
71V547A	10	N	10	N	200	100	N	15		N	300
71V1023A	20	N	15	N	300	100	200	20		N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FF%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
71V837A	47 54 39	91 46 57	1.0	.2	1.50	.10	70	N	N	N	<10
71V836A	47 54 39	91 47 31	7.0	1.5	1.00	.70	2,000	N	N	N	15
71V738A	47 54 39	91 56 47	7.0	2.0	1.50	.30	700	N	N	N	20
71V916A	47 54 40	91 46 0	5.0	1.0	.70	.50	1,500	N	N	N	15
71V1029A	47 54 40	91 54 25	2.0	.5	.70	.10	300	N	N	N	10
71V911A	47 54 40	92 0 23	3.0	1.0	.70	.30	500	N	N	N	<10
71V835A	47 54 41	91 47 51	7.0	1.5	1.00	.50	1,000	N	N	N	15
71V1330A	47 54 44	91 38 43	5.0	1.0	1.00	.50	500	N	N	N	20
71V1329A	47 54 44	91 39 15	5.0	1.0	1.00	.50	700	N	N	N	10
71V1319A	47 54 44	91 43 26	7.0	1.0	1.00	.70	2,000	N	N	N	15
71V1014A	47 54 48	91 47 1	5.0	1.5	1.00	.50	1,500	N	N	N	15
71V1324A	47 54 49	91 41 33	10.0	1.5	1.50	.50	1,000	N	N	N	15
71V1244A	47 54 50	92 19 25	5.0	1.0	1.00	.30	1,500	N	N	N	10
71V840A	47 54 54	91 46 8	7.0	1.5	1.50	.50	2,000	N	N	N	15
71V753A	47 54 55	92 2 24	1.5	.3	.50	.30	150	N	N	N	20
71V1013A	47 54 57	91 47 2	5.0	1.0	1.00	.50	500	N	N	N	15
71V844A	47 54 58	91 45 8	7.0	1.5	1.00	.50	700	N	N	N	15
71V904A	47 54 58	91 57 41	5.0	1.5	1.50	.30	700	N	N	N	10
71V910A	47 54 58	92 0 13	3.0	1.0	.70	.50	700	N	N	N	10
71V1318A	47 54 59	91 43 36	5.0	1.0	1.00	.50	500	N	N	N	10
71V915A	47 55 0	91 50 26	5.0	1.5	1.00	.50	700	N	N	N	10
71V907A	47 55 0	91 58 57	5.0	1.0	1.00	.50	500	N	N	N	10
71V755A	47 55 1	92 0 55	7.0	1.0	.70	.50	300	N	N	N	20
71V938A	47 55 2	91 59 10	5.0	1.0	.70	.50	500	N	N	N	10
71V1331A	47 55 3	91 38 48	7.0	1.5	1.00	.50	700	N	N	N	15
71V1464A	47 55 3	91 52 7	5.0	1.0	1.00	.30	500	N	N	N	20
71V845A	47 55 4	91 45 2	7.0	1.5	1.00	.30	700	N	N	N	15
71V916A	47 55 4	91 48 22	5.0	1.0	.50	.30	1,000	N	N	N	15
71V1243A	47 55 4	92 19 26	5.0	1.0	.70	.50	3,000	N	N	N	15
71V906A	47 55 4	91 58 27	5.0	1.5	1.00	.50	2,000	N	N	N	15
71V739A	47 55 8	91 57 2	7.0	1.5	1.50	.50	1,500	N	N	N	20
71V905A	47 55 9	91 58 3	7.0	2.0	1.00	.50	700	N	N	N	10
71V909A	47 55 9	91 59 43	5.0	1.0	.70	.30	300	N	N	N	10
71V1315A	47 55 10	91 43 59	5.0	1.0	1.00	.50	500	N	N	N	15
71V1012A	47 55 10	91 47 15	7.0	1.5	1.00	.50	2,000	N	N	N	15
71V1316A	47 55 11	91 43 34	7.0	1.0	1.00	.50	1,000	N	N	N	15
71V1314A	47 55 11	91 44 21	5.0	1.5	1.00	.50	700	N	N	N	20
71V907A	47 55 12	91 57 1	5.0	1.0	1.00	.50	2,000	N	N	N	10
71V1463A	47 55 14	91 50 30	5.0	1.0	.70	.20	300	N	N	N	10
71V577A	47 55 14	91 52 58	5.0	1.5	1.00	.50	500	N	N	N	10
71V754A	47 55 15	92 1 29	7.0	1.0	.50	.50	200	N	N	N	15
71V1350A	47 55 16	91 41 22	7.0	1.5	1.00	.50	1,000	N	N	N	20
71V1334A	47 55 16	91 44 38	5.0	1.0	1.00	.50	500	N	N	N	15
71V599A	47 55 19	91 55 57	5.0	1.5	1.00	.30	1,000	N	N	N	15
71V917A	47 55 20	91 48 13	3.0	1.0	.50	.50	500	N	N	N	15
71V900A	47 55 20	91 56 18	7.0	2.0	1.50	.50	1,500	N	N	N	15
71V1317A	47 55 21	91 42 56	5.0	1.0	.70	.50	700	N	N	N	20
71V1322A	47 55 23	91 39 59	5.0	1.5	1.00	.50	2,000	N	N	N	15
71V1450A	47 55 25	91 42 9	5.0	.7	.70	.30	1,000	N	N	N	20
71V1424A	47 55 25	91 44 23	5.0	1.0	1.00	.50	3,000	N	N	N	20

A-horizon Soil Samples--continued

Sample	S-BA	S-RE	S-9T	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NR	S-NI
71V837A	100	1.0	N	N	N	20	15	20	N	<20	10
71V836A	500	1.0	N	N	15	100	50	20	N	20	70
71V738A	500	1.5	V	N	20	300	10	50	N	<20	70
71V914A	500	1.0	N	N	10	100	15	20	N	<20	50
71V1028A	150	1.0	N	N	5	100	70	30	N	<20	30
71V911A	500	2.0	V	N	10	50	15	20	N	<20	20
71V835A	500	1.0	N	N	15	150	70	20	N	20	70
71V1330A	500	1.0	N	N	7	100	15	20	N	20	30
71V1329A	500	1.0	N	N	10	150	15	20	N	<20	50
71V1319A	500	1.5	N	N	15	100	20	20	N	20	30
71V1014A	500	1.5	N	N	10	150	30	20	5	20	50
71V1324A	500	1.5	N	N	15	150	30	20	N	20	50
71V1244A	700	1.5	N	N	7	100	30	20	N	<20	30
71V940A	500	1.0	N	N	15	100	50	20	N	20	50
71V753A	700	1.0	V	N	5	20	20	20	N	<20	5
71V1013A	500	1.5	N	N	7	100	20	20	N	20	30
71V844A	500	1.0	N	N	10	150	15	20	N	30	30
71V904A	700	1.5	N	V	10	150	15	20	N	<20	70
71V910A	500	1.0	N	V	7	70	10	20	N	<20	20
71V1318A	500	1.5	N	N	5	70	15	20	N	20	20
71V915A	500	1.0	N	N	10	100	20	20	N	<20	50
71V907A	500	1.0	N	N	7	70	15	20	N	20	20
71V755A	700	1.5	N	N	7	100	50	20	N	20	30
71V908A	500	3.0	N	N	15	100	70	20	N	20	70
71V1331A	500	1.0	N	N	15	150	50	20	5	20	30
71V1464A	200	1.0	N	N	10	200	10	20	N	20	30
71V845A	500	1.0	N	N	10	100	15	20	N	20	30
71V916A	500	1.0	N	N	10	70	20	20	N	<20	50
71V1243A	700	2.0	N	N	50	70	70	20	N	20	30
71V906A	700	1.0	N	V	10	100	20	20	N	20	50
71V739A	500	2.0	N	N	10	150	15	30	N	20	30
71V905A	500	1.0	N	N	15	300	50	20	N	20	100
71V909A	500	1.0	N	N	7	100	30	20	N	20	50
71V1315A	500	1.0	N	N	10	70	15	20	N	20	30
71V1012A	500	1.0	N	N	15	100	20	20	N	20	30
71V1316A	500	2.0	N	N	15	100	70	20	N	20	50
71V1314A	500	1.0	N	N	15	70	20	20	N	20	30
71V903A	700	1.0	N	N	10	100	30	20	N	<20	20
71V1463A	150	1.0	N	N	15	100	30	20	N	<20	50
71V577A	700	N	N	N	10	300	20	20	N	<20	70
71V754A	700	2.0	V	N	10	100	50	20	7	20	50
71V1350A	200	1.0	V	N	10	150	30	30	15	<20	30
71V1334A	500	1.0	N	N	10	150	20	20	N	20	20
71V599A	700	1.5	V	N	10	500	20	20	N	<20	70
71V917A	500	1.0	V	V	7	100	10	20	N	<20	50
71V900A	700	1.0	N	N	20	500	20	20	N	20	100
71V1317A	700	1.5	N	V	10	100	30	20	N	20	50
71V1327A	700	1.0	N	N	15	150	20	20	N	20	50
71V1450A	150	2.0	N	N	10	100	150	30	N	<20	70
71V1424A	700	1.5	V	V	7	30	30	20	N	20	20

A-horizon Soil Samples--continued

Sample	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V837A	N	7	N	100	30	N	20	N	30
71V836A	15	30	N	150	200	500	30	N	200
71V738A	20	10	N	700	70	N	15	N	100
71V914A	15	10	N	150	100	N	10	N	150
71V1028A	15	5	N	<100	50	N	15	N	50
71V911A	10	7	N	300	70	N	N	N	70
71V835A	50	20	N	200	200	100	20	500	300
71V1330A	15	15	N	300	150	50	15	N	200
71V1329A	10	15	N	500	150	100	20	N	150
71V1310A	10	15	N	300	150	N	20	N	300
71V1014A	20	10	N	700	100	700	10	N	150
71V1324A	20	15	N	700	150	200	15	200	150
71V1246A	100	10	N	200	70	N	10	N	150
71V847A	15	20	N	500	150	70	20	N	200
71V753A	10	10	N	200	30	N	15	N	200
71V1013A	50	10	N	300	150	50	15	N	200
71V844A	15	20	N	500	200	<50	20	N	300
71V904A	15	10	N	500	100	N	20	N	200
71V910A	10	10	N	200	100	N	15	N	200
71V1312A	10	15	N	300	150	N	15	N	150
71V915A	10	15	N	300	150	N	10	N	150
71V907A	15	10	N	300	100	N	15	N	200
71V755A	15	10	N	150	150	N	15	N	200
71V908A	15	10	N	100	150	N	15	N	200
71V1331A	15	15	N	300	150	200	15	N	500
71V1464A	20	10	N	200	70	N	15	N	100
71V845A	10	20	N	500	150	N	20	N	200
71V916A	10	10	N	200	100	N	10	N	100
71V1247A	50	10	N	100	150	N	15	N	200
71V906A	20	15	N	300	100	N	15	N	150
71V739A	30	10	N	500	100	N	20	N	150
71V905A	15	15	N	500	100	N	10	N	150
71V909A	20	10	N	150	150	N	10	N	100
71V1315A	10	15	N	500	150	200	20	N	200
71V1012A	20	15	N	300	150	100	15	200	200
71V1316A	15	20	N	300	150	N	15	N	150
71V1314A	15	15	N	500	150	500	15	N	200
71V903A	15	10	N	300	100	N	20	N	150
71V1463A	20	10	N	300	70	N	10	N	70
71V577A	10	10	N	200	100	N	15	N	300
71V754A	20	10	N	150	150	N	15	N	200
71V1350A	20	10	N	300	150	N	15	N	150
71V1334A	10	15	N	500	100	200	15	N	200
71V509A	20	10	N	500	150	N	10	N	100
71V217A	N	10	N	200	100	N	10	N	150
71V900A	15	15	N	300	150	N	20	200	300
71V1317A	N	15	N	200	150	150	15	N	300
71V1327A	10	15	N	500	100	200	20	N	200
71V1450A	20	10	N	150	150	200	15	N	100
71V1424A	15	10	N	200	150	N	20	1,000	200

Sample	LATITUDE	LONGITUDE	S-FF%	S-MG%	S-C%	S-T%	S-MN	S-AG	S-AS	S-AU	S-B
71V578A	47 55 25	91 52 46	7.0	2.0	1.00	.70	2,000	N	N	N	15
71V902A	47 55 25	91 56 46	5.0	1.5	1.00	.50	1,500	N	N	N	10
71V1349A	47 55 26	91 41 21	5.0	1.0	1.50	.50	1,500	N	N	N	20
71V919A	47 55 29	91 47 12	7.0	1.5	1.00	.50	2,000	N	N	N	10
71V573A	47 55 29	91 51 26	3.0	1.5	1.00	.50	500	N	N	N	10
71V592A	47 55 29	91 55 35	5.0	1.5	1.50	.50	1,500	N	N	N	10
71V1425A	47 55 30	91 44 25	5.0	1.5	1.00	.50	700	N	N	N	15
71V591A	47 55 30	91 55 5	7.0	1.5	1.00	.50	1,000	N	N	N	10
71V579A	47 55 33	91 53 13	5.0	1.5	1.00	.50	300	N	N	N	10
71V580A	47 55 33	91 53 33	7.0	1.5	1.00	.50	3,000	N	N	N	10
71V590A	47 55 33	91 54 43	5.0	1.5	1.00	.30	500	N	N	N	10
71V574A	47 55 34	91 51 49	3.0	3.0	1.00	.20	700	N	N	N	<10
71V756A	47 55 34	92 1 42	1.5	.5	.70	.30	150	N	N	N	15
71V920A	47 55 35	91 46 46	5.0	1.0	1.00	.50	1,000	N	N	N	15
71V920	47 55 35	91 46 46	15.0	2.0	5.00	.70	3,000	N	N	N	N
71V550A	47 55 35	91 51 2	7.0	1.5	1.00	.50	1,500	N	N	N	30
71V597A	47 55 35	91 54 21	5.0	2.0	1.00	.50	1,000	N	N	N	15
71V1451A	47 55 36	91 33 9	5.0	1.0	.70	.50	1,000	N	N	N	20
71V1348A	47 55 36	91 41 18	5.0	1.5	1.00	.50	1,000	N	N	N	20
71V901A	47 55 36	91 56 20	5.0	1.5	1.00	.50	500	N	N	N	10
71V581A	47 55 37	91 53 53	7.0	2.0	1.50	.50	1,500	N	N	N	15
71V921A	47 55 39	91 46 24	5.0	1.0	.70	.50	2,000	N	N	N	15
71V1427A	47 55 41	91 44 32	5.0	1.0	1.00	.50	700	N	N	N	15
71V922A	47 55 42	91 45 52	7.0	1.0	1.00	.50	1,000	N	N	N	15
71V593A	47 55 42	91 55 12	5.0	1.0	1.00	.50	500	N	N	N	10
71V1313A	47 55 43	91 37 52	7.0	1.0	.30	.50	2,000	N	N	N	15
71V1347A	47 55 44	91 41 19	5.0	1.0	1.00	.30	300	N	N	N	10
71V760A	47 55 44	91 48 7	7.0	1.0	.50	.50	2,000	N	N	N	20
71V1454A	47 55 47	91 33 15	5.0	2.0	1.00	.30	1,000	N	N	N	20
71V1326A	47 55 47	91 35 55	5.0	1.5	1.50	.50	1,000	N	N	N	10
71V589A	47 55 47	91 54 39	5.0	1.5	1.00	.70	1,500	N	N	N	15
71V1027A	47 55 48	91 46 23	5.0	1.0	.70	.30	500	N	N	N	10
71V923A	47 55 50	91 45 25	7.0	1.0	.50	.50	3,000	N	N	N	20
71V576A	47 55 50	91 52 27	7.0	3.0	1.50	.70	700	N	N	N	10
71V594A	47 55 51	91 55 6	3.0	1.0	1.00	.50	300	N	N	N	10
71V588A	47 55 52	91 54 22	3.0	1.5	1.00	.30	500	N	N	N	10
71V1312A	47 55 53	91 38 2	7.0	1.5	1.00	.50	500	N	N	N	10
71V1346A	47 55 53	91 41 9	5.0	1.5	1.50	.50	500	N	N	N	30
71V928A	47 55 55	91 43 10	5.0	1.0	.50	.30	700	N	N	N	10
71V927A	47 55 56	91 43 57	7.0	1.0	.50	.50	1,000	N	N	N	15
71V924A	47 55 56	91 45 9	7.0	1.5	1.00	.50	2,000	N	N	N	15
71V1026A	47 55 56	91 46 29	7.0	1.5	.70	.50	1,500	N	N	N	15
71V1311A	47 55 57	91 38 13	3.0	1.0	.70	.50	300	N	N	N	20
71V929A	47 55 57	91 42 29	7.0	1.5	.70	.50	1,500	N	N	N	15
71V551A	47 55 58	91 51 10	5.0	1.5	1.00	.20	1,000	N	N	N	10
71V926A	47 55 59	91 44 18	5.0	1.5	1.00	.50	700	N	N	N	10
71V925A	47 55 59	91 44 49	3.0	1.0	.70	.50	700	N	N	N	15
71V1455A	47 56 0	91 33 17	7.0	2.0	1.00	.50	700	N	N	N	15
71V1456A	47 56 2	91 33 37	5.0	1.5	1.00	.70	700	N	N	N	30
71V1426A	47 56 2	91 44 32	5.0	1.5	1.00	.50	700	N	N	N	10

A-Horizon Soil Samples--continued

Sample	S-BA	S-PE	S-BI	S-CD	S-CC	S-CR	S-CU	S-LA	S-WO	S-NB	S-NI
71V578A	700	<1.0	N	N	30	200	70	20	N	<20	100
71V902A	700	1.0	N	N	10	100	20	20	N	20	20
71V1340A	200	<1.0	N	N	10	150	20	20	N	<20	30
71V919A	500	1.0	N	N	15	100	50	30	N	20	50
71V573A	500	<1.0	N	N	10	700	20	20	N	<20	70
71V592A	700	1.0	N	N	20	500	50	20	N	<20	70
71V1425A	500	1.0	N	N	10	100	30	20	S	<20	50
71V591A	700	1.0	N	N	15	500	50	20	N	<20	100
71V579A	700	<1.0	N	N	7	300	15	20	N	<20	50
71V580A	700	<1.0	N	N	20	1,500	30	20	N	<20	70
71V590A	700	1.0	N	N	10	150	20	20	N	<20	70
71V574A	500	1.0	N	N	15	1,500	15	30	N	20	100
71V756A	500	1.0	N	N	N	20	15	20	N	<20	10
71V920A	500	1.0	N	N	7	100	20	20	N	<20	20
71V920	100	1.0	N	N	30	70	100	20	N	20	50
71V550A	700	2.0	N	N	20	150	30	20	N	20	70
71V587A	500	1.0	N	N	15	1,000	50	30	N	<20	200
71V1451A	200	1.5	N	N	10	100	70	30	N	20	50
71V1348A	300	<1.0	N	N	7	150	10	30	N	<20	30
71V901A	700	1.0	N	N	10	150	7	20	N	<20	70
71V591A	700	<1.0	N	N	20	2,000	20	20	N	<20	100
71V921A	500	1.0	N	N	10	70	30	20	N	20	20
71V1427A	500	1.0	N	N	10	200	15	20	N	20	30
71V922A	700	1.0	N	N	10	100	50	20	<5	20	30
71V597A	500	1.0	N	N	10	150	50	20	N	<20	70
71V1313A	500	2.0	N	N	15	70	200	20	N	20	20
71V1347A	150	1.0	N	N	7	150	10	20	N	<20	30
71V760A	700	1.5	N	N	15	200	50	30	N	20	50
71V1454A	150	1.0	N	N	10	150	30	20	N	20	50
71V1326A	700	1.0	N	N	10	100	20	20	N	20	50
71V589A	700	1.0	N	N	10	150	15	20	N	<20	70
71V1027A	300	1.0	N	N	7	70	15	20	N	20	20
71V923A	700	1.5	N	N	10	50	70	20	5	20	70
71V576A	700	<1.0	N	N	20	700	70	20	N	<20	150
71V594A	700	<1.0	N	N	5	150	10	20	N	<20	30
71V588A	700	1.0	N	N	10	1,500	10	20	N	<20	100
71V1312A	700	1.0	N	N	10	150	20	20	N	20	50
71V1346A	200	1.0	N	N	7	150	7	30	N	20	30
71V928A	500	1.0	N	N	10	70	15	20	N	<20	30
71V927A	300	1.0	N	N	20	150	100	20	<5	20	70
71V924A	700	1.5	N	N	10	100	20	20	N	20	30
71V1026A	500	1.0	N	N	20	150	70	20	N	30	100
71V1311A	500	1.0	N	N	7	50	10	20	N	<20	20
71V929A	300	1.0	N	N	15	150	70	20	N	<20	70
71V551A	700	1.0	N	N	15	300	30	20	N	<20	100
71V926A	500	1.0	N	N	15	100	30	20	N	<20	50
71V925A	500	<1.0	N	N	7	70	15	20	N	<20	20
71V1455A	150	<1.0	N	N	10	150	50	20	N	<20	50
71V1456A	150	<1.0	N	N	10	150	50	30	N	<20	50
71V1426A	500	1.0	N	N	10	100	10	20	N	<20	30

Sample	S-PH	S-SB	S-SC	S-SN	S-SP	S-V	S-W	S-Y	S-ZN	S-ZR
71V573A	20	N	15	N	200	150	N	20	200	200
71V902A	15	N	15	N	300	100	N	15	N	300
71V1349A	15	N	10	N	300	100	N	15	N	100
71V919A	10	N	20	N	200	150	N	15	300	200
71V573A	10	N	15	N	200	100	N	20	N	300
71V592A	20	N	15	N	500	100	N	15	N	200
71V1425A	15	N	10	N	300	150	200	N	N	150
71V591A	15	N	15	N	300	100	N	20	N	200
71V579A	15	N	10	N	200	100	N	N	N	200
71V580A	30	N	20	N	200	150	N	20	N	200
71V590A	10	N	10	N	300	70	N	15	N	150
71V574A	10	N	7	N	500	50	N	10	N	150
71V756A	N	N	5	N	200	30	100	N	N	150
71V920A	10	N	15	N	300	100	N	15	N	200
71V920	10	N	20	N	150	200	N	70	N	100
71V550A	15	N	20	N	200	150	N	20	200	300
71V587A	15	N	15	N	300	100	N	20	N	200
71V1451A	20	N	10	N	200	100	N	20	N	100
71V1348A	20	N	10	N	300	70	N	20	N	100
71V901A	15	N	10	N	300	100	N	10	N	200
71V581A	20	N	20	N	300	150	N	20	N	200
71V921A	15	N	15	N	100	100	N	15	300	200
71V1427A	10	N	10	N	200	100	100	10	N	150
71V922A	15	N	20	N	200	150	N	20	N	200
71V593A	15	N	10	N	200	100	N	20	N	300
71V1313A	50	N	15	N	100	100	N	20	200	200
71V1347A	10	N	10	N	300	100	N	10	N	100
71V760A	300	N	15	50	200	150	<50	15	500	200
71V1454A	10	N	10	N	300	100	N	15	200	70
71V1326A	10	N	15	N	700	150	N	15	N	200
71V589A	20	N	15	N	200	100	N	20	200	200
71V1027A	N	N	10	N	150	70	<50	10	N	200
71V923A	15	N	15	N	150	150	N	20	1,000	200
71V576A	15	N	10	N	200	100	N	10	N	200
71V594A	15	N	10	N	200	70	N	10	N	200
71V588A	10	N	10	N	300	50	N	10	N	150
71V1312A	10	N	10	N	200	150	150	15	N	150
71V1346A	20	N	10	N	500	100	N	15	N	150
71V928A	10	N	10	N	200	100	N	10	200	150
71V927A	20	N	15	N	100	150	N	15	<200	150
71V924A	15	N	15	N	300	100	N	15	200	200
71V1026A	20	N	20	N	150	150	100	15	N	100
71V1311A	50	N	10	N	200	100	200	10	N	200
71V929A	15	N	20	N	200	150	N	10	N	100
71V551A	15	N	10	N	300	100	N	10	N	200
71V926A	20	N	10	N	500	100	N	10	N	150
71V925A	15	N	15	N	200	100	N	20	N	200
71V1455A	20	N	10	N	200	150	N	15	N	70
71V1456A	20	N	10	N	300	100	N	20	N	150
71V1426A	N	N	10	N	200	100	N	N	N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FFZ	S-MGZ	S-CAZ	S-TIY	S-MN	S-AG	S-AS	S-AU	S-B
71V586A	47 56 2	91 53 32	3.0	1.0	1.00	.50	500	N	N	N	10
71V595A	47 56 3	91 55 17	5.0	1.0	1.00	.50	500	N	N	N	15
71V1310A	47 56 4	91 38 10	3.0	1.0	1.00	.50	1,500	N	N	N	10
71V1423A	47 56 4	91 44 27	5.0	1.5	1.50	.70	1,500	N	N	N	20
71V930A	47 56 6	91 41 52	5.0	1.0	.70	.50	700	N	N	N	15
71V757A	47 56 6	92 1 22	3.0	.7	.50	.30	150	N	N	N	15
71V931A	47 56 9	91 41 16	3.0	1.0	.70	.50	700	N	N	N	15
71V552A	47 56 10	91 51 11	3.0	1.5	1.00	.30	500	N	N	N	10
71V1345A	47 56 11	91 36 11	7.0	1.5	1.00	.50	500	N	N	N	30
71V1412A	47 56 11	91 42 4	10.0	1.5	1.50	.70	1,000	N	N	N	20
71V1325A	47 56 11	91 42 41	7.0	1.5	1.50	.50	700	N	N	N	15
71V595A	47 56 12	91 53 23	5.0	1.5	1.00	.50	300	N	N	N	10
71V1457A	47 56 14	91 37 32	7.0	2.0	1.00	.50	500	N	N	N	20
71V1309A	47 56 14	91 38 17	7.0	1.5	1.50	.50	700	N	N	N	15
71V932A	47 56 14	91 40 54	7.0	1.5	1.00	.50	700	N	N	N	15
71V596A	47 56 15	91 55 6	5.0	1.0	.70	.30	300	N	N	N	10
71V1414A	47 56 18	91 42 16	5.0	1.5	1.00	.50	1,000	N	N	N	15
71V1344A	47 56 19	91 34 14	5.0	1.5	1.50	.50	500	N	N	N	30
71V584A	47 56 19	91 53 16	3.0	1.5	1.00	.30	700	N	N	N	10
71V1418A	47 56 20	91 41 52	5.0	1.0	1.00	.70	1,000	N	N	N	20
71V1422A	47 56 21	91 44 2	5.0	1.5	.70	.50	1,300	N	N	N	20
71V771A	47 56 21	91 48 43	5.0	1.0	.70	.50	500	N	N	N	10
71V772A	47 56 21	91 48 55	5.0	1.5	.70	.50	1,300	N	N	N	15
71V762A	47 56 22	91 47 38	5.0	1.0	.70	.50	1,500	N	N	N	20
71V1308A	47 56 23	91 39 19	7.0	1.5	1.00	.50	700	N	N	N	15
71V933A	47 56 24	91 40 31	3.0	1.0	1.00	.50	500	N	N	N	15
71V763A	47 56 25	91 47 23	5.0	1.0	1.00	.50	1,300	N	N	N	10
71V761A	47 56 25	91 48 9	5.0	1.0	1.00	.50	1,500	N	N	N	15
71V1447A	47 56 26	91 50 31	5.0	1.0	1.00	.50	700	N	N	N	15
71V597A	47 56 26	91 55 11	3.0	1.0	.70	.30	200	N	N	N	10
71V1415A	47 56 27	91 42 13	7.0	2.0	1.00	.50	1,000	N	N	N	20
71V849A	47 56 27	91 49 14	5.0	1.0	.70	.50	1,000	N	N	N	20
71V553A	47 56 27	91 51 11	5.0	2.0	1.50	.20	500	N	N	N	<10
71V1343A	47 56 29	91 36 9	7.0	1.0	1.00	.50	500	N	N	N	30
71V1417A	47 56 29	91 42 1	5.0	1.5	1.00	.50	5,000	N	N	N	20
71V850A	47 56 30	91 49 21	5.0	1.5	.70	.50	300	N	N	N	20
71V770A	47 56 32	91 48 26	5.0	1.5	1.00	.30	700	N	N	N	10
71V592A	47 56 32	91 52 55	7.0	3.0	1.00	.50	2,300	N	N	N	15
71V583A	47 56 33	91 53 12	5.0	1.5	1.00	.50	500	N	N	N	10
71V1307A	47 56 34	91 38 28	5.0	1.0	1.00	.50	500	N	N	N	15
71V1421A	47 56 34	91 43 51	5.0	1.5	1.00	.50	500	N	N	N	15
71V598A	47 56 34	91 54 45	3.0	1.0	1.00	.30	500	N	N	N	10
71V934A	47 56 35	91 40 12	5.0	2.0	1.00	.50	700	N	N	N	10
71V768A	47 56 35	91 46 24	5.0	1.5	1.00	.70	1,500	N	N	N	50
71V875A	47 56 35	91 47 26	3.0	1.0	1.00	.30	700	N	N	N	15
71V876A	47 56 35	91 47 26	3.0	1.0	1.00	.30	300	N	N	N	10
71V877A	47 56 35	91 47 26	5.0	1.0	1.00	.20	1,300	N	N	N	<10
71V878A	47 56 35	91 47 26	5.0	1.5	1.50	.30	500	N	N	N	10
71V879A	47 56 35	91 47 26	5.0	1.0	1.00	.30	200	N	N	N	10
71V1459A	47 56 37	91 33 26	7.0	1.5	.70	.30	300	N	N	N	20

A-horizon Soil Samples--continued

Sample	S-RA	S-RE	S-RI	S-CD	S-CG	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V586A	500	<1.0	N	N	7	700	15	20	N	<20	50
71V595A	500	1.0	N	N	7	70	15	20	N	<20	20
71V1310A	500	1.0	N	N	7	70	10	20	N	<20	20
71V1423A	700	1.0	N	N	7	50	20	20	N	<20	30
71V930A	300	1.0	N	N	15	100	300	20	N	<20	70
71V757A	500	1.5	N	N	N	20	15	30	N	<20	15
71V931A	500	1.0	N	N	7	100	15	20	N	<20	50
71V552A	700	<1.0	N	N	10	500	20	20	N	20	50
71V1345A	200	1.0	N	N	7	100	15	30	N	20	30
71V1412A	500	1.5	N	N	15	150	50	30	N	20	50
71V1325A	700	1.5	N	N	7	100	50	20	N	20	30
71V585A	700	1.0	N	N	15	1,500	15	20	N	<20	200
71V1457A	150	<1.0	N	N	15	200	20	20	N	20	70
71V1309A	300	1.0	N	N	10	150	50	20	N	20	50
71V932A	500	1.0	N	N	10	150	20	20	N	<20	70
71V596A	500	1.0	N	N	7	100	20	20	N	<20	50
71V1414A	500	1.0	N	N	10	100	30	20	N	20	70
71V1344A	200	1.0	N	N	7	150	15	20	N	<20	30
71V584A	700	<1.0	N	N	10	1,000	30	20	N	<20	70
71V1418A	500	1.0	N	N	7	70	50	20	N	20	30
71V1422A	700	1.0	N	N	10	70	50	20	N	20	50
71V771A	500	1.0	N	N	7	100	20	20	N	<20	30
71V772A	500	1.5	N	N	15	100	50	20	7	20	70
71V762A	700	1.5	N	N	15	100	50	20	N	20	50
71V1308A	500	1.0	N	N	10	150	50	20	N	20	50
71V933A	500	<1.0	N	N	7	100	15	20	N	<20	20
71V763A	500	1.5	N	N	10	150	15	20	N	<20	50
71V761A	700	1.5	N	N	15	200	30	20	N	20	70
71V1447A	300	1.0	N	N	10	70	100	20	N	20	30
71V597A	700	1.0	N	N	5	100	10	20	N	<20	20
71V1415A	500	1.0	N	N	15	150	30	20	N	<20	70
71V849A	200	1.0	N	N	10	150	30	30	N	<20	50
71V553A	500	<1.0	N	N	10	500	15	20	N	20	70
71V1343A	150	1.0	N	N	10	100	15	20	10	<20	30
71V1417A	700	1.0	N	N	30	100	100	20	5	20	100
71V850A	300	1.0	N	N	10	300	5	50	N	<20	70
71V770A	700	1.5	N	N	10	100	20	20	N	<20	70
71V582A	700	1.0	N	N	30	1,000	30	20	N	<20	500
71V583A	700	<1.0	N	N	15	3,000	15	20	N	<20	100
71V1307A	500	<1.0	N	N	7	70	15	20	N	20	20
71V1421A	500	1.0	N	N	7	100	20	20	N	<20	50
71V598A	700	1.0	N	N	5	50	7	20	N	<20	20
71V934A	500	1.0	N	N	15	150	15	20	N	<20	70
71V768A	700	1.0	N	N	10	150	50	20	N	20	50
71V875A	500	1.0	N	N	7	70	10	20	N	<20	20
71V876A	500	1.0	N	N	5	50	15	20	N	<20	15
71V877A	300	1.0	N	N	7	20	10	20	N	<20	15
71V878A	500	1.0	N	N	7	50	7	20	N	<20	20
71V879A	500	1.0	N	N	7	70	7	20	N	<20	30
71V1459A	150	1.0	N	N	10	150	10	20	N	<20	50

A-horizon Soil Samples--continued

Sample	S-P	S-SR	S-SC	S- γ N	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V586A	10	N	10	N	200	100	N	15	N	200
71V595A	20	N	15	N	300	150	N	15	N	300
71V1310A	10	N	10	N	200	100	70	10	300	150
71V1423A	15	N	10	N	300	150	50	10	N	300
71V930A	10	N	15	N	200	100	N	15	N	150
71V757A	15	N	7	N	200	70	50	10	N	150
71V931A	10	N	10	N	200	100	N	10	<200	150
71V552A	15	N	10	N	300	100	N	10	N	200
71V1345A	20	N	10	N	300	100	N	15	N	100
71V1412A	10	N	20	N	300	200	<50	30	N	300
71V1325A	20	N	20	N	700	150	N	20	N	200
71V585A	10	N	15	N	300	100	N	10	N	150
71V1457A	15	N	15	N	500	150	N	15	N	150
71V1309A	10	N	15	N	500	150	N	15	200	150
71V932A	15	N	15	N	200	150	N	10	N	150
71V596A	15	N	10	N	200	100	N	10	N	150
71V1414A	10	N	20	N	300	150	100	15	N	200
71V1344A	20	N	10	N	500	70	N	15	N	100
71V584A	20	N	10	N	300	70	N	10	N	150
71V1418A	10	N	20	N	150	150	50	20	N	500
71V1422A	15	N	15	N	150	150	50	20	300	300
71V771A	10	N	10	N	200	150	N	15	N	200
71V772A	15	N	15	N	300	150	1,000	20	N	200
71V762A	15	N	15	N	150	100	50	20	1,000	200
71V1309A	10	N	15	N	300	150	N	15	N	150
71V933A	10	N	15	N	300	100	N	10	N	200
71V767A	10	N	10	N	200	100	N	20	N	200
71V761A	50	N	15	N	300	150	<50	20	N	200
71V1447A	20	N	15	N	100	150	N	20	500	300
71V597A	10	N	10	N	200	70	N	10	N	200
71V1415A	10	N	20	N	200	200	200	20	N	200
71V849A	20	N	10	N	100	100	N	15	<200	100
71V553A	10	N	10	N	300	100	N	10	N	150
71V1343A	15	N	10	N	300	100	N	20	N	150
71V1417A	20	N	20	N	100	200	1,000	20	1,000	200
71V850A	15	N	10	N	200	70	N	15	N	100
71V770A	15	N	10	N	200	100	100	10	N	200
71V582A	20	N	10	N	200	100	N	20	N	200
71V583A	20	N	10	N	200	70	N	15	N	200
71V1307A	10	N	10	N	300	100	50	N	N	200
71V1421A	15	N	10	N	300	100	70	10	200	150
71V593A	10	N	7	N	500	50	N	10	N	150
71V934A	10	N	15	N	500	150	N	10	N	150
71V763A	20	N	15	N	150	100	200	20	200	300
71V875A	10	N	10	N	300	100	N	10	N	200
71V876A	10	N	7	N	300	70	N	10	N	150
71V877A	10	N	7	N	200	100	N	10	N	100
71V879A	10	N	10	N	500	100	<50	N	N	100
71V979A	10	N	10	N	200	100	500	N	N	200
71V1459A	10	N	15	N	300	100	N	15	N	100

Sample	LATITUDE	LONGITUDE	S-FFX	S-MGX	S-CAZ	S-FIX	S-MN	S-AG	S-AS	S-AU	S-B
71V1342A	47 56 38	91 35 59	5.0	1.0	.70	.70	500	N	N	N	50
71V1416A	47 56 38	91 42 8	5.0	1.5	1.00	.70	500	N	N	N	20
71V1446A	47 56 39	91 50 14	3.0	1.0	.70	.50	700	N	N	N	20
71V567A	47 56 39	91 52 42	5.0	2.0	1.00	.20	700	N	N	N	10
71V1452A	47 56 39	91 32 49	7.0	1.5	1.00	.20	300	N	N	N	20
71V851A	47 56 41	91 49 24	5.0	.5	.50	.50	1,500	N	N	N	20
71V935A	47 56 42	91 30 51	5.0	1.5	1.50	.50	1,000	N	N	N	10
71V568A	47 56 42	91 52 33	7.0	3.0	1.50	.50	700	N	N	N	10
71V554A	47 56 43	91 51 8	5.0	1.5	1.00	.50	700	N	N	N	15
71V938A	47 56 44	91 30 33	5.0	1.5	1.50	.50	1,000	N	N	N	10
71V566A	47 56 45	91 52 21	3.0	1.0	1.00	.50	300	N	N	N	10
71V1341A	47 56 47	91 35 57	7.0	1.5	1.00	.50	700	N	N	N	20
71V1306A	47 56 47	91 28 27	5.0	1.0	1.00	.50	1,000	N	N	N	15
71V1445A	47 56 43	91 49 52	5.0	1.5	1.00	.30	500	N	N	N	10
71V1305A	47 56 52	91 38 19	7.0	1.5	1.00	.50	700	N	N	N	10
71V880A	47 56 52	91 47 19	5.0	1.0	1.00	.50	500	N	N	N	15
71V881A	47 56 52	91 47 19	5.0	1.0	1.00	.30	300	N	N	N	10
71V882A	47 56 52	91 47 19	5.0	1.0	1.00	.50	700	N	N	N	10
71V883A	47 56 52	91 47 19	5.0	1.5	1.00	.50	500	N	N	N	10
71V939A	47 56 53	91 30 7	5.0	1.5	1.00	.50	500	N	N	N	10
71V560A	47 56 53	91 52 51	5.0	2.0	1.50	.70	1,000	N	N	N	10
71V561A	47 56 53	91 53 11	3.0	2.0	1.50	.20	500	N	N	N	<10
71V1340A	47 56 54	91 36 4	7.0	1.0	.70	.50	700	N	N	N	30
71V1444A	47 56 54	91 40 39	3.0	1.0	.20	.50	500	N	N	N	20
71V1460A	47 56 55	91 33 33	5.0	1.0	1.00	.30	300	N	N	N	30
71V936A	47 56 57	91 30 34	7.0	1.5	1.00	.50	500	N	N	N	10
71V1339A	47 56 59	91 35 58	3.0	.7	.70	.50	300	N	N	N	30
71V388A	47 56 59	91 51 12	2.0	.7	.70	.30	700	N	N	N	20
71V558A	47 56 59	91 52 27	5.0	2.0	1.50	.20	700	N	N	N	<10
71V559A	47 56 59	91 52 37	5.0	1.5	1.00	.50	700	N	N	N	10
71V940A	47 57 0	91 38 48	5.0	1.0	1.00	.50	300	N	N	N	10
71V1443A	47 57 0	91 40 38	7.0	1.0	.70	.50	500	N	N	N	15
71V556A	47 57 0	91 51 43	3.0	1.5	1.50	.30	300	N	N	N	<10
71V555A	47 57 1	91 51 16	5.0	1.5	1.50	.30	500	N	N	N	10
71V557A	47 57 1	91 52 6	5.0	1.5	1.00	.30	500	N	N	N	10
71V1293A	47 57 2	91 32 9	5.0	1.0	.70	.50	300	N	N	N	15
71V765A	47 57 2	91 46 28	5.0	1.0	.70	.30	700	N	N	N	10
71V1304A	47 57 3	91 38 10	7.0	1.5	1.00	.50	700	N	N	N	10
71V973A	47 57 6	91 30 9	7.0	1.5	1.00	.50	500	N	N	N	15
71V1288A	47 57 8	91 34 4	5.0	1.5	1.00	.50	500	N	N	N	20
71V1420A	47 57 8	91 43 8	5.0	1.5	1.50	.50	700	N	N	N	15
71V807A	47 57 10	91 46 53	5.0	1.0	.70	.20	700	N	N	N	15
71V562A	47 57 10	91 53 37	7.0	1.5	.70	.30	5,000	N	N	N	50
71V1338A	47 57 11	91 35 52	5.0	1.0	.70	.50	300	N	N	N	50
71V937A	47 57 11	91 29 26	5.0	2.0	1.00	.70	700	N	N	N	20
71V1292A	47 57 12	91 22 18	7.0	1.0	.70	.50	500	N	N	N	15
71V941A	47 57 12	91 38 31	7.0	1.5	1.00	.50	1,500	N	N	N	20
71V1441A	47 57 12	91 40 39	5.0	1.0	.50	.30	200	N	N	N	10
71V563A	47 57 12	91 53 54	5.0	1.5	1.50	.50	700	N	N	N	10
71V1303A	47 57 13	91 38 7	5.0	1.5	1.50	.50	700	N	N	N	10

A-horizon Soil Samples--continued

Sample	S-DA	S-EF	S-3I	S-CD	S-CC	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V1342A	300	1.0	N	N	10	100	7	30	N	20	20
71V1416A	500	1.0	N	N	10	100	50	20	N	20	50
71V1446A	500	1.0	N	N	7	150	10	20	N	20	30
71V567A	200	1.0	N	N	20	2,000	15	20	N	<20	200
71V1459A	150	1.0	N	N	10	150	20	20	N	<20	50
71V851A	200	1.0	N	N	10	50	70	30	N	<20	20
71V935A	500	1.0	N	N	10	150	20	20	N	<20	70
71V568A	700	5.0	N	N	30	1,000	30	30	N	<20	200
71V554A	700	1.0	N	N	10	150	15	20	N	<20	50
71V938A	500	1.0	N	N	15	150	20	20	N	20	30
71V566A	700	1.0	N	N	5	500	20	20	N	<20	20
71V1341A	200	1.0	N	N	10	150	20	20	N	<20	50
71V1306A	500	1.0	N	N	10	70	20	20	N	20	50
71V1445A	500	1.0	N	N	15	100	15	20	N	<20	100
71V1305A	300	1.0	N	N	10	150	70	20	N	20	50
71V880A	500	1.0	N	N	7	70	15	20	N	20	50
71V881A	300	1.0	N	N	7	20	10	20	N	<20	20
71V882A	500	1.0	N	N	7	50	7	20	N	<20	20
71V883A	500	1.0	N	N	10	50	10	20	N	20	30
71V939A	500	1.0	N	N	10	100	20	20	N	<20	30
71V560A	700	1.0	N	N	15	300	50	20	N	20	70
71V561A	700	1.5	N	N	10	150	20	20	N	20	50
71V1340A	150	1.0	N	N	10	100	20	20	N	<20	30
71V1444A	500	1.0	N	N	7	200	30	20	N	20	70
71V1460A	200	1.0	N	N	7	100	10	20	N	20	30
71V936A	200	1.0	N	N	15	150	100	50	N	<20	100
71V1339A	200	1.0	N	N	5	70	50	30	N	20	30
71V208A	300	<1.0	N	N	5	200	10	30	N	<20	30
71V558A	700	1.0	N	N	20	700	50	20	N	<20	100
71V559A	700	1.0	N	N	15	150	30	20	N	<20	70
71V940A	500	1.0	N	N	5	50	20	20	N	<20	20
71V1443A	300	1.0	N	N	10	150	50	20	N	20	70
71V556A	700	1.0	N	N	10	500	50	20	N	<20	70
71V555A	700	1.0	N	N	10	700	70	20	N	20	70
71V557A	700	1.0	N	N	15	1,000	50	20	N	<20	100
71V1293A	300	1.0	N	N	7	70	10	20	N	<20	30
71V765A	500	1.5	N	N	10	100	10	20	N	<20	50
71V1304A	300	1.0	N	N	15	150	50	20	N	20	50
71V973A	700	1.0	N	N	15	150	20	20	N	20	70
71V1288A	750	1.0	N	N	10	100	15	20	N	<20	50
71V1420A	700	1.0	N	N	7	100	20	20	N	<20	50
71V802A	300	1.0	N	N	7	100	10	20	N	20	50
71V562A	700	2.0	N	N	20	100	50	70	N	<20	70
71V1338A	200	1.0	N	N	7	150	15	20	N	20	20
71V237A	200	1.0	N	N	15	200	30	20	N	20	70
71V1292A	500	1.0	N	N	7	100	50	20	N	<20	50
71V941A	700	1.0	N	N	20	150	70	20	N	<20	70
71V1441A	300	1.0	N	N	10	200	70	20	N	<20	150
71V563A	700	1.5	N	N	10	150	20	50	N	<20	30
71V1305A	500	1.0	N	N	10	70	50	20	N	<20	30

A-horizon Soil Samples--continued

Sample	S-PB	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V1342A	15	N	10	N	300	100	N	15	N	150
71V1416A	15	N	15	N	150	150	100	20	N	300
71V1446A	15	N	15	N	150	100	50	20	N	500
71V567A	10	N	7	N	300	70	N	10	N	150
71V1458A	15	N	10	N	300	70	N	15	N	100
71V851A	20	N	10	N	100	150	N	15	<200	150
71V935A	10	N	15	N	700	100	N	15	N	100
71V568A	10	N	10	N	500	100	N	10	N	200
71V554A	10	N	10	N	300	100	N	10	N	200
71V938A	15	N	15	N	200	150	N	15	N	300
71V566A	10	N	10	N	500	70	N	10	N	500
71V1341A	20	N	10	N	300	100	N	15	N	150
71V1306A	10	N	10	N	500	100	50	10	N	150
71V1445A	15	N	10	N	200	100	100	10	N	200
71V1305A	10	N	15	N	300	100	100	10	N	200
71V880A	10	N	10	N	300	100	300	10	N	200
71V831A	N	N	7	N	200	70	50	10	N	150
71V832A	N	N	10	N	300	100	100	10	N	200
71V833A	15	N	10	N	300	100	100	15	N	200
71V939A	10	N	10	N	500	100	N	10	N	200
71V560A	20	N	15	N	300	150	N	20	N	300
71V561A	15	N	10	N	500	70	N	10	N	100
71V1340A	15	N	10	N	200	100	N	15	N	100
71V1444A	20	N	10	N	150	100	50	15	N	300
71V1460A	15	N	10	N	300	100	N	15	N	200
71V936A	15	N	15	N	200	150	N	20	N	200
71V1339A	20	N	10	N	150	70	N	15	N	150
71V888A	20	N	10	N	300	70	N	10	N	150
71V558A	15	N	10	N	500	100	N	10	N	150
71V559A	15	N	10	N	200	100	N	15	N	200
71V940A	10	N	15	N	500	150	N	10	N	200
71V1443A	20	N	10	N	100	150	50	15	N	300
71V556A	15	N	10	N	500	100	N	15	N	150
71V555A	20	N	10	N	500	100	N	15	N	150
71V557A	15	N	10	N	300	100	N	10	N	150
71V1293A	10	N	10	N	150	100	50	15	N	200
71V765A	15	N	10	N	200	100	N	10	N	150
71V1304A	10	N	15	N	500	150	N	15	N	200
71V973A	15	N	20	N	300	150	N	15	N	200
71V1288A	N	N	15	N	200	100	N	10	N	200
71V1420A	15	N	10	N	200	100	50	15	N	300
71V897A	15	N	7	N	300	70	N	10	N	150
71V562A	20	N	15	N	150	200	N	20	N	100
71V1338A	15	N	10	N	200	100	N	15	N	150
71V937A	15	N	20	N	300	150	N	20	N	500
71V1292A	10	N	10	N	200	100	N	N	N	150
71V941A	20	N	15	N	300	150	N	10	<200	150
71V1441A	20	N	10	N	100	100	N	10	N	150
71V563A	15	N	10	N	500	100	N	15	N	500
71V1303A	10	N	10	N	500	100	50	10	N	100

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FEX	S-MG%	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B
71V764A	47 57 13	91 46 46	5.0	1.5	1.00	.50	700	N	N	N	15
71V972A	47 57 14	91 30 20	5.0	1.5	1.00	.30	500	N	N	N	15
71V1461A	47 57 14	91 33 31	5.0	1.0	.70	.30	500	N	N	N	30
71V889A	47 57 16	91 51 22	5.0	1.0	.70	.30	500	N	N	N	20
71V1435A	47 57 17	91 50 9	3.0	1.0	.70	.30	500	N	N	N	10
71V1419A	47 57 18	91 42 51	5.0	1.5	1.00	.50	1,000	N	N	N	20
71V1440A	47 57 18	91 40 34	5.0	1.5	1.00	.30	300	N	N	N	10
71V1439A	47 57 19	91 40 52	3.0	1.0	1.00	.30	200	N	N	N	10
71V890A	47 57 19	91 50 49	7.0	2.0	1.00	.30	1,000	N	N	N	15
71V942A	47 57 20	91 38 7	5.0	1.5	1.00	.70	500	N	N	N	50
71V930A	47 57 20	91 39 53	5.0	1.0	1.00	.50	500	N	N	N	20
71V981A	47 57 21	91 40 21	3.0	.7	.70	.50	300	N	N	N	20
71V1207A	47 57 22	91 33 59	5.0	1.0	1.00	.50	700	N	N	N	20
71V1337A	47 57 22	91 35 53	3.0	1.0	1.00	.30	700	N	N	N	20
71V1290A	47 57 24	91 33 40	3.0	1.0	.70	.50	700	N	N	N	15
71V709A	47 57 24	91 53 1	5.0	2.0	2.00	.30	500	N	N	N	N
71V852A	47 57 25	91 51 56	2.0	1.0	.70	.50	700	N	N	N	20
71V1437A	47 57 26	91 50 20	3.0	1.5	.70	.30	700	N	N	N	10
71V564A	47 57 26	91 54 18	3.0	1.5	1.00	.50	300	N	N	N	100
71V945A	47 57 27	91 37 2	7.0	1.5	1.00	.50	1,000	N	N	N	20
71V710A	47 57 27	91 51 54	3.0	1.5	2.00	.20	300	N	N	N	N
71V949A	47 57 28	91 35 20	5.0	1.5	1.00	.50	500	N	N	N	20
71V946A	47 57 28	91 37 26	3.0	1.0	1.00	.50	500	N	N	N	20
71V673A	47 57 29	91 42 35	5.0	1.5	1.50	.50	500	N	N	N	30
71V971A	47 57 29	91 30 31	2.0	1.5	1.00	.30	500	N	N	N	15
71V1291A	47 57 29	91 32 12	5.0	1.5	1.00	.30	500	N	N	N	10
71V983A	47 57 29	91 41 2	3.0	1.0	1.00	.50	700	N	N	N	15
71V1462A	47 57 30	91 33 41	7.0	1.0	.70	.30	300	N	N	N	30
71V943A	47 57 30	91 35 40	7.0	1.5	1.00	.50	1,500	N	N	N	20
71V947A	47 57 30	91 36 12	5.0	1.5	1.00	.70	1,000	N	N	N	20
71V943A	47 57 30	91 37 48	10.0	.7	.20	.70	2,000	N	N	N	100
71V1449A	47 57 30	91 50 47	5.0	1.0	.70	.50	700	N	N	N	15
71V731A	47 57 30	91 53 2	5.0	.7	.50	.50	300	N	N	N	10
71V946A	47 57 31	91 36 33	5.0	1.5	1.00	.50	700	N	N	N	20
71V711A	47 57 31	91 53 2	5.0	3.0	3.00	.20	500	N	N	N	N
71V965A	47 57 32	91 22 38	7.0	1.5	1.50	.70	700	N	N	N	15
71V970A	47 57 33	91 30 59	5.0	1.0	1.00	.50	500	N	N	N	15
71V969A	47 57 33	91 31 21	7.0	1.0	.70	.50	500	N	N	N	15
71V957A	47 57 33	91 32 58	7.0	1.5	1.50	.50	700	N	N	N	15
71V951A	47 57 33	91 34 32	5.0	1.0	.70	.70	1,000	1.5	N	N	20
71V982A	47 57 33	91 40 51	10.0	1.0	.70	.50	1,000	.5	N	N	20
71V934A	47 57 34	91 41 10	5.0	1.5	1.50	.50	500	N	N	N	10
71V956A	47 57 35	91 34 6	7.0	1.5	1.50	.50	700	N	N	N	20
71V952A	47 57 37	91 33 38	3.0	1.0	1.50	.50	3,000	N	N	N	50
71V1413A	47 57 37	91 41 25	10.0	1.5	.70	.50	3,000	N	N	N	20
71V749A	47 57 38	91 48 10	7.0	1.5	.70	.50	500	N	N	N	15
71V713A	47 57 39	91 52 37	3.0	1.5	2.00	.30	500	N	N	N	N
71V963A	47 57 40	91 32 19	5.0	1.0	1.00	.50	700	N	N	N	15
71V955A	47 57 40	91 33 31	7.0	1.5	1.50	.50	1,000	N	N	N	15
71V638A	47 57 40	91 47 2	3.0	1.0	1.00	.50	500	N	N	N	15

A-horizon Soil Samples--continued

Sample	S-SA	S-BF	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V764A	700	1.5	N	N	15	200	50	20	N	<20	100
71V972A	500	1.0	N	N	15	200	20	20	N	20	100
71V1461A	200	1.0	N	N	10	150	30	20	N	<20	50
71V889A	300	1.0	N	N	7	150	10	30	N	<20	50
71V1438A	500	<1.0	N	N	10	1,500	10	20	N	<20	100
71V1419A	500	1.0	N	N	10	100	50	20	N	20	50
71V1440A	500	1.0	N	N	15	1,000	50	20	S	20	200
71V1439A	300	1.0	N	N	7	700	15	20	N	<20	50
71V390A	300	1.0	N	N	30	500	20	20	N	<20	150
71V942A	700	1.5	N	N	7	100	20	20	N	20	30
71V980A	500	1.0	N	N	7	100	20	20	N	20	30
71V931A	500	1.0	N	N	5	70	30	20	N	<20	10
71V1237A	700	1.0	N	N	10	100	15	20	N	<20	50
71V1337A	200	1.0	N	N	7	100	5	20	N	<20	30
71V1290A	300	<1.0	N	N	7	70	20	20	N	<20	30
71V709A	700	1.0	N	N	20	300	70	50	N	20	100
71V392A	200	<1.0	N	N	10	150	10	30	N	<20	50
71V1437A	500	<1.0	N	N	15	500	20	20	N	<20	100
71V564A	700	1.5	N	N	5	70	50	70	N	<20	20
71V945A	500	1.0	N	N	15	150	20	20	N	20	50
71V710A	500	N	N	N	7	100	20	20	N	20	30
71V949A	500	1.0	N	N	7	150	10	20	N	<20	30
71V946A	500	1.0	N	N	5	70	20	20	N	<20	20
71V673A	500	1.0	N	N	7	150	50	20	N	<20	50
71V971A	700	1.5	N	N	10	150	10	20	N	20	50
71V1291A	500	1.0	N	N	7	100	15	20	N	<20	50
71V983A	500	1.5	N	N	7	100	10	20	N	<20	20
71V1462A	200	1.0	N	N	10	150	10	20	N	<20	50
71V948A	500	1.0	N	N	20	200	70	20	N	<20	70
71V947A	700	1.0	N	N	15	100	20	20	N	<20	50
71V943A	500	1.5	N	N	20	500	150	20	S	20	100
71V1448A	300	1.0	N	N	10	200	50	20	N	20	50
71V731A	500	1.0	N	N	7	70	50	20	N	20	20
71V946A	500	1.0	N	N	15	150	50	20	N	<20	70
71V711A	700	N	N	N	10	150	15	20	N	20	50
71V965A	700	1.5	N	N	10	150	20	20	N	20	50
71V970A	700	1.0	N	N	10	100	10	20	N	20	20
71V969A	700	2.0	N	N	10	100	20	20	N	30	30
71V957A	700	1.0	N	N	10	150	20	20	N	20	50
71V951A	500	1.0	N	N	20	50	50	20	N	20	20
71V942A	500	1.5	N	N	15	150	70	20	20	30	50
71V984A	500	1.5	N	N	10	150	10	20	N	<20	50
71V956A	700	1.0	N	N	15	150	50	20	N	20	70
71V952A	700	1.0	N	N	15	50	50	20	N	20	20
71V1413A	700	1.0	N	N	5	50	30	20	N	30	20
71V769A	500	1.5	N	N	15	150	50	20	N	<20	70
71V713A	700	1.0	N	N	7	100	20	20	N	20	20
71V566A	700	1.0	N	N	7	150	30	20	N	20	30
71V955A	700	1.5	N	N	15	100	50	20	N	20	50
71V689A	700	<1.0	N	N	7	100	15	20	N	<20	20

A-horizon Soil Samples--continued

Sample	S-Pg	S-Sg	S-Sc	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V764A	20	N	15	N	500	150	100	20	N	200
71V972A	15	N	15	N	300	100	N	15	N	200
71V1461A	15	N	10	N	300	100	N	20	N	150
71V889A	20	N	7	N	300	70	N	10	N	100
71V1439A	10	N	10	N	200	100	50	10	N	200
71V1419A	20	N	10	N	500	100	50	15	<200	200
71V1440A	20	N	10	N	300	70	300	10	N	300
71V1439A	15	N	7	N	200	70	150	10	N	200
71V890A	20	N	10	N	300	70	N	10	N	150
71V942A	15	N	20	N	500	150	N	20	N	300
71V910A	20	N	15	N	300	150	N	20	N	300
71V921A	15	N	10	N	200	100	N	20	N	300
71V1287A	N	N	15	N	300	150	N	15	N	200
71V1337A	10	N	10	N	500	70	N	15	N	100
71V1290A	10	N	10	N	200	70	N	10	N	200
71V703A	N	N	10	N	500	70	N	15	N	100
71V892A	15	N	10	N	200	70	N	15	N	150
71V1437A	10	N	10	N	150	70	50	20	N	300
71V564A	15	N	10	N	500	70	N	10	N	200
71V945A	10	N	15	N	500	150	N	20	200	200
71V710A	N	N	5	N	300	30	N	N	N	30
71V949A	10	N	15	N	300	100	N	15	N	200
71V944A	10	N	15	N	500	100	N	15	N	200
71V673A	20	N	15	N	300	150	N	15	N	100
71V971A	15	N	20	N	500	100	N	15	N	200
71V1291A	10	N	10	N	500	100	N	10	N	150
71V983A	10	N	10	N	500	100	N	15	N	200
71V1462A	15	N	10	N	300	100	N	15	N	150
71V948A	15	N	15	N	300	150	N	15	N	150
71V947A	10	N	15	N	300	150	N	20	N	200
71V943A	15	N	30	N	150	300	N	30	N	150
71V1448A	15	N	10	N	100	100	50	20	N	200
71V731A	20	N	10	N	100	100	N	20	N	200
71V946A	20	N	15	N	300	150	N	15	N	150
71V711A	N	N	10	N	500	50	N	N	N	70
71V965A	15	N	20	N	500	150	N	20	N	300
71V970A	15	N	15	N	200	100	N	15	N	200
71V969A	20	N	15	N	150	150	N	20	N	200
71V957A	15	N	20	N	500	150	N	20	N	300
71V951A	15	N	15	N	100	150	N	20	N	300
71V982A	20	N	15	N	200	200	N	20	200	200
71V984A	10	N	15	N	700	150	N	10	N	200
71V956A	20	N	20	N	300	150	N	15	N	200
71V952A	15	N	20	N	150	150	N	30	N	300
71V1413A	10	N	15	N	<100	150	50	30	N	500
71V769A	20	N	15	N	150	150	N	15	N	200
71V713A	15	N	7	N	500	50	N	10	N	50
71V966A	15	N	20	N	300	100	N	20	N	200
71V955A	20	N	20	N	300	150	N	20	N	300
71V682A	10	N	15	N	300	150	N	20	N	300

Sample	LATITUDE	LONGITUDE	S-FEZ	S-MGZ	S-CAZ	S-TIZ	S-MN	S-AG	S-AS	S-AU	S-B
71V694A	47 57 40	91 50 52	3.0	1.0	.70	.30	300	N	N	N	10
71V953A	47 57 41	91 33 52	5.0	1.5	1.00	.70	1,000	N	N	N	20
71V714A	47 57 41	91 51 32	3.0	1.5	2.00	.20	500	N	N	N	<10
71V958A	47 57 42	91 32 51	7.0	1.5	1.50	.30	500	N	N	N	15
71V1294A	47 57 43	91 37 30	3.0	1.0	.70	.50	300	N	N	N	20
71V954A	47 57 46	91 33 39	7.0	1.0	1.00	.50	1,000	N	N	N	15
71V1100A	47 57 46	91 49 47	7.0	1.0	.70	.50	300	N	N	N	20
71V895A	47 57 47	91 50 28	3.0	1.0	.70	.20	1,000	N	N	N	20
71V967A	47 57 49	91 31 59	3.0	1.0	1.00	.50	700	N	N	N	50
71V676A	47 57 50	91 41 59	7.0	1.5	1.50	.50	1,500	N	N	N	15
71V727A	47 57 50	91 50 38	2.0	1.0	1.00	.20	200	N	N	N	<10
71V565A	47 57 51	91 54 33	7.0	1.5	1.00	.50	500	N	N	N	10
71V968A	47 57 52	91 31 37	7.0	1.0	.70	.50	500	N	N	N	15
71V959A	47 57 52	91 32 35	7.0	1.5	1.00	.50	700	N	N	N	20
71V1295A	47 57 52	91 37 19	7.0	1.5	1.00	.50	2,000	1.0	N	N	15
71V899A	47 57 52	91 40 19	5.0	1.0	.70	.50	500	N	N	N	20
71V974A	47 57 53	91 31 12	5.0	1.0	1.00	.20	700	N	N	N	15
71V896A	47 57 53	91 50 26	3.0	1.5	.70	.20	300	N	N	N	15
71V898A	47 57 55	91 49 59	10.0	5.0	.70	.50	1,000	N	N	N	15
71V692A	47 57 57	91 43 7	3.0	.7	1.00	.30	2,000	N	N	N	15
71V991A	47 57 57	91 52 33	3.0	1.5	.70	.50	700	N	N	N	20
70V407A	47 57 59	91 48 12	1.0	.5	.70	.20	500	N	N	N	10
71V1296A	47 58 2	91 37 21	5.0	1.0	.70	.50	1,000	N	N	N	15
71V960A	47 58 3	91 32 20	5.0	1.0	1.00	.70	1,000	N	N	N	30
71V683A	47 58 5	91 43 10	3.0	1.0	1.00	.30	1,500	N	N	N	10
70V408A	47 58 6	91 48 12	2.0	.5	.50	.30	300	N	N	N	20
71V975A	47 58 7	91 31 4	5.0	1.0	1.00	.50	700	N	N	N	20
71V681A	47 58 7	91 42 58	5.0	1.5	1.50	.30	700	1.0	N	N	10
70V410A	47 58 7	91 48 28	2.0	.7	.70	.30	200	N	N	N	15
71V725A	47 58 7	91 51 5	3.0	1.0	1.00	.30	300	N	N	N	10
70V409A	47 58 7	91 51 26	1.0	.5	.50	.20	500	N	N	N	10
71V677A	47 58 9	91 41 16	5.0	1.0	.70	.30	300	N	N	N	10
71V684A	47 58 9	91 43 17	3.0	.7	.70	.30	700	N	N	N	<10
71V919A	47 58 10	91 46 16	5.0	1.0	.50	.50	1,500	N	N	N	20
71V678A	47 58 11	91 41 56	10.0	2.0	.50	.70	1,000	N	N	N	20
70V411A	47 58 11	91 48 34	1.5	.5	.70	.30	300	N	N	N	20
71V1297A	47 58 12	91 37 18	5.0	1.5	1.00	.50	500	N	N	N	15
71V685A	47 58 12	91 43 20	5.0	1.0	1.00	.50	2,000	N	N	N	15
71V730A	47 58 12	91 51 51	5.0	1.5	1.50	.20	2,000	N	N	N	<10
71V724A	47 58 13	91 49 46	3.0	1.0	1.00	.50	300	N	N	N	<10
71V950A	47 58 13	91 49 54	7.0	1.5	1.00	.50	500	N	N	N	20
71V715A	47 58 13	91 50 16	3.0	1.0	.70	.50	500	N	N	N	<10
71V961A	47 58 15	91 32 5	5.0	1.5	1.50	.50	1,000	N	N	N	20
71V691A	47 58 15	91 35 32	3.0	1.0	1.50	.20	1,000	N	N	N	10
70V414A	47 58 15	91 48 50	3.0	.5	.70	.30	300	N	N	N	10
71V729A	47 58 16	91 52 18	3.0	1.5	1.00	.50	500	N	N	N	10
71V679A	47 58 17	91 42 3	5.0	1.0	.50	.50	700	N	N	N	20
71V680A	47 58 17	91 42 10	5.0	1.0	1.00	.50	500	N	N	N	10
71V686A	47 58 17	91 43 19	5.0	1.5	1.50	.50	700	N	N	N	15
71V716A	47 58 18	91 50 0	5.0	1.5	1.00	.50	500	N	N	N	10

A-horizon Soil Samples--continued

Sample	S-PA	S-BF	S-BI	S-CD	S-ÇO	S-CR	S-CU	S-LA	S-NO	S-NB	S-NI
71V894A	300	1.0	N	N	7	300	5	20	N	<20	50
71V953A	700	1.0	N	N	15	100	50	20	N	20	30
71V714A	1,000	1.5	N	N	7	100	15	20	N	20	30
71V958A	500	1.5	N	N	10	150	30	20	N	<20	50
71V1294A	500	<1.0	N	N	5	50	10	20	N	<20	20
71V954A	700	1.5	N	N	15	100	100	20	15	20	30
71V1100A	300	1.0	N	N	7	150	20	20	N	<20	30
71V895A	300	1.0	N	N	7	70	<5	30	N	20	20
71V967A	700	1.0	N	N	7	100	15	20	N	20	20
71V676A	700	1.0	N	N	15	150	15	20	N	20	70
71V727A	700	1.0	N	N	N	50	10	20	N	20	10
71V565A	700	1.5	N	N	7	100	20	70	N	<20	50
71V969A	700	2.0	N	N	10	100	70	20	N	20	50
71V959A	700	1.5	N	N	15	150	20	20	N	30	50
71V1295A	500	1.5	N	N	15	100	100	20	N	20	70
71V899A	300	1.0	N	N	10	200	20	20	N	20	20
71V974A	700	1.0	N	N	7	100	10	20	N	20	70
71V896A	300	1.0	N	N	7	150	<5	30	N	20	70
71V898A	150	1.0	N	N	30	200	50	20	N	<20	70
71V682A	300	1.0	N	N	7	70	7	20	N	<20	20
71V891A	300	<1.0	N	N	15	700	<5	30	N	<20	50
70V407A	500	1.0	N	N	5	150	5	20	N	20	20
71V1296A	300	1.0	N	N	7	50	20	20	N	<20	30
71V960A	700	1.5	N	N	10	100	15	20	N	30	30
71V683A	500	<1.0	N	N	7	100	10	20	N	<20	20
70V408A	500	<1.0	N	N	5	100	5	30	N	<20	30
71V975A	500	1.5	N	N	10	100	15	20	N	<20	30
71V681A	500	1.0	N	N	10	150	20	20	N	<20	50
70V410A	500	1.0	N	N	15	200	20	20	N	<20	100
71V725A	700	2.0	N	N	5	100	10	20	N	<20	20
70V409A	300	1.0	N	N	20	100	5	20	N	20	30
71V677A	300	<1.0	N	N	7	100	15	20	N	<20	30
71V684A	300	<1.0	N	N	5	70	5	20	N	20	10
71V918A	500	1.0	N	N	10	100	50	20	N	<20	70
71V678A	200	1.0	N	N	30	200	20	20	N	20	150
70V411A	300	1.0	N	N	15	1,500	5	20	N	20	70
71V1297A	300	1.0	N	N	7	70	10	20	N	<20	30
71V685A	300	<1.0	N	N	10	100	50	20	N	<20	50
71V730A	700	2.0	N	N	10	300	15	20	N	<20	30
71V724A	500	1.0	N	N	7	100	15	20	N	<20	20
71V950A	500	1.0	N	N	10	100	20	20	N	20	30
71V715A	700	1.0	N	N	7	100	10	20	N	20	30
71V961A	700	1.5	N	N	10	150	15	20	N	20	50
71V691A	500	1.0	N	N	10	70	50	20	N	<20	20
70V414A	300	<1.0	N	N	30	700	5	20	N	20	150
71V729A	500	1.0	N	N	10	200	15	20	N	<20	50
71V679A	300	<1.0	N	N	7	50	7	20	N	<20	30
71V680A	500	1.0	N	N	5	100	15	20	N	<20	30
71V684A	300	<1.0	N	N	10	150	20	20	N	<20	50
71V716A	700	1.5	N	N	10	100	20	20	N	<20	30

A-horizon Soil Samples--continued

Sample	S-PB	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V894A	10	N	7	N	300	70	N	10	N	100
71V953A	15	N	15	N	200	150	N	20	200	500
71V714A	20	N	10	N	700	50	N	10	N	30
71V958A	15	N	20	N	500	100	N	10	N	150
71V1294A	N	N	15	N	150	100	<50	15	N	200
71V954A	5	N	15	N	200	150	N	20	<200	500
71V1100A	20	N	7	N	200	100	N	15	N	150
71V895A	10	N	5	N	300	30	N	10	N	150
71V967A	15	N	15	N	200	100	N	20	N	300
71V676A	20	N	20	N	500	150	N	20	N	150
71V727A	10	N	7	N	500	30	N	N	N	150
71V565A	20	N	10	N	300	150	N	15	N	200
71V963A	20	N	15	N	150	150	N	20	N	200
71V959A	20	N	20	N	300	150	N	30	N	500
71V1295A	10	N	20	N	150	150	70	20	300	150
71V899A	20	N	7	N	200	100	N	15	N	150
71V974A	10	N	15	N	500	100	N	20	N	500
71V896A	20	N	7	N	300	50	N	10	N	100
71V898A	20	N	20	N	100	200	N	15	N	150
71V682A	10	N	10	N	150	70	N	20	N	150
71V891A	20	N	10	N	200	70	N	15	N	200
70V407A	10	N	7	N	300	50	N	15	N	150
71V1296A	N	N	10	N	150	100	N	10	N	150
71V960A	20	N	20	N	300	150	N	30	N	500
71V683A	20	N	10	N	300	50	N	10	N	100
70V408A	10	N	10	N	200	100	N	20	N	200
71V975A	15	N	10	N	200	100	N	20	N	300
71V681A	50	N	15	N	700	100	N	20	N	100
70V410A	10	N	7	N	200	70	N	15	N	200
71V725A	10	N	10	N	500	100	N	10	N	300
70V409A	10	N	5	N	200	50	N	10	N	200
71V677A	10	N	10	N	200	100	N	10	N	150
71V684A	10	N	7	N	100	50	N	10	N	70
71V918A	10	N	15	N	200	100	N	10	200	100
71V678A	N	N	50	N	200	200	N	30	N	100
70V411A	10	N	7	N	300	70	N	15	N	200
71V1297A	N	N	15	N	700	100	150	10	N	150
71V685A	10	N	10	N	150	100	N	15	N	150
71V730A	15	N	10	N	700	50	N	10	N	100
71V724A	15	N	15	N	500	100	N	15	N	200
71V950A	15	N	15	N	500	100	N	20	N	200
71V715A	10	N	10	N	200	50	N	10	N	200
71V961A	20	N	15	N	500	100	N	20	N	300
71V691A	15	N	10	N	700	100	N	10	N	150
70V414A	20	N	7	N	200	100	N	15	N	200
71V729A	15	N	10	N	500	70	N	15	N	300
71V679A	N	N	10	N	100	100	N	20	N	200
71V680A	N	N	10	N	500	100	N	15	N	200
71V686A	15	N	15	N	300	100	N	20	N	200
71V716A	20	N	15	N	300	100	N	20	N	300

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FF%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
71V723A	47 58 20	91 49 14	5.0	1.0	.70	.20	200	N	N	N	<10
71V893A	47 58 20	91 52 35	7.0	2.0	2.00	.50	1,500	N	N	N	15
71V976A	47 58 21	91 50 55	5.0	1.0	1.00	.50	500	N	N	N	15
71V692A	47 58 21	91 35 29	5.0	1.5	1.00	.50	1,300	N	N	N	50
71V1298A	47 58 24	91 37 25	3.0	1.0	1.00	.50	700	N	N	N	20
70V417A	47 58 24	91 50 32	2.0	.5	.70	.30	700	N	N	N	20
71V693A	47 58 26	91 35 33	5.0	1.5	1.50	.50	500	N	N	N	20
71V962A	47 58 30	91 32 17	7.0	2.0	1.50	.30	700	N	N	N	15
71V722A	47 58 30	91 40 4	7.0	1.5	1.00	.70	500	N	N	N	20
71V1301A	47 58 31	91 37 55	5.0	1.5	1.00	.50	500	N	N	N	10
70V418A	47 58 31	91 48 57	2.0	.7	1.00	.30	500	N	N	N	10
71V721A	47 58 32	91 49 4	5.0	1.0	1.00	.30	300	N	N	N	10
71V1302A	47 58 33	91 39 14	5.0	1.5	1.50	.30	700	N	N	N	10
71V1290A	47 58 34	91 37 25	3.0	1.5	1.00	.50	500	N	N	N	10
71V997A	47 58 34	91 48 20	3.0	1.0	.50	.30	1,000	N	N	N	15
71V695A	47 58 36	91 35 53	5.0	1.5	1.50	.50	500	N	N	N	15
71V1300A	47 58 36	91 37 32	5.0	1.5	1.50	.50	700	N	N	N	10
71V694A	47 58 38	91 35 23	5.0	1.5	1.50	.50	700	N	N	N	20
71V963A	47 58 39	91 31 53	5.0	1.5	1.00	.50	700	N	N	N	15
71V719A	47 58 39	91 49 23	5.0	1.5	1.00	.50	500	N	N	N	<10
71V977A	47 59 40	91 30 49	3.0	1.0	1.00	.50	500	N	N	N	15
71V697A	47 59 40	91 36 3	7.0	1.5	1.50	.50	500	N	N	N	15
70V419A	47 59 40	91 48 58	1.5	.5	.70	.30	200	N	N	N	15
71V713A	47 59 42	91 49 12	5.0	1.5	1.50	.30	700	N	N	N	<10
71V796A	47 59 43	91 43 17	5.0	2.0	1.50	.50	700	N	N	N	10
71V964A	47 59 47	91 31 39	5.0	1.5	1.00	.30	1,300	N	N	N	10
71V978A	47 59 48	91 30 30	7.0	1.5	1.00	.70	1,000	N	N	N	20
70V400A	47 59 48	91 48 56	3.0	1.0	.70	.30	700	N	N	N	15
71V783A	47 59 51	91 43 43	5.0	2.0	1.50	.50	700	N	N	N	15
71V698A	47 59 56	91 36 16	5.0	1.5	1.50	.50	500	N	N	N	10
71V786A	47 59 58	91 43 17	2.0	1.0	1.00	.30	500	N	N	N	10
71V711A	47 59 0	91 44 11	5.0	1.5	1.00	.30	500	N	N	N	10
71V970A	47 59 3	91 30 16	5.0	1.0	1.00	.50	1,500	N	N	N	20
71V785A	47 59 3	91 43 30	3.0	1.5	1.00	.50	700	N	N	N	10
70V401	47 59 6	91 40 1	2.0	.7	.50	.30	200	N	N	N	15
70V420A	47 59 9	91 48 46	2.0	.5	.70	.50	500	N	N	N	20
71V787A	47 59 12	91 42 58	5.0	2.0	1.00	.50	3,000	N	N	N	10
71V702A	47 59 15	91 35 27	3.0	1.0	1.00	.50	500	N	N	N	15
70V413A	47 59 16	91 48 47	2.0	.5	.70	.30	300	N	N	N	15
70V412A	47 59 19	91 48 46	3.0	.5	.70	.50	300	N	N	N	15
71V699A	47 59 20	91 36 0	5.0	1.5	1.50	.50	500	N	N	N	10
70V402	47 59 20	91 49 11	3.0	1.0	1.00	.30	1,500	N	N	N	15
70V415A	47 59 20	91 50 43	3.0	2.0	1.00	.30	1,000	N	N	N	10
71V780A	47 59 22	91 43 52	3.0	1.5	1.00	.30	1,500	N	N	N	10
71V704A	47 59 27	91 35 28	7.0	1.5	1.50	.50	500	N	N	N	10
71V705A	47 59 27	91 42 57	5.0	1.5	1.00	.50	500	N	N	N	10
70V416A	47 59 34	91 48 22	2.0	.5	.70	.30	200	N	N	N	10
71V788A	47 59 35	91 42 58	3.0	1.0	1.00	.50	500	N	N	N	15
71V734A	47 59 41	91 41 59	5.0	1.5	1.50	.30	1,000	N	N	N	10
71V782A1	47 59 45	91 42 56	3.0	1.0	1.50	.50	500	N	N	N	20

A-horizon Soil Samples--continued

Sample	S-SA	S-RE	S-BI	S-CD	S-CC	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V723A	500	1.0	N	N	7	150	10	20	N	20	20
71V933A	500	<1.0	N	N	20	50	10	20	N	<20	30
71V976A	500	1.5	N	N	7	100	15	20	N	<20	30
71V692A	500	1.0	N	N	15	100	20	20	N	<20	50
71V1298A	500	1.0	N	N	5	100	10	20	N	<20	20
70V417A	500	<1.0	N	N	10	100	10	20	N	<20	30
71V693A	300	1.0	N	N	10	100	50	20	N	<20	50
71V962A	500	1.5	N	N	15	200	20	20	N	20	70
71V722A	500	1.0	N	N	10	100	20	20	N	20	30
71V1301A	500	1.0	N	N	7	70	10	20	N	20	30
70V418A	300	<1.0	N	N	10	70	30	20	N	<20	30
71V721A	700	1.0	N	N	10	200	15	20	N	<20	70
71V1302A	500	1.0	N	N	7	100	15	20	N	20	30
71V1299A	500	1.0	N	N	7	70	20	20	N	<20	20
71V937A	500	1.0	N	N	5	70	50	20	N	<20	20
71V695A	500	1.0	N	N	10	100	30	20	N	<20	30
71V1300A	500	1.0	N	N	7	70	10	20	N	20	20
71V694A	700	<1.0	N	N	10	100	30	20	N	<20	50
71V963A	700	2.0	N	N	10	100	20	20	N	20	50
71V719A	700	1.5	N	N	10	150	30	50	N	<20	50
71V977A	500	1.0	N	N	7	70	20	20	N	<20	30
71V697A	500	1.0	N	N	7	100	30	20	N	20	30
70V419A	300	<1.0	N	N	10	150	20	20	N	<20	20
71V718A	700	1.5	N	N	10	150	50	50	N	<20	50
71V796A	300	1.0	N	N	10	200	10	20	N	<20	70
71V964A	700	1.5	N	N	10	150	20	20	N	<20	50
71V978A	500	1.0	N	N	15	100	30	20	N	20	50
70V600A	500	1.0	N	N	20	150	10	<20	N	20	70
71V783A	300	1.0	N	N	15	200	50	20	N	20	200
71V698A	500	<1.0	N	N	7	100	15	20	N	<20	30
71V786A	500	<1.0	N	N	5	50	10	20	N	<20	20
71V781A	500	1.0	N	N	10	150	20	20	N	<20	70
71V979A	500	1.0	N	N	10	100	20	20	N	<20	50
71V785A	500	1.5	N	N	10	100	15	20	N	<20	50
70V401	500	1.0	N	N	7	50	<5	20	N	20	15
70V420A	300	<1.0	N	N	10	70	10	<20	N	<20	10
71V787A	500	<1.0	N	N	15	500	15	20	N	<20	100
71V702A	500	<1.0	N	N	5	50	20	20	N	<20	15
70V413A	300	<1.0	N	N	15	2,000	5	20	N	<20	100
70V412A	300	1.0	N	N	20	700	5	20	N	<20	100
71V699A	700	1.0	N	N	7	100	20	20	N	<20	50
70V402	700	1.0	N	N	10	50	15	20	N	20	15
70V415A	300	1.5	N	N	50	500	10	20	N	<20	150
71V780A	500	1.0	N	N	10	100	50	20	N	<20	50
71V704A	700	1.0	N	N	10	100	15	20	N	20	30
71V795A	500	1.5	N	N	7	100	10	20	N	<20	30
70V416A	300	<1.0	N	N	10	200	5	20	N	20	100
71V788A	500	<1.0	N	N	5	100	10	20	N	<20	20
71V784A	700	1.0	N	N	10	100	15	20	N	<20	30
71V782A1	500	1.0	N	N	7	20	50	100	N	<20	30

A-horizon Soil Samples--continued

Sample	S-PH	S-SN	S-SC	S-SN	S-SP	S-V	S-W	S-Y	S-ZN	S-ZR
71V723A	10	N	7	N	500	70	N	N	N	150
71V853A	15	N	20	N	1,000	200	N	20	200	100
71V976A	15	N	10	N	200	100	N	15	N	200
71V652A	10	N	20	N	200	150	N	20	200	500
71V1298A	10	N	10	N	200	100	N	15	N	200
70V417A	20	N	7	N	200	70	N	15	N	200
71V693A	10	N	15	N	500	100	N	15	N	200
71V962A	10	N	15	N	500	100	N	10	N	70
71V722A	20	N	15	N	200	100	N	15	N	300
71V1301A	10	N	15	N	500	100	70	15	N	150
70V418A	20	N	7	N	200	70	N	15	N	150
71V721A	20	N	10	N	500	50	N	10	N	200
71V1302A	15	N	10	N	700	100	50	10	N	200
71V1299A	10	N	10	N	700	70	500	10	N	200
71V997A	20	N	10	N	150	100	N	15	N	150
71V695A	10	N	15	N	700	150	N	15	N	200
71V1300A	10	N	10	N	700	100	N	10	N	200
71V694A	15	N	15	N	700	150	N	20	N	300
71V963A	10	N	15	N	500	100	N	15	N	300
71V719A	20	N	10	N	300	100	N	20	N	300
71V977A	15	N	10	N	200	100	N	15	N	200
71V697A	15	N	15	N	500	150	N	20	N	200
70V419A	10	N	7	N	200	70	N	20	N	200
71V718A	20	N	10	N	700	100	N	20	N	150
71V706A	10	N	20	N	500	150	N	10	N	150
71V964A	10	N	15	N	500	100	N	10	N	100
71V978A	15	N	15	N	200	150	N	20	N	300
70V400A	15	N	10	N	300	100	N	10	N	200
71V787A	15	N	20	N	150	100	N	20	N	200
71V698A	N	N	15	N	700	100	N	20	N	300
71V786A	10	N	10	N	200	50	N	10	N	150
71V781A	20	N	10	N	300	100	N	15	N	150
71V709A	20	N	10	N	300	100	N	10	N	150
71V785A	15	N	10	N	200	100	N	15	N	200
70V401	10	N	10	N	300	70	N	10	N	200
70V420A	10	N	10	N	150	100	N	20	N	300
71V787A	15	N	15	N	200	100	N	15	<200	150
71V702A	10	N	10	N	150	70	N	20	N	500
70V413A	10	N	5	N	200	100	N	15	N	200
70V412A	20	N	10	N	200	100	N	20	N	300
71V699A	10	N	15	N	500	100	N	10	N	200
70V402	20	N	10	N	500	70	N	10	N	200
70V415A	20	N	10	N	150	100	N	20	<200	150
71V730A	20	N	10	N	200	100	N	15	N	200
71V704A	15	N	15	N	700	150	N	20	N	300
71V795A	20	N	10	N	300	100	N	10	N	150
70V416A	10	N	7	N	150	70	N	10	N	150
71V733A	15	N	10	N	500	70	N	15	N	300
71V704A	15	N	10	N	500	100	N	15	N	200
71V732A1	15	N	15	N	150	150	N	20	N	200

A-horizon Soil Samples--continued

Sample	LATITUDE	LONGITUDE	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B
71V739A	47 59 47	91 43 16	3.0	1.0	.70	.30	300	N	N	N	10
71V705A	47 59 49	91 35 54	7.0	2.0	2.00	.50	700	N	N	N	10
71V790A1	47 59 49	91 43 21	3.0	1.0	.70	.50	700	N	N	N	15
71V794A1	47 59 55	91 43 10	5.0	2.0	.70	.50	1,000	N	N	N	<10

A-horizon Soil Samples--continued

Sample	S-PA	S-BE	S-BI	S-CD	S-CN	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
71V739A	500	<1.0	N	N	5	100	10	20	N	<20	20
71V735A	700	1.0	V	N	10	150	15	20	N	<20	50
71V730A1	500	1.0	N	N	5	100	7	20	N	<20	20
71V724A1	200	<1.0	N	N	15	500	20	20	N	<20	100

A-horizon Soil Samples--continued

Sample	S-PR	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
71V739A	15	N	7	N	300	50	N	10	N	150
71V705A	N	N	15	N	200	150	N	20	N	200
71V790A1	15	N	10	N	300	70	N	10	N	200
71V794A1	20	N	20	N	150	150	N	15	N	100

TABLE 2.--OUTCROP SAMPLES FROM THE VERMILLION DISTRICT, NORTHEASTERN MINNESOTA

Sample	LATITUDE	LONGITUDE	S-FEZ	S-MGZ	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B
SK1002R	47 48 47	92 14 21	7.0	5.00	1.5	.05	1,000	N	N	N	<10
SK1003R	47 48 52	92 13 42	1.0	.50	3.0	.10	200	N	N	N	10
SK1004R	47 49 0	92 13 17	1.5	1.00	3.0	.10	150	N	N	N	N
SK1005R	47 49 9	92 12 21	3.0	2.00	3.0	.10	300	N	N	N	N
SK1006R	47 49 17	92 11 47	2.0	1.00	3.0	.30	300	N	N	N	N
SK1007R	47 49 27	92 11 11	5.0	1.50	2.0	.70	500	N	N	N	N
SK1008R	47 49 44	92 10 42	3.0	1.50	3.0	.50	300	N	N	N	N
SK1009R	47 49 57	92 10 13	3.0	1.50	3.0	.20	300	N	N	N	N
SK1271R	47 50 3	92 15 32	5.0	1.50	2.0	.50	700	N	N	N	30
75V5002R	47 50 17	92 8 2	7.0	3.00	7.0	.50	1,500	N	N	N	<10
75V5000R	47 50 21	92 8 23	10.0	5.00	5.0	.50	1,000	3.0	N	N	15
75V5004R	47 50 24	92 7 18	10.0	5.00	5.0	.50	1,500	N	N	N	10
75V5003R	47 50 24	92 7 43	7.0	3.00	7.0	.70	1,500	N	N	N	<10
75V5001R	47 50 28	92 8 49	1.5	1.50	.7	.15	300	N	N	N	15
SK1272R	47 50 31	92 16 11	7.0	2.00	3.0	.50	1,000	N	N	N	30
75V5006R	47 50 34	92 6 34	15.0	3.00	7.0	.70	1,500	N	N	N	<10
SK1273R	47 50 37	92 16 39	10.0	2.00	2.0	.70	700	N	N	N	20
SK1215R	47 51 13	92 3 3	7.0	1.50	5.0	1.00	700	N	N	N	10
SK1213R	47 51 21	92 3 54	10.0	3.00	5.0	1.00	1,000	N	N	N	<10
SK1216R	47 51 23	92 2 41	5.0	1.00	5.0	.50	300	N	N	N	N
SK1217R	47 51 42	92 2 23	10.0	3.00	3.0	>1.00	1,500	N	N	N	N
SK1217R	47 51 42	92 2 23	3.0	.70	.7	.20	200	N	N	N	15
SK1218R	47 51 59	92 1 58	10.0	3.00	5.0	.70	700	N	N	N	N
SK1219R	47 52 12	92 1 43	7.0	3.00	5.0	.70	700	N	N	N	<10
SK1220R	47 52 25	92 1 20	10.0	3.00	5.0	.50	700	N	N	N	<10
SK1221R	47 52 34	92 1 4	3.0	1.50	3.0	.50	700	N	N	N	N
SK1405R1	47 52 38	92 18 2	10.0	3.00	2.0	.20	700	N	N	N	N
SK1406R	47 52 51	92 17 37	5.0	3.00	.3	.50	500	N	N	N	70
SK1406R1	47 52 51	92 17 37	10.0	2.00	7.0	.70	700	N	N	N	10
SK1225R	47 52 52	91 58 52	5.0	3.00	7.0	.15	700	N	N	N	N
SK1222R	47 52 53	92 0 18	2.0	1.00	7.0	.20	200	N	N	N	N
SK1224R	47 52 57	91 59 15	7.0	2.00	5.0	.50	500	N	N	N	N
SK1252R	47 52 58	92 21 34	3.0	.05	.2	.01	1,000	N	N	N	N
75V5014R	47 52 59	92 11 5	3.0	1.50	2.0	.20	300	N	N	N	15
SK1223R	47 53 2	91 59 56	10.0	3.00	5.0	1.00	700	N	N	N	N
75V5010R	47 53 4	92 11 37	10.0	2.00	7.0	.70	2,000	N	N	N	10
SK1277R	47 53 5	92 15 8	3.0	.70	3.0	.20	500	N	N	N	15
SK1278R	47 53 17	92 14 54	3.0	1.00	1.0	.30	300	N	N	N	70
SK1019RV	47 53 22	91 48 12	1.5	.30	2.0	.20	200	N	N	N	N
SK1256R1	47 53 22	92 14 21	2.0	.50	.5	.15	700	N	N	N	15
SK1256R2	47 53 22	92 14 21	15.0	.70	10.0	.10	5,000	N	N	N	<10
SK1018RV	47 53 30	91 48 0	2.0	.50	3.0	.30	300	N	N	N	N
SK1262R	47 53 33	92 9 41	3.0	1.50	2.0	.30	700	N	N	N	30
SK1279R	47 53 36	92 14 56	1.0	.20	.3	.07	200	N	N	N	N
SK1263R	47 53 40	92 9 32	10.0	3.00	2.0	.70	1,500	N	N	N	10
SK1021RV	47 53 42	91 48 49	2.0	.70	3.0	.20	200	N	N	N	N
SK1234R	47 53 44	92 15 52	10.0	3.00	5.0	.70	1,000	N	N	N	20
SK1336R	47 53 47	91 42 33	10.0	3.00	5.0	1.00	1,000	N	N	N	<10
SK1264R	47 53 52	92 9 32	15.0	5.00	3.0	.70	1,000	N	N	N	20
SK1020RV	47 53 54	91 48 20	5.0	1.50	2.0	.70	500	N	N	N	<10

Outcrop Samples

Sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
SK1002R	30	N	N	N	150	300	7	N	N	N	500
SK1003R	100	<1.0	N	N	7	10	20	N	N	N	20
SK1004R	70	<1.0	N	N	10	30	20	N	N	N	50
SK1005R	70	<1.0	N	N	50	70	30	N	N	N	150
SK1006R	150	<1.0	N	N	20	100	70	N	N	N	50
SK1007R	150	N	N	N	50	300	70	N	N	N	150
SK1008R	150	<1.0	N	N	20	100	70	N	N	N	70
SK1009R	100	<1.0	N	N	20	200	100	N	N	N	30
SK1271R	1,500	1.5	N	N	15	20	50	70	N	N	30
75V5002R	100	N	N	N	30	300	<5	N	5	N	150
75V5000R	200	N	N	N	50	500	15	N	N	N	150
75V5004R	150	<1.0	N	N	70	500	10	N	N	N	200
75V5003R	700	1.0	N	N	30	500	30	N	<5	N	300
75V5001R	700	2.0	N	N	N	30	5	N	N	N	20
SK1272R	1,500	1.5	N	N	30	20	20	70	N	N	50
75V5006R	70	<1.0	N	N	70	500	15	N	5	N	100
SK1273R	2,000	1.0	N	N	50	50	20	100	N	N	70
SK1215R	700	<1.0	N	N	50	70	50	N	N	N	70
SK1213R	150	<1.0	N	N	70	300	200	N	N	N	150
SK1216R	300	<1.0	N	N	20	200	30	N	N	N	100
SK1217R	150	N	N	N	100	200	700	N	N	N	200
SK1217R	500	1.5	N	N	10	10	15	N	N	N	30
SK1218R	150	N	N	N	100	500	200	N	N	N	300
SK1219R	150	N	N	N	70	300	50	N	N	N	150
SK1220R	150	<1.0	N	N	70	500	70	N	N	N	300
SK1221R	200	1.0	N	N	15	50	50	N	N	N	70
SK1405R1	100	<1.0	N	N	150	700	20	N	N	N	500
SK1406R	300	2.0	N	N	50	200	50	N	10	N	100
SK1406R1	150	1.0	N	N	100	300	70	N	N	N	300
SK1225R	100	N	N	N	50	200	30	N	N	N	70
SK1222R	150	N	N	N	15	30	10	N	N	N	100
SK1224R	150	<1.0	N	N	70	300	30	N	N	N	200
SK1252R	200	1.0	N	N	<5	N	20	N	N	N	5
75V5014R	500	1.0	N	N	20	30	30	N	N	N	20
SK1223R	200	<1.0	N	N	70	200	200	N	N	N	200
75V5010R	50	<1.0	N	N	70	300	150	N	N	N	150
SK1277R	300	1.0	N	N	10	15	10	30	N	N	10
SK1278R	500	1.0	N	N	15	30	15	N	N	N	70
SK1019RV	150	<1.0	N	N	15	15	50	N	N	N	30
SK1256R1	1,000	1.5	N	N	10	10	5	N	N	N	10
SK1256R2	1,500	5.0	N	N	15	30	5	150	N	N	30
SK1018RV	200	<1.0	N	N	15	10	30	N	N	N	20
SK1262R	1,500	2.0	N	N	15	20	30	50	N	N	30
SK1279R	100	7.0	N	N	N	10	5	N	N	N	7
SK1263R	1,000	3.0	N	N	50	30	5	100	N	N	50
SK1021RV	150	<1.0	N	N	20	50	50	N	N	N	50
SK1234R	300	<1.0	N	N	70	300	100	N	N	N	150
SK1336R	200	<1.0	N	N	150	300	300	N	N	N	500
SK1264R	700	<1.0	N	N	100	20	150	N	N	N	200
SK1020RV	200	<1.0	N	N	30	200	150	N	N	N	70

Outcrop Samples

Sample	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZR	S-ZR
SK1002R	N	N	7	N	150	50	N	N	N	N
SK1003R	N	N	5	N	1,000	50	N	N	N	N
SK1004R	N	N	5	N	300	50	N	N	N	10
SK1005R	N	N	5	N	300	50	N	N	N	20
SK1006R	N	N	7	N	300	50	N	N	N	20
SK1007R	<10	N	10	N	300	100	N	<10	N	20
SK1008R	N	N	10	N	300	200	N	<10	N	30
SK1009R	N	N	7	N	200	150	N	15	N	50
SK1271R	10	N	10	N	1,500	100	N	10	N	30
75V5002R	<10	N	30	N	100	200	N	15	N	150
75V5000R	30	N	50	N	100	500	N	20	N	150
75V5004R	N	N	50	N	<100	500	N	15	N	100
75V5003R	10	N	50	N	150	500	N	20	N	20
75V5001R	10	N	<5	N	300	300	N	10	N	100
SK1272R	15	N	10	N	2,000	50	N	N	N	100
75V5006R	15	N	50	N	150	300	N	15	N	70
SK1273R	10	N	15	N	1,000	700	N	15	N	30
SK1215R	<10	N	15	N	1,000	500	N	20	N	200
SK1213R	N	N	30	N	300	300	N	20	N	150
SK1216R	N	N	7	N	700	150	N	30	N	150
SK1217R	N	N	30	N	300	500	N	15	N	70
SK1217R	N	N	5	N	N	500	N	50	500	100
SK1218R	N	N	20	N	200	50	N	<10	N	50
SK1219R	N	N	7	N	300	300	N	20	N	50
SK1220R	N	N	10	N	300	500	N	15	N	70
SK1221R	N	N	10	N	300	200	N	10	N	50
SK1405R1	N	N	7	N	300	100	N	15	N	70
SK1406R	30	N	30	N	150	70	N	N	N	10
SK1406R1	10	N	15	N	300	300	N	30	300	200
SK1225R	N	N	30	N	300	200	N	20	N	200
SK1222R	N	N	7	N	700	700	N	N	N	N
SK1224R	N	N	7	N	500	70	N	N	N	15
SK1252R	N	N	N	N	N	150	N	N	N	30
75V5014R	N	N	5	N	500	15	N	N	N	N
SK1223R	N	N	10	N	300	150	N	N	N	100
75V5010R	<10	N	50	N	150	500	N	15	N	70
SK1277R	15	N	<5	N	1,000	700	N	30	N	70
SK1278R	10	N	5	N	500	150	N	<10	N	200
SK1019RV	<10	N	5	N	300	150	N	N	N	70
SK1256R1	20	N	5	N	700	70	N	10	N	30
SK1256R2	20	N	5	N	700	70	N	N	N	100
SK1018RV	<10	N	5	N	50	50	N	150	N	50
SK1262R	30	N	7	N	300	150	N	10	N	70
SK1279R	30	N	N	N	1,000	150	N	15	N	200
SK1263R	15	N	10	N	N	20	N	N	N	70
SK1021RV	<10	N	5	N	1,000	300	N	50	N	300
SK1234R	<10	N	30	N	500	70	N	10	N	50
SK1336R	N	N	20	N	300	300	N	15	N	70
SK1264R	10	N	30	N	300	300	N	10	N	50
SK1020RV	10	N	10	N	700	700	N	15	N	100
					300	200	N	20	N	150

Outcrop Samples--continued

Sample	LATITUDE	LONGITUDE	S-FEZ	S-MGZ	S-CAZ	S-TIZ	S-MN	S-AG	S-AS	S-AU	S-B
SK1022RV	47 53 58	91 49 11	1.5	.30	3.0	.30	150	N	N	N	N
SK1016PV	47 54 0	91 47 11	2.0	.50	3.0	.50	300	N	N	N	N
SK1017RV	47 54 9	91 47 19	3.0	.70	3.0	.20	300	N	N	N	N
SK1236R	47 54 10	92 16 12	10.0	1.50	3.0	>1.00	1,500	N	N	N	<10
SK1015R	47 54 11	91 46 47	2.0	.50	3.0	.30	200	N	N	N	<10
SK1015RV	47 54 11	91 46 47	1.0	.20	.7	.10	200	N	N	N	<10
SK1037R	47 54 18	91 56 26	2.0	1.00	3.0	.30	300	N	N	N	N
SK1322R	47 54 22	91 42 20	3.0	1.00	1.0	.20	700	N	N	N	20
SK1033R	47 54 23	91 55 18	3.0	1.50	3.0	.20	300	N	N	N	N
SK1036R	47 54 23	91 56 6	3.0	.70	3.0	.30	300	N	N	N	30
SK1032R	47 54 24	91 54 59	3.0	1.50	2.0	.30	500	N	N	N	N
SK1034R	47 54 25	91 55 37	3.0	1.50	3.0	.15	300	N	N	N	N
SK1031R	47 54 26	91 54 47	5.0	.70	1.5	.20	500	N	N	N	10
SK1035R	47 54 26	91 55 47	1.5	.50	3.0	.50	300	N	N	N	<10
SK1030R	47 54 30	91 54 40	2.0	1.50	3.0	.20	500	N	N	N	N
SK1320R	47 54 33	91 43 10	5.0	1.50	7.0	.30	300	N	N	N	<10
SK1323R	47 54 35	91 42 0	.5	.20	.7	.07	100	N	N	N	N
SK1023RV	47 54 37	91 49 55	5.0	1.50	2.0	.50	500	N	N	N	10
SK1028R	47 54 40	91 54 25	3.0	1.50	3.0	.30	300	N	N	N	<10
SK1330R	47 54 44	91 38 43	15.0	.50	5.0	.02	>5,000	N	N	N	<10
SK1013R	47 54 57	91 47 2	2.0	.70	3.0	.20	300	N	N	N	N
SK1318R1	47 54 59	91 43 36	10.0	2.00	5.0	.50	700	N	N	N	<10
SK1315R	47 55 10	91 43 59	7.0	2.00	7.0	.30	700	N	N	N	N
SK1012R	47 55 10	91 47 15	2.0	.70	3.0	.30	300	N	N	N	N
SK1316R	47 55 11	91 43 34	10.0	2.00	7.0	1.00	700	N	N	N	N
SK1314R	47 55 11	91 44 21	7.0	1.50	7.0	.50	700	N	N	N	N
SK1347R	47 55 44	91 41 19	10.0	3.00	7.0	.70	700	N	N	N	<10
SK1326R	47 55 47	91 35 55	3.0	1.50	1.5	.30	500	N	N	N	N
SK1027R	47 55 48	91 46 23	3.0	.50	3.0	.30	300	N	N	N	<10
SK1027RV	47 55 48	91 46 23	1.5	.50	3.0	.20	300	N	N	N	30
SK1312R	47 55 53	91 38 2	15.0	2.00	7.0	>1.00	1,000	N	N	N	N
SK1026R	47 55 56	91 46 29	2.0	.70	3.0	.30	300	N	N	N	<10
SK1345R	47 56 11	91 36 11	10.0	2.00	7.0	.70	700	N	N	N	<10
SK1309R	47 56 14	91 38 17	10.0	2.00	7.0	>1.00	1,000	N	N	N	N
SK1344R	47 56 19	91 36 14	10.0	3.00	5.0	1.00	1,000	N	N	N	<10
SK1343R	47 56 29	91 36 9	15.0	3.00	5.0	1.00	1,000	N	N	N	<10
SK1307R	47 56 34	91 38 28	15.0	3.00	7.0	>1.00	1,000	N	N	N	N
SK1305R1	47 56 52	91 38 19	15.0	3.00	5.0	>1.00	1,500	N	N	N	N
SK1338R	47 57 11	91 35 52	10.0	2.00	5.0	.70	700	N	N	N	<10
SK1337R	47 57 22	91 35 53	10.0	2.00	5.0	.70	700	N	N	N	<10
SK1302R	47 58 33	91 38 14	10.0	1.00	3.0	.70	700	N	N	N	<10

Outcrop Samples--continued

Sample	S-BA	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI
SK1022RV	150	<1.0	N	N	10	10	30	N	N	N	15
SK1016RV	200	<1.0	N	N	15	15	30	N	N	N	20
SK1017RV	150	<1.0	N	N	15	30	70	N	N	N	30
SK1236R	500	2.0	N	N	50	10	150	N	N	N	50
SK1015R	200	<1.0	N	N	15	20	30	N	N	N	50
SK1015RV	200	2.0	N	N	5	N	20	N	N	N	20
SK1037R	100	N	N	N	20	50	50	N	N	N	70
SK1322R	700	1.5	N	N	15	50	5	N	N	N	30
SK1033R	100	N	N	N	30	700	70	N	N	N	150
SK1036R	150	N	N	N	15	70	50	N	N	N	30
SK1032P	150	N	N	N	30	100	70	N	N	N	150
SK1034R	100	N	N	N	30	150	50	N	N	N	100
SK1031R	700	1.0	N	N	15	70	30	N	N	N	30
SK1035R	100	N	N	N	15	50	30	N	N	N	20
SK1030R	200	<1.0	N	N	50	200	150	N	N	N	100
SK1320R	150	<1.0	N	N	70	200	30	N	N	N	150
SK1323R	1,500	1.0	N	N	N	N	<5	N	N	N	5
SK1023RV	200	<1.0	N	N	50	300	100	N	N	N	100
SK1028R	150	<1.0	N	N	20	30	50	N	N	N	50
SK1330R	150	2.0	N	N	20	10	200	N	N	N	10
SK1013R	150	<1.0	N	N	30	15	30	N	N	N	30
SK1318R1	150	<1.0	N	N	100	300	70	N	N	N	150
SK1315R	200	1.0	N	N	50	10	30	N	N	N	100
SK1012R	150	<1.0	N	N	30	50	30	N	N	N	50
SK1316R	150	<1.0	N	N	50	150	150	N	N	N	70
SK1314R	300	1.0	N	N	30	50	100	N	N	N	70
SK1347R	200	<1.0	N	N	70	50	50	N	N	N	150
SK1326R	2,000	1.0	N	N	15	50	15	30	N	N	30
SK1027R	150	<1.0	N	N	15	300	50	N	N	N	30
SK1027RV	500	<1.0	N	N	10	20	20	N	N	N	20
SK1312R	150	<1.0	N	N	70	70	200	N	N	N	70
SK1026R	200	<1.0	N	N	10	50	30	N	N	N	30
SK1345R	150	<1.0	N	N	70	300	70	N	N	N	200
SK1309R	100	N	N	N	70	100	30	N	N	N	100
SK1344R	200	N	N	N	100	300	150	N	N	N	300
SK1343R	200	<1.0	N	N	100	200	150	N	N	N	300
SK1307R	100	N	N	N	150	300	300	N	N	N	150
SK1305R1	100	N	N	N	150	300	300	N	N	N	200
SK1338R	200	<1.0	N	N	70	300	100	N	N	N	150
SK1337R	200	<1.0	N	N	70	200	200	N	N	N	150
SK1302R	200	<1.0	N	N	20	50	50	N	N	N	50

Outcrop Samples--continued

Sample	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR
SK1022RV	<10	N	5	N	500	70	N	10	N	30
SK1016RV	<10	N	7	N	500	100	N	15	N	50
SK1017RV	<10	N	7	N	300	70	N	N	N	20
SK1236R	15	N	20	N	500	500	N	50	300	200
SK1015R	10	N	5	N	300	100	N	10	N	70
SK1015RV	20	N	N	N	150	30	N	N	N	50
SK1037R	N	N	5	N	300	70	N	N	N	10
SK1322R	20	N	7	N	500	70	N	<10	N	70
SK1033R	<10	N	10	N	300	150	N	N	N	15
SK1036R	N	N	7	N	500	150	N	10	N	20
SK1032R	<10	N	7	N	300	100	N	<10	N	30
SK1034R	N	N	<5	N	300	70	N	N	N	20
SK1031R	15	N	5	N	500	100	N	10	N	70
SK1035R	N	N	10	N	300	150	N	10	N	30
SK1030R	<10	N	7	N	300	100	N	10	N	20
SK1320R	N	N	5	N	300	100	N	N	N	20
SK1323R	15	N	N	N	500	20	N	N	N	70
SK1023RV	15	N	15	N	300	150	N	15	N	50
SK1028R	N	N	10	N	300	100	N	15	N	50
SK1330R	N	N	N	N	N	50	N	10	N	15
SK1013R	<10	N	5	N	300	70	N	N	N	30
SK1318R1	N	N	15	N	300	300	N	10	N	70
SK1315R	N	N	7	N	300	70	N	10	N	30
SK1012R	N	N	5	N	500	70	N	<10	N	30
SK1316R	N	N	50	N	300	500	N	30	N	70
SK1314R	N	N	15	N	500	200	N	20	N	30
SK1347R	N	N	15	N	300	150	N	20	N	100
SK1326R	20	N	7	N	1,500	100	N	10	N	150
SK1027R	N	N	7	N	300	150	N	10	N	50
SK1027RV	N	N	5	N	300	70	N	15	N	50
SK1312R	N	N	50	N	500	700	N	30	N	100
SK1026R	N	N	7	N	500	100	N	<10	N	20
SK1345R	N	N	7	N	300	200	N	10	N	50
SK1309R	N	N	50	N	500	500	N	30	N	50
SK1344R	N	N	20	N	300	300	N	20	N	100
SK1343R	N	N	20	N	300	300	N	20	N	70
SK1307R	N	N	70	N	200	1,000	N	70	N	150
SK1305R1	N	N	70	N	200	1,000	N	100	N	200
SK1338R	N	N	10	N	300	300	N	20	N	70
SK1337R	N	N	7	N	300	200	N	15	N	70
SK1302R	N	N	20	N	500	300	N	N	N	15