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Analyses and description
of
geochemical samples
Mountain Lake Wilderness Study Area
Virginia and West Virginia

by
Leung Mei, J.D. Fletcher, Norma Rait
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This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards and nomenclature.

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Abstract

Semiquantitative emission spectrographic analyses for 64 elements on 98 stream sediment and 122 rock samples from Mountain Lake Wilderness Study Area, Giles and Craig Counties, Virginia and Monroe County, West Virginia, are reported here in detail. Locations for all samples are in Universal Transverse Mercator (UTM) coordinates. Brief descriptions of rock samples are also included. Rocks analysed are mostly sandstone. Samples of hematitic sandstone of the Rose Hill Formation and limonite-cemented sandstone of the Rocky Gap Sandstone contain high values of iron; these rocks are submarginal iron resources. Some of these iron-rich samples have a little more barium, copper, cobalt, lead, silver, and/or zinc than in average sandstone, but they do not suggest the presence of economic deposits of these metals. A few samples of Tuscarora Quartzite contain moderate amounts of manganese. These are from a submarginal manganese resource. No other obviously anomalous values related to mineralized rock are present in the data.

Introduction

The analyses reported in this open-file report are on samples from the Mountain Lake Wilderness Study Area and vicinity, Giles and Craig Counties, Virginia, and Monroe County, West Virginia, collected by M.P. Foose, P.J. Geraci, F.G. Lesure, D.R. McQueen, P.L. Weis, and Helmuth Wedow in April 1975. The samples include 98 stream sediments from the study area and vicinity and 122 rock samples. The rock samples, which are described briefly, are for the most part chip samples of representative materials collected from outcrop or road cut. A few are composite samples of representative float material. Some of the rock is partly weathered but the freshest material available was generally sampled.

Sample locations and discussion of the results of the analytical work are given by Lesure and others (1978).

Rock samples

Sample No.

Description

VML 001	Chip sample, grayish-orange, iron-stained, friable sandstone; upper Keefer Sandstone.
VML 005	Chip sample, light brownish-gray, iron-stained, fine-grained sandstone; upper Keefer Sandstone.
VML 007	Chip sample, very pale-orange, friable, very fine- to fine-grained sandstone; upper Keefer Sandstone.

- VML 009 Chip sample, limonite, bedded (?) or replacement of shale; upper Keefer Sandstone.
- VML 010 Chip sample, light-tan, friable, fine-grained sandstone, dark-brown to black manganese oxide cement locally; upper Keefer Sandstone.
- VML 011 Chip sample, very pale-orange, friable sandstone, minor dark minerals; Keefer Sandstone.
- VML 013 Chip sample, 1.5 m, dark-grayish-red, fine- to medium-grained, hematitic sandstone, minor white and pale-red clay chips; Rose Hill Formation. Sp. G. 3.07.
- VML 014 Chip sample, pale yellow-brown, very fine-grained sandstone; upper Tuscarora Quartzite.
- VML 015 Chip sample, 1 m, light-gray to brown, iron-stained, fine-grained quartz conglomerate; lower Tuscarora Quartzite.
- VML 017 Chip sample, 0.6 m, grayish-red, hematitic sandstone, pale-red clay seams; Rose Hill Formation. Sp. G. 2.88.
- VML 018 Chip sample, 1.5 m, pale yellow-brown, coarse-grained sandstone; Keefer Sandstone.
- VML 019 Chip sample, red, fine- to coarse-grained, hematitic sandstone; Rose Hill Formation.
- VML 100 Chip sample, 2 m, dark-grayish-red, hematitic sandstone; Rose Hill Formation. Sp. G. 2.87.
- VML 101 Chip sample, 1 m, light-gray, fine-grained sandstone and quartz conglomerate; Tuscarora Quartzite.
- VML 102 Chip sample, 1 m, dark-grayish-red, hematitic sandstone; Rose Hill Formation. Sp. G. 2.85.
- VML 103 Chip sample, 2 m, light-gray, iron-stained, fine-grained, vitreous quartzite; Keefer Sandstone.
- VML 104 Chip sample, very light-gray, fine-grained quartz-pebble conglomerate; Tuscarora Quartzite.
- VML 105 Composite of float, pale red, very fine-grained sandstone; Juniata Formation.
- VML 107 Chip sample, 2 m, brownish-gray, fine- to medium-grained, limonite-cemented sandstone; Rocky Gap Sandstone.
- VML 108 Chip sample, 1 m, pinkish-gray, very fine-grained sandstone; Tuscarora Quartzite.

- VML 109 Chip sample, 1m, dark grayish-red, hematitic sandstone, minor pale-red clay galls; Rose Hill Formation. Sp. G. 3.04.
- VML 110 Chip sample, 1 m, white, iron-stained, weathered, friable, very fine- to very coarse-grained sandstone; Keefer Sandstone.
- VML 112 Chip sample, 2 m, grayish-brown, porous, limonite-cemented sandstone; Rocky Gap Sandstone.
- VML 113 Grab sample, black shale, minor pyrite; Millboro Shale.
- VML 115 Chip sample, 2 m, dark grayish-red, fine-grained, hematitic sandstone; Rose Hill Formation. Sp. G. 3.12.
- VML 116 Chip sample, 1 m, pale-red, iron-stained, fine- to very coarse-grained sandstone; Tuscarora Quartzite.
- VML 117 Chip sample, 1 m, white, weathered, iron-stained, fine-grained sandstone; Keefer Sandstone.
- VML 119 Chip sample, 2 m, light-gray, iron-stained, very fine- to fine-grained sandstone; Keefer Sandstone.
- VML 121 Chip sample, 0.6 m, white, friable sandstone; upper Keefer Sandstone.
- VML 122 Chip sample, porous fine- to medium-grained sandstone, brachiopod shell molds; Rocky Gap Sandstone.
- VML 123 Chip sample, 1 m, medium olive-gray siltstone and shale; Brallier Formation.
- VML 124 Composite of float, grayish-red, very fine-grained sandstone; Juniata Formation.
- VML 125 Chip sample, 2 m, grayish-orange, poorly sorted, fine to coarse-grained sandstone; Tuscarora Quartzite.
- VML 126 Chip sample, 1 m, dark grayish-red, fine-grained, hematitic sandstone; Rose Hill Formation. Sp. G. 3.07.
- VML 127 Chip sample, 2 m, light-gray, very fine-grained sandstone; Tuscarora Quartzite.
- VML 129 Chip sample, 1 m, light-gray, very fine-grained sandstone; Keefer Sandstone.
- VML 131 Chip sample, 1 m, white, very fine- to coarse-grained sandstone, minor dark minerals; Keefer Sandstone.
- VML 132 Chip sample, 1 m, brown, limonite-cemented, fine- to very coarse-grained sandstone; Rocky Gap Sandstone.

- VML 133 Chip sample, 1 m, white, iron-stained, medium- to coarse-grained sandstone; Keefer Sandstone.
- VML 135 Chip sample, 2 m, grayish-red, fine- to medium-grained, hematitic sandstone, large pale red clay galls; Rose Hill Formation. Sp. G. 3.12.
- VML 136 Chip sample, 1 m, pale yellowish-gray, fine-grained quartz granule conglomerate; Tuscarora Quartzite.
- VML 137 Chip sample, 1 m, pale-red, iron-stained, fine- to coarse-grained sandstone; Keefer Sandstone.
- VML 138 Chip sample, 1 m, white to tan, iron-stained, friable, fine- to coarse-grained sandstone; Keefer Sandstone.
- VML 139 Chip sample, 1 m, dark grayish-red, hematitic sandstone interlayered with grayish-red shale; Rose Hill Formation. Sp. G. 2.69.
- VML 140 Chip sample, 2 m, pale-brown, weathering pale-orange, very coarse-grained sandstone and fine pebble conglomerate; lower Tuscarora Quartzite.
- VML 142 Chip sample, 1 m, black shale; Millboro Shale.
- VML 143 Composite sample, layer 0.3-0.6 m, dark grayish-red and brownish-black, iron-manganese cemented, weathered sandstone; upper Tuscarora Quartzite.
- VML 144 Chip sample, 2 m, light-gray, pale yellowish-brown, iron-stained, very fine-grained sandstone; Tuscarora Quartzite.
- VML 145 Chip sample, 1 m, dark grayish-red, fine-grained, hematitic sandstone, pale red clay galls; Rose Hill Formation, Sp. G. 3.07.
- VML 147 Composite sample, dark-gray, manganese-cemented sandstone; upper Tuscarora Quartzite.
- VML 148 Composite sample of dump material, dark gray-black, manganese-cemented sandstone; upper Tuscarora Quartzite.
- VML 149 Chip sample, 2 m, dark grayish-red, fine-grained sandstone, some limonite in fractures; Rose Hill Formation; Sp. G. 3.02.
- VML 150 Chip sample, 1 m, light-gray, iron-stained, fine-grained sandstone; Keefer Sandstone.

- VML 151 Chip sample, 1 m, light-gray, iron-cemented sandstone bed; upper Tuscarora Quartzite.
- VML 152 Chip sample, 2 m, light-gray, fine-grained sandstone; Tuscarora Quartzite.
- VML 209 Composite sample, pinkish-gray, fine-grained sandstone; Tuscarora Quartzite.
- VML 211 Composite sample, pale yellow-brown, very fine-grained sandstone, iron oxides along joints; Tuscarora Quartzite.
- VML 218 Grayish-orange, vitreous, fine-grained quartzite; Keefer Sandstone.
- VML 219 Light-gray, iron-stained vitreous quartzite; Keefer Sandstone.
- VML 222 Dark grayish-red, hematitic sandstone, Rose Hill Formation. Sp. G. 2.75.
- VML 231 Olive-drab shale; Brallier Formation.
- VML 244 Grayish-orange, friable, fine- to coarse-grained sandstone; Keefer Sandstone.
- VML 301 Brown, poorly sorted, limonite-cemented, porous sandstone; Rocky Gap Sandstone. Sp. G. 2.68.
- VML 302 Grayish-red, hematitic sandstone; lower Rose Hill Formation.
- VML 307 Light-gray sandstone; Tuscarora Quartzite.
- VML 308 Light grayish-red, fine-grained sandstone; Juniata Formation.
- VML 311 Light-gray sandstone; Tuscarora Quartzite.
- VML 312 Grayish-red, hematitic sandstone; lower Rose Hill Formation.
- VML 400 Light-gray, fine-grained sandstone; Tuscarora Quartzite.
- VML 401 Grayish-red, medium- to coarse-grained, hematitic sandstone, weathered surface; Rose Hill Formation. Sp. G. 3.01.
- VML 402 Fractured, grayish-red, hematitic sandstone, limonite fracture fillings; Rose Hill Formation(?). Sp. G. 3.32.
- VML 403 Pale-red to pale-yellowish-brown, very fine-grained sandstone; Juniata Formation.
- VML 404 Light-gray, poorly sorted, fine- to very coarse-grained sandstone; Tuscarora Quartzite.

- VML 405 Dark grayish-red, fine-grained, hematitic sandstone, pale-red clay galls; Rose Hill Formation.
- VML 406 White to pale-orange, very fine-grained sandstone; Keefer Sandstone.
- VML 407 Pale-red, iron-stained vitreous quartzite; Keefer Sandstone(?).
- VML 409 Dark-gray, manganese-cemented, friable, sandstone; Rocky Gap Sandstone.
- VML 410 White, very fine-grained sandstone; Tuscarora Quartzite.
- VML 412 Conglomeratic sandstone; Tuscarora Quartzite.
- VML 413 Light gray, fine-grained, quartz-pebble conglomerate; Tuscarora Quartzite.
- VML 414 Dark grayish-red, fine- to medium-grained, hematitic sandstone; Rose Hill Formation. Sp. G. 2.88.
- VML 416 Very pale-orange, vitreous quartzite; Tuscarora Quartzite.
- VML 417 Dark grayish-red, fine-grained, hematitic sandstone; Rose Hill Formation. Sp. G. 2.78.
- VML 418 Iron-stained, pale-red to tan, very fine-grained, vitreous quartzite; Tuscarora Quartzite.
- VML 419 Brown, limonite seams cutting tan, very fine-grained, brecciated sandstone; Tuscarora Quartzite.
- VML 420 Light-gray, stained yellow-brown, fine-grained, quartz pebble conglomerate; Tuscarora Quartzite.
- VML 421 Light-gray sandstone; Tuscarora Quartzite.
- VML 423 Grayish-red, hematitic sandstone; Rose Hill Formation.
- VML 424 Brecciated, light-colored sandstone; Keefer Sandstone.
- VML 425 Yellowish, poorly sorted, limonite-cemented sandstone; Rocky Gap Sandstone.
- VML 426 Manganese-cemented, friable sandstone; Rocky Gap Sandstone (?).
- VML 428 Limonite-cemented, friable sandstone; Rocky Gap Sandstone.
- VML 429 Limonite-cemented, friable sandstone; Rocky Gap Sandstone.
- VML 431 Tan, friable sandstone; upper Keefer Sandstone.

VML 432	Light gray sandstone; Keefer Sandstone.
VML 434	Black shale; Millboro Shale.
VML 435	Light-gray sandstone; Keefer Sandstone.
VML 437	Pale grayish-red, fine-grained sandstone; Juniata Formation.
VML 438	Light-gray, brecciated sandstone, manganese-cemented; Tuscarora Quartzite.
VML 440	Grayish-red, hematitic sandstone; Rose Hill Formation.
VML 441	Yellowish, thin bedded, friable, shaly sandstone; Brallier Formation.
VML 442	Black shale; Millboro Shale.
VML 443	Olive-gray shale; Brallier Formation.
VML 444	Grayish-red, hematitic sandstone; Rose Hill Formation.
VML 446	Light-gray sandstone; Keefer Sandstone.
VML 448	Light-gray sandstone; Keefer Sandstone(?).
VML 449	Light-gray sandstone; Keefer Sandstone.
VML 450	Limonite-cemented, porous, friable, brecciated, sandstone; Rocky Gap Sandstone.
VML 451	Light-gray sandstone; Keefer Sandstone.
VML 452	Grayish-red, hematitic sandstone; Rose Hill Formation.
VML 453	Limonite-cemented sandstone; Rocky Gap Sandstone.
VML 500	Chip sample, 2 m, light yellowish-gray, very fine-grained sandstone; Tuscarora Quartzite.
VML 501	Chip sample, 3 m, light gray, very coarse-grained sandstone; Tuscarora Quartzite.
VML 502	Chip sample, 1.2 m, dark grayish-red, hematitic sandstone; Rose Hill Formation. Sp. G. 3.02.
VML 503	Chip sample, 4 m, light-gray, very fine-grained sandstone; Tuscarora Quartzite.
VJM 100	Dark-gray, calcareous concretion, minor iron sulfides; Millboro Shale, on Va. State Route 18, across Potts Creek from Boiling Spring School.
VJM 101	Similar sample as above.

Analytical techniques

The stream sediment samples were dried and sieved in the laboratory; the minus 80-mesh fraction was used for analyses. The rock samples were crushed and split.

The semiquantitative emission spectrographic analyses were made using computerized equipment. This method permits a rapid electronic recording on magnetic tape of the optical transmissions of all lines in a spectrogram. The tape is read by a computer which has been programmed to determine the concentrations of 64 elements. The standard deviation of any single answer should be taken as plus 50 percent and minus 33 percent. The third significant figure, when reported, appears solely for programming convenience and should not be used in publications.

All the samples were also tested for gold by a combined fire assay-atomic absorption method in the U.S. Geological Survey laboratories, Reston, Va., by Herbert Kirschenbaum and B.A. McCall. No gold was detected at a limit of detection of 0.05 parts per million (ppm) Au.

Explanation of table

The X and Y coordinates are Universal Transverse Mercator (UTM) grid, zone 17. The X coordinate is the easting value; the Y is the northing. Symbols used include: S, semiquantitative spectrographic analysis, <, less than lower limit; >, greater than upper limit; .0 interference for an element which cannot be resolved by any routine method. The limits apply under ideal conditions, and in some cases interferences will narrow the limits. All data are in parts per million (ppm) except where indicated in percent (%). Elements looked for but not found and the lower limit of determination:

Rocks: As (<68) except VML 009--123, VML 010--105, VML 014--93, and VML 450--239; Au (<10); Bi (<4.6) except VML 233--5.3; Cd (<10) except VML 101--34, VML 425--48, VML 426--278, VML 438--28; Pd (<0.68) except VML 443--0.77; Pt (<6.8) except VML 113--7.9; Sb (<68) except VML 233--83; Te (<464) except VML 152--595; U (<147); W (<10); Ge (<3.1) except VML 444--3.9, VML 502--3.4; In (<4.6) except VML 403--5.4, VML 425--7; Re (<10); Ta (<464); Tl (<4.6) except VML 425--10, VML 426--32; Nd (<68); Tb (<10, <46); Tm (<3.1); Ir (<6.8) except VML 013--73; Os (<6.8, <21.5); Rh (<0.68, <3.1); Ru (<0.68, <1, <4.6). Stream sediments--Ag (<0.46) except VML 203--0.77; As (<68); Au (<10); Bi (<4.6); Cd (<10); Pd (<0.68); Pt (<6.8) except VML 305--6.9, VML 317--7.7, VML 415--7.1; Sb (<68); Sn (<14) except VML 201--32; Te (<464); U (<147) except VML 134--194, VML 439--169, VML 514--180, VML 515--149; W (<10); Ge (<3.1) except VML 519--3.9, VML 520--3.5; Hf (<21); In (<4.6) except VML 240--4.9, VML 436--5.6, VML 512--4.6; Re (<10); Ta (<464); Tl (<4.6); Tb (<10); Ho (<3.1); Tm (<3.1); Lu (<3.1); Ir (<6.8); Os (<6.8); Rh (<0.68, <3.1); Ru (<0.68, <1).

Reference cited

Lesure, F.G., Williams, B.B., and Dunn, M.L., Jr., 1978, Mineral resources of the Mill Creek, Mountain Lake, and Peters Mountain Wilderness Study Areas, Craig and Giles Counties, Virginia, and Monroe County, West Virginia: U.S. Geological Survey Open-File Report, OF 78-1076.

Rocks

sample	S-ZR	S-SIZ	S-ALX	S-NAZ	S-KXZ	S-PRZ	S-CE	S-GA	S-HZ	S-TH	S-YB	S-PR	S-SM	S-ER	S-LU
VJM100	60.4	3.48	.8980	.0223	.4540	<.0681	97.1	<2.15	<21.5	<21.5	3.11	52.10	5.31	5.79	<3.16
VJM101	51.7	8.63	1.7500	<.0046	.7590	<.0681	<63.2	3.15	<21.5	<21.5	3.37	<3.16	5.97	6.10	<3.16
VML001	431.0	>34.30	.5700	<.0046	<.0681	.1690	116.0	4.48	<21.5	<21.5	1.31	<3.16	<4.64	<4.64	<3.16
VML005	163.0	>34.30	.2070	<.0046	.1060	<.0681	<43.0	<2.15	<21.5	<21.5	.28	<3.16	<4.64	<4.64	<3.16
VML007	179.0	>34.30	.1740	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	.25	<3.16	<4.64	<4.64	<3.16
VML009	533.0	17.50	2.4300	.0459	.0	<.0681	294.0	19.70	22.1	<21.5	2.67	12.70	9.62	<4.64	<3.16
VML010	>2,150.0	>34.30	.8680	<.0046	.2910	<.0681	<43.0	3.13	<21.5	<21.5	1.99	3.95	<31.60	<4.64	<3.16
VML011	>2,150.0	>34.30	.5050	<.0046	.2310	<.0681	<63.0	2.36	<21.5	<21.5	2.48	<3.16	<31.60	<4.64	<3.16
VML013	812.0	26.90	1.1700	<.0046	.0	<.0681	505.0	17.60	<21.5	<100.0	4.58	16.40	13.40	19.30	<3.16
VML014	>2,150.0	>34.30	.8660	.0116	.3200	<.0681	102.0	3.13	<21.5	<21.5	4.54	5.70	<31.60	6.57	3.88
VML015	>2,150.0	>34.30	.2450	<.0046	.1020	<.0681	49.7	<2.15	<21.5	<21.5	3.91	<3.16	<31.60	<4.64	<3.16
VML016	>2,150.0	>34.30	.4290	<.0046	.2090	<.0681	<43.0	2.44	<21.5	<21.5	4.97	<3.16	<31.60	<4.64	<3.16
VML017	968.0	>34.30	3.0300	.0444	.6810	<.0681	210.0	16.00	<21.5	<21.5	4.38	9.83	7.22	<4.64	<3.16
VML018	814.0	>34.30	.1320	<.0046	.0762	.0974	<43.0	<2.15	<21.5	<21.5	.99	<3.16	<4.64	<4.64	<3.16
VML019	507.0	29.70	1.4200	.0059	.6810	.6710	242.0	12.20	<21.5	<21.5	4.81	12.90	8.21	19.00	<3.16
VML100	723.0	>34.30	1.1300	<.0046	.5070	<.0681	194.0	8.80	<21.5	<21.5	4.49	8.89	7.00	12.20	<3.16
VML101	956.0	>34.30	.3840	<.0046	.1400	<.0681	45.6	<2.15	<21.5	<21.5	1.35	<3.16	<4.64	<4.64	<3.16
VML102	1,180.0	>34.30	1.0700	<.0046	.4440	<.0681	237.0	10.00	25.6	<21.5	5.22	13.50	9.12	19.50	<3.16
VML103	>2,150.0	>34.30	<.0316	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	<2.87	<3.16	<31.60	<4.64	<3.16
VML104	<46.4	>34.30	.3080	<.0046	.2030	<.0681	<43.0	<2.15	<21.5	<21.5	.25	<3.16	<4.64	<4.64	<3.16
VML105	277.0	>34.30	1.0700	<.0046	.5060	<.0681	<43.0	2.73	<21.5	<21.5	1.05	<3.16	<4.64	<4.64	<3.16
VML107	30.9	19.90	.2480	<.0046	.0	<.0681	<43.0	13.50	<21.5	<100.0	1.77	7.52	<4.64	<4.64	<3.16
VML108	224.0	>34.30	.2020	<.0046	.1090	<.0681	<43.0	<2.15	<21.5	<21.5	.88	<3.16	5.59	<4.64	<3.16
VML109	465.0	>34.30	.9030	<.0046	.0	<.0681	<63.0	12.70	82.6	<21.5	1.51	12.10	5.59	12.20	<3.16
VML110	>2,150.0	>34.30	<.0316	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	1.42	<3.16	<31.60	<4.64	<3.16
VML112	57.9	17.10	.3230	<.0046	<.0681	.8610	<43.0	11.00	<21.5	<21.5	2.39	6.71	<4.64	<4.64	<3.16
VML113	120.0	34.10	8.4700	.2480	>1.4700	<.0681	93.4	25.60	<21.5	<21.5	5.80	5.91	<4.64	<4.64	<3.16
VML115	1,090.0	32.80	.7770	<.0046	.2650	.4840	277.0	11.00	<21.5	<21.5	6.87	13.20	12.70	13.80	<3.16
VML116	894.0	>34.30	.0560	<.0046	<.0681	<.0681	<63.0	<2.15	<21.5	<21.5	1.51	<3.16	4.82	<4.64	<3.16
VML117	807.0	>34.30	<.0316	<.0046	<.0681	<.0681	<63.0	<2.15	27.0	<21.5	.79	<3.16	<4.64	<4.64	<3.16
VML119	>2,150.0	>34.30	.2580	<.0046	.0819	<.0681	<43.0	<2.15	<21.5	<21.5	2.61	<3.16	<31.60	<4.64	<3.16
VML121	425.0	>34.30	.4220	<.0046	.1010	<.0681	<43.0	<2.15	<21.5	<21.5	1.29	<3.16	<4.64	<4.64	<3.16
VML122	435.0	>34.30	.5000	<.0046	<.0681	<.0681	56.9	2.64	<21.5	<100.0	1.05	3.40	<4.64	5.39	<3.16
VML123	318.0	34.70	6.5500	>.3160	>1.4700	<.0681	86.9	18.80	<21.5	<21.5	3.84	8.80	6.20	<4.64	<3.16
VML124	217.0	>34.30	1.5500	<.0046	.5730	.0750	<43.0	3.43	<21.5	<21.5	1.61	<3.16	<4.64	<4.64	<3.16
VML125	>2,150.0	>34.30	.3050	<.0046	.1260	.1000	142.0	<2.15	<21.5	<21.5	3.15	13.10	14.30	4.71	<3.16
VML126	311.0	>34.30	.6890	<.0046	.0	.5100	174.0	10.00	<21.5	<100.0	2.61	10.20	5.02	7.22	<3.16
VML127	237.0	>34.30	.2050	<.0046	.1240	<.0681	<43.0	<2.15	<21.5	<21.5	.97	<3.16	<4.64	<4.64	<3.16
VML129	188.0	>34.30	.2620	<.0046	<.0681	.1150	<43.0	2.22	<21.5	<21.5	.45	<3.16	<4.64	<4.64	<3.16
VML131	394.0	>34.30	.4930	<.0046	.1380	.0820	<43.0	<2.15	<21.5	<21.5	.99	<3.16	<4.64	<4.64	<3.16
VML132	<46.4	>34.30	.5830	<.0046	<.0681	.4170	<43.0	3.45	<21.5	<100.0	1.91	<3.16	<4.64	6.69	<3.16
VML133	>2,150.0	>34.30	<.0316	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	2.38	<3.16	<14.70	<4.64	<3.16
VML135	665.0	29.90	.8930	<.0046	.0	.6100	258.0	13.00	25.0	<100.0	4.07	12.50	7.72	16.70	<3.16
VML136	1,580.0	>34.30	.4240	<.0046	.1970	<.0681	48.4	<2.15	<21.5	<21.5	1.00	3.31	5.80	<4.64	<3.16
VML137	1,530.0	>34.30	.0329	<.0046	<.0681	.0766	<43.0	<2.15	<21.5	<21.5	1.33	<3.16	<4.64	<4.64	<3.16

Rocks--continued

sample	X-COORD.	Y-COORD.	S-FEZ	S-MGZ	S-CAZ	S-TI2	S-MN	S-AG	S-B	S-BA	S-BE	S-CO	S-EU	S-GO
VML138	544,910	4,137,070	1,020	.0224	-.0094	.0715	32.6	<.46	114.0	40.90	<1.00	<1.00	<1.00	<4.64
VML139	544,930	4,136,980	6,870	-.0932	-.0436	.1090	132.0	<.46	79.9	512.00	1.03	2.09	<1.00	<14.70
VML140	544,910	4,136,770	.271	.0188	-.0391	.1920	79.4	-.59	134.0	210.00	1.67	<1.00	<1.00	16.10
VML142	545,070	4,136,010	2,310	-.5940	-.2270	.3950	196.0	-.86	154.0	719.00	4.27	1.58	1.51	<14.70
VML143	540,880	4,133,350	8,880	-.0648	-.0259	.1750	181.0	<.46	44.2	126.00	1.31	1.36	<1.00	<14.70
VML144	540,450	4,132,910	.518	-.0252	-.0310	.1020	134.0	<.46	76.8	46.80	<1.00	1.03	<1.00	<14.70
VML145	540,990	4,132,790	>23,500	-.0406	-.2940	.1010	322.0	<.46	95.2	105.00	3.87	4.10	<1.00	<14.70
VML147	541,540	4,132,500	11,000	.0497	-.0684	.1280	49,500.0	6.10	68.7	104.00	7.12	301.00	<1.00	<14.70
VML148	541,540	4,132,500	1,560	-.0299	-.0630	.0652	71,800.0	<3.16	35.8	137.00	3.22	349.00	<1.00	<4.64
VML149	542,020	4,132,790	25,800	-.0435	-.0441	.1060	545.0	<.46	36.7	500.00	3.85	5.03	3.77	<14.70
VML150	542,680	4,133,130	1,290	-.0148	-.0092	.0572	238.0	<.46	77.8	52.80	<1.00	1.75	<1.00	<4.64
VML151	543,100	4,133,240	9,100	-.1440	-.0428	.2750	71.9	<.46	113.0	233.00	2.59	1.42	1.60	<14.70
VML152	543,880	4,133,610	.342	-.0167	-.0129	.1140	74.1	<.46	67.1	55.90	<1.00	<1.00	<1.00	<14.70
VML209	546,070	4,141,500	.426	-.0077	-.0238	.0467	89.8	<.46	62.1	71.20	<1.00	<1.00	<1.00	<4.64
VML210	546,890	4,141,900	>23,500	-.0566	-.8800	.1120	87.5	-.50	56.0	369.00	2.98	2.17	1.91	<14.70
VML211	543,770	4,140,170	.929	-.0162	-.0160	.0910	363.0	<.46	75.9	18.30	<1.00	1.69	<1.00	<4.64
VML218	550,230	4,145,670	.304	-.0199	-.0074	.0382	289.0	<.46	54.8	30.50	<1.00	1.68	<1.00	<4.64
VML219	549,930	4,145,650	.915	-.0103	-.0161	.0455	118.0	<.46	102.0	7.35	<1.00	<1.00	<1.00	<4.64
VML222	542,040	4,136,430	16,900	-.0878	-.0768	.1850	83.7	<.46	97.9	142.00	1.20	1.02	3.31	31.30
VML231	547,500	4,138,200	5,850	1.4600	-.1640	.5000	322.0	<.46	117.0	435.00	4.90	17.50	1.04	<14.70
VML233	546,690	4,139,130	7,920	1.9100	-.5260	.9120	614.0	<.46	160.0	633.00	6.27	29.80	2.49	<14.70
VML234	546,990	4,139,260	10,900	-.0285	-.1330	.0468	125.0	<.46	14.5	1,410.00	2.03	<1.00	<1.00	<4.64
VML237	547,920	4,139,650	5,210	1.0800	-.1320	.4810	542.0	<.46	141.0	511.00	4.78	29.80	<1.00	<14.70
VML244	545,690	4,135,270	.810	-.0449	-.0533	.0474	680.0	<.46	189.0	23.90	<1.00	1.66	<1.00	<4.64
VML301	553,890	4,138,630	16,900	-.0281	-.0422	.0201	1,620.0	<.46	<14.7	326.00	2.65	12.80	<1.00	<4.64
VML302	548,440	4,141,850	>23,500	-.0921	-.4190	.0957	102.0	-.93	66.5	96.60	2.91	2.71	2.75	15.00
VML307	542,660	4,135,100	.442	-.0245	-.0159	.1430	44.3	<.46	86.1	82.70	<1.00	<1.00	1.59	<14.70
VML308	542,820	4,136,380	2,710	-.4560	-.0626	.2760	146.0	<.46	94.9	172.00	1.23	7.44	<1.00	20.40
VML311	541,460	4,133,410	.147	-.0292	-.0576	.1510	36.8	<.46	108.0	35.00	<1.00	<1.00	<1.00	<14.70
VML312	541,780	4,133,420	>23,500	-.2130	-.3170	.1200	82.7	<.46	72.4	148.00	3.31	4.25	3.35	<14.70
VML400	544,850	4,141,060	.610	-.0336	-.0185	.2110	66.7	<.46	168.0	28.80	2.06	<1.00	<1.00	<14.70
VML401	544,840	4,140,990	>23,500	-.0428	-.0472	.1100	108.0	<.46	45.7	120.00	2.12	1.60	2.97	<14.70
VML402	544,840	4,140,990	>23,500	-.0282	-.0243	.0425	231.0	<.46	16.7	52.20	5.75	3.95	1.66	<4.64
VML403	544,630	4,140,690	.747	-.0137	-.0074	.0239	25.0	<.46	49.4	16.80	<1.00	<1.00	<1.00	<4.64
VML404	544,790	4,140,050	.178	-.0112	-.0040	.0546	42.2	<.46	112.0	12.80	<1.00	<1.00	<1.00	<4.64
VML405	544,800	4,139,810	>23,500	-.2860	-.0565	.2430	330.0	<.46	147.0	169.00	2.46	3.94	2.63	<14.70
VML406	544,810	4,139,500	.368	-.0140	-.0472	.0560	115.0	<.46	43.6	28.50	<1.00	<1.00	<1.00	<4.64
VML407	544,770	4,139,430	.804	-.0075	-.0056	.0655	108.0	<.46	69.7	17.50	<1.00	<1.00	<1.00	<4.64
VML409	544,110	4,138,390	20,600	-.0300	-.0215	.0460	30,800.0	2.53	36.9	741.00	6.52	35.10	<1.00	<4.64
VML410	543,550	4,138,140	.275	-.0329	-.0151	.1610	113.0	<.46	190.0	20.40	1.30	<1.00	<1.00	<14.70
VML412	548,970	4,143,250	.327	-.0150	-.0104	.0804	62.2	<.46	61.0	69.70	<1.00	<1.00	<1.00	<4.64
VML413	548,800	4,143,090	.503	-.0368	-.0175	.1460	269.0	<.46	159.0	111.00	<1.00	<1.00	1.54	<14.70
VML414	548,800	4,143,090	25,900	-.0446	-.0958	.0752	93.9	<.46	132.0	151.00	6.59	2.31	3.37	12.90
VML416	548,740	4,142,570	.467	-.0307	-.0322	.0486	67.2	<.46	37.8	30.80	<1.00	<1.00	1.11	<4.64
VML417	548,500	4,142,860	10,200	-.0584	-.0171	.1400	109.0	<.46	79.9	57.60	1.56	<1.00	<1.00	<14.70

Rocks

sample	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SN	S-SR	S-V	S-Y	S-ZN	S-DY	S-HO
VJL100	13.00	10.50	36.70	8.34	<10.0	41.70	12.70	6.57	<14.7	200.00	60.10	56.70	<14.7	8.36	4.37
VJL101	19.00	30.80	29.10	11.70	<10.0	84.80	32.50	7.73	<14.7	117.00	117.00	49.10	2.520.0	<6.81	3.49
VJL103	9.68	38.50	19.60	11.67	<10.0	49.00	16.60	4.03	<14.7	15.10	31.20	10.60	403.0	<6.81	<3.16
VJL105	16.90	<1.00	6.38	<1.47	<10.0	5.85	8.81	<1.00	<14.7	4.98	7.17	2.45	<14.7	<6.81	<3.16
VJL107	3.76	2.09	<4.64	<1.47	<10.0	2.41	<6.81	<1.00	<14.7	2.91	4.18	2.68	<14.7	<6.81	<3.16
VJL109	55.10	48.30	68.20	.0	<10.0	9.79	>1000.00	13.50	<14.7	52.70	108.00	19.80	191.0	<6.81	<3.16
VJL110	18.50	2.35	23.60	<1.47	16.4	22.90	10.20	4.59	<14.7	94.90	21.50	45.80	58.5	<6.81	<10.00
VJL111	21.60	<1.00	<4.64	<1.47	<10.0	10.50	13.90	1.85	<14.7	4.42	11.10	17.70	<14.7	<6.81	<10.00
VJL113	44.00	1.17	<4.64	.0	15.0	15.90	23.80	16.00	<14.7	249.00	137.00	82.40	133.0	<6.81	<3.16
VJL114	26.90	2.34	43.30	<1.47	14.4	9.49	17.00	4.51	<14.7	109.00	16.20	56.70	<14.7	<6.81	<10.00
VJL115	9.69	<1.00	20.60	<1.47	<10.0	2.77	13.80	2.01	<14.7	5.22	8.58	17.50	<14.7	<6.81	<10.00
VJL116	8.57	<1.00	11.30	<1.47	<10.0	2.23	16.90	3.52	<14.7	7.51	9.79	23.60	<14.7	<6.81	<10.00
VJL117	51.70	<1.00	48.80	2.24	15.4	28.80	15.90	15.90	<14.7	166.00	131.00	59.90	37.1	<6.81	<3.16
VJL118	13.20	<1.00	<4.64	<1.47	<10.0	5.82	8.95	1.34	<14.7	6.33	5.58	6.06	<14.7	<6.81	<3.16
VJL119	21.90	<1.00	44.40	5.30	<10.0	9.11	20.50	12.70	<14.7	253.00	131.00	114.00	86.2	27.30	<3.16
VJL120	26.60	3.18	45.60	<1.47	13.7	10.40	12.20	9.76	<14.7	134.00	65.80	50.10	18.4	<6.81	<3.16
VJL121	8.74	4.77	21.40	<1.47	11.1	3.28	14.80	1.76	<14.7	6.55	7.68	15.20	<14.7	<6.81	<3.16
VJL122	29.60	<1.00	51.90	1.83	11.7	10.80	16.10	11.70	<14.7	80.40	92.00	107.00	33.6	<14.70	16.30
VJL123	5.00	<1.00	<4.64	<1.47	<10.0	2.65	11.10	<1.00	<14.7	3.04	3.33	11.30	<14.7	<6.81	<10.00
VJL124	18.30	1.40	10.80	<1.47	<10.0	5.64	89.40	1.04	<14.7	7.93	6.82	2.26	<14.7	<6.81	<3.16
VJL125	17.80	<1.00	13.30	<1.47	12.9	4.24	6.92	1.89	<14.7	15.20	24.50	11.90	<14.7	<6.81	<3.16
VJL126	13.10	10.40	<4.64	.0	<10.0	366.00	21.80	4.29	<14.7	12.60	15.70	23.50	890.0	<6.81	<3.16
VJL127	13.10	<1.00	14.30	<1.47	<10.0	3.25	<6.81	1.02	<14.7	4.21	5.39	8.72	<14.7	<6.81	<3.16
VJL128	37.40	6.52	32.90	10.40	<10.0	13.50	18.80	10.90	<14.7	103.00	101.00	63.30	104.0	<14.70	<3.16
VJL129	5.08	2.59	<4.64	<1.47	<10.0	3.16	10.70	1.87	<14.7	2.52	4.31	8.55	32.9	<6.81	<10.00
VJL130	14.30	36.50	<4.64	8.16	<10.0	351.00	33.70	<1.00	<14.7	7.26	11.10	21.70	939.0	<6.81	<3.16
VJL131	117.00	171.00	48.60	11.30	<10.0	129.00	39.60	21.90	<14.7	153.00	228.00	40.00	79.0	<6.81	<3.16
VJL132	35.00	2.81	73.70	3.90	14.0	9.12	16.90	13.60	<14.7	159.00	108.00	75.50	46.4	18.10	6.74
VJL133	6.76	<1.00	5.37	<1.47	<10.0	4.28	<6.81	1.02	<14.7	7.70	3.65	5.63	73.0	<6.81	<3.16
VJL134	14.30	<1.00	<4.64	<1.47	<10.0	7.35	46.60	<1.00	<14.7	2.43	5.20	6.12	<14.7	<6.81	<3.16
VJL135	7.88	<1.00	20.00	<1.47	<10.0	2.93	<6.81	2.20	<14.7	8.97	8.80	23.30	<14.7	<6.81	<10.00
VJL136	9.60	<1.00	<4.64	<1.47	<10.0	4.44	<6.81	1.65	<14.7	2.05	5.92	6.65	<14.7	<6.81	<3.16
VJL137	20.20	36.60	22.70	<1.47	<10.0	13.70	22.30	3.42	<14.7	28.20	20.80	20.30	223.0	<6.81	<3.16
VJL138	73.70	31.50	41.70	<1.47	14.3	66.30	11.10	19.30	<14.7	173.00	137.00	34.90	60.5	<6.81	<3.16
VJL139	18.10	10.70	14.90	<1.47	<10.0	6.27	7.34	1.99	<14.7	12.80	19.30	14.70	<14.7	<6.81	<3.16
VJL140	5.39	2.42	60.70	<1.47	<10.0	1.61	<6.81	3.20	<14.7	7.77	8.13	28.90	<14.7	<6.81	<10.00
VJL141	42.10	<1.00	26.60	.0	<10.0	25.50	16.80	9.04	<14.7	30.40	89.70	42.20	74.1	<6.81	<3.16
VJL142	11.70	<1.00	8.20	<1.47	<10.0	3.60	6.78	1.00	<14.7	6.53	5.25	8.61	<14.7	<6.81	<3.16
VJL143	4.33	<1.00	7.42	<1.47	<10.0	2.09	8.36	<1.00	<14.7	4.19	5.18	3.83	<14.7	<6.81	<3.16
VJL144	15.90	<1.00	5.76	<1.47	<10.0	4.53	15.00	1.30	<14.7	8.21	5.65	7.03	<14.7	<6.81	<3.16
VJL145	10.10	59.10	<4.64	<1.47	<10.0	257.00	14.10	2.43	<14.7	6.22	23.90	25.90	870.0	<6.81	<3.16
VJL146	3.54	<1.00	5.81	<1.47	<10.0	3.17	17.20	1.83	<14.7	2.36	3.61	7.75	16.0	<6.81	<10.00
VJL147	40.00	2.01	49.20	.0	12.1	25.20	21.60	11.90	<14.7	157.00	94.10	64.60	123.0	<6.81	<3.16
VJL148	6.16	<1.00	22.70	<1.47	<10.0	7.01	<6.81	1.93	<14.7	6.20	8.79	7.25	<14.7	<6.81	<10.00
VJL149	2.61	<1.00	6.37	3.15	<10.0	3.25	27.30	1.09	<14.7	2.01	7.30	6.22	<14.7	<6.81	<10.00

Rocks--continued

sample	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SN	S-SR	S-V	S-Y	S-ZN	S-DY	S-MO
VML138	15.70	1.09	9.50	<1.47	<10.0	1.46	26.20	1.70	<14.7	5.08	8.94	6.64	<14.7	<6.81	<10.00
VML139	20.70	<1.00	37.50	2.20	10.3	6.59	<6.81	7.75	<14.7	128.00	39.90	32.70	<14.7	<6.81	<3.16
VML140	12.90	1.02	17.80	<1.47	<10.0	4.23	10.90	2.28	<14.7	9.82	10.50	40.70	<14.7	<6.81	<10.00
VML142	102.00	53.00	55.70	19.10	<10.0	14.50	53.90	24.00	<14.7	177.00	236.00	26.70	<14.7	<6.81	<3.16
VML143	21.60	1.25	41.80	<1.47	14.0	3.49	16.50	4.28	<14.7	79.80	33.40	32.00	<14.7	<6.81	<10.00
VML144	12.30	<1.00	14.60	<1.47	<10.0	2.91	13.30	1.51	<14.7	6.24	7.44	23.00	<14.7	<6.81	<3.16
VML145	31.20	1.08	50.00	.0	14.9	13.00	26.70	11.90	<14.7	203.00	122.00	50.40	49.9	<6.81	<3.16
VML147	22.90	77.00	<4.64	<1.47	13.0	383.00	<6.81	8.61	30.6	77.50	85.10	33.40	567.0	<6.81	<3.16
VML148	21.40	271.00	<4.64	33.30	11.2	703.00	<6.81	8.18	42.5	82.30	113.00	51.20	786.0	<6.81	<3.16
VML149	35.20	47.70	63.00	1.56	10.5	18.50	35.80	11.90	<14.7	237.00	69.90	74.70	88.7	<14.70	<3.16
VML150	19.50	1.12	6.73	1.92	<10.0	8.64	16.70	1.14	<14.7	8.95	4.57	3.94	18.0	<6.81	<3.16
VML151	29.10	<1.00	67.00	<1.47	20.1	6.80	13.60	6.34	<14.7	188.00	48.50	50.50	<14.7	<6.81	<10.00
VML152	8.44	<1.00	20.50	<1.47	<10.0	1.93	9.23	1.57	<14.7	6.21	6.52	15.50	<14.7	<6.81	<3.16
VML204	22.10	2.11	<4.64	<1.47	<10.0	14.40	50.70	1.19	<14.7	5.39	3.77	10.10	<14.7	<6.81	<10.00
VML210	37.20	7.96	56.20	12.50	16.3	8.82	20.80	13.60	<14.7	194.00	119.00	62.10	60.9	<6.81	<3.16
VML211	12.30	<1.00	14.20	<1.47	<10.0	5.35	<6.81	1.58	<14.7	4.38	5.97	11.30	<14.7	<6.81	<3.16
VML212	5.52	<1.00	<4.64	<1.47	<10.0	6.99	<6.81	1.16	<14.7	2.44	6.97	4.12	<14.7	<6.81	<3.16
VML219	17.10	<1.00	<4.64	<1.47	<10.0	8.78	<6.81	<1.00	<14.7	3.34	2.91	4.63	<14.7	<6.81	<10.00
VML222	24.80	<1.00	79.40	<1.47	15.6	3.31	9.66	11.00	<14.7	211.00	71.90	97.60	<14.7	15.50	<10.00
VML231	87.10	226.00	46.20	<1.47	14.9	79.10	17.70	20.90	<14.7	154.00	157.00	36.80	59.2	<6.81	<3.16
VML233	122.00	90.10	63.50	<1.47	23.3	118.00	15.80	25.70	<14.7	248.00	184.00	51.80	78.4	<6.81	3.54
VML234	24.40	18.00	15.40	<1.47	<10.0	2.79	14.40	2.16	<14.7	29.70	30.30	4.14	257.0	<6.81	<3.16
VML237	100.00	76.50	52.10	<1.47	13.7	80.80	10.20	25.00	<14.7	157.00	87.80	27.80	105.0	<6.81	<3.16
VML244	5.51	<1.00	6.22	<1.47	<10.0	2.80	54.10	1.65	<14.7	6.13	6.47	9.30	19.8	<6.81	<10.00
VML311	15.60	11.50	<4.64	<1.47	<10.0	72.20	21.30	1.77	<14.7	2.81	22.70	18.40	917.0	<6.81	<3.16
VML312	21.60	9.04	46.40	.0	10.1	14.10	656.00	12.40	<14.7	102.00	90.90	57.60	1,030.0	<6.81	<3.16
VML313	18.20	3.31	39.60	<1.47	11.0	3.18	18.30	1.68	<14.7	6.75	9.20	18.20	<14.7	<6.81	<10.00
VML314	19.50	4.66	27.00	<1.47	<10.0	18.10	<6.81	5.44	<14.7	82.10	31.30	29.60	<14.7	<6.81	<3.16
VML311	4.31	<1.00	8.29	<1.47	10.9	1.89	11.20	2.77	<14.7	5.30	6.51	19.90	<14.7	<6.81	<10.00
VML312	36.20	27.50	63.90	.0	<10.0	14.40	20.20	14.30	<14.7	252.00	111.00	75.70	69.2	<6.81	<3.16
VML400	6.95	<1.00	15.50	<1.47	13.4	3.31	7.47	3.53	<14.7	9.69	16.30	49.30	<14.7	<6.81	<10.00
VML401	19.90	6.76	55.90	.0	11.9	6.69	29.30	12.20	<14.7	179.00	109.00	51.70	44.3	<6.81	<3.16
VML402	20.00	16.20	<4.64	.0	<10.0	21.60	13.90	12.80	<14.7	26.50	29.20	13.30	132.0	<6.81	<3.16
VML403	3.47	<1.00	<4.64	<1.47	<10.0	1.79	<6.81	<1.00	<14.7	5.74	5.17	3.09	<14.7	<6.81	<3.16
VML404	6.69	19.20	<4.64	<1.47	<10.0	4.05	14.50	<1.00	<14.7	2.88	4.86	5.67	<14.7	<6.81	<3.16
VML405	35.00	4.87	60.40	.0	14.1	19.50	33.20	16.90	<14.7	232.00	129.00	68.00	53.6	20.60	<3.16
VML406	11.30	<1.00	10.30	<1.47	<10.0	4.56	<6.81	<1.00	<14.7	4.60	5.76	5.70	<14.7	<6.81	<3.16
VML407	3.89	<1.00	<4.64	<1.47	<10.0	2.17	8.36	1.52	<14.7	3.10	4.33	12.50	<14.7	<6.81	<10.00
VML409	12.30	31.90	<4.64	<1.47	<10.0	14.90	117.00	4.99	18.5	13.00	22.60	12.60	705.0	<6.81	<3.16
VML410	6.47	<1.00	9.80	<1.47	11.3	2.84	<6.81	2.10	<14.7	7.80	7.61	39.80	<14.7	<6.81	<10.00
VML412	16.70	<1.00	9.25	<1.47	<10.0	3.81	<6.81	<1.00	<14.7	4.08	4.59	10.80	<14.7	<6.81	<3.16
VML413	9.30	1.09	23.80	<1.47	<10.0	7.91	7.83	2.11	<14.7	8.27	7.98	11.40	<14.7	<6.81	<3.16
VML414	19.90	4.19	57.70	<1.47	11.2	13.10	15.60	10.90	<14.7	173.00	112.00	72.10	68.6	<6.81	<3.16
VML416	8.52	1.02	16.00	<1.47	<10.0	4.39	7.83	1.30	<14.7	7.19	6.24	9.13	<14.7	<6.81	<3.16
VML417	17.90	1.12	26.60	<1.47	12.2	2.54	<6.81	5.65	<14.7	23.90	65.00	29.90	<14.7	<6.81	<3.16

Rocks--continued

sample	S-ZR	S-SIZ	S-ALZ	S-NAZ	S-KX	S-PX	S-CE	S-GA	S-MF	S-TH	S-YB	S-PR	S-SM	S-ER	S-LU
VML138	1,540.0	>34.30	.3350	<.0046	.1420	<.0681	<43.0	<2.15	<21.5	31.4	1.44	<3.16	<4.64	4.63	<3.16
VML139	379.0	>34.30	1.0300	.0054	.5880	<.0681	136.0	6.12	<21.5	<21.5	2.23	6.37	6.39	4.74	<3.16
VML140	>2,150.0	>34.30	.4340	<.0046	.1350	.1050	49.3	<2.15	<21.5	26.2	7.16	<3.16	<31.60	<4.64	<3.16
VML142	229.0	32.80	6.9800	.2410	4.2900	.0759	98.0	24.40	<21.5	<21.5	3.91	6.37	6.44	5.42	<3.16
VML143	1,820.0	>34.30	1.0300	.0085	.5710	<.0681	144.0	6.51	<21.5	<21.5	2.45	5.32	6.96	<4.64	<3.16
VPL144	776.0	>34.30	.4310	<.0046	.1550	<.0938	<43.0	<2.15	<21.5	<21.5	1.67	<3.16	<4.64	<4.64	<3.16
VML145	629.0	>34.30	.8370	<.0046	.0	<.0681	237.0	11.30	<21.5	<21.5	3.98	12.80	8.98	<4.64	<3.16
VML147	707.0	>34.30	<.0681	.0160	.9960	.3990	<43.0	6.40	<21.5	<21.5	2.41	<3.16	5.00	8.16	<3.16
VML148	410.0	28.30	1.7100	<.0046	1.0400	.1840	<43.0	2.65	<21.5	<21.5	2.97	<3.16	<4.64	<4.64	<3.16
VML149	655.0	32.30	1.6000	<.0046	.5870	<.0681	224.0	14.00	<21.5	80.1	4.61	13.40	8.63	17.00	<3.16
VML150	351.0	>34.30	.1880	<.0046	.0719	.0716	<43.0	<2.15	<21.5	22.9	.35	<3.16	<4.64	<4.64	<3.16
VML151	1,470.0	>34.30	1.6700	.0213	.9390	<.0681	145.0	7.04	<21.5	<21.5	5.30	11.60	9.14	8.53	<3.16
VML152	816.0	>34.30	.4570	<.0046	.1400	<.0681	61.3	<2.15	<21.5	<21.5	1.31	<3.16	5.66	<4.64	<3.16
VML217	2,000.0	>34.30	.0635	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	1.88	<3.16	<4.64	<4.64	<3.16
VML210	975.0	>34.30	1.0400	<.0046	.0	.5750	239.0	12.60	32.6	<21.5	4.41	12.40	9.63	<4.64	4.36
VML211	578.0	>34.30	.2360	<.0046	<.0681	.0811	43.2	<2.15	<21.5	<21.5	1.38	<3.16	<4.64	<4.64	<3.16
VML218	185.0	>34.30	.1530	<.0046	.0721	.0812	<43.0	<2.15	<21.5	32.4	.44	<3.16	<4.64	<4.64	<3.16
VML219	2,100.0	>34.30	<.0316	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	.76	<3.16	5.41	<4.64	<3.16
VML222	2,380.0	>34.30	1.4500	<.0046	.4340	<.0681	130.0	9.17	<21.5	<100.0	4.93	14.60	15.90	17.10	<3.16
VML231	281.0	>34.30	7.2200	>.3160	>1.4700	.1070	108.0	21.60	<21.5	<21.5	4.38	7.02	5.73	6.67	<3.16
VPL233	468.0	>34.30	13.8000	>.3160	>1.4700	.1840	170.0	38.80	<21.5	<21.5	5.52	11.30	9.10	11.70	3.96
VML234	449.0	>34.30	.5010	<.0046	<.0681	.4460	82.6	4.05	<21.5	36.3	.97	<3.16	5.97	<4.64	<3.16
VML237	193.0	31.60	8.5400	.1750	>1.4700	.0931	115.0	25.70	<21.5	<100.0	3.67	7.61	4.85	7.76	<3.16
VML244	1,440.0	>34.30	.1900	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	1.62	<3.16	<4.64	<4.64	<3.16
VML301	96.4	24.70	.2470	<.0046	.0685	1.1200	<43.0	5.62	<21.5	22.2	1.27	<3.16	<4.64	<4.64	<3.16
VML302	403.0	30.50	1.1400	<.0046	.0	.6280	231.0	13.90	<21.5	<21.5	4.05	13.00	8.51	13.70	<3.16
VML307	1,330.0	>34.30	.8070	<.0046	.3090	<.0681	110.0	2.31	<21.5	<21.5	1.54	7.75	9.76	<4.64	<3.16
VML308	229.0	>34.30	3.3600	>.3160	>1.4700	.0715	47.8	7.26	<21.5	<21.5	2.33	<3.16	4.85	<4.64	3.45
VML311	>2,150.0	>34.30	.3470	<.0046	.0800	<.0681	71.5	<2.15	<21.5	<21.5	3.16	<3.16	<31.60	<4.64	<3.16
VML312	1,020.0	>34.30	1.5400	<.0046	.0	<.0681	314.0	11.00	<21.5	<21.5	4.83	16.00	11.50	16.40	<3.16
VPL400	>2,150.0	>34.30	.6780	<.0046	.1290	<.0681	<43.0	<2.15	<21.5	<21.5	5.05	<3.16	<31.60	<4.64	<3.16
VML401	517.0	>34.30	1.1400	<.0046	.0	<.0681	224.0	13.40	<21.5	<100.0	3.98	14.40	9.64	<4.64	<3.16
VML402	225.0	16.10	.8640	<.0046	.0	.9720	<43.0	10.00	<21.5	51.4	1.47	6.31	<4.64	<4.64	<3.16
VML403	123.0	>34.30	.1890	<.0046	.0762	.0890	<43.0	<2.15	<21.5	<21.5	.25	<3.16	<4.64	<4.64	<3.16
VML404	112.0	>34.30	.0645	<.0046	<.0681	.0787	<43.0	<2.15	<21.5	<21.5	.39	<3.16	<4.64	<4.64	<3.16
VML405	596.0	>34.30	3.2400	.0160	>.6810	<.0681	228.0	15.90	<21.5	109.0	4.83	13.60	10.70	17.10	<3.16
VML406	152.0	>34.30	.3550	<.0046	.0982	.0801	<43.0	<2.15	<21.5	<21.5	.50	<3.16	<4.64	<4.64	<3.16
VML407	2,070.0	>34.30	.0423	<.0046	<.0681	.0850	<43.0	<2.15	<21.5	<21.5	2.13	<3.16	6.78	<4.64	<3.16
VML409	495.0	29.30	.6650	<.0046	.3820	<.0681	<43.0	7.35	<21.5	<21.5	1.14	4.75	<4.64	<4.64	<3.16
VML410	>2,150.0	>34.30	.4410	<.0046	.0864	.0688	<43.0	<2.15	<21.5	<21.5	5.21	<3.16	<31.60	<4.64	3.39
VML412	309.0	>34.30	.2260	<.0046	.0789	<.0681	<43.0	<2.15	<21.5	<21.5	.88	<3.16	<4.64	<4.64	<3.16
VML413	>2,150.0	>34.30	1.2190	<.0046	<.0681	<.0681	35.0	<2.15	<21.5	<21.5	1.92	4.03	<31.60	<4.64	<3.16
VML414	833.0	>34.30	1.0800	<.0046	.1570	.4690	213.0	9.13	<21.5	<21.5	4.00	12.10	10.80	13.40	<3.16
VML416	597.0	>34.30	.2330	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<100.0	.83	<3.16	<4.64	<4.64	<3.16
VML417	920.0	>34.30	.8560	.0049	.4780	.1450	84.9	4.99	<21.5	<100.0	1.49	6.64	5.80	<4.64	<3.16

Rocks--continued

sample	X-COORD.	Y-COORD.	S-FEX	S-MGX	S-CAZ	S-TIZ	S-MN	S-AG	S-B	S-BA	S-BE	S-CO	S-EU	S-GO
VML118	548,070	4,142,760	.391	.0194	.0093	.0590	40.4	<.46	44.1	50.00	<1.00	<1.00	<1.00	<4.64
VML119	548,060	4,142,780	9.410	.0241	.0124	.1330	298.0	<.46	52.4	160.00	2.32	1.78	<1.00	<14.70
VML120	549,990	4,144,020	.355	.0208	.0114	.0641	227.0	<.46	59.9	52.10	<1.00	1.74	1.06	<4.64
VML121	545,280	4,139,370	.442	.0180	.0093	.0683	53.7	<.46	71.2	52.40	<1.00	<1.00	1.71	<4.64
VML123	545,400	4,139,370	>23,500	.1080	.0785	.0899	1,040.0	<.46	.0	401.00	4.00	5.05	6.49	19.90
VML124	545,660	4,139,350	7.200	.0191	.0084	.0457	912.0	<.46	82.3	66.00	4.04	11.20	<1.00	<4.64
VML125	546,130	4,139,370	1.080	.0431	.0733	.0465	49,100.0	4.82	57.6	1,720.00	6.54	782.00	<1.00	46.50
VML126	546,160	4,139,330	2.690	.1500	.1830	.1100	169,000.0	4.39	75.6	>2,150.00	24.80	871.00	7.32	36.40
VML128	546,210	4,139,140	23,000	.0086	.0116	.0266	324.0	<.46	<14.7	97.50	30.00	9.74	<1.00	<4.64
VML129	546,210	4,139,140	>23,500	.0548	.0440	.0372	477.0	<.46	<14.7	101.00	29.70	18.60	<1.00	6.28
VML131	546,440	4,139,040	.403	.0315	.0134	.0504	1,240.0	<.46	72.1	129.00	<1.00	11.10	1.39	<4.64
VML132	546,420	4,138,840	.408	.0309	.0071	.0495	909.0	<.46	61.1	103.00	<1.00	4.34	<1.00	<4.64
VML134	547,770	4,138,790	6.300	1.2500	.2110	.5640	388.0	<.46	111.0	525.00	3.55	12.70	2.22	<14.70
VML135	546,820	4,141,210	.564	.0343	.0204	.2440	149.0	<.46	224.0	43.80	1.03	<1.00	<1.00	<14.70
VML137	547,450	4,141,380	1.160	.0777	.0131	.2020	380.0	<.46	65.3	82.90	<1.00	1.85	<1.00	<14.70
VML138	547,510	4,141,520	.481	.0127	.0377	.0668	59,600.0	3.83	33.0	989.00	3.29	424.00	<1.00	<4.64
VML140	547,820	4,141,630	>23,500	.0729	.1060	.1210	688.0	<.46	101.0	486.00	4.21	3.47	2.85	<14.70
VML141	548,370	4,141,130	1.090	.0111	.0058	.0387	92.6	<.46	54.7	13.30	<1.00	<1.00	<1.00	<4.64
VML142	548,270	4,141,080	3.190	.5950	.0609	.4720	123.0	<.46	146.0	486.00	4.18	2.16	1.03	19.20
VML143	548,290	4,140,960	4.750	1.2100	.1530	.4000	181.0	<.46	132.0	718.00	3.91	11.80	3.12	<14.70
VML144	542,790	4,135,880	>23,500	.0651	.4300	.0789	619.0	<.46	73.0	410.00	2.95	4.87	1.14	12.80
VML146	543,360	4,136,270	.493	.0443	.0697	.1420	65.1	<.46	97.7	48.80	<1.00	<1.00	<1.00	<14.70
VML148	544,460	4,135,770	.240	.0238	.0451	.0557	64.5	<.46	122.0	26.80	<1.00	<1.00	1.08	<4.64
VML149	547,950	4,135,890	.462	.0197	.0096	.0732	16.9	<.46	136.0	44.60	<1.00	<1.00	<1.00	<4.64
VML150	547,480	4,135,640	>23,500	.0627	.0432	.0573	437.0	<.46	59.0	92.00	24.20	12.30	<1.00	<4.64
VML151	546,230	4,135,350	5.130	.0167	.0161	.0752	94.8	<.46	40.5	33.00	1.29	<1.00	<1.00	<4.64
VML152	546,070	4,135,280	21.700	.0493	.0210	.0508	81.5	<.46	<14.7	126.00	<1.00	1.40	2.31	<4.64
VML153	545,990	4,135,650	20.100	.0043	.0491	.0126	174.0	<.46	<14.7	96.50	8.49	17.80	<1.00	7.21
VML150	544,750	4,141,230	.573	.0141	.0241	.0727	68.3	<.46	61.6	34.40	<1.00	<1.00	<1.00	<4.64
VML150	543,770	4,141,160	.242	.0127	.0041	.0450	101.0	<.46	61.9	41.20	<1.00	<1.00	<1.00	<4.64
VML150	543,080	4,140,950	26.600	.1300	.7660	.0953	99.3	<.46	31.2	237.00	2.72	2.85	3.46	16.10
VML150	543,080	4,140,980	.564	.0217	.0134	.1510	144.0	<.46	93.8	133.00	<1.00	3.36	1.18	15.00

Rocks--continued

sample	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SM	S-SR	S-V	S-Y	S-ZN	S-8Y	S-MO
V/L418	12.80	<1.00	13.70	<1.47	<10.0	4.03	<6.81	1.51	<14.7	3.52	4.19	4.78	<14.7	<6.81	<3.16
V/L419	11.90	6.99	27.80	<1.47	15.5	12.00	168.00	3.27	<14.7	8.10	8.16	40.70	24.9	<6.81	<10.00
V/L420	14.20	3.01	15.20	<1.47	<10.0	5.83	33.80	2.15	<14.7	6.94	5.01	10.10	<14.7	<6.81	<10.00
V/L421	9.07	<1.00	25.50	<1.47	<10.0	3.93	10.10	1.65	<14.7	5.86	4.93	7.63	<14.7	<6.81	<3.16
V/L423	21.30	10.80	56.80	.0	<10.0	15.20	26.60	14.40	<14.7	305.00	80.90	83.30	138.0	16.50	<3.16
V/L424	6.89	34.00	<4.64	<1.47	<10.0	39.00	53.50	6.24	<14.7	5.84	6.33	29.10	140.0	<6.81	<10.00
V/L425	6.29	150.00	<4.64	<1.47	<10.0	367.00	217.00	7.26	32.4	29.70	39.60	26.60	1,760.0	<6.81	<3.16
V/L426	18.50	136.00	53.50	<1.47	20.1	422.00	1,000.00	12.70	135.0	982.00	139.00	177.00	4,610.0	57.10	8.57
V/L428	24.60	33.70	<4.64	<1.47	<10.0	102.00	92.30	<1.00	<14.7	6.22	35.00	21.90	880.0	<6.81	<3.16
V/L429	55.50	30.90	36.40	.0	<10.0	242.00	85.70	4.71	<14.7	7.11	53.50	47.60	2,510.0	<6.81	<3.16
V/L431	5.63	<1.00	9.37	<1.47	<10.0	6.68	8.01	1.50	<14.7	5.38	6.83	11.10	38.2	<6.81	<3.16
V/L432	7.32	<1.00	13.10	<1.47	<10.0	5.81	9.28	1.50	<14.7	7.63	7.19	11.40	17.0	<6.81	<3.16
V/L434	78.60	20.30	52.90	<1.47	10.2	50.50	30.40	22.60	<14.7	169.00	146.00	39.00	51.5	<6.81	<3.16
V/L435	3.63	<1.00	<4.64	<1.47	14.0	2.75	<6.81	2.11	<14.7	5.29	8.93	25.00	<14.7	<6.81	<10.00
V/L437	11.30	1.37	12.30	<1.47	14.1	4.75	<6.81	2.29	<14.7	10.60	17.30	12.50	<14.7	<6.81	<3.16
V/L438	6.04	236.00	<4.64	<1.47	11.2	268.00	23.60	2.73	29.1	91.30	39.60	27.30	548.0	<6.81	<10.00
V/L440	44.00	1.16	94.20	.0	19.7	10.50	39.00	17.60	<14.7	337.00	107.00	162.00	68.6	25.90	21.60
V/L441	8.34	<1.00	8.14	<1.47	<10.0	3.97	<6.81	<1.00	<14.7	4.50	3.23	3.87	41.9	<6.81	<3.16
V/L442	34.50	49.50	55.10	13.10	12.0	14.80	36.70	20.80	<14.7	129.00	145.00	32.50	<14.7	<6.81	<10.00
V/L443	97.30	543.00	58.10	<1.47	<10.0	105.00	98.60	25.10	79.7	211.00	207.00	34.20	103.0	<6.81	<3.16
V/L444	44.30	3.09	48.30	.0	14.8	10.50	28.50	13.80	<14.7	154.00	105.00	96.60	127.0	16.40	<3.16
V/L446	8.68	1.78	14.30	<1.47	<10.0	3.48	34.10	1.87	<14.7	7.45	8.75	14.00	<14.7	<6.81	<3.16
V/L448	22.10	<1.00	<4.64	<1.47	<10.0	10.30	23.70	2.23	<14.7	3.28	2.64	24.20	<14.7	<6.81	<10.00
V/L449	3.50	12.80	7.44	<1.47	<10.0	2.09	11.40	1.01	<14.7	5.40	3.69	4.57	<14.7	<6.81	<3.16
V/L450	18.70	73.60	<4.64	.0	<10.0	70.00	62.20	3.91	<14.7	11.20	30.50	12.50	1,620.0	<6.81	<3.16
V/L451	6.71	32.30	<14.70	<1.47	<10.0	5.03	73.70	1.95	<14.7	5.78	7.30	8.65	291.0	<6.81	<3.16
V/L452	13.60	51.30	31.30	3.16	<10.0	6.19	14.70	8.59	<14.7	65.10	77.20	37.20	81.9	<6.81	<3.16
V/L453	8.10	96.10	22.80	3.03	<10.0	169.00	317.00	10.20	<14.7	12.60	20.40	41.00	1,840.0	<6.81	<3.16
V/L500	15.50	21.30	5.60	<1.47	<10.0	6.35	<6.81	<1.00	<14.7	4.58	6.68	6.76	15.1	<6.81	<3.16
V/L501	11.10	1.00	<4.64	<1.47	<10.0	3.45	<6.81	1.22	<14.7	4.29	4.83	9.25	<14.7	<6.81	<3.16
V/L502	30.20	6.82	47.80	3.01	12.3	9.32	18.00	16.60	<14.7	169.00	85.30	69.60	93.1	<6.81	<3.16
V/L503	8.06	2.38	21.90	<1.47	<10.0	4.83	<6.81	2.00	<14.7	6.31	8.52	17.60	<14.7	<6.81	<10.00

Rocks--continued

sample	S-ZR	S-SIZ	S-ALX	S-NAX	S-KX	S-PX	S-CE	S-GA	S-MF	S-TH	S-YB	S-PR	S-SM	S-ER	S-LU
V%L418	259.0	>34.30	.3350	<.0046	.1190	<.0681	46.8	2.29	<21.5	<100.0	.41	<3.16	<4.64	<4.64	<3.16
V%L419	>2,150.0	>34.30	.4440	<.0046	.0902	.2250	<43.0	4.01	<21.5	<100.0	2.32	4.41	<31.60	<4.64	<3.16
V%L420	2,300.0	>34.30	.2730	<.0046	.1140	.0775	<43.0	<2.15	<21.5	<100.0	1.80	<3.16	7.42	<4.64	4.76
V%L421	560.0	>34.30	.2190	<.0046	.0932	<.0681	69.2	<2.15	<21.5	<21.5	1.03	3.53	5.87	<4.64	<3.16
V%L423	780.0	23.00	1.2500	<.0046	.0	<.0681	86.0	23.70	<100.0	<21.5	6.97	15.90	11.60	19.00	<3.16
V%L424	1,810.0	>34.30	.2420	<.0046	<.0681	.2070	<43.0	3.21	<21.5	<21.5	3.20	<3.16	<4.64	5.77	<3.16
V%L425	502.0	>34.30	1.4300	<.0046	.1790	.1200	325.0	2.42	<21.5	<21.5	1.93	16.10	19.50	<4.64	<3.16
V%L426	666.0	14.10	1.5200	<.0046	>1.4700	.1330	397.0	3.90	<21.5	<21.5	10.00	22.40	19.20	37.40	<3.16
V%L427	56.3	21.60	.3410	<.0046	<.0681	.6780	<43.0	8.18	<21.5	<100.0	1.42	5.06	<4.64	<4.64	<3.16
V%L427	<46.4	6.52	.7460	<.0046	.0	1.3500	229.0	12.80	<21.5	<100.0	2.90	8.95	<4.64	<4.64	<3.16
V%L431	715.0	>34.30	.3520	<.0046	.0897	.0681	<63.0	<2.15	<21.5	<100.0	.99	<3.16	<4.64	<4.64	<3.16
V%L432	690.0	>34.30	.5110	<.0046	.1920	<.0681	<63.0	<2.15	<21.5	<21.5	1.11	<3.16	<4.64	<4.64	<3.16
V%L434	321.0	>34.30	7.5500	>.3160	>1.4700	.2230	125.0	24.50	<21.5	<21.5	4.92	8.47	8.01	<4.64	<3.16
V%L435	>2,150.0	>34.30	.2290	<.0046	<.0681	<.0681	<43.0	<2.15	23.5	<21.5	2.90	<3.16	<31.60	4.92	<3.16
V%L437	1,030.0	>34.30	1.2500	.0059	.4030	<.0681	<63.0	3.25	<21.5	<21.5	1.18	3.51	<4.64	<4.64	<3.16
V%L438	1,420.0	>34.30	1.1100	<.0046	.3660	.1020	<43.0	<2.15	<21.5	<21.5	1.14	<3.16	5.51	<4.64	<3.16
V%L441	1,410.0	>34.30	1.5700	<.0046	.0	.6290	327.0	18.60	<21.5	<100.0	7.15	17.70	14.20	24.20	3.35
V%L441	74.1	>34.30	.0975	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	.30	<3.16	<4.64	<4.64	<3.16
V%L442	286.0	>34.30	6.3500	.1500	3.2200	.0967	108.0	21.70	<21.5	<21.5	3.78	8.91	7.59	11.10	<3.16
V%L443	192.0	27.10	4.3700	.2240	>1.4700	.1410	153.0	30.20	<21.5	<21.5	4.85	13.70	8.14	6.02	<3.16
V%L444	402.0	26.90	1.2300	<.0046	.0	<.0681	<63.0	18.30	43.9	<100.0	7.03	16.30	9.05	21.70	<3.16
V%L446	1,040.0	>34.30	.5370	.0049	.2060	.0721	<43.0	<2.15	<21.5	<21.5	1.41	<3.16	4.98	<4.64	<3.16
V%L448	646.0	>34.30	<.0316	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	<21.5	5.10	<3.16	<4.64	<4.64	<3.16
V%L449	2,640.0	>34.30	.0852	<.0046	.0723	.0767	<63.0	<2.15	<21.5	<21.5	1.03	<3.16	7.24	<4.64	<3.16
V%L450	217.0	22.30	1.4700	<.0046	.0	1.0100	<43.0	14.00	<21.5	<100.0	1.55	7.79	5.16	<4.64	<3.16
V%L451	828.0	>34.30	.2530	<.0046	<.0681	<.0681	79.4	2.81	<21.5	<21.5	1.16	<3.16	<4.64	<4.64	5.61
V%L452	377.0	22.90	.4370	<.0046	.1330	<.0681	<63.0	9.59	<21.5	<100.0	2.57	10.80	7.94	8.43	<3.16
V%L453	223.0	24.20	.5080	<.0046	<.0681	.7010	<63.0	8.12	<21.5	<100.0	4.32	5.11	5.29	8.25	<3.16
V%L500	272.0	>34.30	.2550	<.0046	.1710	<.0681	<43.0	<2.15	<21.5	25.0	.97	<3.16	<4.64	<4.64	<3.16
V%L501	436.0	>34.30	.2050	<.0046	.1500	<.0681	<43.0	<2.15	<21.5	<21.5	.79	<3.16	<4.64	<4.64	<3.16
V%L502	649.0	>34.30	1.2000	<.0046	.4730	.4590	216.0	11.80	<21.5	<21.5	4.93	10.60	9.36	<4.64	<3.16
V%L503	2,390.0	>34.30	.6170	<.0046	.1740	<.0681	<43.0	2.18	<21.5	<21.5	1.50	<3.16	8.48	<4.64	4.03

Stream Sediments

sample	X-COORD.	Y-COORD.	S-FEZ	S-MGZ	S-CAZ	S-TIZ	S-MN	S-B	S-BA	S-BE	S-CO	S-CR	S-CU
V*LU02	545,220	4,144,540	.140	.0137	.1800	.0168	796.0	4.2	177.0	<1.00	1.08	3.73	12.90
V*LU03	545,580	4,144,670	.443	.0507	.0626	.0550	136.0	42.7	108.0	1.25	5.71	9.03	13.60
V*LU04	545,740	4,144,720	.995	.0445	.0214	.1230	123.0	123.0	61.1	1.36	9.78	5.97	1.50
V*LU06	546,360	4,144,940	1.670	.1240	.0556	.0752	896.0	43.1	122.0	2.33	10.40	14.40	7.62
V*LU08	547,130	4,144,990	.670	.0481	.0250	.0673	318.0	49.3	66.1	1.15	8.80	5.43	1.20
V*LU12	546,750	4,144,530	.977	.0675	.0189	.0556	924.0	42.3	54.7	<1.00	5.96	17.10	1.67
V*LU105	547,850	4,144,950	.888	.1190	.0625	.1350	801.0	28.3	135.0	3.88	16.30	14.40	11.60
V*LU111	548,230	4,145,420	2.110	.2140	.0683	.1560	2,120.0	37.7	196.0	2.42	4.66	20.90	105.00
V*LU114	544,600	4,138,240	.873	.0395	.0201	.0527	206.0	58.8	40.3	<1.00	6.73	8.12	1.58
V*LU118	545,900	4,138,770	.944	.0520	.0277	.0572	624.0	33.2	51.9	<1.00	11.10	8.16	2.60
V*LU120	545,900	4,138,910	1.380	.0589	.0334	.0847	507.0	65.2	96.7	2.00	7.22	8.33	2.07
V*LU128	546,550	4,140,870	1.780	.1160	.1050	.0578	2,410.0	69.5	201.0	10.10	16.90	15.00	17.10
V*LU130	546,320	4,140,760	1.130	.0654	.0297	.0734	1,540.0	43.3	105.0	3.45	23.80	15.20	14.00
V*LU134	543,620	4,137,100	1.080	.0581	.0143	.1160	66.3	113.0	50.1	<1.00	1.63	8.54	2.66
V*LU141	545,020	4,136,610	1.420	.0700	.0218	.0548	707.0	39.1	70.5	1.24	16.60	11.80	9.08
V*LU146	541,150	4,132,710	1.880	.0894	.0241	.1010	571.0	61.7	76.8	1.56	12.10	12.80	12.10
V*LU200	543,620	4,142,170	1.610	.2190	.0574	.0985	2,910.0	38.8	224.0	6.11	12.50	20.20	16.20
V*LU201	543,300	4,141,790	1.360	.1430	.1160	.0713	2,020.0	33.2	195.0	2.44	4.79	19.50	27.50
V*LU202	543,430	4,139,660	3.190	.0439	.0152	.1110	148.0	60.6	54.9	<1.00	7.14	13.90	6.25
V*LU203	543,700	4,139,340	.568	.0260	.0144	.2140	38.8	86.0	38.2	2.56	<1.00	4.50	1.12
V*LU204	543,630	4,138,610	.414	.0480	.0123	.0699	30.3	66.8	31.7	<1.00	<1.00	4.69	<1.00
V*LU205	543,660	4,138,490	.815	.0493	.0274	.0699	110.0	30.3	32.4	<1.00	1.45	4.80	<1.00
V*LU206	541,900	4,136,000	1.110	.9000	.0137	.0378	147.0	35.5	34.4	<1.00	1.87	3.61	<1.00
V*LU207	541,420	4,135,520	1.360	.1070	.0200	.0679	1,410.0	38.4	75.1	<1.00	37.50	18.40	17.10
V*LU208	542,020	4,136,100	1.230	.0273	.0146	.0520	120.0	31.7	32.0	<1.00	2.05	4.67	1.38
V*LU212	548,410	4,143,440	1.540	.1490	.0662	.0631	1,550.0	65.2	191.0	4.61	22.40	20.50	15.70
V*LU213	548,350	4,143,610	.868	.0408	.0103	.0464	263.0	48.7	60.0	<1.00	8.05	6.13	5.92
V*LU214	549,180	4,144,150	.939	.0333	.0203	.0583	231.0	34.8	67.1	<1.00	6.95	5.51	3.49
V*LU215	549,390	4,144,310	.376	.0248	.0149	.0565	678.0	51.7	43.1	<1.00	32.50	3.05	2.12
V*LU216	550,010	4,145,110	.779	.0184	.0125	.0418	188.0	18.5	49.6	<1.00	3.82	3.82	1.35
V*LU217	550,160	4,145,210	4.800	.2260	.1220	.1530	527.0	112.0	269.0	3.94	26.90	29.50	56.80
V*LU220	548,160	4,145,230	1.290	.1270	.0544	.1410	1,200.0	54.9	186.0	5.13	11.40	21.00	57.90
V*LU221	548,370	4,145,190	3.200	.1850	.0292	.2390	1,070.0	98.8	165.0	2.36	49.70	20.40	30.00
V*LU223	540,800	4,131,260	2.430	.4930	.2950	.518.0	518.0	80.5	217.0	2.42	13.20	34.60	31.00
V*LU224	542,040	4,131,320	1.780	.2660	.1450	.1640	218.0	44.8	162.0	1.67	11.40	21.10	25.70
V*LU225	542,410	4,131,540	2.430	.5440	.2970	.3490	838.0	55.3	176.0	2.88	12.30	28.70	29.80
V*LU226	542,850	4,131,890	1.510	.2920	.1570	.1640	143.0	55.3	116.0	1.49	7.29	15.10	16.80
V*LU227	543,460	4,132,220	1.560	1.3200	.1780	.236.0	236.0	52.2	158.0	1.38	8.50	21.20	16.50
V*LU228	543,810	4,132,480	2.150	.5930	.5580	.2170	759.0	60.4	221.0	1.77	10.30	21.00	27.10
V*LU229	546,360	4,134,200	2.000	.5020	.2410	.2450	761.0	58.8	204.0	2.58	11.10	24.70	18.20
V*LU230	548,350	4,135,530	1.800	.2250	.2040	.2390	710.0	71.1	249.0	2.11	8.27	22.20	15.00
V*LU232	547,460	4,138,170	2.000	.0950	.0406	.1500	466.0	109.0	114.0	1.29	6.49	14.40	9.47
V*LU235	547,450	4,139,690	2.840	.1060	.1700	.1580	811.0	95.7	325.0	6.10	14.60	26.50	50.00
V*LU236	547,830	4,139,610	2.910	.4580	.2370	.3730	1,590.0	87.7	607.0	3.76	18.50	54.30	28.60
V*LU238	547,720	4,138,900	3.290	.3790	.1080	.2410	1,550.0	96.6	314.0	7.15	51.50	35.10	28.30

Stream Sediments

sample	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SR	S-V	S-Y	S-ZN	S-ZR	S-SIZ	S-ALZ
V*LL002	7.06	<1.47	<10.0	1.78	20.10	<1.00	8.83	8.15	2.01	51.2	69.6	9.14	.0608
V*LL003	8.74	<1.47	<10.0	4.77	10.90	1.84	8.95	11.20	8.95	<14.7	161.0	21.30	.4190
V*LL004	12.30	<1.47	<10.0	2.50	24.60	2.81	6.50	16.20	31.40	<14.7	>2,150.0	>34.30	.4890
V*LL006	12.80	<1.47	<10.0	6.48	101.00	3.11	15.60	30.60	10.50	65.9	172.0	>34.30	1.2500
V*LL008	7.69	<1.47	<10.0	6.92	26.40	1.61	6.16	15.20	9.41	27.7	425.0	>34.30	.5630
V*LL012	7.33	<1.47	<10.0	5.18	137.00	1.84	13.80	11.70	11.70	44.8	338.0	>34.30	.5550
V*LL106	13.60	<1.47	13.7	19.00	9.80	3.74	15.00	17.70	22.60	<14.7	836.0	>34.30	1.2000
V*LL111	26.80	1.80	11.7	21.00	70.20	4.18	20.60	47.90	26.80	175.0	468.0	>34.30	2.0800
V*LL114	17.00	<1.47	<10.0	2.28	14.10	1.59	6.45	14.00	12.00	<14.7	234.0	>34.30	.5280
V*LL118	11.40	<1.47	<10.0	5.63	38.00	1.85	8.26	16.80	8.96	24.6	148.0	>34.30	.6580
V*LL120	13.10	1.62	<10.0	13.30	13.70	2.60	13.60	22.50	9.60	23.8	175.0	>34.30	.8060
V*LL126	17.00	<1.47	<10.0	48.10	29.10	4.50	20.80	32.50	20.00	115.0	67.6	25.40	1.3100
V*LL130	15.40	<1.47	<10.0	8.63	19.80	2.93	10.40	27.30	16.50	44.5	111.0	26.90	1.2200
V*LL134	13.40	<1.47	11.1	2.29	10.40	2.89	9.90	18.90	28.50	<14.7	>2,150.0	>34.30	.8010
V*LL141	<10.00	<1.47	<10.0	6.00	48.50	2.10	11.80	22.60	7.27	25.5	100.0	>34.30	.9260
V*LL146	16.50	<1.47	<10.0	6.85	26.10	2.55	14.90	29.90	15.90	<14.7	235.0	>34.30	1.0300
V*LL200	18.40	1.57	<10.0	23.20	27.20	6.99	14.30	53.00	19.80	66.3	103.0	19.80	2.0000
V*LL201	13.90	1.67	<10.0	17.90	21.00	3.10	16.90	31.30	15.80	52.4	85.6	25.60	1.3200
V*LL202	16.60	<1.47	<10.0	2.93	<6.81	3.17	14.50	26.70	20.50	<14.7	1,650.0	>34.30	.6180
V*LL203	10.80	<1.47	12.0	<1.00	<6.81	3.92	5.40	12.60	121.00	<14.7	>2,150.0	>34.30	.1990
V*LL204	8.15	<1.47	<10.0	1.56	<6.81	<1.00	4.10	9.29	7.44	<14.7	733.0	>34.30	.4640
V*LL205	6.94	<1.47	<10.0	1.50	13.40	1.41	5.62	9.87	6.48	<14.7	212.0	>34.30	.4960
V*LL206	7.83	<1.47	<10.0	3.21	<6.81	1.66	11.00	10.80	17.80	<14.7	266.0	>34.30	.2880
V*LL207	12.20	<1.47	<10.0	7.02	30.80	3.02	13.40	33.20	13.10	41.2	92.3	30.80	1.3800
V*LL208	10.30	<1.47	<10.0	1.95	18.00	1.50	10.00	15.10	9.05	<14.7	159.0	>34.30	.3790
V*LL212	14.70	<1.47	<10.0	22.30	15.70	5.29	19.00	41.60	14.50	41.3	102.0	24.90	1.6900
V*LL213	9.23	<1.47	<10.0	3.75	15.80	1.85	5.81	18.30	7.16	<14.7	90.0	>34.30	.7030
V*LL214	6.56	3.53	<10.0	4.22	14.50	1.57	6.11	26.80	8.65	<14.7	150.0	>34.30	.5340
V*LL215	<4.64	<1.47	<10.0	2.79	17.80	1.20	3.90	9.98	7.92	<14.7	176.0	>34.30	.3510
V*LL216	4.65	<1.47	<10.0	4.16	<6.81	<1.00	4.43	13.20	4.59	<14.7	197.0	>34.30	.2440
V*LL217	24.80	12.30	<10.0	40.60	54.20	9.53	27.60	105.00	24.80	125.0	153.0	>34.30	2.6400
V*LL220	18.30	2.09	<10.0	12.10	122.00	3.61	22.10	41.30	18.20	38.8	176.0	28.60	1.4300
V*LL221	32.70	<1.47	12.4	14.70	62.30	7.71	31.20	55.00	27.00	25.0	251.0	>34.30	2.3700
V*LL223	26.60	<1.47	10.7	24.00	21.50	7.87	68.50	46.70	21.30	49.9	278.0	>34.30	3.1500
V*LL224	16.60	<1.47	<10.0	14.30	21.90	4.44	21.40	41.00	19.50	55.5	110.0	>34.30	1.9200
V*LL225	42.10	1.51	15.5	19.80	19.80	8.97	95.90	57.90	32.20	24.7	194.0	34.10	3.0500
V*LL226	28.20	<1.47	<10.0	10.30	20.70	3.71	27.30	32.40	15.30	<14.7	236.0	>34.30	1.8200
V*LL227	23.00	1.55	<10.0	12.30	17.10	5.13	31.20	39.20	15.90	<14.7	223.0	>34.30	2.0300
V*LL228	22.10	<1.47	<10.0	15.60	24.50	6.72	74.60	42.10	19.70	25.7	177.0	32.50	2.5200
V*LL229	27.40	<1.47	11.1	19.20	14.40	9.06	63.10	59.10	21.50	19.3	154.0	29.10	2.4200
V*LL230	25.20	<1.47	14.8	16.80	8.74	6.50	20.60	49.80	30.10	<14.7	410.0	>34.30	1.9000
V*LL232	11.30	<1.47	<10.0	8.13	25.30	3.47	14.60	32.90	15.70	<14.7	449.0	>34.30	1.2600
V*LL235	23.70	9.19	<10.0	68.30	141.00	9.98	30.00	120.00	25.20	302.0	224.0	34.50	2.1700
V*LL236	40.80	6.91	15.6	59.30	44.50	15.50	112.00	187.00	31.00	98.5	235.0	35.20	4.8600
V*LL238	33.60	<1.47	10.9	87.10	32.90	14.50	142.00	116.00	27.50	119.0	179.0	26.10	6.0600

Stream Sediments

sample	S-NAZ	S-KX	S-PX	S-CE	S-GA	S-TH	S-YB	S-PR	S-ND	S-SM	S-EU	S-GB	S-DY	S-ER
VML002	<.0046	.0835	<.0681	<43.0	<2.15	<21.5	<.15	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML003	.0094	.2960	.0926	<43.0	<2.15	<21.5	.84	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML004	<.0046	<.0681	.0965	<43.0	<2.15	<21.5	3.00	<3.16	<88.1	<31.60	<1.00	<14.70	<6.81	<4.64
VML006	.0172	.3440	.0760	<43.0	3.38	<21.5	1.66	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML008	<.0046	.0894	.0690	<43.0	<2.15	<21.5	.79	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML102	<.0046	.1360	<.0681	<43.0	<2.15	<21.5	1.03	<3.16	85.0	<4.64	<1.00	<4.64	21.90	<4.64
VML106	.0303	.5830	.1100	49.7	3.61	<21.5	1.20	<3.16	107.0	4.96	<1.00	<14.70	<6.81	<4.64
VML111	.0421	.4470	.1260	47.8	4.76	<100.0	1.91	4.01	<88.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML114	<.0046	.0686	.0779	<43.0	<2.15	<21.5	.93	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML118	<.0046	.2200	.0711	<43.0	<2.15	<21.5	.71	<3.16	106.0	<4.64	<1.00	<4.64	<6.81	<4.64
VML120	.0052	.3030	.0769	<43.0	<2.15	<21.5	.76	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML128	.0212	.4750	.1090	<43.0	3.66	<100.0	1.73	<3.16	<68.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML130	.0167	.3750	.0776	<43.0	2.53	<21.5	1.19	<3.16	93.3	<4.64	<1.00	6.18	<6.81	<4.64
VML134	<.0046	.1070	<.0681	<63.0	<2.15	<21.5	3.60	<3.16	119.0	<31.60	<1.00	<14.70	<6.81	<4.64
VML141	.0112	.3610	<.0681	<43.0	2.50	<100.0	.85	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML146	.0091	.2550	.0792	<43.0	2.93	<21.5	1.24	<3.16	74.9	<4.64	<1.00	<14.70	<6.81	<4.64
VML200	.0477	.6380	.0728	<43.0	6.45	<100.0	2.18	3.21	102.0	<4.64	<1.00	7.12	<6.81	<4.64
VML201	.0413	.5620	.1030	<43.0	3.87	<21.5	1.27	<3.16	<88.1	<4.64	<1.00	8.11	<6.81	<4.64
VML202	<.0046	.2240	<.0681	<63.0	2.67	<100.0	1.49	<3.16	86.0	<4.64	<1.00	<14.70	<6.81	<4.64
VML203	<.0046	<.0681	.0860	<43.0	<2.15	<21.5	11.60	<3.16	<88.1	<31.60	<1.00	<14.70	13.90	13.30
VML204	<.0046	.0928	<.0681	<43.0	<2.15	<21.5	.68	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML205	<.0046	.1090	<.0681	<43.0	2.16	<21.5	.78	<3.16	82.4	<4.64	<1.00	<4.64	<6.81	<4.64
VML206	<.0046	<.0681	.0755	<43.0	<2.15	<21.5	1.69	3.84	77.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML207	.0139	.3010	.0854	<43.0	3.68	<21.5	1.11	3.29	82.3	<4.64	<1.00	<4.64	<6.81	<4.64
VML208	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	.80	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML212	.0229	.6690	.0691	<43.0	4.58	<21.5	1.64	<3.16	<88.1	<4.64	<1.00	5.37	<6.81	<4.64
VML213	<.0046	.0869	<.0681	<43.0	2.22	<21.5	.49	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML214	<.0046	.0891	<.0681	<43.0	<2.15	<21.5	1.00	<3.16	<88.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML215	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	.84	<3.16	73.2	<4.64	<1.00	<4.64	<6.81	<4.64
VML216	<.0046	<.0681	<.0681	<43.0	<2.15	<21.5	.63	<3.16	86.8	<4.64	<1.00	<4.64	<6.81	<4.64
VML217	.0424	1.0400	<.0681	54.9	8.19	<21.5	1.46	5.33	77.8	<4.64	<1.00	<14.70	<6.81	<4.64
VML220	.0480	.5190	<.0681	<43.0	3.78	<21.5	1.96	<3.16	80.7	<4.64	<1.00	<14.70	<6.81	<4.64
VML221	.0329	.8470	<.0681	81.3	6.34	<100.0	1.99	5.03	<88.1	<4.64	<2.15	14.70	<6.81	<4.64
VML223	>.3160	1.1300	.0738	48.5	7.55	<100.0	2.97	4.31	82.9	<4.64	<1.00	<14.70	<6.81	<4.64
VML224	.0898	.7270	<.0681	<43.0	4.45	<21.5	2.56	3.85	71.6	<4.64	<1.00	<14.70	<6.81	<4.64
VML225	>.3160	1.0300	.0762	75.6	7.60	<21.5	3.81	6.40	<88.1	5.05	<1.00	16.60	<6.81	<4.64
VML226	>.3160	.5590	.0768	<43.0	4.58	<21.5	2.02	4.75	<88.1	<4.64	<1.00	15.80	<6.81	<4.64
VML227	.1430	.7770	.0696	<43.0	5.45	<100.0	1.92	<3.16	<88.1	7.79	<1.00	<14.70	<6.81	<4.64
VML228	.2180	.9860	.0706	<43.0	6.72	<21.5	2.31	4.49	<88.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML229	>.3160	1.1500	.0697	44.9	7.44	<21.5	2.77	6.00	<88.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML230	.0599	.6580	.0805	58.6	4.88	<21.5	2.62	<3.16	89.5	4.99	1.09	<14.70	<6.81	<4.64
VML232	.0113	.3440	<.0681	<43.0	3.03	<21.5	3.03	<3.16	<88.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML235	.0331	1.4000	.1150	64.6	6.06	<21.5	1.51	<3.16	110.0	<4.64	<1.00	<14.70	<6.81	<4.64
VML236	.1070	>1.4700	.0743	84.4	13.40	36.7	3.34	7.05	<88.1	5.05	1.16	<14.70	<6.81	5.84
VML238	.1500	>1.4700	<.0681	96.3	12.30	<21.5	2.63	6.31	90.8	5.71	<1.00	<14.70	<6.81	<4.64

Stream Sediments--continued

sample	X-COORD.	Y-COORD.	S-FEX	S-MGX	S-CAX	S-TIX	S-MN	S-B	S-BA	S-BE	S-CO	S-CR	S-CU
V*L237	549,010	4,138,820	2.920	.1410	.0477	.1120	327.0	98.3	232.0	1.96	9.45	18.90	13.90
V*L240	546,970	4,137,640	4.060	.2630	.0832	.1890	256.0	104.0	249.0	3.76	11.00	26.30	15.60
V*L241	546,590	4,137,290	3.480	.3170	.0910	.2530	469.0	97.8	341.0	2.75	19.50	35.50	27.20
V*L242	546,140	4,137,860	2.260	.1980	.1140	.2290	816.0	96.6	358.0	3.71	21.30	28.10	31.10
V*L243	545,700	4,135,730	1.520	.1180	.1240	.0724	545.0	90.7	198.0	1.62	9.73	15.10	11.40
V*L245	545,380	4,135,620	1.360	.1100	.0569	.1090	160.0	84.0	174.0	1.67	10.00	15.00	10.10
V*L246	548,760	4,140,150	4.300	.5300	.1630	.3170	740.0	137.0	377.0	3.55	21.40	46.30	28.50
V*L247	550,660	4,141,230	4.440	.5170	.0879	.3560	436.0	93.9	403.0	4.59	18.50	40.90	24.60
V*L248	550,850	4,141,210	4.340	.6130	.1570	.3960	999.0	94.6	461.0	4.34	27.90	53.10	26.90
V*L249	553,120	4,144,030	.648	.0603	.0660	.1200	121.0	108.0	102.0	<1.00	3.02	7.69	4.03
V*L250	552,040	4,142,490	1.950	.2290	.1280	.1910	731.0	97.6	323.0	2.60	17.90	23.60	28.60
V*L251	551,600	4,142,040	5.200	.5220	.1060	.4050	279.0	98.9	403.0	3.23	12.90	54.30	26.90
V*L300	548,250	4,135,560	2.800	.4450	.2360	.2370	954.0	66.9	312.0	1.90	12.60	26.40	28.30
V*L303	548,640	4,141,950	1.690	.1140	.0615	.1050	918.0	80.5	213.0	3.08	9.72	22.00	9.42
V*L304	548,960	4,140,910	3.460	.2730	.1000	.2390	879.0	150.0	246.0	2.93	13.50	29.00	27.00
V*L305	549,900	4,139,990	3.880	.2600	.0933	.1670	592.0	60.7	197.0	2.28	11.90	25.90	17.10
V*L306	549,970	4,140,060	3.400	.5150	.1560	.3600	1,290.0	69.3	422.0	4.28	32.50	51.10	28.90
V*L307	542,900	4,134,080	1.050	.1550	.0311	.0398	881.0	36.7	247.0	11.70	12.50	20.40	13.90
V*L310	543,510	4,134,400	1.800	.1550	.0442	.2180	193.0	69.9	168.0	<1.00	4.22	20.80	20.50
V*L313	542,420	4,133,680	1.610	.1770	.0714	.1150	745.0	42.6	296.0	6.48	19.70	20.60	20.60
V*L314	543,070	4,133,480	1.290	.0486	.0171	.0841	709.0	64.6	63.4	<1.00	10.00	6.59	2.13
V*L315	543,180	4,133,680	.913	.0832	.0230	.0619	762.0	44.6	85.4	1.31	20.10	14.00	13.40
V*L316	543,490	4,133,860	1.370	.1590	.1530	.0890	894.0	44.5	314.0	5.40	12.20	19.40	25.30
V*L317	543,750	4,134,150	.973	.0958	.0272	.1310	780.0	49.7	124.0	1.11	13.70	12.90	6.81
V*L318	544,610	4,135,310	1.250	.1050	.0235	.1600	69.8	69.8	147.0	<1.00	8.22	18.70	19.20
V*L319	544,820	4,135,250	1.400	.1230	.0554	.1250	212.0	59.7	133.0	1.03	4.01	20.10	15.00
V*L404	544,730	4,139,330	.586	.0472	.0222	.0800	37.9	80.0	43.3	<1.00	<1.00	6.19	2.50
V*L415	549,090	4,142,960	1.120	.0910	.0736	.0899	3,280.0	54.0	207.0	1.54	12.10	21.20	26.80
V*L422	545,280	4,139,370	2.870	.1180	.0809	.1510	1,640.0	95.2	184.0	7.32	18.70	18.20	12.40
V*L427	546,210	4,139,140	1.260	.1410	.0172	.0952	2,420.0	53.4	124.0	1.71	12.60	18.10	24.80
V*L430	546,560	4,138,830	2.040	.0935	.0351	.1840	822.0	90.6	114.0	2.72	8.69	18.60	11.80
V*L433	547,160	4,139,230	2.610	.2450	.1450	.1200	1,200.0	92.6	304.0	3.83	13.70	25.20	43.90
V*L436	547,020	4,141,400	.816	.0832	.1590	.0768	1,020.0	52.1	188.0	1.51	5.21	21.70	17.20
V*L439	547,790	4,141,690	2.830	.2700	.0963	.2110	1,180.0	106.0	201.0	2.99	30.10	26.80	28.50
V*L445	543,000	4,135,890	3.980	.3170	.0555	.3440	198.0	102.0	267.0	1.82	5.29	42.30	21.80
V*L447	544,460	4,135,770	.949	.0624	.0854	.1180	530.0	55.5	149.0	<1.00	4.72	11.00	8.45
V*L504	544,990	4,142,340	.915	.0531	.0880	.1080	269.0	26.5	89.6	<1.00	2.86	6.20	1.53
V*L505	545,240	4,142,370	.886	.0623	.0882	.1690	85.7	53.4	64.8	<1.00	4.41	11.60	2.40
V*L506	545,770	4,142,870	.938	.0421	.0369	.1880	193.0	62.0	67.5	<1.00	6.47	5.21	6.07
V*L507	546,660	4,138,040	1.000	.0987	.0853	.2000	498.0	78.9	140.0	1.53	5.10	15.10	8.97
V*L508	546,570	4,137,760	3.170	.1880	.0941	.1940	227.0	118.0	203.0	2.14	6.71	23.70	30.00
V*L509	546,430	4,137,420	1.180	.0798	.0213	.2080	209.0	53.9	88.1	<1.00	4.50	16.00	4.82
V*L510	545,830	4,136,830	1.700	.0896	.0270	.1180	591.0	131.0	83.7	1.31	5.48	12.00	7.00
V*L511	545,740	4,136,350	2.280	.0921	.0218	.0906	855.0	95.9	56.1	1.50	13.90	16.10	7.83
V*L512	544,610	4,135,310	2.320	.0941	.0267	.1260	1,000.0	113.0	131.0	1.27	10.30	17.90	24.90

Stream Sediments--continued

sample	S-LA	S-MO	S-MB	S-NI	S-PB	S-SC	S-SR	S-V	S-Y	S-ZN	S-ZR	S-SIX	S-ALX
V%L239	15.50	<1.47	<10.0	13.10	20.40	5.22	44.50	36.70	26.60	<14.7	602.0	>34.30	1.5000
V%L243	25.60	<1.47	11.5	36.30	16.60	10.50	104.00	78.70	38.20	61.5	930.0	>34.30	2.8300
V%L241	29.30	<1.47	<10.0	56.70	34.70	10.60	102.00	99.10	26.10	137.0	527.0	>34.30	3.2500
V%L242	25.40	<1.47	<10.0	21.80	26.00	9.66	95.20	71.70	23.30	<14.7	278.0	35.30	2.8300
V%L243	12.40	2.13	<10.0	34.90	16.10	3.22	13.40	44.90	12.70	96.1	183.0	>34.30	1.3000
V%L245	16.50	2.36	<10.0	13.90	11.70	4.47	12.40	45.00	59.30	<14.7	>2,150.0	>34.30	1.3900
V%L246	38.40	1.90	12.1	71.30	20.00	13.70	130.00	130.00	28.70	133.0	289.0	>34.30	3.7300
V%L247	40.10	<1.47	17.5	39.00	15.50	16.90	82.90	125.00	34.20	52.8	412.0	>34.30	4.0600
V%L248	42.90	<1.47	11.0	55.70	27.40	17.50	146.00	131.00	30.10	91.9	489.0	32.50	5.8600
V%L249	15.20	<1.47	<10.0	6.57	9.29	2.46	8.03	23.60	13.10	<14.7	1,720.0	>34.30	.7030
V%L250	21.40	<1.47	11.3	32.90	34.40	8.88	64.80	68.40	20.60	49.1	293.0	>34.30	2.3500
V%L251	50.00	<1.47	16.8	31.30	10.90	17.80	155.00	131.00	39.90	48.6	364.0	>34.30	5.0200
V%L300	31.50	<1.47	12.1	22.50	14.00	9.23	63.60	54.50	35.70	49.0	353.0	>34.30	3.1200
V%L303	17.00	<1.47	<10.0	13.30	16.50	3.68	19.80	33.60	12.80	<14.7	240.0	31.60	1.3200
V%L304	28.00	<1.47	<10.0	39.20	25.20	9.91	71.90	86.30	33.10	79.6	497.0	>34.30	3.2100
V%L305	22.10	<1.47	<10.0	32.40	20.30	8.22	59.20	76.60	17.60	51.3	181.0	>34.30	2.7200
V%L306	38.70	<1.47	13.8	58.00	28.30	15.50	121.00	115.00	30.10	67.7	238.0	26.90	4.0700
V%L307	18.40	<1.47	<10.0	13.60	15.50	4.15	18.50	29.00	22.30	32.9	64.6	12.10	1.3600
V%L310	27.10	<1.47	13.5	4.84	16.60	4.55	31.00	41.30	23.40	<14.7	355.0	34.50	1.7900
V%L313	20.30	<1.47	<10.0	12.10	21.60	5.86	21.10	46.70	25.50	<14.7	137.0	23.40	1.5700
V%L314	12.70	<1.47	<10.0	5.33	16.30	1.98	9.62	13.00	21.60	<14.7	>2,150.0	>34.30	.4740
V%L315	7.99	<1.47	<10.0	6.77	14.60	2.07	9.42	20.10	8.52	22.5	97.5	26.80	.8120
V%L316	17.50	<1.47	<10.0	17.50	15.80	4.43	17.00	33.30	15.80	39.8	153.0	24.60	1.5200
V%L317	17.60	<1.47	<10.0	8.93	12.10	2.97	15.10	18.40	18.90	<14.7	1,820.0	>34.30	1.2400
V%L318	9.96	4.12	<10.0	6.56	69.90	2.92	18.80	62.60	10.70	29.0	186.0	>34.30	1.2800
V%L319	14.70	<1.47	<10.0	9.71	14.10	3.03	26.40	20.40	18.50	<14.7	898.0	>34.30	1.2000
V%L408	8.52	<1.47	<10.0	1.84	42.80	1.52	9.46	9.58	7.89	<14.7	455.0	>34.30	.4870
V%L415	18.50	<1.47	<10.0	10.10	26.20	3.03	19.80	33.20	13.10	54.5	99.9	22.60	1.3700
V%L422	19.80	<1.47	11.2	21.60	29.40	5.03	22.10	41.70	28.30	18.8	770.0	>34.30	1.4400
V%L427	18.50	<1.47	<10.0	14.50	116.00	3.30	11.40	27.60	26.20	128.0	2,430.0	>34.30	1.5000
V%L430	25.30	<1.47	18.5	8.88	58.30	4.42	15.80	25.00	47.70	<14.7	>2,150.0	>34.30	1.0900
V%L433	20.60	8.41	<10.0	43.10	109.00	8.96	75.00	116.00	18.10	185.0	110.0	31.30	2.3600
V%L436	23.30	<1.47	<10.0	17.90	23.60	2.86	20.00	19.50	13.70	31.4	177.0	23.90	.7920
V%L439	23.30	<1.47	14.0	14.70	128.00	9.29	31.50	64.40	26.30	26.6	361.0	>34.30	2.7600
V%L445	35.10	<1.47	11.3	11.90	19.90	10.70	128.00	74.80	31.10	<14.7	483.0	>34.30	3.6200
V%L447	14.60	<1.47	22.5	4.74	71.60	2.31	11.30	20.00	10.60	<14.7	327.0	>34.30	.6530
V%L504	13.10	<1.47	<10.0	7.42	6.64	2.10	10.90	12.40	17.90	<14.7	392.0	>34.30	.6560
V%L505	11.40	<1.47	11.6	8.00	7.74	2.08	11.00	13.10	27.20	<14.7	952.0	>34.30	.7310
V%L506	13.90	<1.47	<10.0	4.26	8.85	1.81	10.30	11.80	9.40	<14.7	318.0	>34.30	.4540
V%L507	17.30	<1.47	11.3	11.80	78.60	3.12	14.40	30.50	21.10	28.4	742.0	>34.30	1.4200
V%L508	21.20	2.31	<10.0	20.10	34.50	8.01	31.60	76.60	22.10	47.7	301.0	>34.30	2.8100
V%L509	13.00	1.99	11.3	5.06	29.80	3.13	11.00	32.50	13.20	<14.7	854.0	>34.30	1.1200
V%L510	13.20	<1.47	<10.0	8.32	9.34	3.55	16.10	26.60	25.80	<14.7	>2,150.0	>34.30	1.2500
V%L511	15.00	<1.47	10.2	6.97	32.90	2.78	15.00	32.90	15.70	27.0	309.0	>34.30	1.0900
V%L512	15.80	6.02	<10.0	8.29	64.00	4.51	21.20	74.20	23.50	<14.7	>2,150.0	>34.30	1.0700

Stream Sediments--continued

sample	S-NAZ	S-KX	S-PX	S-CE	S-GA	S-TH	S-YB	S-PR	S-ND	S-SM	S-EU	S-GD	S-DY	S-ER
VML239	.0218	.6080	.0798	<45.0	4.16	27.2	3.06	4.62	<68.1	44.64	<1.00	<16.70	9.54	<4.64
VML240	.0647	1.3400	.0842	80.1	7.28	<21.5	2.10	4.29	<68.1	5.09	<1.00	<16.70	<6.81	<4.64
VML241	.0888	>1.4700	.0735	78.9	9.76	<21.5	3.08	3.70	97.4	<4.64	<1.00	<16.70	<6.81	<4.64
VML242	.0660	1.3700	.0683	61.5	5.98	35.4	4.23	4.49	103.0	<4.64	<1.00	<16.70	<6.81	<4.64
VML243	.0188	.4570	<.0681	<43.0	2.87	51.7	1.19	<3.16	<68.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML245	.0116	.3940	.0709	<43.0	3.00	40.7	3.84	<3.16	<68.1	<31.60	<1.00	<14.70	<6.81	<4.64
VML246	.1400	>1.4700	.0863	77.7	13.50	<21.5	2.28	7.33	<68.1	4.93	<1.00	<14.70	<6.81	4.66
VML247	.1520	>1.4700	.0747	96.2	11.10	53.6	2.21	5.58	118.0	4.95	<1.00	<14.70	<6.81	<4.64
VML248	.2070	>1.4700	.0829	98.3	16.60	<21.5	3.67	7.96	<68.1	5.40	1.36	<14.70	<6.81	<4.64
VML249	<.0046	.1750	<.0681	56.7	<2.15	<21.5	1.15	<3.16	128.0	5.62	1.25	<14.70	<6.81	<4.64
VML250	.0736	1.0600	.0758	54.1	5.32	<21.5	1.88	3.40	<68.1	4.64	1.37	<14.70	<6.81	<4.64
VML251	.1940	>1.4700	<.0681	102.0	14.00	<21.5	3.58	7.97	83.9	7.10	1.79	<14.70	<6.81	<4.64
VML300	.2250	>1.4700	.1020	76.9	7.53	<21.5	2.43	<3.16	<68.1	5.87	<1.00	<14.70	8.21	<4.64
VML303	.0273	.6810	.0805	<43.0	3.81	27.8	1.48	3.85	<68.1	<4.64	1.25	<14.70	<6.81	<4.64
VML304	.0521	1.2100	<.0681	72.8	8.08	<21.5	4.02	4.45	<68.1	<4.64	<1.00	<14.70	<6.81	4.73
VML305	.0598	1.0400	<.0681	50.8	5.75	31.6	1.60	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML306	.1980	>1.4700	<.0681	87.0	15.30	<21.5	3.21	5.77	<68.1	6.03	1.07	<14.70	<6.81	<4.64
VML309	.0392	.6820	.0774	<43.0	2.75	<21.5	2.08	4.96	<68.1	<4.64	1.46	11.40	<6.81	<4.64
VML310	.1200	.8700	<.0681	57.8	4.35	25.6	3.40	3.87	87.0	5.69	<1.00	<14.70	6.86	<4.64
VML313	.0427	.7640	.0848	<43.0	3.76	27.1	2.31	4.77	129.0	<4.64	<1.00	<14.70	<6.81	<4.64
VML314	<.0046	.1080	<.0681	82.2	<2.15	21.7	2.02	<3.16	<68.1	<31.60	<1.00	<4.64	<6.81	<4.64
VML315	.0261	.4280	<.0681	<43.0	2.60	<21.5	.83	3.65	96.0	<4.64	<1.00	<4.64	<6.81	<4.64
VML316	.0476	.7700	.0838	<43.0	3.59	20.2	1.69	4.62	<68.1	<4.64	<1.00	6.64	<6.81	<4.64
VML317	.0174	.4290	<.0681	<43.0	2.76	<21.5	1.76	<3.16	<68.1	6.11	<1.00	<14.70	<6.81	<4.64
VML318	.0133	.5160	<.0681	<43.0	2.99	<21.5	1.70	<3.16	<68.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML319	.0434	.5720	<.0681	<43.0	3.20	<21.5	3.58	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML403	<.0046	.0790	.0714	<43.0	<2.15	<21.5	1.03	<3.16	<68.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML415	.0487	.5130	.0780	<43.0	3.47	<21.5	1.32	3.92	<68.1	4.76	<1.00	<4.64	<6.81	<4.64
VML422	.0270	.6420	.1180	70.6	4.61	<100.0	2.38	3.96	<68.1	5.11	<1.00	<14.70	<6.81	<4.64
VML427	.0270	.4540	.0708	<43.0	4.04	<21.5	2.63	3.64	<68.1	6.77	1.08	5.11	<6.81	<4.64
VML430	.0187	.5340	.0838	<43.0	3.26	<21.5	5.42	<3.16	<68.1	<31.60	<1.00	<14.70	<6.81	<4.64
VML433	.0336	1.3900	.0794	<43.0	6.16	<21.5	1.92	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML435	.0249	.5240	.0878	<43.0	<2.15	<100.0	1.40	<3.16	<68.1	<4.64	<1.00	<4.64	<6.81	<4.64
VML439	.0621	1.0700	.1730	66.9	8.61	<100.0	2.08	4.68	<68.1	5.47	<1.00	<14.70	8.34	<4.64
VML445	.0822	1.3900	.1270	96.7	10.70	<21.5	3.82	5.56	<68.1	6.86	<1.00	<14.70	<6.81	10.10
VML447	.0092	.2740	<.0681	<43.0	<2.15	<100.0	.99	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML504	<.0046	.1610	<.0681	<43.0	<2.15	<21.5	1.15	<3.16	111.0	<4.64	1.01	15.10	<6.81	<4.64
VML505	.0079	.2780	<.0681	<43.0	<2.15	<21.5	2.24	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML506	<.0046	.0896	<.0681	<43.0	<2.15	<21.5	.92	<3.16	<68.1	<4.64	<1.00	<14.70	<6.81	<4.64
VML507	.0124	.2880	<.0697	36.4	2.60	<21.5	2.23	<3.16	<68.1	5.81	<1.00	<14.70	<6.81	<4.64
VML508	.0427	1.1400	<.0681	55.9	6.90	<21.5	3.09	<3.16	106.0	5.03	<1.00	20.10	<6.81	5.89
VML509	.0066	.2510	<.0681	<43.0	2.76	<21.5	1.35	<3.16	<68.1	4.84	<1.00	<14.70	<6.81	<4.64
VML511	.0073	.3680	<.0681	<43.0	2.99	<21.5	5.06	<3.16	<68.1	<31.60	<1.00	<14.70	<6.81	<4.64
VML511	.0219	.4610	.0737	<43.0	3.73	<21.5	2.28	<3.16	<68.1	<4.64	<1.00	5.93	<6.81	<4.64
VML512	.0108	.4420	.0785	<43.0	3.23	<21.5	3.06	<3.16	<68.1	<31.60	<1.00	<14.70	<6.81	<4.64

Stream Sediments--continued

sample	X-COORD.	Y-COORD.	S-FEX	S-MGX	S-CAZ	S-TIX	S-MN	S-B	S-BA	S-BE	S-CO	S-CR	S-CU
V#L513	549,090	4,139,650	5,330	.5160	.2170	-.2940	1,870.0	106.0	565.0	4.67	38.00	49.30	42.20
V#L514	550,370	4,141,710	.972	.0690	.0360	.1610	297.0	110.0	104.0	1.28	7.17	12.40	6.40
V#L515	550,250	4,141,620	1,840	.1350	.0521	.1670	308.0	88.4	215.0	1.41	7.58	23.40	14.30
V#L516	550,490	4,141,740	1,470	.1050	.0468	.1380	400.0	80.1	161.0	1.27	7.77	19.50	12.60
V#L517	551,890	4,143,670	1,470	.1320	.0724	.2120	734.0	97.5	221.0	2.00	10.70	21.00	16.00
V#L518	551,930	4,142,650	4,530	.3950	.1630	.3140	1,520.0	86.5	457.0	3.03	40.20	39.60	25.00
V#L519	551,950	4,142,620	4,590	.4250	.1810	.3910	1,360.0	87.7	436.0	3.22	35.50	43.50	24.00
V#L520	551,160	4,141,690	4,810	.5030	.1420	.6280	1,030.0	107.0	558.0	3.82	26.00	59.60	23.90

Stream Sediments--continued

sample	S-LA	S-MO	S-NB	S-NI	S-PB	S-SC	S-SR	S-V	S-Y	S-ZN	S-ZR	S-SIZ	S-ALZ
V#L513	39.80	<1.47	10.1	108.00	32.10	15.90	158.00	127.00	30.40	161.0	249.0	33.40	4,5800
V#L514	18.00	<1.47	13.3	7.27	15.00	3.20	11.80	23.80	24.40	<14.7	1,870.0	>34.30	.9950
V#L515	18.30	2.12	<10.0	18.50	19.90	6.10	29.90	44.80	30.30	<14.7	1,790.0	>34.30	1.7600
V#L516	26.70	1.84	<10.0	14.40	14.80	3.98	22.40	30.20	26.10	<14.7	1,490.0	>34.30	1.2500
V#L517	29.20	3.22	17.5	14.80	29.10	7.01	20.30	64.80	30.80	<14.7	688.0	>34.30	1.8300
V#L518	31.80	4.30	11.8	69.50	39.90	12.50	133.00	103.00	51.50	129.0	384.0	>34.30	3,6500
V#L519	33.00	2.09	14.0	48.20	50.70	11.70	84.70	103.00	30.00	89.1	419.0	>34.30	4,7000
V#L520	44.50	<1.47	20.6	50.20	24.10	16.80	167.00	119.00	41.20	32.5	508.0	>34.30	6,1700

Stream Sediments--continued

sample	S-NAZ	S-KZ	S-PX	S-CE	S-GA	S-TH	S-YB	S-PR	S-ND	S-SM	S-EU	S-6D	S-DY	S-ER
V#L513	.1460	>1.4700	<.0681	93.2	13.80	<21.5	2.70	5.26	<68.1	5.04	<1.00	<14.70	<6.81	<4.64
V#L514	.0087	.2460	-.0894	<63.0	2.29	<100.0	2.46	<3.16	<68.1	6.74	<1.00	<14.70	<6.81	5.37
V#L515	.0339	.7480	<.0681	63.6	4.56	<21.5	3.80	3.92	<68.1	<4.64	<1.00	<14.70	12.10	<4.64
V#L516	.0229	.4640	<.0681	68.8	3.28	<100.0	4.50	4.75	<68.1	6.81	<1.00	<14.70	<6.81	<4.64
V#L517	.0361	.5970	.0840	68.3	4.96	<100.0	4.68	3.22	<100.0	5.81	1.21	<14.70	<6.81	6.92
V#L518	.1310	>1.4700	.0862	83.5	11.50	<21.5	5.20	4.79	<68.1	6.21	<1.00	<14.70	<6.81	7.77
V#L519	.1330	>1.4700	.1400	75.3	11.20	<100.0	3.49	3.86	<68.1	<4.64	<1.00	<14.70	<6.81	11.10
V#L520	.1930	>1.4700	.1020	92.5	14.10	<100.0	4.57	7.56	<68.1	7.30	1.45	15.80	<6.81	6.06