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CHEMICAL ANALYSES OF STREAM DEPOSITS IN THE WEST PIONEER MOUNTAINS, BEAVERHEAD COUNTY, MONTANA

(1) VGS Siems, D F

By David F. Siems, Eric P. Welsch, and Wendy S. Speckman

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Chemical analyses of stream deposits in the West Pioneer Mountains, Beaverhead County, Montana

By David F. Siems, Eric P. Welsch, and Wendy S. Speckman

INTRODUCTION

The U.S. Geological Survey commenced a mineral-resource assessment of the West Pioneer Mountains, Montana in 1978. The study consists of coordinated geological, geochemical, and geophysical studies with the objective of evaluating the potential for mineral deposits in the area. The geochemical survey consists of the collection of bulk stream sediments which are analyzed for 31 elements using wet chemical and semiquantitative emission spectrographic techniques. The purpose of this report is to present the chemical analyses of the stream sediments collected to date.

SAMPLING AND ANALYTICAL PROCEDURES

Approximately 277 samples have been collected from selected active streams in the West Pioneer Mountains to show the distribution of elements that may relate to exposed and concealed mineral deposits. Approximately 1 kg of composite stream sediment was collected from each locality, dried at less than 100°C, and sieved to minus 75 microns using stainless steel screens. The fine-grained fractions of the samples were analyzed for 31 elements using a six-step semiquantitative emission spectrographic technique (Grimes and Marranzino, 1968), and additional wet chemical analyses were obtained for zinc, arsenic, and antimony. Atomic absorption spectrometric techniques were used to analyze for zinc (Ward and others, 1969) and antimony (Welsch and Chao, 1975), and a colorimetric technique was used to analyze for arsenic (Almond, 1953).

The semiquantitative spectrographic values are reported as six steps per order of magnitude (1, 0.7, 0.5, 0.3, 0.2, 0.15, and multiples of 10 of these numbers) and are approximate geometric midpoints of the concentration ranges. The precision is shown to be within one adjoining reporting interval on each side of the reported values 83 percent of the time and within two adjoining intervals on each side of the reported value 96 percent of the time (Motooka and Grimes, 1976).

The visual lower limits of determination for the 31 elements that were determined spectrographically and are included in this report are as follows:

For those elements given in percent	
Calcium	0.05
Iron	0.05
Magnesium	0.02
Titanium	0.002

For those elements given in ppm					
Antimony	100	Copper	5	Silver	0.5
Arsenic	200	Gold	10	Strontium	100
Barium	20	Lanthanum	20	Thorium	100
Beryllium	1	Lead	10	Tin	10
Bismuth	10	Manganese	10	Tungsten	50
Boron	10	Molybdenum	5	Vanadium	10
Cadmium	20	Nickel	5	Yttrium	10
Chromium	10	Niobium	20	Zinc	20
Cobalt	5	Scandium	5	Zirconium	10

The lower limits of determination for arsenic, antimony, and zinc determined by wet chemical means are as follows:

Elements	given in ppm
Antimony	1
Arsenic	10
Zinc	5

EXPLANATION OF DATA

The columns in table 1 have headings of sample, latitude, longitude, and elements. Columns in which the element heading is preceded by an S contain the emission spectrographic data. The prefix AA in the zinc and antimony columns indicate that the results were determined by atomic absorption. The prefix CM in the arsenic column indicates that the results were determined using a colorimetric method.

Iron, magnesium, calcium, and titanium are reported in percent (%); all other elements are in parts per million. Other symbols shown on the table are:

N = not detected at the limit of determination shown;

< = detected, but below the limit of determination shown;

> = greater than the limit of determination shown.

REFERENCES CITED

Almond, Hy, 1953, Field method for determination of traces of arsenic in soils: Analytical Chemistry, v. 25, p. 1766-1767.

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

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

Ward, F. N., Nakagawa, H. M., Harms, T. F., and VanSickle, G. H., 1969, Atomic-absorption methods of analysis useful in geochemical exploration: U.S. Geological Survey Bulletin 1289, p. 20-22.

Welsch, E. P., and Chao, T. T., 1975, Determination of trace amounts of antimony in geological materials by atomic absorption spectrometry: Analytica Chimica Acta, v. 76, p. 65-69.

Table 1.--Results of chemical analysis of stream sediments.
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9BF6619	45 45 9	113 16 11	3.0	1.0	.7	.30	500	N	N	N	500	1,000	2.0
9BF6658	45 45 20	113 15 23	5.0	1.0	1.0	.30	1,500	N	N	N	50	500	7.0
9BF6662	45 45 53	113 15 1	10.0	.7	1.5	1.00	1,000	N	N	N	20	700	2.0
9BG6627	45 47 29	113 10 39	7.0	.7	1.0	.20	2,000	N	N	N	30	500	2.0
9BG6628	45 46 40	113 10 53	3.0	.5	1.0	.30	2,000	N	N	N	20	500	2.0
9BG6629	45 46 34	113 10 32	5.0	.7	1.5	.30	1,000	N	N	N	20	500	3.0
9BG6630	45 47 1	113 9 49	7.0	.7	1.5	.30	1,500	N	N	N	20	500	2.0
9BG6643	45 46 43	113 7 38	3.0	.7	1.0	.30	700	N	N	N	10	700	1.5
9BG6644	45 46 41	113 7 53	3.0	.7	1.0	.30	700	N	N	N	10	700	2.0
9BG6645	45 46 29	113 8 20	5.0	1.0	1.0	.50	1,000	N	N	N	15	700	2.0
9BG6646	45 45 43	113 8 14	3.0	.7	.7	.30	700	<.5	N	N	15	500	2.0
9BG6647	45 45 50	113 9 29	5.0	.7	1.0	.50	1,000	N	N	N	20	700	3.0
9BG6648	45 45 43	113 9 23	5.0	.7	1.0	.30	1,000	<.5	N	N	20	700	3.0
9BG6663	45 45 56	113 14 33	3.0	.7	1.0	.30	1,000	N	N	N	30	700	3.0
9BG6664	45 46 22	113 13 57	5.0	1.0	1.5	.50	700	N	N	N	30	700	2.0
9BG6665	45 45 2	113 13 41	5.0	1.0	1.5	.50	1,000	N	N	N	20	700	2.0
9BG6666	45 45 1	113 13 6	5.0	1.0	1.5	.50	1,000	N	N	N	20	700	2.0
9BG6667	45 45 34	113 12 56	5.0	1.0	1.5	.50	1,000	N	N	N	10	700	2.0
9BG6668	45 47 22	113 14 2	3.0	.7	1.0	.50	1,000	N	N	N	30	500	2.0
9BG6669	45 47 15	113 13 40	7.0	1.0	1.5	.50	1,500	N	N	N	15	500	2.0
9BG6670	45 46 50	113 12 46	3.0	1.0	1.5	.50	1,000	N	N	N	20	500	3.0
9BG6671	45 46 45	113 12 23	5.0	1.0	1.0	.30	5,000	N	N	N	30	700	2.0
9BG6672	45 46 37	113 12 27	7.0	1.0	1.5	.50	1,500	N	N	N	30	500	2.0
9BH6634	45 47 16	113 1 52	5.0	1.0	1.5	.50	1,000	N	N	N	50	500	1.5
9BH6635	45 45 57	113 2 38	3.0	15.0	.5	.30	500	N	N	N	150	700	7.0
9BH6636	45 47 28	113 3 53	3.0	.5	.7	.30	700	N	N	N	100	1,000	7.0
9BH6637	45 47 2	113 4 25	5.0	.7	1.5	.50	2,000	N	N	N	50	700	2.0
9BH6638	45 46 25	113 4 9	3.0	.7	.3	.30	500	N	N	N	150	1,000	3.0
9BH6639	45 46 6	113 4 29	3.0	.3	.3	.15	1,000	.5	N	N	30	700	10.0
9BH6640	45 45 36	113 4 36	2.0	.5	.2	.20	500	N	N	N	200	1,000	5.0
9BH6641	45 47 36	113 6 6	5.0	.7	1.0	.50	700	N	N	N	70	700	2.0
9BH6642	45 47 37	113 6 38	3.0	.7	1.0	.50	700	N	N	N	50	700	2.0
9BH6650	45 46 33	113 7 5	5.0	1.0	1.0	.30	700	N	N	N	70	700	3.0
9BH6652	45 45 31	113 6 57	5.0	.7	1.0	.50	700	.5	N	N	20	700	2.0
9BH6653	45 45 1	113 6 56	5.0	.7	1.0	.30	1,000	N	N	N	20	700	3.0
9CF6576	45 37 44	113 19 32	5.0	.7	1.5	.30	2,000	N	N	N	50	700	5.0
9CF6577	45 37 34	113 19 11	3.0	.5	.7	.30	500	.5	N	N	50	700	3.0
9CF6602	45 38 36	113 20 33	5.0	.7	1.0	.50	1,000	N	N	N	30	700	3.0
9CF6603	45 38 26	113 20 34	5.0	1.0	1.5	.50	1,000	N	N	N	30	700	3.0
9CF6604	45 38 34	113 19 57	3.0	.7	1.0	.30	1,500	N	N	N	70	700	5.0
9CF6605	45 38 12	113 19 32	5.0	.7	1.0	.30	1,500	.5	N	N	70	700	3.0
9CF6606	45 41 17	113 17 43	3.0	.7	1.0	.50	1,000	N	N	N	100	700	5.0
9CF6607	45 41 25	113 17 17	3.0	.7	.5	.50	300	N	N	N	200	500	5.0
9CF6608	45 40 48	113 17 41	5.0	1.0	.7	.50	1,500	N	N	N	100	700	5.0
9CF6609	45 40 23	113 17 7	3.0	.7	.7	.30	700	<.5	N	N	100	700	7.0

Table 1.--Results of chemical analysis of stream sediments.
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9BF6619	N	N	10	50	15	100	N	N	20	15	N	7	N
9BF6658	N	N	15	15	20	50	15	N	15	20	N	15	N
9BF6662	N	N	20	30	10	100	10	20	10	15	N	20	N
9BG6627	N	N	15	20	20	30	10	N	10	20	N	7	N
9BG6628	N	N	15	10	20	30	N	N	10	15	N	10	N
9BG6629	N	N	15	10	15	50	10	<20	7	20	N	10	N
9BG6630	N	N	15	15	15	30	N	N	7	15	N	20	N
9BG6643	N	N	15	10	10	50	N	N	5	30	N	10	N
9BG6644	N	N	15	10	15	50	N	N	7	20	N	15	N
9BG6645	N	N	20	15	15	70	5	<20	15	30	N	15	N
9BG6646	N	N	15	15	20	30	N	N	10	20	N	10	N
9BG6647	N	N	15	10	15	50	N	<20	10	30	N	10	N
9BG6648	N	N	15	10	15	50	N	N	10	30	N	15	N
9BG6663	N	N	15	10	20	100	15	N	7	20	N	15	N
9BG6664	N	N	20	30	7	70	N	<20	10	30	N	20	N
9BG6665	N	N	20	30	20	70	5	<20	15	20	N	20	N
9BG6666	N	N	20	20	15	100	N	20	15	20	N	20	N
9BG6667	N	N	20	30	10	100	N	20	10	20	N	20	N
9BG6668	N	N	15	20	10	100	N	20	10	20	N	20	N
9BG6669	N	N	20	30	10	100	10	<20	10	20	N	20	N
9BG6670	N	N	20	20	30	70	N	20	10	20	N	20	N
9BG6671	N	N	20	20	20	100	5	<20	10	20	N	20	N
9BG6672	N	N	20	20	15	100	N	20	10	20	N	30	N
9BH6634	N	N	20	20	20	30	N	N	20	20	N	20	N
9BH6635	N	N	10	20	15	50	N	<20	20	20	N	7	N
9BH6636	N	N	15	20	20	50	N	N	15	30	N	7	N
9BH6637	N	N	20	30	30	50	5	N	15	30	N	15	N
9BH6638	N	N	10	30	15	70	N	<20	20	20	N	5	N
9BH6639	N	N	15	10	15	30	N	N	10	20	N	5	N
9BH6640	N	N	7	20	15	20	N	<20	15	20	N	5	N
9BH6641	N	N	15	30	10	100	N	20	10	15	N	20	N
9BH6642	N	N	15	15	10	70	N	<20	10	30	N	15	N
9BH6650	N	N	20	20	30	50	N	N	20	30	N	15	N
9BH6652	N	N	15	20	15	50	N	<20	15	15	N	15	N
9BH6653	N	N	15	15	15	50	N	N	20	20	N	10	N
9CF6576	N	N	10	15	20	150	10	<20	10	20	N	5	N
9CF6577	N	N	<5	10	30	100	<5	<20	10	30	N	5	N
9CF6602	N	N	7	15	20	200	5	<20	10	30	N	5	N
9CF6603	N	N	7	20	50	200	5	<20	10	20	N	5	N
9CF6604	N	N	7	20	30	150	N	N	10	30	N	5	N
9CF6605	N	N	10	20	20	200	15	N	10	30	N	5	N
9CF6606	N	N	10	30	20	100	N	N	20	20	N	10	N
9CF6607	N	N	10	30	20	50	N	N	20	20	N	10	N
9CF6608	N	N	15	100	20	30	N	<20	50	30	N	10	N
9CF6609	N	N	10	20	70	70	N	N	15	30	N	10	N

Table 1.--Results of chemical analysis of stream sediments.
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9BF6619	150	70	N	100	N	>1,000	N	20	N	<10
9BF6658	200	150	N	30	N	500	N	70	<1	<10
9BF6662	300	200	N	100	N	>1,000	N	20	N	<10
9BG6627	200	100	N	15	N	500	N	120	<1	80
9BG6628	200	100	N	20	N	500	N	70	N	20
9BG6629	300	150	N	30	N	700	N	45	N	<10
9BG6630	200	100	N	30	N	500	N	60	<1	40
9BG6643	200	100	N	20	N	500	N	45	<1	<10
9BG6644	200	100	N	30	N	300	N	55	<1	10
9BG6645	300	150	N	50	N	500	N	55	N	<10
9BG6646	200	100	N	30	N	300	N	65	N	<10
9BG6647	300	100	N	50	N	300	N	150	N	<10
9BG6648	300	100	N	30	N	300	N	100	N	<10
9BG6663	300	100	N	70	N	300	N	40	N	<10
9BG6664	300	150	N	50	N	700	N	35	N	<10
9BG6665	200	100	N	50	N	700	N	50	N	<10
9BG6666	300	150	N	70	N	1,000	N	65	N	<10
9BG6667	300	150	N	70	N	>1,000	N	40	N	<10
9BG6668	300	100	N	70	N	>1,000	N	30	N	<10
9BG6669	300	150	50	50	N	1,000	N	20	N	<10
9BG6670	300	150	N	70	N	>1,000	N	30	N	<10
9BG6671	200	150	N	50	N	1,000	N	75	N	10
9BG6672	300	200	N	70	N	>1,000	N	55	N	<10
9BH6634	300	150	N	50	N	1,000	N	30	<1	10
9BH6635	150	70	N	30	N	700	N	15	<1	<10
9BH6636	200	70	N	70	N	700	N	25	<1	<10
9BH6637	300	150	N	30	N	700	N	50	<1	<10
9BH6638	100	70	N	50	N	1,000	N	15	N	<10
9BH6639	100	70	N	50	N	150	N	100	<1	10
9BH6640	100	50	N	20	N	500	N	15	<1	<10
9BH6641	200	150	N	150	N	>1,000	N	25	<1	<10
9BH6642	200	100	N	70	N	1,000	N	45	<1	<10
9BH6650	200	100	N	30	N	500	N	40	N	<10
9BH6652	200	70	N	30	N	300	N	50	<1	<10
9BH6653	200	70	N	20	N	200	N	50	<1	<10
9CF6576	700	70	N	50	200	500	N	150	1	<10
9CF6577	300	50	N	30	N	300	N	60	<1	<10
9CF6602	500	70	N	50	N	700	N	50	N	<10
9CF6603	300	70	N	70	N	>1,000	N	90	<1	<10
9CF6604	300	70	N	70	<200	700	N	100	<1	<10
9CF6605	500	100	N	70	N	1,000	N	50	N	<10
9CF6606	200	100	N	100	N	1,000	N	40	N	<10
9CF6607	100	70	N	50	N	700	N	20	N	<10
9CF6608	150	100	N	30	N	300	N	120	N	<10
9CF6609	150	70	N	100	N	500	N	20	N	<10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9CF6610	45 40 7	113 16 56	3.0	.5	.5	15.00	500	7.0	N	N	200	500	5.0
9CF6611	45 39 42	113 16 57	5.0	.7	.7	.20	3,000	N	N	N	50	700	7.0
9CF6612	45 39 22	113 18 14	7.0	1.0	1.0	.20	5,000	N	N	N	70	1,000	7.0
9CF6613	45 40 18	113 18 53	5.0	.7	1.0	.30	2,000	N	N	N	30	700	5.0
9CF6614	45 41 7	113 18 51	5.0	.7	1.0	.30	1,500	N	N	N	70	700	10.0
9CF6615	45 38 47	113 19 7	5.0	.7	1.5	.70	1,000	N	N	N	50	1,000	5.0
9CF6616	45 38 34	113 19 7	3.0	.5	1.0	.30	1,500	.7	N	N	50	700	7.0
9CF6617	45 39 2	113 19 31	5.0	.7	1.0	15.00	1,500	3.0	N	N	70	1,000	10.0
9CF6618	45 39 6	113 19 49	5.0	.7	1.5	.50	1,500	3.0	N	N	50	1,000	5.0
9CF6620	45 44 49	113 16 17	5.0	.7	.7	.50	700	N	N	N	300	700	2.0
9CF6621	45 44 29	113 16 2	7.0	.7	.7	.70	700	N	N	N	500	700	2.0
9CF6622	45 44 15	113 15 33	5.0	.7	.5	.30	700	N	N	N	700	700	2.0
9CF6623	45 44 4	113 15 42	5.0	1.0	.7	.30	500	N	N	N	700	700	3.0
9CF6624	45 43 38	113 15 24	3.0	1.0	.5	.30	500	N	N	N	300	1,000	3.0
9CF6625	45 43 25	113 15 42	3.0	.7	.7	.30	1,000	N	N	N	150	700	7.0
9CF6626	45 43 0	113 15 35	7.0	1.0	.7	.50	700	N	N	N	300	1,000	5.0
9CF6699	45 37 33	113 16 59	3.0	.7	1.0	.30	700	N	N	N	15	500	2.0
9CF6700	45 37 35	113 15 40	2.0	.5	.5	.30	1,000	N	N	N	50	700	2.0
9CF6701	45 37 42	113 15 46	3.0	.7	.5	.30	1,500	N	N	N	70	700	3.0
9CF6702	45 37 52	113 15 22	3.0	.7	.7	.30	1,000	N	N	N	50	700	3.0
9CF6703	45 38 20	113 15 14	3.0	1.0	.3	.20	1,000	N	N	N	70	700	3.0
9CF6845	45 43 35	113 18 50	5.0	1.0	1.0	.30	1,000	N	N	N	70	700	2.0
9CF6846	45 42 42	113 18 7	7.0	1.0	1.0	.30	1,500	5.0	N	N	30	700	2.0
9CF6854	45 44 58	113 18 12	5.0	.7	.7	.30	1,000	N	N	N	70	700	2.0
9CF6855	45 42 37	113 17 40	7.0	1.0	1.0	.30	1,500	1.0	N	N	50	700	2.0
9CF6856	45 42 33	113 17 40	7.0	.7	1.0	.30	1,000	1.0	N	N	50	700	1.5
9CG6659	45 44 49	113 14 19	5.0	1.0	1.0	.30	1,000	N	N	N	20	500	2.0
9CG6660	45 44 17	113 13 49	5.0	1.0	1.0	.30	700	N	N	N	50	500	3.0
9CG6661	45 44 16	113 13 44	7.0	1.0	1.5	.50	1,500	N	N	N	30	700	3.0
9CG6681	45 39 30	113 8 8	3.0	.3	.5	.20	3,000	N	N	N	100	700	2.0
9CG6683	45 40 11	113 7 46	2.0	.5	.7	.30	500	N	N	N	100	700	2.0
9CG6685	45 39 5	113 8 30	3.0	.5	.7	.15	2,000	N	N	N	50	700	3.0
9CG6686	45 40 23	113 9 41	5.0	1.0	1.5	.50	700	N	N	N	70	700	2.0
9CG6687	45 40 22	113 10 37	5.0	1.0	1.5	.50	700	N	N	N	30	700	2.0
9CG6688	45 40 37	113 10 33	5.0	1.0	1.5	.50	1,000	N	N	N	50	700	2.0
9CG6689	45 40 30	113 11 50	5.0	.7	.7	.30	1,000	N	N	N	70	1,000	3.0
9CG6690	45 40 30	113 11 39	7.0	1.5	1.5	.50	1,000	N	N	N	50	700	2.0
9CG6691	45 37 53	113 9 44	1.5	.3	.3	.20	500	N	N	N	150	700	5.0
9CG6704	45 38 21	113 14 55	3.0	.7	.3	.30	1,000	N	N	N	70	700	3.0
9CG6718	45 41 53	113 11 7	7.0	1.0	1.5	.50	2,000	.5	N	N	20	1,000	5.0
9CG6719	45 42 29	113 10 48	7.0	1.0	1.5	.50	2,000	N	N	N	20	700	3.0
9CG6721	45 42 49	113 10 43	10.0	1.0	1.5	.50	2,000	N	N	N	15	1,000	2.0
9CG6723	45 43 22	113 10 59	7.0	1.0	1.5	.50	1,500	N	N	N	20	700	2.0
9CG6724	45 43 24	113 11 8	7.0	1.0	1.5	.50	1,000	N	N	N	20	700	2.0
9CG6725	45 42 29	113 11 14	7.0	1.0	1.0	.50	1,500	N	N	N	50	700	2.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9CF6610	N	N	7	50	20	70	N	30	20	20	N	7	N
9CF6611	N	N	20	20	15	50	N	N	20	30	N	5	N
9CF6612	N	N	20	20	20	50	100	N	15	30	N	5	N
9CF6613	N	N	10	15	15	70	20	N	10	20	N	5	N
9CF6614	N	N	15	20	30	50	N	N	20	30	N	7	N
9CF6615	N	N	10	20	30	300	30	20	20	20	N	5	N
9CF6616	N	N	7	10	30	300	30	<20	10	50	N	5	N
9CF6617	N	N	10	15	50	500	N	20	20	50	N	10	N
9CF6618	N	N	10	15	30	500	20	20	15	30	N	7	N
9CF6620	N	N	10	50	10	100	N	N	20	15	N	7	N
9CF6621	N	N	10	150	10	500	N	<20	15	20	N	7	N
9CF6622	N	N	15	30	10	70	N	N	20	20	N	5	N
9CF6623	N	N	7	30	7	70	N	N	20	20	N	5	N
9CF6624	N	N	10	50	20	70	N	N	20	15	N	7	N
9CF6625	N	N	10	30	10	150	N	N	20	20	N	7	N
9CF6626	N	N	10	50	10	70	N	<20	20	20	N	7	N
9CF6699	N	N	5	10	7	50	10	<20	10	20	N	<5	N
9CF6700	N	N	7	15	10	30	7	N	15	20	N	<5	N
9CF6701	N	N	10	20	10	30	20	N	15	20	N	5	N
9CF6702	N	N	10	50	15	70	20	N	20	20	N	7	N
9CF6703	N	N	15	20	10	30	N	N	20	20	N	7	N
9CF6845	N	N	15	20	300	50	5	N	20	20	N	10	N
9CF6846	N	N	15	20	70	50	5	N	20	50	N	10	N
9CF6854	N	N	15	20	50	100	N	N	20	20	N	7	N
9CF6855	N	N	15	30	70	70	5	N	15	50	N	10	<10
9CF6856	N	N	10	30	70	70	N	N	10	20	N	7	<10
9CG6659	N	N	20	15	20	70	10	N	10	20	N	20	N
9CG6660	N	N	20	20	15	70	N	<20	15	15	N	20	N
9CG6661	N	N	20	20	30	70	15	20	15	20	N	20	N
9CG6681	N	N	20	10	15	50	N	N	15	10	N	7	N
9CG6683	N	N	10	15	10	50	N	N	10	15	N	7	N
9CG6685	N	N	15	15	10	20	N	N	7	20	N	7	N
9CG6686	N	N	15	50	15	100	N	<20	10	30	N	15	N
9CG6687	N	N	15	20	15	70	N	N	10	15	N	20	N
9CG6688	N	N	20	20	30	100	N	N	15	20	N	20	N
9CG6689	N	N	20	30	70	30	15	N	20	20	N	10	N
9CG6690	N	N	30	50	50	70	N	N	20	20	N	20	N
9CG6691	N	N	7	20	10	70	N	N	20	15	N	7	N
9CG6704	N	N	15	30	10	50	15	N	20	20	N	7	N
9CG6718	N	N	20	20	30	50	30	<20	15	50	N	15	N
9CG6719	N	N	20	20	20	70	N	<20	15	20	N	20	N
9CG6721	N	N	20	30	15	150	N	<20	20	20	N	30	N
9CG6723	N	N	20	20	20	50	N	<20	20	20	N	20	N
9CG6724	N	N	20	15	15	70	N	<20	7	30	N	15	N
9CG6725	N	N	20	30	30	70	5	<20	15	15	N	20	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9CF6610	100	70	N	50	N	700	N	15	N	<10
9CF6611	150	70	N	50	N	700	N	40	N	<10
9CF6612	300	100	N	30	<200	700	N	60	<1	<10
9CF6613	300	100	N	100	N	1,000	N	40	N	<10
9CF6614	200	100	N	20	<200	500	N	100	<1	<10
9CF6615	700	70	N	50	N	1,000	<100	30	N	<10
9CF6616	500	70	N	50	N	700	N	70	N	<10
9CF6617	500	100	N	200	200	1,000	N	70	<1	<10
9CF6618	700	70	N	70	N	1,000	<100	40	<1	<10
9CF6620	200	100	N	100	N	>1,000	N	20	<1	<10
9CF6621	150	150	N	300	N	>1,000	N	15	N	10
9CF6622	100	100	N	50	N	1,000	N	5	N	<10
9CF6623	100	70	N	70	N	>1,000	N	75	<1	<10
9CF6624	<100	70	N	50	N	700	N	25	<1	<10
9CF6625	100	70	N	70	N	>1,000	N	25	<1	<10
9CF6626	100	100	N	100	N	>1,000	N	15	N	<10
9CF6699	300	30	100	15	N	500	N	50	<1	<10
9CF6700	150	50	N	15	N	1,000	N	50	N	<10
9CF6701	150	70	N	20	N	1,000	N	100	N	10
9CF6702	200	70	N	30	N	700	N	50	N	10
9CF6703	100	70	N	30	N	300	N	50	N	<10
9CF6845	200	100	N	50	N	>1,000	N	80	N	15
9CF6846	200	100	N	30	N	700	N	95	3	20
9CF6854	200	70	N	70	N	>1,000	N	30	<1	15
9CF6855	200	100	N	30	N	700	N	85	1	15
9CF6856	200	100	N	50	N	>1,000	N	35	<1	15
9CG6659	200	150	N	30	N	500	N	85	<1	<10
9CG6660	200	100	N	30	N	700	N	60	N	<10
9CG6661	300	150	N	50	N	1,000	N	70	<1	<10
9CG6681	100	70	N	20	N	500	N	60	<1	10
9CG6683	100	70	N	30	N	500	N	35	N	<10
9CG6685	200	70	N	15	N	300	N	60	N	20
9CG6686	300	100	N	150	N	>1,000	N	35	N	<10
9CG6687	700	100	N	50	N	1,000	N	80	N	<10
9CG6688	500	100	N	70	N	1,000	N	50	N	<10
9CG6689	100	100	N	50	500	700	N	240	N	<10
9CG6690	300	200	N	70	500	>1,000	N	120	N	<10
9CG6691	100	50	N	30	N	1,000	N	25	N	<10
9CG6704	100	70	N	30	N	700	N	60	N	<10
9CG6718	500	100	N	50	<200	500	N	120	N	<10
9CG6719	300	150	N	70	N	700	N	95	N	<10
9CG6721	500	200	N	150	N	700	N	65	N	10
9CG6723	300	150	N	70	N	500	N	80	N	<10
9CG6724	300	100	N	50	N	300	N	110	N	10
9CG6725	200	100	N	70	N	1,000	N	70	N	<10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9CG6726	45 42 48	113 12 2	7.0	1.0	1.0	.50	1,500	N	N	N	30	500	2.0
9CG6727	45 42 51	113 10 52	5.0	.7	1.0	.30	1,000	N	N	N	15	700	2.0
9CG6728	45 43 5	113 10 30	5.0	1.0	1.0	.50	1,000	N	N	N	15	500	2.0
9CG6729	45 42 53	113 8 55	5.0	1.0	1.5	.50	1,500	N	N	N	50	500	3.0
9CG6730	45 42 2	113 8 25	5.0	1.0	1.5	.50	1,500	N	N	N	30	500	2.0
9CG6731	45 42 7	113 8 6	1.5	.5	.2	.20	300	N	N	N	100	700	5.0
9CG6732	45 41 10	113 8 16	2.0	.5	.7	.30	700	N	N	N	70	500	3.0
9CH6649	45 44 59	113 1 47	2.0	--	.5	.20	500	N	N	N	150	1,500	10.0
9CH6654	45 43 54	113 5 3	1.0	.5	.2	.20	300	N	N	N	100	1,500	5.0
9CH6655	45 43 44	113 4 25	3.0	.7	.7	.30	500	N	N	N	70	1,000	5.0
9CH6656	45 43 47	113 3 2	2.0	.5	.5	.20	300	N	N	N	150	1,000	3.0
9CH6657	45 43 14	113 2 42	2.0	.5	.7	.20	500	N	N	N	50	500	3.0
9CH6673	45 41 43	113 3 25	2.0	.7	.5	.30	700	N	N	N	100	700	5.0
9CH6674	45 41 5	113 4 25	2.0	.5	.5	.20	300	N	N	N	100	700	3.0
9CH6675	45 41 38	113 5 19	2.0	.7	.5	.30	300	N	N	N	100	1,000	5.0
9CH6676	45 42 23	113 5 49	3.0	.7	.5	.30	500	N	N	N	100	700	3.0
9CH6677	45 42 18	113 5 53	1.5	.2	.5	.20	300	N	N	N	100	700	3.0
9CH6678	45 41 26	113 5 25	2.0	.3	.5	.20	700	N	N	N	70	700	2.0
9CH6679	45 40 19	113 5 19	2.0	.7	.7	.20	500	N	N	N	100	2,000	5.0
9CH6680	45 39 46	113 7 19	2.0	.5	.5	.30	500	N	N	N	100	700	2.0
9CH6682	45 38 57	113 7 19	3.0	.5	.3	.30	1,500	N	N	N	150	700	3.0
9CH6684	45 40 20	113 6 53	2.0	.7	.5	.30	300	N	N	N	150	1,000	3.0
9CH6692	45 38 45	113 4 20	1.5	.5	.5	.20	300	N	N	N	100	1,000	10.0
9CH6693	45 38 11	113 4 50	2.0	.7	.5	.20	1,000	.5	N	N	100	1,500	15.0
9DF6551	45 35 51	113 20 25	5.0	3.0	1.5	.30	1,000	N	N	N	50	700	1.5
9DF6551	45 35 51	113 20 25	3.0	1.5	1.0	.30	700	N	N	N	70	500	2.0
9DF6551	45 35 51	113 20 25	2.0	.7	1.0	.30	500	N	N	N	50	700	3.0
9DF6552	45 35 35	113 20 17	5.0	.7	1.0	.30	1,500	N	N	N	50	700	2.0
9DF6553	45 35 30	113 19 48	3.0	.7	1.0	.30	1,500	N	N	N	30	500	2.0
9DF6554	45 35 14	113 20 9	3.0	.7	1.0	.30	500	N	N	N	50	700	2.0
9DF6555	45 35 13	113 19 54	2.0	.7	1.0	.30	700	N	N	N	70	700	2.0
9DF6556	45 36 23	113 19 58	3.0	.7	1.0	.30	700	N	N	N	50	500	3.0
9DF6558	45 36 17	113 19 28	1.5	.3	.7	.15	3,000	N	N	N	20	500	2.0
9DF6561	45 36 27	113 18 55	3.0	.5	.7	.20	1,500	1.0	N	N	50	500	3.0
9DF6564	45 36 25	113 17 42	1.0	.5	.7	.15	700	.5	N	N	50	300	3.0
9DF6565	45 36 11	113 17 29	1.5	.5	.7	.20	1,000	.5	N	N	50	500	5.0
9DF6566	45 36 15	113 18 25	2.0	.7	1.0	.20	500	.5	N	N	70	500	5.0
9DF6567	45 36 5	113 19 36	1.5	.5	1.0	.30	500	N	N	N	50	500	3.0
9DF6568	45 36 3	113 20 48	3.0	.7	1.0	.30	700	<.5	N	N	50	500	3.0
9DF6569	45 33 28	113 19 59	3.0	.7	.7	.30	500	N	N	N	100	700	3.0
9DF6570	45 33 47	113 19 35	5.0	.7	1.0	.30	2,000	N	N	N	30	700	2.0
9DF6571	45 33 56	113 20 19	3.0	.7	.7	.30	3,000	N	N	N	50	700	2.0
9DF6572	45 34 37	113 20 29	5.0	.7	.7	.30	1,000	N	N	N	50	700	3.0
9DF6573	45 34 24	113 20 32	3.0	.7	.7	.20	1,000	N	N	N	100	700	5.0
9DF6574	45 37 12	113 20 14	3.0	.5	1.0	.20	1,000	1.0	N	N	30	500	5.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9CG6726	N	N	15	15	10	50	N	<20	10	15	N	15	N
9CG6727	N	N	15	15	10	30	N	<20	7	20	N	15	N
9CG6728	N	N	20	20	15	30	N	<20	10	15	N	20	N
9CG6729	N	N	20	20	15	30	N	<20	10	20	N	20	N
9CG6730	N	N	20	20	15	30	N	<20	15	30	N	20	N
9CG6731	N	N	10	10	7	20	N	N	10	15	N	5	N
9CG6732	N	N	10	10	10	20	N	N	5	15	N	15	N
9CH6649	N	N	7	15	15	30	N	N	20	15	N	7	N
9CH6654	N	N	5	10	10	30	N	N	5	15	N	5	N
9CH6655	N	N	10	20	10	70	N	N	10	20	N	5	N
9CH6656	N	N	5	10	10	70	N	<20	10	20	N	<5	N
9CH6657	N	N	7	10	10	70	N	N	10	30	N	5	N
9CH6673	N	N	10	20	30	30	N	N	20	30	N	7	N
9CH6674	N	N	5	15	10	20	N	N	10	20	N	5	N
9CH6675	N	N	7	30	15	30	N	N	30	20	N	7	N
9CH6676	N	N	10	30	30	30	N	N	20	20	N	5	50
9CH6677	N	N	N	10	10	20	N	<20	5	20	N	5	N
9CH6678	N	N	7	15	10	30	N	N	10	20	N	5	N
9CH6679	N	N	10	20	30	50	N	N	20	15	N	10	N
9CH6680	N	N	7	15	10	30	N	N	15	15	N	7	N
9CH6682	N	N	15	20	15	20	N	N	30	20	N	10	N
9CH6684	N	N	7	20	10	50	N	N	20	15	N	7	N
9CH6692	N	N	7	20	20	30	N	N	20	20	N	7	N
9CH6693	N	N	10	20	15	30	N	N	30	20	N	10	N
9DF6551	N	N	15	70	20	50	N	<20	30	20	N	15	N
9DF6551	N	N	15	30	30	30	N	N	20	30	N	10	N
9DF6551	N	N	5	15	10	50	N	N	7	15	N	7	N
9DF6552	N	N	10	20	20	70	N	<20	15	20	N	15	<10
9DF6553	N	N	7	15	15	30	N	<20	10	20	N	7	N
9DF6554	N	N	5	30	15	150	N	<20	10	15	N	10	N
9DF6555	N	N	7	15	7	50	N	<20	10	15	N	7	N
9DF6556	N	N	5	20	20	200	N	20	5	50	N	5	10
9DF6558	N	N	7	10	15	30	N	<20	5	10	N	5	N
9DF6561	N	N	10	15	30	70	N	<20	15	30	N	7	N
9DF6564	N	N	5	10	20	30	N	<20	5	20	N	5	N
9DF6565	N	N	7	10	15	50	N	N	7	30	N	7	N
9DF6566	N	N	5	15	20	100	N	<20	20	30	N	5	10
9DF6567	N	N	<5	15	5	50	N	<20	<5	20	N	5	N
9DF6568	N	N	7	10	10	100	N	<20	5	30	N	5	N
9DF6569	N	N	5	20	<5	70	N	N	5	<10	N	10	N
9DF6570	N	N	10	20	10	50	N	N	10	20	N	10	N
9DF6571	N	N	10	20	10	70	N	<20	15	15	N	10	N
9DF6572	N	N	10	15	20	70	N	<20	15	15	N	7	N
9DF6573	N	N	10	20	10	150	N	N	15	15	N	5	N
9DF6574	N	N	7	15	100	100	N	<20	10	20	N	7	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9CG6726	150	150	N	50	N	700	N	65	<1	<10
9CG6727	300	100	N	30	N	500	N	85	N	10
9CG6728	200	150	N	50	N	700	N	70	N	10
9CG6729	300	200	N	50	N	1,000	N	90	N	<10
9CG6730	300	200	N	30	N	500	N	120	N	<10
9CG6731	100	50	N	20	N	300	N	30	N	<10
9CG6732	150	100	N	20	N	500	N	50	N	<10
9CH6649	150	30	N	70	N	500	N	10	N	<10
9CH6654	100	20	N	20	N	700	N	15	N	<10
9CH6655	200	50	N	30	N	500	N	30	<1	<10
9CH6656	150	30	N	50	N	1,000	N	10	<1	<10
9CH6657	200	50	N	20	N	300	N	30	<1	<10
9CH6673	150	70	N	50	N	200	N	45	N	<10
9CH6674	150	50	N	20	N	500	N	25	N	<10
9CH6675	100	50	N	30	N	300	N	50	N	20
9CH6676	100	50	N	20	N	200	N	65	N	<10
9CH6677	150	30	N	20	N	500	N	20	N	<10
9CH6678	150	50	N	15	N	300	N	25	N	<10
9CH6679	200	70	N	70	N	300	N	45	N	<10
9CH6680	150	70	N	20	N	300	N	20	<1	<10
9CH6682	100	70	N	50	N	700	N	25	<1	<10
9CH6684	100	70	N	50	N	1,000	N	10	N	<10
9CH6692	100	50	N	70	N	300	N	30	<1	<10
9CH6693	100	70	N	70	N	200	N	35	N	<10
9DF6551	200	100	N	20	N	500	N	60	<1	<10
9DF6551	200	70	N	20	N	200	N	55	N	<10
9DF6551	300	50	N	50	N	700	N	20	N	<10
9DF6552	200	70	N	30	N	300	N	65	<1	<10
9DF6553	200	70	N	20	N	500	N	60	N	<10
9DF6554	200	70	N	100	N	1,000	N	20	N	<10
9DF6555	300	70	N	20	N	700	N	35	N	<10
9DF6556	300	70	N	50	N	700	<100	85	<1	<10
9DF6558	200	30	N	20	<200	70	N	110	<1	<10
9DF6561	300	50	N	30	200	300	N	180	4	<10
9DF6564	200	50	N	15	200	150	N	160	<1	20
9DF6565	200	50	N	20	N	500	N	70	N	<10
9DF6566	200	30	N	20	N	200	N	95	<1	<10
9DF6567	300	30	N	15	N	700	N	25	N	<10
9DF6568	300	50	N	70	N	700	N	60	N	<10
9DF6569	150	70	N	20	N	1,000	N	25	N	10
9DF6570	300	100	N	15	N	700	100	65	N	<10
9DF6571	200	100	N	20	N	1,000	N	35	N	<10
9DF6572	200	100	N	50	N	500	N	75	N	<10
9DF6573	200	70	N	30	N	1,000	N	40	N	<10
9DF6574	200	70	N	100	700	300	N	640	N	<10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9DF6575	45 37 26	113 19 59	3.0	.5	.7	.30	1,000	.5	N	N	50	500	5.0
9DF6578	45 37 17	113 19 7	3.0	.7	1.0	.30	500	.7	N	N	50	500	5.0
9DF6579	45 36 52	113 19 45	3.0	.7	1.0	.20	1,000	N	N	N	50	500	3.0
9DF6530	45 36 43	113 19 40	3.0	.5	.7	.30	1,000	N	N	N	50	500	3.0
9DF6581	45 35 41	113 17 40	2.0	.5	1.0	.30	1,000	.5	N	N	100	700	5.0
9DF6582	45 35 18	113 17 24	2.0	.5	.7	.20	1,500	.5	N	N	150	700	5.0
9DF6583	45 34 59	113 17 39	3.0	.7	1.0	.30	1,500	N	N	N	50	500	3.0
9DF6584	45 35 24	113 18 17	5.0	--	.7	.30	1,500	<.5	N	N	50	500	3.0
9DF6586	45 35 16	113 18 39	3.0	.7	1.0	.30	1,500	N	N	N	50	700	5.0
9DF6587	45 35 30	113 18 36	3.0	.5	1.0	.30	2,000	N	N	N	70	700	5.0
9DF6588	45 35 50	113 18 50	3.0	.7	1.0	.30	1,500	N	N	N	50	700	3.0
9DF6589	45 34 47	113 18 8	2.0	.2	.7	.10	700	N	N	N	70	300	2.0
9DF6590	45 34 33	113 18 19	3.0	.7	1.0	.20	500	N	N	N	15	500	2.0
9DF6591	45 34 52	113 18 23	5.0	.7	1.5	.30	700	<.5	N	N	50	700	3.0
9DF6592	45 34 39	113 18 35	2.0	.3	.7	.20	500	N	N	N	30	500	2.0
9DF6593	45 35 1	113 18 36	3.0	.5	1.0	.20	1,000	N	N	N	20	700	3.0
9DF6594	45 35 25	113 19 3	3.0	.7	1.5	.50	700	N	N	N	50	700	2.0
9DF6595	45 35 50	113 19 0	2.0	.7	1.5	.30	500	N	N	N	70	700	3.0
9DF6596	45 34 2	113 19 1	3.0	.7	1.0	.30	1,000	N	N	N	50	700	5.0
9DF6597	45 33 54	113 19 7	3.0	.7	1.0	.50	1,500	N	N	N	70	700	10.0
9DF6598	45 34 22	113 19 39	2.0	.5	1.0	.30	300	.5	N	N	50	700	3.0
9DF6599	45 34 33	113 19 30	3.0	1.0	1.5	.30	700	N	N	N	50	700	2.0
9DF6600	45 34 57	113 19 55	3.0	.5	.7	.30	1,000	N	N	N	70	700	2.0
9DF6705	45 37 6	113 15 40	2.0	.5	.2	.20	700	N	N	N	50	700	2.0
9DF6706	45 36 11	113 15 19	2.0	.7	.3	.30	700	N	N	N	150	700	2.0
9DF6707	45 36 27	113 15 23	2.0	.5	.2	.20	1,500	N	N	N	70	700	3.0
9DF6708	45 36 32	113 15 37	2.0	.5	.2	.30	700	N	N	N	100	700	2.0
9DF6761	45 30 2	113 17 38	3.0	.5	.5	.20	500	N	N	N	70	700	2.0
9DF6762	45 30 7	113 17 31	3.0	.7	1.0	.20	1,500	N	N	N	100	700	2.0
9DF6763	45 30 24	113 17 57	2.0	.3	.3	.20	300	N	N	N	70	700	2.0
9DF6764	45 30 42	113 17 57	2.0	.3	.3	.20	1,000	N	N	N	50	500	3.0
9DF6765	45 31 8	113 17 26	3.0	.7	1.5	.30	1,500	N	N	N	50	700	3.0
9DF6766	45 31 3	113 17 13	3.0	.7	1.0	.15	2,000	N	N	N	10	500	2.0
9DF6767	45 31 4	113 16 33	3.0	.7	1.0	.30	700	N	N	N	20	500	3.0
9DF6768	45 31 44	113 16 32	3.0	.7	1.5	.30	700	N	N	N	30	700	2.0
9DF6769	45 31 57	113 16 13	3.0	.7	1.0	.30	700	N	N	N	30	500	2.0
9DF6770	45 31 43	113 15 26	5.0	1.0	1.0	.30	2,000	N	N	N	50	700	2.0
9DF6776	45 32 4	113 15 22	5.0	1.0	1.0	.20	3,000	N	N	N	10	700	2.0
9DF6777	45 32 7	113 15 26	7.0	1.0	1.5	.30	1,500	N	N	N	20	1,000	2.0
9DF6780	45 32 32	113 15 41	5.0	.7	1.0	.30	1,000	N	N	N	20	700	2.0
9DF6781	45 32 37	113 15 24	5.0	.7	1.0	.30	700	N	N	N	20	700	2.0
9DF6783	45 32 48	113 15 24	5.0	1.0	2.0	.20	2,000	N	N	N	15	700	3.0
9DF6788	45 30 27	113 15 51	5.0	1.0	1.0	.30	2,000	N	N	N	20	700	2.0
9DF6789	45 30 31	113 15 37	5.0	.5	.7	.10	1,000	N	N	N	10	500	1.5
9DF6790	45 30 39	113 15 11	2.0	.7	1.0	.20	1,000	N	N	N	10	500	2.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9DF6575	N	N	7	10	50	100	N	<20	10	30	N	5	N
9DF6578	N	N	5	10	20	70	N	<20	7	30	N	5	N
9DF6579	N	N	7	15	20	100	N	<20	5	30	N	5	N
9DF6580	N	N	7	15	10	100	N	<20	5	20	N	5	N
9DF6581	N	N	7	20	10	70	5	<20	10	20	N	5	N
9DF6582	N	N	7	20	15	50	5	<20	10	30	N	5	N
9DF6583	N	N	10	15	10	70	10	20	10	30	N	5	N
9DF6584	N	N	10	20	20	100	N	<20	15	30	N	7	N
9DF6586	N	N	7	15	10	30	7	<20	10	30	N	5	N
9DF6587	N	N	10	15	30	100	N	<20	15	30	N	7	N
9DF6588	N	N	10	20	15	50	N	<20	10	20	N	7	N
9DF6589	N	N	<5	10	7	20	N	N	<5	10	N	5	N
9DF6590	N	N	7	10	10	30	N	N	5	20	N	7	N
9DF6591	N	N	10	20	15	150	N	<20	10	30	N	10	N
9DF6592	N	N	5	10	10	70	N	<20	<5	10	N	7	N
9DF6593	N	N	15	10	15	30	N	N	<5	15	N	7	N
9DF6594	N	N	10	10	7	100	N	<20	10	50	N	10	N
9DF6595	N	N	7	10	5	150	N	20	10	20	N	7	N
9DF6596	N	N	10	15	20	30	N	N	7	20	N	10	N
9DF6597	N	N	10	30	10	70	N	<20	15	20	N	10	N
9DF6598	N	N	5	20	10	70	N	N	5	15	N	7	N
9DF6599	N	N	10	20	5	200	N	<20	10	20	N	7	N
9DF6600	N	N	7	30	7	100	N	<20	10	15	N	7	N
9DF6705	N	N	7	20	10	50	10	N	10	20	N	5	N
9DF6706	N	N	10	30	10	50	15	N	15	20	N	5	N
9DF6707	N	N	20	20	10	30	7	N	10	20	N	5	N
9DF6708	N	N	10	30	5	30	5	N	15	30	N	5	N
9DF6761	N	N	10	15	15	50	7	N	10	20	N	10	N
9DF6762	N	N	10	20	10	50	15	N	7	30	N	10	N
9DF6763	N	N	5	15	10	20	N	N	10	20	N	7	N
9DF6764	N	N	10	10	10	30	N	N	10	20	N	7	<10
9DF6765	N	N	15	10	7	50	15	N	7	30	N	10	N
9DF6766	N	N	20	10	15	20	15	N	5	30	N	7	N
9DF6767	N	N	15	15	10	20	N	N	7	20	N	15	N
9DF6768	N	N	15	20	15	50	10	N	7	30	N	10	<10
9DF6769	N	N	15	20	20	50	15	N	10	20	N	10	N
9DF6770	N	N	20	15	15	50	5	N	7	30	N	15	N
9DF6776	N	N	20	10	20	20	20	N	5	20	N	10	N
9DF6777	N	N	20	30	20	150	30	N	10	30	N	15	N
9DF6780	N	N	15	20	20	20	7	N	15	20	N	10	N
9DF6781	N	N	10	20	20	30	20	N	5	15	N	10	N
9DF6783	N	N	15	15	20	30	15	N	7	20	N	15	N
9DF6788	N	N	15	15	15	20	N	N	10	20	N	15	N
9DF6789	N	N	7	<10	7	20	N	N	<5	15	N	7	N
9DF6790	N	N	10	10	10	20	N	N	<5	20	N	15	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9DF6575	200	70	N	70	200	300	N	130	N	<10
9DF6578	300	50	N	50	N	700	N	100	<1	<10
9DF6579	300	50	N	30	N	300	N	100	N	20
9DF6580	300	50	N	50	N	700	N	70	<1	<10
9DF6581	300	70	N	30	N	700	N	40	<1	<10
9DF6582	200	50	N	30	N	150	N	60	N	<10
9DF6583	200	70	N	20	N	500	N	50	<1	<10
9DF6584	200	100	N	50	N	300	N	50	N	<10
9DF6586	300	70	N	30	N	700	N	55	N	<10
9DF6587	200	70	N	200	<200	500	N	95	<1	<10
9DF6588	300	70	N	50	N	700	N	70	<1	<10
9DF6589	200	70	N	10	N	100	N	40	N	<10
9DF6590	200	100	N	10	N	300	N	60	N	40
9DF6591	300	70	N	50	N	>1,000	<100	70	<1	<10
9DF6592	200	70	N	30	N	300	N	60	N	<10
9DF6593	200	70	N	30	N	200	N	50	N	<10
9DF6594	300	70	N	50	N	1,000	N	30	N	<10
9DF6595	300	50	N	100	N	>1,000	N	30	N	<10
9DF6596	200	100	N	30	N	500	N	50	N	<10
9DF6597	200	100	N	50	N	500	N	20	<1	<10
9DF6598	200	70	N	50	N	700	N	30	<1	<10
9DF6599	300	50	N	30	N	700	N	25	N	<10
9DF6600	150	100	N	50	N	>1,000	N	15	N	<10
9DF6705	100	70	N	20	N	500	N	60	N	<10
9DF6706	150	70	N	20	N	1,000	N	40	N	<10
9DF6707	100	50	N	20	N	300	N	60	N	10
9DF6708	100	70	N	20	N	700	N	80	N	<10
9DF6761	150	100	N	20	N	500	N	30	N	<10
9DF6762	200	100	N	150	N	300	N	30	N	<10
9DF6763	100	70	N	15	N	700	N	20	N	20
9DF6764	100	70	N	50	N	300	N	40	N	<10
9DF6765	300	70	N	50	N	700	N	35	--	<10
9DF6766	200	70	N	20	N	300	N	110	N	<10
9DF6767	200	70	N	30	N	700	N	35	N	<10
9DF6768	300	70	N	30	N	700	N	25	N	<10
9DF6769	200	70	N	30	N	500	N	30	N	<10
9DF6770	300	100	N	50	N	700	N	50	N	<10
9DF6776	200	100	N	20	N	300	N	90	<1	10
9DF6777	300	100	N	100	N	1,000	N	50	<1	<10
9DF6780	200	100	N	15	N	200	N	50	N	<10
9DF6781	200	100	N	50	N	500	N	55	N	<10
9DF6783	300	100	N	30	N	300	N	60	N	<10
9DF6788	300	100	N	50	N	700	N	40	N	<10
9DF6789	200	100	N	30	N	200	N	50	N	10
9DF6790	200	70	N	20	N	700	N	60	N	<10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9DF6791	45 30 43	113 15 15	2.0	.7	1.0	.20	1,000	N	N	N	15	700	2.0
9DF6792	45 30 22	113 15 6	7.0	.7	1.0	.15	>5,000	N	N	N	10	700	1.5
9DF6801	45 31 23	113 21 5	3.0	.7	.7	.20	700	N	N	N	70	700	3.0
9DF6802	45 31 15	113 21 13	5.0	1.0	.7	.20	2,000	N	N	N	50	700	3.0
9DF6803	45 30 49	113 21 30	3.0	.7	.7	.30	1,500	N	N	N	50	700	5.0
9DF6804	45 30 47	113 21 40	5.0	1.0	1.0	.30	1,500	N	N	N	100	700	5.0
9DF6805	45 34 20	113 16 18	3.0	.7	.5	.30	1,000	.5	N	N	50	1,000	1.5
9DF6807	45 34 9	113 15 55	5.0	.7	.5	.50	1,500	2.0	N	N	50	1,500	2.0
9DF6808	45 33 52	113 16 29	5.0	1.0	1.0	.30	2,000	.5	N	N	30	1,500	2.0
9DF6809	45 33 55	113 16 31	3.0	.7	.7	.30	3,000	<.5	N	N	30	1,000	2.0
9DF6810	45 33 31	113 16 49	3.0	.7	.7	.30	2,000	.5	N	N	30	700	2.0
9DF6811	45 33 26	113 16 40	5.0	.7	1.0	.30	1,000	<.5	N	N	20	500	2.0
9DF6812	45 33 1	113 16 50	5.0	.7	1.0	.30	1,500	N	N	N	15	500	1.5
9DF6813	45 32 44	113 16 52	5.0	1.0	1.0	.30	1,500	N	N	N	20	700	2.0
9DF6814	45 32 18	113 17 21	5.0	1.0	1.5	.30	1,500	<.5	N	N	15	700	3.0
9DF6816	45 33 19	113 15 35	3.0	.7	.7	.30	1,500	3.0	N	N	50	500	2.0
9DF6817	45 32 51	113 16 20	5.0	.7	1.0	.20	1,000	N	N	N	15	500	1.5
9DF6818	45 32 16	113 16 13	2.0	.5	.7	.20	500	N	N	N	20	500	2.0
9DF6819	45 31 54	113 17 53	5.0	.7	.7	.15	3,000	N	N	N	15	700	2.0
9DF6820	45 31 51	113 17 37	7.0	.5	.7	.20	700	N	N	N	20	700	1.5
9DF6821	45 32 23	113 17 32	3.0	.7	.7	.30	1,500	N	N	N	70	700	2.0
9DF6822	45 32 41	113 17 35	3.0	.5	1.0	.20	2,000	N	N	N	10	500	2.0
9DF6823	45 32 40	113 18 3	5.0	1.0	.5	.20	2,000	N	N	N	50	1,000	2.0
9DF6824	45 33 29	113 18 6	5.0	.5	1.0	.20	1,000	N	N	N	10	500	2.0
9DF6842	45 32 14	113 21 33	3.0	.7	.7	.30	700	N	N	N	50	700	3.0
9DF6843	45 32 35	113 21 6	3.0	.7	.7	.30	1,500	N	N	N	30	700	2.0
9DF6844	45 32 30	113 20 57	3.0	.7	.7	.30	1,000	N	N	N	30	700	2.0
9DG6733	45 31 6	113 12 0	3.0	.5	.5	.50	700	N	N	N	70	500	5.0
9DG6734	45 31 34	113 13 7	5.0	.7	.7	.30	1,500	N	N	N	70	700	5.0
9DG6735	45 32 20	113 13 22	3.0	.7	.7	.30	700	N	N	N	50	700	5.0
9DG6740	45 32 19	113 12 13	3.0	.7	.1	.30	500	<.5	N	N	70	500	3.0
9DG6779	45 32 17	113 14 21	7.0	1.5	1.5	.30	3,000	N	N	N	15	700	2.0
9DG6784	45 32 52	113 14 39	7.0	1.0	1.0	.30	1,500	N	N	N	15	700	3.0
9DG6785	45 32 57	113 14 41	5.0	1.0	1.0	.20	2,000	N	N	N	15	700	3.0
9DG6793	45 30 27	113 13 58	2.0	.5	.5	.20	300	N	N	N	20	500	2.0
9DG6794	45 30 31	113 13 51	3.0	.7	1.0	.20	500	N	N	N	20	500	3.0
9DG6795	45 30 36	113 13 52	2.0	.5	1.0	.20	500	N	N	N	30	500	2.0
9DH6694	45 30 54	113 6 19	3.0	.3	.7	.30	300	N	N	N	200	500	2.0
9DH6695	45 30 22	113 6 47	3.0	.5	.7	.30	1,500	N	N	N	700	700	2.0
9EF6749	45 26 38	113 19 25	3.0	.7	.2	.30	1,000	N	N	N	100	700	3.0
9EF6750	45 27 12	113 20 0	3.0	.3	.2	.20	>5,000	N	N	N	100	1,000	3.0
9EF6755	45 27 13	113 20 20	2.0	.5	.3	.20	2,000	N	N	N	100	700	5.0
9EF6758	45 27 35	113 16 52	1.5	.5	.3	.20	300	N	N	N	70	1,000	2.0
9EF6759	45 28 3	113 16 6	2.0	.3	.7	.15	500	N	N	N	10	500	1.5
9EF6760	45 29 50	113 17 32	3.0	.7	.7	.20	700	N	N	N	70	700	2.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9DF6791	N	N	7	10	10	30	N	<20	<5	15	N	10	N
9DF6792	N	N	20	N	10	<20	N	N	<5	20	N	7	N
9DF6801	N	N	7	20	20	70	N	N	10	20	N	7	N
9DF6802	N	N	10	20	10	50	N	N	15	20	N	7	N
9DF6803	N	N	10	20	15	50	N	N	15	20	N	7	N
9DF6804	N	N	15	20	50	70	N	<20	20	20	N	10	N
9DF6805	N	N	7	70	10	20	20	N	20	20	N	5	N
9DF6807	N	N	10	100	20	50	10	<20	20	50	N	5	N
9DF6808	N	N	10	100	15	70	30	N	20	30	N	10	N
9DF6809	N	N	10	50	15	30	20	<20	10	30	N	7	N
9DF6810	N	N	15	30	70	50	15	N	15	20	N	7	N
9DF6811	N	N	15	15	20	30	20	N	7	20	N	10	N
9DF6812	N	N	15	10	15	30	7	N	5	20	N	7	N
9DF6813	N	N	20	30	15	30	20	N	10	20	N	10	N
9DF6814	N	N	15	15	10	30	15	N	7	20	N	10	N
9DF6816	N	N	15	20	30	50	5	N	10	150	N	7	N
9DF6817	N	N	15	15	15	30	15	N	5	20	N	7	N
9DF6818	N	N	7	10	10	30	5	N	<5	15	N	7	N
9DF6819	N	N	30	10	15	20	N	N	5	20	N	7	N
9DF6820	N	N	7	15	10	50	15	N	5	20	N	5	N
9DF6821	N	N	15	15	10	50	<5	N	10	30	N	7	N
9DF6822	N	N	15	10	15	30	<5	N	7	20	N	10	N
9DF6823	N	N	20	30	10	100	N	N	15	30	N	7	N
9DF6824	N	N	15	10	10	30	5	N	<5	20	N	7	N
9DF6842	N	N	15	50	10	200	N	<20	10	30	N	7	10
9DF6843	N	N	15	20	20	30	N	N	10	20	N	7	N
9DF6844	N	N	15	30	15	70	N	N	10	20	N	7	N
9DG6733	N	N	15	30	20	50	7	20	20	20	N	10	N
9DG6734	N	N	20	20	30	30	10	N	10	20	N	10	N
9DG6735	N	N	15	15	50	50	10	N	15	15	N	10	N
9DG6740	N	N	15	30	50	30	N	N	30	10	N	7	N
9DG6779	N	N	30	30	50	100	30	N	10	30	N	20	N
9DG6784	N	N	15	15	50	50	30	<20	5	20	N	20	N
9DG6785	N	N	15	15	30	30	50	N	10	30	N	15	N
9DG6793	N	N	5	10	10	30	N	N	5	20	N	5	N
9DG6794	N	N	7	10	10	30	N	N	5	30	N	10	N
9DG6795	N	N	N	10	5	30	N	<20	<5	15	N	7	N
9DH6694	N	N	7	20	10	30	N	N	10	10	N	7	N
9DH6695	N	N	10	20	10	50	N	<20	5	30	N	7	N
9EF6749	N	N	15	30	20	30	N	N	30	20	N	10	N
9EF6750	N	N	50	20	20	70	N	N	30	30	N	7	N
9EF6755	N	N	20	30	20	70	N	N	30	30	N	10	N
9EF6758	N	N	5	20	10	30	N	N	10	15	N	5	N
9EF6759	N	N	N	10	15	20	N	<20	<5	15	N	7	N
9EF6760	N	N	10	20	10	70	15	N	10	30	N	10	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9DF6791	200	70	N	30	N	300	N	50	N	<10
9DF6792	150	100	N	15	N	300	N	140	N	20
9DF6801	200	70	N	70	N	1,000	N	20	N	<10
9DF6802	200	70	N	30	N	500	N	25	N	<10
9DF6803	200	50	N	30	N	200	N	50	N	<10
9DF6804	200	70	N	50	N	500	N	30	N	<10
9DF6805	100	70	N	30	N	1,000	N	40	<1	10
9DF6807	100	100	N	50	N	>1,000	N	55	1	<10
9DF6808	200	70	N	50	N	700	N	100	<1	<10
9DF6809	150	70	N	20	N	500	N	80	<1	<10
9DF6810	200	100	N	20	N	700	N	50	<1	<10
9DF6811	200	100	N	20	N	500	N	55	<1	<10
9DF6812	200	100	N	20	N	300	N	65	1	<10
9DF6813	200	100	N	30	N	500	N	95	3	10
9DF6814	300	100	N	20	N	300	N	50	1	<10
9DF6816	150	70	N	20	<200	700	N	140	4	<10
9DF6817	200	70	N	20	N	500	N	40	<1	<10
9DF6818	200	70	N	15	N	300	N	45	1	<10
9DF6819	200	70	N	15	N	200	N	70	1	10
9DF6820	200	70	N	20	N	700	N	40	1	10
9DF6821	200	70	N	50	N	300	N	45	<1	<10
9DF6822	200	100	N	20	N	300	N	65	<1	10
9DF6823	150	70	N	70	N	500	N	40	1	<10
9DF6824	200	150	N	15	N	300	N	55	<1	10
9DF6842	200	70	N	50	N	1,000	N	25	<1	<10
9DF6843	200	70	N	30	N	500	N	35	<1	10
9DF6844	200	70	N	50	N	700	N	30	<1	<10
9DG6733	150	100	N	50	200	>1,000	N	110	N	<10
9DG6734	200	100	N	20	N	300	N	100	N	10
9DG6735	200	100	N	30	N	1,000	N	75	<1	<10
9DG6740	100	70	N	50	N	1,000	N	80	N	<10
9DG6779	300	150	N	50	N	500	N	85	N	<10
9DG6784	300	200	N	50	N	700	N	65	N	<10
9DG6785	300	100	N	50	N	500	N	60	N	<10
9DG6793	100	50	N	15	N	500	N	20	N	<10
9DG6794	200	100	N	15	N	300	N	30	N	<10
9DG6795	200	50	N	15	N	700	N	15	N	<10
9DH6694	150	50	N	50	N	>1,000	N	10	N	<10
9DH6695	200	70	N	50	N	700	N	20	N	<10
9EF6749	100	70	N	50	N	300	N	35	<1	<10
9EF6750	100	70	N	70	N	200	N	70	2	10
9EF6755	100	70	N	70	N	300	N	55	N	<10
9EF6758	150	50	N	20	N	300	N	70	<1	<10
9EF6759	200	30	N	15	N	300	N	100	N	<10
9EF6760	150	100	N	30	N	700	N	40	N	<10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9EF6771	45 29 43	113 17 22	7.0	.7	.7	.15	5,000	N	N	N	30	1,000	3.0
9EF6772	45 29 44	113 16 6	7.0	.7	.7	.20	3,000	N	N	N	70	1,000	2.0
9EF6774	45 29 39	113 15 42	1.5	.5	.7	.20	300	N	N	N	100	1,000	3.0
9EF6775	45 29 20	113 15 27	3.0	.7	1.0	.20	500	N	N	N	30	700	2.0
9EF6786	45 29 37	113 17 50	3.0	.7	.3	.20	1,000	N	N	N	50	700	5.0
9EF6787	45 29 55	113 16 15	7.0	.5	1.0	.15	>50,000	N	N	N	20	1,500	2.0
9EF6796	45 29 12	113 17 58	1.5	.5	.5	.20	300	N	N	N	50	700	3.0
9EF6797	45 29 8	113 17 48	5.0	.7	.7	.20	1,500	N	N	N	50	700	1.5
9EF6798	45 28 56	113 17 52	3.0	1.0	.5	.30	300	1.0	N	N	70	700	2.0
9EF6799	45 28 5	113 17 49	5.0	.7	.5	.30	1,500	N	N	N	100	700	3.0
9EF6800	45 28 8	113 17 27	5.0	.7	.7	.30	3,000	N	N	N	100	1,000	5.0
9EF6825	45 27 3	113 16 38	2.0	.5	.5	.20	1,000	N	N	N	50	700	1.5
9EF6826	45 26 45	113 15 51	2.0	.5	.5	.30	700	N	N	N	50	500	1.5
9EF6827	45 26 42	113 15 45	2.0	.5	.5	.20	300	<.5	N	N	50	1,000	2.0
9EF6828	45 27 2	113 15 26	3.0	.5	.5	.20	1,500	N	N	N	50	700	1.5
9EF6829	45 27 39	113 17 50	5.0	.7	.7	.30	1,000	N	N	N	70	700	1.5
9EF6830	45 28 7	113 19 14	3.0	.7	.3	.30	1,000	N	N	N	70	700	3.0
9EG6713	45 29 1	113 8 2	5.0	.7	1.0	.30	3,000	N	N	N	30	500	2.0
9EG6714	45 29 34	113 8 34	7.0	.7	1.0	.20	5,000	N	N	N	30	500	3.0
9EG6715	45 29 46	113 8 19	10.0	1.0	1.0	.30	1,500	<.5	N	N	30	500	2.0
9EG6716	45 29 4	113 8 54	1.5	.5	.7	.20	700	<.5	N	N	15	300	3.0
9EG6717	45 28 44	113 8 36	5.0	.5	1.0	.20	1,500	N	N	N	20	500	3.0
9EG6741	45 26 57	113 7 38	3.0	.7	1.0	.30	1,500	N	N	N	70	700	3.0
9EG6742	45 27 30	113 8 35	3.0	.5	.5	.30	1,000	N	N	N	100	700	5.0
9EG6743	45 27 19	113 8 9	3.0	.5	.5	.30	700	N	N	N	100	700	2.0
9EG6744	45 27 47	113 8 44	5.0	.5	.7	.20	2,000	N	N	N	30	500	3.0
9EG6745	45 27 44	113 8 56	5.0	.7	.7	.30	1,500	N	N	N	50	500	3.0
9EG6746	45 27 39	113 9 44	3.0	.5	.5	.30	700	N	N	N	70	500	3.0
9EG6747	45 27 48	113 10 28	3.0	.5	.7	.30	700	N	N	N	50	500	3.0
9EG6751	45 28 12	113 7 22	5.0	.7	1.0	.30	2,000	<.5	N	N	20	700	3.0
9EG6752	45 25 51	113 8 35	2.0	.5	.7	.20	500	N	N	N	70	700	3.0
9EG6753	45 25 44	113 8 40	2.0	.5	.5	.20	500	N	N	N	70	1,000	5.0
9EG6831	45 27 11	113 14 56	3.0	.5	.3	.20	300	N	N	N	50	1,000	3.0
9EG6832	45 27 41	113 14 18	5.0	.7	1.0	.30	500	N	N	N	20	500	1.5
9EG6833	45 27 32	113 13 36	2.0	.3	.5	.30	700	N	N	N	70	700	1.5
9EG6834	45 26 43	113 13 19	2.0	.5	.2	.30	700	N	N	N	100	1,000	2.0
9EG6835	45 26 26	113 12 54	2.0	.3	.2	.20	700	N	N	N	70	700	2.0
9EG6836	45 25 54	113 11 37	2.0	.5	.2	.20	1,000	N	N	N	70	1,000	3.0
9EG6837	45 25 51	113 11 49	3.0	.5	.2	.20	700	<.5	N	N	50	700	3.0
9EG6838	45 26 11	113 11 43	2.0	.5	.2	.30	700	N	N	N	100	1,000	3.0
9EG6839	45 26 53	113 13 12	2.0	.3	.2	.30	500	N	N	N	150	700	1.5
9EG6840	45 29 47	113 13 6	5.0	1.0	2.0	.30	3,000	N	N	N	15	700	2.0
9EG6841	45 28 4	113 13 20	5.0	.7	1.0	.20	5,000	N	N	N	15	700	2.0
9EG6847	45 27 17	113 12 45	3.0	.5	.7	.20	1,500	N	N	N	30	700	3.0
9EG6848	45 27 36	113 12 24	5.0	.5	.7	.15	5,000	N	N	N	20	700	2.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9EF6771	N	N	20	15	10	30	N	N	7	20	N	7	N
9EF6772	N	N	20	30	15	30	N	N	15	20	N	10	N
9EF6774	N	N	5	20	15	70	N	N	10	20	N	7	N
9EF6775	N	N	10	15	10	70	N	N	10	20	N	7	N
9EF6786	N	N	15	30	20	30	N	N	20	20	N	10	N
9EF6787	N	N	30	10	10	30	15	N	5	30	N	10	N
9EF6796	N	N	<5	10	10	30	N	N	10	15	N	7	N
9EF6797	N	N	10	15	7	50	5	N	10	20	N	7	N
9EF6798	N	N	10	20	15	30	N	N	20	20	N	7	N
9EF6799	N	N	20	30	20	70	N	N	30	20	N	15	N
9EF6800	N	N	15	30	20	50	N	N	30	15	N	15	N
9EF6825	N	N	7	15	15	30	5	N	7	30	N	5	N
9EF6826	N	N	7	15	15	30	5	N	10	20	N	5	N
9EF6827	N	N	5	20	15	30	N	N	15	20	N	7	N
9EF6828	N	N	10	15	15	50	N	N	10	20	N	5	N
9EF6829	N	N	10	20	15	70	5	N	10	50	N	7	10
9EF6830	N	N	15	30	15	50	N	N	20	20	N	10	N
9EG6713	N	N	15	15	15	70	N	N	7	20	N	10	N
9EG6714	N	N	30	20	20	70	N	N	10	20	N	7	N
9EG6715	N	N	20	30	20	50	N	<20	15	30	N	15	N
9EG6716	N	N	N	10	10	50	N	N	5	15	N	5	N
9EG6717	N	N	10	20	15	50	N	<20	10	20	N	7	N
9EG6741	N	N	15	20	15	50	N	<20	15	20	N	20	N
9EG6742	N	N	15	20	15	50	N	<20	30	20	N	10	N
9EG6743	N	N	15	20	15	50	N	N	20	15	N	10	N
9EG6744	N	N	15	15	15	30	5	N	10	20	N	7	N
9EG6745	N	N	15	20	10	70	N	N	15	20	N	10	N
9EG6746	N	N	10	15	7	50	N	N	15	20	N	7	N
9EG6747	N	N	7	20	10	70	N	<20	20	20	N	5	N
9EG6751	N	N	10	15	15	30	N	<20	5	30	N	7	N
9EG6752	N	N	7	15	30	20	N	N	5	20	N	7	N
9EG6753	N	N	7	15	30	30	N	N	15	20	N	5	N
9EG6831	N	N	15	20	15	50	N	N	20	20	N	5	N
9EG6832	N	N	10	20	10	50	5	<20	10	20	N	10	N
9EG6833	N	N	7	15	10	50	N	<20	10	20	N	7	N
9EG6834	N	N	7	20	10	30	N	<20	15	15	N	7	N
9EG6835	N	N	7	15	20	30	N	N	10	20	N	5	N
9EG6836	N	N	10	20	30	30	N	N	20	20	N	7	N
9EG6837	N	N	10	20	70	50	10	N	15	30	N	7	N
9EG6838	N	N	10	20	30	50	N	N	15	30	N	7	N
9EG6839	N	N	7	15	15	30	N	N	10	30	N	5	N
9EG6840	N	N	20	15	10	70	N	20	5	30	N	7	20
9EG6841	N	N	20	10	15	20	N	<20	5	20	N	5	10
9EG6847	N	N	15	15	15	70	N	<20	7	20	N	7	N
9EG6848	N	N	20	10	15	50	N	<20	7	20	N	5	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9EF6771	300	100	N	50	N	200	N	110	N	10
9EF6772	200	100	N	30	N	300	N	60	N	<10
9EF6774	200	50	N	70	N	700	N	20	N	20
9EF6775	500	70	N	20	N	200	N	40	N	<10
9EF6786	150	100	N	30	N	300	N	60	N	10
9EF6787	200	100	N	30	N	300	N	160	N	20
9EF6796	150	50	N	30	N	200	N	30	N	<10
9EF6797	200	70	N	30	N	>1,000	N	50	N	20
9EF6798	150	70	N	20	N	300	N	40	N	<10
9EF6799	100	100	N	50	N	700	N	40	N	<10
9EF6800	150	100	N	50	<200	700	N	50	N	<10
9EF6825	100	30	N	20	N	700	N	45	<1	<10
9EF6826	100	50	N	15	N	700	N	40	1	<10
9EF6827	100	50	N	20	N	300	N	55	1	<10
9EF6828	100	50	N	20	N	700	N	60	1	<10
9EF6829	100	70	N	20	N	700	N	45	1	<10
9EF6830	100	100	N	50	N	500	N	25	<1	<10
9EG6713	200	150	N	30	N	700	N	80	N	<10
9EG6714	200	200	N	20	N	500	N	70	N	<10
9EG6715	200	200	N	50	N	700	N	70	N	20
9EG6716	150	30	N	10	N	200	N	60	N	<10
9EG6717	300	70	N	30	N	300	N	60	N	<10
9EG6741	300	100	N	50	N	700	N	40	N	10
9EG6742	150	70	N	30	N	700	N	35	N	<10
9EG6743	200	70	N	30	N	1,000	N	30	N	<10
9EG6744	200	100	N	20	N	300	N	60	N	<10
9EG6745	300	70	N	50	N	700	N	50	N	<10
9EG6746	150	70	N	20	N	1,000	N	35	N	<10
9EG6747	300	50	N	30	N	1,000	N	30	N	<10
9EG6751	300	70	N	20	N	500	N	100	N	<10
9EG6752	150	50	N	20	N	300	N	35	N	<10
9EG6753	100	50	N	50	N	500	N	30	N	<10
9EG6831	150	50	N	30	N	700	N	100	<1	<10
9EG6832	300	100	N	30	N	1,000	N	40	1	<10
9EG6833	100	50	N	30	N	700	N	20	4	<10
9EG6834	<100	50	N	50	N	700	N	25	2	<10
9EG6835	<100	50	N	20	N	500	N	60	<1	<10
9EG6836	100	50	N	30	N	300	N	45	<1	<10
9EG6837	100	70	N	30	N	500	N	80	1	10
9EG6838	100	50	N	30	N	500	N	30	<1	<10
9EG6839	100	50	N	20	N	>1,000	N	30	1	<10
9EG6840	500	100	N	20	N	700	N	80	1	<10
9EG6841	300	100	N	15	N	300	N	110	1	<10
9EG6847	300	70	N	30	N	500	N	35	<1	<10
9EG6848	200	70	N	20	N	200	N	85	1	10

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
9EG6849	45 27 53	113 12 33	5.0	.5	.7	.20	1,000	N	N	N	20	500	2.0
9EG6850	45 28 31	113 11 36	7.0	.7	.7	.30	1,500	N	N	N	20	500	2.0
9EG6851	45 28 15	113 10 26	3.0	.5	.7	.15	5,000	.5	N	N	10	700	2.0
9EG6852	45 29 1	113 11 33	5.0	.5	.7	.30	1,500	N	N	N	20	700	2.0
9EG6853	45 27 29	113 11 38	3.0	.5	.7	.30	500	N	N	N	50	1,000	2.0
9EH6712	45 27 6	113 7 12	5.0	.7	1.0	.30	2,000	1.0	N	N	50	500	3.0
9EH6754	45 25 29	113 7 31	3.0	.5	.7	.30	500	N	N	N	100	1,000	5.0

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN
9EG6849	N	N	15	15	10	50	N	<20	5	20	N	5	N
9EG6850	N	N	15	20	7	100	N	20	7	50	N	5	N
9EG6851	N	N	20	10	5	50	N	N	5	15	N	5	N
9EG6852	N	N	20	20	15	30	N	N	10	20	N	10	N
9EG6853	N	N	7	20	10	150	5	<20	15	20	N	7	N
9EH6712	N	N	15	15	50	50	20	<20	7	50	N	10	N
9EH6754	N	N	7	20	30	50	N	N	20	20	N	7	N

Table 1.--Results of chemical analysis of stream sediments.--continued
Sample locations given in longitude and latitude.

sample	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-ZN-P	AA-SB-P	CM-AS
9EG6849	200	100	N	15	N	500	N	40	1	10
9EG6850	300	150	N	20	N	1,000	N	85	1	<10
9EG6851	200	50	N	15	N	150	N	120	2	10
9EG6852	200	100	N	20	N	700	N	55	1	<10
9EG6853	200	50	N	30	N	1,000	N	20	<1	10
9EH6712	200	100	N	30	300	500	N	160	1	10
9EH6754	100	50	N	70	N	1,000	N	30	N	20

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