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Analyses of Heavy-Mineral-Concentrate Samples, East Half of the Lewiston 1° x 2° Quadrangle, Maine and New Hampshire

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INTRODUCTION

This report presents analytical data for nonmagnetic heavy-mineral-concentrate samples from 350 sites in the east half of the Lewiston, Maine 1° x 2° quadrangle. Most of the sampled sites are in Maine, but a few are in New Hampshire. The vast majority of the samples were collected in 1979, the remainder were collected in 1980.

The sampling was done in cooperation with the Maine Geological Survey as part of the Conterminous United States Mineral Appraisal Program (CUSMAP) being carried out by the U.S. Geological Survey. The geochemical sampling reported here is only one facet of a multidisciplinary mineral-resource evaluation of the Sherbrooke and Lewiston 1° x 2° quadrangles (fig. 1). Analytical results for 569 heavy-mineral concentrates collected from portions of the Lewiston quadrangle in north-central New Hampshire are listed by Domenico and others (1982). Geochemical data from the west half of the Lewiston quadrangle and from the southern portions of the Sherbrooke quadrangle are currently being prepared for publication.

The data in this report are from nonmagnetic heavy-mineral-concentrate samples that were collected as part of a more extensive program of stream-sediment sampling (Nowlan and others, 1983). Heavy-mineral concentrates and stream-sediment samples were collected concurrently at 350 of the 2,244 sites reported by Nowlan and others (1983) in order to test the utility of heavy-mineral concentrates for reconnaissance geochemical work in the Lewiston quadrangle.

Samples were collected by Frank Howd, Eric Carlson, Innes Carlson, Glen Daukas, Bill Foster, Tom Howd, Jeff Josephson, Blake Salmon, Mike Scully, Andy Sprecher, and Susan Zieminski, all of the Maine Geological Survey. Analyses were by J. A. Domenico and Betty Adrian of the U.S. Geological Survey.

SAMPLE COLLECTION AND PREPARATION

Samples were generally collected from first- and second-order streams. Plate 1 is a plot of sampling locations. Each sample consisted of approximately 20 lbs (9 kg) of active sediment which was a composite of sediment collected from stream sites favorable for the concentration of heavy minerals. At the sampling site, the sediments were panned to remove most of the quartz, feldspar, clay, and organic material. The panned samples were then air dried and sieved to minus 25 mesh (0.71-mm). Each sample was then separated at a specific gravity of 2.86 with bromoform into a light fraction and a heavy fraction. The light fraction was discarded. Magnetite was then removed with a hand magnet. Ferromagnesian silicates and other slightly magnetic minerals, were removed by separation with a Frantz Isodynamic Separator set at 0.6 amperes with a 15° side and forward slope. The resultant nonmagnetic sample concentrate usually consists of light-colored rock-accessory minerals, such as zircon, and primary and secondary ore minerals (see Rosenblum, 1958).

The samples were randomized prior to preparation to minimize analytical bias due to sequential handling.

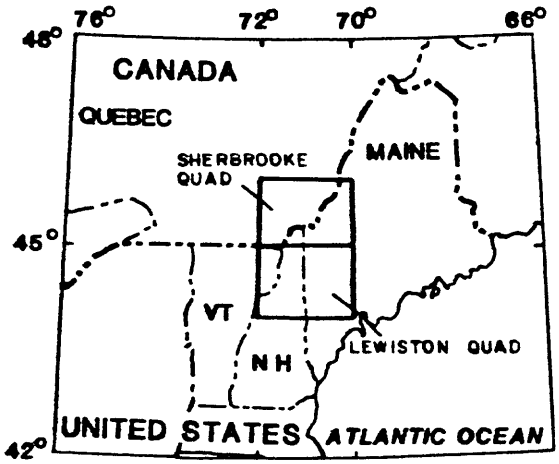

Figure 1.--Index map, Lewiston and Sherbrooke 1° x 2° quadrangles.

ANALYTICAL METHODS

The heavy-mineral-concentrate samples were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). Spectrographic results are obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, 7, and so forth. The precision of the analytical method is approximately plus or minus one reporting unit at the 83 percent confidence level and plus or minus two reporting units at the 96 percent confidence level (Motooka and Grimes, 1976).

EXPLANATION OF TABLES

Table 1 lists the limits of determination for the emission spectrographic procedure used. Table 2 lists the spectrographic analytical data. Deleted from table 2 are the elements arsenic, gold, cadmium, and antimony. Cadmium was not detected in any sample. Arsenic, gold, and antimony were rarely detected; where their presence was determined the respective concentrations are noted in footnotes. The data in table 2 are arranged so that column 1 contains the assigned field number; the numeric portion denotes the site on plate 1 where the sample was collected. The data are subdivided into 15-minute quadrangles to aid in finding the sites on plate 1. Areas presently covered by 7.5-minute quadrangles are systematically lumped in 15-minute areas. The order of listing the areas in table 2 is left to right, top to bottom on plate 1.

REFERENCES CITED

Domenico, J. A., Howd, F. H., Hall-Santala, P. A., and Gerstel, W. J., 1982, Spectrographic analyses and statistical summaries of nonmagnetic heavy-mineral-concentrate samples from north-central Hew Hampshire: U.S. Geological Survey Open-File Report 82-886, 33 p.

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 analysis: U.S. Geological Survey Circular 738, 25 p.

Nowlan, G. A., Howd, F. H., and Nakagawa, H. M., 1983, Analytical results for 2244 stream-sediment samples, east half of the Lewiston 1° x 2° quadrangle, Maine and New Hampshire: U.S. Geological Survey Open-File Report 83-848.

Rosenblum, Sam, 1958, Magnetic susceptibilities of minerals in the Frantz Isodynamic Magnetic Separator: American Mineralogist, v. 43, p. 170-173.

Table 1.--Limits of determination for 31-element emission spectrographic procedure[1]

[Values in ppm unless noted otherwise]

Element	Lower limit	Upper limit	Element	Lower limit	Upper limit
Ca, percent	0.1	50	Mn	20	10,000
Fe, percent	0.1	50	Mo	10	5,000
Mg, percent	0.05	20	Nb	50	2,000
Ti, percent	0.005	2	Ni	10	10,000
Ag	1	10,000	Pb	20	50,000
As	500	20,000	Sb	200	20,000
Au	20	1,000	Sc	10	200
B	20	5,000	Sn	20	2,000
Ba	50	10,000	Sr	200	10,000
Be	2	2,000	Th	200	5,000
Bi	20	2,000	V	20	20,000
Cd	50	1,000	W	100	20,000
Co	10	5,000	Y	20	5,000
Cr	20	10,000	Zn	500	20,000
Cu	10	50,000	Zr	20	2,000
La	50	2,000			

[1]The limits of determination are double those listed in Grimes and Marranzino (1968), because the spectrographic procedure was altered to accommodate for spectrographic interferences which commonly occur in samples of heavy minerals.

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire

[N, not detected at lower limit of determination. Analyses by semi-quantitative emission spectrography]

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Errol quad															
SH01240A	44 57 26	71 2 19	10.0	2.0	.70	>2.0	N	150	200	2	N	10	70	N	300
SH01244A	44 52 19	71 0 39	7.0	1.0	.50	>2.0	N	200	150	5	N	10	50	N	200
SH01500A	44 58 33	71 3 13	7.0	2.0	2.00	>2.0	N	300	150	<2	N	15	100	10	N
SH01710A	44 52 10	71 0 25	10.0	.7	.20	>2.0	N	100	300	5	N	<10	150	N	500
SH01711A	44 56 51	71 0 20	10.0	2.0	1.00	>2.0	N	100	300	2	N	N	150	10	200
Oquossoc and Cupsuptic quads															
SH01227	44 49 30	70 50 47	7.0	2.0	.50	2.0	N	300	150	20	N	N	70	<10	200
SH01236A	44 59 53	70 52 20	5.0	3.0	1.50	1.5	N	100	200	2	N	15	100	10	N
SH01701A	44 50 14	70 57 53	15.0	.7	.30	>2.0	N	300	200	10	N	N	150	N	300
SH01703A	44 49 30	70 55 43	20.0	.5	.30	>2.0	N	100	200	20	N	N	100	N	300
SH01706A	44 47 49	70 55 40	20.0	1.0	.30	>2.0	N	100	300	5	N	N	200	N	300
SH01707A	44 52 22	70 57 57	20.0	.7	.50	>2.0	N	100	200	20	N	N	150	N	300
SH01708A	44 52 43	70 57 45	30.0	.7	.50	>2.0	N	70	200	5	N	10	300	N	500
SH01709A	44 52 18	70 58 8	15.0	.7	.15	>2.0	N	100	150	5	N	<10	100	N	700
SH01713A	44 55 12	70 56 34	2.0	1.0	.20	2.0	N	150	200	5	N	N	150	N	100
SH01714A	44 48 18	70 57 11	15.0	2.0	1.00	>2.0	N	200	200	100	N	N	200	<10	200
SH01715A	44 48 24	70 57 30	15.0	1.0	1.00	>2.0	N	200	500	5	N	N	300	<10	300
SH01716A	44 47 58	70 58 11	20.0	.5	.15	>2.0	N	70	150	20	N	N	150	N	300
SH01717A	44 48 0	70 58 14	20.0	.7	.15	>2.0	N	70	200	20	N	N	70	<10	500
SH01720A	44 47 48	70 56 56	20.0	.5	.15	>2.0	N	N	150	7	N	N	150	N	300
SH02723	44 59 57	70 53 4	5.0	2.0	1.00	2.0	N	200	300	2	N	15	50	<10	N
SH02796	44 45 9	70 47 50	7.0	1.5	.50	2.0	N	150	200	10	N	20	30	N	150
SH02828	44 47 33	70 53 38	15.0	1.5	.70	1.5	N	300	150	15	N	10	100	10	700
Rangeley quad															
SH00164A	44 51 15	70 31 37	7.0	3.0	1.00	1.5	N	700	200	7	N	10	50	<10	150
SH00181A	44 45 31	70 35 24	7.0	2.0	1.00	2.0	N	1,000	150	5	N	15	50	10	100
SH00182A	44 45 30	70 35 14	3.0	5.0	1.00	.7	N	500	200	7	N	15	50	10	N
SH00187A	44 45 16	70 34 13	3.0	3.0	1.00	1.0	N	2,000	200	10	N	20	50	15	150
SH01204A	44 54 54	70 36 30	7.0	2.0	1.00	1.0	N	150	150	2	N	15	70	N	N
SH01206A	44 53 26	70 37 4	7.0	3.0	1.50	1.0	N	500	150	2	N	15	50	10	50
SH01213A	44 57 18	70 34 23	3.0	2.0	1.00	1.0	N	150	200	3	N	15	30	<10	N
SH01215A	44 50 57	70 42 4	5.0	3.0	1.50	1.5	N	150	300	3	N	15	150	<10	200
SH01220A	44 48 45	70 40 35	5.0	1.5	1.00	1.0	3	150	150	5	N	10	50	300	50
SH01292A	44 52 22	70 43 54	5.0	2.0	1.50	2.0	N	200	300	3	N	10	50	N	500
SH01298A	44 49 19	70 43 5	5.0	2.0	1.00	1.0	N	100	200	7	N	10	70	<10	70
SH01333A	44 52 38	70 40 53	1.5	2.0	.70	.7	N	300	150	7	N	10	70	<10	50
SH01338A	44 46 52	70 38 23	3.0	5.0	1.00	.7	N	700	150	7	N	15	30	20	N
SH01378A	44 47 44	70 42 31	5.0	2.0	1.00	.7	N	1,000	300	7	N	10	100	<10	N
SH01414A	44 45 53	70 43 3	3.0	2.0	1.00	1.0	N	700	150	15	N	10	50	<10	150

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Errol quad--continued														
SH01240A	700	N	N	10	50	30	N	300	N	500	N	100	N	300
SH01244A	700	10	150	10	30	10	20	N	N	300	<100	200	N	700
SH01500A	1,000	N	<50	30	30	20	N	300	N	700	100	50	N	500
SH01710A	3,000	N	150	N	50	N	70	<200	N	500	1,000	300	N	>2,000
SH01711A	1,500	N	100	N	N	N	N	300	N	300	N	150	N	>2,000
Oquossoc and Cupsuptic quads--continued														
SH01227	700	N	50	15	30	15	70	200	N	200	N	150	N	1,000
SH01236A	700	N	N	30	30	15	N	300	N	500	N	50	N	200
SH01701A	3,000	N	150	N	20	N	50	N	N	300	N	500	N	2,000
SH01703A	1,500	N	150	N	<20	N	150	N	N	500	N	500	N	>2,000
SH01706A	2,000	N	200	N	20	N	200	<200	N	300	500	500	N	>2,000
SH01707A	5,000	N	200	N	70	N	200	N	N	300	N	500	N	>2,000
SH01708A	5,000	N	150	N	50	N	150	200	N	200	N	500	N	>2,000
SH01709A	2,000	N	150	N	20	N	100	200	N	500	N	500	N	>2,000
SH01713A	1,000	N	N	N	N	N	N	N	N	200	N	100	N	>2,000
SH01714A	7,000	N	100	N	20	N	300	N	N	500	<100	500	N	>2,000
SH01715A	5,000	N	150	N	50	N	700	N	N	500	N	500	N	>2,000
SH01716A	2,000	N	150	N	20	30	N	N	N	500	N	500	N	>2,000
SH01717A	2,000	N	150	N	20	N	50	N	N	300	N	700	N	>2,000
SH01720A	2,000	N	200	N	20	N	100	N	N	300	N	500	N	>2,000
SH02723	700	N	<50	20	200	10	1,000	300	N	500	N	70	N	700
SH02796	700	<10	70	10	30	10	<20	200	N	200	N	200	N	2,000
SH02828	1,000	N	70	10	30	10	<20	<200	N	200	N	200	N	>2,000
Rangeley quad--continued														
SH00164A	1,000	N	N	20	30	10	300	200	N	300	1,000	70	N	1,000
SH00181A	700	N	<50	30	30	15	100	200	N	300	<100	70	N	700
SH00182A	1,500	N	N	30	20	10	N	200	N	200	N	70	1,000	>2,000
SH00187A	1,000	N	50	20	30	15	20	200	N	200	300	50	N	700
SH01204A	700	N	N	20	30	10	N	300	N	200	N	70	N	2,000
SH01206A	700	N	N	30	30	15	150	300	N	200	500	50	N	1,000
SH01213A	700	N	N	15	20	15	N	200	N	200	N	70	N	>2,000
SH01215A	1,000	N	N	30	50	30	N	200	N	200	100	70	N	700
SH01220A	700	N	N	20	30	10	70	200	N	200	N	50	N	200
SH01292A	1,500	N	50	20	50	10	N	300	<200	300	300	100	N	1,000
SH01298A	700	N	N	15	30	10	N	200	N	150	N	70	N	500
SH01333A	700	N	N	15	30	10	N	N	N	100	N	30	500	200
SH01338A	1,000	N	N	30	30	<10	20	N	N	200	200	50	1,000	500
SH01378A	1,000	N	<50	10	30	<10	N	200	N	200	200	100	N	>2,000
SH01414A	1,000	N	N	15	20	10	N	N	N	200	N	100	700	700

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
						Phillips quad									
SH01009	44 53 45	70 26 34	3.0	2.0	.7	.7	N	200	300	5	N	10	70	15	N
SH01015	44 54 28	70 18 26	3.0	2.0	.7	.7	N	1,000	200	7	N	10	50	10	100
SH01017	44 47 56	70 16 5	7.0	5.0	1.5	.7	N	1,000	150	7	N	30	20	20	50
SH01024	44 58 55	70 16 20	7.0	3.0	3.0	.5	N	1,500	100	2	N	20	500	10	N
SH01025	44 58 49	70 16 26	5.0	3.0	3.0	.7	N	1,500	200	10	N	15	300	20	50
SH01043 1/	44 49 29	70 24 38	7.0	3.0	1.5	.5	N	1,000	300	10	N	15	70	10	150
SH01046 1/	44 49 3	70 27 47	5.0	3.0	1.0	.7	70	1,000	100	7	N	20	50	20	300
SH01047	44 49 24	70 26 57	7.0	1.5	1.0	2.0	N	3,000	150	50	N	15	30	<10	200
SH01059	44 47 49	70 22 24	7.0	2.0	1.0	.7	N	1,500	150	10	N	N	20	N	70
SH01063	44 47 14	70 22 36	7.0	1.5	.7	.7	N	1,000	100	70	N	N	50	N	50
SH01067	44 47 33	70 24 48	7.0	2.0	1.0	1.0	N	2,000	100	150	N	<10	20	N	70
SH01068	44 57 39	70 24 28	5.0	2.0	1.0	1.5	N	300	150	2	N	15	100	10	100
SH01070A	44 58 41	70 24 38	3.0	2.0	1.0	.7	N	700	200	5	N	10	100	N	50
SH01074	44 55 35	70 25 47	5.0	3.0	1.5	1.0	N	300	200	2	N	15	100	10	150
SH01075	44 55 42	70 25 46	7.0	2.0	1.0	1.5	N	300	100	2	N	N	50	<10	50
SH01076	44 53 33	70 24 11	1.5	3.0	1.5	.5	N	300	500	5	N	15	100	10	N
SH01077 2/	44 54 20	70 23 55	5.0	2.0	1.0	1.5	N	300	100	<2	N	10	70	10	100
SH01080 1/	44 53 1	70 29 14	1.5	2.0	1.0	.5	N	300	700	7	N	15	50	<10	N
SH01087	44 50 58	70 17 52	5.0	3.0	1.5	.7	N	700	300	5	N	15	70	<10	100
SH01096	44 55 5	70 28 7	3.0	2.0	.7	.5	N	300	200	2	N	10	50	N	50
SH01132	44 54 47	70 19 4	3.0	2.0	1.0	.5	N	700	200	10	N	10	50	10	150
SH01136	44 55 42	70 19 23	2.0	1.5	.7	.5	N	1,000	300	7	N	N	70	10	N
SH01137	44 55 54	70 19 30	2.0	1.5	1.0	.5	N	1,000	200	2	N	N	50	N	N
SH01138	44 56 18	70 19 21	2.0	1.0	.7	.3	N	700	200	3	N	N	50	N	N
SH01156	44 46 11	70 18 14	10.0	3.0	.7	.7	N	1,000	100	50	N	N	50	N	N
SH01257A	44 48 31	70 26 1	7.0	1.0	.5	>2.0	N	500	150	7	N	<10	50	<10	700

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
							Phillips quad--continued							
SH01009	700	N	N	20	30	15	N	N	N	300	N	100	N	>2,000
SH01015	700	N	N	15	20	10	70	N	N	200	N	50	N	1,000
SH01017	1,500	N	N	20	30	10	<20	200	N	300	N	50	N	700
SH01024	700	N	N	50	20	30	N	200	N	200	N	30	N	100
SH01025	700	N	<50	20	<20	20	N	200	N	500	N	20	N	200
SH01043 [1]	2,000	N	N	30	30	15	700	300	N	200	700	50	N	700
SH01046 [1]	1,000	N	N	20	30	10	200	300	N	150	200	70	700	1,000
SH01047	1,500	N	<50	20	30	10	150	<200	N	200	<100	150	N	>2,000
SH01059	1,000	N	N	10	30	10	200	300	N	150	200	50	N	1,000
SH01063	1,500	N	N	10	30	10	70	300	N	150	100	70	N	700
SH01067	500	N	<50	10	50	10	500	300	N	300	700	200	N	2,000
SH01068	700	N	70	20	70	<10	20	200	N	200	N	100	N	1,000
SH01070A	700	N	<50	20	20	15	N	N	N	150	N	100	N	700
SH01074	700	N	N	10	N	30	N	200	N	200	N	150	N	>2,000
SH01075	1,000	N	N	15	20	30	N	N	N	200	N	150	N	>2,000
SH01076	700	N	N	50	30	10	N	N	N	150	N	20	N	150
SH01077 [2]	700	N	N	20	20	15	N	N	N	200	N	200	N	>2,000
SH01080 [2]	700	N	N	10	30	10	N	N	N	200	N	20	N	700
SH01087	1,000	N	N	20	20	10	N	200	N	300	N	150	N	>2,000
SH01096	700	N	N	20	20	15	N	200	N	200	N	50	N	700
SH01132	700	N	N	20	30	10	N	N	N	200	N	70	N	1,500
SH01136	700	N	N	15	30	10	N	N	N	150	N	70	N	700
SH01137	700	N	N	10	20	N	70	N	N	70	N	20	N	500
SH01138	500	N	N	10	30	10	N	N	N	70	N	50	N	700
SH01156	2,000	N	N	15	30	10	100	300	N	300	<100	70	N	1,000
SH01257A	700	15	200	15	30	N	70	200	<200	300	N	300	N	>2,000

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
						Kingfield quad									
SH00223A	44 59 52	70 10 22	10	2.0	3.0	.5	N	700	200	2	N	15	300	10	N
SH00244A	44 57 18	70 11 15	5	2.0	2.0	1.0	N	2,000	150	50	N	10	150	N	150
SH00296A	44 45 37	70 10 21	5	2.0	1.0	.7	N	700	200	10	N	10	100	N	N
SH00728A	44 46 11	70 7 41	5	3.0	2.0	.5	N	500	150	5	N	20	150	N	N
SH00733A	44 51 8	70 5 42	5	2.0	1.0	.7	N	700	150	3	N	<10	50	N	100
SH00735A	44 51 2	70 0 46	3	2.0	1.0	1.0	N	300	150	2	N	N	100	N	100
SH00736A	44 48 46	70 2 48	5	2.0	2.0	.5	N	700	200	5	N	15	150	<10	N
SH00744A	44 56 33	70 0 41	7	2.0	1.5	2.0	N	500	500	5	N	10	100	N	300
SH00746A	44 58 27	70 8 16	7	2.0	1.5	1.0	N	500	200	5	N	10	200	N	150
SH00750A	44 54 28	70 3 12	5	2.0	1.0	1.0	N	500	100	2	N	10	70	N	100
SH00756A	44 59 26	70 2 25	5	1.5	.7	1.5	N	300	300	7	N	<10	70	N	100
SH00759A	44 59 5	70 4 5	7	2.0	2.0	1.0	N	300	300	2	N	10	100	N	70
SH00765A	44 50 13	70 5 13	5	2.0	1.5	.7	N	700	200	5	N	10	150	N	100
SH00767A	44 51 23	70 2 25	5	1.5	1.5	2.0	N	500	300	7	N	<10	100	N	N
SH00772A	44 46 8	70 3 40	5	2.0	1.5	1.0	N	700	200	5	N	15	200	<10	N
SH00776A	44 47 25	70 3 9	7	2.0	2.0	1.0	N	1,000	150	5	N	20	50	10	70
SH00859A	44 46 36	70 6 41	5	3.0	3.0	.7	N	1,000	150	N	N	15	500	10	50
SH00863A	44 49 5	70 2 54	5	2.0	2.0	.7	N	1,000	200	3	N	10	100	N	N
SH00870A	44 58 34	70 9 8	7	2.0	2.0	1.0	N	300	150	2	N	15	100	N	70
SH00876A	44 47 20	70 4 44	5	3.0	3.0	1.0	N	1,000	100	5	N	15	200	N	70
SH01021	44 57 35	70 14 11	5	2.0	3.0	.7	<1	1,500	100	2	N	15	500	N	N
SH01034	44 51 50	70 13 43	7	3.0	1.5	1.5	N	500	500	5	N	10	50	<10	200
SH01101	44 55 30	70 7 51	7	2.0	2.0	1.0	N	1,000	150	2	N	15	100	<10	500
SH01507A	44 53 8	70 12 52	5	2.0	1.0	1.0	N	700	150	5	N	N	70	<10	100
						Milan quad									
SH01274A	44 40 43	71 3 19	2	3.0	.7	1.0	N	200	100	10	N	15	50	N	N
SH01279A	44 32 20	71 1 53	10	1.5	.2	>2.0	N	100	100	15	N	<10	50	10	700
SH01404	44 34 51	71 0 23	5	10.0	.5	2.0	N	150	100	2	200	100	20	70	1,000
SH01979	44 32 2	71 1 16	5	1.5	.5	1.0	N	700	150	15	N	10	50	N	200
SH01986	44 36 45	71 3 11	7	1.5	.7	>2.0	N	500	100	15	N	10	100	N	100

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
							Kingfield quad--continued							
SH00223A	1,000	N	N	50	20	20	N	300	N	500	N	30	N	700
SH00244A	1,000	N	70	20	20	10	20	<200	N	300	N	100	N	2,000
SH00296A	700	N	N	20	30	15	N	200	N	200	N	70	N	1,000
SH00728A	1,000	N	<50	50	20	20	2,000	200	N	300	700	50	N	500
SH00733A	700	N	<50	15	20	10	<20	300	N	200	<100	70	N	1,500
SH00735A	700	N	N	15	30	N	200	N	N	300	N	150	N	>2,000
SH00736A	1,000	N	N	30	20	15	N	200	N	300	N	70	N	1,000
SH00744A	700	N	100	15	30	15	100	300	N	500	N	300	N	>2,000
SH00746A	700	N	100	30	20	20	N	200	N	150	N	200	N	1,000
SH00750A	700	N	100	15	20	10	30	<200	N	300	N	100	N	2,000
SH00756A	700	N	70	15	20	10	N	300	N	200	N	100	N	1,500
SH00759A	700	N	<50	20	30	10	N	300	N	300	N	70	1,500	1,000
SH00765A	1,000	N	<50	20	30	10	N	200	N	150	N	100	N	1,000
SH00767A	700	N	<50	20	30	<10	N	200	N	300	N	70	N	2,000
SH00772A	700	N	<50	20	N	10	300	200	N	200	N	100	N	>2,000
SH00776A	700	N	N	20	30	15	150	300	N	200	N	70	N	1,000
SH00859A	700	N	N	20	30	15	100	300	N	700	N	100	N	1,000
SH00863A	1,000	N	N	20	20	15	N	300	N	200	N	50	N	500
SH00870A	1,000	N	50	20	<20	15	N	200	N	200	N	100	N	>2,000
SH00876A	700	N	N	20	20	10	50	200	N	500	N	50	N	2,000
SH01021	1,000	N	<50	20	<20	30	N	300	N	200	N	70	N	1,000
SH01034	1,000	N	N	15	30	10	N	300	N	300	N	150	N	1,500
SH01101	1,500	N	N	20	<20	20	20	200	N	200	N	70	N	2,000
SH01507A	700	N	N	10	30	15	N	200	N	200	N	50	N	700
							Milan quad--continued							
SH01274A	1,000	N	N	15	30	<10	30	300	N	200	N	50	1,500	2,000
SH01279A	700	<10	70	10	30	N	500	300	N	500	<100	500	N	2,000
SH01404	700	N	200	30	50	10	1,000	N	200	150	<100	300	700	>2,000
SH01979	1,000	N	50	10	30	10	1,500	N	N	300	N	150	N	700
SH01986	700	N	50	10	70	10	200	<200	N	300	<100	100	1,500	2,000

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
						Old Speck Mountain quad									
SH01232A	44 44 43	70 48 34	7	2.0	1.5	2.0	N	300	200	15	N	15	70	10	100
SH01285A	44 31 2	70 55 59	5	2.0	.7	1.5	N	1,500	200	10	N	N	70	N	100
SH01315A	44 40 38	70 47 20	10	1.5	.7	>2.0	N	700	200	10	N	10	50	N	150
SH01321A	44 42 32	70 57 26	7	5.0	1.0	2.0	N	200	300	50	N	50	50	30	700
SH01429	44 30 4	70 55 8	7	1.5	.7	2.0	N	1,000	200	7	N	10	50	<10	200
SH01439	44 30 5	70 46 33	3	1.5	.5	>2.0	N	1,000	150	20	N	20	70	<10	300
SH01462	44 39 11	70 51 3	7	2.0	1.0	>2.0	N	150	300	70	N	15	50	N	200
SH01475	44 34 51	70 55 49	20	1.0	.3	>2.0	N	300	70	70	N	10	20	15	1,500
SH01948	44 32 25	70 56 40	15	1.0	.5	1.5	N	300	150	70	N	30	70	N	2,000
SH01961	44 32 52	70 58 19	10	1.5	.7	>2.0	N	200	100	20	N	30	50	<10	700
SH01969	44 32 39	70 50 32	10	1.0	.2	>2.0	N	500	100	10	N	10	30	30	1,000
SH01992	44 37 41	70 59 35	2	2.0	.7	1.5	N	300	200	5	N	10	20	N	N
SH01996	44 30 26	70 46 31	5	1.0	.3	>2.0	N	1,500	100	30	N	N	30	N	500
SH02002	44 34 12	70 54 29	10	1.0	.2	>2.0	N	200	50	70	N	10	20	N	1,500
SH02230A	44 44 13	70 48 6	7	3.0	1.5	1.5	N	300	200	2	N	15	100	10	200
SH02239A	44 41 24	70 47 56	7	1.5	1.0	>2.0	N	300	200	70	N	15	100	<10	150
SH02240A	44 41 49	70 47 45	7	1.5	1.0	>2.0	N	300	100	10	N	100	100	N	300
SH02246A	44 42 48	70 51 27	7	2.0	1.0	>2.0	N	300	150	15	N	10	50	<10	150
SH02254A	44 40 9	70 53 25	5	2.0	1.0	1.5	N	200	150	10	20	10	50	<10	70
SH02255A	44 40 10	70 53 35	10	1.5	1.0	2.0	N	300	150	20	N	10	50	15	150
SH02259A	44 36 24	70 50 41	7	1.5	.5	>2.0	N	200	100	3	N	10	20	N	500
SH02265A	44 37 19	70 45 44	7	1.5	1.0	2.0	N	500	150	5	N	10	30	300	150
SH02268A	44 37 41	70 52 29	7	.5	.2	>2.0	N	700	50	2	N	10	70	N	2,000
SH02269A	44 37 45	70 52 32	7	2.0	.5	>2.0	N	200	200	5	N	N	30	15	300
SH02273A	44 33 34	70 45 2	7	1.5	.5	>2.0	N	1,500	100	200	N	<10	30	<10	300

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
							Old Speck Mountain quad--continued							
SH01232A	1,000	N	70	30	30	10	N	N	N	300	N	200	N	1,000
SH01285A	700	<10	100	10	30	N	20	N	N	200	200	200	N	1,500
SH01315A	1,000	10	100	20	30	15	20	200	N	200	N	300	N	>2,000
SH01321A	700	N	70	30	30	10	N	200	N	500	N	100	N	>2,000
SH01429	700	10	200	10	30	10	30	N	N	200	N	200	N	1,000
SH01439	700	<10	70	15	500	<10	200	200	N	300	N	300	N	2,000
SH01462	1,000	N	N	10	30	15	20	200	N	300	N	300	N	>2,000
SH01475	3,000	N	150	20	70	10	70	N	N	200	N	1,000	N	>2,000
SH01948	1,000	N	100	10	50	N	30	200	200	150	<100	500	1,500	1,500
SH01961	1,500	10	70	10	70	15	700	200	N	500	N	300	500	1,500
SH01969	700	10	100	<10	50	10	50	N	N	200	N	500	1,500	>2,000
SH01992	1,000	N	50	10	20	10	N	N	N	200	N	50	1,000	1,000
SH01996	700	<10	50	10	20	N	100	N	N	200	N	300	500	>2,000
SH02002	1,500	15	150	10	50	10	70	N	200	300	N	700	N	>2,000
SH02230A	700	N	N	20	N	30	N	200	N	300	N	150	N	>2,000
SH02239A	1,000	N	70	15	30	<10	20	<200	N	500	N	200	N	>2,000
SH02240A	1,000	N	70	30	20	15	20	N	200	500	N	300	N	>2,000
SH02246A	700	N	<50	20	20	15	30	<200	N	500	N	200	N	>2,000
SH02254A	700	N	50	20	30	10	N	200	N	300	N	150	N	>2,000
SH02255A	1,000	N	N	15	30	10	N	<200	N	200	N	200	N	>2,000
SH02259A	1,000	30	500	10	30	<10	2,000	N	N	700	150	700	N	1,000
SH02265A	1,000	<10	150	10	70	15	30	200	N	500	N	200	N	2,000
SH02268A	700	50	500	10	20	10	300	N	500	500	<100	700	N	>2,000
SH02269A	700	N	100	20	30	15	70	200	N	300	N	200	N	>2,000
SH02273A	1,000	<10	100	15	30	15	100	N	N	300	<100	300	N	>2,000

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Ellis Pond, Roxbury, East Andover, and Rumford quads															
SH00906A	44 43 25	70 38 50	3	2.0	.7	1.0	N	700	100	20	N	15	50	<10	200
SH00908A	44 44 25	70 39 30	3	3.0	1.0	.7	N	700	150	15	N	15	50	10	N
SH00916	44 38 34	70 42 41	7	1.0	.3	>2.0	N	200	100	150	N	<10	50	N	700
SH00936A	44 36 32	70 42 53	10	1.5	.5	>2.0	N	200	150	70	N	10	50	N	700
SH00937	44 37 26	70 42 37	10	1.0	.3	>2.0	N	300	100	20	N	10	50	N	500
SH00945	44 35 9	70 30 30	7	1.5	.7	>2.0	N	1,000	50	30	N	10	70	N	300
SH00949A	44 34 18	70 33 7	7	1.5	.5	>2.0	N	700	150	70	N	<10	50	N	500
SH00951	44 36 34	70 33 40	7	2.0	.5	>2.0	N	1,000	70	30	N	<10	50	N	1,000
SH00953A	44 37 2	70 35 28	10	1.0	1.0	>2.0	N	500	100	20	N	15	70	N	700
SH00959	44 34 0	70 36 24	7	2.0	1.5	>2.0	N	700	200	50	N	15	70	N	300
SH00972A	44 38 38	70 35 32	7	1.5	1.0	>2.0	N	700	100	3	N	N	30	<10	150
SH00973	44 39 22	70 35 11	3	2.0	.7	1.0	N	1,000	300	20	N	15	50	N	50
SH00978A	44 43 46	70 31 55	3	2.0	.7	1.0	N	1,000	200	10	N	15	50	N	200
SH01307A	44 42 40	70 41 45	5	1.5	.5	2.0	N	200	150	15	200	N	30	N	300
SH01351A	44 41 19	70 43 11	10	1.5	.7	>2.0	N	300	150	15	N	15	50	<10	300
SH01389A	44 33 41	70 44 24	7	1.5	.7	>2.0	N	1,500	150	50	N	10	70	<10	200
SH02221A	44 40 49	70 44 9	10	2.0	1.0	>2.0	N	500	150	10	N	15	50	N	200
SH02404	44 33 44	70 43 50	7	2.0	1.0	2.0	N	2,000	200	15	N	10	50	N	200
SH02433	44 43 41	70 30 49	3	2.0	1.0	.5	N	1,500	200	7	N	10	50	10	N
SH02439	44 44 29	70 35 15	3	3.0	1.0	1.0	N	1,000	150	7	N	15	30	10	150
SH02452	44 42 27	70 36 6	3	3.0	.7	.5	N	1,000	200	15	N	20	70	N	N
SH02492	44 39 24	70 33 20	5	3.0	1.0	2.0	N	2,000	300	50	N	10	50	<10	150
SH02499	44 41 15	70 35 9	5	2.0	1.0	1.5	N	2,000	300	30	N	15	70	<10	100
Weld, Mount Blue, Dixfield, and East Dixfield quads															
SH00921	44 34 34	70 25 4	5	1.5	.5	1.0	N	1,500	200	50	N	N	50	N	100
SH00928A	44 33 35	70 28 24	10	1.0	.5	1.5	N	700	150	20	N	N	50	<10	150
SH00942A	44 37 0	70 26 54	7	2.0	.7	2.0	N	2,000	300	20	N	10	70	N	300
SH00964A	44 35 38	70 21 19	3	2.0	.5	1.0	N	1,500	200	15	N	15	70	<10	100
SH00981A	44 40 56	70 20 50	7	3.0	1.0	.7	N	1,500	300	30	N	15	30	N	100
SH00986A	44 37 51	70 17 52	5	2.0	.7	1.0	N	1,500	300	30	N	15	50	N	150
SH00987	44 38 13	70 17 30	5	3.0	1.0	.7	1	700	200	10	<20	30	70	10	50
SH00990A	44 43 7	70 16 17	7	3.0	1.0	.7	N	700	700	10	N	30	50	10	100
SH00991A	44 43 9	70 16 11	7	2.0	.5	.5	N	500	150	20	N	10	150	N	100
SH00995A [3/]	44 41 32	70 28 22	7	2.0	.7	1.5	N	2,000	200	10	N	10	70	15	1,000
SH01001 [1/]	44 38 6	70 25 12	3	2.0	.5	1.0	1	500	200	10	30	10	70	70	N
SH01006	44 44 14	70 27 31	5	3.0	1.0	.7	N	1,000	300	10	N	15	50	10	150
SH01008	44 42 31	70 22 44	7	2.0	1.0	.7	N	700	200	10	N	10	70	N	N
SH01091	44 44 57	70 25 54	7	2.0	1.0	1.5	N	3,000	200	100	N	<10	50	10	150
SH02512	44 37 42	70 29 51	10	2.0	.7	1.0	N	1,000	100	20	N	10	70	<10	50

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Ellis Pond, Roxbury, East Andover, and Rumford quads--continued														
SH00906A	1,000	N	N	15	20	10	N	N	N	150	N	70	700	1,000
SH00908A	700	N	N	30	20	10	N	200	N	150	N	20	700	150
SH00916	700	<10	70	10	30	10	30	N	N	300	N	300	N	1,000
SH00936A	700	<10	100	10	50	15	50	200	N	500	N	500	N	>2,000
SH00937	700	10	150	15	30	10	70	<200	N	500	N	300	N	>2,000
SH00945	1,000	10	150	20	30	15	200	300	N	500	N	300	N	2,000
SH00949A	1,000	15	150	15	30	10	500	N	N	300	N	300	N	>2,000
SH00951	1,000	10	100	15	30	15	500	200	300	300	150	300	N	>2,000
SH00953A	1,000	30	200	15	50	10	2,000	N	<200	700	N	500	N	>2,000
SH00959	1,000	10	200	30	30	15	300	200	N	500	N	500	N	1,000
SH00972A	1,500	N	100	10	30	<10	50	N	N	150	100	300	N	2,000
SH00973	700	N	150	20	30	10	30	200	N	300	N	100	N	200
SH00978A	700	N	N	30	50	10	20	200	N	200	200	70	N	1,500
SH01307A	1,000	<10	100	10	30	10	20	N	N	200	100	200	N	1,500
SH01351A	700	10	100	15	30	15	500	200	N	300	N	300	N	1,500
SH01389A	1,000	10	150	15	30	10	1,500	N	N	500	N	300	N	>2,000
SH02221A	1,000	10	100	30	30	15	30	200	N	500	<100	300	N	1,000
SH02404	1,500	N	100	10	30	<10	1,500	200	N	300	N	200	N	>2,000
SH02433	700	N	N	20	30	15	N	200	N	200	N	70	N	150
SH02439	1,000	N	<50	20	30	10	300	200	N	150	200	50	500	1,000
SH02452	1,000	N	N	30	N	10	30	200	N	200	N	100	1,500	300
SH02492	1,000	N	150	15	30	20	70	N	N	200	150	100	N	500
SH02499	700	N	100	30	70	20	1,000	200	N	300	N	150	500	500
Weld, Mount Blue, Dixfield, and East Dixfield quads--continued														
SH00921	1,000	N	70	15	30	15	30	200	N	200	N	100	N	200
SH00928A	1,500	N	70	10	20	10	30	200	N	300	150	200	N	700
SH00942A	1,000	N	150	10	30	15	20	200	N	500	N	200	N	700
SH00964A	700	N	70	15	30	10	700	200	N	300	500	100	N	500
SH00981A	1,500	N	N	20	30	15	N	300	N	300	500	50	N	700
SH00986A	700	N	N	15	50	10	30	200	N	200	N	70	<500	700
SH00987	1,000	N	50	20	2,000	15	700	300	N	200	500	100	N	500
SH00990A	1,500	N	<50	20	30	10	20	200	N	150	N	30	500	200
SH00991A	1,500	N	N	10	20	<10	200	200	N	70	200	70	N	1,000
SH00995A [3/]	1,000	N	100	15	50	15	700	300	200	200	500	200	N	700
SH01001	700	N	70	10	5,000	10	30	200	N	200	N	50	N	500
SH01006	1,000	N	N	20	30	10	N	200	N	200	700	70	N	700
SH01008	1,500	N	N	20	30	15	N	500	N	200	N	100	N	150
SH01091	1,000	N	N	15	70	15	100	200	N	150	150	100	N	1,500
SH02512	1,500	N	100	15	20	10	150	<200	N	500	150	150	N	500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
					Farmington, New Sharon, Wilton, Farmington Falls, and Norridgewock quads										
SH00645A	44 32 44	70 0 50	5	2.0	1.0	1.0	N	700	100	10	N	10	70	10	N
SH00651A	44 30 33	70 4 57	5	2.0	1.0	.7	N	700	150	10	N	<10	70	N	50
SH00652A	44 32 39	70 1 37	5	2.0	1.0	.7	N	700	300	10	N	10	70	N	50
SH00658A	44 35 10	70 5 4	5	1.5	.7	1.5	N	700	150	7	N	10	50	10	200
SH00663A	44 35 46	70 2 2	5	3.0	2.0	.7	N	700	150	7	N	10	100	N	50
SH00665A	44 35 47	70 1 0	5	2.0	1.0	1.5	N	700	200	15	N	10	70	N	150
SH00700A	44 31 37	70 13 20	5	1.5	.3	2.0	N	1,000	200	20	N	10	70	<10	200
SH00703A	44 31 35	70 11 18	3	2.0	.5	.7	N	1,000	100	20	N	N	50	N	200
SH00709A	44 33 38	70 7 52	5	2.0	1.0	.7	N	300	200	10	N	10	70	10	N
SH00711A	44 33 37	70 10 32	5	2.0	.7	.7	N	700	150	15	N	N	70	N	150
SH00721A	44 33 9	70 8 24	5	2.0	.7	1.0	N	700	150	70	N	15	50	N	70
SH00725A	44 35 32	70 10 36	5	2.0	.7	1.0	N	700	150	30	N	10	70	N	70
SH00773A	44 43 17	70 3 4	7	2.0	1.5	1.5	N	1,000	200	5	N	15	100	<10	100
SH00782A	44 40 29	70 8 32	7	3.0	1.5	2.0	N	700	150	3	N	15	150	N	300
SH00794A	44 42 6	70 6 51	5	2.0	1.0	1.0	N	1,000	200	15	N	15	150	<10	70
SH00798A	44 44 8	70 5 53	5	2.0	1.5	1.5	N	1,500	150	5	N	10	150	N	70
SH00805A	44 40 32	70 2 51	3	2.0	1.5	1.0	N	700	300	5	N	10	50	N	N
SH00813A	44 41 1	70 0 39	5	2.0	1.5	.7	N	1,000	200	5	N	15	100	N	50
SH00817A	44 43 36	70 0 28	3	2.0	1.5	1.0	N	700	150	3	N	10	100	<10	N
SH00825A	44 38 52	70 4 35	5	1.5	1.5	1.0	N	1,500	200	5	N	10	50	N	100
SH00826A	44 39 15	70 4 11	5	2.0	1.5	1.0	N	1,000	200	50	N	10	150	N	200
SH00828A	44 40 12	70 3 17	5	2.0	1.5	2.0	N	3,000	200	5	N	10	150	<10	N
SH00833A	44 44 50	69 59 56	5	1.5	.7	1.0	N	500	200	7	N	N	70	<10	N
SH00837A	44 44 45	70 7 10	5	2.0	1.5	.7	N	1,000	200	5	N	10	200	<10	70
SH00846	44 42 18	70 8 55	5	3.0	1.0	1.5	N	500	200	2	N	15	100	N	200
SH00848A	44 43 15	70 8 4	5	2.0	1.5	.7	N	1,000	200	20	N	10	70	N	<50
SH00852A	44 44 33	70 8 12	7	2.0	2.0	1.5	N	1,500	150	7	N	10	150	N	150
SH00856A	44 41 32	70 9 21	5	2.0	1.0	2.0	N	700	150	2	N	15	50	N	200
SH00969	44 36 15	70 12 44	2	2.0	.7	.5	N	500	500	100	N	15	50	N	N
					Shelburne and Wild River quads										
SH00312	44 15 49	71 0 15	5	1.0	.5	>2.0	N	1,500	200	300	N	N	50	<10	500
SH00514	44 20 34	71 0 47	5	2.0	.7	>2.0	N	2,000	300	50	N	15	50	<10	500
SH01808	44 25 39	71 1 9	7	1.5	.5	1.5	N	700	300	7	N	<10	100	10	150
SH01810	44 26 21	71 1 6	7	1.5	.7	1.5	N	700	500	7	N	N	100	10	150
SH01818	44 28 8	71 0 44	10	1.0	.7	>2.0	N	200	150	2	N	10	30	N	500
SH01820	44 27 38	71 0 20	7	2.0	1.0	>2.0	N	500	100	10	N	10	30	<10	500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Farmington, New Sharon, Wilton, Farmington Falls, and Norridgewock quads--continued														
SH00645A	700	N	<50	15	30	10	500	200	N	200	N	70	N	1,500
SH00651A	1,000	N	N	15	30	10	50	300	N	200	N	50	N	1,500
SH00652A	1,000	N	N	15	20	<10	N	300	N	200	N	50	N	1,500
SH00658A	700	N	N	20	30	10	<20	<200	N	200	<100	150	N	>2,000
SH00663A	1,000	N	N	20	30	10	30	200	N	300	N	20	N	700
SH00665A	700	N	70	20	30	10	500	200	N	300	<100	150	N	500
SH00700A	700	N	100	10	30	10	200	200	N	300	<100	100	N	>2,000
SH00703A	700	N	N	10	30	N	150	200	N	150	N	50	N	1,000
SH00709A	700	N	N	10	20	10	70	200	N	200	N	50	N	1,000
SH00711A	700	N	N	15	30	N	70	200	N	150	N	70	700	1,000
SH00721A	1,500	N	N	15	30	10	50	<200	N	200	N	100	N	>2,000
SH00725A	1,000	N	50	15	30	15	200	300	N	300	100	150	N	>2,000
SH00773A	700	N	50	20	N	10	100	300	N	300	<100	150	N	>2,000
SH00782A	1,000	N	70	30	20	15	N	300	N	300	N	200	N	500
SH00794A	700	N	N	20	30	10	500	200	N	200	N	50	N	700
SH00798A	700	N	70	15	20	10	200	<200	N	500	N	100	N	>2,000
SH00805A	1,000	N	N	20	30	10	N	200	N	200	N	30	N	1,000
SH00813A	1,000	N	<50	20	20	10	100	200	N	300	N	70	N	>2,000
SH00817A	1,000	N	N	15	30	15	N	200	N	200	N	70	N	2,000
SH00825A	1,000	N	<50	15	30	15	300	200	N	200	N	150	N	>2,000
SH00826A	1,000	N	<50	20	20	15	<20	300	N	300	N	100	N	2,000
SH00828A	700	N	<50	20	20	10	20	300	N	300	<100	70	N	1,500
SH00833A	700	N	N	15	30	10	N	300	N	200	N	70	N	1,500
SH00837A	700	N	<50	15	20	10	70	200	N	200	N	100	N	>2,000
SH00846	700	N	N	30	30	15	N	200	N	200	N	200	N	>2,000
SH00848A	1,000	N	N	15	50	10	20	200	N	200	N	70	N	>2,000
SH00852A	1,000	N	50	20	50	15	100	200	N	500	N	100	N	2,000
SH00856A	700	N	50	20	30	20	70	200	N	300	N	200	N	>2,000
SH00969	700	N	N	20	30	15	N	N	N	200	N	30	500	200
Shelburne and Wild River quads--continued														
SH00312	1,000	N	500	10	50	15	30	N	200	500	N	200	N	1,000
SH00514	700	<10	150	20	30	10	20	N	N	500	N	300	N	1,000
SH01808	700	N	70	10	30	15	70	N	N	300	N	150	N	700
SH01810	700	N	70	15	30	20	<20	N	N	300	N	150	N	700
SH01818	1,000	N	200	15	70	10	300	500	N	500	N	300	N	1,000
SH01820	1,000	15	300	20	30	15	50	N	N	500	N	500	N	>2,000

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Gilead, Bethel, Speckled Mountain, and East Stoneham quads															
SH00301	44 21 1	70 59 0	5	1.5	.5	2.0	N	1,000	300	100	N	N	70	<10	500
SH00308	44 19 39	70 58 30	3	1.5	.5	>2.0	N	700	500	70	N	N	20	<10	1,000
SH00320	44 15 39	70 55 52	5	1.5	2.0	1.0	N	700	150	50	N	10	100	N	150
SH00324	44 17 19	70 54 35	5	1.5	.5	>2.0	N	200	300	2	N	N	50	N	500
SH00328	44 17 10	70 51 54	5	2.0	1.5	2.0	15.0	2,000	200	5	N	10	150	N	50
SH00338	44 20 5	70 47 53	5	1.0	.5	>2.0	N	700	200	7	N	15	50	N	200
SH00343	44 19 57	70 50 44	3	1.0	.7	2.0	N	1,000	500	15	N	N	50	<10	500
SH00346	44 20 3	70 53 54	3	1.5	1.0	1.5	N	500	700	7	N	N	100	<10	150
SH00351	44 22 15	70 55 2	5	2.0	.5	>2.0	N	1,000	200	7	N	<10	100	10	300
SH00369	44 19 56	70 45 14	3	1.0	.5	2.0	N	1,000	200	10	N	10	70	N	300
SH00402	44 15 8	70 58 43	3	1.0	.7	>2.0	N	700	300	5	N	N	30	15	300
SH00510	44 15 17	70 49 44	7	1.0	.2	>2.0	N	300	200	20	N	10	70	<10	1,000
SH00512	44 15 9	70 54 4	7	1.0	.5	>2.0	N	700	200	20	N	N	50	N	200
SH00519	44 20 51	70 51 56	2	1.5	.5	1.5	N	700	300	7	N	10	100	N	150
SH00531	44 23 0	70 58 48	7	1.5	.5	>2.0	N	700	200	5	N	<10	100	10	200
SH01822	44 27 13	70 59 51	7	1.5	.5	>2.0	N	700	200	5	N	10	50	<10	500
SH01823	44 24 43	70 59 54	5	1.0	.5	1.5	<1.0	700	300	7	700	10	30	N	1,000
SH01827	44 25 49	70 58 17	7	1.5	.5	>2.0	N	700	300	3	N	15	30	<10	700
SH01845	44 27 35	70 46 55	7	1.0	.7	>2.0	N	1,000	200	100	N	<10	50	N	700
SH01849	44 29 42	70 50 40	5	1.5	.5	2.0	N	1,000	200	10	N	N	50	N	300
SH01857	44 29 22	70 47 3	5	2.0	1.0	2.0	N	1,500	200	20	N	15	70	<10	150
SH01859	44 29 17	70 45 9	5	1.0	.5	>2.0	N	1,500	200	50	N	N	30	N	300
SH01867	44 21 35	70 54 51	5	1.5	.7	2.0	N	1,000	300	50	N	<10	70	10	150
SH01869	44 22 2	70 55 39	7	2.0	.3	>2.0	1.5	500	300	10	N	20	30	15	300
SH01876	44 20 1	70 53 30	5	1.0	.2	>2.0	N	700	150	100	N	20	70	N	1,500
SH01886	44 20 4	70 54 27	5	1.0	.5	>2.0	N	300	150	50	N	<10	70	10	200
SH01889	44 21 38	70 52 41	2	1.0	.5	>2.0	N	1,000	150	100	N	<10	70	10	150
SH01893	44 19 0	70 52 56	2	1.5	1.0	>2.0	N	1,500	150	30	N	N	100	N	1,000
SH01898	44 21 55	70 58 2	10	1.0	.5	>2.0	N	700	150	50	N	10	70	N	700
SH01898A	44 21 55	70 58 2	7	2.0	1.0	1.0	N	1,000	150	7	N	10	50	<10	200
SH01903	44 20 38	70 57 46	10	1.5	.2	>2.0	N	500	150	2	N	15	70	15	500
SH01922	44 28 14	70 51 5	5	1.5	.5	1.5	N	1,000	500	7	N	N	30	<10	300
SH01928	44 29 46	70 54 56	7	1.5	.5	>2.0	N	2,000	150	5	N	15	20	15	700
SH01935	44 29 2	70 58 37	10	2.0	.7	2.0	N	3,000	100	10	N	15	70	<10	300
SH01943	44 28 50	70 57 39	7	3.0	1.0	2.0	N	700	200	5	N	30	30	150	300
SH01944	44 29 1	70 58 53	7	2.0	1.0	2.0	N	700	150	5	N	30	30	20	300
SH01954	44 26 17	70 56 5	7	.7	.3	>2.0	N	1,000	200	7	N	10	20	N	300
SH01957	44 26 14	70 51 10	7	1.5	.5	1.5	N	1,000	150	20	N	10	70	N	200
SH01960	44 26 17	70 51 24	5	1.5	.5	2.0	N	1,500	300	30	N	10	30	N	300

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Gilead, Bethel, Speckled Mountain, and East Stoneham quads--continued														
SH00301	700	N	200	20	30	10	50	N	N	300	N	200	N	2,000
SH00308	1,000	N	100	10	200	<10	20	N	N	300	N	300	N	>2,000
SH00320	1,000	N	70	30	20	20	N	N	N	300	N	200	N	500
SH00324	700	N	200	20	30	10	150	N	N	500	N	200	N	2,000
SH00328	700	N	50	20	20	15	20	200	N	500	N	70	N	1,000
SH00338	500	10	150	10	30	10	30	N	N	300	N	300	N	700
SH00343	700	N	150	15	30	20	1,500	N	200	500	N	200	N	1,500
SH00346	700	N	100	15	20	30	<20	N	N	500	N	150	N	700
SH00351	700	N	200	15	30	10	300	N	N	500	N	200	N	2,000
SH00369	700	<10	150	10	30	10	50	N	N	500	N	300	N	2,000
SH00402	1,000	N	200	10	30	N	20	N	N	300	N	200	N	>2,000
SH00510	1,000	<10	200	<10	50	10	50	N	200	500	N	500	N	2,000
SH00512	700	N	200	15	30	10	150	N	N	300	N	200	N	2,000
SH00519	500	N	150	10	20	15	<20	N	N	200	N	150	N	700
SH00531	700	10	200	10	30	10	<20	N	N	150	N	300	N	1,000
SH01822	1,000	10	100	15	30	10	30	<200	N	500	N	300	N	2,000
SH01823	700	N	150	<10	30	15	20	N	N	200	N	300	N	1,000
SH01827	700	10	150	10	30	15	500	300	N	500	<100	300	N	>2,000
SH01845	700	<10	150	10	30	<10	150	N	N	300	N	300	2,000	>2,000
SH01849	700	<10	200	15	30	10	30	N	N	300	N	200	N	1,500
SH01857	700	N	200	30	30	<10	1,500	N	N	300	N	200	N	2,000
SH01859	300	N	150	<10	30	15	1,000	N	N	200	N	200	N	>2,000
SH01867	700	N	200	15	30	15	20	N	N	500	N	200	N	700
SH01869	1,000	N	200	30	50	10	500	200	N	300	<100	300	N	2,000
SH01876	700	<10	300	10	30	10	70	N	<200	500	N	300	N	>2,000
SH01886	700	N	700	10	30	10	30	N	N	500	N	300	N	1,000
SH01889	500	N	500	15	30	15	20	N	N	700	N	200	N	2,000
SH01893	700	N	150	15	50	10	50	N	N	700	N	300	N	1,000
SH01898	1,000	15	200	10	50	10	50	N	N	700	N	300	N	2,000
SH01898A	700	N	<50	20	20	10	70	500	N	200	N	150	N	1,500
SH01903	700	10	200	20	30	N	50	N	N	500	N	300	N	1,500
SH01922	700	N	70	15	30	15	70	N	N	300	N	200	N	2,000
SH01928	700	N	150	20	20	10	20	N	N	300	N	300	N	>2,000
SH01935	1,500	N	70	20	50	10	2,000	200	N	300	N	300	N	2,000
SH01943	700	N	100	30	30	15	70	200	N	300	100	200	N	2,000
SH01944	700	<10	150	15	30	15	30	200	N	300	150	200	N	1,500
SH01954	1,000	N	150	<10	50	15	50	N	N	300	N	300	N	2,000
SH01957	700	N	50	10	50	10	70	<200	N	300	N	200	N	1,000
SH01960	700	N	100	10	30	10	20	N	N	300	N	300	N	1,500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Bryant Pond, Mount Zircon, Greenwood, and West Paris quads															
SH00154A	44 21 34	70 30 37	3	1.5	.7	1.0	N	1,000	100	70	N	10	50	N	100
SH00357	44 28 29	70 42 11	7	1.5	1.0	>2.0	N	2,000	100	30	20	10	70	N	1,000
SH00368 [4/]	44 22 14	70 44 51	5	1.5	.5	>2.0	N	1,000	200	10	N	10	50	N	300
SH00371 [4/]	44 16 41	70 43 15	5	1.0	.5	2.0	1	1,500	300	30	N	10	70	20	200
SH00379	44 18 58	70 39 59	2	3.0	.5	1.5	N	1,000	200	7	N	N	50	N	100
SH00382	44 18 52	70 42 43	2	1.0	.3	2.0	N	500	150	10	N	N	50	50	200
SH00386	44 20 20	70 41 11	5	1.0	.2	>2.0	N	700	150	15	N	N	30	N	300
SH00437	44 16 31	70 41 41	5	1.0	.5	1.0	N	1,000	200	200	N	N	100	N	500
SH00439	44 19 39	70 37 18	5	2.0	1.0	2.0	N	500	300	10	N	10	50	N	700
SH00486	44 27 58	70 43 39	7	1.5	.5	>2.0	N	1,000	200	50	N	N	70	<10	300
SH00491	44 24 39	70 37 57	3	1.0	.7	>2.0	N	700	300	5	N	10	50	N	300
SH00496	44 25 0	70 42 30	7	1.5	1.0	2.0	N	3,000	200	50	N	15	100	<10	500
SH00537	44 20 54	70 36 39	15	.3	.7	>2.0	N	700	100	2	N	N	70	N	1,000
SH01165	44 29 59	70 36 2	7	1.0	.7	>2.0	N	1,000	100	50	N	10	50	N	2,000
SH01914	44 29 22	70 44 54	3	2.0	1.0	>2.0	N	5,000	200	30	N	10	100	N	300
SH01919	44 29 50	70 38 2	7	1.0	1.0	>2.0	N	1,500	100	20	N	15	50	N	500
SH02175A	44 27 49	70 30 56	3	2.0	.7	1.0	N	500	200	10	N	<10	30	N	200
SH02186	44 25 56	70 35 35	7	1.5	1.5	>2.0	N	2,000	150	5	N	15	70	N	700
SH02193A	44 27 58	70 35 46	7	1.0	.5	>2.0	N	1,000	70	10	N	N	50	N	1,000
SH02202A	44 24 35	70 30 46	5	1.5	.7	2.0	N	500	200	70	N	<10	50	10	200
SH02207A	44 23 31	70 34 41	5	1.5	.7	2.0	N	1,000	300	200	N	N	70	<10	500
Worthley Pond, Canton, West Sumner, and Buckfield quads.															
SH00128A	44 17 47	70 23 28	5	1.0	.3	>2.0	N	1,500	50	10	N	N	50	N	500
SH00130A	44 18 29	70 25 34	3	1.0	.7	2.0	N	2,000	150	10	N	N	50	N	700
SH00137A	44 20 37	70 17 53	5	1.5	.7	1.0	N	1,500	200	50	N	15	100	N	200
SH00139A	44 21 34	70 21 53	10	2.0	.5	1.5	N	1,000	200	50	N	N	50	N	150
SH00207A	44 21 46	70 27 27	7	1.0	1.0	1.5	N	2,000	150	20	N	10	70	N	150
SH00888A	44 29 27	70 19 25	5	1.5	.7	1.5	N	1,000	300	20	N	N	50	<10	150
SH00890A	44 29 35	70 20 16	5	3.0	1.0	1.0	N	2,000	150	20	N	15	30	10	100
SH00895A	44 26 34	70 18 28	7	1.5	.5	>2.0	N	1,000	150	30	N	<10	70	N	500
SH00898A	44 27 46	70 19 47	5	1.5	1.0	1.5	N	1,500	200	10	N	10	30	N	200
SH02104A	44 25 5	70 16 39	7	1.0	.2	>2.0	N	1,000	70	20	<20	N	30	N	500
SH02108A	44 22 47	70 16 9	5	1.5	.7	1.5	N	500	200	100	N	10	50	N	70
SH02110A	44 24 3	70 15 43	7	1.0	.3	>2.0	N	1,500	70	20	N	N	30	N	300
SH02121A	44 26 11	70 21 14	5	1.5	.5	2.0	N	2,000	200	70	N	<10	70	N	200
SH02123A	44 25 32	70 21 39	10	1.5	.5	2.0	N	1,000	100	200	N	N	50	N	200
SH02126A	44 26 23	70 19 42	7	1.5	.5	>2.0	N	3,000	150	15	N	<10	50	N	150
SH02131A	44 28 22	70 22 46	7	1.5	.5	1.0	N	1,000	100	20	N	N	30	30	100
SH02136A	44 27 24	70 24 30	7	1.0	.5	2.0	N	1,000	150	15	N	N	50	<10	100
SH02142A	44 24 16	70 24 0	5	1.5	.5	1.5	N	1,000	150	10	N	N	50	N	150
SH02146A	44 24 25	70 27 28	7	.5	.5	>2.0	N	1,000	100	20	N	10	50	<10	300
SH02149A	44 24 4	70 28 1	7	2.0	.3	>2.0	N	1,000	150	7	N	N	30	N	1,000
SH02156A	44 28 47	70 29 15	7	1.5	1.0	2.0	N	1,000	300	10	N	10	150	<10	500
SH02158A	44 28 23	70 29 50	7	2.0	.5	1.5	N	700	150	10	N	15	100	<10	100
SH02163A	44 24 12	70 28 58	7	1.5	.5	2.0	N	1,000	200	15	N	N	50	N	500
SH02164	44 25 8	70 29 19	3	1.5	.7	1.0	N	700	200	10	N	10	50	N	150
SH02168A	44 30 0	70 24 5	5	2.0	.5	1.5	N	1,000	150	50	N	N	30	N	100

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Bryant Pond, Mount Zircon, Greenwood, and West Paris quads--continued														
SH00154A	500	N	100	20	20	10	N	N	N	300	N	150	N	500
SH00357	700	N	150	20	50	<10	700	N	<200	300	N	500	N	>2,000
SH00368 4/	700	<10	150	20	30	10	30	N	N	500	N	200	<500	2,000
SH00371 4/	500	10	150	10	150	10	700	N	N	500	N	300	N	700
SH00379	700	N	100	15	30	10	<20	N	N	200	N	200	N	1,000
SH00382	500	<10	100	10	30	<10	30	N	N	200	N	200	N	500
SH00386	700	N	150	10	100	15	30	N	N	300	N	300	N	2,000
SH00437	500	N	100	15	30	10	150	200	N	200	N	200	N	1,500
SH00439	1,000	<10	200	15	30	10	>2,000	200	N	300	N	200	500	2,000
SH00486	700	N	100	10	30	20	20	N	N	500	N	300	N	>2,000
SH00491	700	<10	500	10	20	30	<20	N	N	500	N	300	N	2,000
SH00496	1,000	<10	100	20	20	15	100	N	N	300	N	300	N	1,000
SH00537	2,000	N	200	N	20	10	30	N	N	1,000	N	1,000	N	1,000
SH01165	1,000	N	100	10	30	10	100	N	N	200	<100	300	N	>2,000
SH01914	1,000	N	100	20	30	15	70	N	N	300	N	200	N	>2,000
SH01919	1,000	10	150	15	30	15	70	N	N	500	<100	500	N	>2,000
SH02175A	1,000	N	100	15	20	10	<20	N	N	200	N	100	N	700
SH02186	1,000	10	150	15	30	15	50	N	N	500	N	300	N	>2,000
SH02193A	1,000	<10	70	10	20	N	50	N	N	200	N	500	N	>2,000
SH02202A	1,000	N	150	10	20	10	100	N	N	300	N	200	N	2,000
SH02207A	700	N	200	10	20	15	30	N	N	500	N	300	N	500
Worthley Pond, Canton, West Sumner, and Buckfield quads--continued														
SH00128A	500	N	500	10	30	10	70	N	N	500	N	200	N	2,000
SH00130A	700	N	150	10	30	N	200	<200	N	200	<100	200	N	1,500
SH00137A	700	N	100	10	30	15	20	200	N	200	N	200	N	1,000
SH00139A	1,000	N	70	15	20	10	<20	N	N	200	N	200	N	700
SH00207A	700	N	70	10	100	15	700	N	N	300	N	200	N	700
SH00888A	700	N	150	10	30	15	500	N	N	200	100	150	N	500
SH00890A	1,000	N	50	15	20	10	500	200	N	200	N	100	700	700
SH00895A	700	N	100	10	30	<10	200	200	N	500	N	300	N	>2,000
SH00898A	700	N	70	15	30	10	100	200	N	300	N	150	N	1,500
SH02104A	700	N	150	20	30	15	200	200	N	300	N	200	N	>2,000
SH02108A	700	N	50	15	20	10	700	<200	N	300	3,000	150	N	700
SH02110A	700	N	150	20	30	N	100	300	N	500	N	200	N	2,000
SH02121A	700	N	150	10	30	15	50	200	N	300	<100	150	N	2,000
SH02123A	1,500	N	100	10	30	N	200	200	N	300	N	300	N	2,000
SH02126A	700	N	100	10	20	10	30	300	N	300	N	200	N	700
SH02131A	700	N	50	10	30	10	200	200	N	300	N	150	N	700
SH02136A	1,000	N	150	10	30	10	30	300	N	300	N	200	N	300
SH02142A	700	N	100	10	30	10	20	N	N	300	N	200	N	500
SH02146A	700	N	150	10	30	15	50	200	N	300	N	300	N	>2,000
SH02149A	700	N	150	10	30	15	200	N	200	300	N	200	N	>2,000
SH02156A	700	N	100	20	30	20	50	200	N	200	N	200	N	1,000
SH02158A	1,000	N	70	20	30	10	<20	N	N	200	N	150	N	700
SH02163A	1,000	N	100	10	20	10	30	<200	N	200	N	300	N	>2,000
SH02164	700	N	50	10	20	10	N	N	<200	200	N	100	N	700
SH02168A	700	N	100	20	30	10	200	N	N	300	N	100	N	1,500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Livermore Falls, Fayette, Turner Center, Wayne, and Augusta quads															
SH00122A	44 15 25	70 8 51	7	2.0	.7	2.0	N	1,000	200	50	N	10	50	N	300
SH00123A	44 22 4	70 13 32	10	1.5	2.0	1.5	N	1,000	100	5	N	<10	70	N	500
SH00126A	44 18 3	70 8 35	5	2.0	.7	1.5	N	700	100	20	N	N	50	N	150
SH00196A	44 20 23	70 6 24	7	1.0	.3	>2.0	N	700	100	15	N	N	50	15	700
SH00606A	44 23 25	70 2 7	7	2.0	1.0	>2.0	N	700	100	7	N	10	100	N	700
SH00608A	44 24 20	70 2 54	7	1.5	1.0	1.0	N	1,000	200	15	N	10	50	N	100
SH00614A	44 24 52	70 0 8	7	2.0	1.0	1.0	N	700	150	15	N	<10	50	N	150
SH00620A	44 26 17	70 2 9	7	1.5	.7	2.0	N	700	200	7	N	N	70	N	500
SH00623A	44 27 51	70 4 5	5	2.0	1.0	1.0	N	500	150	20	N	<10	70	N	100
SH00624A	44 29 49	70 1 2	7	2.0	1.0	1.0	N	700	300	10	N	N	150	N	700
SH00626A	44 28 27	70 1 57	10	1.5	1.0	>2.0	N	1,000	100	2	N	10	70	N	1,000
SH00628A	44 29 42	70 2 44	7	2.0	1.5	.5	N	200	150	15	N	N	50	N	200
SH00630A	44 28 42	70 3 14	5	2.0	1.0	.5	N	200	200	15	N	15	70	N	100
SH00633A	44 23 6	70 6 26	7	2.0	1.5	.7	N	700	150	10	N	10	30	10	50
SH00639A	44 24 7	70 4 22	5	2.0	1.0	1.0	N	700	150	10	N	15	50	N	200
SH00641A	44 28 40	70 6 36	7	2.0	.7	1.5	N	300	200	10	N	10	70	N	100
SH00668A	44 28 7	70 9 34	7	3.0	1.0	>2.0	N	1,000	200	20	N	N	100	<10	150
SH00677A	44 29 42	70 14 5	3	1.0	.3	1.5	N	1,000	150	200	N	N	20	N	500
SH00681A	44 27 16	70 11 55	7	1.5	.3	1.5	N	700	100	100	N	N	50	N	200
SH00686A	44 25 24	70 9 41	10	1.5	.5	>2.0	N	1,000	150	15	N	10	50	N	1,000
SH00692A	44 23 53	70 11 34	7	1.5	.5	1.0	N	1,000	150	50	N	10	50	N	500
SH00694A	44 24 37	70 12 25	10	1.0	.3	>2.0	N	150	100	2	N	20	50	N	500
SH00698A	44 23 42	70 8 58	7	1.5	.5	1.5	N	1,000	300	15	N	N	70	10	500
Center Lovell, North Waterford, Fryeburg, and Pleasant Mountain quads															
SH00391	44 9 31	70 59 17	7	2.0	.7	1.0	N	1,500	300	50	N	10	50	N	100
SH00395	44 13 4	70 59 5	7	1.0	1.0	2.0	N	1,000	150	150	N	10	20	N	1,500
SH00397	44 11 52	70 56 21	5	1.0	1.0	>2.0	N	500	200	5	N	10	50	N	1,000
SH00400	44 14 5	70 54 39	5	1.0	1.5	2.0	N	1,000	150	70	N	N	70	N	500
SH00406	44 12 44	70 51 28	10	.7	.5	>2.0	N	500	150	200	N	N	30	N	>2,000
SH00413	44 11 35	70 51 45	10	1.5	.3	>2.0	N	200	150	100	N	N	50	50	>2,000
SH00417	44 8 42	70 50 40	10	1.0	.5	>2.0	N	1,000	200	70	N	<10	50	N	1,500
SH00421	44 11 6	70 49 38	7	1.0	.2	>2.0	N	1,500	300	10	N	<10	70	N	700
SH00424	44 12 48	70 49 3	15	.7	.2	>2.0	N	300	70	15	N	10	70	<10	2,000
SH00427	44 8 57	70 46 43	10	1.0	.3	2.0	N	700	150	70	N	10	50	N	1,500
SH00431	44 13 31	70 45 43	7	1.0	.3	>2.0	<1	700	200	20	N	N	70	N	700
SH00447	44 13 48	70 45 16	7	1.0	.3	>2.0	N	700	200	50	N	<10	50	N	700
SH00524	44 14 14	70 52 49	5	1.0	.3	>2.0	N	500	150	150	N	N	50	N	700
SH00530	44 8 8	70 51 13	7	1.0	.3	>2.0	N	700	150	5	N	N	50	<10	1,500
SH00541	44 3 51	70 58 55	7	1.5	.5	>2.0	N	2,000	300	30	N	N	30	N	500
SH00545	44 7 20	70 59 45	7	1.0	.7	2.0	N	2,000	150	100	N	<10	70	N	1,000
SH00553	44 1 27	70 57 3	7	2.0	.7	>2.0	N	1,500	300	50	N	10	30	N	700
SH00558	44 1 29	70 51 13	5	1.5	.5	>2.0	N	1,500	100	15	N	N	50	<10	500
SH00569	44 1 34	70 47 57	10	2.0	1.5	2.0	N	300	100	20	N	10	100	15	1,500
SH00583	44 6 13	70 50 34	5	7.0	3.0	1.0	N	700	150	7	N	50	200	20	500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Livermore Falls, Fayette, Turner Center, Wayne, and Augusta quads--continued														
SH00122A	1,000	N	150	20	30	15	30	300	N	500	N	200	N	2,000
SH00123A	700	N	100	10	30	<10	30	1,000	N	300	N	200	N	>2,000
SH00126A	700	N	70	10	30	10	500	300	N	300	<100	150	N	2,000
SH00196A	700	N	150	10	30	50	70	200	N	300	N	300	N	>2,000
SH00606A	1,000	N	50	20	30	10	70	500	200	300	<100	200	N	1,500
SH00608A	1,000	N	N	30	20	15	30	500	N	200	N	100	N	700
SH00614A	700	N	<50	15	30	10	200	700	N	200	<100	100	N	1,500
SH00620A	700	N	50	<10	50	<10	20	1,000	N	300	N	200	N	1,000
SH00623A	700	N	<50	15	20	10	150	300	N	300	N	100	N	1,000
SH00624A	700	N	N	20	<20	10	150	300	N	200	N	150	N	>2,000
SH00626A	700	N	200	15	50	10	70	700	200	300	N	300	N	>2,000
SH00628A	1,000	N	N	20	30	10	N	700	N	150	N	70	N	700
SH00630A	700	N	N	30	30	10	20	300	N	200	N	70	N	700
SH00633A	1,000	N	<50	15	50	10	20	500	N	200	N	100	N	700
SH00639A	1,000	N	500	15	30	10	30	200	N	200	N	150	N	1,500
SH00641A	1,000	N	N	10	30	10	70	200	N	300	N	150	N	1,000
SH00668A	1,500	N	70	20	20	<10	20	300	N	300	N	150	N	>2,000
SH00677A	700	N	150	10	30	10	2,000	<200	N	200	100	200	N	>2,000
SH00681A	700	N	100	10	30	10	200	300	N	200	150	200	N	1,000
SH00686A	700	N	100	10	50	<10	150	N	N	300	N	500	N	>2,000
SH00692A	700	N	70	10	30	10	100	300	N	150	N	150	N	1,000
SH00694A	700	15	150	10	20	10	150	300	N	300	200	500	N	>2,000
SH00698A	700	N	100	10	30	10	150	200	N	150	N	300	N	>2,000
Center Lovell, North Waterford, Fryeburg, and Pleasant Mountain quads--continued														
SH00391	1,000	N	100	10	30	15	50	N	200	200	N	500	N	>2,000
SH00395	1,500	N	150	15	70	10	20	N	300	200	N	500	N	>2,000
SH00397	1,500	N	150	10	50	N	70	N	200	300	N	300	N	>2,000
SH00400	700	N	200	20	30	15	30	N	N	500	N	300	N	2,000
SH00406	2,000	N	300	10	50	N	70	N	300	300	N	1,000	N	1,500
SH00413	700	10	500	10	70	15	70	N	700	300	<100	500	N	>2,000
SH00417	700	N	200	20	50	15	100	N	200	300	N	500	N	>2,000
SH00421	700	10	300	10	30	N	100	N	<200	500	N	500	N	>2,000
SH00424	1,500	10	200	<10	50	10	50	N	500	200	N	1,000	N	>2,000
SH00427	1,000	<10	200	15	30	10	100	200	500	200	N	500	N	1,500
SH00431	700	10	200	10	50	10	100	N	N	300	N	300	N	1,000
SH00447	700	10	200	10	30	10	70	N	N	500	N	500	N	2,000
SH00524	700	N	200	10	30	10	30	N	N	500	N	300	N	1,000
SH00530	700	N	100	10	20	20	70	N	200	500	N	500	N	>2,000
SH00541	700	N	150	10	30	10	70	500	N	200	N	300	N	>2,000
SH00545	1,000	N	150	20	70	15	500	N	<200	200	N	500	N	>2,000
SH00553	1,500	N	150	10	70	15	700	500	200	200	N	500	N	>2,000
SH00558	1,000	N	150	10	30	10	20	N	N	200	N	300	N	2,000
SH00569	1,000	N	150	15	50	15	50	500	500	150	<100	500	N	2,000
SH00583	3,000	N	<50	100	30	50	N	300	N	500	N	100	500	200

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Norway quad															
SH00161A	44 5 46	70 31 15	7	1.0	.2	2.0	N	700	50	70	N	N	50	N	1,000
SH00445	44 11 17	70 43 14	5	1.0	.5	>2.0	N	1,000	200	100	N	N	50	N	500
SH00453	44 13 41	70 39 22	10	1.0	.3	>2.0	N	1,500	100	100	N	N	30	N	1,500
SH00458	44 13 14	70 38 46	7	1.0	.5	>2.0	N	3,000	100	200	N	10	50	10	300
SH00462	44 10 0	70 31 51	5	1.0	.3	>2.0	N	700	70	100	N	N	50	N	700
SH00466	44 8 11	70 39 26	5	1.0	.3	>2.0	N	700	100	15	N	N	30	N	1,000
SH00471	44 7 0	70 42 16	5	1.0	.3	>2.0	N	700	100	15	N	N	70	N	1,000
SH00480	44 4 5	70 32 41	7	1.5	.7	1.0	N	1,500	100	15	N	N	70	<10	700
SH00593	44 11 5	70 44 38	10	1.0	.5	>2.0	N	1,000	200	15	N	N	100	N	2,000
SH00594	44 14 39	70 43 23	3	1.5	.5	2.0	N	700	200	20	N	10	50	N	200
SH00598	44 6 23	70 36 22	5	1.0	.2	>2.0	N	700	150	20	N	N	100	N	300
Poland quad															
SH00002A	44 2 16	70 27 13	10	1.5	1.0	1.0	N	1,000	70	15	N	N	150	N	500
SH00009A	44 4 32	70 20 21	5	1.5	1.0	1.0	N	1,000	70	50	N	N	70	N	70
SH00013A	44 1 29	70 16 26	10	1.0	.3	>2.0	N	1,000	70	10	N	N	70	10	500
SH00018A	44 4 39	70 26 11	7	1.0	.5	>2.0	N	1,500	70	50	N	10	70	N	500
SH00021A	44 9 15	70 28 26	7	1.5	.5	>2.0	N	1,000	100	30	N	10	70	N	200
SH00028A	44 8 1	70 27 0	5	2.0	1.0	1.5	N	1,500	100	70	N	<10	50	N	150
SH00034A	44 10 50	70 23 26	7	1.5	1.0	1.0	N	5,000	150	10	N	<10	50	N	70
SH00038A	44 12 54	70 29 26	7	1.0	.5	>2.0	N	2,000	50	100	150	N	70	N	300
SH00042A	44 14 49	70 27 25	7	2.0	.7	2.0	N	3,000	100	7	N	10	70	N	100
SH00046A	44 13 56	70 22 11	2	1.0	.5	>2.0	1	2,000	100	10	N	N	50	N	2,000
SH00049A	44 13 47	70 20 19	7	1.0	.5	1.5	N	700	100	15	N	N	100	50	50
SH00055A	44 12 6	70 21 1	5	1.5	.7	>2.0	N	1,500	100	10	N	N	50	<10	100
SH00058A	44 6 59	70 21 33	7	1.0	.5	>2.0	N	2,000	50	20	N	N	100	N	300
SH00065A	44 8 46	70 19 52	7	1.5	1.0	1.0	N	1,000	150	15	N	N	50	10	N
Lewiston quad															
SH00082A	44 4 43	70 3 2	5	1.5	1.0	1.5	N	3,000	200	150	N	N	70	N	N
SH00084A	44 3 41	70 0 26	5	2.0	1.0	1.5	N	2,000	150	15	N	10	100	20	N
SH00093A	44 12 28	70 1 51	5	2.0	1.0	.7	N	1,500	200	150	N	N	50	N	50
SH00105A	44 12 32	70 7 0	7	1.5	.7	2.0	N	1,500	100	200	N	<10	70	N	150
SH00108A	44 7 49	70 8 24	7	1.5	.5	>2.0	N	2,000	100	50	N	10	100	N	700
SH00109A	44 9 26	70 6 52	5	1.5	.7	1.5	N	1,000	150	20	N	N	50	N	150
SH00110A	44 10 19	70 10 37	10	2.0	1.5	2.0	<1	3,000	100	7	N	10	100	20	100

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Mn	Mo	Nb	Ni	Pb	Sc	Sn	Sr	Th	V	W	Y	Zn	Zr
Norway quad--continued														
SH00161A	700	<10	150	10	30	N	200	200	<200	200	150	300	N	2,000
SH00445	1,000	15	200	10	30	10	70	N	N	500	N	700	N	1,000
SH00453	700	N	150	15	50	10	50	<200	300	300	N	500	N	>2,000
SH00458	700	10	150	10	50	10	30	200	N	300	N	300	N	2,000
SH00462	700	10	200	10	2,000	10	100	N	N	200	N	500	1,000	>2,000
SH00466	700	N	200	10	30	10	50	<200	300	200	N	300	N	1,500
SH00471	700	<10	150	<10	30	15	50	N	N	500	N	500	500	1,500
SH00480	1,000	N	150	15	30	N	1,000	200	200	200	N	500	N	>2,000
SH00593	700	15	200	10	50	10	100	N	N	300	<100	500	N	>2,000
SH00594	700	N	100	10	30	10	30	N	N	300	N	200	N	500
SH00598	700	<10	150	<10	30	N	50	N	N	300	N	300	N	>2,000
Poland quad--continued														
SH00002A	1,000	N	70	15	30	15	<20	<200	N	100	N	300	N	500
SH00009A	700	N	70	15	30	10	50	200	N	200	N	150	N	700
SH00013A	700	<10	100	10	30	10	70	N	N	500	N	500	N	>2,000
SH00018A	700	10	200	10	30	15	70	N	N	500	N	300	N	2,000
SH00021A	700	10	150	15	30	<10	70	N	N	300	N	300	N	2,000
SH00028A	700	N	100	10	30	10	200	<200	N	500	N	200	N	700
SH00034A	700	N	50	10	N	15	20	500	N	300	150	150	N	1,000
SH00038A	700	<10	200	15	30	15	200	200	N	300	150	300	N	2,000
SH00042A	700	N	100	15	30	<10	20	200	N	500	N	150	N	700
SH00046A	500	N	500	15	30	10	100	N	300	300	N	300	N	1,000
SH00049A	500	N	100	<10	20	N	50	200	N	200	N	200	N	700
SH00055A	500	N	100	10	20	10	50	200	N	300	N	150	N	1,000
SH00058A	700	N	100	10	20	10	200	200	N	700	<100	300	N	2,000
SH00065A	700	N	N	30	20	10	<20	300	N	200	N	100	N	300
Lewiston quad--continued														
SH00082A	700	N	<50	20	30	<10	<20	300	N	200	N	150	N	500
SH00084A	700	N	50	20	30	10	30	500	N	300	N	150	N	500
SH00093A	700	N	<50	15	150	N	500	500	N	200	N	70	N	2,000
SH00105A	700	N	200	15	20	10	150	300	N	500	N	300	N	1,000
SH00108A	700	N	150	15	30	10	300	300	200	500	150	200	N	1,500
SH00109A	700	N	100	15	20	20	50	300	N	300	200	200	N	1,500
SH00110A	1,000	N	100	30	70	10	150	700	N	300	2,000	300	N	500

Table 2.--Analytical results for nonmagnetic heavy-mineral-concentrate samples from the east half of the Lewiston 1-degree by 2-degree quadrangle, Maine and New Hampshire--continued

Sample	Latitude	Longitude	Ca pct	Fe pct	Mg pct	Ti pct	Ag	B	Ba	Be	Bi	Co	Cr	Cu	La
Norway quad															
SH00161A	44 5 46	70 31 15	7	1.0	.2	2.0	N	700	50	70	N	N	50	N	1,000
SH00445	44 11 17	70 43 14	5	1.0	.5	>2.0	N	1,000	200	100	N	N	50	N	500
SH00453	44 13 41	70 39 22	10	1.0	.3	>2.0	N	1,500	100	100	N	N	30	N	1,500
SH00458	44 13 14	70 38 46	7	1.0	.5	>2.0	N	3,000	100	200	N	10	50	10	300
SH00462	44 10 0	70 31 51	5	1.0	.3	>2.0	N	700	70	100	N	N	50	N	700
SH00466	44 8 11	70 39 26	5	1.0	.3	>2.0	N	700	100	15	N	N	30	N	1,000
SH00471	44 7 0	70 42 16	5	1.0	.3	>2.0	N	700	100	15	N	N	70	N	1,000
SH00480	44 4 5	70 32 41	7	1.5	.7	1.0	N	1,500	100	15	N	N	70	<10	700
SH00593	44 11 5	70 44 38	10	1.0	.5	>2.0	N	1,000	200	15	N	N	100	N	2,000
SH00594	44 14 39	70 43 23	3	1.5	.5	2.0	N	700	200	20	N	10	50	N	200
SH00598	44 6 23	70 36 22	5	1.0	.2	>2.0	N	700	150	20	N	N	100	N	300
Poland quad															
SH00002A	44 2 16	70 27 13	10	1.5	1.0	1.0	N	1,000	70	15	N	N	150	N	500
SH00009A	44 4 32	70 20 21	5	1.5	1.0	1.0	N	1,000	70	50	N	N	70	N	70
SH00013A	44 1 29	70 16 26	10	1.0	.3	>2.0	N	1,000	70	10	N	N	70	10	500
SH00018A	44 4 39	70 26 11	7	1.0	.5	>2.0	N	1,500	70	50	N	10	70	N	500
SH00021A	44 9 15	70 28 26	7	1.5	.5	>2.0	N	1,000	100	30	N	10	70	N	200
SH00028A	44 8 1	70 27 0	5	2.0	1.0	1.5	N	1,500	100	70	N	<10	50	N	150
SH00034A	44 10 50	70 23 26	7	1.5	1.0	1.0	N	5,000	150	10	N	<10	50	N	70
SH00038A	44 12 54	70 29 26	7	1.0	.5	>2.0	N	2,000	50	100	150	N	70	N	300
SH00042A	44 14 49	70 27 25	7	2.0	.7	2.0	N	3,000	100	7	N	10	70	N	100
SH00046A	44 13 56	70 22 11	2	1.0	.5	>2.0	1	2,000	100	10	N	N	50	N	2,000
SH00049A	44 13 47	70 20 19	7	1.0	.5	1.5	N	700	100	15	N	N	100	50	50
SH00055A	44 12 6	70 21 1	5	1.5	.7	>2.0	N	1,500	100	10	N	N	50	<10	100
SH00058A	44 6 59	70 21 33	7	1.0	.5	>2.0	N	2,000	50	20	N	N	100	N	300
SH00065A	44 8 46	70 19 52	7	1.5	1.0	1.0	N	1,000	150	15	N	N	50	10	N
Lewiston quad															
SH00082A	44 4 43	70 3 2	5	1.5	1.0	1.5	N	3,000	200	150	N	N	70	N	N
SH00084A	44 3 41	70 0 26	5	2.0	1.0	1.5	N	2,000	150	15	N	10	100	20	N
SH00093A	44 12 28	70 1 51	5	2.0	1.0	.7	N	1,500	200	150	N	N	50	N	50
SH00105A	44 12 32	70 7 0	7	1.5	.7	2.0	N	1,500	100	200	N	<10	70	N	150
SH00108A	44 7 49	70 8 24	7	1.5	.5	>2.0	N	2,000	100	50	N	10	100	N	700
SH00109A	44 9 26	70 6 52	5	1.5	.7	1.5	N	1,000	150	20	N	N	50	N	150
SH00110A	44 10 19	70 10 37	10	2.0	1.5	2.0	<1	3,000	100	7	N	10	100	20	100

1/ Contains 500 ppm Au.
2/ Contains 1500 ppm As.
3/ Contains <200 ppm Sb.
4/ Contains 200 ppm Sb.