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RESULTS OF STREAM SEDIMENT SAMPLING IN PARTS OF THE SOUTHERN ALASKA RANGE

By

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This report is preliminary
and has not been edited or
reviewed for conformity with
Geological Survey standards

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Introduction

Analytical data for stream-sediment samples collected in two areas of the southern Alaska Range are presented in this report. The samples were collected in 1967 during field evaluation of this sector of the Alaska Range as part of the Heavy Metals program of the U.S. Geological Survey. A total of 1123 samples were collected in the three areas shown in figure 1. The geology, geochemical anomalies and metalliferous deposits of area 2 have been described earlier (Reed and Elliott, 1968a, b). Geochemical data for areas 1 and 3 are presented here in tabular form. Geochemical data for area 2 has been released as an open-file report (Elliott and Reed, 1968), and is not included in this report. The data from the three areas are presented in the form of histograms.

Geologic environment

The part of the Alaska Range west of the South Fork of the Kuskokwim consists predominantly of Paleozoic sedimentary rocks intruded by granitic stocks, hypabyssal breccia bodies, and abundant felsic and mafic dikes. Tertiary extrusive rocks, including mafic flows and pyroclastic deposits with interbedded sedimentary units, locally overlie the Paleozoic rocks south of the Farewell fault. A thick sequence of Tertiary conglomerate, sandstone and shale is present locally north of the fault.

Only a stream sediment reconnaissance was carried out east of the South Fork of the Kuskokwim River (area 3, fig. 1). Parts of this area have been described by Brooks (1911) and Capps (1927). Granitic intrusive rocks and some of the more accessible zones of alteration were briefly examined. The area is characterized by complexly folded and faulted

sedimentary rocks which strike northeast. The Farewell fault zone transects the area and mafic rocks are emplaced locally along segments of the fault.

Area 1

Sedimentary rocks.--The Paleozoic rocks are predominantly interbedded shale, siltstone, argillite and limestone, but they also include prominent units of thin- to massive-bedded gray limestone. Due to the stratigraphic and structural complexity of the area, these sedimentary rocks are shown on figure 2 as one unit, with the exception of prominent limestone units which are shown locally. These rocks are tentatively assigned a Paleozoic age because fossils of Ordovician and Devonian age have been found in similar lithologies in area 2 (Reed and Elliott, 1968b).

North of the Farewell fault a thick sequence of complexly folded and faulted conglomerate, sandstone and shale is present. The conglomerate is characterized by a predominance of well rounded white "vein" quartz and gray chert pebbles with subordinate light and dark gray chert and granite pebbles. Shale beds locally contain abundant plant fossils (localities F-1, 2, and 3, fig. 2) of probable middle or late Oligocene age (Jack Wolfe, written commun., 1968). Uprooted tree trunks and stumps up to 6 feet long were noted in the conglomerate. These sedimentary rocks are lithologically similar to the thick sequence of quartz conglomerate, shale, and sandstone on the south side of the Farewell fault in the White Mountain area (Sainsbury and MacKevett, 1965). The White Mountain area is about 6 miles west of Big River.

Igneous rocks.--Two large igneous bodies in the central and southern parts of figure 2 are chiefly of granitic composition. The body near the center of figure 2 is a composite intrusive. Igneous float in streams draining the body is chiefly granodiorite and quartz monzonite, but one area at least several hundred feet across (locality A, fig. 2) is a medium-grained syenite in which poikilitic alkali feldspar contains about 10 percent of small euhedral crystals of aegirine-augite. Quartz comprises less than 5 percent of the rock. The southern body is a medium- to coarse-grained, hornblende and (or) biotite granite.

A small igneous body north of Big River in the southwest corner of the map is a medium-grained biotite-hornblende granodiorite in which the mafic constituents comprise 20-25 percent of the rock. The small stock on the Middle Fork (B, fig. 2) is a medium-grained biotite quartz monzonite in which biotite makes up 5 to 10 percent of the rock.

The small body of gabbro on the south tributary to the Middle Fork (C, fig. 2) was examined only near its north contact where it cuts dark-gray, laminated metasiltstone. Near the contact the gabbro consists of labradorite, clinopyroxene and several alteration minerals including epidote, chlorite, carbonate and actinolite. In the samples collected small clots of pyrrhotite make up less than 5 percent of the rock.

A small body of partially serpentinized peridotite (D, fig. 2) contains minor amounts of scattered copper-nickel sulfide minerals. This body, with a maximum exposed dimension of about 50 feet, intrudes complexly folded limestone and argillite, and may have been emplaced along a segment of the Farewell fault.

The small igneous complex in the northeast corner of figure 2 was examined briefly. It consists of abundant dikes of intermediate to mafic composition and extrusive breccias. This igneous complex may be genetically and temporally related to the hypabyssal centers and associated extrusive volcanic rocks mapped in area 2 (Reed and Elliott, 1968b).

Structure.--The oldest structural grain in this part of the Alaska Range trends in a northerly direction. These older structural features, however, are not as easily recognized as they are east of the Windy Fork (Reed and Elliott, 1968b). Locally, for example on the south tributary to the Middle Fork, northerly trending recumbent folds are overturned to the west. The east-dipping thrust faults shown on figure 2 are probably related to this period of deformation. In the northern part of figure 2 east-northeast-trending open folds are superimposed on the earlier north-trending folds.

The most prominent structural feature in this part of the Alaska Range is the Farewell fault zone--a major right-lateral strike-slip crustal feature that is part of the Denali fault system (Grantz, 1966). Linear scars in surficial deposits and the presence of many gouge zones in bedrock (fig. 2) indicate that in this area the fault zone is at least 5 miles wide.

Area 3

Sedimentary rocks north of the Tatina River are chiefly graywacke sandstone, shale, argillite and limestone, and are lithologically similar to the Paleozoic rocks in areas 1 and 2. The rocks are complexly folded and faulted, and strike northeast parallel to the mountain front. On the east side of the South Fork of the Kuskokwim River the rocks form tightly compressed folds that are overturned to the northwest. The folds are broken by northeast-striking reverse faults.

Sedimentary rocks south of the Tatina River (fig. 3) are predominantly a monotonous sequence of dark-gray argillite with an apparent thickness of several thousand feet. These rocks dip to the south and are, at least locally, faulted against sedimentary rocks characteristic of the area north of the Tatina River.

The larger known plutons are shown on figure 3. Samples collected from the pluton in the southwest corner are partially altered hornblende quartz diorite. The Cathedral Peaks intrusive at locality A (fig. 3), south of the Tatina River, is a coarse-grained biotite quartz monzonite that cuts dark-gray argillite. The intrusive east of the Tonzona River (localities B and C, fig. 3) is coarse grained, locally porphyritic biotite quartz monzonite that cuts argillite, marble, and andalusite-bearing pelitic schists. Metamorphic effects on sedimentary rocks in this area are greater than those observed in the area south of Farewell.

Analytical procedure

Standard procedures were followed in the collection and preparation of the stream-sediment samples. Where possible, the sample was collected from the active stream channel; where this was not possible, the sample was collected from higher level stream deposits adjacent to the active channel. The samples were dried, sieved, and the minus 80 mesh fractions submitted for 6-step semiquantitative spectrographic analyses for 34 elements. The spectrographic analyses for Fe, Ca, Mg, and Ti are given in percent, and all other elements are reported in parts-per-million (ppm) to the nearest number in the series 0.5, 0.7, 1.0, 1.5, 3, 5, 7, 10, 15, and so on. The precision of a reported value is approximately plus 100

percent or minus 50 percent. Because of the number of samples collected by this and other Heavy Metals projects, three different spectrometers of the Geological Survey were used. For most elements the limits of determination are very similar for the three spectrometers; but there are differences, and so the analyses are marked by a set of symbols keyed to the corresponding limits of detectibility given at the end of the tables.

Analyses for 24 elements are given for all samples. Ten other elements were either not detected or detected in so few samples that, where present, they are shown in the "Remarks Column" of the tables. These elements and their limits of determination in the three laboratories are given below:[1/]

Element	Limits of determination (ppm)	
	*, **	†
As	200	2000
Bi	10	10
Cd	20	50
Pd	---	2
Pt	---	50
Sb	100	200
Sn	10	10
Ta	---	200
Te	---	2000
W	50	100

[1/] Two of the laboratories represented by * and ** have the same limits of determination for these 10 elements.

Presentation of data

Locations of the 249 stream sediment samples collected in area 1 are shown on figure 4, and the semiquantitative spectrographic analyses for these samples are given in table 1. Three geochemical maps (figs. 5-7) show the distribution of the higher values of selected elements in this area.

Geochemical anomalies and known metalliferous deposits in area 2 (fig. 1) have been described (Reed and Elliott, 1968a, 1968b), and the analyses for 556 stream sediment samples have been released in an open-file report (Elliott and Reed, 1968).

Locations of the 318 stream sediment samples collected in area 3 are shown in figure 3, and the semiquantitative spectrographic analyses for these samples are given in table 2. Three geochemical maps (figs. 8-10) show the distribution of the higher values of selected elements in this area.

Histograms for 19 elements in each of the three areas are shown in figures 11-29. Composite histograms of all three areas are shown in the lower right corner of these figures.

Discussion of results

The cutoff point for the elements shown on the geochemical maps (figs. 5-10) was selected largely on the basis of the histograms. The assignment of symbols to represent certain concentrations or ranges of concentrations is arbitrary; the same symbols on different maps do not imply an equal degree of anomaly. Streams draining areas of known or suspected metallization were sampled at a greater density than other streams, and the overall sample density for the three areas varies considerably. Therefore, the histograms for the three areas are not

directly comparable. They do, however, suggest approximate background values for each of the areas in general; and for some of the elements the higher values shown on the histograms may represent significant anomalies. However, it should be emphasized that sediment sampling in these areas is of a reconnaissance nature, and was carried out in diverse geologic environments. Truly anomalous values can be determined only by thorough orientation surveys confined to areas of known geologic environment.

With the exception of molybdenum, the metal content of sediments collected in area 1 are low as compared to area 3 and in particular when compared to area 2. The molybdenum values in area 1 cannot be related to any known metal occurrences. The nickel contents of 100 to 150 ppm in sediments on the south tributary to the Middle Fork (fig. 7) are probably related to the small body of gabbro shown on figure 2. Massive nickel-bearing pyrrhotite is associated with this gabbro (Ed Chipp, oral commun., 1967).

Moderately high copper and zinc contents in sediments (figs. 8-9), define an east-trending zone in area 3 that extends from Pingston Creek to Ripsnorter Creek. The high zinc, copper and molybdenum content in sediments from streams draining the quartz monzonite intrusive north of Ripsnorter Creek suggests that the contact of this intrusive may be of interest to the prospector. Beryllium contents up to 10 ppm and the only tin values of 10 ppm or greater in area 3 are also present in the sediments from streams draining this intrusive.

The lead content of samples 123 and 124 in area 3 (300 ppm and 200 ppm, respectively) appear anomalously high. These samples were collected from the heads of alluvial fans of relatively large streams. In area 2 (Reed and Elliott, 1968b) lead values of 200 ppm or greater generally occur within a mile of known lead mineralization.

References cited

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_____1968b, Geochemical anomalies and metalliferous lode deposits between Windy Fork and Post River, southern Alaska Range: U.S. Geol. Survey Circ. 569.

Sainsbury, C. L., and MacKevett, E. M., Jr., 1965, Quicksilver deposits of southwestern Alaska: U.S. Geol. Survey Bull. 1187, 89 p.

Table 1.--Semiquantitative spectrographic analyses and gold analyses of stream-sediment samples in area 1.

(Analysts: W. L. Campbell, D. M. Conklin, Arnold Farley, Jr., J. G. Finley, [illegible], J. C. Hamilton, A. L. Meier, R. L. Miller, H. G. Neiman, T. A. Roemer. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 1

Sample No	Lab. No.	Field No.	Ag	Au 1/	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
x 1	ACG189	67AG117	N	<.02	70	700	N	10	150	30	50	200	N	<20	30	10	15	200	150	30	<200	150	10	5	1	.2	
† 2	ACJ173	334	N	<.02	—	500	1	7	70	30	N	300	N	<10	30	10	—	200	100	15	N	150	3	2	3	.3	
† 3	174	335	N	<.02	—	500	1	7	70	50	N	300	N	<10	30	10	—	200	100	15	N	150	3	2	3	.3	
† 4	175	336	N	<.02	—	700	1	15	100	50	30	200	N	<10	50	10	—	300	150	20	N	150	5	3	3	.5	
† 5	176	337	N	<.02	—	700	1	10	100	50	N	200	N	<10	50	10	—	150	150	20	N	200	3	3	3	.3	
† 6	177	338	N	<.02	—	500	1	7	70	50	N	300	N	<10	30	10	—	200	100	15	N	150	3	2	3	.3	
† 7	178	339	N	<.02	—	500	1	7	70	50	N	200	N	<10	30	10	—	200	100	15	N	150	3	1.5	3	.3	
x 8	ACG190	118	N	<.02	100	700	N	15	100	30	70	200	N	<20	50	15	15	300	150	30	200	150	5	7	1	.3	
† 9	ACJ179	340	N	<.02	—	500	1	15	100	50	<30	300	N	<10	50	10	—	300	150	20	N	150	5	3	3	.5	
† 10	180	341	N	<.02	—	500	1	7	70	50	N	300	N	<10	20	10	—	200	100	15	N	100	3	1.5	3	.3	
† 11	181	342	N	<.02	—	700	1.5	15	100	50	<30	300	N	<10	70	10	—	300	150	30	N	300	7	3	3	.5	
† 12	182	343	N	<.02	—	500	1	10	100	50	N	300	N	<10	50	10	—	300	150	20	N	150	5	3	3	.3	
† 13	ACJ473	67AR518	N	<.02	—	1000	1.5	30	300	70	50	700	N	15	150	15	—	150	200	30	200	200	.7	3	3	1.5	
† 14	474	519	N	<.02	—	1000	1.5	20	200	70	30	700	N	20	150	10	—	200	150	30	200	200	.7	3	2	1	
x 15	ACG191	67AG115	N	<.02	70	1000	N	15	100	30	100	300	N	<20	30	30	15	300	150	30	N	150	7	7	1	.2	
† 16	ACJ171	332	N	<.02	—	1000	1.5	7	70	50	N	300	N	<10	30	10	—	200	150	20	N	150	7	3	2	.3	
x 17	ACG192	120	1	<.02	70	700	2	15	100	2	70	300	N	<20	50	20	15	200	100	30	N	200	5	5	1.5	.5	
† 18	608	67AR229	N	<.02	—	500	1	10	70	50	N	300	N	N	30	10	—	200	100	20	N	100	7	5	1.5	.2	
x 19	193	67AG121	N	<.02	100	700	2	20	150	20	70	300	N	20	50	15	20	N	100	20	N	200	2	10	1	.7	
x 20	194	122	N	<.02	100	500	1	15	100	10	30	300	N	<20	30	10	15	150	100	15	N	150	10	3	1	.7	
x 21	195	123	N	<.02	100	700	<1	10	150	20	300	300	N	N	50	10	15	300	100	15	N	150	7	5	1.5	.7	
x 22	196	124	N	<.02	70	700	1.5	30	150	30	50	200	N	<20	50	30	30	150	100	20	N	150	7	7	1	.3	
x 23	197	125	N	<.02	70	700	N	30	150	30	50	500	N	<20	30	20	30	150	70	20	N	150	10	7	1	.5	
x 24	199	127	N	<.02	70	700	2	30	150	30	30	300	N	<20	50	15	30	150	70	20	N	150	5	7	1	.3	
x 25	198	126	N	<.02	70	700	1	50	150	30	50	300	N	<20	50	20	30	150	100	20	N	150	10	7	1	.3	
† 26	607	67AR220	N	<.02	—	700	1	10	70	50	30	500	N	N	30	10	—	200	150	20	N	150	5	5	1.5	.2	
† 27	381	67AM82	N	<.02	—	500	1	15	100	50	30	300	N	N	50	10	—	300	150	20	N	100	5	2	2	.3	
† 28	380	81	N	<.02	—	700	1.5	15	100	100	30	300	N	N	50	15	—	200	200	20	N	70	3	3	1.5	.3	
† 29	382	83	N	<.02	—	700	1.5	20	100	70	30	300	N	N	50	20	—	150	200	20	N	100	2	3	2	.3	
x 30	200	67AG128	N	<.02	70	700	N	50	150	30	30	300	N	<20	50	15	20	200	100	15	N	150	10	7	1.5	.2	
† 31	384	67AM86	N	<.02	—	500	1	10	70	50	30	300	N	N	30	10	—	200	100	20	N	100	5	2	15	.2	
x 32	501	67AG129	N	<.02	70	1000	N	50	150	20	30	200	N	<20	70	20	30	150	70	20	N	150	10	7	1	.3	
x 33	502	130	N	<.02	70	700	2	30	150	50	30	300	N	<20	30	20	30	150	100	15	N	150	7	7	1	.3	
x 34	503	131	N	<.02	70	1000	2	30	150	30	30	700	N	<20	50	30	30	200	70	20	N	150	15	7	1	.2	
† 35	361	67AM62	N	<.02	—	700	1	10	100	70	N	300	N	N	30	15	—	200	150	15	N	70	3	2	1.5	.2	
† 36	362	63	N	<.02	—	700	1.5	10	70	70	N	300	N	N	50	15	—	200	150	15	N	70	3	3	1.5	.2	
† 37	363	64	N	<.02	—	700	1.5	10	70	70	N	300	N	N	50	15	—	200	150	15	N	100	3	2	1.5	.15	
† 38	364	66	N	<.02	—	700	1.5	10	70	70	N	300	N	N	50	15	—	150	200	15	N	100	2	2	2	.2	
† 39	365	66	N	<.02	—	700	1	7	70	70	N	300	N	N	30	10	—	300	150	15	N	100	5	1.5	1	.15	
† 40	366	67	N	<.02	—	1500	1	15	100	100	N	300	N	N	50	10	—	300	150	15	N	70	3	3	1.5	.3	
† 41	625	67AR255	N	<.02	—	700	1	15	70	70	N	300	N	N	30	20	—	200	200	20	N	150	5	3	2	.5	
† 42	624	254	N	<.02	—	700	1.5	20	100	70	30	300	N	N	50	20	—	200	200	30	N	200	7	5	2	.5	
† 43	621	257	N	<.02	—	500	1	15	70	50	N	300	N	N	30	15	—	200	150	20	N	100	5	3	2	.3	
† 44	626	256	N	<.02	—	700	1	15	70	50	30	300	N	N	30	10	—	200	150	20	N	150	3	3	2	.3	
x 45	003	4	N	<.02	70	500	N	10	150	20	30	200	N	N	30	30	20	700	70	20	N	100	20	5	1.5	.15	
x 46	004	5	N	<.02	100	700	1.5	15	70	20	30	150	N	N	30	20	20	300	100	20	200	100	7	5	1	.2	
x 47	005	7	N	<.02	100	700	1	15	100	30	30	150	N	N	30	20	20	300	100	20	<200	100	10	5	1.5	.3	
x 48	006	8	N	<.02	100	1000	1.5	20	100	30	50	200	N	N	30	30	20	150	100	20	<200	150	5	3	.7	.5	
x 49	007	12	N	<.02	100	700	1	20	150	30	50	200	N	N	50	30	20	200	70	20	200	150	7	5	1	.3	
† 50	617	248	N	<.02	—	1000	1.5	10	70	70	30	300	N	N	30	15	—	200	150	20	N	100	7	3	1.5	.3	
† 51	618	249	N	<.02	—	1000	1.5	10	70	70	30	300	N	N	30	20	—	200	100	20	N	100	3	2	1	.3	
† 52	619	250	N	<.02	—	1000	1.5	10	70	50	N	300	N	N	30	15	—	200	100	20	N	100	5	2	1	.3	
† 53	620	251	N	<.02	—	1500	2	15	70	50	30	300	3	N	30	20	—	300	150	20	N	150	7	2	1	.3	
† 54	616	247	N	<.02	—	700	1.5	10	70	50	N	300	N	N	30	20	—	200	150	20	N	150	7	2	1.5	.3	
x 55	008	13	N	<.02	100	500	1.5	15	150	30	50	300	N	N	30	30	20	200	70	20	200	100	10	5	1	.2	
x 56	010	16	N	<.02	70	700	1	15	100	70	30	300	N	N	30	10	15	300	70	15	<200	100	15	3	1	.15	
† 57	374	67AM75	N	<.02	—	700	1	15	100	70	N	300	N	N	50	15	—	150	150	20	N	70	3	3	1.5	.3	
x 58	011	67AR17	N	<.02	100	700	2	20	150	30	50	300	N	<20	50	20	30	200	70	15	<200	150	7	5	1	.5	
x 59	012	18	N	<.02	50	700	1	10	70	20	30	300	N	N	20	N	15	700	70	15	N	70	15	3	1	.15	
† 60	373	67AM74	N	<.02	—	700	1	15	100	50	50	300	N	N	50	15	—	300	150	20	N	70	5	3	1.5	.2	
† 61	611	67AR231	N	<.02	—	700	1	10	70	50	N	300	N	N	30	10	—	300	100	20	N	100	10	2	1	.3	
† 62	612	232	N	.04	—	700	1	15	100	50	50	500	N	N	50	10	—	300	150	30	N	150	5	3	2	.5	Sn<10
† 63	622	253	N	<.02	—	700	1	15	100	70	N	300	N	N	50	15	—	150	200	20	N	200	3	3	2	.3	
† 64	372	67AM73	N	<.02	—	500	1	15	70	50	30	500	N	N	50	10	—	500	150	20	N	100	5	3	1.5	.2	
† 65	371	72	N	<.02	—	700	1.5	15	100	50	30	500	N	N	50	15	—	300	150	20	N	100	3	3	3	.2	
† 66	369	70	N	<.02	—	700	1	15	100	70	N	300	N	N	30	15	—	200	150	20	N	70	5	3	2	.3	
† 67	370	71	N	<.02	—	1000	1	15	100	50	N	300	N	N	50	10	—	500	150	15	N	70	3	2	1	.2	
† 68	368	69	N	<.02	—	700	1	15	70	50	50	300	N	N	30	10	—	300	150	20	N	70	5	2	2	.3	
† 69	367	68	N	<.02	—	1000	1.5	15	100	50	30	300	N	10	50	15	—	200	150	20	N	100	3	3	15	.3	
† 70	614	67AR241	N	<.02	—	700	1.5	10	70	30	30	300	N	N	30	10	—	200	150	30	N	300	2	2	1	.5	

Table 1.--Semiquantitative spectrographic analyses and gold analyses of stream-sediment samples in area 1.

(Analysts: W. L. Campbell, N. M. Conklin, Arnold Farley, Jr., [illegible] Finley, [illegible] Grimes, [illegible] C. Hamilton, A. L. Meier, R. L. Miller, H. J. Neiman, T. A. Roemer. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series [illegible], 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table I

Sample No.	Lab. No.	Field No.	Ag	Au [1]	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 71	ACG 387	67AMo89	N	<.02	—	700	2	15	100	30	50	500	N	10	30	20	—	150	100	50	N	200	2	2	1.5	.3	
† 72	390	92	N	<.02	—	500	1.5	20	100	70	30	700	N	N	50	15	—	200	150	30	N	200	5	3	3	.3	
† 73	391	93	1	<.02	—	500	1	15	100	70	30	300	N	N	50	15	—	200	150	20	N	100	5	3	1	.3	
† 74	393	95	N	<.02	—	1000	1	10	100	50	N	300	N	N	50	15	—	200	150	20	N	150	5	2	1	.3	
† 75	395	97	N	<.02	—	1000	1.5	15	100	50	30	500	N	N	50	15	—	200	150	20	N	150	5	2	1.5	.3	
† 76	396	98	N	<.02	—	1000	1.5	15	70	50	30	300	N	N	50	15	—	200	150	20	N	150	3	3	1.5	.3	
† 77	397	99	N	<.02	—	1000	1.5	15	100	50	30	500	N	N	30	15	—	200	100	15	N	100	3	2	1	.2	
x 78	211	67ABu11	N	<.02	100	700	1	10	100	20	<20	300	N	<20	30	20	15	300	70	10	N	150	7	3	.7	.2	
x 79	212	12	N	<.02	70	500	<1	<10	70	30	<20	300	N	<20	30	20	15	100	70	7	N	70	5	3	.7	.2	
x 80	213	13	N	<.02	70	500	<1	<10	50	10	30	300	N	N	15	<10	10	300	70	7	N	70	10	2	.7	.15	
x 81	214	14	N	<.02	70	500	<1	<10	100	15	<20	200	N	N	20	15	15	200	70	7	N	70	7	3	.7	.15	
x 82	215	15	N	<.02	100	700	<1	10	150	20	<20	300	N	N	30	20	15	200	100	15	N	70	5	3	.7	.2	
x 83	217	17	N	<.02	70	500	1	10	70	20	20	200	N	<20	20	10	15	200	100	10	N	100	7	3	.7	.15	
x 84	216	16	N	<.02	100	700	1	<10	70	50	<20	500	N	N	30	<10	10	N	100	5	N	70	5	5	1	.3	
x 85	227	18	N	<.02	100	700	2	N	150	30	20	200	N	<20	30	15	10	200	150	15	<200	100	5	3	1	.2	
x 86	218	19	N	<.02	70	500	1.5	10	50	15	20	200	N	<20	20	10	15	100	100	15	N	100	2	3	.7	.2	
x 87	129	67AEr44	N	<.02	50	500	2	20	100	30	20	300	N	<20	30	20	20	200	100	15	<200	150	5	7	.7	.5	
x 88	219	67ABu20	N	<.02	70	700	1.5	20	50	30	30	200	N	<20	30	20	20	N	100	15	N	100	1.5	5	.7	.5	
x 89	130	67AEr45	N	<.02	50	700	2	20	100	30	30	300	7	<20	30	20	15	200	100	15	<200	150	5	3	1	1	
x 90	132	47	N	<.02	50	1000	2	15	100	30	N	200	15	<20	30	30	10	150	150	15	N	150	1.5	3	.7	.7	
x 91	220	67ABu21	N	<.02	70	700	1.5	50	100	30	30	200	N	<20	50	30	20	150	70	15	N	100	5	7	.7	.3	
x 92	133	67AEr48	N	<.02	30	700	1	20	100	30	20	300	10	<20	30	30	15	100	100	20	N	150	3	3	1	1	
x 93	221	67ABu22	N	<.02	70	700	1.5	15	70	30	20	200	N	<20	20	30	20	200	100	15	N	150	7	3	1.5	.3	
x 94	222	23	N	<.02	70	700	2	15	70	20	50	300	15	<20	30	20	15	N	100	15	N	100	1.5	3	.7	.2	
x 95	134	67AEr49	N	<.02	50	700	1.5	10	100	30	20	300	N	<20	30	20	15	500	70	20	N	150	10	3	1	.5	
x 96	223	67ABu24	N	<.02	100	1000	2	20	200	30	20	150	10	<20	50	30	15	100	150	15	N	150	3	3	1.5	.5	
x 97	135	67AEr50	N	<.02	50	1500	2	30	70	30	30	500	15	<20	50	20	15	300	100	30	<200	150	3	3	1	.5	
x 98	224	67ABu25	N	<.02	70	500	1	10	100	20	N	150	N	<20	20	20	15	150	100	20	N	100	5	3	1	.2	
x 99	179	67AEr95	N	<.02	100	700	1	30	150	30	70	300	N	<20	30	30	20	200	150	30	N	150	7	5	1.5	.3	
x 100	247	67ABu55	N	<.02	150	1000	1.5	20	100	30	30	500	N	<20	100	20	20	300	200	20	N	150	1.5	5	1.5	.3	
x 101	248	56	N	<.02	100	1500	1.5	50	150	70	30	300	20	<20	100	30	20	100	200	30	<200	150	1.5	5	1	.5	
x 102	249	57	N	<.02	100	700	1.5	20	100	20	50	300	<5	<20	30	N	15	200	200	30	N	150	7	3	1.5	.5	
x 103	180	67AEr96	N	<.02	100	1000	1	50	200	50	70	300	5	<20	70	30	20	150	150	30	N	150	5	7	1.5	.3	
x 104	253	67ABu61	.5	<.02	100	5000	1	70	70	300	150	300	15	<20	150	20	15	150	150	50	200	150	3	15	2	.2	
x 105	181	67AEr97	N	<.02	100	2000	1	20	100	50	70	500	15	<20	70	30	20	150	150	30	N	200	10	5	1	.3	
x 106	185	101	2	<.02	100	700	<1	20	150	30	70	300	N	<20	70	20	20	100	100	30	N	150	5	7	1.5	.3	
x 107	201	67ABu1	N	<.02	20	700	1	70	15	30	50	700	N	<20	10	20	20	300	70	30	N	150	3	7	1	.7	
x 108	202	2	N	<.02	15	700	1	10	50	15	30	700	N	<20	7	15	15	300	70	20	N	150	3	5	1	.5	
x 109	203	3	N	<.02	15	700	1	<10	30	10	20	500	N	<20	5	15	5	300	70	20	N	150	2	3	.7	.3	
x 110	204	4	N	<.02	15	700	1	<10	50	20	20	700	N	<20	2	15	7	200	70	20	N	200	1.5	3	.7	.5	
x 111	205	5	N	<.02	20	700	1	10	50	10	30	300	N	<20	10	20	10	300	50	20	N	100	1.5	3	1	.3	
x 112	206	6	N	<.02	70	1000	1	15	100	20	50	100	N	20	20	20	20	300	70	30	<200	150	5	7	1	.7	
x 113	207	7	N	<.02	100	700	1	15	150	20	30	200	N	<20	50	30	30	300	150	15	<200	100	7	5	1.5	.3	
x 114	208	8	N	<.02	100	1000	1	15	150	30	30	150	N	<20	30	30	20	200	150	15	<200	100	7	5	1.5	.2	
x 115	209	9	N	<.02	70	1000	2	15	100	20	50	300	N	<20	30	30	20	200	70	20	N	200	3	5	1.5	.5	
x 116	210	10	N	<.02	70	500	1	<10	70	15	<20	200	N	<20	15	20	10	300	70	10	N	100	10	3	1	.15	
x 117	244	52	N	<.02	100	700	1.5	30	150	50	30	300	15	<20	150	30	20	150	200	20	N	150	5	7	1	.5	
x 118	243	51	N	<.02	150	2000	2	30	150	50	30	1500	30	<20	150	20	20	100	200	30	300	150	1	7	.7	.5	
x 119	245	53	N	<.02	70	1000	2	30	150	30	30	300	10	<20	150	20	20	200	150	20	N	150	5	5	1	.5	
x 120	246	54	N	<.02	70	2000	1.5	30	100	50	30	300	30	<20	150	20	20	150	200	30	N	150	1.5	5	1	.7	
x 121	242	50	N	<.02	100	1500	2	20	100	50	30	300	15	<20	50	N	20	150	200	30	N	150	5	5	1	.7	
x 122	043	67AR57	N	<.02	30	700	N	15	150	20	20	1000	N	<20	15	N	20	700	70	20	N	100	10	10	1.5	.7	
x 123	044	58	N	<.02	30	700	N	50	300	50	20	1000	5	<20	70	N	30	700	100	30	N	100	7	15	2	.7	
x 124	045	59	N	.04	150	150	5	<10	N	5	150	300	20	<20	<2	N	N	N	30	150	300	N	.3	>20	.07	.03	
x 125	046	60	N	<.02	50	150	7	<10	N	30	10	150	7	<20	20	N	N	N	30	100	N	N	.7	10	.15	.05	
x 126	040	54	N	<.02	30	300	N	50	200	30	20	1000	N	<20	20	N	20	500	100	30	N	100	7	10	2	.7	
x 127	047	61	N	<.02	30	1000	1	15	150	30	30	100	N	<20	100	N	20	700	70	30	N	100	10	7	3	.7	
x 128	048	62	N	<.02	30	1000	1	20	150	50	30	1000	5	<20	50	N	30	500	100	50	N	100	10	10	3	1	
x 129	049	63	N	<.02	30	1000	2	20	150	100	30	700	5	<20	50	N	20	500	100	30	N	150	10	7	2	.7	
x 130	050	65	N	<.02	30	1000	1	20	100	50	20	300	15	<20	100	10	15	100	200	20	200	100	1.5	5	.7	.3	
x 131	051	66	N	<.02	30	1500	1	60	70	30	<20	700	15	<20	150	10	15	150	200	20	300	100	3	5	.7	.2	
x 132	052	67	N	<.02	30	1000	N	30	100	30	<20	700	10	<20	150	10	15	150	200	20	300	100	3	5	.7	.3	
x 133	053	68	N	<.02	30	1000	1	50	150	50	30	1000	7	<20	100	20	30	300	150	30	200	200	7	10	1	1	
x 134	054	69	N	<.02	30	1000	N	30	100	50	30	700	5	<20	50	N	20	300	100	20	300	150	7	5	1.5	.7	
x 135	055	70	N	<.02	30	1000	N	15	100	30	20	700	5	<20	30	N	20	300	100	20	N	100	7	3	1.5	.3	
x 136	241	67ABu49	N	<.02	100	1000	2	30	150	30	30	300	<5	<20	70	N	30	200	200	20	N	200	10	7	2	.5	
x 137	178	67AEr94	N	<.02	100	700	3	10	70	15	100	300	5	30	20	50	10	100	70	70	N	500	.7	3	.7	.2	
† 138	ACJ187	348	N	<.02	—	700	1.5	50	300	150	50	500	N	20	200	<10	—	300	300	20	N	200	3	3	7	1	
† 139	188	349	N	<.02	—	1000	1.5	50	300	150	30	500	N	20	200	<10	—	200	200	20	N	200	3	5	7	1	
† 140	189	350	N	<.02	—	700	1.5	30	300	150	30	500	N	20	150	<10	—	200	150	20	N	200	3	3	7	1	

Table 1.--Semiquantitative spectrographic analyses and gold analyses of stream-sediment samples in area 1.

(Analysts: W. L. Campbell, B. M. Conklin, Arnold Farley, Jr., J. L. Finley, D. J. Grimes, J. G. Hamilton, A. L. Meier, P. G. Miller, H. G. Neiman, T. A. Roemer. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 1

Sample No.	Lab. No.	Field No.	Ag	Au [1/]	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 141	ACJ 190	67AE351	N	<.02	—	700	1.5	50	300	150	30	500	N	30	200	<10	—	200	200	20	N	200	.3	5	7	1.5	
† 142	185	346	N	<.02	—	1000	1.5	15	70	100	<30	300	5	<10	70	15	—	150	150	30	N	200	3	3	3	.5	
† 143	184	345	N	<.02	—	700	1.5	15	70	70	N	300	N	<10	50	20	—	150	150	20	N	150	3	3	3	.3	
† 144	191	352	N	<.02	—	1000	1.5	50	300	150	50	700	N	30	200	<10	—	300	300	30	N	300	7	5	7	1.5	
† 145	183	344	N	<.02	—	500	1.5	20	150	100	N	500	N	15	100	10	—	150	150	15	N	150	3	3	3	7	
x 146	ACG 177	99	N	<.02	100	700	1	70	700	70	50	500	30	50	200	N	30	300	150	—	N	300	5	10	3	>1	Sb 100
x 147	089	67AR115	N	<.02	100	—	N	10	150	20	30	200	N	N	70	N	10	300	70	10	N	70	15	3	2	.15	
x 148	079	99	N	<.02	70	—	N	15	150	20	30	300	N	<20	70	30	15	700	100	15	N	100	20	5	2	.2	
x 149	080	100	N	<.02	70	—	1	10	150	20	20	300	N	<20	70	N	15	700	150	10	N	100	15	3	2	.3	
x 150	078	98	N	<.02	70	—	N	10	150	30	30	300	N	<20	50	15	20	500	100	15	N	100	15	3	2	.2	
x 151	077	97	N	.03	70	700	1	15	100	30	N	200	N	<20	70	20	15	100	100	15	N	100	2	3	1.5	.3	
x 152	076	96	N	<.02	50	700	N	10	150	20	N	200	N	<20	30	N	15	700	100	10	N	100	15	3	2	.2	
x 153	094	122	N	<.02	20	—	3	N	N	10	50	700	N	<20	<2	30	<5	N	20	50	<200	100	.7	3	.2	.2	
x 154	092	120	N	<.02	30	—	2	15	150	20	70	1500	N	20	15	N	20	200	70	70	N	150	3	7	1	>1	
x 155	093	121	N	<.02	30	—	2	10	200	15	50	1500	N	<20	20	20	15	150	70	20	N	150	5	5	1.5	.3	
x 156	090	118	N	<.02	20	—	N	15	70	30	50	1500	N	<20	10	10	20	300	70	20	<200	100	3	7	1.5	.7	
x 157	091	119	N	<.02	30	—	1	<10	100	20	30	1000	N	<20	7	20	20	200	70	30	N	70	2	3	1.5	.7	
x 158	186	67AE102	N	<.02	70	500	<1	20	200	20	70	500	N	<20	50	20	15	1000	70	20	<200	100	20	5	3	.2	
x 159	187	103	N	<.02	50	3000	1	50	150	30	70	1500	N	<20	70	N	30	700	70	50	300	300	5	15	2	>1	
x 160	188	104	N	<.02	30	700	N	30	150	30	100	2000	N	30	7	N	30	500	100	50	<200	300	7	15	2	>1	
x 161	228	67AB41	N	<.02	15	700	1.5	50	200	15	30	1500	N	<20	20	N	30	500	70	30	N	150	7	15	2	1	
x 162	058	67AR91	N	<.02	70	500	1.5	20	150	30	20	300	N	N	30	50	15	1000	100	15	N	100	>20	7	3	.15	
x 163	059	92	N	<.02	50	300	1.5	20	150	30	30	300	N	N	30	30	15	1000	100	15	N	70	>20	5	3	.15	
x 164	071	87	N	<.02	50	1000	1	20	500	15	N	500	N	<20	20	20	15	1000	100	15	<200	100	10	5	2	.5	
x 165	072	88	N	<.02	70	700	1	15	1000	15	20	1000	N	<20	15	20	15	700	70	15	N	70	10	5	2	.5	
x 166	067	90	N	<.02	30	1500	N	20	100	20	30	700	N	<20	20	N	20	500	100	20	N	100	10	7	2	1	
x 167	070	86	N	<.02	50	700	1	30	300	30	30	1500	N	20	30	20	20	500	100	20	N	150	15	15	2	1	
† 168	338	67AM39	N	<.02	—	700	3	15	70	10	N	1000	N	50	30	15	—	500	70	100	N	500	3	5	2	1	
† 169	339	40	N	<.02	—	700	2	15	100	15	50	1000	N	20	30	15	—	500	100	100	N	300	3	5	1.5	.7	
x 170	067	67AR89	N	<.02	50	500	1.5	20	70	15	30	1500	N	<20	2	20	20	300	100	20	<200	100	5	10	1.5	.7	
† 171	340	67AM41	N	<.02	—	700	3	15	50	15	100	1000	N	20	30	15	—	500	70	70	N	700	3	5	1.5	.5	
x 172	066	67AR82	N	<.02	30	500	1	20	200	15	30	1000	N	<20	30	20	15	200	100	30	<200	70	5	10	2	.7	
x 173	065	81	N	<.02	30	500	1	20	150	20	30	1000	N	20	30	20	10	300	100	20	<200	150	5	7	2	.7	
† 174	342	67AM43	N	<.02	—	500	2	30	150	20	150	1000	N	20	70	15	—	500	100	70	N	300	5	5	3	.7	
x 175	063	67AR79	N	<.02	30	700	N	70	300	30	20	1000	N	<20	50	30	20	700	150	15	N	150	7	15	3	1	
† 176	341	67AM42	N	<.02	—	700	2	15	70	15	70	1000	N	30	30	10	—	500	70	100	N	1000	3	5	1.5	.7	
† 177	343	44	N	<.02	—	700	2	20	100	20	70	1000	N	20	50	10	—	500	70	70	N	1000	3	5	2	.7	
† 178	345	47	N	<.02	—	500	N	50	300	50	200	1000	N	N	150	N	—	500	150	30	N	200	5	5	10	.7	
x 179	225	67AB28	N	<.02	30	1000	1	50	300	20	N	150	N	<20	30	10	20	500	70	15	<200	50	7	7	5	.7	
x 180	226	29	N	<.02	50	700	1	50	700	30	20	1500	N	<20	70	10	20	500	100	15	<200	150	5	10	7	1	
x 181	068	67AR84	N	<.02	30	700	N	<10	100	10	N	300	N	<20	5	20	7	3000	50	7	200	50	>20	3	1.5	.3	Bi <10
x 182	069	85	N	<.02	50	500	3	10	200	15	30	1500	N	20	3	20	10	150	50	30	<200	100	3	15	.7	.7	
x 183	075	95	N	<.02	70	700	N	15	150	20	N	300	N	<20	50	10	20	700	100	10	N	100	15	3	1.5	2	
x 184	074	94	N	<.02	70	700	1	15	150	20	N	500	N	<20	30	10	20	700	100	15	N	100	15	3	2	3	
x 185	073	93	N	<.02	70	700	1	10	150	20	N	300	N	<20	30	10	15	700	100	15	N	100	20	3	2	.2	
† 186	265	67AB78	N	<.02	—	1000	1.5	15	100	30	50	1000	N	20	15	15	—	700	100	50	N	300	5	7	2	.7	
† 187	266	79	N	<.02	—	1000	1.5	30	50	50	70	1000	N	N	20	10	—	1000	100	70	N	100	7	7	3	.5	
† 188	708	67AM110	N	<.02	—	700	1	10	70	50	N	200	N	N	30	10	—	500	150	15	N	100	5	2	1	.3	
† 189	709	111	N	<.02	—	700	1	10	100	50	30	300	N	N	50	10	—	500	150	15	N	100	5	2	1.5	.3	
† 190	710	112	N	<.02	—	700	1	10	100	50	30	300	N	N	50	10	—	500	150	15	N	150	7	2	1.5	.3	
† 191	711	113	N	<.02	—	700	1	10	70	50	N	300	N	N	30	10	—	500	150	15	N	100	7	2	1.5	.3	
† 192	352	67AM54	N	<.02	—	1000	2	15	100	30	N	700	N	15	30	15	—	500	100	50	N	300	3	3	2	.7	
† 193	354	56	N	<.02	—	1000	2	15	100	50	70	700	3	15	50	15	—	500	150	50	N	300	5	5	3	.7	
† 194	355	57	N	<.02	—	500	1.5	10	100	70	70	300	N	N	50	15	—	150	200	20	N	150	3	2	1.5	.3	
x 195	480	67AR182	N	<.02	50	700	1	15	100	30	30	200	N	<20	30	20	20	300	100	20	<200	150	10	7	2	.5	
† 196	356	67AM58	N	<.02	—	500	1.5	10	100	70	N	300	N	N	50	15	—	200	200	20	N	100	3	3	2	.3	
x 197	479	67AR181	N	<.02	30	1000	2	10	100	30	30	500	N	<20	20	15	20	300	70	20	N	150	7	7	1.5	.5	
† 198	357	67AM59	N	<.02	—	500	1	10	70	70	N	300	N	N	50	15	—	150	150	15	N	100	3	2	1.5	.3	
† 199	358	60	N	<.02	—	500	1.5	10	70	50	N	300	N	N	50	15	—	200	200	20	N	100	2	3	2	.3	
† 200	359	61	N	<.02	—	1000	2	15	100	50	N	700	N	10	50	15	—	200	150	30	N	200	2	3	2	.5	
x 201	482	67AR184	N	<.02	70	700	1.5	10	70	30	30	700	N	<20	30	30	15	200	100	15	N	150	5	10	2	.7	
† 202	712	67AM114	N	<.02	—	700	1.5	15	100	30	30	700	N	10	30	15	—	500	100	30	N	150	5	3	2	.5	
x 203	124	67AG26	N	<.02	50	1000	1.5	15	70	50	30	300	20	<20	30	20	15	150	150	15	<200	150	1.5	3	.5	.3	
x 204	125	28	N	<.02	50	500	2	15	150	30	30	300	N	<20	30	20	15	1000	100	30	<200	150	7	3	1	.3	
x 205	126	29	N	<.02	50	1500	2	15	70	50	30	200	30	<20	70	20	15	150	200	20	200	150	.7	3	.7	.3	
x 206	127	30	N	<.02	50	700	2	15	100	30	20	300	10	<20	30	20	15	200	100	20	<200	150	5	3	.7	.5	
x 207	035	67AR48	N	<.02	70	500	3	10	50	20	30	300	N	30	15	10	7	200	70	20	N	200	2	3	.7	.5	
† 208	115	67AM117	N	<.02	—	500	1	7	100	30	N	300	N	N	30	10	—	700	100	15	N	100	>10	1.5	2	.2	
† 209	116	118	N	<.02	—	700	1	10	100	30	N	300	N	N	50	10	—	700	100	15	N	100	10	2	1.5	.3	
† 210	114	116	N	<.02	—	1000	1	7	70	30	N	300	N	N	20	10	—	700	70	15	N	150	>10	1.5	1.5	.15	

Table 1.--Semiquantitative spectrographic analyses of soil and rock samples from sampling in area 1.

(Analysts: [illegible] Campbell, [illegible] Conklin, Arnold [illegible], [illegible] Bridges, [illegible] Brown, [illegible] Dorrzapf, [illegible] Millar, [illegible] Millar, [illegible] Marran, [illegible] Rowe. Analyses, unless noted, are semiquantitative spectrographic analyses reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the lowest determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 1

Sample No.	Lab. No	Field No.	Ag	Au 1/	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 211	ACG713	67AM115	N	<.02	—	500	1	10	70	30	30	500	N	N	30	10	—	300	100	15	N	100	3	2	1.5	.3	
x 212	039	67AR53	N	<.02	30	700	N	<10	70	30	20	300	N	<20	20	N	15	1000	70	20	N	150	>20	3	1.5	.15	
x 213	038	52	N	<.02	30	700	1	10	70	30	20	500	N	<20	20	30	20	300	100	20	300	150	7	5	.7	.3	
x 214	029	39	N	<.02	50	700	<1	N	70	15	20	150	N	<20	30	N	10	500	70	10	N	150	10	2	1	1.5	
xx 215	730	67AM132	N	<.02	10	150	7	N	7	15	300	700	N	30	2	20	5	50	15	150	N	1000	.7	5	.15	3	Sn 30
xx 216	729	131	N	<.02	50	300	2	15	150	30	100	500	<5	15	30	30	7	1000	70	70	N	300	1.5	5	15	3	Sn 10
xx 217	728	130	N	<.02	70	1000	2	15	150	30	50	500	N	<10	30	50	10	1500	70	30	N	200	1.5	5	2	.3	
x 218	034	67AR47	N	<.02	30	500	2	N	30	10	70	150	N	<20	10	N	5	200	50	30	N	150	3	2	.3	1.5	
x 219	033	46	N	<.02	50	700	1	10	70	20	20	200	N	<20	30	N	15	700	100	15	N	100	10	3	1.5	.2	
x 220	032	45	N	<.02	70	700	2	10	70	30	20	300	N	<20	30	10	20	150	100	15	N	150	3	3	1.5	.2	
x 221	030	42	N	<.02	100	700	1.5	10	100	30	30	300	N	<20	30	10	20	300	150	15	N	150	7	3	1	.3	
† 222	346	67AM48	N	<.02	—	500	1	10	100	50	30	300	N	N	50	10	—	500	100	15	N	100	7	2	2	.3	
† 223	347	49	N	<.02	—	500	1	10	70	50	N	300	N	N	50	15	—	200	100	15	N	100	5	2	1.5	.2	
† 224	348	50	N	<.02	—	700	1	15	100	50	N	300	N	N	50	15	—	200	150	20	N	100	7	3	1.5	.5	
† 225	349	51	N	<.02	—	1500	1	10	100	50	N	300	N	N	50	15	—	300	150	20	N	100	7	2	1.5	.3	
† 226	350	52	N	<.02	—	1000	1	10	100	50	N	300	N	N	50	10	—	500	100	15	N	100	7	2	1.5	.2	
† 227	484	67AR188	N	<.02	—	700	1.5	15	100	50	N	300	N	N	50	10	—	700	150	15	N	100	7	2	2	.2	
† 228	351	67AM53	N	<.02	—	1000	1	7	100	50	N	300	N	N	50	10	—	700	100	15	N	100	7	2	1.5	.2	
† 229	524	67AR147	N	<.02	—	1000	1	15	100	70	N	300	N	N	50	10	—	700	150	20	N	150	7	3	3	.2	
† 230	525	148	N	<.02	—	700	1	7	70	50	N	200	N	N	30	15	—	700	100	15	N	70	7	2	2	.1	
† 231	526	149	N	<.02	—	1000	1.5	15	100	70	30	300	3	N	70	15	—	200	150	20	N	100	3	3	2	.3	
† 232	604	215	N	<.02	—	500	1	7	70	50	N	500	N	N	20	10	—	1000	70	15	N	70	>10	2	2	.2	
† 233	498	208	N	<.02	—	700	1.5	15	100	70	N	300	N	N	50	10	—	500	150	20	N	100	5	2	2	.2	
† 234	499	209	N	<.02	—	1000	1.5	15	100	70	30	300	<3	N	70	10	—	200	150	20	N	100	3	2	1.5	.2	
† 235	500	210	N	<.02	—	2000	1.5	20	70	100	30	500	7	N	100	15	—	200	200	20	N	100	2	3	1	.2	
† 236	601	211	N	<.02	—	1000	1.5	15	100	70	30	300	N	N	50	15	—	200	150	20	N	150	5	3	3	.3	
† 237	602	212	N	<.02	—	1500	1.5	20	100	100	30	500	7	N	100	20	—	150	200	30	N	150	3	5	1	.2	
† 238	603	213	N	<.02	—	1000	1	15	300	70	N	500	N	N	150	15	—	500	100	20	N	100	10	3	5	.2	
† 239	490	200	N	<.02	—	500	5	10	50	30	100	500	N	15	20	20	—	300	100	70	N	1000	3	3	1	.3	
† 240	491	201	N	<.02	—	700	1.5	10	100	70	30	500	N	N	50	15	—	500	150	30	N	200	3	2	2	.2	
† 241	492	202	N	<.02	—	700	1.5	10	100	70	30	300	N	N	50	15	—	500	150	20	N	150	5	2	1.5	.2	
† 242	488	197	N	<.02	—	300	5	3	7	5	200	700	3	20	5	20	—	100	30	150	N	1500	7	2	3	.3	
† 243	487	196	N	<.02	—	500	3	10	50	20	100	700	N	15	20	15	—	300	100	70	N	500	2	3	2	.3	
† 244	493	203	N	<.02	—	700	1.5	10	100	70	N	300	N	N	30	15	—	700	100	20	N	100	5	2	1.5	.2	
† 245	494	204	N	<.02	—	1000	1.5	15	100	100	N	500	<3	N	50	15	—	700	150	20	N	150	10	2	1.5	2	
† 246	495	205	1.5	<.02	—	1000	1.5	20	100	70	N	500	N	N	50	70	—	200	150	20	N	100	3	2	1.5	.2	
† 247	496	206	N	<.02	—	1000	1.5	20	150	100	70	500	5	N	100	10	—	200	200	20	N	200	3	3	2	.3	
† 248	497	207	N	<.02	—	2000	1.5	20	100	100	N	500	7	N	100	10	—	200	200	20	N	70	3	2	1	.2	
† 249	486	194	N	<.02	—	700	1.5	7	50	50	30	500	<3	10	30	70	—	500	100	20	N	150	7	2	1.5	.2	
1/ Analyses by atomic absorption																											
† Limit of detectibility			1	.02	20*	2	1	3	1	1	30	1	3	10	3	10	5*	5	7	10	200	10	.005	.001	.005	.002	*B and Sc not determined for all samples
x Limit of detectibility			.5	.02	10	100	1	10	10	2	20	20	5	20	2	10	5	100	10	5	200	20	.05	.05	.02	.002	
xx Limit of detectibility			.5	.02	10	5	1	5	5	2	20	20	5	10	2	10	5	50	10	5	200	20	.05	.05	.02	.002	

Table 2.--Semi-quantitative spectrographic [illegible] analyses of stream-sediment samples in Area 2.

(Analysts: [illegible] L. Campbell, N. M. Conklin, Arnold Farley, Jr., [illegible] Hamilton, A. [illegible], [illegible] L. Miller, [illegible] Neiman, T. A. Roemer. Analyses, unless noted, are semiquantitative spectrographic [illegible] in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, [illegible]; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 2-

Sample No	Lab. No.	Field No.	Ag	Au 1/	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 1	ACG 994	67AB-221	N	<.02	—	700	1.5	15	150	70	30	700	N	<10	70	15	—	300	150	30	N	150	5	3	2	.3	
† 2	995	222	N	<.02	—	700	1.5	15	100	70	30	700	N	<10	50	15	--	300	150	30	N	150	5	3	1.5	.3	
† 3	997	224	N	<.02	—	700	1	15	100	70	30	500	N	<10	50	15	—	300	150	30	N	150	5	3	2	.3	
† 4	996	223	N	<.02	—	700	1	15	100	70	30	700	N	<10	30	15	—	700	150	30	N	150	7	3	1.5	.3	
† 5	998	225	N	<.02	—	700	1	15	70	50	N	700	N	N	50	15	—	200	150	30	N	150	3	3	1.5	.3	
† 6	999	226	N	<.02	—	700	1	10	150	50	30	700	N	N	50	15	—	700	150	30	N	150	7	3	2	.3	
† 7	ACJ201	227	N	<.02	—	700	1	10	70	50	N	300	N	<10	30	15	—	300	100	20	N	100	7	2	1.5	.3	
† 8	202	228	N	<.02	—	1500	2	15	100	70	30	500	10	<10	70	20	—	300	150	30	N	150	5	3	1.5	.3	
† 9	107	67AB-251	N	<.02	—	1500	1	15	70	100	30	500	15	N	70	15	—	300	200	30	300	100	3	3	1.5	3	
† 10	108	252	N	<.02	—	2000	2	15	70	50	30	500	10	<10	70	15	—	300	200	30	N	150	3	3	2	.3	
† 11	109	253	N	<.02	—	2000	2	15	70	100	30	500	15	<10	70	15	—	200	200	50	N	150	.5	3	1.5	.3	
† 12	110	254	N	<.02	—	1000	2	15	100	70	30	700	7	<10	70	15	—	300	200	50	N	150	1.5	3	2	.3	
† 13	111	265	N	<.02	—	1500	2	15	70	70	30	500	10	<10	70	15	—	300	150	30	N	100	3	3	1.5	.3	
† 14	112	266	N	<.02	—	1000	1	15	70	70	N	500	7	<10	50	15	—	200	200	20	N	70	3	2	1.5	.2	
† 15	203	67AB-229	N	<.02	—	700	1	15	70	50	30	500	N	10	30	20	—	200	150	30	N	100	7	2	1.5	.3	
† 16	113	67AE-267	N	<.02	—	1500	2	15	70	70	N	700	7	<10	50	20	—	200	150	30	N	100	3	2	1.5	.3	
† 17	204	67AB-230	N	<.02	—	700	1	15	70	50	30	500	N	10	30	20	—	200	150	30	N	100	5	3	1.5	.3	
x 18	ACG027	67AR 36	N	<.02	50	700	<1	10	70	15	20	300	5	<20	50	N	10	200	100	15	N	100	3	3	.7	.2	Bi<10
x 19	028	37	N	<.02	50	700	1	15	70	20	70	300	N	<20	30	N	15	500	100	15	N	150	10	5	1	.3	
x 20	026	35	N	<.02	70	700	1.5	15	70	30	30	300	N	<20	50	N	20	300	100	15	N	150	10	3	1	.3	Bi<10
x 21	123	67AE-23	N	<.02	50	700	1.5	30	150	30	20	500	N	<20	30	20	15	300	100	20	<200	150	7	3	1	.5	
x 22	117	17	N	<.02	50	700	1.5	20	150	30	20	1000	N	<20	70	N	15	N	150	15	<200	150	.7	3	.7	.3	
x 23	118	18	N	<.02	50	700	N	15	70	20	N	300	N	<20	30	15	15	500	70	15	N	100	7	3	1	.3	
x 24	021	67AR29	N	<.02	50	700	1	15	100	20	30	300	N	<20	30	10	20	2000	150	10	N	100	20	5	1.5	.3	
x 25	119	67AE-19	N	<.02	50	700	N	<10	70	20	N	200	N	<20	15	N	10	700	70	10	N	100	7	3	1	.2	
x 26	120	20	N	<.02	50	700	2	50	100	30	30	300	N	<20	30	20	20	500	150	15	N	150	3	5	1	.7	
† 27	821	67AM-218	N	<.02	—	700	1.5	15	100	30	30	700	N	10	30	15	--	500	100	30	N	150	5	3	2	.5	
† 28	820	217	N	<.02	—	1500	1.5	20	100	50	30	1000	N	10	50	15	—	150	150	20	N	150	3	2	1	3	
x 29	022	67AR 30	N	<.02	10	700	1	10	50	15	30	300	N	<20	20	N	15	100	70	7	N	150	1.5	3	.5	.3	
x 30	023	31	N	<.02	70	1000	2	20	150	30	30	1500	N	<20	70	N	30	150	150	15	N	150	.3	7	1	.5	
† 31	ACJ466	500	N	<.02	—	500	N	7	70	50	N	300	N	<10	30	15	—	300	70	15	N	100	1.5	3	2	.2	
† [illegible]2	465	499	N	<.02	—	700	1	15	70	30	30	1000	N	<10	15	15	—	700	150	30	N	100	1.5	3	2	.5	
† 33	462	496	N	<.02	—	500	N	15	50	30	N	1000	N	<10	15	10	—	300	100	20	200	200	1.5	3	2	.7	
† 34	463	497	N	<.02	—	700	1.5	15	70	50	N	1000	N	<10	30	20	—	200	100	30	N	150	1	2	2	.3	
† 35	460	494	N	<.1*	—	1000	1.5	20	100	70	30	1500	N	10	70	15	—	200	150	30	N	150	.7	3	2	.5	
† 36	461	495	N	<.1*	—	700	1.5	20	100	70	30	1500	N	10	70	20	—	200	150	20	N	100	1.5	3	3	.5	
† 37	459	493	N	<.02	—	1000	1.5	15	100	70	30	1000	3	10	70	15	—	200	150	30	N	200	1	3	2	.5	Sn <10
† 38	458	492	N	<.02	—	700	1.5	15	50	70	N	1000	N	<10	20	30	—	500	150	20	N	300	1.5	3	2	.3	
† 39	457	491	<1	<.02	—	700	1.5	15	70	70	N	1500	N	10	30	70	—	500	200	30	200	100	1.5	3	2	.7	Sn <10
† 40	456	490	<1	<.02	—	700	1.5	15	30	50	N	1000	N	<10	20	100	—	500	150	30	200	150	1.5	3	2	.5	
x 41	ACG121	67AE-21	N	<.02	50	500	1.5	15	70	30	30	300	N	<20	30	20	15	700	100	15	N	100	7	3	1	.3	
† 42	ACJ464	67AR498	1	<.02	—	700	2	30	70	150	30	1000	3	<10	70	70	—	500	150	50	200	150	1.5	3	2	.3	Sn <10
x 43	ACG024	32	N	<.02	70	700	2	15	150	20	20	300	N	<20	30	N	15	150	100	10	N	150	.7	3	.7	.2	
x 44	122	67AE-22	N	<.02	50	1500	2	20	150	50	30	200	20	<20	50	15	15	100	200	20	200	150	1.5	3	.7	.3	
x 45	025	67AR34	N	<.02	70	700	2	20	150	20	30	700	N	<20	50	N	20	200	100	15	N	150	1.5	5	1	.3	
x 46	096	124	N	<.02	70	—	1	10	150	20	30	300	N	<20	30	10	20	300	100	15	N	100	7	3	1.5	.3	
x 47	095	123	N	<.02	70	—	2	10	150	20	30	500	N	<20	30	30	20	100	100	15	N	100	3	3	1.5	.5	
† 48	ACJ205	67AB-231	N	<.02	-	150	N	3	30	15	N	200	N	N	7	N	—	3000	70	<10	N	20	M	.7	1.5	.15	
x 49	ACG097	67AR125	N	.2	70	—	1	10	150	20	30	300	N	<20	50	20	20	300	100	10	N	100	7	3	1.5	.3	
x 50	098	126	N	.1	70	—	1	10	150	30	30	300	N	<20	50	N	20	150	100	15	N	100	5	3	1.5	.3	
x 51	099	127	N	.3	70	—	N	10	150	20	30	300	N	<20	50	10	20	300	100	15	N	100	7	3	1.6	.3	
x 52	100	128	N	<.02	70	1000	2	15	50	30	N	200	10	<20	30	N	7	N	150	10	N	70	1	3	.7	.15	
x 53	402	130	N	<.02	100	1000	2	10	100	50	N	300	15	<20	70	20	15	300	150	20	200	150	10	5	1.5	.2	
x 54	401	129	N	<.02	100	1000	2	50	150	50	N	700	7	<20	100	20	20	700	150	20	300	150	15	7	2	.3	
x 55	403	131	N	<.02	100	700	3	20	150	30	30	500	N	20	N	30	20	200	100	30	<200	150	7	7	1.5	.5	
x 56	404	132	N	<.02	100	700	1.5	30	150	50	20	2000	N	<20	100	N	20	300	150	30	<200	150	7	10	.7	.5	
x 57	406	134	N	<.02	70	500	1	N	100	30	N	300	N	<20	30	10	10	1000	70	15	N	100	>20	3	2	.15	
x 58	405	133	N	<.02	70	500	1	N	150	20	20	200	N	<20	30	N	10	700	100	20	N	150	20	5	1.5	.15	
x 59	407	135	N	<.02	100	700	2	15	100	30	30	500	N	<20	30	30	20	200	100	20	N	70	5	7	1.5	.3	
x 60	408	136	N	<.02	100	700	1.5	20	150	30	50	300	N	<20	50	20	30	200	100	20	N	150	7	10	2	.7	
x 61	410	138	N	<.02	100	700	2	15	100	30	30	300	N	<20	30	30	20	100	100	30	<200	150	1.5	7	1.5	.7	
x 62	409	137	N	<.02	70	500	1.5	10	100	30	30	300	N	<20	30	20	20	100	70	20	N	150	7	5	1.5	.3	
x 63	413	141	N	<.02	70	700	2	15	150	30	30	200	N	<20	30	20	20	300	100	20	N	150	15	7	2	.5	
x 64	412	140	N	<.02	70	700	1	10	100	15	<20	300	N	<20	30	30	15	300	100	15	N	100	15	7	2	.3	
x 65	416	144	N	<.02	50	500	1	15	150	30	20	300	N	<20	30	20	15	300	70	20	N	100	7	7	3	.5	
x 66	415	143	N	<.02	50	700	2	15	100	30	20	300	N	<20	30	20	15	150	100	20	N	150	3	5	2	.5	
x 67	414	142	N	<.02	50	500	1.5	N	70	30	<20	200	N	<20	15	20	10	300	70	20	N	100	15	3	2	.3	
† 68	ACJ214	67AB-240	N	<.02	—	1500	1	20	150	70	30	1500	N	10	70	30	—	300	200	30	N	150	.7	3	1.5	.3	
† 69	216	242	N	<.02	—	1500	1	15	150	70	30	1500	N	10	70	20	—	200	200	30	N	150	.7	3	1.5	.3	
† 70	217	243	N	<.02	—	1500	1	20	150	70	30	3000	N	10	70	20	—	200	200	30	N	150	.7	3	1.5	.3	

Table 2.--Semiquantitative spectrographic [illegible] analyses of stream-sediment samples in area 3.

(Analysts: [illegible] Campbell, L. M. Conklin, Arnold Farley, Jr., [illegible] Hamilton, [illegible] Miller, R. G. Neiman, T. A. Roemer. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but [illegible] the limits of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 2

Sample No.	Lab. No.	Field No.	Ag	Au [1]	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 71	ACJ218	67AM-[illegible]	N	<.02	—	1500	1	20	150	70	30	2000	N	10	70	20	—	200	150	30	N	150	.7	3	1.5	.3	
† 72	114	67AM-26[illegible]	N	<.02	—	1500	1	20	100	70	30	3000	N	<10	70	20	—	150	150	30	N	150	.7	3	1.5	.3	
† 73	115	269	N	<.02	—	1500	1	20	70	70	30	3000	N	<10	70	20	—	150	150	30	N	150	.7	3	1.5	.3	
† 74	116	270	N	<.02	—	1500	N	15	100	70	30	3000	N	<10	70	20	—	150	150	30	N	150	1	3	1.5	.3	
† 75	117	271	N	<.02	—	1500	1	20	100	100	30	3000	N	<10	70	20	—	150	150	30	N	150	.7	3	1.5	.3	
† 76	118	272	N	<.02	—	1500	1	15	70	70	N	1500	N	<10	30	20	—	300	150	30	N	100	3	3	1.5	.3	
† 77	119	273	N	<.02	—	1500	1	20	70	70	30	3000	N	<10	70	20	—	150	150	30	N	150	.3	3	1.5	.3	
† 78	120	274	N	<.02	—	1500	1	20	100	70	30	1500	N	<10	70	20	—	150	150	30	N	150	.5	3	1.5	.3	
† 79	122	276	N	<.02	—	1500	1	15	100	70	30	2000	N	<10	70	20	—	150	150	30	N	150	.7	3	1.5	.7	
† 80	121	275	N	<.02	—	1500	1	20	100	70	30	1500	N	<10	50	20	—	150	150	30	N	150	.7	3	1.5	.3	
† 81	123	277	N	<.02	—	1500	1	15	100	70	30	1500	N	10	50	20	—	150	150	30	N	150	.7	3	1.5	.7	
† 82	124	278	N	<.02	—	1500	1	30	100	150	30	2000	N	10	50	20	—	300	150	50	N	150	3	5	3	2	
† 83	125	279	N	<.02	—	1500	1	15	100	70	30	2000	N	10	70	20	—	150	150	30	N	150	.7	3	1.5	.5	
† 84	126	280	N	<.02	—	1500	1	20	150	100	30	3000	N	10	70	20	—	150	150	30	N	150	.5	3	1.5	.3	
† 85	127	281	N	<.02	—	1500	1	15	150	70	30	1500	N	10	70	15	—	150	150	30	N	150	.7	3	1.5	.7	
† 86	ACG895	67AM-290	N	<.02	—	1500	1.5	20	150	70	N	700	N	<10	70	15	—	150	150	30	N	150	.7	3	2	.5	
† 87	896	291	N	<.02	—	1500	1	20	150	70	N	1000	N	<10	70	30	—	150	150	30	N	150	.7	3	1.5	.3	
† 88	897	292	N	<.02	—	1500	1.5	20	150	100	30	1000	N	<10	70	20	—	150	200	30	N	150	.5	3	1.5	.5	
† 89	898	293	N	<.02	—	1500	1	20	150	70	30	1000	N	<10	70	30	—	150	150	30	N	150	.5	3	1.5	.5	
† 90	899	294	N	<.02	—	1500	1	15	150	100	30	700	N	<10	70	30	—	150	150	30	N	150	.5	3	1.5	.3	
† 91	900	295	N	<.02	—	1500	1	15	150	70	N	700	N	<10	70	30	—	150	150	30	N	150	.5	3	1.5	.3	
† 92	ACJ301	296	N	<.02	—	1500	1	15	150	70	30	700	N	10	70	20	—	150	150	30	N	150	.3	3	2	.3	
† 93	308	303	N	<.02	—	300	N	10	70	50	30	300	N	N	30	10	—	1500	100	15	N	50	>10	1.5	2	.2	
† 94	307	302	N	<.02	—	500	N	7	70	50	N	300	N	<10	30	10	—	1500	70	10	N	50	>10	1.5	1.5	.2	
† 95	309	304	N	<.02	—	700	N	10	1000	50	30	300	N	N	20	15	—	1500	70	15	N	70	>10	2	2	.3	
† 96	310	305	N	<.02	—	700	N	10	70	50	N	300	N	N	20	15	—	1500	100	15	N	70	>10	1.5	2	.3	
† 97	311	306	N	<.02	—	500	N	15	70	50	30	500	N	N	30	15	—	1500	150	15	N	100	>10	3	3	.3	
† 98	312	307	N	<.02	—	500	N	10	100	50	30	500	N	N	30	10	—	2000	100	20	N	70	>10	2	3	.3	
† 99	313	308	N	<.02	—	700	N	15	70	50	50	300	N	N	30	15	—	700	150	30	N	70	10	2	2	.3	
† 100	314	309	N	<.02	—	700	N	15	70	50	30	300	N	N	30	15	—	1500	150	30	N	70	>10	2	3	.3	
† 101	315	310	N	<.02	—	700	N	15	150	70	30	300	N	<10	50	15	—	500	150	30	N	100	5	3	3	.3	
† 102	316	311	N	<.02	—	700	1	15	150	70	30	500	N	<10	50	15	—	700	200	30	N	150	7	3	3	.3	
† 103	317	312	N	<.02	—	700	N	7	70	30	N	300	N	N	20	10	—	1500	70	15	N	70	>10	1.5	2	.3	
† 104	318	313	N	<.02	—	700	1	15	70	70	30	500	N	<10	30	15	—	2000	150	30	N	100	>10	3	2	.3	
x 105	ACG435	67AR163	N	<.02	30	500	N	15	100	20	N	150	N	<20	20	N	15	1000	70	10	N	50	15	3	2	.5	
† 106	887	67AM-282	N	<.02	—	1500	1	15	150	70	30	1000	N	N	70	50	—	150	150	30	N	150	.3	3	1.5	.3	
† 107	889	284	N	<.02	—	1500	1	15	150	70	30	1000	N	<10	70	20	—	150	150	30	N	150	.3	3	1.5	.3	
† 108	888	283	N	<.02	—	1000	2	20	150	100	30	1000	N	<10	70	30	—	150	150	50	N	150	.7	3	2	.3	
† 109	891	286	N	<.02	—	1500	1	15	150	70	30	1000	N	<10	70	15	—	150	150	30	N	150	.3	3	1.5	.3	
† 110	890	285	N	<.02	—	700	3	15	70	50	30	700	N	<10	50	20	—	150	100	50	N	100	.7	2	1.5	.3	
† 111	892	287	N	<.02	—	1500	1	15	150	70	30	1000	N	<10	70	15	—	150	150	30	N	150	.3	3	1.5	.3	
† 112	893	288	N	<.02	—	1500	1	20	150	100	30	1500	N	10	70	15	—	200	150	50	N	150	.7	3	1.5	.5	
† 113	894	289	N	<.02	—	1500	1	15	150	70	30	700	N	<10	70	15	—	150	150	30	N	150	.3	3	1.5	.3	
† 114	ACJ086	67AR401	N	<.1*	—	70	N	N	15	7	N	1500	N	N	7	N	—	1000	7	N	N	N	>10	2	.15	.02	
x 115	ACG431	159	N	<.02	30	300	N	10	50	15	20	150	N	<20	20	N	10	700	70	5	N	70	15	2	1.5	.15	
† 116	ACJ305	67AM-3[illegible]	N	<.02	—	1500	1	30	150	150	30	3000	N	<10	100	20	—	200	150	30	N	100	.3	3	1	.3	
x 117	ACG430	67AR158	N	<.02	30	300	N	<10	50	10	N	150	N	<20	10	30	7	700	70	<5	N	20	20	1.5	1.5	.1	
† 118	ACJ304	67AM-299	N	<.02	—	500	3	5	20	7	30	500	N	<10	20	20	—	70	30	70	N	70	.5	1	.3	.1	
† 119	303	298	N	<.02	—	700	1	15	100	70	70	500	N	<10	30	15	—	700	150	30	N	100	5	3	1.5	.3	
† 120	302	297	N	<.02	—	700	N	10	100	70	30	300	N	<10	30	15	—	500	150	20	N	70	5	2	2	.3	
x 121	ACG429	67AR157	<.5	<.02	70	700	N	15	150	20	N	700	N	<20	30	100	15	700	100	10	N	30	15	5	1	.2	
† 122	ACJ088	403	N	<.02	—	300	N	30	500	150	N	1000	N	N	300	10	—	150	150	15	N	70	3	5	7	.3	
x 123	ACG417	145	N	<.02	70	500	N	10	70	30	70	300	N	<20	30	10	10	700	100	15	N	100	15	5	1.5	.2	
x 124	418	146	N	<.02	50	500	N	<10	70	20	N	200	N	<20	15	300	7	1000	70	10	N	100	>20	2	1.5	.15	
x 125	419	147	N	<.02	70	500	1	20	100	30	N	300	N	<20	30	20	15	200	100	15	N	150	7	7	1.5	.7	
x 126	420	148	N	<.02	70	700	1	N	100	30	N	500	N	<20	50	200	N	200	100	20	N	150	7	7	1.5	.7	
† 127	ACJ206	67AM-232	N	<.02	—	700	N	10	70	50	N	300	N	N	20	15	—	1500	70	15	N	70	>10	1.5	1.5	.2	
† 128	207	233	N	<.02	—	700	1	15	70	70	30	500	N	<10	30	20	—	300	150	30	N	150	3	3	3	.3	
† 129	208	234	N	<.02	—	300	N	5	70	30	N	200	N	N	15	10	—	2000	70	10	N	70	>10	1	2	.15	
† 130	209	235	N	<.02	—	200	N	3	30	20	N	200	N	N	10	10	—	2000	50	10	N	20	>10	7	3	.15	
† 131	210	236	N	<.02	—	300	N	3	70	20	N	200	N	N	15	N	—	3000	70	10	N	30	>10	1	2	.15	
† 132	212	238	N	<.02	—	300	N	5	50	30	N	200	N	N	15	10	—	1500	70	10	N	50	>10	.7	1.5	.15	
† 133	211	237	N	<.02	—	500	N	7	70	30	N	300	N	N	20	15	—	700	70	15	N	70	>10	1.5	1.5	.3	
† 134	213	239	N	<.02	—	1500	1	15	100	70	30	1500	N	10	70	20	—	150	150	30	N	150	.7	3	1.5	.3	
x 135	ACG421	67AR149	N	<.02	70	700	N	15	150	30	N	500	N	<20	30	50	30	1000	150	15	N	100	15	7	2	.3	
x 136	424	152	N	<.02	50	700	N	20	150	30	20	700	N	<20	30	N	15	300	150	7	N	70	5	7	1.5	.3	
x 137	425	153	N	<.02	50	700	N	20	150	50	N	700	N	<20	30	10	30	200	200	20	<200	100	1.5	7	1.5	.5	
x 138	427	155	N	<.02	50	1000	N	30	200	70	N	700	N	30	500	N	30	200	200	15	<200	100	3	10	1.5	1	
† 139	ACJ089	405	N	<.02	—	700	3	5	30	20	N	500	N	N	15	15	—	150	150	30	N	100	3	.7	.7	.1	
† 140	091	408	N	<.02	—	1500	1	15	150	100	N	700	N	N	70	10	—	150	200	30	N	100	3	3	2	.3	

Table 2.--Semiquantitative spectrographic analyses and gold analyses of stream-sediment samples in area 3.

(Analysts: [illegible] Campbell, [illegible] Conklin, Arnold Farley, Jr., [illegible] L. Finley, [illegible] J. Grimes, J. C. Hamilton, [illegible] L. Meier, R. L. Miller, [illegible] Heiman, [illegible] Somer. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 2.

Sample No.	Lab. No.	Field No.	Ag	Au[1]	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 141	ACJ094	67AR411	N	<.02	—	1500	1	15	150	70	30	300	N	N	70	10	—	150	200	30	N	150	3	3	1.5	.3	
† 142	092	409	N	<.02	—	1500	1	20	150	100	30	1500	N	<10	70	15	—	150	150	30	N	150	.3	3	1.5	.3	
† 143	093	410	N	<.02	—	1500	2	20	150	70	30	1000	7	<10	70	15	—	200	200	30	N	150	.7	3	1.5	.3	
† 144	289	67ABu314	N	<.02	70	1000	N	15	150	70	30	500	N	<10	50	15	20	150	150	30	N	100	3	3	2	.3	
† 145	290	315	N	<.02	50	700	N	30	150	100	N	700	N	10	70	<10	30	200	300	30	N	150	3	5	3	.7	
† 146	291	316	N	<.02	70	1000	N	30	150	100	N	700	3	10	70	<10	30	200	300	30	N	100	3	3	3	.7	
† 147	293	318	N	<.02	70	1000	1	15	70	70	30	500	3	10	50	10	20	200	150	30	N	70	3	2	2	.3	
† 148	292	317	N	<.02	100	1500	1	15	70	50	30	300	3	10	50	15	15	150	150	30	N	100	2	2	1.5	.2	
† 149	294	319	N	<.02	70	1000	1	20	150	70	N	700	3	<10	70	10	30	200	200	30	N	70	3	3	3	.5	
† 150	295	320	N	<.02	70	1000	1	20	150	70	30	700	5	<10	70	15	30	150	150	30	N	100	1.5	3	2	.3	
† 151	296	321	N	<.02	100	1000	1.5	15	70	50	30	300	5	<10	70	15	15	150	150	30	N	100	2	3	1.5	.3	
† 152	297	322	N	<.02	70	1000	N	15	100	70	N	500	N	<10	70	10	20	150	150	15	N	70	2	3	2	.3	
† 153	288	313	N	<.02	30	1000	N	15	150	100	N	700	N	10	50	15	30	200	150	30	N	100	3	3	3	.3	
† 154	287	312	N	<.02	30	1000	N	20	300	100	N	700	3	10	70	15	30	200	150	30	N	70	3	3	3	.5	
† 155	286	311	N	<.02	70	1000	1	15	100	70	N	300	N	10	30	15	20	200	150	30	N	150	5	2	3	.3	
† 156	355	67AR341	N	<.02	70	700	1	15	100	70	N	500	N	<10	70	15	15	700	150	30	N	100	5	3	3	.3	
† 157	354	340	N	<.02	150	1000	1.5	15	150	70	30	300	3	<10	70	20	20	150	200	30	N	200	2	3	1.5	.3	
† 158	356	342	N	<.02	150	1000	1.5	15	150	70	30	300	5	10	100	20	15	150	200	30	N	150	2	3	1.5	.3	
† 159	353	339	N	<.02	100	1000	1	15	100	70	30	700	N	<10	70	15	20	150	150	30	N	150	3	3	2	.3	
† 160	352	338	N	<.02	150	1000	1.5	15	100	70	30	300	3	<10	70	15	15	150	150	30	N	150	3	3	1.5	.3	
† 161	357	343	N	<.02	70	700	1	15	150	70	N	700	N	<10	70	15	20	500	150	30	N	150	3	3	3	.3	
† 162	358	344	N	<.02	150	1000	1.5	15	100	70	30	500	3	10	70	15	15	100	150	30	N	150	.5	3	1.5	.3	
† 163	359	345	N	<.02	70	1000	1.5	20	70	70	30	700	7	10	70	15	30	150	200	50	N	150	1.5	3	2	.5	
† 164	360	346	N	<.02	70	500	1.5	15	70	70	N	300	N	<10	50	15	15	200	100	15	N	70	3	2	3	.3	
† 165	361	347	N	<.02	70	700	1.5	15	70	70	30	700	3	<10	70	15	20	200	150	30	N	70	.7	3	2	.5	
† 166	362	348	N	<.02	70	700	1.5	15	70	70	30	300	N	<10	70	20	15	150	150	20	300	70	3	3	3	.3	
† 167	363	349	N	<.02	70	1500	1.5	15	70	50	30	500	3	<10	70	30	15	150	150	30	300	100	2	3	1.5	.3	
† 168	364	350	N	<.02	70	1000	1	20	200	70	30	300	3	10	70	15	30	150	200	30	N	70	2	3	3	.3	
† 169	ACJ131	67AE287	N	<.02	—	1000	1	30	150	70	<30	700	7	<10	150	10	—	150	150	20	500	200	2	5	2	.3	
† 170	130	286	N	<.02	—	1500	1	15	100	70	30	300	5	<10	70	10	—	200	150	20	200	200	.5	3	.7	.3	
† 171	132	288	N	<.02	—	1500	1.5	15	100	50	30	300	7	<10	70	10	—	200	150	30	200	200	.3	3	.7	.3	
† 172	133	289	N	<.02	—	1500	1.5	30	150	50	30	700	5	<10	150	15	—	150	150	30	300	150	.7	3	1	.5	
† 173	427	67AR430	N	<.02	—	1500	1.5	20	150	70	<30	500	7	<10	100	10	—	200	150	20	300	150	.7	3	1.5	.3	
† 174	430	434	N	<.02	—	1500	1.5	15	100	70	50	700	3	10	50	15	—	200	150	30	N	200	.3	2	.7	.5	
† 175	429	432	N	<.02	—	1500	1.5	15	100	70	<30	500	3	<10	50	10	—	500	150	20	N	150	3	3	.7	.3	
† 176	428	431	N	<.02	—	1000	1	10	70	50	N	300	N	<10	50	10	—	500	100	20	N	150	10	2	.5	.3	
† 177	426	429	N	<.02	—	1500	1	20	100	70	N	700	5	<10	150	10	—	200	150	20	300	150	2	3	1.5	.3	
† 178	366	67AR352	N	<.02	70	1500	1	15	70	30	30	700	3	10	70	15	10	150	100	20	N	70	1.5	2	.7	.2	
† 179	365	351	N	<.02	70	1000	1.5	15	150	70	30	300	3	10	70	15	15	100	150	30	N	100	1.5	3	3	.3	
† 180	367	353	N	<.02	70	1000	1.5	15	100	50	30	500	N	10	70	15	15	150	100	30	N	100	.3	2	.7	.3	
† 181	368	354	N	<.02	70	1000	1.5	15	70	70	30	700	N	10	70	15	15	150	150	30	N	100	.7	2	.7	.3	
† 182	369	355	N	<.02	70	300	N	30	70	200	N	700	N	10	70	15	30	200	150	30	N	30	3	5	3	.5	
† 183	370	356	N	<.02	70	1000	1.5	30	150	100	30	500	3	10	100	15	15	150	150	30	N	100	1.5	2	3	.3	
† 184	371	357	N	<.02	70	1000	1.5	15	70	70	30	500	N	<10	70	15	15	150	100	30	N	100	.7	2	1	.3	
† 185	372	358	N	<.02	70	1000	1.5	15	70	70	30	500	N	10	70	15	15	150	100	30	N	150	.7	2	1.5	.3	
† 186	373	359	N	<.02	70	1000	1	15	70	70	N	700	N	<10	70	15	15	150	150	30	300	100	.7	3	1.5	.3	
† 187	374	360	N	<.02	100	1000	3	30	100	150	50	3000	3	15	70	15	30	150	200	50	N	150	.7	3	3	.5	
† 188	375	361	N	<.02	70	1000	1	15	100	70	30	700	N	<10	70	15	20	200	150	30	N	100	.7	3	3	.5	
† 189	376	362	N	<.02	70	1000	1	15	100	70	30	700	N	<10	70	15	20	200	150	30	N	100	5	3	3	.5	
† 190	377	363	<1	<.02	70	2000	1.5	15	70	70	30	500	7	<10	70	20	15	300	150	30	700	150	7	1.5	1.5	.3	
† 191	378	365	N	<.02	70	2000	1.5	15	70	70	30	700	7	10	30	15	15	150	100	30	300	150	3.0	1.5	1.5	.3	
† 192	379	366	N	<.02	70	2000	1.0	20	70	150	30	1000	3	10	50	30	30	150	150	30	N	100	1.5	3.0	1.5	.7	
† 193	380	368	N	<.02	100	2000	1.5	20	100	100	30	1000	3	10	70	15	15	150	150	30	N	150	.7	3.0	1.5	.3	
† 194	381	369	N	<.02	70	1500	1.0	15	70	70	50	700	5	10	30	15	15	150	150	30	N	150	.7	1.5	1.5	.3	
† 195	382	371	N	<.02	70	1500	1.0	20	70	70	30	1500	3	10	70	15	15	150	150	30	300	100	.3	2.0	1.0	.3	
† 196	383	372	N	<.02	70	1500	1.5	15	70	100	30	700	3	10	70	15	15	150	150	30	200	100	.3	2.0	1.5	.3	
† 197	384	373	N	<.02	100	1000	1.5	30	150	150	30	1000	3	15	70	15	20	150	200	30	200	150	.7	3.0	2.0	.5	
† 198	385	374	N	<.02	70	2000	1.5	30	100	150	30	1000	7	15	100	15	15	200	200	50	700	150	3.0	3.0	1.5	.3	
† 199	387	376	N	<.02	100	1000	1.5	30	150	150	30	1500	3	15	70	20	20	150	150	30	N	150	.5	3.0	2.0	.5	
† 200	386	375	N	<.02	70	1500	1.5	30	150	70	30	1500	7	15	100	20	15	150	200	50	300	150	3.0	3.0	1.5	.5	
† 201	388	377	N	<.02	100	1500	1.5	N	100	150	30	1500	5	15	70	20	20	150	150	80	300	150	2.0	3.0	2.0	.5	
† 202	389	378	N	<.02	100	2000	1.5	N	100	70	30	1000	7	15	100	15	20	150	200	30	700	150	.7	3.0	1.5	.3	
† 203	390	379	N	<.02	100	700	N	N	70	150	N	1500	N	15	50	15	15	100	100	20	300	100	.7	2.0	1.5	.3	
† 204	391	380	N	<.02	70	1000	1.5	30	150	70	70	500	3	30	70	30	15	200	150	70	N	150	1.5	5.0	1.5	.7	
† 205	393	382	N	<.02	100	1000	1.5	30	150	150	30	1500	3	15	70	15	15	150	150	30	N	70	1.5	3.0	2.0	.5	
† 206	392	381	N	<.02	70	1000	1.5	30	100	100	30	1500	3	15	70	15	30	150	150	30	N	70	3.0	3.0	3.0	.5	
† 207	394	383	N	<.02	70	1000	1.5	30	100	100	30	1500	3	15	70	15	30	150	200	30	N	70	3.0	3.0	3.0	.7	
† 208	395	384	N	<.02	100	2000	1.5	30	100	100	70	700	7	15	100	30	15	200	200	30	700	100	.7	3.0	1.5	.5	
† 209	396	385	N	<.02	70	1000	1.5	30	100	100	30	1500	3	15	70	15	50	150	200	30	300	150	3.0	3.0	3.0	.5	
† 210	397	386	N	<.02	70	1000	1.5	30	150	100	30	1500	3	15	70	15	30	200	200	30	200	100	3.0	3.0	3.0	.5	

Table 2.--Semiquantitative [illegible]

[Analysts: [illegible] Campbell, [illegible] Conklin, [illegible] Hamilton, [illegible] Miller, [illegible]. Analyses, unless noted, are semiquantitative [illegible] and are reported in the series 0.1, 0.15, 0.2, [illegible], 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. [illegible] of determination are given at the end of the table.]

Table 2.

Sample No	Lab. No.	Field No.	Ag	Au [1]	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 211	ACJ 398	67AMa387	N	<.02	70	1000	1.0	30	150	100	30	1500	3	<10	70	15	30	200	200	30	N	70	3.0	3	3.0	.7	
† 212	399	388	N	<.02	100	1000	3.0	20	70	30	70	1000	5	15	50	30	20	150	150	30	300	300	.7	3	1.5	.7	
† 213	400	389	N	<.02	70	1000	1.5	20	70	70	N	2000	5	10	70	15	30	150	300	30	300	150	2.0	3	2.0	5	
† 214	334	321	N	<.02	150	2000	1.5	15	150	70	30	500	3	15	70	20	20	150	150	30	300	200	.7	3	1.5	.3	
† 215	333	320	N	<.02	150	1500	1.5	15	100	70	30	700	3	10	70	20	15	150	150	30	300	150	1.0	3	1.5	.3	
† 216	331	318	N	<.02	150	2000	1.5	15	150	100	30	700	5	15	70	30	15	150	150	30	300	200	.7	3	1.5	.3	
† 217	332	319	N	<.02	150	2000	1.5	20	100	100	30	700	5	15	70	20	20	150	200	50	300	150	.5	3	1.5	.3	
† 218	329	316	N	<.02	150	2000	1.5	15	70	10	30	700	5	15	50	15	15	150	200	30	300	150	.5	3	1.5	.2	
† 219	330	317	N	<.02	150	3000	1.5	15	100	70	30	700	5	15	70	15	20	150	150	30	200	150	.7	3	1.5	.2	
† 220	328	315	N	<.02	150	3000	1.5	15	70	70	30	500	5	15	70	20	15	150	150	30	300	200	.5	3	1.5	.2	
† 221	327	314	N	<.02	100	1500	1.5	15	100	70	30	500	3	15	70	20	15	150	150	30	N	150	1.5	3	1.5	.3	
† 222	325	312a	N	<.02	100	3000	1.5	15	70	100	30	700	3	15	50	15	15	150	150	30	300	150	.7	3	1.5	.3	
† 223	326	313a	N	<.02	100	3000	1.5	15	70	100	30	500	3	15	70	15	15	150	150	30	700	150	.5	3	1.5	.3	
† 224	324	311a	N	.04	100	3000	1.5	15	70	100	30	700	3	15	70	15	15	150	150	30	200	200	.7	3	1.5	.3	
† 225	322	309a	N	<.02	70	7000	1.5	15	100	100	30	700	5	15	70	20	15	150	150	30	300	200	.7	3	1.5	.3	
† 226	323	310a	N	<.02	70	2000	1.5	15	70	100	30	700	3	15	70	15	15	150	150	30	700	150	.7	3	1.0	.3	
† 227	320	307a	N	<.02	150	1500	1.0	15	70	70	30	700	3	15	30	20	15	100	100	30	N	150	.5	2.0	1.5	3	Sn 10
† 228	321	308a	N	—	150	1500	1.5	15	70	70	70	700	3	15	30	20	15	100	100	30	N	150	.5	2.0	1.5	.3	
† 229	319	306a	N	<.02	150	1500	1.5	15	70	70	50	700	3	15	50	30	20	150	100	30	N	150	1.5	3.0	1.5	.3	
† 230	285	67ABu310	N	<.02	70	700	N	7	50	30	N	300	N	N	20	10	15	200	70	15	N	70	10	1.5	1.5	.15	
† 231	ACJ 351	67AMa337	N	<.02	70	1500	1.5	20	150	100	30	700	5	10	150	15	20	200	150	30	N	200	1.5	3.0	2.0	.3	
† 232	350	336	N	<.02	70	1000	1.0	15	100	100	30	500	N	<10	30	15	20	200	150	30	N	150	3.0	3.0	1.5	.3	
† 233	349	335	N	<.02	70	1500	1.0	15	150	100	30	700	3	<10	70	15	20	200	150	30	N	150	3.0	3.0	1.5	.3	
† 234	347	334	N	<.02	100	7000	1.5	15	100	70	30	500	3	10	70	15	15	200	150	30	N	150	3.0	3.0	1.5	.3	
† 235	346	333	N	<.02	70	1000	1.0	15	70	70	30	500	3	<10	30	15	20	200	150	30	N	150	3.0	3.0	1.5	.3	
† 236	345	332	N	<.02	70	1500	1.0	15	70	70	50	500	3	<10	50	15	15	200	150	30	N	150	3.0	3.0	1.5	.3	
† 237	284	67ABu309	N	<.02	100	1000	1.0	15	70	50	30	300	N	<10	30	15	20	150	150	30	N	200	2.0	3.0	1.5	.3	
† 238	344	67AMa331	N	<.02	70	1500	1.5	20	150	70	30	700	5	<10	100	15	20	200	200	30	N	150	3.0	5.0	2.0	.2	
† 239	343	330	<1	<.02	70	3000	1.5	15	150	70	30	700	5	10	70	15	15	200	200	30	500	150	3.0	3.0	2.0	3	
† 240	281	67ABu306	N	<.02	30	700	N	15	100	70	N	300	N	<10	30	N	30	200	150	30	N	70	7.0	2.0	2.0	3	
† 241	282	307	N	<.02	100	1000	1	15	70	70	30	300	3	15	30	15	20	200	200	30	N	150	3.0	3.0	1.5	.3	
† 242	283	308	N	<.02	50	700	N	10	70	50	N	300	N	N	30	<10	15	200	150	20	N	70	10.0	2.0	1.5	.2	
† 243	342	67AMa329	<1	<.02	100	1500	1.5	15	150	70	N	700	3	10	50	30	20	200	200	30	200	150	3.0	3.0	1.5	.5	
† 244	341	328	N	<.02	150	1000	1.5	15	70	70	30	500	3	10	50	20	20	200	150	30	N	150	3.0	3.0	1.5	.3	
† 245	280	67ABu305	N	<.02	70	1500	1.0	30	70	100	30	1000	N	10	150	15	15	150	150	30	1500	70	.7	7.0	.7	.2	
† 246	279	304	N	<.02	70	1000	1.0	15	100	70	30	300	N	10	30	10	20	200	150	30	N	150	5.0	3.0	2.0	.3	
† 247	276	301	N	<.02	100	1500	1.0	15	70	50	30	300	3	10	30	15	15	150	150	30	N	150	1.0	3.0	1.5	.3	
† 248	277	302	N	<.02	70	1000	1.0	15	70	70	30	300	N	10	30	<10	30	200	150	30	N	150	3.0	3.0	1.5	5	
† 249	278	303	N	<.02	70	2000	1.0	15	70	50	30	300	3	<10	30	10	15	200	150	30	N	150	3.0	2.0	1.5	.3	
† 250	340	67AMa327	N	<.02	70	5000	1.5	15	70	70	30	500	3	15	50	15	20	200	150	30	N	150	1.0	3.0	1.5	.3	
† 251	339	326	N	<.02	70	1500	1.5	15	70	70	30	500	3	15	70	15	15	150	150	30	N	150	2.0	3.0	1.5	.3	
† 252	ACJ 275	67ABu300	N	<.02	70	1000	1.5	15	100	70	30	300	3	10	50	15	30	200	150	30	N	150	2.0	3.0	2.0	.5	
† 253	338	67AMa325	N	<.02	70	1500	1.5	15	100	70	30	500	3	15	50	15	15	150	150	30	N	150	.7	3.0	1.0	.3	
† 254	337	324	N	<.02	70	1000	1.5	15	100	70	30	500	3	15	50	15	20	150	150	30	200	150	.5	3.0	1.0	3	
† 255	336	323	N	<.02	150	1500	1.5	15	150	70	30	500	3	15	50	15	20	150	150	30	N	200	1.5	3.0	1.5	3	
† 256	274	67ABu299	N	<.02	70	1500	1.0	15	70	70	30	300	3	<10	50	15	30	150	150	30	N	150	.7	3.0	1.5	.3	
† 257	273	298	N	<.02	70	1500	1.0	20	100	70	30	300	3	<10	30	15	30	200	150	30	N	150	1.0	3.0	1.5	.3	
† 258	335	67AMa322	N	<.02	150	1000	1.5	15	150	70	30	500	3	15	70	15	20	150	150	30	300	200	1.5	3.0	1.5	.3	
† 259	272	67ABu297	N	<.02	100	7000	1.0	20	70	150	50	700	7	10	70	30	20	150	150	50	300	200	.3	2.0	1.5	.3	
† 260	505	67AMa392	N	<.02	—	700	7.0	5	30	20	<30	700	5	15	7	15	—	70	100	70	N	100	.3	1.5	.7	.15	Sn 15
† 261	504	391	N	<.02	—	1500	1.5	20	100	100	30	1000	N	<10	70	15	—	150	150	30	200	200	1.5	3.0	2.0	.5	
† 262	503	390	N	<.02	—	1000	1.5	30	100	150	50	1500	N	10	70	15	—	200	200	30	N	200	1.0	3.0	2.0	.7	
† 263	422	67AR419	N	<.02	—	1500	1.5	7.0	30	50	<30	300	3	<10	30	<10	—	200	150	20	N	150	3.0	2.0	1.0	.3	
† 264	421	418	N	<.02	—	1500	1.5	7.0	30	70	N	300	3	<10	30	<10	—	150	100	20	N	150	.5	2.0	.7	.3	
† 265	507	67AMa394	N	<.02	—	150	7	N	2	1.5	30	300	N	15	N	30	—	15	70	150	N	200	.3	.7	.07	.05	Sn 10
† 266	253	67ABu278	N	<.02	50	1500	1.5	15	70	70	50	500	3	15	50	15	30	150	150	50	N	200	1.5	3.0	1.5	.3	
† 267	254	279	N	<.02	30	1500	1.5	15	70	70	30	700	3	15	50	15	30	150	150	30	N	150	1.0	2.0	1.0	.3	
† 268	255	280	N	<.02	30	1500	1.0	30	100	70	30	1500	3	10	70	30	20	200	150	30	300	150	3.0	3.0	1.5	.3	
† 269	256	281	N	<.02	50	1500	1.5	50	100	70	50	1500	7	15	150	30	30	200	150	30	700	300	.5	3.0	1.5	.3	
† 270	257	282	N	<.02	50	1500	1.0	15	100	70	30	500	7	15	70	15	30	150	150	30	N	150	.3	5.0	1.5	3	
† 271	252	277	N	<.02	100	300	3	3	20	15	70	700	N	30	15	30	15	30	50	300	N	300	.5	1.5	.3	.15	
† 272	251	276	N	<.02	100	2000	7	20	50	70	30	1500	7	15	70	20	30	150	150	150	700	150	.7	3.0	1.0	.3	
† 273	258	283	N	<.02	50	1500	1	15	70	100	30	700	3	10	70	15	20	200	150	30	N	150	.7	3.0	1.5	.5	
† 274	259	284	N	<.02	50	1500	1	15	50	70	30	700	3	<10	100	15	15	200	70	30	300	150	.7	2.0	1.0	.2	
† 275	260	285	N	<.02	50	1500	2	15	70	50	30	700	3	10	50	15	15	150	100	30	N	150	.7	2.0	1.5	.3	
† 276	262	287	N	<.02	30	1000	1.5	15	100	100	30	700	3	10	70	20	15	150	150	30	300	150	.3	3.0	1.0	.5	
† 277	263	288	N	<.02	100	700	1.5	15	70	50	50	500	N	<10	70	15	20	150	150	30	N	150	.3	2.0	1.0	.3	
† 278	261	286	N	<.02	70	1000	1.5	15	70	70	30	700	N	10	70	15	15	150	150	30	N	150	.3	3.0	1.5	.3	
† 279	264	289	N	<.02	70	1000	N	15	30	50	30	300	N	<10	30	10	20	200	70	30	N	150	.3	2.0	1.0	2	
† 280	423	67AR421	<1	<.02	—	3000	3	15	100	200	30	1000	20	10	50	15	—	200	300	30	N	200	.5	3.0	1.5	.3	

[illegible] heat treatment [illegible] analysis [illegible] in area [illegible]

(Analyses: [illegible] Campbell, [illegible] Conklin, Arnold [illegible], [illegible], [illegible], [illegible], [illegible], [illegible] Hamilton, [illegible], [illegible] Meier, [illegible], [illegible] Miller, H. G. Neiman, T. A. [illegible]. Analyses, unless noted, are semiquantitative spectrographic and are reported in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, and so on, or by the following symbols: N = not detected; < = detected, but below the limit of determination; -- = not looked for; > = greater than value shown. Limits of determination are given at the end of the table.)

Table 2

Sample No.	Lab. No.	Field No.	Ag	Au 1/	B	Ba	Be	Co	Cr	Cu	La	Mn	Mo	Nb	Ni	Pb	Sc	Sr	V	Y	Zn	Zr	Ca	Fe	Mg	Ti	Remarks
			parts per million																				percent				
† 281	NC/250	67AB-278	N	<.02	100	2000	7	15	100	100	30	700	7	15	70	15	30	150	200	70	300	200	1.5	3.0	2.0	.3	
† 282	249	274	N	<.02	70	2000	1.5	15	100	70	30	300	N	15	70	15	30	150	150	30	N	150	3.0	3.0	1.5	.5	
† 283	247	272	N	<.02	70	1500	1.5	15	70	70	30	700	3	15	70	15	30	150	150	50	N	150	1.0	3.0	1.5	.3	
† 284	248	273	N	<.02	50	1500	1.5	15	70	70	30	700	3	15	70	15	30	150	150	50	N	200	.7	3.0	2.0	.3	
† 285	425	67AR424	N	<.02	—	1000	1.5	20	100	100	30	700	N	10	70	10	—	150	150	30	N	300	.5	3.0	1.5	.5	
† 286	265	67AB-290	N	<.02	70	1000	1.0	30	70	70	30	700	3	<10	70	15	30	150	150	30	300	150	.7	3.0	1.5	.5	
† 287	266	291	N	<.02	70	2000	1.0	15	70	70	30	500	3	<10	70	20	30	200	200	30	300	150	1.0	3.0	1.5	.3	
† 288	267	292	N	<.02	70	1500	1.5	15	70	50	30	500	N	<10	50	15	15	150	150	30	N	150	.7	3.0	1.0	.3	
† 289	268	293	N	<.02	70	2000	1.5	20	70	70	30	300	5	<10	70	15	30	150	150	30	N	150	1.0	3.0	1.5	.3	
† 290	269	294	N	<.02	70	3000	N	15	50	70	50	300	N	<10	30	15	15	150	100	30	N	150	.5	3.0	1.0	.3	
† 291	270	295	N	<.02	70	2000	1.5	15	70	70	30	500	3	10	30	15	20	150	150	30	N	150	1.0	3.0	1.5	.3	
† 292	246	271	N	<.02	100	2000	3	30	100	150	70	1500	7	15	100	15	30	150	200	70	700	200	.5	3.0	1.5	.3	
† 293	271	296	N	<.02	100	1500	1.0	15	70	50	30	300	N	<10	30	15	15	200	100	30	N	200	.5	1.5	.3	.5	
† 294	245	270	N	<.02	70	2000	2	20	100	70	30	700	3	15	70	15	30	150	200	70	<200	200	.5	3.0	1.5	.5	
† 295	244	269	N	<.02	70	3000	1.5	20	100	150	30	700	7	15	100	20	30	150	200	30	300	200	.3	3.0	1.5	.5	
† 296	243	268	N	<.02	70	2000	1.5	15	70	150	30	1500	7	15	70	20	30	150	300	30	300	200	.2	3.0	1.5	.3	
† 297	242	267	N	<.02	70	3000	2	30	100	150	30	1500	7	15	150	30	30	150	200	70	700	200	.3	3.0	1.5	.3	
† 298	241	266	N	<.02	70	3000	2	50	100	150	70	3000	7	15	100	30	30	150	200	70	700	200	.3	3.0	1.5	.3	
† 299	240	265	N	<.02	70	2000	2	70	100	300	70	3000	7	15	150	30	30	150	300	100	1000	200	.7	5.0	2.0	.3	
† 300	239	264	N	<.02	50	300	7	N	3	3	30	150	N	15	3	30	5	30	10	100	N	150	.5	.7	.07	.07	
† 301	238	263	N	<.02	150	2000	7	15	70	50	70	1000	7	15	30	20	20	150	150	100	N	150	1.0	3.0	1.5	2.0	
† 302	220	246	N	<.02	70	700	5	N	15	7	150	300	N	15	7	30	7	70	30	500	N	300	.5	1	1.5	.15	
† 303	221	247	N	<.02	300	700	3	7	30	30	30	700	N	15	15	70	7	70	70	100	N	100	.7	1.5	.5	.15	Sn 15
† 304	222	248	N	<.02	150	700	3	7	30	30	50	700	N	15	15	70	15	100	70	150	N	150	.7	1.5	.7	.15	Sn 20
† 305	223	249	N	<.02	150	700	2	15	30	50	50	1000	3	15	20	30	15	200	70	30	N	200	1	3.0	.7	.3	
† 306	224	250	N	<.02	150	700	1.5	15	50	50	70	1000	N	15	30	30	15	150	70	50	N	300	.7	3.0	.7	.3	
† 307	225	251	N	<.02	150	700	1.5	15	70	50	70	700	N	15	30	30	15	150	70	30	N	300	1.0	3.0	.7	.3	
† 308	226	252	N	<.02	100	500	10	3	20	7	70	700	N	30	15	30	7	30	30	150	N	200	.3	.7	.3	.07	
† 309	227	253	N	<.02	150	1500	3.0	15	150	50	30	1000	3	15	70	30	20	300	150	70	N	200	1.5	3.0	1.5	.3	Sn 10
† 310	228	254	N	<.02	70	1000	1.0	15	150	150	30	1000	3	15	70	70	30	150	150	30	N	150	1.5	3.0	3.0	3	
† 311	229	255	N	<.02	70	2000	1.5	15	70	70	70	700	3	15	50	30	30	150	150	50	N	300	.7	3.0	1.5	.5	
† 312	231	256	N	<.02	100	1500	2.0	20	100	70	150	700	3	15	70	30	30	150	150	30	N	300	.5	3.0	2.0	.5	
† 313	232	257	N	<.02	150	1000	1.5	15	70	50	70	700	3	15	50	30	20	300	150	30	N	200	3.0	3.0	3.0	.5	
† 314	233	258	N	<.02	70	1500	1.5	15	150	70	70	700	3	15	70	30	30	150	150	30	N	200	1.5	3.0	3.0	3	
† 315	234	259	N	<.02	70	700	1.5	15	70	70	70	700	3	15	30	30	15	100	70	30	N	300	.3	3.0	1.5	5	
† 316	237	262	N	<.02	70	2000	2.0	15	70	50	70	500	3	15	30	30	20	150	100	30	N	200	.7	3.0	1.5	.3	
† 317	235	260	N	<.02	70	2000	1.5	15	70	70	70	700	3	15	50	30	20	150	70	50	200	300	.7	3.0	1.5	.5	
† 318	236	261	N	<.02	70	1000	1.5	15	100	50	70	700	3	15	50	50	20	150	100	30	N	300	.3	3.0	1.5	.5	
1/ Analyses by atomic absorption																											
† Limit of detectability			1	.02	20	2	1	3	1	1	30	1	3	10	3	10	5	5	7	10	200	10	.005	.001	.006	.0002	B and Sc not determined for all samples
X Limit of detectability			.5	.02	10	100	1	10	10	2	20	20	5	20	2	10	5	100	10	5	200	20	.05	.05	.02	.002	

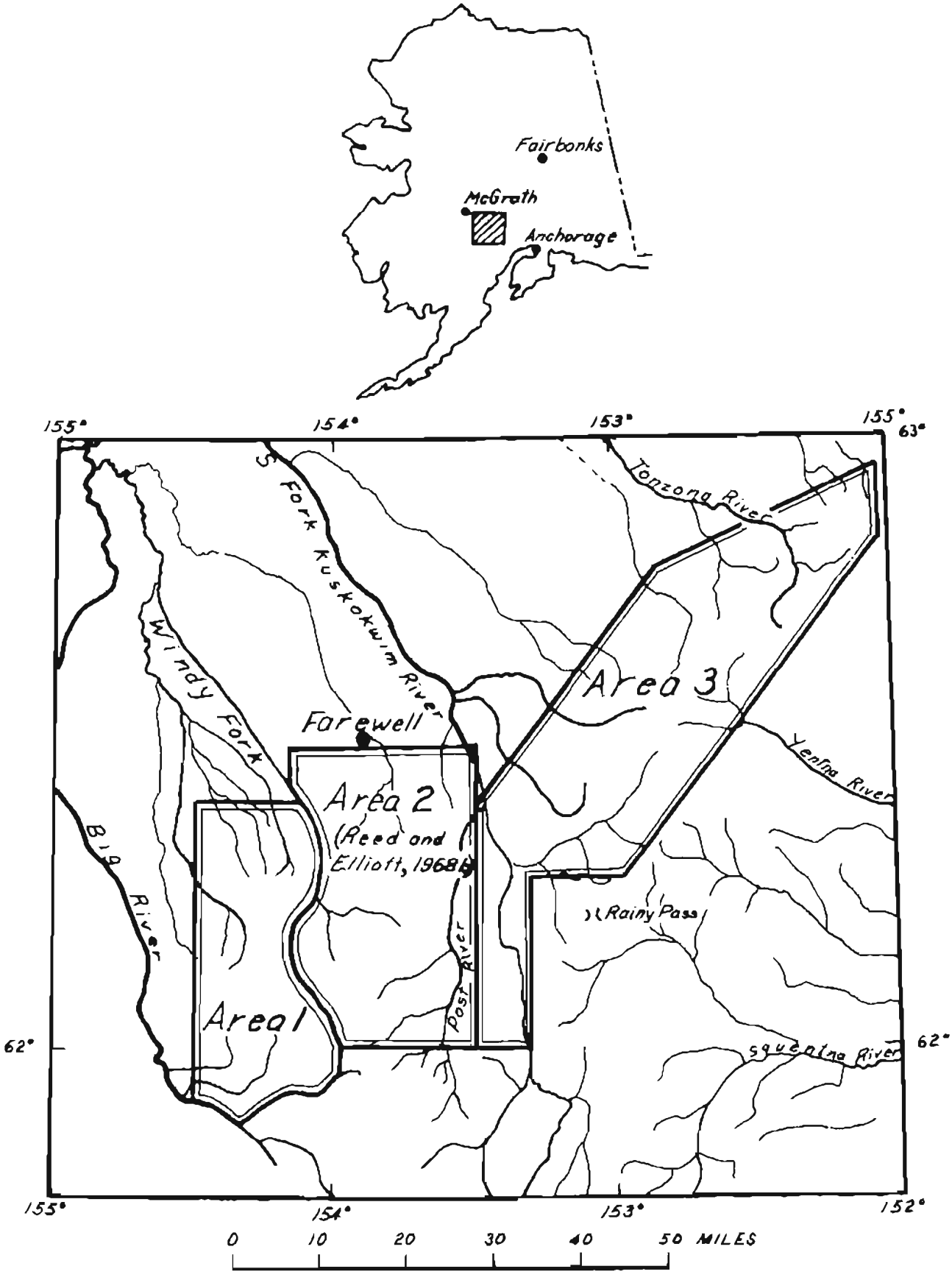

Figure 1. Location of areas discussed in this report.

EXPLANATION FOR FIGURE (2)

QUATERNARY

Surficial deposits

Included [illegible], tuffs, [illegible] various material depth

Oligocene

TERTIARY

Conglomerate, [illegible] and [illegible]

Dikes and volcaniclastic rocks

LATE CRETACEOUS OR TERTIARY

Intrusive rocks

Granite, quartz monzonite, granodiorite quartz diorite and locally syenite, gabbro, and peridotite

Dikes

Intermediate to felsic. Major dike swarm shown

PALEOZOIC

Shale, siltstone, limestone, and argillite. May locally include Mesozoic sedimentary rocks

Is, prominent gray limestone units, shown locally

Contact

Dashed where approximately located; queried where doubtful

Fault

Dashed where doubtful; dotted where concealed

Thrust fault

Dashed where approximately located; queried where inferred; saw teeth on upper plate

Anticline

Showing trace of axial plane; dashed where approximately located

Overturned anticline

Showing trace of axial plane, dashed where approximately located; queried where inferred

Syncline

Showing trace of axial plane; dashed where approximately located

40 30

Strike and dip of beds

Dashed symbol indicates attitude estimated from distant field observations

F-1

Fossil locality

B

Bedrock [illegible]

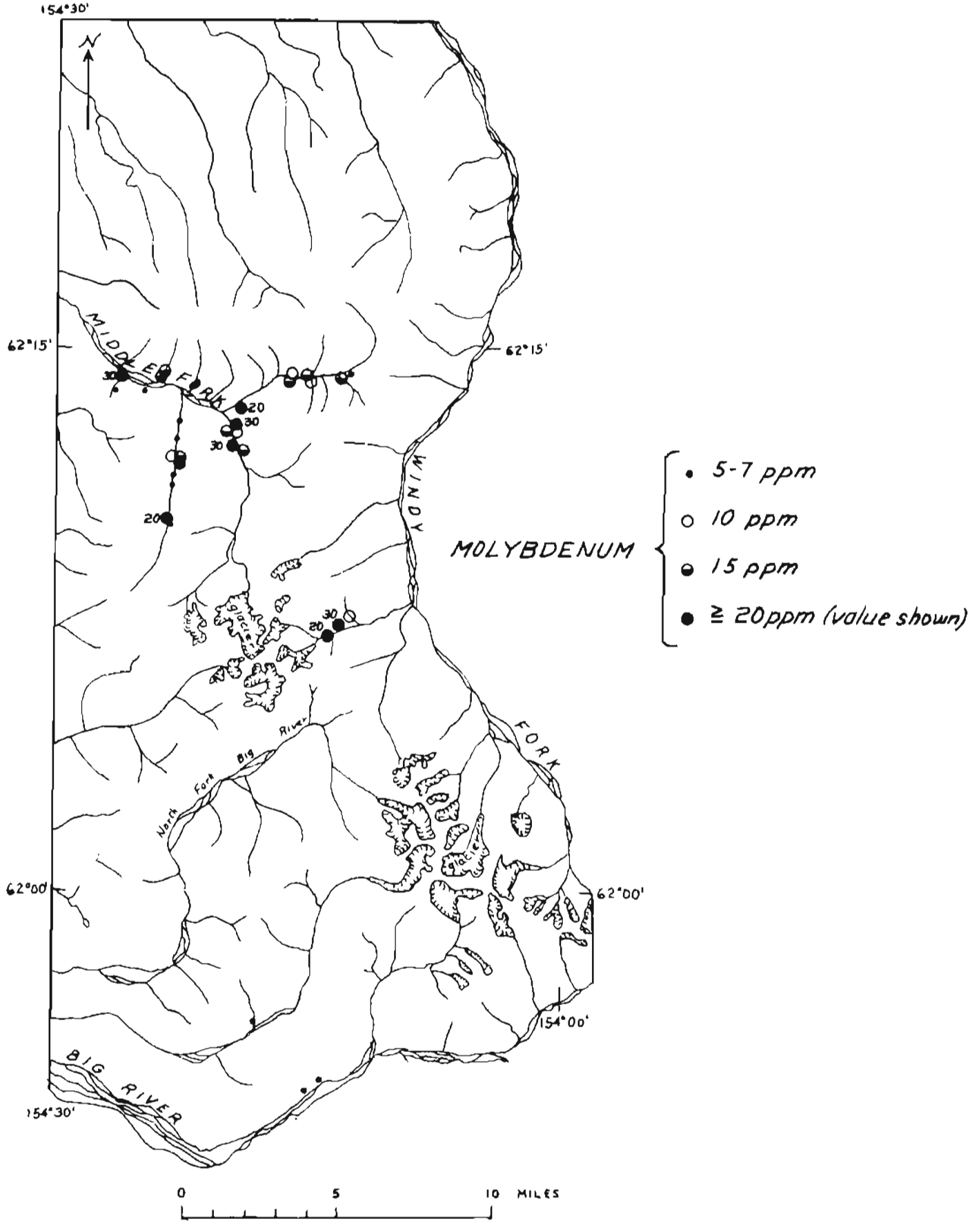

Figure 5. Molybdenum distribution in stream sediment samples in Area I showing location of samples with 5ppm or greater.

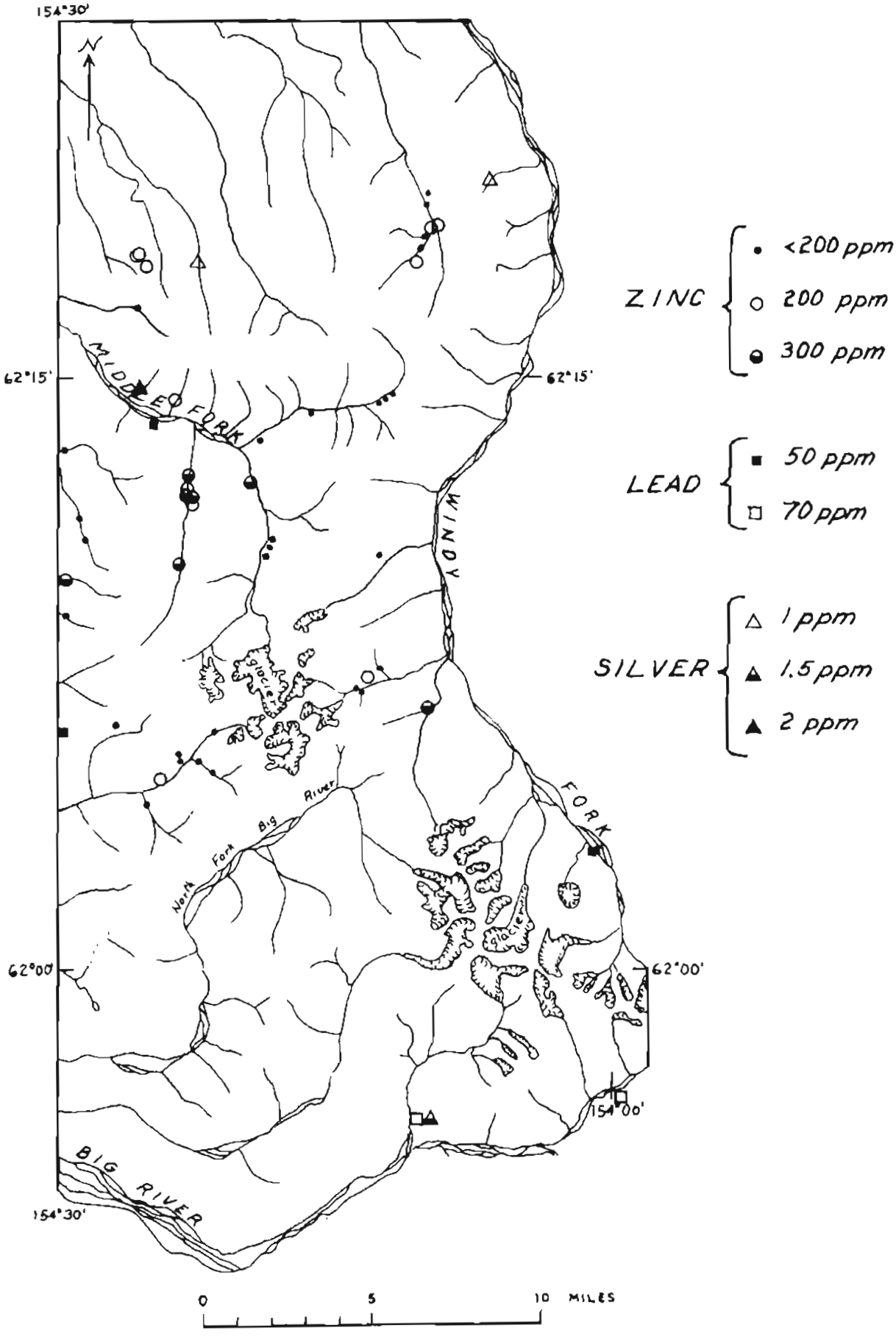

Figure 6. Zinc, lead and silver distribution in stream sediment samples in Area 1.

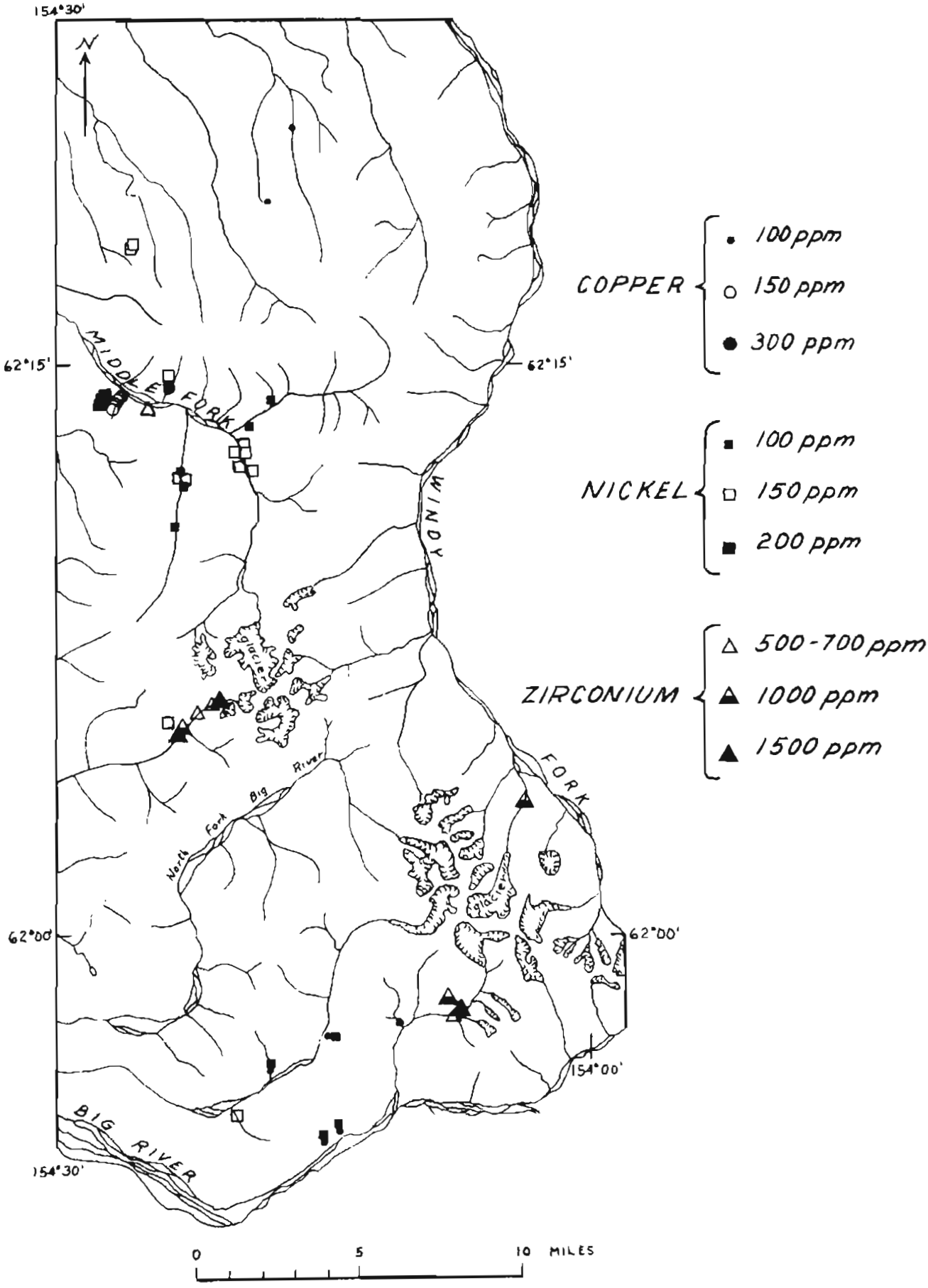

Figure 7. Copper, nickel and zirconium distribution in stream sediment samples in Area I.

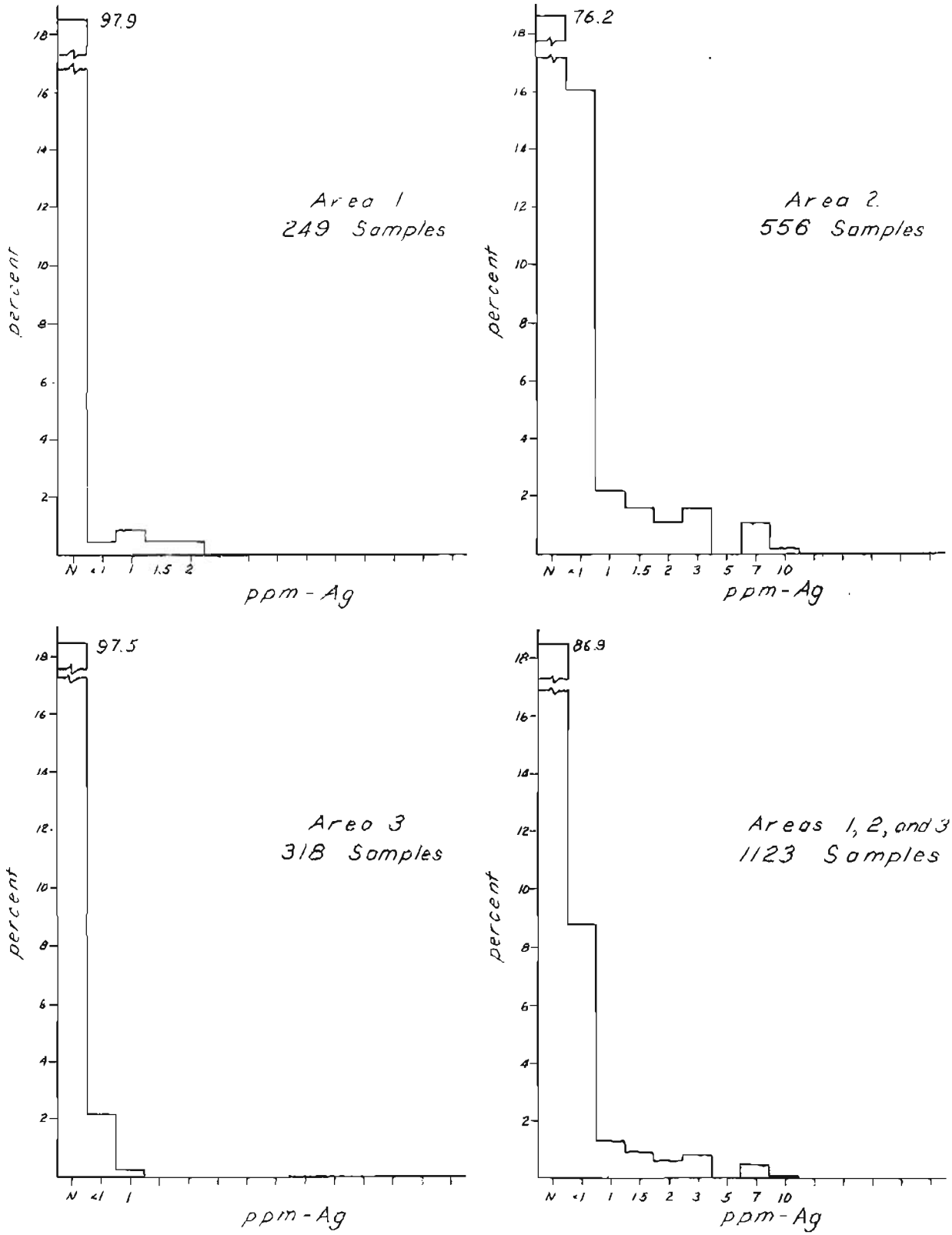

Figure 11.--Histograms showing distribution of silver content in stream sediment samples from areas 1, 2 and 3. Symbols used: < = less than; N = not detected.

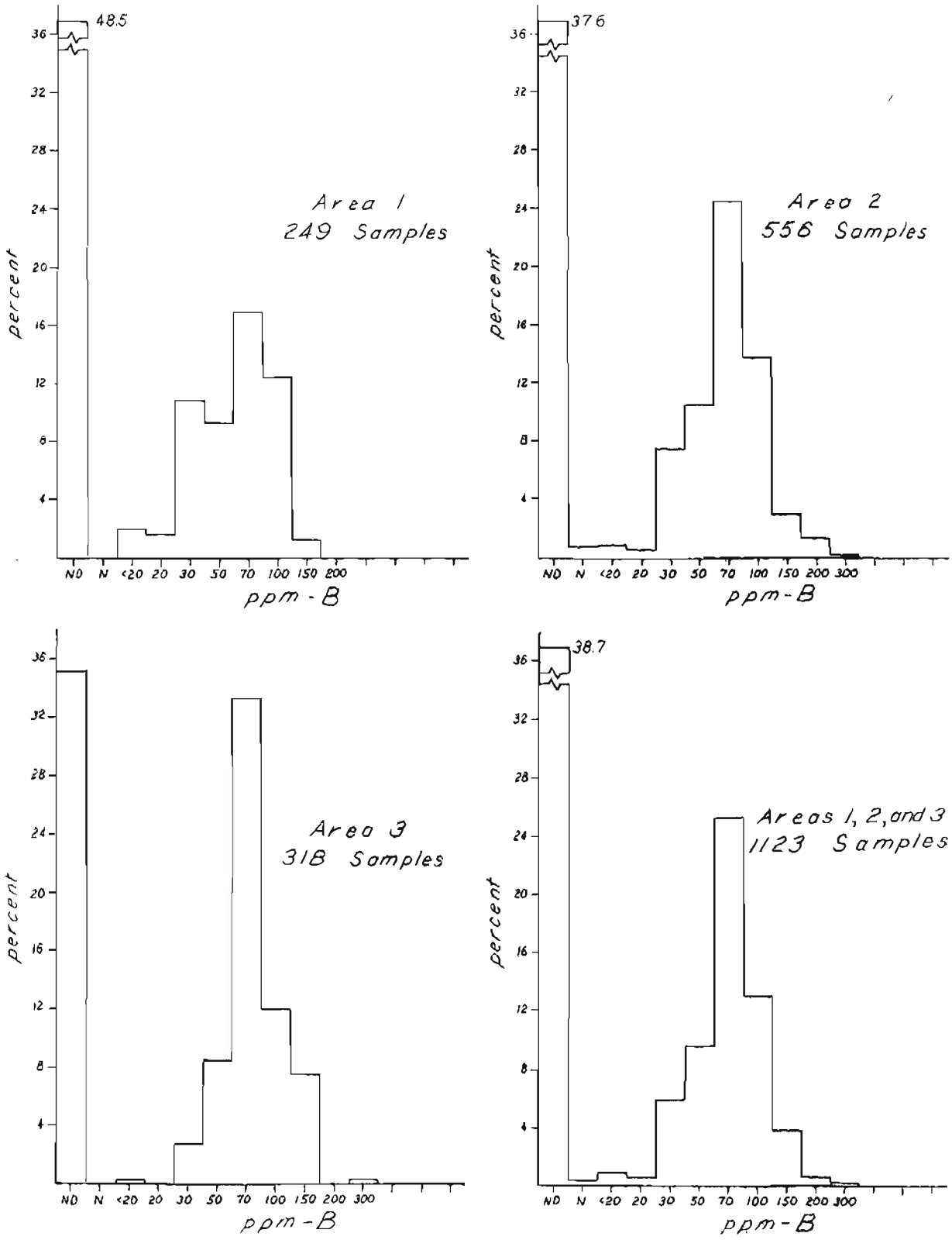

Figure 12.--Histograms showing distribution of boron content in stream sediment samples from areas 1, 2 and 3. Symbols used: < = less than; N = not detected; ND = not determined.

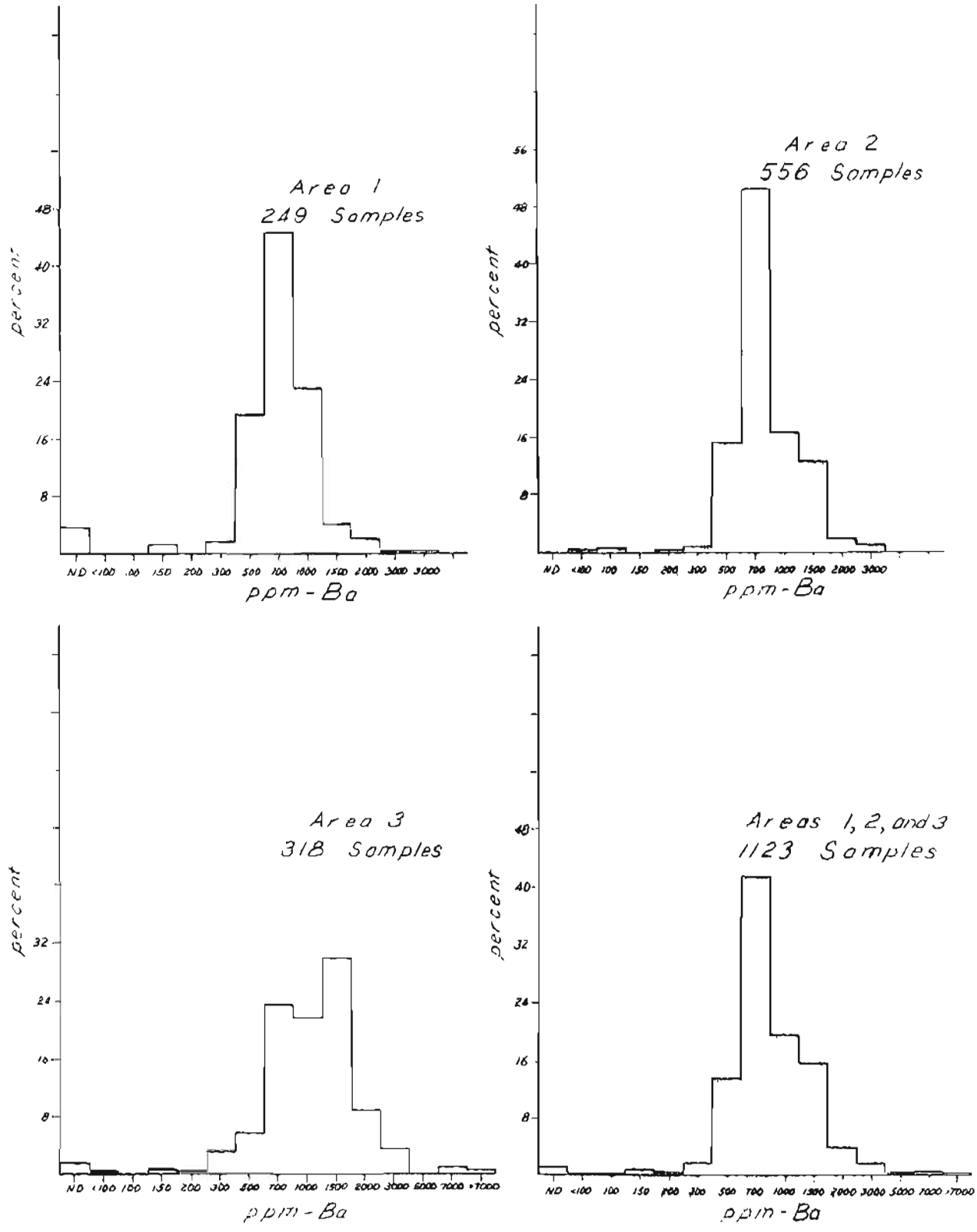

Figure 13.--Histograms showing distribution of barium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; ND = not determined.

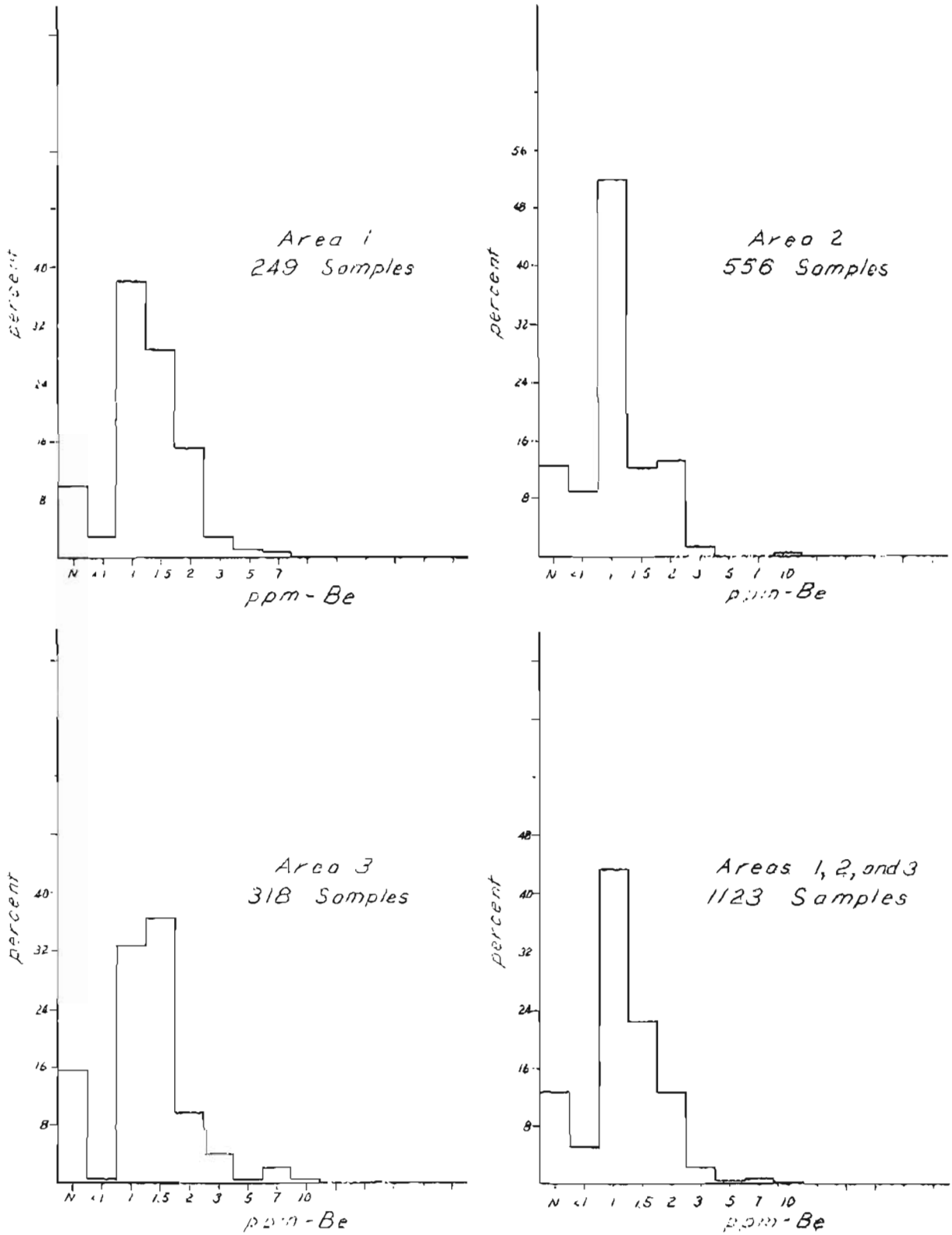

Figure 14.--Histograms showing distribution of beryllium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

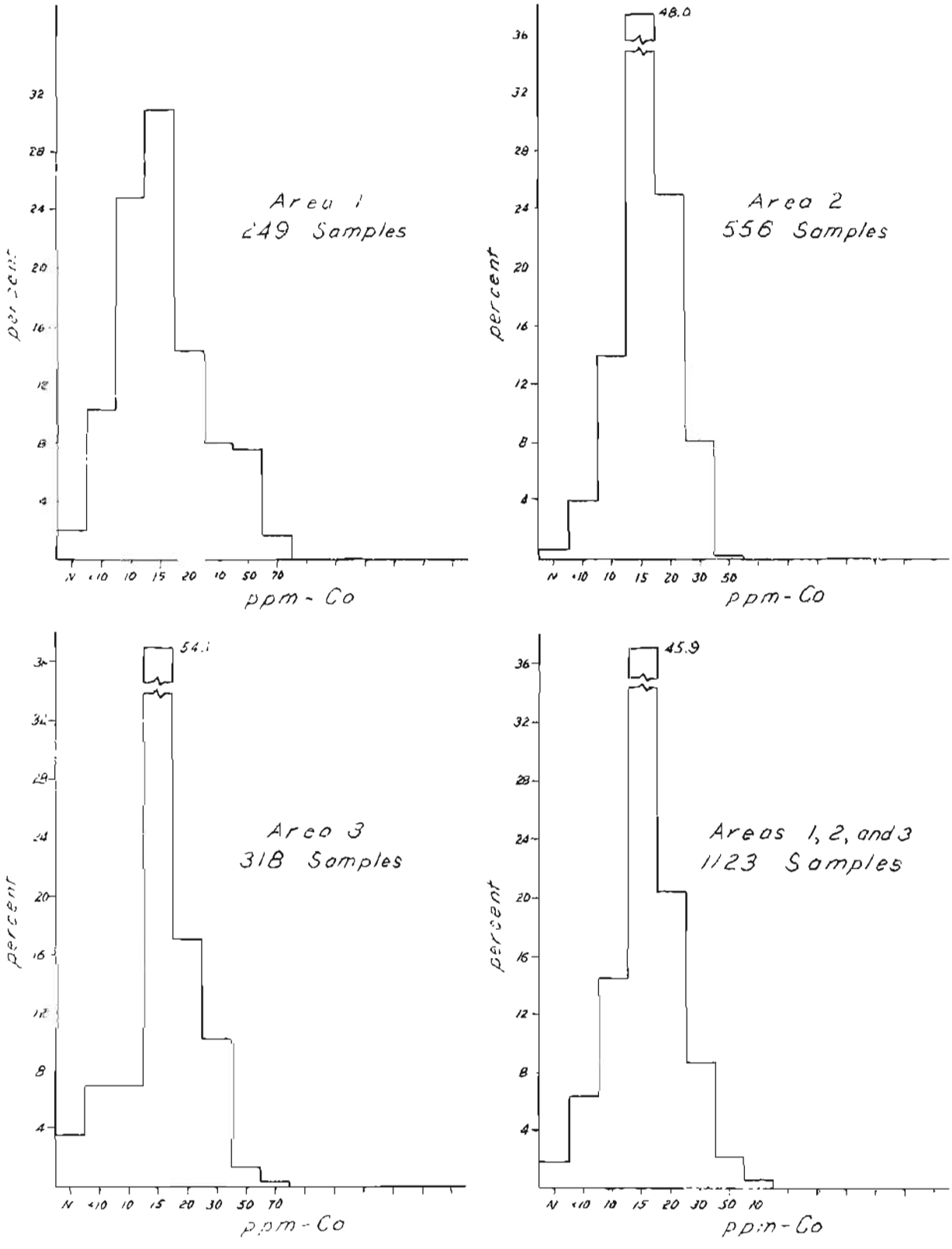

Figure 17.--Histograms showing distribution of cobalt content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

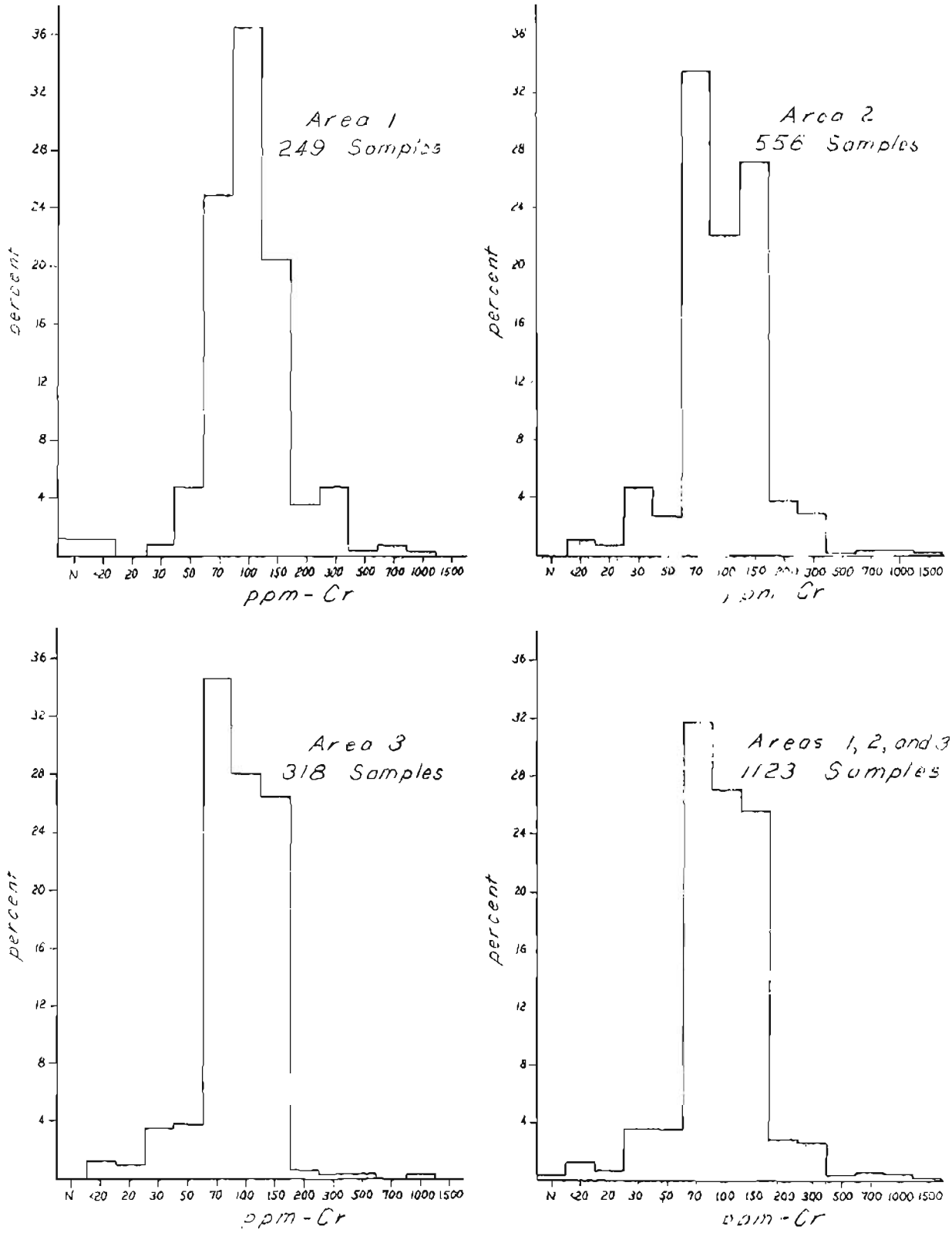

Figure 16.--Histograms showing distribution of chromium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

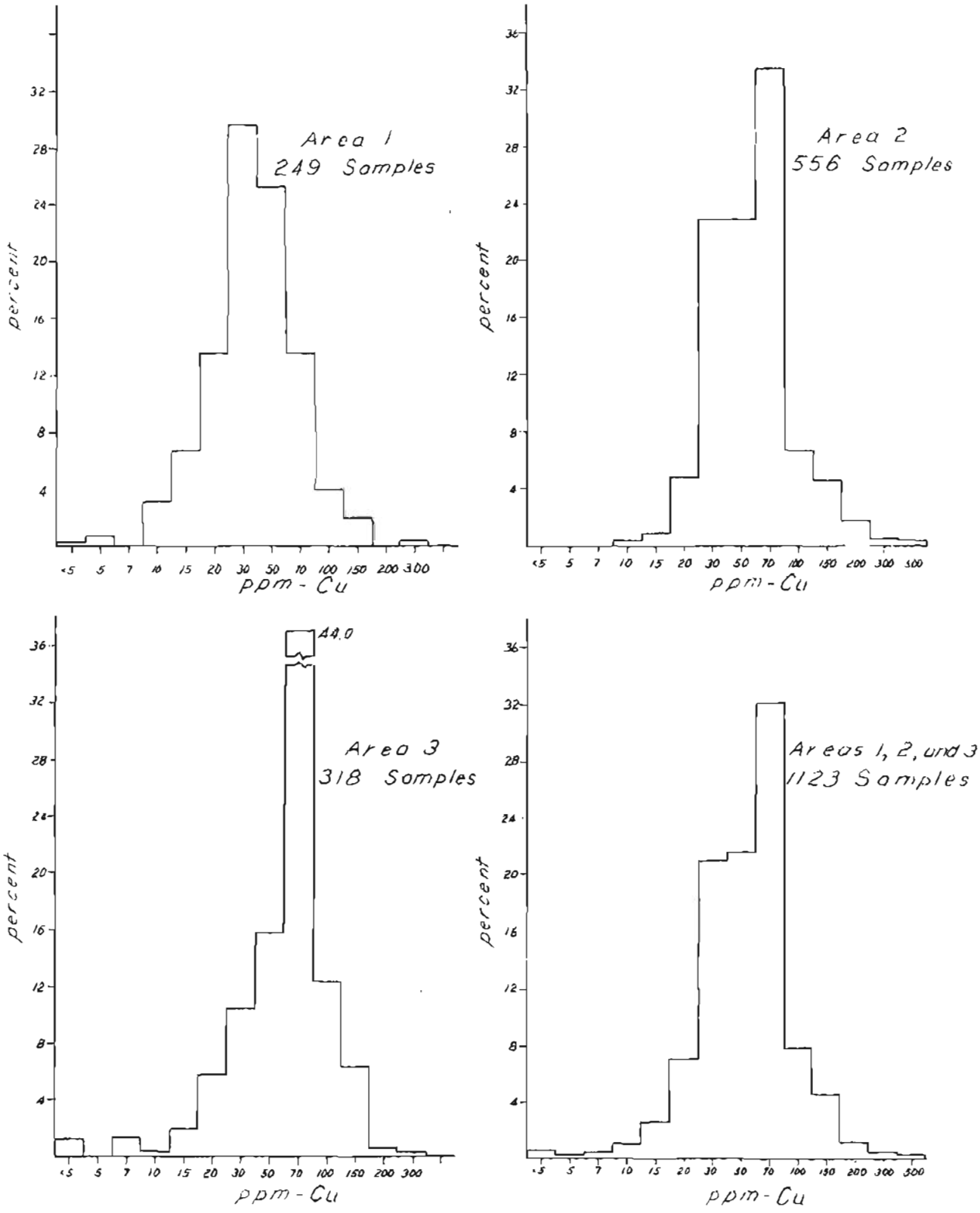

Figure 17.--Histograms showing distribution of copper content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than.

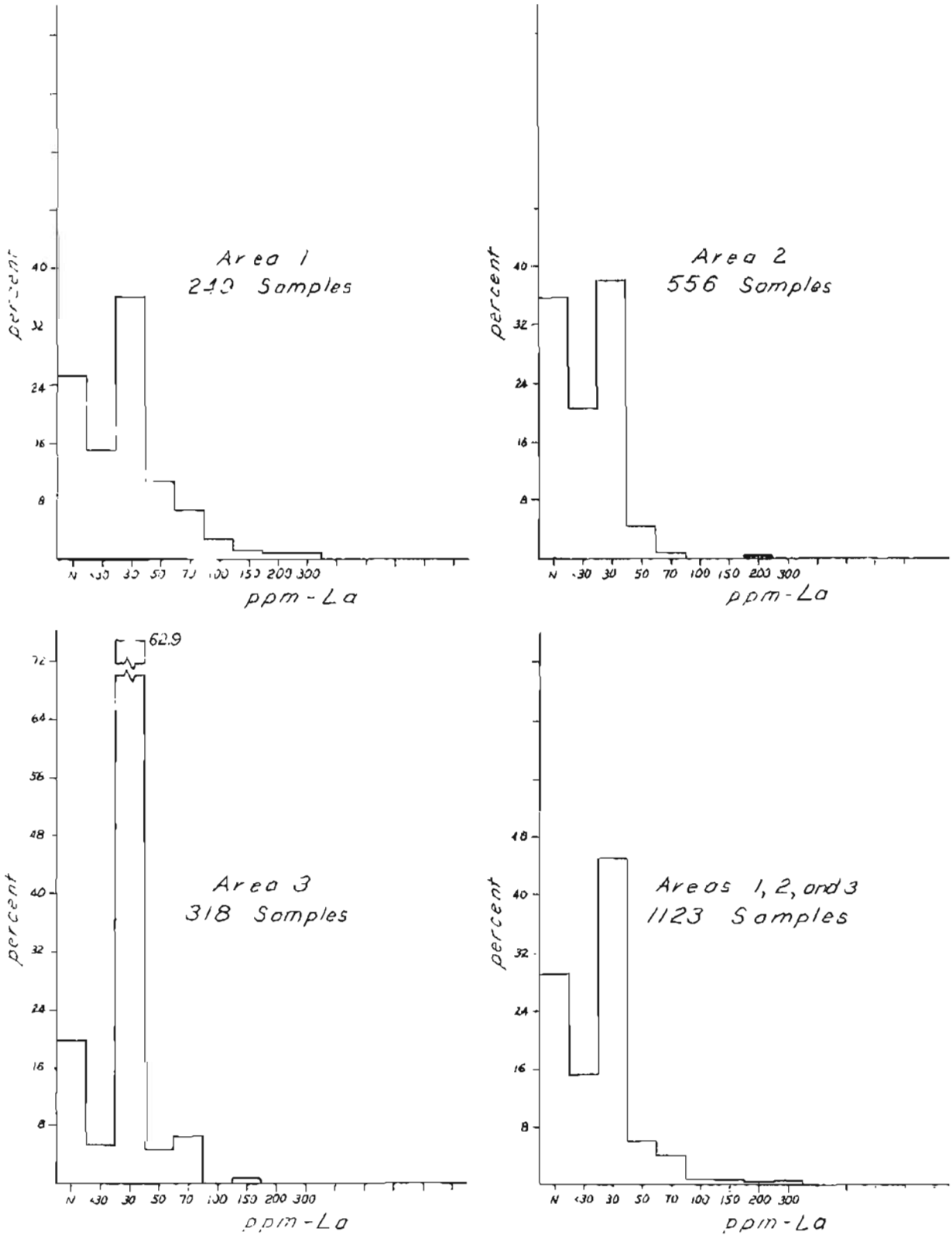

Figure 15.--Histograms showing distribution of lanthanum content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

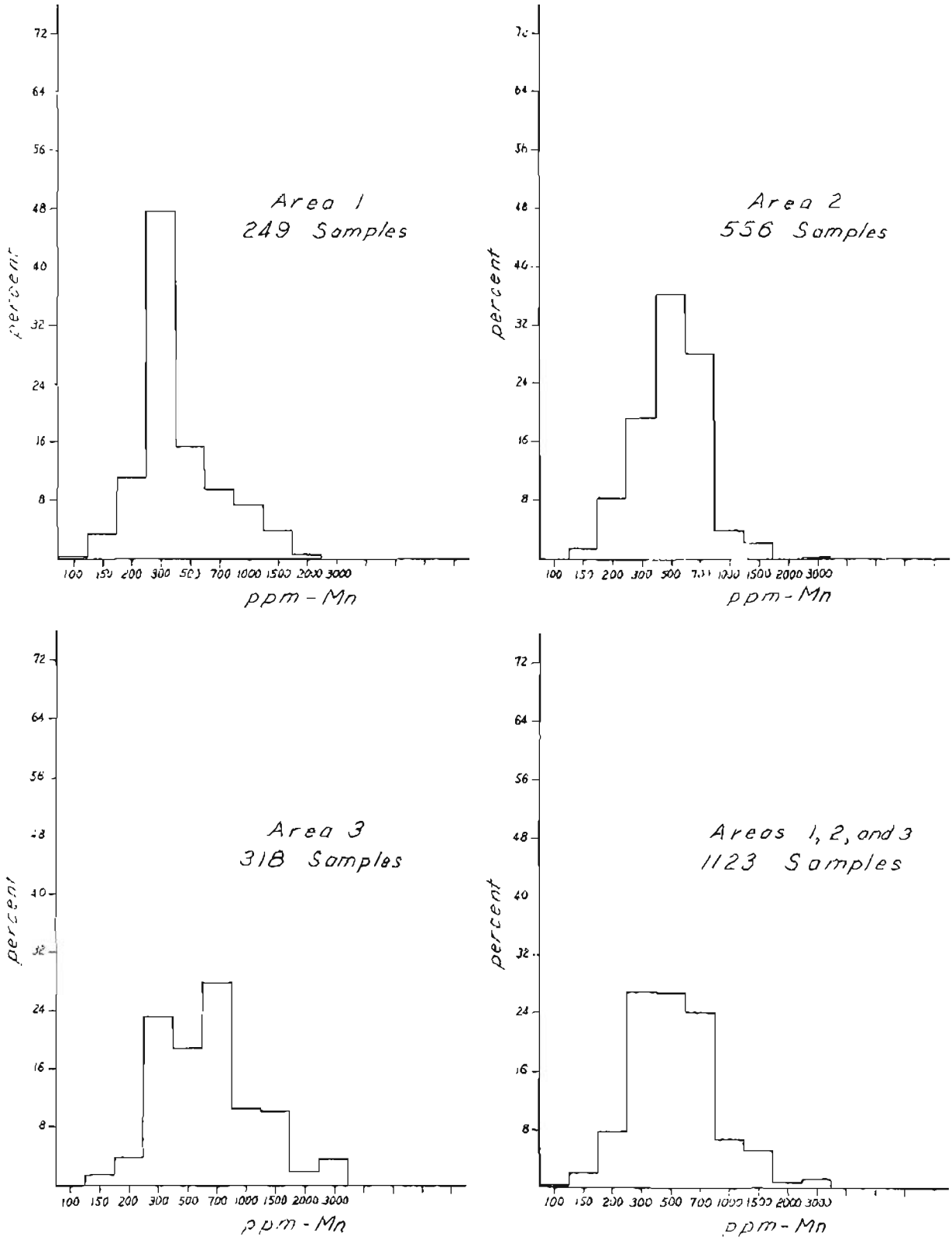

Figure 19.--Histograms showing distribution of manganese content in stream sediment: samples from areas 1, 2, and 3.

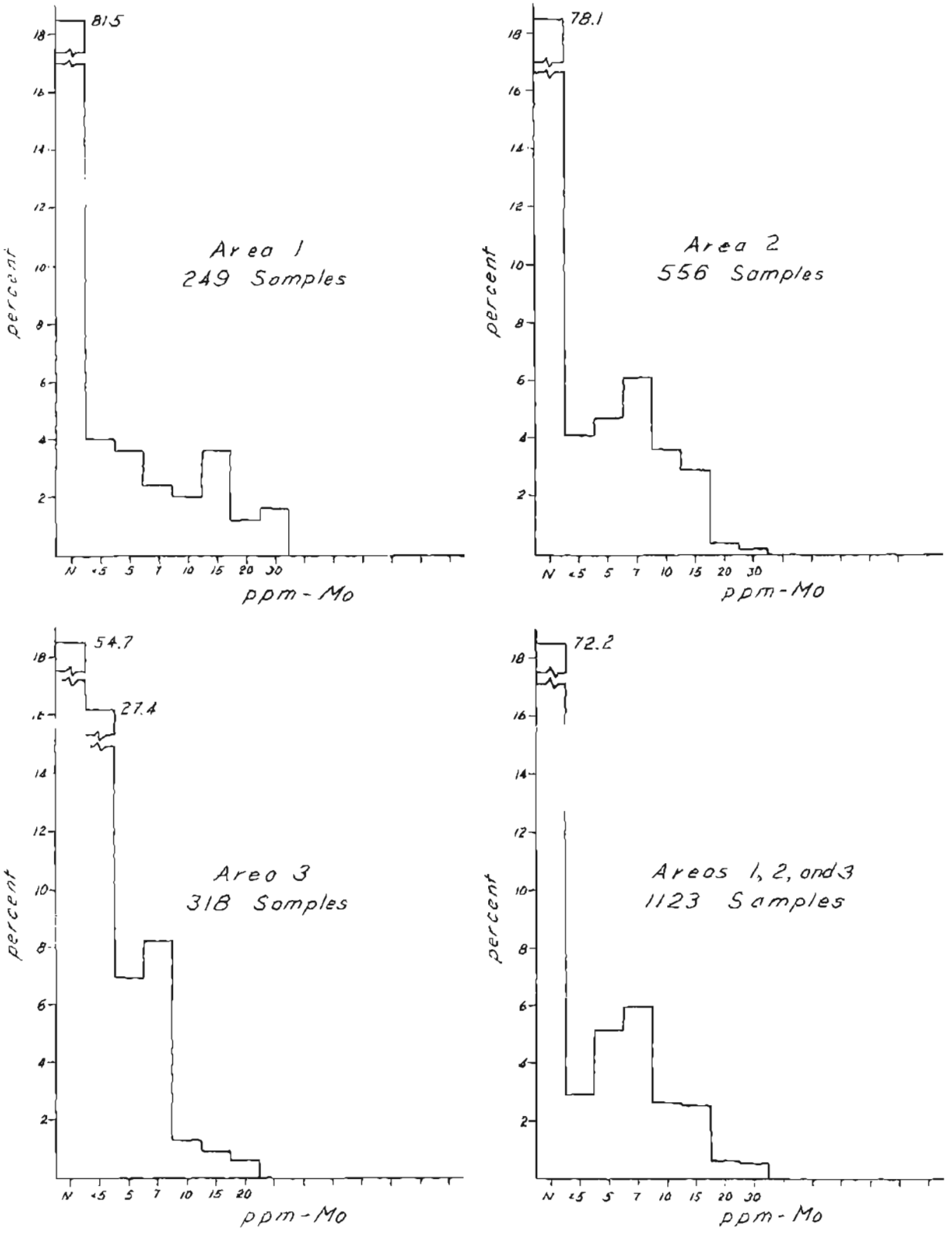

Figure 20.--Histograms showing distribution of molybdenum content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

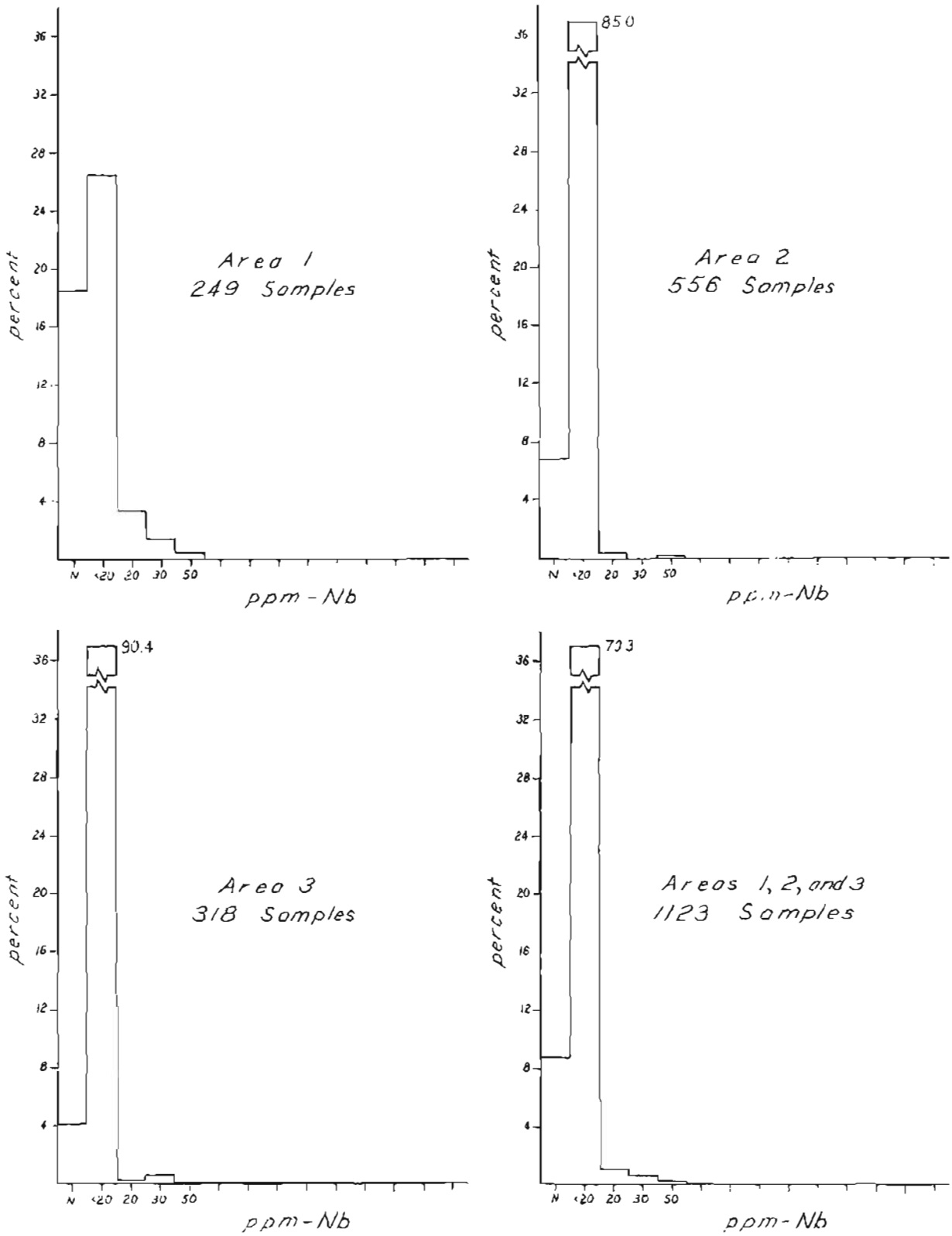

Figure 21.—Histograms showing distribution of niobium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

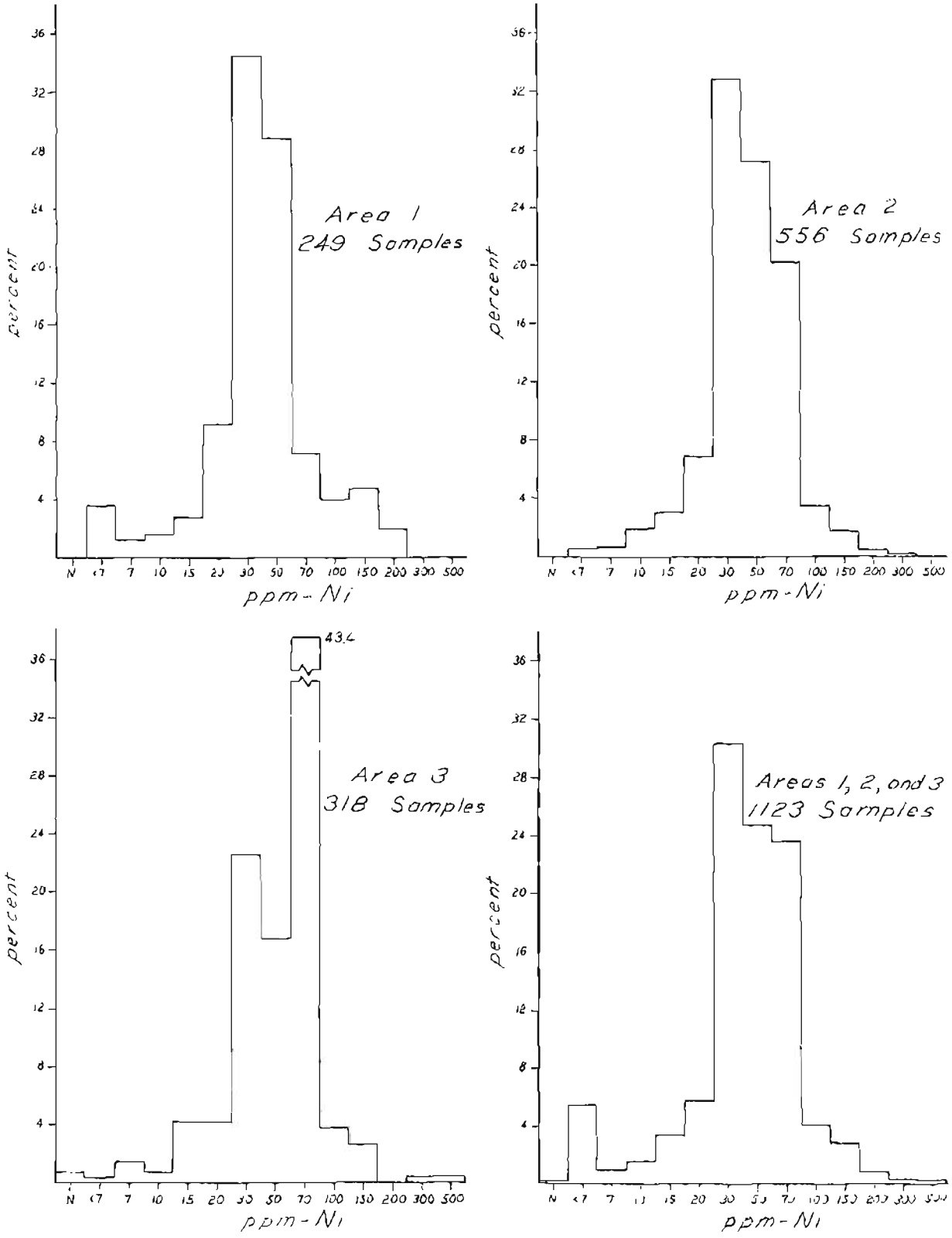

Figure 22.--Histograms showing distribution of nickel content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than, N = not detected.

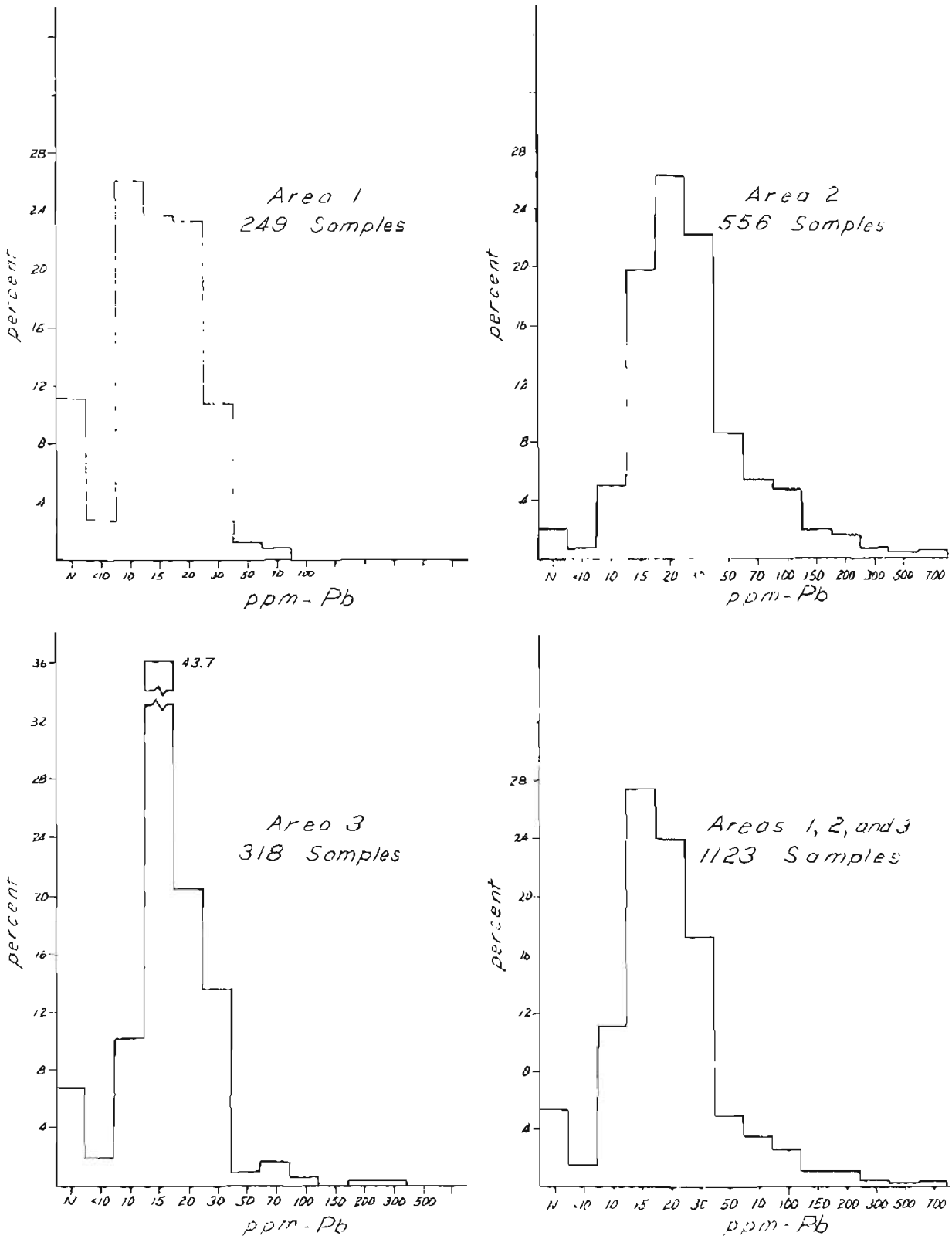

Figure 23.--Histograms showing distribution of lead content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected.

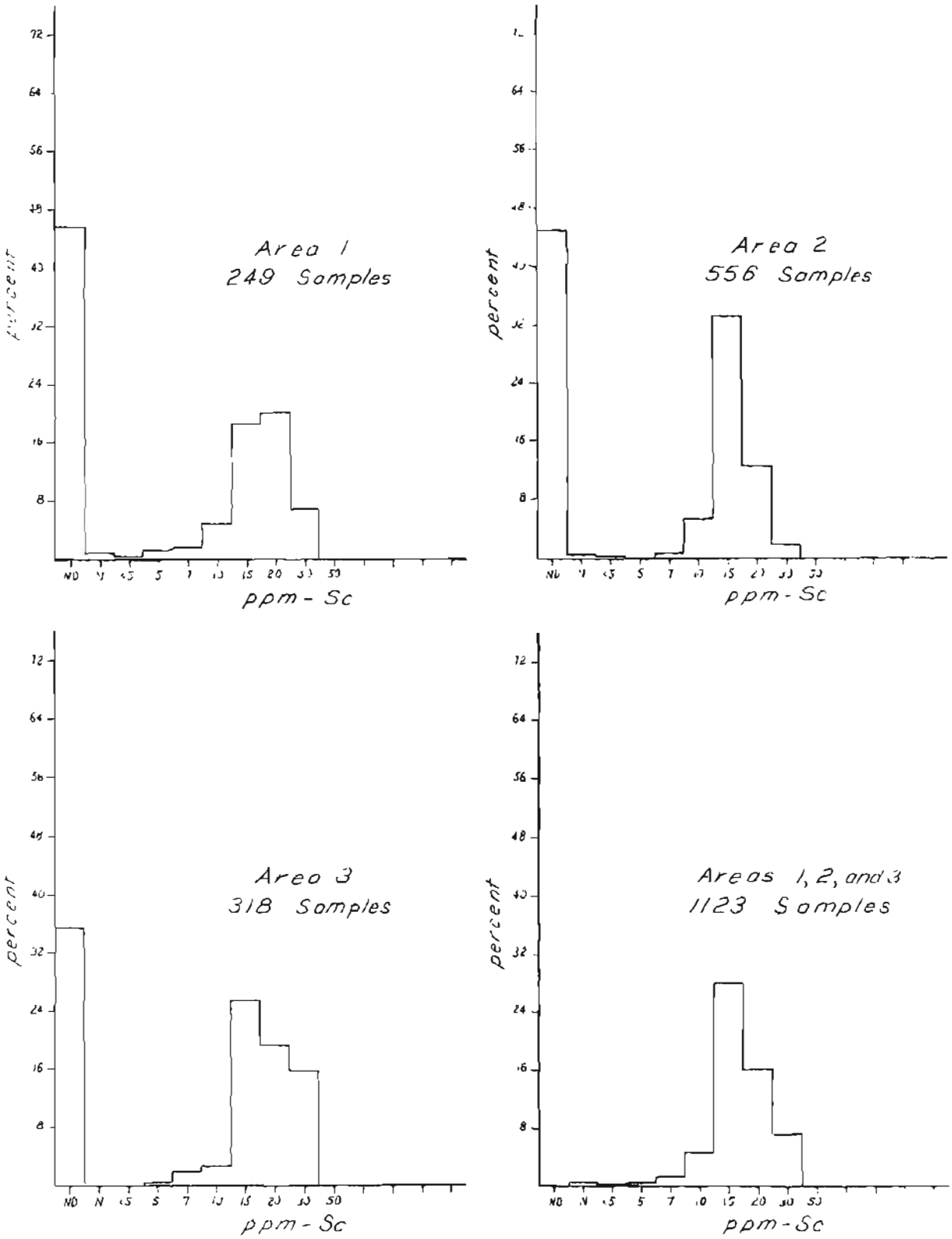

Figure 24.--Histograms showing distribution of scandium content in stream sediment samples from areas 1, 2, and 3. Symbols used; < = less than; N = not detected; ND = not determined.

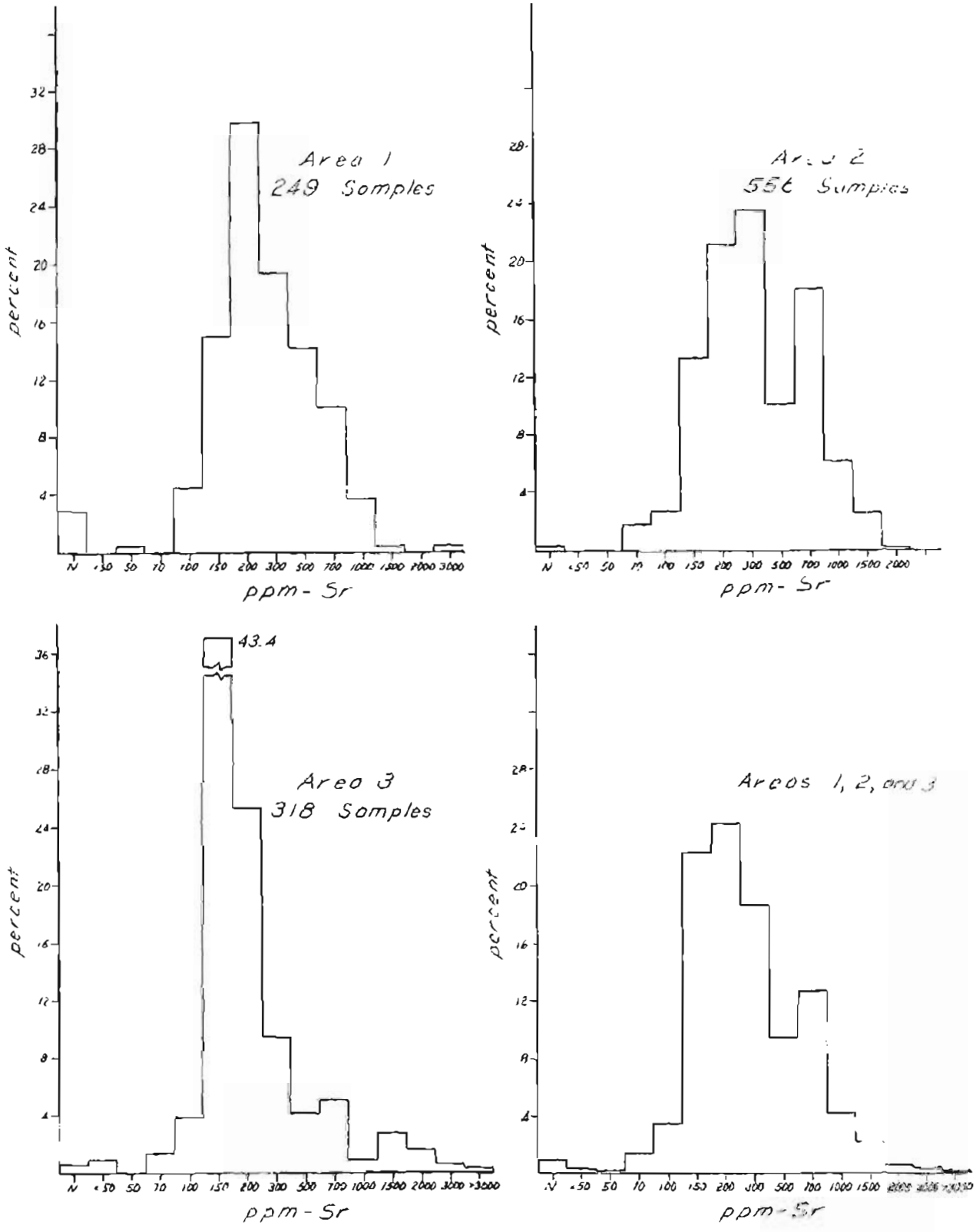

Figure 25.--Histograms showing distribution of strontium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = [illegible]; N = not detected.

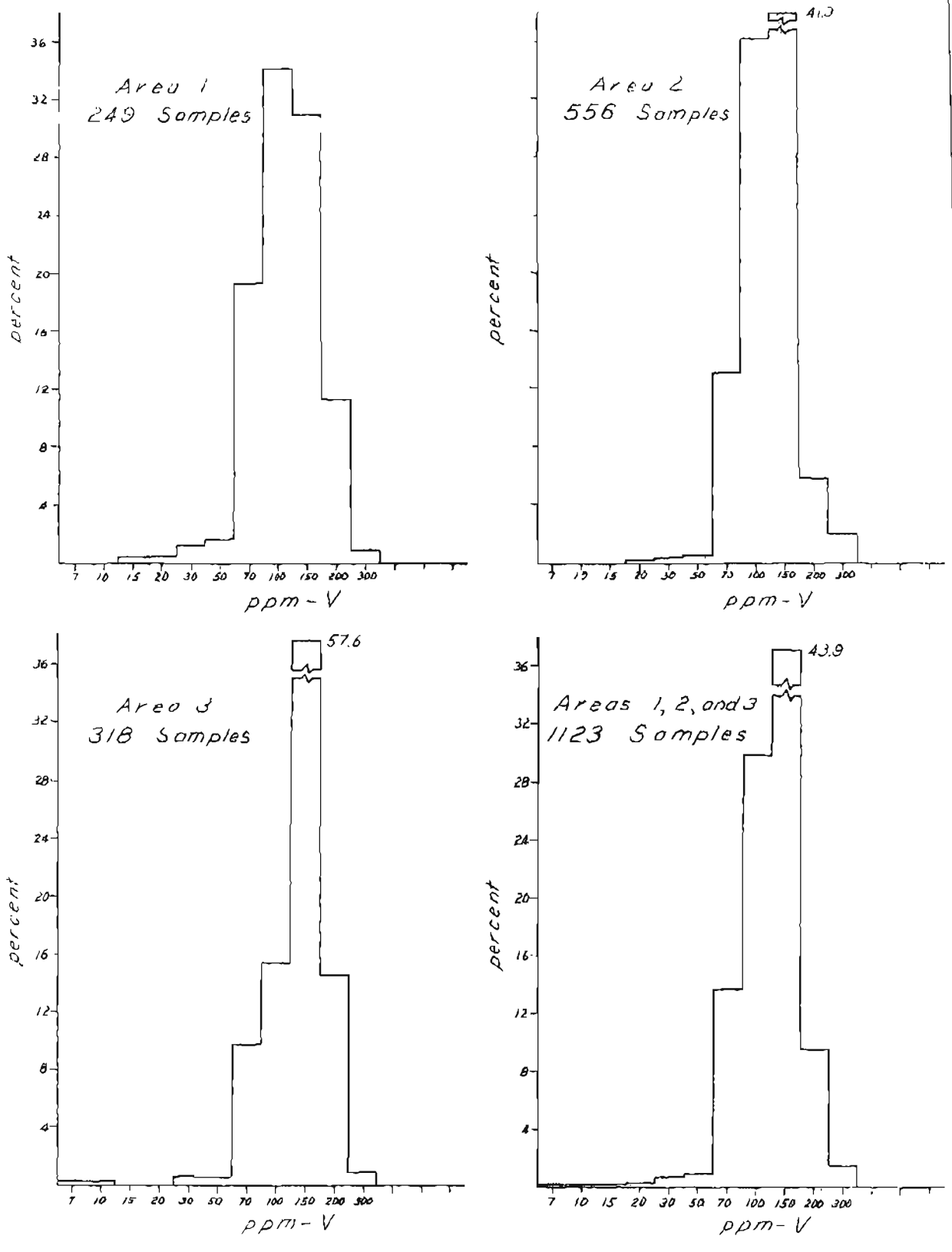

Figure 26.--Histograms showing distribution of vanadium content in stream sediment samples from areas 1, 2, and 3.

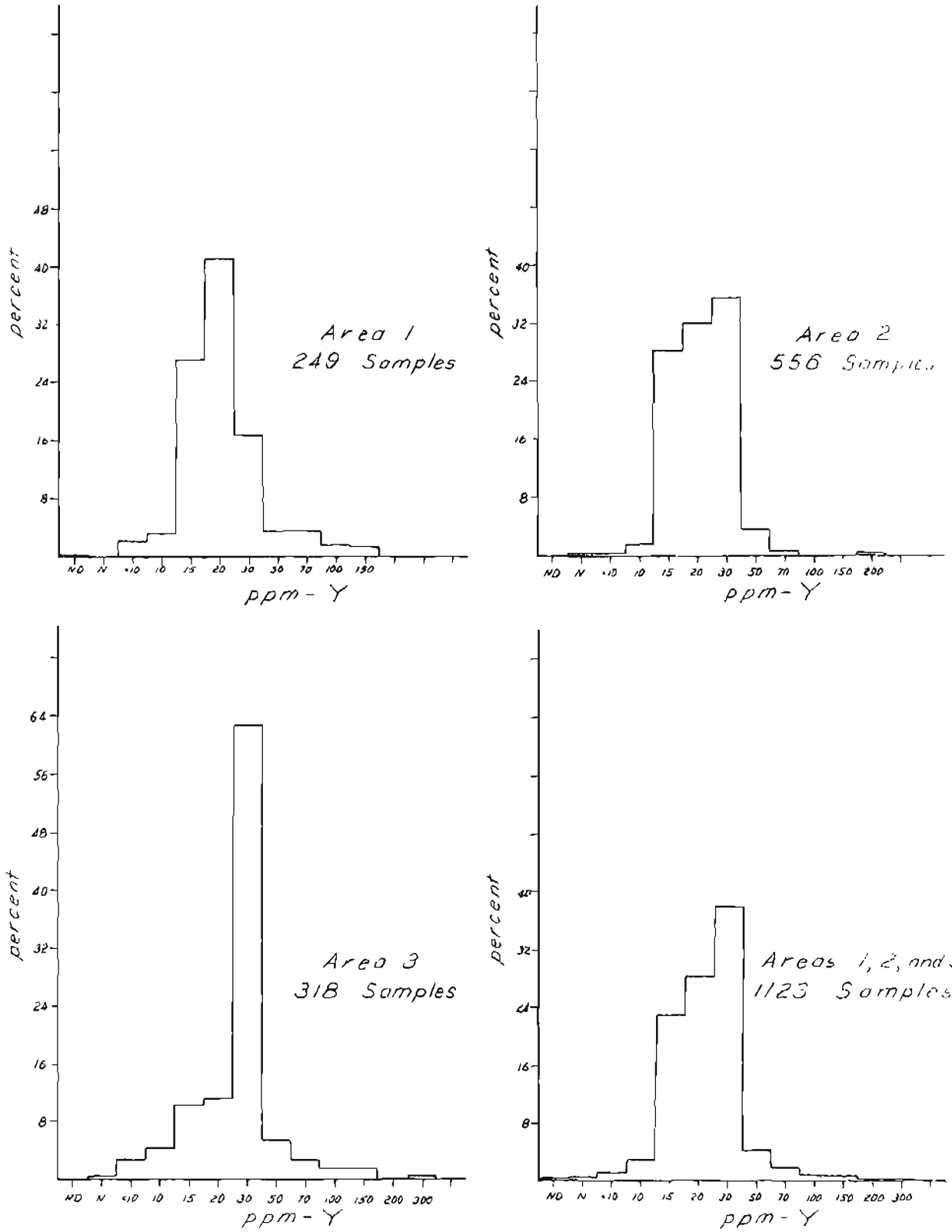

Figure 27.--Histograms showing distribution of yttrium content in stream sediment samples from areas 1, 2, and 3. Symbols used: < = less than; N = not detected; ND = not determined.

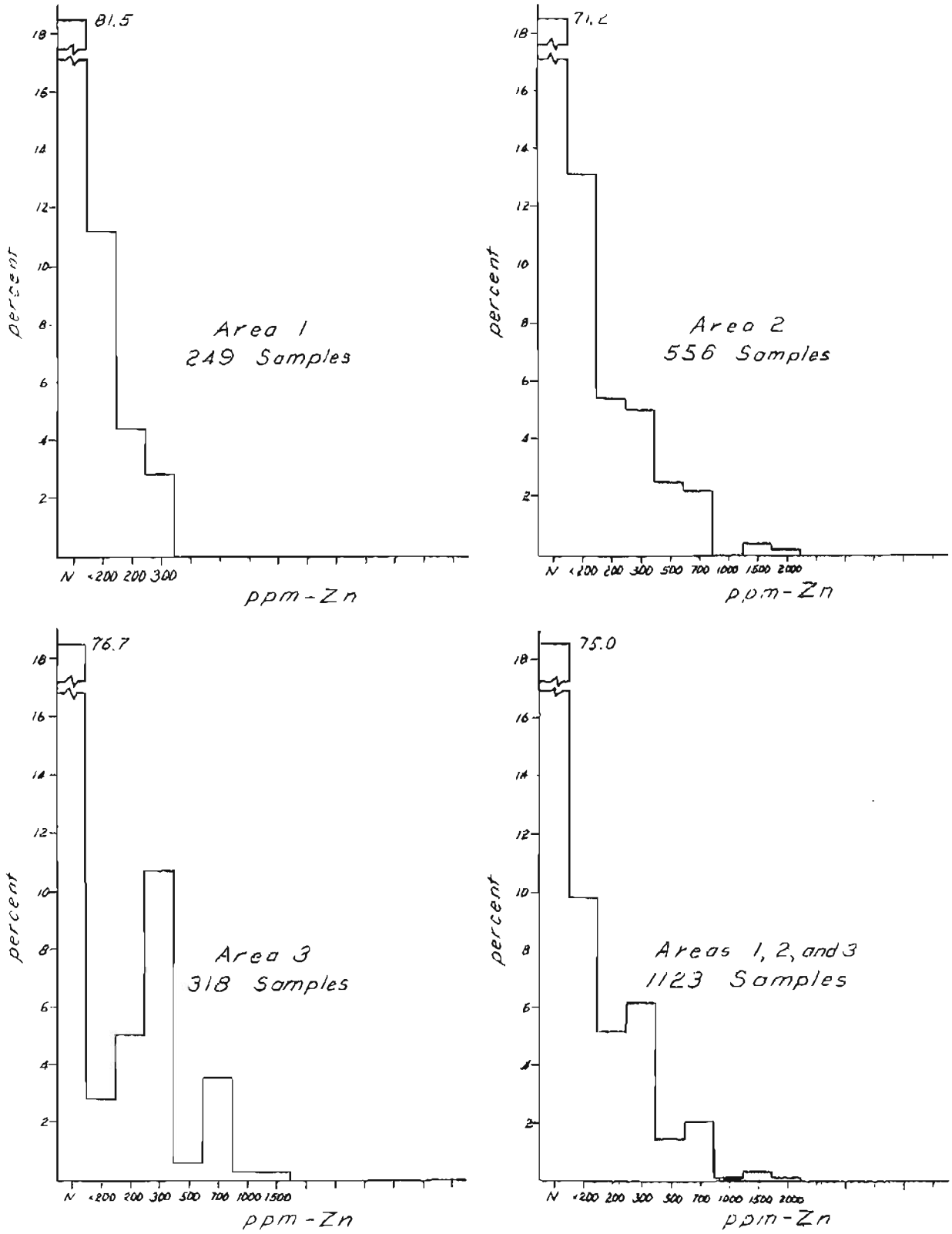

Figure 28.--Histograms showing distribution of zinc content in stream sediment samples from areas 1, 2, and 3. Symbols used: < - less than; N = not detected.

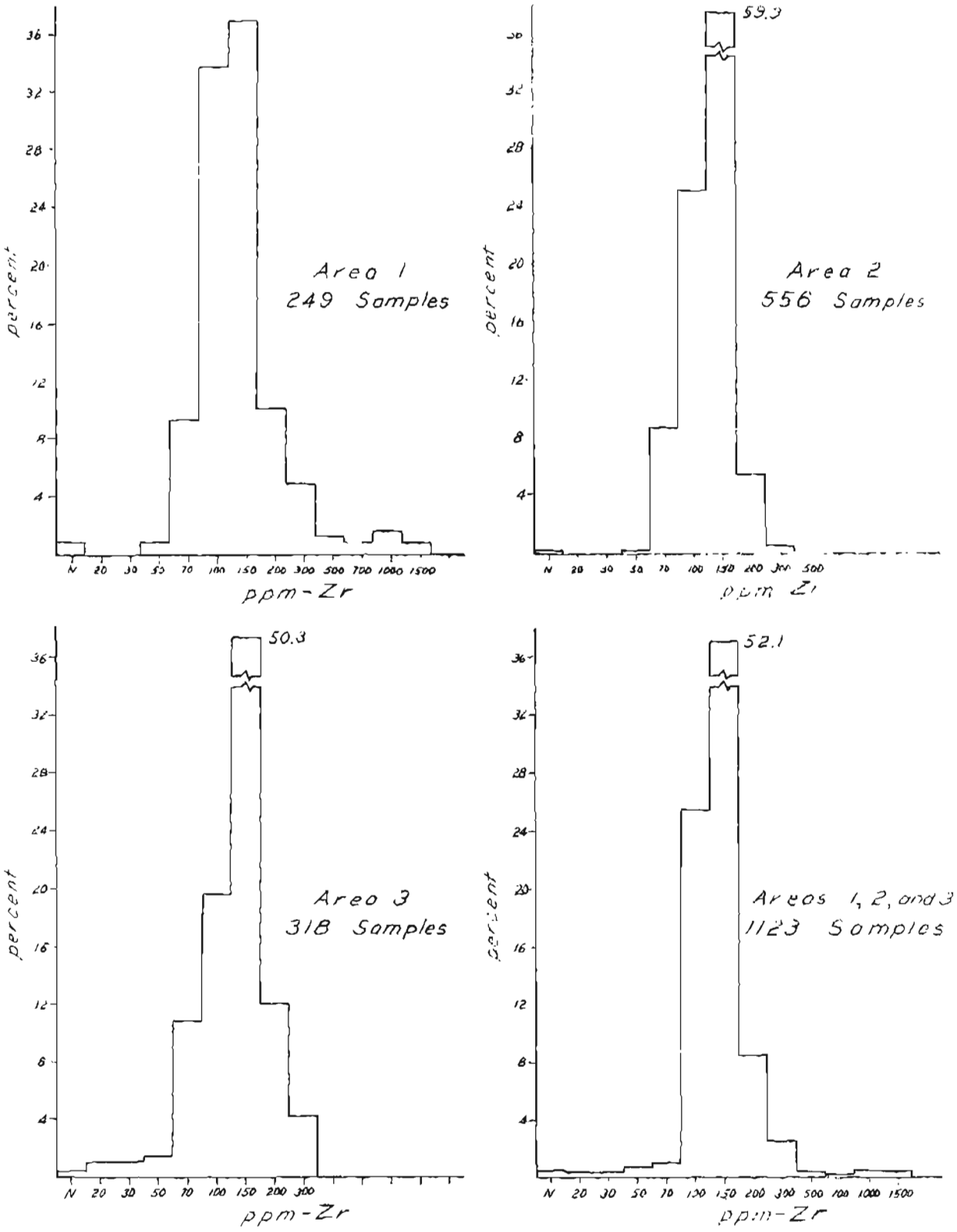

Figure 29.--Histograms showing distribution of zirconium content in stream sediment samples from areas 1, 2, and 3. Symbols used: N not determined.