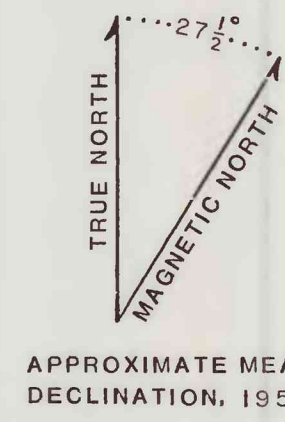
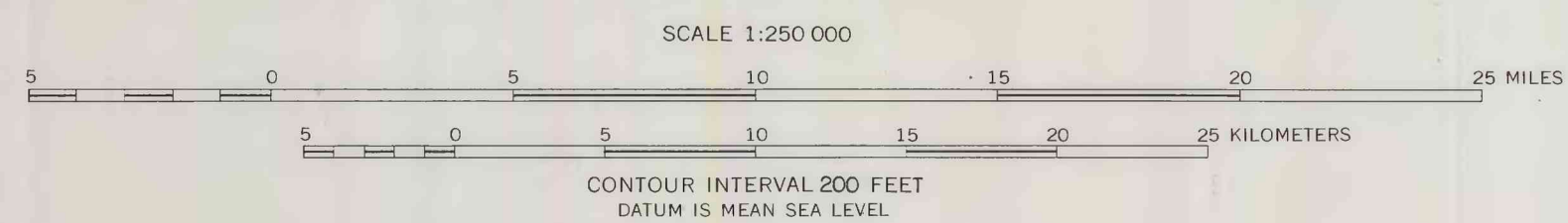


Base map from U.S. Geological Survey, 1:250,000
Talkeetna Mountains Quadrangle, Alaska, 1955



EXPLANATION OF GEOLOGIC MAP SYMBOLS

Contact, approximately located

Approximate contact of surficial deposits

U

Fault

Long dashed where approximately located; short dashed where inferred; dotted where concealed. U indicates upthrown side where direction of displacement is known. Arrows indicate relative lateral movement

Thrust fault

Long dashed where approximately located, dotted where concealed, Teeth indicate upthrown side.

Approximate axis of intense shear zone of variable width, possibly marking a thrust fault

Dotted where concealed; teeth indicate possible upthrown side of postulated thrust

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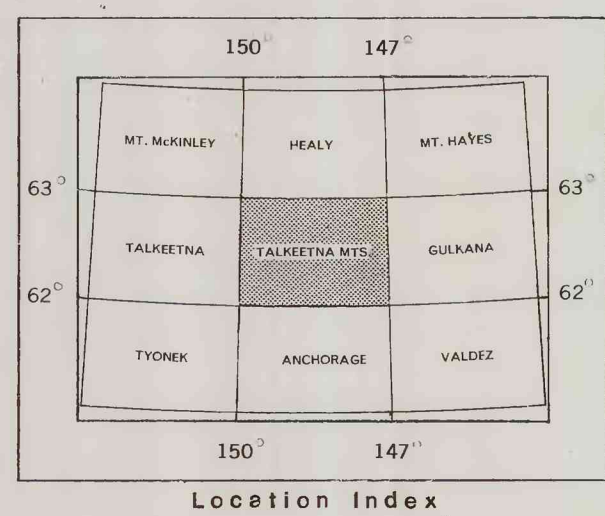
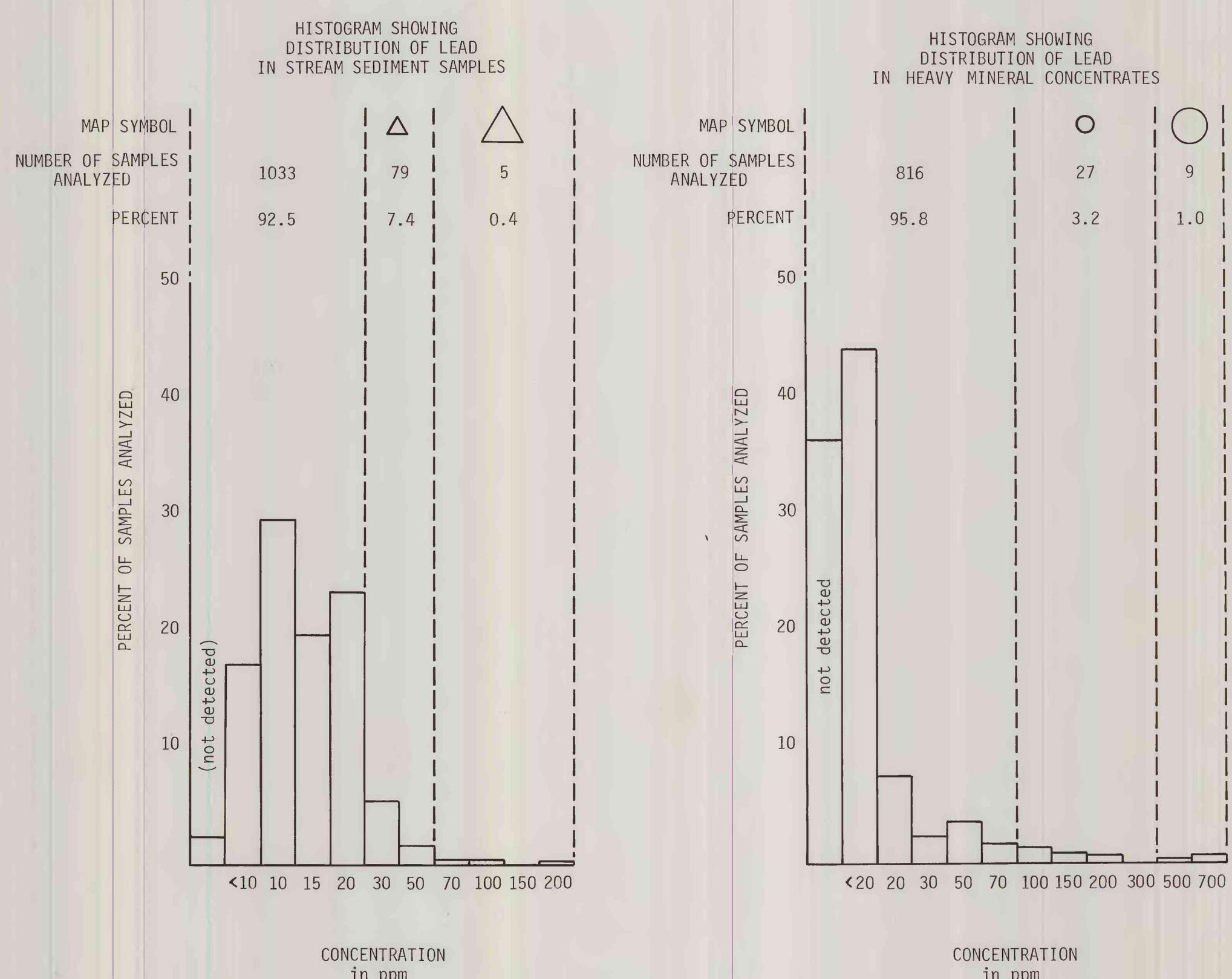
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This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.



EXPLANATORY STATEMENT

In the course of U.S.Geological Survey investigations of the Talkeetna Mountains quadrangle, 1118 stream sediment, 852 heavy mineral concentrate, and 501 rock samples were collected. All of these analyses were made by the U.S. Geological Survey, using semi-quantitative spectrographic methods (Grimes and Naranzano, 1968). Most of the stream sediment and rock samples were also analyzed for up to 4 elements by atomic absorption spectroscopy, as summarized in Table 1. Figure 1 is a typical map showing the sample collection sites of 1117 stream sediment samples and 852 heavy mineral concentrates which were analyzed for the 12 elements. The map includes a legend, a scale bar, and plus location maps, station coordinates, and discussion of sampling and analytical procedures for samples from sites shown on the present map are published in a report by Miller and others (1970).

Concentration of metals in geochemical samples varies for different lithologies and in different areas. Because of this, the inherent variability of the data, the degree of soil contamination, sampling practice, analytical variance, and degree of chemical weathering, it is impossible to select a specific analytical level above which values might indicate the presence of lead. For this reason, the data have been grouped into ranges (see histograms), each range being represented by a different symbol on the map. Higher values may be great as a great likelihood of lead contamination. The lower levels are low for "single-element" anomalies and for results which are not supported by neighboring values.

MAP SHOWING GEOCHEMICAL DISTRIBUTION AND ABUNDANCE OF LEAD IN STREAM SEDIMENTS
AND HEAVY MINERAL CONCENTRATES, TALKEETNA MOUNTAINS QUADRANGLE, ALASKA

by

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