This plot represents the distribution and abundance of arsenic in 876 stream sediment and 129 glacial debris samples collected during 1975 and 1976 in the Talkeetna quadrangle. At most sites, stream sediments were collected in the active channels of swift mountain streams, whereas glacial debris was collected from lateral and medial moraines of several glaciers situated near the center of the area. The distribution of arsenic in the Talkeetna quadrangle (Fig. 3) shows a concentration area similar to those of other areas. For the purposes of this study analytical data from the samples of glacial debris were combined with those from stream sediment in statistical analysis of the analytical data showed that these two media are chemically similar. The samples of stream sediment and glacial debris were analyzed for arsenic, iron, manganese, copper, and zinc. The size-to-size material was analyzed by wet quantitative electron microprobe. The results were entered into the computerized Rock Analytical Storage System (ROACS) of the U.S. Geological Survey and data sets were analyzed by various statistical programs in the U.S. Geological Survey STATAT system to produce element distribution plans and tabular statistics. The range of concentration of each element was subdivided into three or more intervals for plotting by tams and as shown in the accompanying histogram.