This plot represents the distribution of arsenic in 790 samples of the nonmagnetic heavy mineral concentrates collected during 1964 and 1970 in the Talkeetna quadrangle. At most sites, the stream sediments from which the concentrates were isolated were collected in the active channels of swift mountain streams draining areas ranging from about 5 to 10 km². The heavy-fraction concentrates were preliminarily prepared in the field by panning the stream sediments to remove most of the light minerals. The passed samples were then treated through a 10-mesh (1.6-mm) screen to the laboratory and the portion finer than this screen was air-dried and then treated with 5% (by weight) HCl-AHCl to remove the remaining light minerals (clays). Magnetic and other strongly magnetic heavy mineral concentrates were removed from the heavy-fraction materials by the use of a hand magnet. The remaining heavy minerals were passed through a Frantz (sediment separator) to a nonmagnetic fraction was obtained at a settling of 0.6 square. A split of this fraction was purified and analyzed by quantitative emission spectrophotometry. The results were entered into the computer for processing. The final concentrations and data sets were analyzed by various statistical programs in the U.S. Geological Survey (USGS) system to produce element distribution maps and tabular statistics. The range of concentration of each element is divided into three or more intervals for plotting by symbols as shown in the accompanying histogram.

The use of trade names is for descriptive purposes only and does not constitute endorsement of this product by the U.S. Geological Survey.