

U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY

**GEOLOGIC AND FOSSIL LOCALITY MAPS OF THE  
WEST-CENTRAL PART OF THE HOWARD PASS QUADRANGLE AND PART  
OF THE ADJACENT MISHEGUK MOUNTAIN QUADRANGLE,  
WESTERN BROOKS RANGE, ALASKA**

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**Miscellaneous Field Studies Map MF-2413**

**ABSTRACT**

This publication consists of two map sheets, a pamphlet, and a geospatial database. Sheet 1 consists of the principal map, a diagram showing stratigraphic correlation of map units, a list of map units, and four figures. Sheet 2 consists of a map showing localities from which fossils were collected. The pamphlet (provided here as a separate, accessible, document) consists of complete descriptions of the map units listed on sheet 1, a discussion of the geology of the map area, a discussion of the biostratigraphic data from the west-central part of the Howard Pass quadrangle, two lists of references, and five tables giving extensive information on the fossils collected in that area. The geospatial database consists of ArcInfo export files and ArcView shapefiles for the various features shown on the map and images of the topographic base map used in production of the publication.

The principal map on sheet 1 depicts the field distribution and contact relations between stratigraphic units, the tectonic relations between major stratigraphic sequences, and the detailed internal structure of these sequences. The stratigraphic sequences formed in a variety of continental margin depositional environments, and subsequently underwent a complex deformational history of imbricate thrust faulting and folding.

The fossil localities shown on sheet 2 are color coded to distinguish between previously published and unpublished data and between data collected prior to 1978 and those collected more recently.

**FIGURE CAPTIONS**

**Figure 1.** Location of map area, showing extent of the Howard Pass and Misheguk 1:250,000 quadrangles, the 1:63,360 quadrangles that make up the topographic base for this map, and the Brooks Range orogen in northern Alaska.

**Figure 2.** Distribution of field stations in the Howard Pass B-3–B-5 and C-3–C-5 quadrangles (scale 1:63,360). Mapping shown in Misheguk Mountain B-1 and C-1 quadrangles based on Mayfield and others (1984).

**Figure 3.** Simplified tectonic maps showing distribution of thrust sequences. Smaller map shows major structural features.

**Figure 4.** Structure section at Nuka Ridge (Misheguk Mountain 1:250,000 quadrangle) inferred from geologic mapping of Mayfield and others (1984).

**CORRELATION DIAGRAM**

This is a diagram that shows the stratigraphic correlation of the units used on this map.

### **LIST OF MAP UNITS**

This is a list of the map units in the form of a key to the map, which shows the color and symbol used on the map to represent each different map unit.