The introduction of the section begins with a general discussion of the geological context of the area. It explains the significance of the Durham quadrangle, Madison and Washington Counties, Arkansas, and how it relates to the overall geological processes in the region. The text then delves into specific geological features, such as the cross-bedded nature of the Brentwood formation, which is characterized by wavy and parallel lamination. The thickness of the Brentwood varies, with some sections being as thin as 20 feet and others up to 30 feet. The text also discusses the presence of limestone beds within the shale sections and the local occurrence of mounded features at about 20 feet below the upper contact.

The stratigraphic column is a critical component of the map, providing a detailed sequence of geological layers. It includes a variety of units, each with its own geologic characteristics, ranging from shale and sandstone to limestone. The column shows the typical thicknesses and the extent of each unit, allowing for a visual understanding of the geological layers at different locations. The column is essential for understanding the vertical distribution of rocks and their relationship to surface features and landforms.

Symbols are used on the map to represent different geological features. These symbols help in identifying the types of rock formations, such as sandstone, shale, and limestone, as well as significant geological structures like faults and unconformities. The symbols are crucial for interpreting the map and understanding the geological processes that have shaped the area.

The geologic cross-section A-A' provides a vertical representation of the geological layers, showing the distribution of rock types and their thickness. It is an important tool for visualizing the subsurface geology and understanding the stratigraphic relationships between different layers. The cross-section can help in the interpretation of underground features, such as faults and unconformities, and in planning for resource extraction, such as oil and gas exploration.

References:


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