Introduction to the Surficial Geology of Pottawattamie County, Iowa

Pottawattamie County is located in the north-central part of Iowa. The area has a rich geologic history, including deposits from various eras. The surficial geology of Pottawattamie County is influenced by a variety of factors, including glacial activity, fluvial processes, and pedogenesis.

The county is characterized by a diverse range of surficial deposits, including alluvial, colluvial, and eolian sediments. The alluvial deposits are mainly found in river valleys and along the Missouri River Valley, while the colluvial deposits are concentrated in the upland areas. Eolian deposits, such as loess, are present in some areas, especially in the western portion of the county.

The Glacial Episode

The most significant event in the history of Pottawattamie County is the Glacial Episode, which occurred during the Pleistocene period. The Wisconsin Glaciation, which ended about 11,000 years ago, had a profound impact on the geology of the area. The glacial deposits, known as till, are found throughout the county.

The Illinois Episode

The Illinois Episode, which began approximately 200,000 years ago, is another important event in the history of Pottawattamie County. This episode is characterized by the deposition of loess and related slope sediments. The loess deposits are particularly thick in the western part of the county.

The Geologic Setting

The geologic setting of Pottawattamie County is influenced by the underlying bedrock geology. The bedrock geology of the area is characterized by a variety of formations, including sandstone, shale, and limestone. These formations are exposed in the upland areas and are overlain by surficial deposits.

References

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Correlation of Map Units

- No
- Yes
- Map unit is subdivided into two variants

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Author Information

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