Introduction

Benton County is located in east central Iowa and is part of both the Iowa 'Erosion' Surface and the Southern Iowa Drift Plain landform regions. Benton County is on the Iowa 'Erosion' Surface largely within the Cedar River watershed and is dominated by dissected drumlins with unglaciated Wisconsinan residuum periglacial sediments and contiguous loess-covered uplands called eskers. The Southern Iowa Drift Plain is mostly in the Iowa River watershed and is characterized by thick loess generally found over a clayey Farmdale-Sangamon Geosol formed in till. Stratigraphically, Benton County contains Wisconsinan loess and/or eolian sediments over Paleozoic age glacial till which overlies Paleozoic carbonates and shales. The thickness of Quaternary deposits in Benton County ranges from less than 1.20 m (4 ft) to more than 30 m (100 ft). Depth to bedrock in the northern half of the county is in average around 10 to 28 m (33-90 ft), while about 30 m (120 ft) of Quaternary deposits underlies the southern part of the county.

New data collected for the mapping project consisted of 84 drill cores, which included 11 drilling transects, and this data was further supplemented with 44 hand auger or hand probe locations. New subsoil information was derived from the analysis of over 1,250 soil samples collected. Additional information regarding the initial mapping units and stratigraphy may be found in the accompanying Summary Map Report.

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LEGEND

CENOZOIC
QUATERNARY SYSTEM

BUDGEON EPISODE

WISCONSIN EPISODE

Pleistocene

Holocene

Pleistocene

Pleistocene

EACHEON EPISODE

PRE-ILLINOIS EPISODE

OTHER MAPPING UNITS

CORRELATION CHART

ACKNOWLEDGMENTS