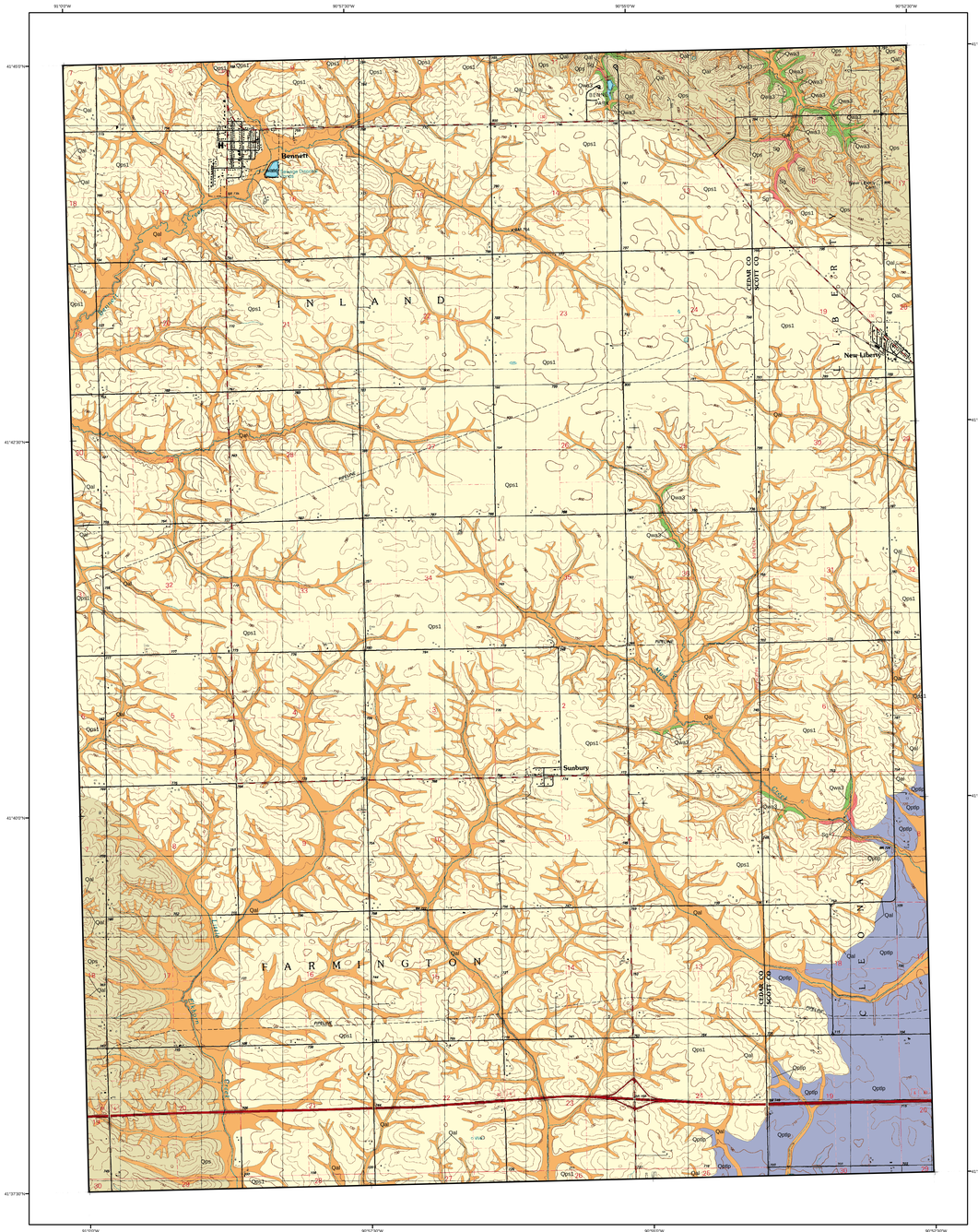
Surficial Geology of the Bennett (Iowa) 7.5' Quadrangle



1:24,000

0 0.5 1 2 3 4 Miles

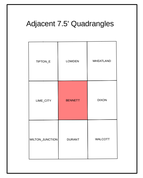
0 0.5 1 2 3 4 Kilometers

Quadrangle Location

Base map from USGS Bennett 7.5' Digital Raster Graphic (IGS GIS file DRGP47.TIF) which was scanned from the Bennett 7.5' Topographic Quadrangle map, published by US Geological Survey in 1991
Topographic contours and land features based on 1986 aerial photography, field checked in 1988
Land elevation contours (10' interval) based on NGVD 1929

Iowa Geological Survey digital cartographic file Bennettquad06.mxd, version 6/28/06 (ArcGIS 9.0)
Map projection and coordinate system based on Universal Transverse Mercator (UTM) Zone 15, datum NAD83

Adjacent 7.5' Quadrangles



COOPERATIVE MAPPING WITH THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS) SURFICIAL GEOLOGIC MAPS OF THE ROCHESTER AND BENNETT 1:24,000 QUADRANGLES PHASE 1

Iowa Geological Survey
Open File Map OFM-06-4
July 2006

prepared by

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Supported in part by the U.S. Geological
Cooperative Agreement Number 05HQAG0086
National Cooperative Geologic Mapping Program (STATEMAP)

ACKNOWLEDGEMENTS

Recognized for contributions to map's production: Andy Asell, Dave Pals, Heather Buresh, Brian Witzke, Mary Pat Heitman, and Lois Bair (all from the Iowa Geological Survey). Digital cartography was provided by Jim Giglierano (IGS). Drilling was provided under contract with Aquadrill of Swisher, Iowa; a special thanks to drilling crew members who worked at times in challenging drilling conditions. Kathy Woida and Ryan Dermody (NRCS) provided drilling and core description assistance as well as discussion of mapping strategy and unit characterization. A special thank you to all the landowners who graciously allowed access to their land for drilling. A thank you to the Iowa Department of Natural Resources for allowing access on public lands for drilling. Also, thanks to the Cedar and Scott County Engineer's offices for providing access to their boring logs.

LEGEND

Description of Map Units

Cenozoic

Quaternary System

Holocene Series

Hudson Episode

Qal - Alluvium (DeForest Formation-Undifferentiated) Variable thickness less than 1 to 5 meters (3 to 16 feet) of very dark gray to brown, noncalcareous to calcareous, stratified silty clay loam, clay loam, loam to sandy loam alluvium and colluvium in stream valleys, on hill slopes and in closed depressions. May overlie Pre-Illinoian glacial till (Wolf Creek or Alburnett formations) or Noah Creek Formation sand and gravel. Associated with low-relief modern floodplains, closed depressions, modern drainageways or toeslope positions on the landscape. Seasonal high water table and potential for frequent flooding.

Wisconsin Episode

Qptp - Late Phase High Terrace (LPHT) (Peoria Formation-silt and/or sand facies) Two to seven meters (6 to 23 ft) of yellowish brown to gray, massive, jointed, calcareous or noncalcareous, silt loam and interc alated fine to medium, well sorted, sand. Grades downward to poorly to moderately well sorted, moderately to well stratified, coarse to fine feldspathic quartz sand, loam, or silt loam alluvium.

Qps – Loess (Peoria Formation—silt facies) Generally 2 to 8 m (6 to 25 ft) of yellowish to grayish brown, massive, jointed calcareous or noncalcareous silt loam to silty clay loam. Overlies a grayish brown to olive gray silty clay loam to silty clay (Pisgah Formation —eroded Farmdale Geosol) which is less than 1.5 m (5 ft) thick. The Farmdale Geosol appears to have been disturbed by periglacial action and was welded to an older Sangamon Geosol developed in loamy glacial till of the Wolf Creek or Alburnett formations. This mapping unit encompasses upland divides, ridgetops and convex sideslopes. Well to somewhat poorly drained landscape.

Qps1 - Loess and Intercalated Eolian Sand (Peoria Formation-silt facies) Two to ten meters (6 to 33 ft) of yellowish brown to gray, massive, fractured, noncalcareous grading downward to calcareous silt loam and intercalated fine to medium, well sorted, sand . Sand is most abundant in lower part of the eolian package- eolian dunes 0.5 to 2.5 m (1.6 to 8 ft) thick may be present at the base of this unit. Overlies massive, fractured, loamy glacial till of the Wolf Creek or Alburnett formations with or without intervenin g clayey Farmdale/Sangamon Geosol.

Pre-Illinois Episode

Qwa3 – Till (Wolf Creek or Alburnett formations) Generally 10 to 35 m (33 to 115 ft) of very dense, massive, fractured, loamy glacial till of the Wolf Creek or Alburnett Formations with or without a thin loess mantle (Peoria Formation—less than 2 meters/ 6 ft) and intervening clayey Farmdale/Sangamon Geosol. This mapping unit encompasses narrowly dissected interfluves and side slopes, and side valley slopes. Drainage is variable from well drained to poorly drained.

Paleozoic Bedrock

Sg- Silurian Gower Formation - Laminated or mounded dolomite, mound facies may have steeply dipping beds.

Water Features