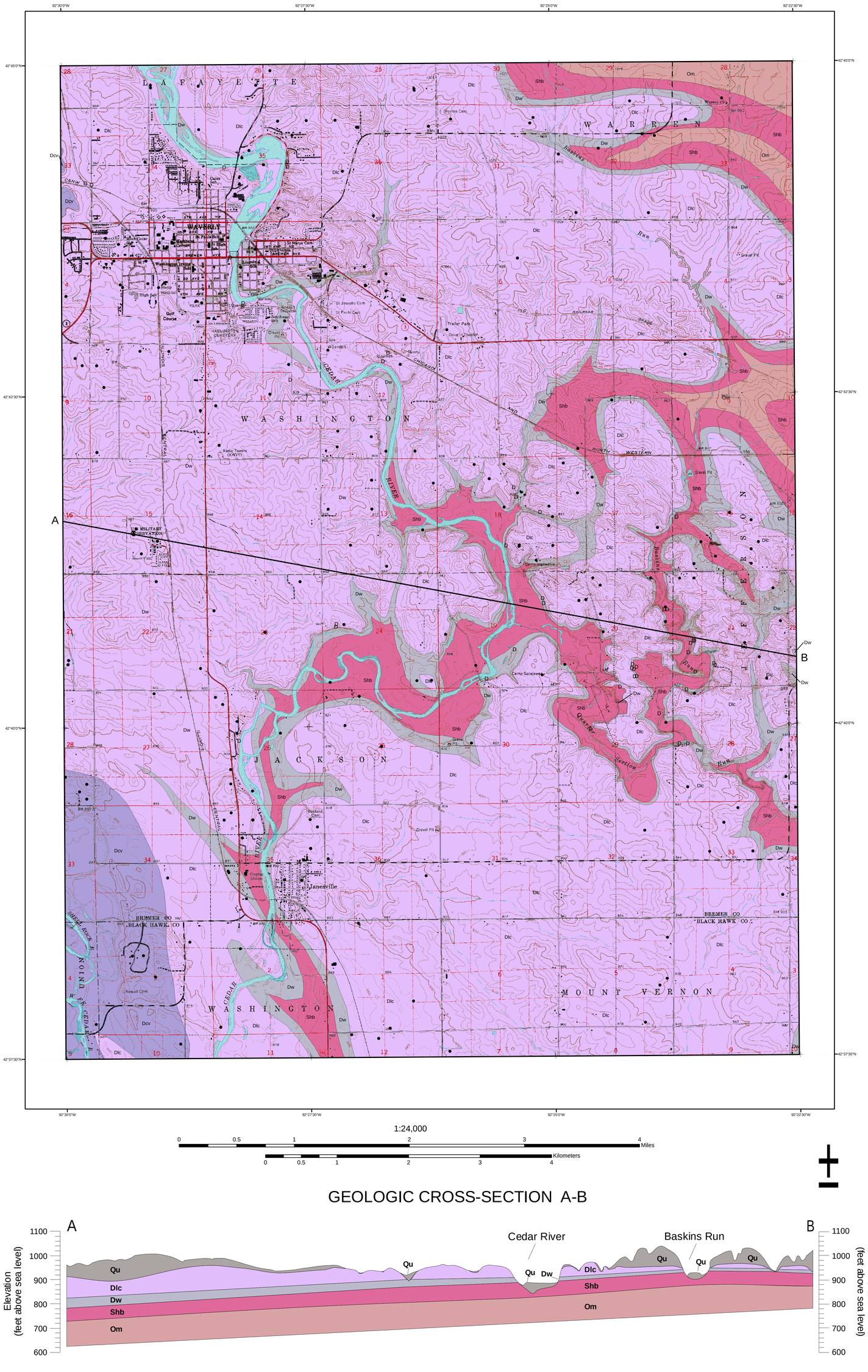
Bedrock Geology of the Waverly (Iowa) 7.5' Quadrangle



GEOLOGIC CROSS-SECTION A-B

BEDROCK GEOLOGY OF THE WAVERLY 7.5' QUADRANGLE, BREMER AND BLACK HAWK COUNTIES, IOWA

Iowa Geological Survey
Open File Map OFM-09-02
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prepared by

Robert McKay, Huaibao Liu, and James Giglierano

Iowa Geological Survey, Iowa City, Iowa

Iowa Department of Natural Resources, Richard A. Leopold, Director
Iowa Geological Survey, Robert D. Libra, State Geologist

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LEGEND

CENOZOIC

QUATERNARY SYSTEM

Qu

Qu – Undifferentiated unconsolidated sediment Consists of loamy soils developed in loess and glacial till of variable thickness, and alluvial clay, silt, sand and gravel. Total thickness can be up to 56 m (180 ft) in the northeast part of the quad. Unit shown only on cross-section, not on map.

PALEOZOIC

DEVONIAN SYSTEM

Dcv

Dcv - Limestone and Dolomite (Coralville Formation) Middle Devonian. Thickness of this formation varies between 0 and 10 m (0-32 ft), and is dominated by limestone, dolomitic limestone, and dolomite, in part laminated and argillaceous; brachiopods and corals are usually abundant in the limestone facies.

Dlc

Dlc - Dolomite and Limestone (Little Cedar Formation) Middle Devonian. The thickness of this formation ranges from 27 to 36 m (90-120 ft) in this quad. It is dominated by slightly argillaceous to argillaceous dolomite and dolomitic limestone, usually vuggy and partially laminated and/or cherty. This unit is commonly fossiliferous and brachiopods are especially abundant in lower portion.

Dw

Dw - Dolomite, Limestone, Shale, and minor Sandstone (Wapsipinicon Group) Middle Devonian. This map unit usually contains the Pinicon Ridge Formation only, with a total thickness that varies between 6 and 12 m (18-40 ft) in the mapping area. It is dominated by laminated or brecciated, unfossiliferous limestone and dolomite that is sometimes sandy and cherty at its base.

SILURIAN SYSTEM

Shb

Shb – Dolomite with Chert (Hopkinton and Blanding formations) Lower Silurian. Total thickness up to 20 m (65 ft). Fossil-moldic to vuggy dolomite, and cherty to very cherty with nodular to bedded chert in the upper part of the Blanding. Fossils include corals, brachiopods and stromatoporoids.

ORDOVICIAN SYSTEM

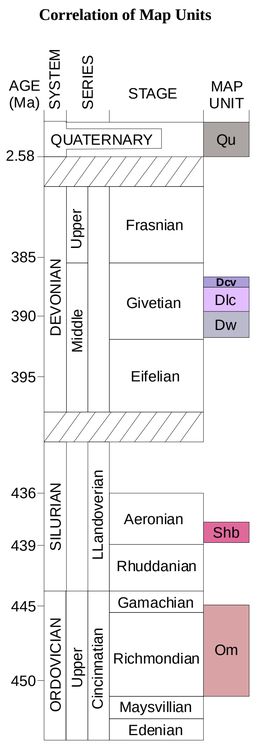
Om

Om – Shale and Dolomite (Maquoketa Formation) Upper Ordovician. Total thickness up to 78 m (250 ft). Interbedded dolomitic shale and shaly dolomite; variably cherty and fossiliferous with brachiopods and graptolites.

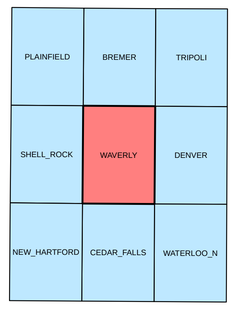
● **Drill Holes**

D **Outcrops**

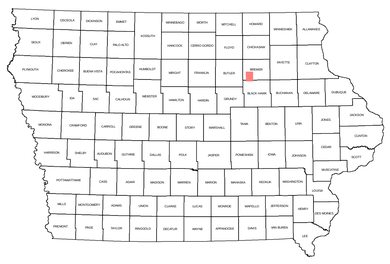
Correlation of Map Units



Adjacent 7.5' Quadrangles



Location Map



Base map from USGS Waverly 7.5' Digital Raster Graphic (IGS GIS file DRGH35.TIF) which was scanned from the Waverly 7.5' Topographic Quadrangle map, published by US Geological Survey in 1963, photorevised in 1972. Topographic contours and land features based on 1958 aerial photography, field checked in 1963
Land elevation contours (10' interval) based on NGVD 1929.

Iowa Geological Survey digital cartographic file Waverlyquad_bedrock09.mxd, version 6/15/09 (ArcGIS 9.2)
Map projection and coordinate system based on Universal Transverse Mercator (UTM) Zone 15, datum NAD83.

The map and cross section are based on interpretations of the best available information at the time of mapping. Map interpretations are not a substitute for detailed site specific studies.