

Bedrock Geology of the Davenport East (Iowa) 7.5' Quadrangle

BEDROCK GEOLOGY OF THE DAVENPORT EAST 7.5' QUADRANGLE, SCOTT COUNTY, IOWA

Iowa Geological Survey
Open File Map OFM-09-04
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prepared by

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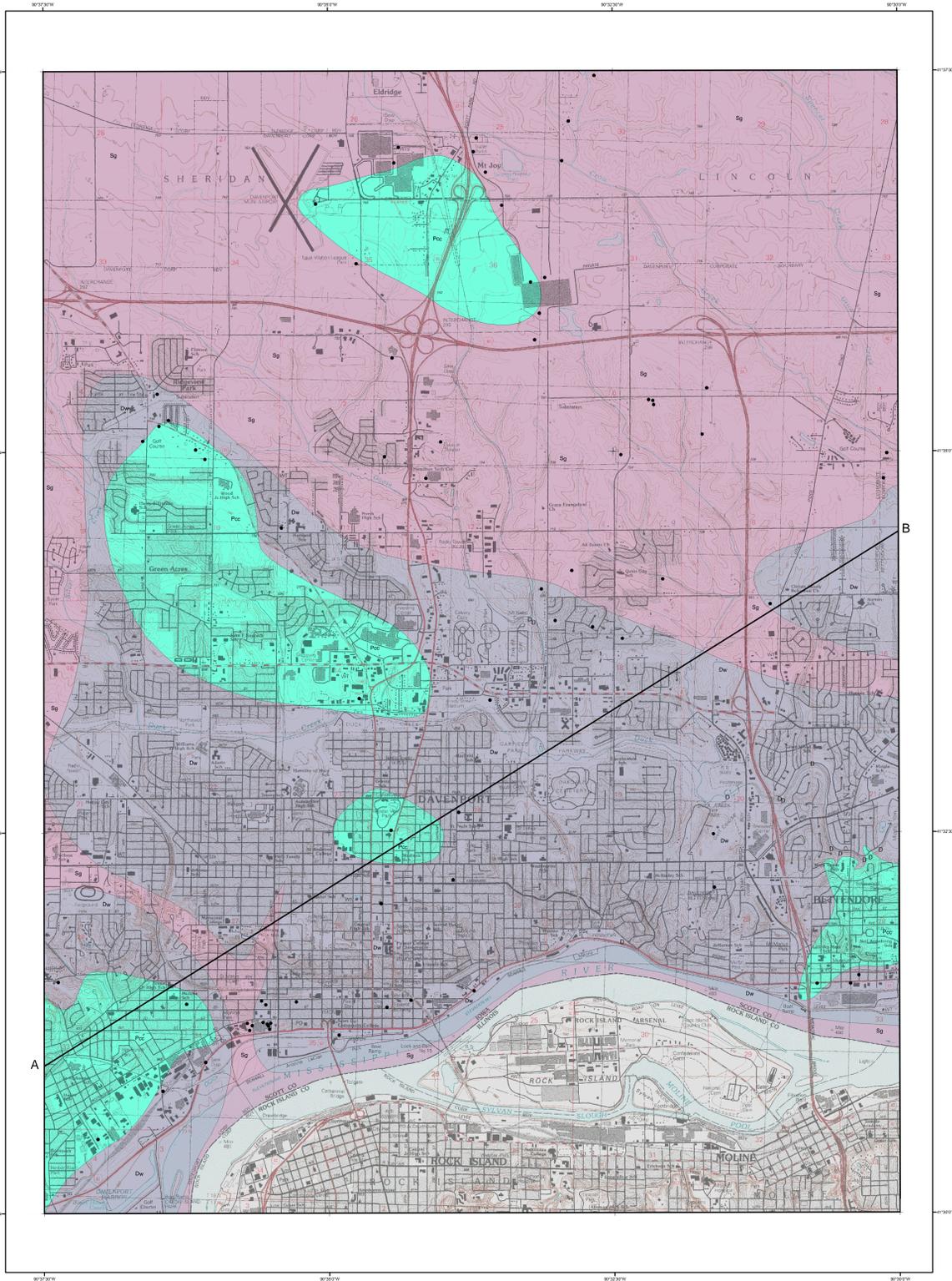


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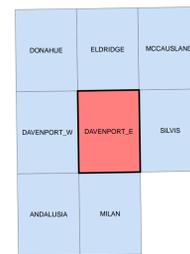
LEGEND

- CENOZOIC**
- QUATERNARY SYSTEM**
- Qu** - **Undifferentiated unconsolidated sediment**. Consists of loamy soils developed in loess and glacial till of variable thickness, and alluvial clay, silt, sand and gravel, with a maximum thickness locally exceeding 60 m (200 ft). Unit shown only on cross-section, not on map.
- PALEOZOIC**
- PENNSYLVANIAN SYSTEM**
- Pcc** - **Shale, Siltstone and Sandstone** (Cherokee Group and Caseyville Formation undifferentiated) Lower and Middle Pennsylvanian. The thickness of this unit may exceed 30 m (100 ft) in the west central map area, but in general is less than 10 m (30 ft). Primary lithology includes gray shale, siltstone, and minor sandstone. Secondary lithologies include black carbonaceous shale and coal; plant fossils, pyrite, and siderite pellets & concretions may be present.
- DEVONIAN SYSTEM**
- Dw** - **Dolomite, Limestone, Shale, and minor Sandstone** (Wapiniton Group) Middle Devonian. This map unit includes the Otis and the Placoin Ridge formations, with a total thickness between 18 and 29 m (60-95 ft). The Otis Formation is dominated by lithologic to sublitologic, pelitic limestone, with minor dolomite near its base. The Placoin Ridge Formation is characterized by laminated or brecciated, unfossiliferous limestone and dolomite with minor shale.
- SILURIAN SYSTEM**
- Sg** - **Dolomite** (Gower Formation) Silurian. Thickness of this formation ranges between 27 and 37 m (90-120 ft), and the lithology is dominated by porous dolomite, in part laminated and vuggy. Brachiopods and corals are common in nonvuggy facies.
 - Ss** - **Dolomite with minor chert** (Scott Grove Formation) Lower Silurian. The thickness of this interval ranges between 37-45 m (120-150 ft), and is characterized by fossiliferous (especially crinoidal) dolomite. Vugs and pores are common in most parts, and minor chert may occur in lower part of the formation. Unit shown only on cross-section, not on map.
- **Drill Holes**
 - D **Outcrops**

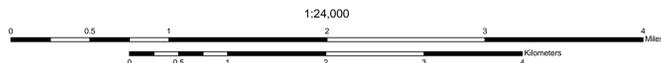
Correlation of Map Units

| AGE (Ma) | SYSTEM | SERIES | STAGE | MAP UNIT |
|----------|---------------|--------|--------------|----------|
| 2.58 | QUATERNARY | | | Qu |
| 310-315 | PENNSYLVANIAN | Middle | Desmoinesian | Pcc |
| | | | Atokan | ? |
| | | | Morrowan | Pcc |
| 390 | DEVONIAN | Middle | Givetian | Dw |
| | | | Eifelian | |
| 423-430 | SILURIAN | Lower | Ludfordian | |
| | | | Gorstian | |
| | | | Homerian | Sg |
| | | | Sheinwoodian | |
| | | | Telychian | Ss |
| | | | Aeronian | |
| | | | Rhuddanian | |

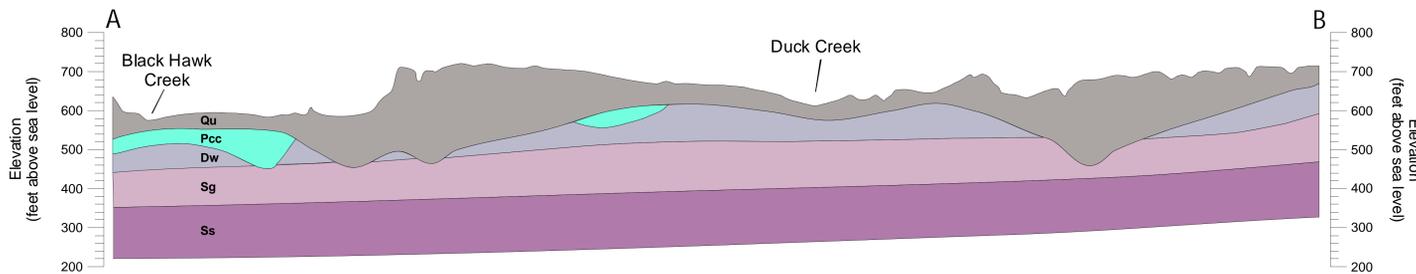
Adjacent 7.5' Quadrangles



Locator Map



GEOLOGIC CROSS-SECTION A-B



Base map from USGS Davenport East 7.5' Digital Raster Graphic (IGS GIS file DRGB42.TIF) which was scanned from the Davenport East 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 DavenportEastquad_bedrock09.mxd, version 6/16/09 (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.