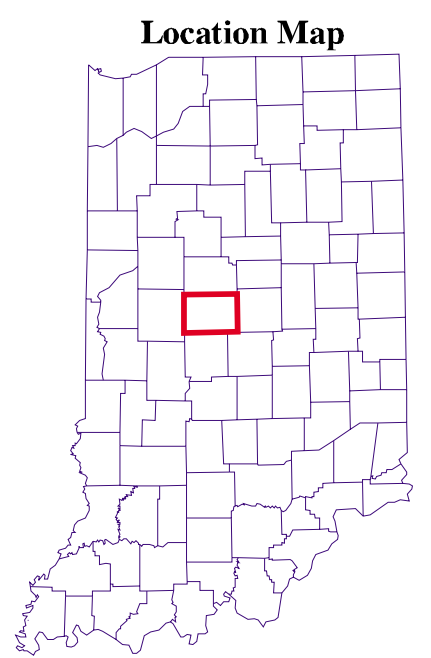
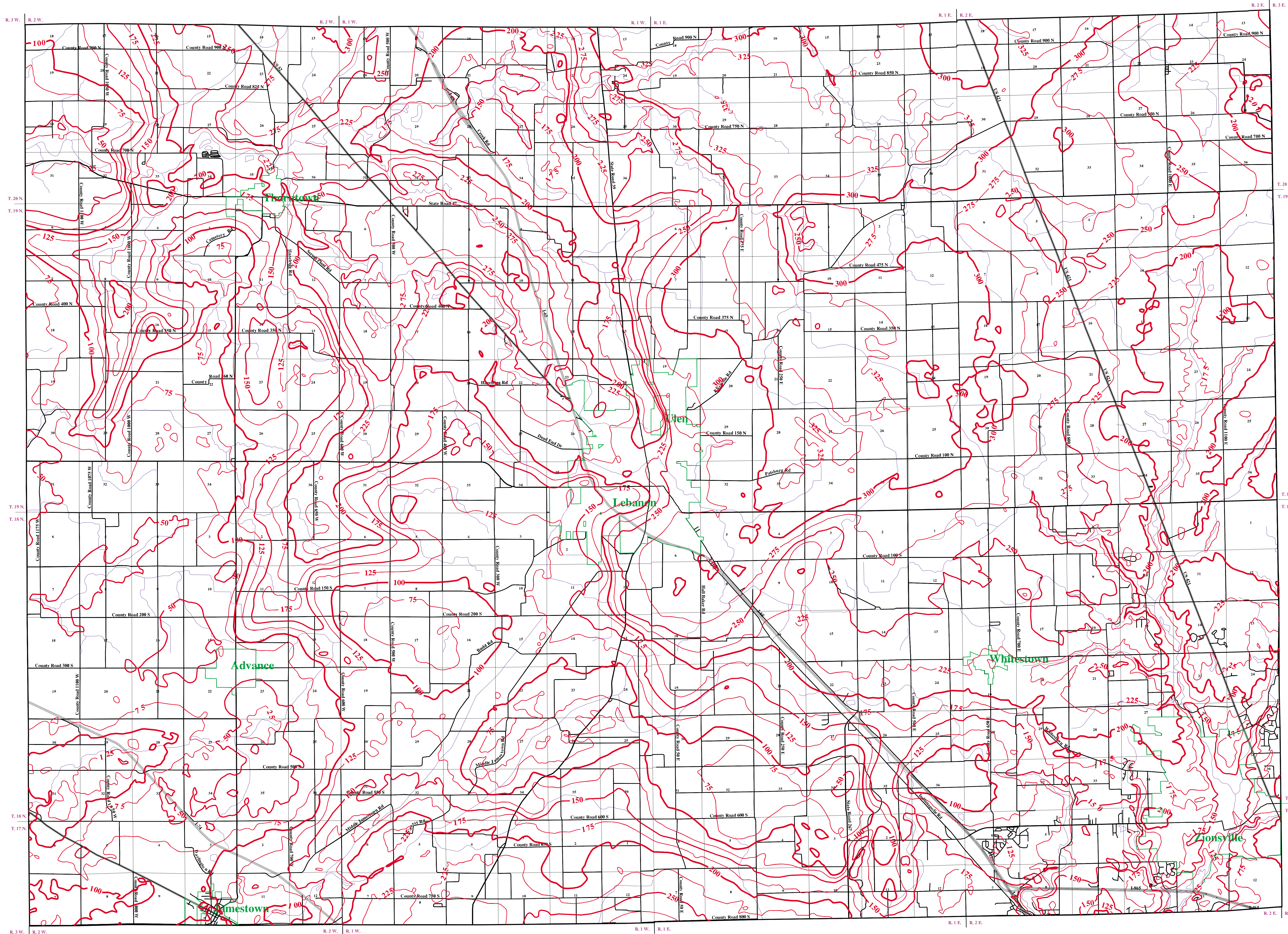


THICKNESS OF UNCONSOLIDATED DEPOSITS OF BOONE COUNTY, INDIANA

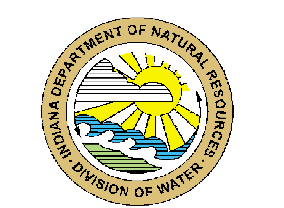
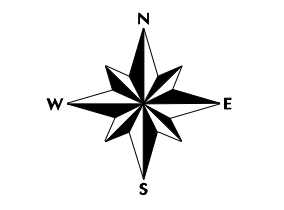
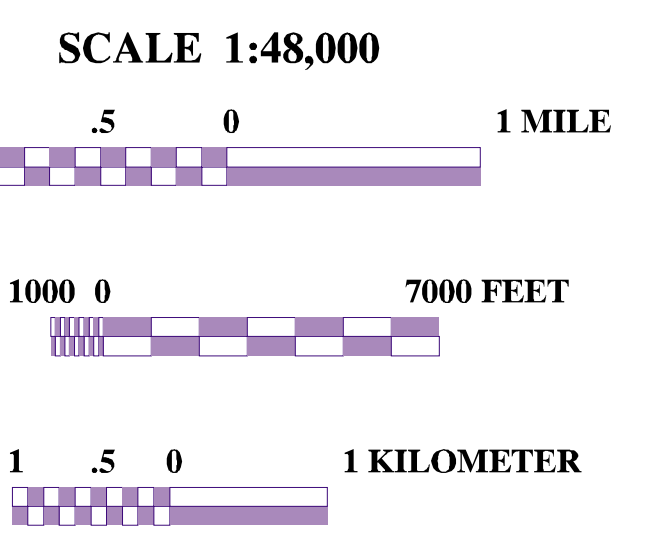


EXPLANATION
Tiger files (2000)
 Interstate Route
 U.S. & State Route
 County Road
 Streams
 Municipal Boundary
 Contour Interval 25 feet

Thickness of Unconsolidated Deposits Map
 This map shows the contours of the thickness of the unconsolidated deposits lying above the bedrock surface. This surface is often considered a pre-glacial surface. However, the surface was somewhat modified (eroded) by the earliest continental ice sheets before these glaciers deposited their load of rock, soil, and organic particles ranging in size from boulders to clay. Several later ice sheets overrode the earlier glacial deposits, often partially eroding and reworking them. In Indiana, the unconsolidated materials derived from the glaciers completely "buried" many of the old valleys in the bedrock surface. These buried valleys (also called paleovalleys) in many areas contain relatively thick deposits of sand and gravel that occurred as outwash from melting glaciers. These outwash aquifers were later covered by other ice sheets that left behind layers of clay-rich ground moraine, or till. The sand and gravel aquifers within paleovalleys often have higher potential yields than aquifers in surrounding areas. However, many of these paleovalleys and areas of very thick unconsolidated deposits have not been well explored for water supplies. Therefore, the reader is cautioned not to assume that the thickest deposits always contain the best aquifers.

Map Use and Disclaimer Statement
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This map was created from two existing digital coverages, the USGS 1999 and 2001 hypsography (land surface contours) and the bedrock-surface topography of Boone County (Grove, Herring, and Thompson, 2002). Both maps were developed at a scale of 1:24,000. The two coverages were converted into ArcInfo Triangulated Irregular Networks (TIN), a product of ESRI. These TINs were then converted into 10-meter grids and the latter subtracted from the former to produce the unconsolidated thickness grid. The resulting grid was then filtered using a low pass filter with 25 iterations to produce smoother lines when contoured. Then the grid was contoured in ArcInfo using lattice contour with a 25-foot interval.

Thickness of Unconsolidated Deposits of Boone County, Indiana
 by
 Glenn E. Grove
 Division of Water, Ground Water Section
 October 2002

Map generated by Glenn E. Grove
 IDNR, Division of Water, Ground Water Section,
 October 24, 2002