

# GEOLOGICAL AND GEOPHYSICAL MAPS OF THE ILLINOIS BASIN-OZARK DOME REGION

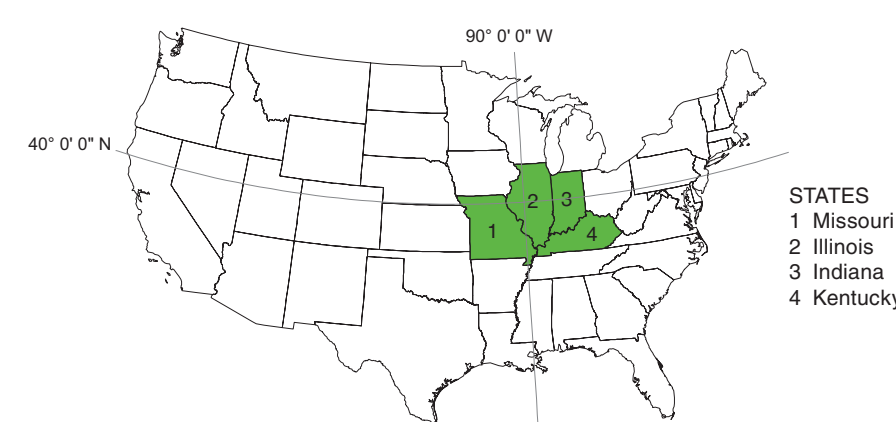
## MAP 4: BEDROCK GEOLOGY WITH BEDROCK TOPOGRAPHY

Digitally compiled by Curtis C. Abert, Stephen Marshak, and Timothy H. Larson  
2016

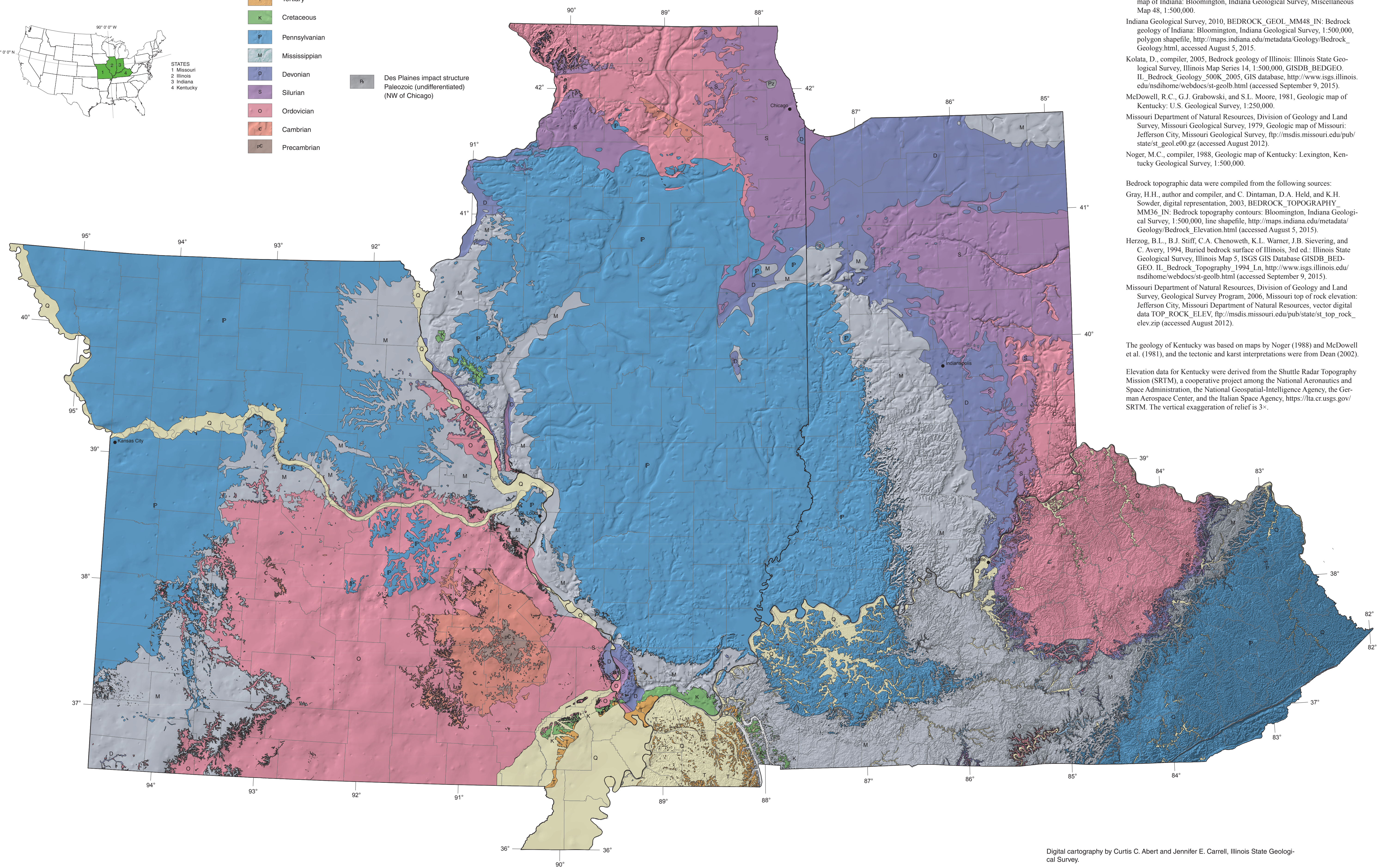
### System

- Q Quaternary
- T Tertiary
- K Cretaceous
- P Pennsylvanian
- M Mississippian
- D Devonian
- S Silurian
- O Ordovician
- c Cambrian
- pc Precambrian

Ps Des Plaines impact structure  
Paleozoic (undifferentiated)  
(NW of Chicago)



STATES  
1 Missouri  
2 Illinois  
3 Indiana  
4 Kentucky



### Data Sources

Geologic data were compiled and generalized from the following sources:  
Dean, C.S., 2002, State geology series: Lexington, Kentucky Geological Survey, <http://www.uky.edu/KGS/gis/geology.htm>, accessed August 5, 2015.  
Gray, H.H., C.H. Ault, and S.J. Keller, compilers, 1987, Bedrock geologic map of Indiana: Bloomington, Indiana Geological Survey, Miscellaneous Map 48, 1:500,000.  
Indiana Geological Survey, 2010, BEDROCK\_GEOLOGY\_MM48\_IN: Bedrock geology of Indiana: Bloomington, Indiana Geological Survey, 1:500,000, polygon shapefile, [http://maps.indiana.edu/metadata/Geology/Bedrock\\_Geology.html](http://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html), accessed August 5, 2015.  
Kolata, D., compiler, 2005, Bedrock geology of Illinois: Illinois State Geological Survey, Illinois Map Series 14, 1:500,000, GISDB, BEDGEO\_IL\_Bedrock\_Geology\_500K\_2005, GIS database, <http://www.isgs.illinois.edu/isdhome/webdocs/st-geolb.html> (accessed September 9, 2015).  
McDowell, R.C., G.J. Grabowski, and S.L. Moore, 1981, Geologic map of Kentucky: U.S. Geological Survey, 1:250,000.  
Missouri Department of Natural Resources, Division of Geology and Land Survey, Missouri Geological Survey, 1979, Geologic map of Missouri: Jefferson City, Missouri Geological Survey, <ftp://msdis.missouri.edu/pub/state/st-geol.e00.gz> (accessed August 2012).  
Noger, M.C., compiler, 1988, Geologic map of Kentucky: Lexington, Kentucky Geological Survey, 1:500,000.

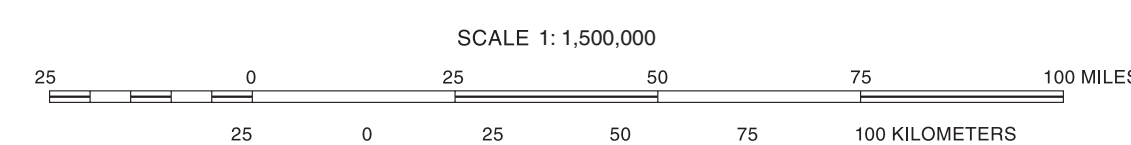
Bedrock topographic data were compiled from the following sources:  
Gray, H.H., author and compiler, and C. Dintaman, D.A. Held, and K.H. Sowder, digital representation, 2003, BEDROCK\_TOPOGRAPHY\_MM36\_IN: Bedrock topography contours: Bloomington, Indiana Geological Survey, 1:500,000, line shapefile, [http://maps.indiana.edu/metadata/Geology/Bedrock\\_Elevation.html](http://maps.indiana.edu/metadata/Geology/Bedrock_Elevation.html) (accessed August 5, 2015).  
Herzog, B.L., B.J. Stiff, C.A. Chenoweth, K.L. Warner, J.B. Sievering, and C. Avery, 1994, Buried bedrock surface of Illinois, 3rd ed.: Illinois State Geological Survey, Illinois Map 5, ISGS GIS Database GISDB\_BEDGEO\_IL\_Bedrock\_Topography\_1994\_Ln, <http://www.isgs.illinois.edu/isdhome/webdocs/st-geolb.html> (accessed September 9, 2015).  
Missouri Department of Natural Resources, Division of Geology and Land Survey, Geological Survey Program, 2006, Missouri top of rock elevation: Jefferson City, Missouri Department of Natural Resources, vector digital data TOP\_ROCK\_ELEV, [ftp://msdis.missouri.edu/pub/state/st\\_top\\_rock\\_elev.zip](ftp://msdis.missouri.edu/pub/state/st_top_rock_elev.zip) (accessed August 2012).

The geology of Kentucky was based on maps by Noger (1988) and McDowell et al. (1981), and the tectonic and karst interpretations were from Dean (2002).

Elevation data for Kentucky were derived from the Shuttle Radar Topography Mission (SRTM), a cooperative project among the National Aeronautics and Space Administration, the National Geospatial-Intelligence Agency, the German Aerospace Center, and the Italian Space Agency, <https://ita.cr.usgs.gov/SRTM>. The vertical exaggeration of relief is 3x.

Vector base data from 2009 Esri Data and Maps  
Geographic coordinate system: GCS\_WGS\_1984  
Projection: Lambert Conformal Conic

**Recommended citation:**  
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Digital cartography by Curtis C. Abert and Jennifer E. Carrell, Illinois State Geological Survey.

This map is a compilation of multiple preexisting data sets. The data sources may not have been reviewed by the ISGS for accuracy. Discrepancies may exist across state boundaries. Data resolution may vary across the map.

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