

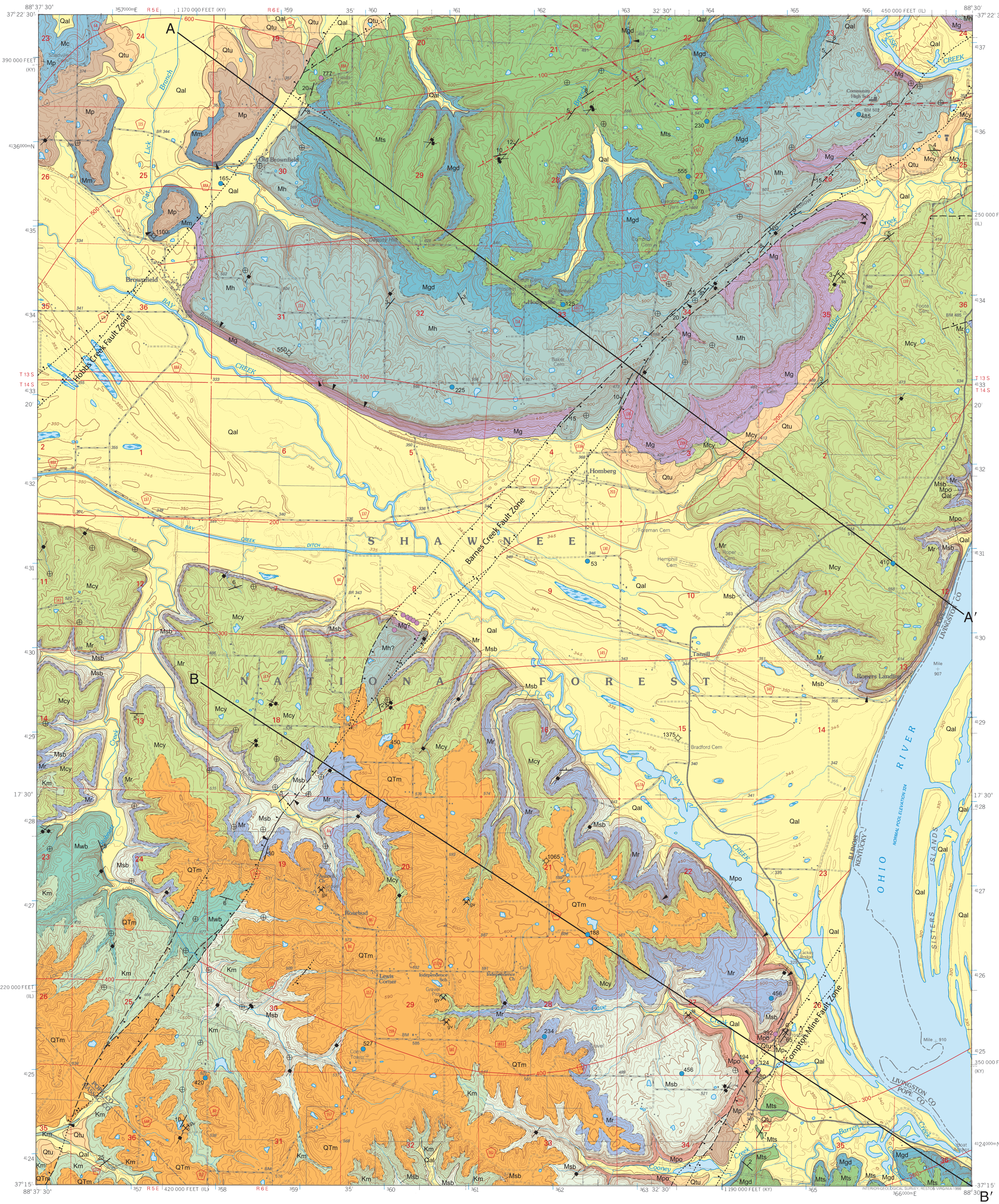
BEDROCK GEOLOGY OF BROWNFIELD QUADRANGLE

MASSAC AND POPE COUNTIES, ILLINOIS

Illinois Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
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2008

Illinois Geologic Quadrangle Map
IGQ Brownfield-BG



EXPLANATION		
Holocene	Qal Alluvial deposits; includes Wisconsinan terrace sediments	
Pleistocene	Qtu Terrace deposits	
	Unconformity	
Pliocene	QTm Mounds Gravel	
	Unconformity	
Maastrichtian	Km McNairy Formation	
	Unconformity	
Cretaceous	Mc Clare Formation	
	Mp Palestine Formation	
	Mm Menard Limestone	
	Mts Tar Springs Formation	
	Mgd Glen Dean Formation	
	Mississippian	Mh Hardinsburg Formation
		Mg Golconda Formation
		Mcy West Baden Sandstone
		Mr Cypress Formation
	Chesterian	Msb Ridenhower Shale
Msb Sample and Bethel Sandstones		
Mpo Paoli Limestone		

Symbols

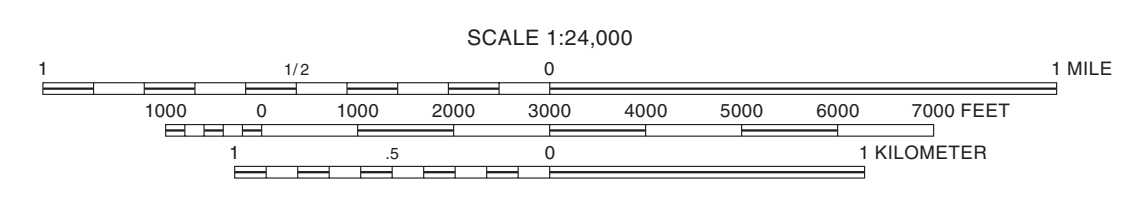
- 15 Strike and dip of bedding; number indicates degree of dip
- ⊕ Horizontal bedding
- ⊗ Vertical joints
- ↙ Outcrop of special note, shown where contact or map unit was well exposed at time of mapping
- ⊗ Active pit or quarry (gv, gravel; ss, sandstone; ls, limestone)
- ⊗ Abandoned pit or quarry
- Drill Holes**
from which subsurface data were obtained
- Water well
- Cored mineral exploration hole (several such holes near Compton Mine site not shown to avoid clutter)
- Dry oil test hole
- Numeric label indicates total depth of boring in feet.
- Line Symbols**
dashed where inferred, dotted where concealed
- Contact
- Normal fault; bar and ball on downthrown side
- Monocline; arrow on dipping flank
- Structure contour; elevation on top of Paoli Limestone; contour interval, 100 feet
- A—A' Lines of cross section

Note: Well and boring records are on file at the ISGS Geological Records Unit and are available online from the ISGS Web site.

Base map compiled by Illinois State Geological Survey from digital data provided by the United States Geological Survey. Topography compiled 1959. Planimetry derived from imagery taken 1993. PLSS and survey control current as of 1996.

North American Datum of 1927 (NAD 27)
Projection: Transverse Mercator
10,000-foot ticks: Illinois State Plane Coordinate system, east zone (Transverse Mercator)
1,000-meter ticks: Universal Transverse Mercator grid system, zone 16

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BASE MAP CONTOUR INTERVAL 10 FEET
SUPPLEMENTARY CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1989

Released by the authority of the State of Illinois: 2008

Geology based on field work by W.J. Nelson and F.B. Denny, 1995–1996.
Digital cartography by J. Domier, M. Widener, and M. Turino, Illinois State Geological Survey.

The Illinois State Geological Survey, the Illinois Department of Natural Resources, and the State of Illinois make no guarantee, expressed or implied, regarding the correctness of the interpretations presented in this document and accept no liability for the consequences of decisions made by others on the basis of the information presented here. The geologic interpretations are based on data that may vary with respect to accuracy of geographic location, the type and quantity of data available at each location, and the scientific and technical qualifications of the data sources. Maps or cross sections in this document are not meant to be enlarged.



ADJOINING QUADRANGLES		
1	2	3
4	5	6
7	8	

APPROXIMATE MEAN DECLINATION, 2008

ROAD CLASSIFICATION	
Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Light-duty road, dirt
	Unimproved road
○ State Route	○ County Route

SYSTEM	SERIES	FORMATION	MEMBER	GRAPHIC COLUMN	THICKNESS (FEET)	UNIT
QUAT.	PLEIS.	Mounds Gravel			0-80	A
TERT.	PLIO.					
CRETACEOUS	MAASTRICHTIAN	McNairy			0-180	B
MISSISSIPPIAN	CHESTERIAN	Cloro	Tygett Sandstone		10	C
			Cora		30-50	
		Paletine			50-80	D
		Menard Limestone			120-140	E
		Waltersburg			35-85	F
		Vienna Ls.			8-45	G
		Tar Springs			65-130	H
		Glen Dean Limestone			40-60	I
		Hardinsburg			70-120	J
		Golconda	Haney Limestone		57	K
			Fraileys Shale		32-120	
		West Baden Sandstone	Beech Creek Ls.		0-12	M
			upper		15-30	
		Cypress	lower		55-120	O
					85-135	
		Ridenhower Shale			0-100	P
Sample Sandstone			40-125	Q		
Bethel Ss.			15-20	R		
Paoli Limestone	Downey's Bluff Limestone		25-52	S		
	Yankeetown		25-52			
	Shelleville Limestone		30-45			
	Levias Limestone		17-22			
Aux Vases			15-25	V		
Ste. Genevieve Limestone	Karnak		70-80	X		
	Spar Mountain Ss.		7-9			
	Fredonia		130-140			
			210-265			
St. Louis Limestone and older formations			55+	AA		

