

PDMS Stratigraphic Unit													
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8						
System	SprGp	Group	Formation	Member/Informal Unit	Group	Formation	Membe/Informal Unit						
Quaternary (Pleistocene)	NA												
Pennsylvanian		↕ Southwestern and Western Indiana ↕			↕ Northeastern and Eastern Indiana ↕								
		McLeansboro	Hutton Fm.	Mazon Ss. Mbr. Cohn Coal Mbr. Livingston Ls. Mbr. Riverview Ls. Mbr. Fairbanks Coal Mbr. St. Wendel Ss. Mbr. Carthage Ls. Mbr. Parker Coal Mbr. Raben Branch Coal Mbr. Dicksburg Hills Ss. Mbr.									
			Bond Fm.	Vigo Ls. Mbr. Hazleton Bridge Coal Mbr. Ingelfield Ss. Mbr. Dibsey Coal Mbr.									
			Patoka Fm.	West Franklin Ls. Mbr. Pirtle Coal Mbr. Busserson Ss. Mbr. Danville Coal Mbr. (Coal VII)									
			Shelburn Fm.	Universal Ls. Mbr. Anvil Rock Ss. Mbr. Bridge Junction Ss. Mbr. Hymers Coal Mbr. (Coal VI)									
				Dugger Fm.	Providence Ls. Mbr. Herrin Coal Mbr. Antioch Ls. Mbr. Bucktown Coal Mbr. (Coal VB)								
					Carbondale	Alum Cave Ls. Mbr. Springfield Coal Mbr. (Coal V)	NA	NA	NA				
						Petersburg Fm.	Folsomville Mbr. Stendal Ls. Mbr. Hootchin Creek Coal Mbr. (Coal IVa)						
						Linton Fm.	Survant Coal Mbr. (Coal IV)						
							Staunton Fm.	Velpen Ls. Mbr. Mecca Quarry Sh. Mbr. Colchester Coal Mbr. (Coal IIIa)					
								Raccoon Creek	Coville Ss. Mbr. Seelyville Coal Mbr. (Coal III)				
		Brazil Fm.							Silverwood Ls. Mbr. Holland Ls. Mbr. (not reliable)				
									Mansfield Fm.	Perth Ls. Mbr. Minshall Coal Mbr. Buffaloville Coal Mbr.			
											U. Block Coal Mbr. L. Block Coal Mbr. Shady Lane Coal Mbr. Lead Creek Ls. Mbr.		
											Mariash Hill Coal Mbr. Blue Creek Coal Mbr. Pinick Coal Mbr. St. Meinrad Coal Mbr.		
											French Lick Coal Mbr.		

Miss.-Penn. unconformity[illegible]

Ordovician	NA
	Knox (u. part)
Cambrian	Knox (l. part)
	Potsdam
Precambrian	NA

[illegible]

Col. 6	Col. 7	Col. 8
Group	Formation	Membe/Informal Unit
<div>↕ Northeastern and Eastern Indiana ↕</div> <div> <div>NA</div> <div>NA</div> <div>NA</div> </div>		

Northern Indiana					
NA		NA		NA	
		Coldwater Sh.			
		Sunbury Sh.			
		Ellsworth (Sh.) (u. part)			
		Ellsworth Sh. (l. part)			
NA		Antrim Sh.		NA	
Muscatawuck		Traverse Fm.		Traverse ls. (informal)	
		Detroit River Fm.		Cranberry Marsh Mbr. Milan Center Dol. Mbr. Gower Ditch Mbr.	
		Wabash Fm.		Liston Creek Ls. Mbr.	Kenneth Ls. Mbr. Kokomo Ls. Mbr.
Selina		Pleasant Mills Fm.		Mississinewa Sh. Mbr.	
				Louisville Mbr.	
				Waldron Sh. Mbr.	
NA		Salamanca Dol.		Limberlost Dol. Mbr. (of Pleasant Mills Fm.)	NA
				Stroh Mbr. (of Cataract Fm.)	
NA		Catawact Fm.	Barnesfield Ls.	Cabot Head Mbr. (of Cataract Fm.)	
			Sexton Creek Ls.	Manitoulin Dol. Mbr. (of Cataract Fm.)	

**↻ Eastern Indiana ↻**

Maquoketa	Whitewater Fm.		Saluda Mbr.
		Dillsboro Fm.	NA
	Scalen Sh.	Kope Fm.	
NA		Point Pleasant Mbr. (of Lex.)	
	Trenton Ls.	NA	
Black River		Curdsville Mbr. (of Lex.)	
	Plattin Fm.		
Ancell	Recoleta Fm.		
	St. Peter Ss.	NA	
NA	Everton Dol.		
	Shakopee Dol.		
Prairie du Chien	Ononda Dol.		
NA	Potosi Dol.	NA	
NA	<div style="display: inline-block; transform: rotate(-45deg);">Davis Fm.</div>	Francia Fm.	
		Trenton Fm.	
		Galveston Fm.	
NA	Eau Claire Fm.		
NA	Mount Simon Ss.		
NA	Middle Run Fm.	NA	

Completion Formation			
Col. 9			
Pleistocene			
Pensylvanian	Pensylvanian IV	Pensylvanian CBM	
Shelburn			
Dugger			
Petersburg			
Linton			
Staunton			
Brazil			
Mansfield			

Degonia	
Clore	
Palestine	
Waltersburg	
Tar Springs	
Hardinsburg	
Big Clifty (Jackson)	
Cypress	
Sample (Paint Creek)	
Bethel	
Paoli	Yankeetown
	Renault
Ste. Genevieve	Aux Vases
	Joppa
	Karnak
	Fredonia
St. Louis	
Salem	
Harmsdsburg	
Muldrough	
Borden	
New Albany	Antrim
Muscatatuck	Traverse
	Detroit River
New Harmony	
Silurian	

Maquoketa		
Trenton	Lexington	
Black River		Trenton/Black River Undir. (Lexington excluded)
Ancell		St. Peter
Knox		
Davis		
Eau Claire Fm.		
Mount Simon Ss.		

Pay Zone	
Col. 10	
Pennsylvania	
Pennsylvania Inc	
Pennsylvania CDM	

Deponia	
Clore	
Palestine	
Waltersburg	
Tier Springs	
Hardinsburg	
Big Clifty (Jackson)	
Cypress	
Sample (Paint Creek)	
Bethel	
Paoli	
Ste. Genevieve	
St. Louis	
Salem	
Harrodsburg	
Muldraugh	
Borden	
NA	
New Albany	Antrin
Muscatactuck	Traverse Detroit River
New Harmony	
Silurian	

Maquoketa			
Trenton	Lexington	Trenton (Black River and Upper) (Lexington excluded)	
Black River			
Ancell			
Knox			
Davis			
Eau Claire Fm.			
Mount Simon			

Col. 11	
TD Formation	Pleistocene
Test Formation	
Show Formation	

	Degonia
	Clore
	Palestine
	Menard
	Watersburg
	Vienna
	Tar Springs
	Glen Dean
	Harvard
	Haney (Solondra)
	Big City (Jackson)
	Brecht Creek (Barlow)
	Cypress
	Reelsville (U.Paint Creek)
	Sample (Paint Creek)
	Beaver Bend (L. Paint Creek)
	Beethel
	Paoli
	Ste. Genevieve
	St. Louis
	Salem
	Harrodsburg
	Muldraugh
	Borden
	Rackford
	Coldwater
	Sunbury
	Ellsworth
	New Albany
	Antrim
	Muscatactuck
	New Harmony
	Silurian

Maquoketa	
Trenton	Loxington
Black River	
Anceill	
Knox	
Davis	Franconia Trenton Galesville
Eau Claire	
Mount Simon	

Core Fm.	
Pleistocene	Surface
<div> <div></div> <div>Pennsylvanian</div> </div>	

	Degonia
	Clore
	Palestine
	Monsard
	Waltersburg
	Vienna
	Tar Springs
	Glen Dean
	Hardinsburg
	Haney (Goldsands)
	Big Clifty (Jackson)
	Beech Creek (Barlow)
	Cypress
	Reelsville (U Paint Creek)
	Sample (Paint Creek)
	Beaver Bend (L. Paint Creek)
	Downeys Bluff (Renault)
	Renoilt
	Aux Vases
	Ste. Genevieve
	St. Louis
	Salem
	Harrodsburg
	Muldrough
	Borden (Carper)
	Rockford
	Sunbury
	Ellsworth
	New Albany
	Antrim
	Devonian
	Geneva
	Silurian

Maquoketa	
Trenton	Livingston
Black River	
Ancell	St. Peter
Knox	
Davis	
Eau Claire	
Mount Simon	
Precambrian	

## Chart Showing Stratigraphic Terminology Used in the Indiana Geological Survey's Petroleum Database Management System (PDMS)

October 6, 2005

**This is a draft edition prepared for immediate inclusion in the recent beta release of the PDMS. It has not yet gone through formal review and may contain errors, omissions, and unapproved terminology.**

For convenience and clarity, the Petroleum Database Management System (PDMS) uses stratigraphic terminology simplified from formally recognized nomenclature. This chart summarizes PDMS terminology and illustrates relationships with currently accepted rock-unit names in Indiana.

**Columns 1-8** on the left show Indiana rock-unit names used in the PDMS and their hierarchy. The presentation is limited to the correspondence of terminology – the size of unit divisions portrayed does not infer the relative thickness, lateral extent, or length of time for deposition associated with the actual rock intervals. Most of the names correspond directly to accepted nomenclature as presented in Shaver and others (1986), *Compendium of Paleozoic Rock-Unit Stratigraphy in Indiana – A Revision*, and certain stratigraphic revisions (e.g., 1990) have been adopted. Column 1-8 is a simplified version of the PDMS, essentially a modified and greatly simplified version of Plate 2 of Shaver and others (1986). The reader should refer to these original sources for a more complete discussion of Indiana stratigraphy and its nomenclature. The following changes have been made to the named rock-units depicted in Plate 2 of Shaver and others (1986).

1. Most of the "miscellaneous" terminology, and terms referring solely to surface exposures are not presented. A few surface terms without subsurface equivalents are used for units or contacts with distinctive features which allow them to be traced into the subsurface.
2. Chronostratigraphic units and bionomenclature are not presented.
3. Some commonly used industry and informal names are used, shown either in parentheses as part of the formal name, or as named units in the "Member/Informal" columns.

In the remaining Columns 9-11, unit names have been shortened from their corresponding formal equivalents to conserve space in the PDMS.

**Completion Formation (Column 9)** is the name of the geologic unit or formation in which the well is completed (a well interval opened for hydrocarbon production or other operation). The term "formation" is used here in the common petroleum industry parlance, referring to any given stratigraphic unit. The unit may or may not correspond to a formally named unit, and the interval may include more or less section than a formally recognized formation.

As presented in Column 9, Completion Formation represents optional choices for identifying an interval in the borehole. For example, "Pennsylvanian," "Pennsylvanian MV," "Pennsylvanian CBM," and "Dugger" may be appropriate choices for an interval in a particular well.

Additionally, Completion Formations are more coarsely grouped than the stratigraphic picks listed in Columns 1-8. For example, the Completion Formation "Muscatatuck" is the designated Completion Formation for a well with a completion interval that falls within the Genesee Dolomite. Broader grouping is necessary because more specific determinations in many cases cannot be reliably made from well to well, or to conform with legacy terminology used in earlier records at the Indiana Geological Survey (IGS).

Strictly speaking, the terms "Pennsylvanian Coal CBM" and "Pennsylvanian Coal MV" are neither formal nor informal units. What's more, they denote gas production, which has nothing to do with being a stratigraphic unit. They are exceptionally termed Geologic Units in the PGS so that they can be manipulated as Completion Formations in the Completion Wizard. The code name for the coal seam productive (geologic) units prepared by the Indiana Geological Survey, "Pennsylvanian Coal CBM" refers to any coal interval in Pennsylvanian rocks that produce methane gas and "Pennsylvanian Coal MV" indicates gas production from mine voids resulting from underground coal mining. A search for "Pennsylvanian" as a completion formation in the Search Menu will return all wells with completion formations that are either "Pennsylvanian Coal CBM" or "Pennsylvanian Coal MV." A separate search option can be used to find only coalbed gas wells (both "Penn. Coal MV" and "Penn. Coal CBM").

**Play Zones (Column 10)** represent well intervals in reservoirs used specifically for oil and gas operations. They differ from Completion Formations in that completion intervals used for oil and gas operations are not necessarily the same as the completion intervals used for other purposes are not included. Zones used for water injection (waterflood) and other types of enhanced recovery are considered Play Zones. Unlike the Completion Formation, Play Zones do not occupy space in the PDMS data tables. Instead, they are derived programmatically from the Completion Formations. The PDMS Map Viewer uses the Play Zones to show the distribution of wells producing from common intervals. Due to correlation difficulties and numerous cases of insufficient information about the correlation of the completion intervals, the PDMS Map Viewer does not show the correlation of the Completion Formations. As an example, a well completed in either the Yanketown, Renault, or Aux Vases Completion Formations is assigned to the Aux Vase Play Zone. The explanations of the Play Zones are provided in the PDMS Map Viewer described in the above section.

**Completion Formations (Column 9)** also apply.

**TD Formation, Test Formation, Show Formation [Column 11]** all use the same terminology. TD Formation is the geologic unit or formation penetrated at the total depth of a Well Event (Each well in the PDMS has been divided into one or more chronological Well Events that represent a well's history). Test Formation refers to a geologic unit that has been tested for production. A Show Formation is a geologic unit in which the presence of oil or gas has been indicated. To avoid certain correlation difficulties in some areas and to provide a more detailed stratigraphic correlation, the names of the named intervals are grouped into broader geologic units than those identified in Columns 1-8. For the most part, the names match those used for Pay Zones, except that more units are included in Column 11 because Pay Zones are limited to wells completed in specific zones whereas TD, Test, and Show Formations may include any stratigraphic unit.

**Core Formation (Column 12)** Is the geologic unit or formation of a cored interval. The