Pennsylvania Geological Survey

Open-File Oil and Gas Report 19–01.1

Subsurface Lithostratigraphy of the Oil- and Gas-Producing Regions of Pennsylvania

APPENDIX 1. INFORMAL NAMES AND RESERVOIR ACTIVITY FOR SELECTED CORRELATION DIAGRAM ROCK UNITS

Appendix 1. *Informal names and reservoir activity for selected correlation diagram rock units.*

[Named units in this table do not always reflect a vertical stratigraphic relationship. See Plate 1 for illustrative representation of stratigraphic positions.]

Upper Pennsylvanian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Dunkard	Waynesburg	Waynesburg coals		Coalbed methane production
Monongahela	Uniontown	Uniontown coal		Coalbed methane production
	Pittsburgh	Sewickley coal		Coalbed methane production
		Redstone coal		Coalbed methane production
		Pittsburgh coal	Big Seam	Coalbed methane production
Conemaugh	Casselman	Morgantown sandstone	Murphy Stray, Murphy, Mitchell	
	Glenshaw	Bakerstown coals		Coalbed methane production
		Buffalo sandstone	Little Dunkard	
		Brush Creek coal		Coalbed methane production
		Mahoning coal		Coalbed methane production
		Mahoning Sandstone	Big Dunkard, Hurry Up	

Middle Pennsylvanian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Allegheny	Freeport coals		Coalbed methane production
		Freeport sandstone	Upper Gas, First Gas	Conventional natural gas production
		Kittanning coals		Coalbed methane production
		Lower Worthington Sandstone	First Gas, Middle Gas, Second Gas, Kittanning	Conventional natural gas production
		Clarion coals		Coalbed methane production
		Clarion sandstone	Lower Gas, Third Gas	Conventional natural gas production
		Brookville coals		Coalbed methane production

Appendix 1. *(Continued)*

Middle Pennsylvanian *(Continued)*

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Pottsville	Homewood Sandstone	First Salt	Conventional oil/natural gas production
		Mercer coals		Coalbed methane production
		Connoquenessing sandstone	Second Salt, Maxton, Third Salt, Salt	Conventional oil/natural gas production
		Quakertown coal		Coalbed methane production
		Sharon coal		Historical coalbed methane production in Westmoreland County

Upper Mississippian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Mauch Chunk	Mauch Chunk Fm	Red beds	

Upper/Middle Mississippian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Greenbrier	Wymps Gap Limestone	Little lime	
		Deer Valley Limestone		
		Loyalhanna Limestone	Big lime	Geologic storage opportunity
		Greenbrier Fm		

Lower Mississippian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Burgoon	Burgoon Sandstone	Big Injun, Mountain, Keener	Conventional oil/natural gas production, natural gas storage
	Shenango	Shenango Fm	Squaw	

Appendix 1. *(Continued)*

Upper Devonian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Berea	Berea Sandstone	Second Gas	Conventional oil/natural gas production, natural gas storage
	Murrysville	Murrysville sandstone	Upper Thirty Foot, Thirty Foot, Gas	Conventional oil/natural gas production, natural gas storage
	Ohio	Huron Shale		Unconventional natural gas production from shale
		Dunkirk Shale		Unconventional natural gas production from shale
	West Falls	Rhinestreet Shale		Unconventional natural gas production from shale
	Sonyea	Middlesex Shale		Unconventional natural gas production from shale
	Genesee	Geneseo Shale	Burket	Unconventional natural gas production from shale
	Riceville	Riceville Shale	Drake sand	*Drake's Well (8/27/1859)*
	Venango	Venango Fm	Hundred-Foot	Conventional oil/natural gas production
Venango		Venango Gp	(1) Venango First, Tuna, Woodcock, Panama, Red Valley, Gantz, Fifty-Foot, Hundred-Foot (2) Venango Second, Lytle, Rosenberry, Salamanca, Thirty-Foot, Snee, Nineveh, Upper Nineveh, Lower Nineveh (3) Venango Third Stray, Gray, Knox Third, Shira, Venango Third, Knox Fourth, Wolf Creek, Clarion, Gordon Stray, Boulder, Gordon, Third (4) Knox Fifth, Fourth, Washington (5) Venango Fifth, Fifth, McDonald, Fifth A (6) Magee Hollow, Bayard, Bayard Stray, Elizabeth, Elizabeth Stray, Sweet Richard	Conventional oil/natural gas production, natural gas storage, geologic storage opportunity
	Catskill	Catskill Fm	Red rock Warren and Speechley sands in north-central PA	Conventional oil/natural gas production
	Chadakoin	Chadakoin Fm	Pink rock	

Appendix 1. *(Continued)*

Upper Devonian *(Continued)*

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Bradford		Bradford Gp	(1) Warren First, First Warren (2) Warren Second, Second Warren (3) Bradford First, Eighty-Foot, Queen, Glade, Third Warren (4) Clarendon Stray, Watsonville, Sugar Run, Clarendon, Kinzua, Upper Balltown, Dewdrop, Lower Balltown, Gartland, Upper Speechley, Speechley Stray, Speechley, Chipmunk (5) Speechley, Cherry Grove, Tiona, Bradford Second (5a) First, Second, and Third Bradford sands used in southwestern PA between the Speechley and Kane sands (6) Cooper Stray, Silverville, Cooper, First Balltown (7) Klondike, Harrisburg Run, Deerlick, Second Balltown, Sliverville (8) Bradford Third, Lewis Run, Sheffield, Third Balltown (9) Upper Kane, Lower Kane, Bradford, Kane	Conventional oil/natural gas production, natural gas storage, geologic storage opportunity
Elk		Elk Gp	Saltwell, Haskill, Riley, Elk, Humphrey, Benson, Alexander, Haverty, Fox, Sycamore	Conventional oil/natural gas production, geologic storage opportunity
	Foreknobs	Foreknobs Fm	Elk sands in south-central PA	Conventional natural gas production
	Scherr	Scherr Fm		
	Lock Haven	Lock Haven Fm	Balltown, Bradford, and Elk sands in north-central PA	Conventional oil/natural gas production
	Brallier	Brallier Fm	Bradford and Elk sands/siltstones west of Monongahela River in southwestern PA	Conventional natural gas production
	Harrell	Harrell Fm		Show gas
		Burket Shale	Geneseo	Unconventional natural gas production from shale

Appendix 1. *(Continued)*

Middle Devonian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Hamilton	Moscow	Tichenor Limestone	Driller's Tully	
	Skaneateles	Skaneateles Fm	Part of "organic-rich Marcellus" in southwestern PA	
	Mahantango	Mahantango Fm	Chaneysville	Conventional natural gas production
	Marcellus	Oatka Creek Member	Upper Marcellus	Unconventional natural gas production from shale
		Cherry Valley Limestone	Purcell	
		Union Springs Member	Lower Marcellus	Unconventional natural gas production from shale
		Purcell Limestone	Cherry Valley	
		Marcellus Fm		Unconventional natural gas production from shale
	Onondaga	Onondaga Limestone		Conventional oil/natural gas production

Lower Devonian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Bois Blanc	Bois Blanc Fm		Conventional natural gas production
	Huntersville	Huntersville Chert		Conventional natural gas production, natural gas storage
	Oriskany	Oriskany Sandstone		Conventional natural gas production, show oil, natural gas storage, geologic storage opportunity
Helderberg	Keyser	Keyser Fm		Show gas
		Helderberg Gp		Conventional natural gas production

Appendix 1. *(Continued)*

Silurian (Pridoli)

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Bass Islands	Bass Islands Dolomite		Conventional oil/natural gas production

Silurian (Pridoli/Ludlow)

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Salina		F		Geologic storage opportunity
		Salina Gp		Conventional oil/natural gas production in Erie County

Silurian (Ludlow/Wenlock)

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Lockport	Lockport Dolomite		Conventional natural gas production

Silurian (Llandovery)

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Clinton	Dayton	Dayton Dolomite	Packer Shell	
Medina	Grimsby	Grimsby Sandstone	Stray Clinton, Red Clinton, White Clinton	Conventional oil/natural gas production, geologic storage opportunity
	Whirlpool	Whirlpool Sandstone	Medina	Conventional oil/natural gas production, geologic storage opportunity
		Medina Gp	Cataract Group, Medina group	Conventional oil/natural gas production, geologic storage opportunity
	Tuscarora	Tuscarora Sandstone		Conventional natural gas production

Appendix 1. *(Continued)*

Upper Ordovician

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Bald Eagle	Bald Eagle Fm		Conventional natural gas production
	Utica	Utica Shale		Unconventional natural gas production from shale
	Point Pleasant	Point Pleasant Fm	Utica	Unconventional natural gas production from shale
	Trenton	Trenton Limestone	Logana	Conventional natural gas production
	Black River	Black River Limestone		Conventional natural gas production

Middle Ordovician

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Loysburg	Loysburg Fm	Gull River	Conventional natural gas production
	Wells Creek	Wells Creek Fm	Shadow Lake	Conventional natural gas production

Lower Ordovician

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
Beekmantown		Beekmantown Gp	Knox	Show gas

Upper Cambrian

Group	Formation	Named Unit	Informal and Drillers' Names Used by Industry	Reservoir Activity
	Gatesburg	Mines Member		Conventional natural gas production(sometimes with condensate) in northwestern PA, geologic storage opportunity
		Upper Sandy member	Theresa, Rose Run	
		Middle dolomite member		
		Lower Sandy member		
	Conasauga	Conasauga Fm	Rogersville of West Virginia and eastern Kentucky	