

Table 3. Characterization of USGS 2002 Assessment Units for the Appalachian basin (Milici and others, 2002)

| Assessment Units | Source Rock | Maturation | Migration | Reservoir Rock | Traps | Seals |
|------------------------------------|-------------------------------|--|--------------------------|--|--------------------------|--------------------------------|
| Conventional | | | | | | |
| Oriskany Sandstone Structural | Needmore and Marcellus Shales | Carboniferous/ Permian | Lateral updip; downward | Fine-to coarse-grained sandstone | Structural | Marcellus Shale |
| Oriskany Sandstone Stratigraphic | Needmore and Marcellus Shales | Carboniferous/ Permian | Lateral updip; downward | Fine-to coarse-grained sandstone | Stratigraphic | Marcellus Shale |
| Greenbrier Limestone | Devonian Shale | Carboniferous/ Permian | Lateral updip; upward | Fractured oolitic limestone, dolomite, and sandstone | Stratigraphic | Carboniferous shale |
| Mississippian Sandstone | Devonian Shale | Carboniferous/ Permian | Lateral updip; upward | Fine-to coarse-grained sandstone | Stratigraphic | Carboniferous shale |
| Continuous | | | | | | |
| Greater Big Sandy | Devonian Shale | Carboniferous/ Permian | Autogenic (Self-sourced) | Fractured shale | Continuous | Devonian shale |
| Northwestern Ohio Shale | Devonian Shale | Immature with respect to oil generation? | Autogenic (Self-sourced) | Fractured shale | Continuous | Devonian shale |
| Devonian Siltstone and Shale | Devonian Shale | Carboniferous/ Permian | Autogenic (Self-sourced) | Fractured shale and siltstone | Continuous | Devonian shale |
| Marcellus Shale | Marcellus Shale | Late Devonian?/ Carboniferous/ Permian | Autogenic (Self-sourced) | Fractured shale | Continuous | Devonian shale |
| Catskill Sandstones and Siltstones | Devonian Shale | Late Devonian?/ Carboniferous/ Permian | Lateral updip; upward | Fine-to coarse-grained sandstone | Continuous | Devonian shales and siltstones |
| Berea Sandstone | Devonian Shale | Carboniferous/ Permian | Lateral updip; upward | Fine-to coarse-grained sandstone | Continuous/ conventional | Sunbury Shale |