



- EXPLANATION**
- Hamilton Group in Pennsylvania (Dicken and others, 2005)
 - Hamilton Group in Maryland (Dicken and others, 2005)
 - Marcellus Shale in West Virginia (Nicholson and others, 2005); and Marcellus Shale and Needmore Shale, undifferentiated, in West Virginia (Nicholson and others, 2005)
 - Millboro Shale in West Virginia (Nicholson and others, 2005)
 - Millboro Shale and Needmore Shale, undifferentiated, in Virginia (Dicken and others, 2005)
 - Marcellus Shale and Needmore Shale, undifferentiated, in Virginia (Dicken and others, 2005)
 - Cross sections shown on plates 2 and 3
 - Outline of area of this study

- Sample locations, keyed to stratigraphic unit
- Mahantango Formation
 - Harrell Shale
 - Marcellus Shale
 - Tioga Ash Bed
 - Needmore Shale
 - Mandata Formation
 - Keyser Limestone
 - Unknown

- Total organic carbon (TOC) content, in weight percent.
For samples US250-01 through -20 and YY99-8A through -8C, the range of values is shown.
- Sample not analyzed
 - 0.00–0.99
 - 1.00–1.50
 - 1.51–3.00
 - 3.01–7.22

Plate 4. Map of the study area showing the geographic distribution of Middle Devonian shales (modified from Dicken and others (2005) and Nicholson and others (2005)), locations of cross sections shown on plates 2 and 3, locations of samples collected for this study, and the total organic carbon content, in weight percent, of each sample.