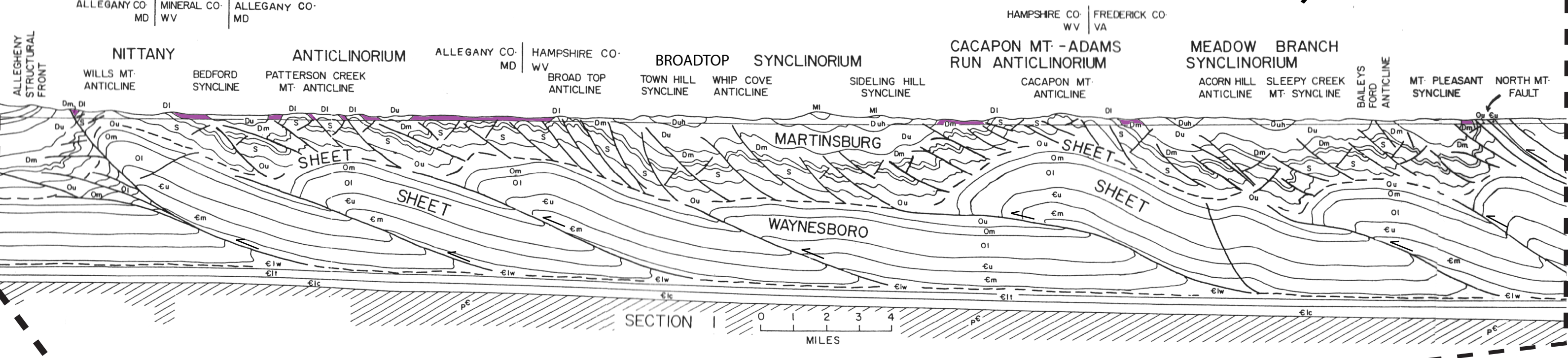
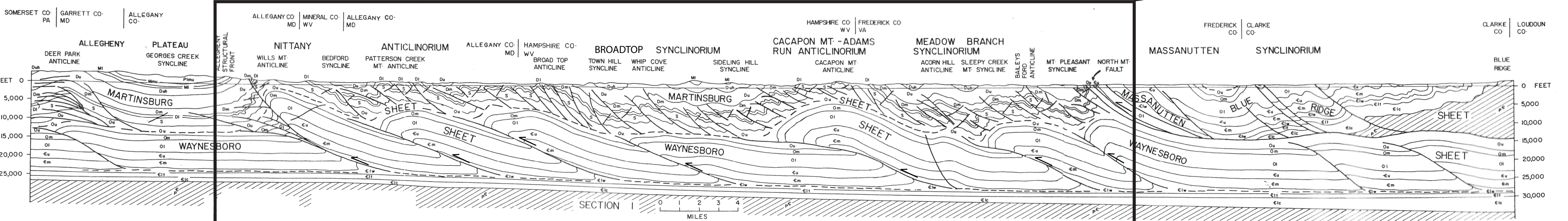


EXPLANATION OF MAP

- 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)
- Marcellus Shale and Needmore Shale, undifferentiated, in Virginia (Dicken and others, 2005)
- PC-01 USGS sample identifier
- Contact. M, Mississippian; D, Devonian; S, Silurian; O, Ordovician
- Thrust fault
- Anticlinorium or synclinorium
- Axis of fold
- Anticline
- Syncline



KILOMETER SCALE FOR ALL SECTIONS



EXPLANATION OF CROSS SECTION 1

- | | | | |
|--|--|--------------------------------------|--------------|
| Mi Lower Mississippian rocks (undivided) | S Silurian rocks (undivided) | Cu Upper Cambrian rocks (undivided) | Thrust fault |
| Duh Upper Devonian Hampshire Formation | Ou Upper Ordovician rocks (undivided) | Cm Middle Cambrian rocks (undivided) | Other fault |
| Du Upper Devonian rocks (undivided) | Om Middle Ordovician rocks (undivided) | Cl Lower Cambrian rocks (undivided) | Decollement |
| Dm Middle Devonian rocks (undivided) | Oi Lower Ordovician rocks (undivided) | Pc Precambrian rocks (undivided) | Contact |
| Di Lower Devonian rocks (undivided) | | | |

Plate 2. Structural cross section 1 and structure map showing distribution of Middle Devonian shales in the study area, with locations of the most proximal samples. Modified from Kulander and Dean (1986, figs. 5 and 6 (AAPG©1986; used by permission of the American Association of Petroleum Geologists, whose permission is required for further use)), Dicken and others (2005), and Nicholson and others (2005). Cross-section trace is shown on plates 1, 4, and 5. Middle Devonian rocks (undivided) are highlighted in purple in the enlarged segment of cross section 1.