

Middlesboro Syncline Gas Assessment

Abstract

The Devonian-Mississippian shales of eastern Kentucky are significant producers of natural gas. Hence, their equivalents in the Middlesboro Syncline south of Pine Mountain should also have a rich potential, judging by the lithologic similarity of the shale within the syncline to that in surrounding areas and by the occurrence of gas fields in rocks of Mississippian age within it. The maps in this report complement and extend to the southeast the structure and thickness map of the shale sequence made by Provo (1979), which covers all of eastern Kentucky northwest of Pine Mountain. Subsurface mapping and study of outcrop patterns revealed six major segments of the Middlesboro Syncline. The volume of shale in each segment is estimated, and its petroleum potential is assessed.