
Coal Bed Methane Resources in the Wilcox Formation (Paleocene-Eocene) in Louisiana

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ABSTRACT

The Wilcox Formation in Louisiana has long been known to contain numerous lignite beds, but these were of little interest economically. As the need for additional gas resources has increased over the last decade, these lignite beds have become an exploration target for coal bed methane (CBM). Recent studies and industry activity have demonstrated the viability of Wilcox CBM. Except for the Sabine Uplift, the Wilcox Formation is present everywhere in the subsurface of northern Louisiana. Its thickness varies from several hundred feet to several thousand feet. An ancient deltaic complex of sands and shales, the Wilcox (especially the Lower Wilcox) contains numerous thin coal seams which were formed in interdistributary environments. While the coal seams are widely distributed over northern Louisiana, most individual seams are not. The Wilcox coal seams are considered prospective at depths of approximately 1500 to 6000 feet. Average production from Wilcox CBM wells is relatively low, averaging only 45 Mcfd. Total reserves for Wilcox CBM are estimated to be in the 3 to 5 Tcf range.