

Kansas Coal — A Review of Several Important Factors of Interest to Coalbed Methane Exploration and Production in Eastern Kansas.

Lawrence L. Brady, Kansas Geological Survey

Coal resources in Kansas of Middle and Upper Pennsylvanian age are generally present in an area east of the Nemaha Uplift. Within this eastern Kansas area is a conservative estimate of 53 billion tons (42 million metric tons) of deep coal resources. Coal resources are recognized in 31 coal beds, with 25 coals including the important coalbed methane resource coals present in the Cherokee Group. Multiple coal beds are present throughout eastern Kansas with up to fourteen coals present in a given well. Coal beds with the larger resource amounts in eastern Kansas include the Riverton, Bevier, Mineral, "Aw", Rowe, and Weir-Pittsburg. An estimated two billion tons (1.7 billion mt) of coal is present in the Kansas coal resource having a thickness of 42 inches (107cm) or greater. Key to correlation of the various coal beds is the highly radioactive "black shales" that commonly occur in Kansas cyclothem a short distance above most coal beds. Apparent rank of the coals are generally high volatile A bituminous (HvAb) in the southeastern part of the state, and ranges to high volatile B bituminous in shallow coals and HvAb in deeper coals in the northeastern part of Kansas. Values of vitrinite reflectance (R_o max) in Kansas coals, often suggests a lower rank than the apparent rank determined by moist, mineral-matter-free Btu values. Care must be used when utilizing these values as an exploration guide in Kansas.