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Coal-Bed Methane Activity in the Illinois Basin – An Update

Within the Illinois Basin is a series of Pennsylvanian Age deltaic deposits that contain significant coal reserves and is found in most of Illinois, Southwestern Indiana and Western Kentucky. The basin has undergone intermittent exploration for coal-bed methane since 1985. The coals are relatively thin (1 to 8 feet), have large lateral extent, high volatile C to A bituminous rank, sulfur varies from 2% to 11%, ash from 5% to 15% and moisture contents less than 8%. Gas contents vary from 5 to over 200 scf per ton. Present day coal bed methane production from unmined areas is restricted to Sullivan and Vigo counties, Indiana, wells producing from abandon mines and an ongoing pilot in Central Illinois. Other pilot projects and test wells have been initiated in 2003 with various results. As with all basins, the Illinois Basin coals have their own unique characteristics, basin thermal and structural history. Existing permeability, desorption and adsorption data sets indicate poor to good permeability and marginal to moderate gas contents that vary across the basin. Completion practices have gone from historically single seam to multiple seams. The coal seams that are the main targets are the Seelyville, Colchester (No. 2), Springfield, (No. 5), Herrin (No. 6) and Danville (No. 7) or their equivalents. The basin in late 2002 and into 2003 has seen an increase in leasing and drilling activity and because of its location to strong gas markets is attractive to industry.