Promgaz Kuzbass Project—Coalbed Methane Exploration in the Kuznetsk Coal Basin, Russia

The Promgaz Coalbed Methane Project consists of a seven well exploration program to test the production potential of the coal seams within the south-central Kuznetsk coal basin (Kuzbass). The Kuzbass, while highly developed by the coal mining industry, currently has no commercial production of gas from the Permian-age coal seams extensively developed in this basin. Estimates indicate that more than 450 trillion cubic feet (Tcf) of gas exist in the coal seams less than 6,000 feet deep in the Kuzbass.

The project area consists of a 2,300 square mile license area in the structurally less-complex southern basin, containing an estimated 200 Tcf of gas. Three exploration sites in this area were selected to test the production potential of the coals under varying stratigraphic and structural conditions. Drilling, completion, and testing plans incorporate the need for understanding the coal’s reservoir conditions at each exploration site with the requirement of proving project commerciality. An integrated coring, logging, and well testing program is utilized to collect and analyze the primary reservoir characteristics (coal thickness, gas content, sorption characteristics, reservoir pressure, and permeability). Coupled with this is a multi-zone (4 to 6 coal seams per well) hydraulic fracturing and production-testing program. In addition to the geologic and engineering complexity, the project’s location in south-central Siberia adds additional climatic and logistical difficulties.