Maximum-Reservoir-Contact Wells for Coalbed Methane Exploitation: Corbett Creek Case Study

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The Corbett Coal Bed Methane project, located in Alberta Canada, has produced methane on a commercial scale from wet, Cretaceous-age coals since 2005. The exploitation techniques utilized have evolved steadily, most notably in the design of the horizontal wells and the associated pumping equipment. Beginning in 2006, Trident Exploration Corp., as operator of the majority of the project area, began drilling Maximum-Reservoir-Contact-wells. MRC wells (defined as wells with a minimum aggregate reservoir contact of at least 5 km) have been utilized globally since at least 2002 to achieve high well productivities in low permeability reservoirs.

Initial MRC wells in the Corbett Field, utilized longer individual laterals to solve geographic problems within the field area. Initial, but limited success of these wells led to a redesign that incorporates more but shorter laterals and this has been the dominant well design since mid-2008.

This paper will compare the different horizontal well configurations and relate these to the production performance of each well type.