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**Recent Advances in Hydrocarbon Exploration and Exploitation Techniques for Incised Valley Systems: Examples from the Lower Cretaceous of the Western Canada Sedimentary Basin**

Lower Cretaceous fluvial to fluvial-estuarine incised valley reservoirs are the host to the most prolific hydrocarbon successions in the Western Canada Sedimentary Basin (WCSB). Production ranges from conventional oil and gas reservoirs of the Basal Quartz, Glauconitic, Bluesky, Basal Colorado and Viking Formations, to the unconventional "supergiant" heavy oil deposits of the McMurray Formation. Over the last 10 years, a series of collaborative studies were undertaken on Lower Cretaceous WCSB incised valley systems, and a number of unique formation specific problems were identified that the explorationist needed to be addressed in order to effectively exploit this resource. Arguably, the most significant of these problems that were common to all units is the mappability of incised valley trends and internal facies architecture developed in LOW ACCOMODATION settings across the Basin. The WCSB is an ideal area for examining the changes between low and high accommodation due to the wealth of publicly available data. Detailed core, wireline log correlation, petrography, ichnology, chemostratigraphy, 3-D seismic and production engineering analysis, organised into a systematic sequence stratigraphic framework, utilising robust facies models and an understanding of underlying structural overprints and geopressure distribution, allows for a better understanding of fairway trends, compartmentalization, reservoir quality and production characteristics of incised valley reservoirs. This paper will utilise case studies from the key Lower Cretaceous producing reservoirs to demonstrate the complexity, and opportunity that still exists, in the exploration for, and exploitation of, incised valley systems.