

Assessment of the Gas Potential of the Upper Cretaceous Play Group Western Canada Sedimentary Basin

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Assessment of the gas potential of the Upper Cretaceous by the Canadian Gas Potential Committee included established plays in the Upper Cretaceous and Paleocene in the Western Canada Sedimentary Basin. The reservoirs are the result of the final clastic infill of the foreland basin.

Eighteen exploration plays were assessed by the Committee. An attempt was made to divide the Belly River Group into shoreline and fluvial play trends for the assessment.

The Upper Cretaceous Play Group is unique as it includes the three largest gas pools in Canada with over 50% of the group's In Place Discovered Resources. The pools are the Cardium Pembina (8,900 Bcf), Medicine Hat A (6,700 Bcf) and the Milk River A (6,000 Bcf). The distribution of Upper Cretaceous gas endowment is strikingly different from other groups in the WCSB and in particular from the Lower Cretaceous.

The Petrimex analysis estimated that 6% of the gas endowment (46,345 Bcf) of the Upper Cretaceous is undiscovered. The relatively low undiscovered potential is due to the significant low potential expected in the Cardium (3%), the Second White Specks Play 2 (2%), the Milk River (0.5%) and the Medicine Hat (0.1%).

For comparison, the Undiscovered Gas Potential of the Belly River and Cardium was assessed using the Arps-Roberts methodology. This assessment increased the Undiscovered Gas Potential for the Play Group.