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THE GREYBULL SANDSTONE (SYKES MOUNTAIN FORMATION): A POTENTIAL STRATIGRAPHIC PLAY IN THE BIGHORN BASIN, WYOMING

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ABSTRACT

The Greybull Sandstone has a long history as an oil and gas target in the Bighorn Basin. It has been viewed as possible pay in the basin since gas was discovered at Greybull field in 1907. Exploration efforts to date have focused on the large structural features rimming the basin. However, the potential for a stratigraphic accumulation within the basin is good. Significant stratigraphic accumulations exist from equivalent strata in Montana, Colorado, and elsewhere in Wyoming.

The depositional setting and distribution of the Greybull Sandstone has seen significant modification over time as a better understanding of the Early Cretaceous marine transgression into this area was put into a regional context. Understanding this regional context and trapping mechanisms will allow similar configurations to be targeted in the Bighorn Basin. Integration of outcrop and subsurface information presented here provides a framework for a basin wide interpretation of this Lower Cretaceous valley-fill sequence.

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