# Upper Shaunavon Geology Revisited: Evidence for a Mixed Carbonate-Siliciclastic Barrier Island System in the Greater Rapdan Area of Southwest Saskatchewan

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***Abstract***

*The Upper Shaunavon formation in southwest Saskatchewan was deposited along a Middle Jurassic shoreline, consisting of mixed carbonate and clastic sediment. The Shaunavon trend is situated on the northwestern corner of the Williston Basin. The hydrodynamically trapped, regionally oil charged Upper Shaunavon coicides with the easternmost extent of the prograding Upper Shaunavon shoreline complex. The productive portion of the Upper Shaunavon in the Rapdan/Whitemud area (TWP 3-6 RGE 20W3) is a barrier bar shoreline trend, which has been extensively cored and exhibits many great examples of the components of barrier bar systems. The Upper Shaunavon Member can be subdivided into the Upper Shaunavon A, B, and C units. The Upper Shaunavon B unit is productive throughout most of the study area, with reservoir units that are commonly calcareous sandstone but can include sandy oolitic limestone and dolomitic mudstone. These carbonate and siliciclastic facies were being deposited in the same or laterally adjacent environments, and show evidence of tidal forces influencing deposition. These facies along with several non-reservoir facies have been mapped throughout much of the Shaunavon area and have shown a distribution that is consistent with a barrier island system.*

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**Mike Blair** received a Bachelor's and Master's Thesis at the University of Regina. His Master's Thesis concentrated on correlating the Middle Jurassic stratigraphy between the Shaunavon area oil trend in SW Saskatchewan and the Moosomin-Wapella field in SE Saskatchewan, with special attention paid to the Gravelbourg Formation. Mike has worked at Crescent Point Energy for over 5 years and is currently an Exploration Manager working several areas including the Shaunavon oil trend. Previous to his time at Crescent Point he spent 8 years at Canadian Natural Resources Ltd working several areas as an exploration geologist.