



# geoconvention

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## Hydrocarbon Accumulations in the Mississippian of Southeastern Saskatchewan

*Arden Marsh*

*Saskatchewan Geological Survey, Saskatchewan Ministry of the Economy*

### **Abstract**

The location, shape and orientation of Mississippian oil pools in southeastern Saskatchewan can be directly correlated to the paleotopography of this strata. The exploration for future oil production from this strata may also be dependent on this same relationship. This comes down to data quality, density and distribution controlling the resolution of maps and models being produced. Further drilling will lead a better understanding of the distribution and significance of various geological features in the subsurface.

Oil has been produced from Mississippian age reservoirs in southeastern Saskatchewan since the early 1950's. Many papers have been written and presented over the years regarding various aspects of the Mississippian strata, often focusing on individual beds within this strata. There are also regional reports that discuss the entire Mississippian, however, many of these reports were written using sparse well data due to the limited number of wells that were drilled at the time the report was published. Now that we have an abundance of wells drilled through the Mississippian in southeastern Saskatchewan an update to the regional mapping of these strata has been performed, which has led to the discovery of some interesting, but not surprising relationships between paleotopography and hydrocarbon accumulation.

Data from over 4,000 non-horizontal wells will be used to present updated high resolution regional mapping of the Mississippian strata, and the known and potential hydrocarbon accumulations in the southeast of the province. The study area extends from Township 1 Range 34 West of the 1st Meridian, to Township 6 Range 7 West of the 2nd Meridian. This presentation will show the relationships between paleotopography and known Mississippian oil production, plus the potential for further oil accumulation from this strata by utilizing production and core analysis data.