Government of Saskatchewan

ptrc Petroleum Technology Research Centre

Saskatchewan Phanerozoic Fluids and Petroleum Systems

University of Regina

University of Alberta

Open File 2014-1, Map 98 of 156 (Saskatchewan Ministry of the Economy, Saskatchewan Geological Survey)

SASKATCHEWAN PHANEROZOIC FLUIDS AND PETROLEUM SYSTEMS PROJECT

Upper Devonian-Lower Mississippian Bakken Formation: Structure Map

A. Marsh and M. Love

The series of stratigraphic framework maps for the Saskatchewan Phanerozoic Fluids and Petroleum Systems (SPFPS) project have been produced using 2 km equi-spaced modified grids generated from Golden Software's Surfer 9 kriging algorithm. The dataset used to produce each of the maps in this series was created using data from several projects completed by the Ministry (Christopher, 2003; Saskatchewan Industry and Resources *et al.*, 2004; Kreis *et al.*, 2004; Marsh and Heinemann, 2006; Saskatchewan Ministry of Energy and Resources *et al.*, 2007; Heinemann and Marsh, 2009); these data were validated and edited as required to facilitate correlations between the various regional projects. In addition, to minimize edge effects during contouring, the senior author also generated stratigraphic data from wells in adjacent jurisdictions.

References

Christopher, J.E. (2003): Jura-Cretaceous Success Formation and Lower Cretaceous Mannville Group of Saskatchewan; Sask. Industry and Resources, Misc. Rep. 223, CD-ROM.

Heinemann, K. and Marsh, A. (2009): Regional Stratigraphic Framework of Western Saskatchewan – Phase 1; Petroleum Technology Research Centre, URL <http://ptrc.ca/+pub/document/WSP%20PHASE%202%20FINAL%20SPREADSHEET.xls>.

Kreis, L.K., Haidl, F.M., Nimegeers, A.R., Ashton, K.E., Maxeiner, R.O., and Coolican, J. (2004): Lower Paleozoic Map Series, Saskatchewan; Sask. Industry and Resources, Misc. Rep. 2004-8, CD-ROM, URL <http://economy.gov.sk.ca/MiscRep2004-8>.

Marsh, A. and Heinemann, K. (2006): Regional Stratigraphic Framework of Western Saskatchewan – Phase 1; Petroleum Technology Research Centre, URL <http://ptrc.ca/+pub/document/WSP%20Final%20Report.pdf>.

Saskatchewan Ministry of Energy and Resources, Manitoba Innovation, Energy and Mines, Geological Survey of Canada, University of Alberta, and University of Saskatchewan (2007): Williston Basin Architecture and Hydrocarbon Potential in Eastern Saskatchewan and Western Manitoba: Targeted Geoscience Initiative II (TGI II), URL <http://www.manitoba.ca/iem/mrd/geo/willistontgi/index.html>.

Saskatchewan Industry and Resources, North Dakota Geological Survey, and Petroleum Technology Research Centre (2004): Geological Maps and Data: IEA Weyburn CO_2 Monitoring and Storage Project Area, URL <http://economy.gov.sk.ca/files/co2monitoring/index.asp>.

This map may be referenced as:

Marsh, A. and Love, M. (2014): Upper Devonian-Lower Mississippian Bakken Formation: structure map; Saskatchewan Phanerozoic Fluids and Petroleum Systems Project; Sask. Ministry of the Economy, Saskatchewan Geological Survey, Open File 2014-1, map 98 of 156.

This entire series may be referenced as:

Marsh, A. and Love, M. (2014): Regional Stratigraphic Framework of the Phanerozoic in Saskatchewan; Saskatchewan Phanerozoic Fluids and Petroleum Systems Project; Sask. Ministry of the Economy, Saskatchewan Geological Survey, Open File 2014-1, set of 156 maps.

LOCATION MAP



N

100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 1

Township

30W3 25 20 15 10 5 1 30W2 25 20 15 10 5 1 34W1

Range

Lloydminster
Prince Albert
North Battleford
Melfort
Saskatoon
Humboldt
Yorkton
Melville
Moose Jaw
Regina
Swift Current
Weyburn
Estevan

200 0 -200 -400 -600 -800 -1000 -1200 -1400 -1600

Contour Interval: 50 metres

LEGEND

City

Hydrography

Well Location

0 25 50 75 100 125

KILOMETRES