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Manitoba Oil Facts

Did You Know That

Manitoba has two potential areas for oil and gas production, southwest Manitoba and the Hudson Bay lowlands.

- Oil was discovered in Manitoba in, and has been produced since 1951.
- Manitoba's current oil production is located in southwest Manitoba along the northeastern flank of the Williston Basin, a sedimentary basin that also occupies portions of southern Saskatchewan, North Dakota, South Dakota and Montana.
- Potential hydrocarbon bearing-formations in southwest Manitoba occur to depths of up to 2 300 metres (7,500 feet).
- The majority of the approximately 6,600 wells drilled in Manitoba have only been drilled to Mississippian formations; this represents approximately one half of the potential hydrocarbon bearing formations.
- Production in 2008 was 1,370,585 m³ – 8.6 million Barrels. The month of March 2007 had the highest production on record – 120,087 m³ (755,740 Bbls) or 24,379 Bbls per day. Total production to May 2009 was 42.1 million m³ (265 million barrels).
- There is over 73 kilometers of core from wells drilled in Manitoba available for examination.
- All pre-1980 oil production originated from Mississippian Lodgepole and Mission Canyon formations at depths that range from 600 to 1 050 metres (2,000 to 3,500 feet) during 2007 to May 2009. These formations accounted for approximately 81.5% of Manitoba's cumulative oil production.
- Oil was discovered in 1980 above the Mississippian in the Triassic Amaranth Formation. Approximately 13.9% of Manitoba's 2008 production originates from the Amaranth Formation in the Pierson-Waskada area.
- In 1985, oil was discovered in the Mississippian Bakken Formation in the Daly area. Production from the Bakken made up 2% of the 2008 annual production.
- In 1993, oil was discovered in the Jurassic Melita Formation in the St. Lazare area.

- In 2001, oil was discovered in the Devonian Three Forks Formation in the Daly Field, marking Manitoba's first pre Mississippian Production. In 2008, it accounted for 48.1% of Manitoba's oil production.
- As of December 31, 2008, Manitoba oil fields have produced a total of 41,534,482 m³ (261,387,554 Bbls) of oil. The Virden field has produced 57.3% of this total.
- The oldest producing well drilled in Manitoba is Daly Unit #3 Prov. 7-12-10-26 which has produced since July 1951. Manitoba's most productive well is 2-21-11-26W1 in North Virden Scallion Unit No. 1 which has produced 1.91 million barrels of oil since June 1955.
- Manitoba's oil is of good quality, and in 2008 the average selling price for light sour blend crude was \$612.10 per cubic metre (\$97.27 CDN per barrel). The estimated value of oil sold in 2008 was approximately \$838 million.
- As of December 2008, there are approximately 2,692 producing oil wells in Manitoba, 220 of which were put on production during 2006.
- In December 2008, average production rate for horizontal wells in the province is 2.81 m³ per day (17.7 barrels per day), compared to an average production rate of 1.02 m³ per day (6.4 barrels per day) for vertical wells. During 2008, horizontal wells accounted for 30.4% of the province's total production.
- Currently there are 14 designated oil fields and 135 oil pools in southwest Manitoba.
- Manitoba's crude oil production is equivalent to approximately 40% of the province's refined petroleum products requirements.
- Approximately 10.0 million m³ (62.9 million barrels) of salt water were produced in 2008, that's 7.3 m³ of salt water for every 1 m³ of crude oil produced. Salt water must be separated from the oil and re-injected into subsurface formations.
- Approximately 400 wells are used for purposes other than production, such as disposal of produced water.
- The current cost to drill and complete a well in Manitoba ranges from \$325,000 to \$1.2 Million depending primarily on depth.
- 316 new wells were drilled in Manitoba during 2008 including 127 horizontal wells; of these 298 (94.3%) were cased as potential oil producers.
- Only 10 to 15% of the oil discovered in Manitoba is recoverable under natural depletion. Recovery may be increased to over 30% by water flooding.
- In 2008, approximately 37% of the producing wells are in waterflood projects and presently account for approximately 31.4% of the oil produced.
- As of December 31, 2003, the remaining established oil reserves were estimated to be 4.3 million m³ (27.2 million barrels).
- Approximately 80% of the oil and gas rights are owned by private individuals or companies (freehold), the remaining 20% are owned by the Crown in the right of Manitoba.

- With a geothermal gradient of 1.3°C/m in the Virden area, thermally mature oil and gas can be generated in the rocks as shallow as a depth of 335 m. This means the Cretaceous shales in Manitoba are excellent candidates for shallow gas exploration in most of the extreme southwest corner of Manitoba.
- Royalties payable to private oil and gas rights owners were estimated at \$83 million in 2008.
- Total oil industry expenditures in Manitoba in 2008 were approximately \$509 million.
- In July 2008, Manitoba approved a CO₂ Enhanced Oil Recovery project in the Sinclair Oil Field.

Conversions - cubic metre = 6.29 barrels
1 barrel = 35 gallons (Imperial)