

## **Backgrounder – Enhanced Oil Recovery (EOR) Announcement**

The oil and gas industry is a major part of Saskatchewan's economy accounting for about 8% of provincial GDP. The industry invests \$1.5 – 2.0 billion annually in exploration and development activities, maintains 24,000 direct and indirect jobs and generates about \$1 billion annually in revenues for the province.

Approximately 35 billion barrels of oil have been discovered in the province to date. Unfortunately, only about 15% of Saskatchewan's oil resources are recoverable based on currently employed recovery technologies. Heavy oil recovery rates are even lower averaging only 5 - 10 %. Improving recovery rates for existing oil pools represents the greatest opportunity to increase recoverable oil reserves in the province.

Saskatchewan's oil industry is at a mature stage of development with many pools having been discovered in the early 1950's. Based on an average recovery rate of 15%, the province's initial established reserves are about 5.2 billion barrels of which 4 billion barrels have been produced to date. If the average oil recovery rate for the province was increased by only 5 percentage points (from 15% to 20%), this would more than double the current remaining recoverable oil reserves for the province of about 1.2 billion barrels.

The province has implemented various policies and programs over the years to encourage greater development of our enhanced oil recovery (EOR) potential.

- a specific cost sensitive EOR royalty/tax structure was implemented in the mid 1980's
- a carbon dioxide (CO<sub>2</sub>) EOR royalty/tax regime was implemented in 2001
- the Saskatchewan Petroleum Research Incentive (SPRI) program was introduced in 1998 to encourage EOR related R & D and field demonstration of new technologies
- the province, in partnership with the federal government, created the Petroleum Technology Research Centre in Regina to develop better recovery technologies and reduce the environmental impacts associated with oil and gas development.

As a result of these initiatives to promote increased EOR development, approximately 9% of Saskatchewan's oil production is currently being produced from recognized EOR projects. Most of these projects are in the heavy oil areas and utilize thermal techniques to improve recovery rates. There is also a major CO<sub>2</sub> enhanced oil recovery project in the Weyburn oil pool. A second CO<sub>2</sub> EOR project was recently announced for the Midale pool in southeast Saskatchewan. This form of enhanced oil recovery has the added benefit of safely sequestering large amounts of the most abundant greenhouse gas (CO<sub>2</sub>) underground and can contribute to Canada's greenhouse gas reduction targets.

Over the past year the province has undertaken a review of the opportunities for EOR development and the constraints that can act to limit that development. Discussions with the oil industry and other interested parties resulted in a number of recommendations being developed for consideration by government.