

A. Carbone Capture and Storage

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Title

Weyburn CO2 Enhanced Oil Recovery, a Commercial Success and the World's Largest Geological CO2 Sequestration Project

Abstract

The Weyburn Field discovered in 1954 is one of the three largest conventional oilfields in Canada, and contains 1.4 billion barrels of oil-in-place. Waterflooding commenced in 1964 and peak oil production was achieved in 1965 at a rate of 46,000 barrels of oil per day (Bopd).

CO2 miscible injection commenced in September 2000 and to date, over 8 million tonnes of CO2 has been injected. Over the life of the project it is expected that 30 million tonnes of CO2 will be stored. Current oil rates of 30,000 Bopd surpass the initial EOR flood predictions, and are the highest oil rates since 1971. EOR infill horizontal wells rank among the best in Western Canada.

The International Energy Agency (IEA) initiated a long term study at Weyburn in 2000 to evaluate CO2 injection and storage in oilfield reservoirs. The first phase of the study was completed in 2004 and concluded that 99.5% of the CO2 injected in Weyburn will remain in the reservoir for at least 5000 years. The final phase of the study is to be complete by 2009 and is building on the key learnings of Phase 1 to help develop a best practices guideline for future selection and monitoring of geological storage sites and to provide input to policy makers to establish the required regulatory framework, public consultation processes and business environment for additional projects to proceed.