

Productivity Improvement in Tight Viking Oil Reservoirs:

An SRC Consortium R&D Approach

Motivation

The Viking formation—an established light sweet oil play in west-central Saskatchewan—has been producing since the 1950s. It has six billion barrels of original oil in place, second only to Cardium in Western Canada, but primary recoveries are rather low, at about 4 per cent.

Viking reservoirs feature extremely low permeabilities, complex mineralogy and water sensitivity, all of which pose challenges for developing technically viable and cost-effective enhanced oil recovery (EOR) techniques. The Saskatchewan Research Council (SRC) is applying its three decades of expertise in EOR to these challenges to recover the vast volumes of residual oil after primary production and waterflooding.

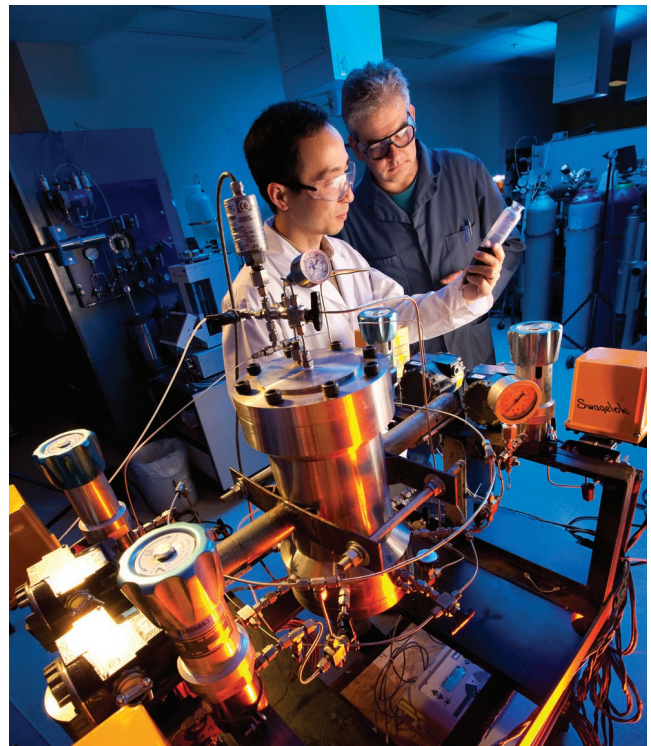
SRC's Approach

SRC's work in this area focuses on screening and evaluating particular EOR processes for clients' Viking reservoirs of interest. We augment experimental studies—conducted in a setup specially designed for tight oil—with numerical simulation to understand and advance this promising approach to tight oil recovery.

We invite you to participate in a consortium-based program to evaluate effective EOR technologies for your Viking oil reservoirs.

Project Objectives

- Map reservoir and fluid properties; optimize performance of existing waterflooding applications.
- Design technically viable and cost-effective EOR technologies for tight Viking oil reservoirs.
- Apply demand-oriented R&D, helping tight oil operators tackle injection and production challenges during EOR operations.
- Ultimately, assist our partners in designing and implementing field pilot tests as well as commercial projects.



SRC researchers study chemical and gas injection processes for tight oil in fully equipped laboratories.

SRC's EOR Processes team encompasses nearly three decades of experience and expertise in gas and chemical EOR solutions for conventional/unconventional oil reservoirs in the Western Canadian Sedimentary Basin. Our R&D was instrumental in the engineering design of the Weyburn field CO₂ miscible flood. Now we're acknowledged as a technical leader with an unparalleled ability to assist operators with tight oil holdings.