



Characterization and CO₂ Pilot Injection in Large Saline Aquifer

Project Leader:

ARC Resources Ltd.

Project Title:

**Heartland Area Redwater
Project (HARP)**

CO₂ Source:

**Chemical, petrochemical
and fertilizer plants**

CO₂ Storage Type:

**Sequestration in saline
aquifer**

Location:

**Fort Saskatchewan–
Heartland–Redwater area,
northeast of Edmonton,
Alberta**

Project Description

This project will demonstrate the feasibility of safe CO₂ storage in the Redwater Leduc Reef, situated northeast of Edmonton, Alberta. This site is close to the Alberta Industrial Heartland region, where there are a number of large industrial sources of GHG emissions, including chemical and fertilizer plants and several oil sands upgraders that are operating, being built or in the planning stages. The Redwater Leduc Reef is also strategically located along a straight-line path between Fort McMurray and Edmonton, a potential route for a CO₂ pipeline from Fort McMurray. Preliminary work estimates the storage capacity of the saline aquifer portion of the reef to be 1 Gt of CO₂. This project will demonstrate carbon capture and storage (CCS) on a commercial scale (a minimum of several megatonnes per year), contributing to a significant reduction in GHG emissions.

Expected Outcomes

In the medium term, the expected outcomes are: scaling up the pilot operation followed by the commercial demonstration operation (injecting a minimum of 1 to 2 Mt of CO₂ per year); local (Heartland Area) development of infrastructure for CO₂ capture, transportation and injection; and development of procedures and protocols for monitoring large-scale operations of CO₂ storage in deep saline aquifers.

Company Profile

ARC Resources Ltd. is a wholly owned subsidiary of ARC Energy Trust, headquartered in Calgary, one of Canada's largest conventional energy trusts. The company explores for, acquires, develops and produces long-life, low-declining oil and gas properties in western Canada.

Project Leader Web Site

www.arcresources.com



Aussi disponible en français sous le titre :
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dans un grand aquifère salin

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