Project Profile

Project Name:	Disposal and Injection Well Testing and Analysis Guideline Update
Project Number:	ES-Wells-2025-02
Proponent:	Pressure Diagnostics Ltd.
Funding Envelope:	Engineering and Safety—Wells, Facilities and Other
Timeframe:	December 5, 2024, to July 31, 2025

Project objectives

The objectives of this project are to:

- Review and propose updates, as appropriate, to the guidelines and regulations for safe and sustainable oilfield disposal, injection, and carbon capture and storage (CCS) operations in British Columbia.

Project description

BC Energy Regulator (BCER) approval is required, by permit holders, to inject, store, and/or dispose of fluids in the deep subsurface. The BCER requires testing of the target formation to determine the pressure at which the rock will fracture, open, or break to avoid impact to groundwater and surface safety. Currently two types of tests are allowed, the Diagnostic Fracture Injection Test (DFIT), and the Step Rate Test (SRT).

This project is a study of these 2-rock fracture-pressure test methods, with the intent of identifying which method is appropriate in varying reservoir types. The project results are expected to advise the Regulator and industry on determining safe injection pressures for disposal, storage of CO2, natural gas or hydrogen or enhanced recovery injection wells.

The project will involve the following:

- Investigating 12 to 15 Step Rate Tests (SRTs) and an equal number of Diagnostic Fracture Injection Tests (DFITs) to determine the most appropriate testing methods for varying reservoir conditions.
- Documenting finding of procedures for determining the breaking point of the rock and enabling safe injection that also fully utilizes the injection capacity of the reservoir.

Project Team

- Pressure Diagnostics Ltd.

Project deliverables

The deliverables from this project include the following:

- Final report with information to consider in any revisions and/or new testing procedures, diagnostic and analysis methods, and a revised (as necessary) guideline for the oil and gas industry to follow in safely disposing and injecting fluids in the deep subsurface.