Fracture Diagnosis by
Diagnostic Fracture Injection Testing

DFIT-*Pro* 1.0

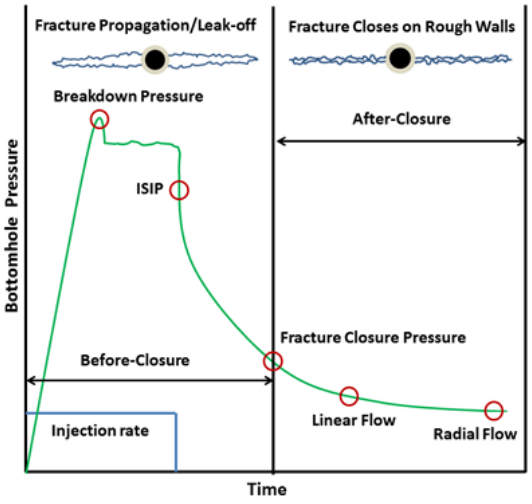
What is DFIT?

Diagnostic Fracture Injection Tests (DFITs) is a fracture diagnostic tool to obtain hydraulic fracturing parameters and reservoir properties. DFIT provides an estimate of closure stress, pore pressure, fracture dimension, reservoir flow capacity, fracture compliance and fracture conductivity by analyzing shut-in data.

Take Advantage of DFIT Data

Drawbacks of Current Common Practice

- Carter's Leak-off with constant pressure boundary condition



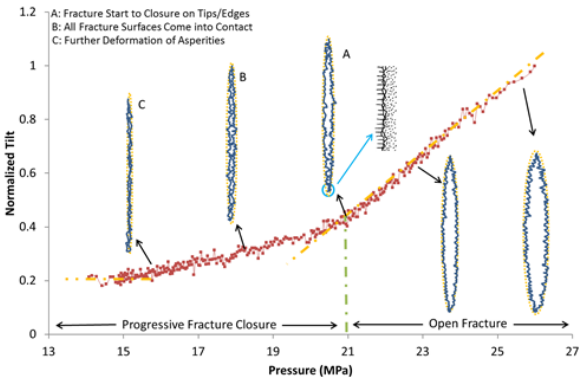
- Assumption of constant fracture compliance or stiffness

These oversimplifications lead to erroneous interpretation of DFIT data

Unique Capabilities of DFIT-Pro

DFIT-Pro solves a transient flow problem of a closing fracture with changing boundary conditions:

- Leak-off rate is fracture pressure dependent
- Fracture compliance or stiffness is changing with pressure as fracture closes progressively from its edges to the center
- Before closure and after closure data are seamlessly bridged
- A global history match provides more reliability in the re-



Simulation Results

The simulation results from DFIT-Pro consist of graphs, charts, and tables including:

- G-function plot, square root of time plot and log-log plot
- Estimated initial pore pressure from after-closure analysis
- Simulated and field-observed pressures
- Pressure dependent fracture stiffness and conductivity
- Reservoir permeability and fracture surface roughness

All output data can be saved in an Excel format for your own workflow for fracture treatment data management.

Simple, Intuitive User Experience

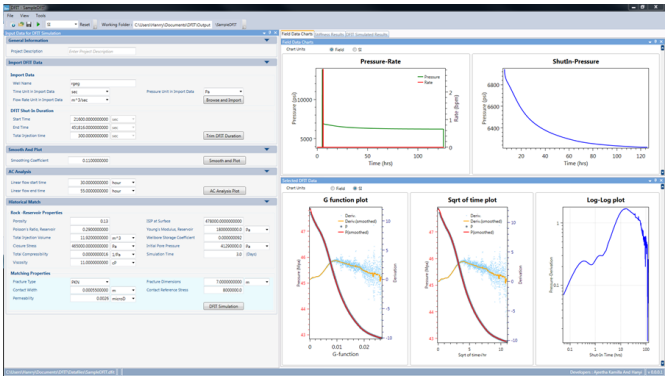
A standardized, easy-to-use and flexible interface

The user interface for DFIT-Pro is designed to offer the simplest user experience.

1. **INPUTS** – Entering various inputs will be simplified and user can switch between various systems of units.
2. **RESULTS** – A standout feature with the DFIT interface is its emphasis on results – both their interpretation and visualization. Our interface offers an integrative comparative analysis.

Consulting Services

Infuse your project with our customized solutions



At any stage of your project, we can furnish customized solutions for your hydraulic fracture diagnostic analysis workflow and DFIT design problems.

About Us

DFIT-Pro is one a key piece of software in an operators fracture simulation toolbox. Our goal is to lead the advancements in technologies by providing insights using numerical simulations for unconventional and conventional petroleum productions. Dr. Mukul Sharma and HanYi Wang can support your data analysis using DFIT-Pro.

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