



What is WID?

WID is a PC-based simulator for designing and optimizing water and waste injection wells. Accurate calculation of injection-induced fracture growth, injectivity, particle filtration and thermal stress change forms a standalone tool to design and optimize waterflooding operations. WID offers a constant-height and a planar-3D height growth fracture simulation.

20 Years of Consulting History

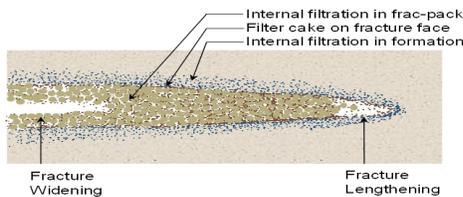
For more than 20 years and over 30 projects worldwide, WID has been successfully used to design waterflooding, produced water reinjection, waste disposal wells. With these projects, WID has been proven to be a unique simulator which can handle various physics involved in water injection. Successful applications of WID include:

Produced water reinjection

- Injection well fracture growth in 2D or 3D
- Solid particles or oily water injection
- Simulation of core flow tests
- Thermally or hydraulically fractured wells

Waterflooding and surface facilities design

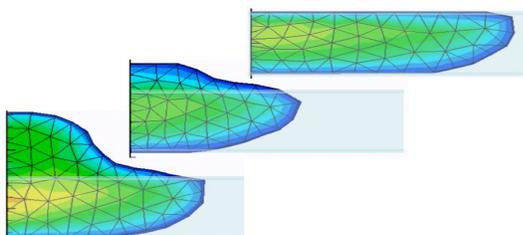
- Performance prediction of vertical / horizontal injectors
- Water quality requirements
- Wells/facilities design for deep water subsea intervention
- Gravel-packed/Cased-perforated/Frac-packed wells



Capabilities Acknowledged by Industry

WID allows a user to address questions such as:

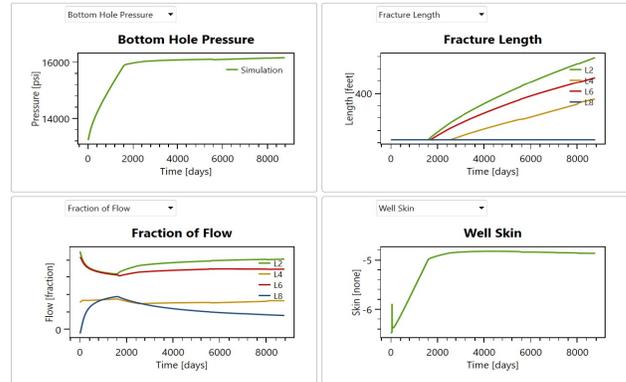
- What is the geometry of the injection induced fracture in horizontal and vertical wells?
- How fast is a fracture growing?
- How can the reservoir conformance be improved?
- What filtration specs should be used for injection water?
- How often will the injection well require a remedial treatment to regain injectivity?
- What is the right balance between injection water treatment costs and injection well stimulation costs?



Simulation Results

The simulation results of WID consist of graphs, charts, values, contour plots, full 3D planar fracture visualization and animation videos. Some examples are:

- Fracture propagation plots
- Pressure, thermal/poroelastic stress plots
- Injectivity results
- Fluid distributions in multiple layers



- Fracture contour plots

Simple, Intuitive User Experience

A standardized, easy-to-use and flexible interface

The user interface for WID was designed to offer the simplest user experience. The interface is comprised of:

1. **INPUTS** – Entering various inputs has been simplified and user can switch between various systems of units.
2. **RESULTS** – A standout feature with the WID 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-gate of your project, we can furnish customized solutions for your waterflooding operations and injection well design problems.

About Us

The methodologies underlying WID are developed by Dr. Jongsoo Hwang, Prateek Bhardwaj, Dr. Ajay Suri and Dr. Mukul Sharma. Our goal is to systematically design waterflood project using our simulation suite. For information/enquiries, contact us at: msharma@mail.utexas.edu