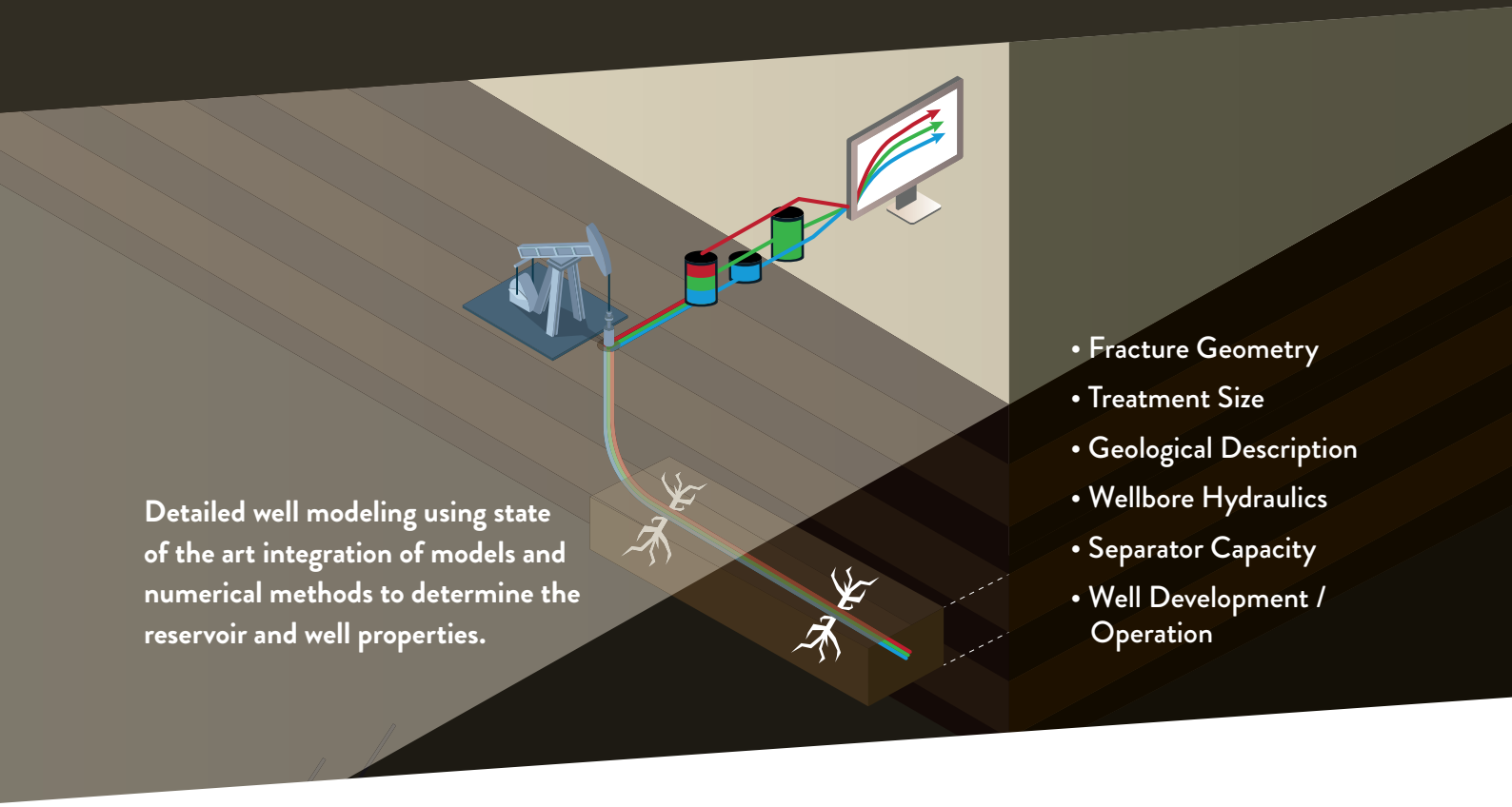
PETROSTREAMZ

Shale Well Design Optimization

A PIPE-IT SHALE SERVICE

Optimize CAPEX & OPEX in your shale wells

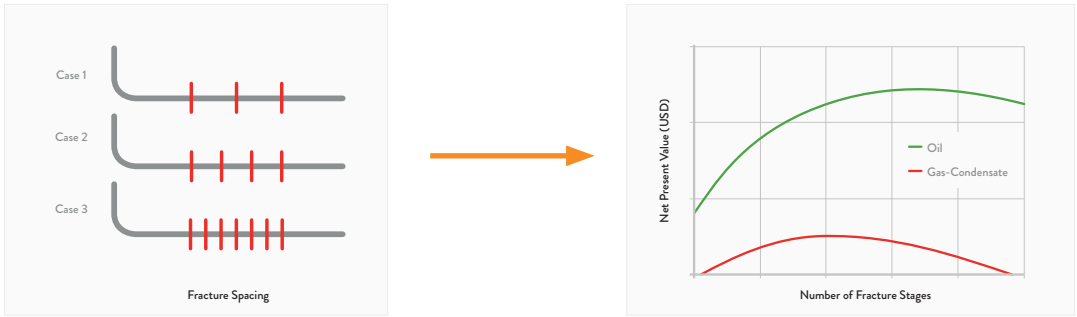
Pipe-It Shale Well Design Optimization utilizes information from nearby wells and updated economic models to arrive at the well design that will yield the highest Return on Investment for the section to be drilled.



Detailed well modeling using state of the art integration of models and numerical methods to determine the reservoir and well properties.

- Fracture Geometry
- Treatment Size
- Geological Description
- Wellbore Hydraulics
- Separator Capacity
- Well Development / Operation

Optimize well design on Net Present Value, Cash Flow or EUR



Using data from an existing nearby well, this service yields design recommendations to optimize value in new in-fill wells, and to evaluate the potential for refracturing in existing wells.

Global Experts in Integrated Asset Modeling

CHALLENGE:

Design shale wells to yield highest NPV

Optimal design of shale wells is often an expensive, trial-and-error process. Wells with different reservoir properties are completed with different well designs and the one showing best production may be misleadingly used as a guide for new well designs because variability in rock permeability is not identified.

A highly productive well does not always represent the optimal design given that the same rates might be achieved with a less expensive completion design (e.g. less fractures) or that a different completion could yield even higher rates.

This poses a challenge for operators trying to maximize return on investment from an asset, and cannot be solved without the aid of accurate numerical modeling.

SOLUTION:

Pipe-It Shale Well Design service couples reservoir characteristics, fracture and fluid descriptions, completion design, vertical lift models and topside economic models to arrive at the optimized design for a given section or ownership area. Net Present Value is optimized and all constraints in the system are honored to deliver a well design package with uncertainty analysis.

Features

- Optimized for horizontal wells of varying complexity.
- Applicable for all reservoir fluids, ranging from dry gas to moderate-GOR oil.
- Once set up, the integrated model can optimize a range of well management and design issues.
- Accurate description of historic and future liquids production, based on detailed numerical modeling and EOS.

Requirements

- Completed Pipe-It Shale History Matching and Forecasting for pilot well or relevant well in neighboring section (consistent PVT area).
- Updated drilling and completion cost estimates.

Value Delivered

Firm recommendations on well design to optimize NPV

- Number of fracture stages.
- Horizontal well length.
- Fracture treatment size.
- Indication on well spacing for surrounding wells.

Recommendations on optimized well development over production lifespan

- Ideal Timing for installation of artificial lift equipment.
- Recommendations on type of lifting equipment best suited to the specific reservoir characteristic.

Reduce trial and error drilling

Delivered by experts in Shale Well Modeling

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