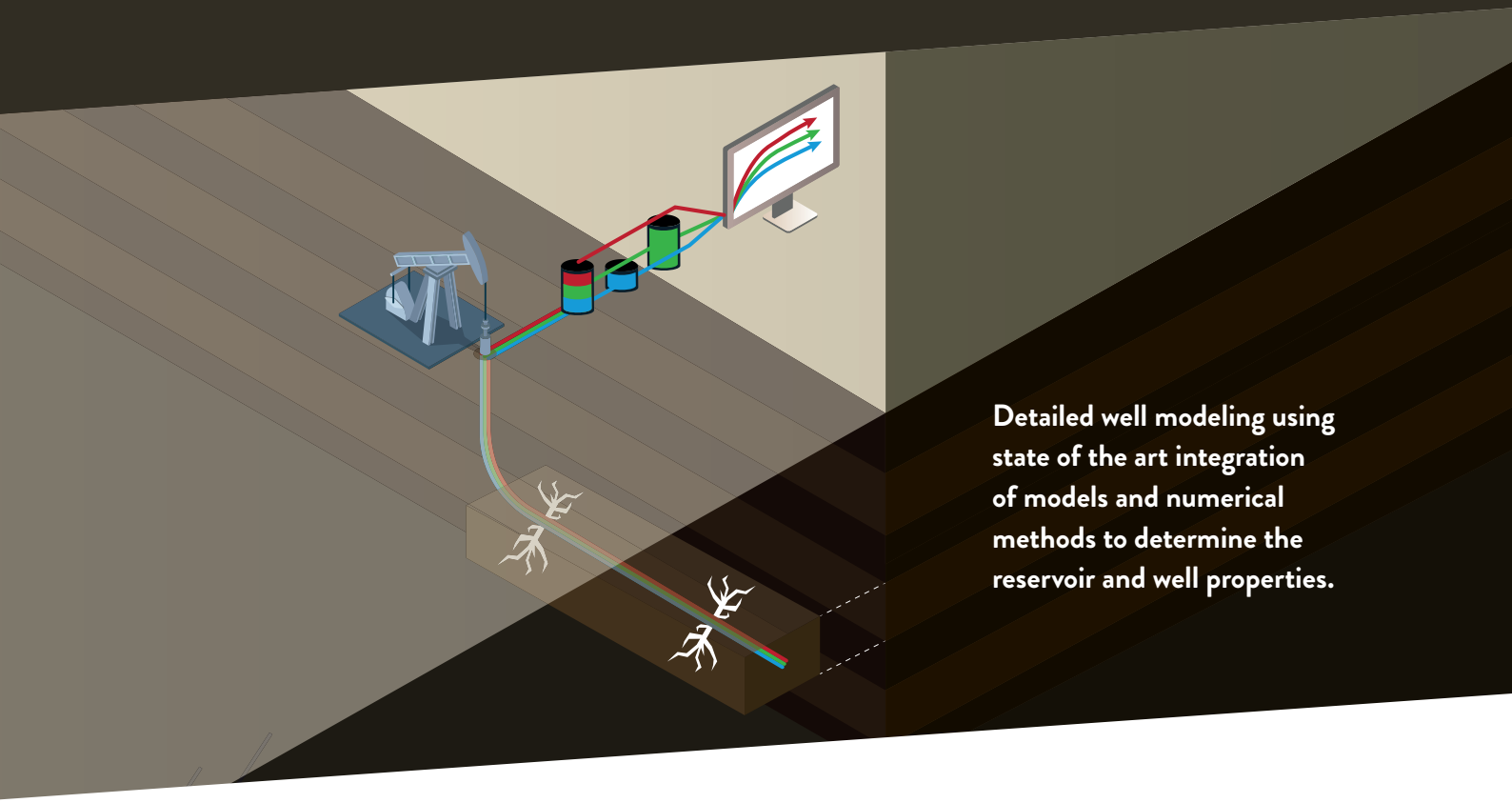
PETROSTREAMZ

Choke Control / Liquid Yield Optimization

A PIPE-IT SHALE SERVICE

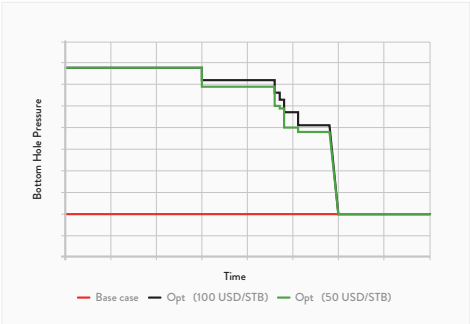
Optimized drainage of under-saturated gas-condensate assets

Pipe-It Shale Choke Control services rely on an improved description of the reservoir fluids to yield a detailed wellhead pressure control schedule that optimizes Net Present Value. In under-saturated wells, maximum drawdown does not necessarily maximize revenue.

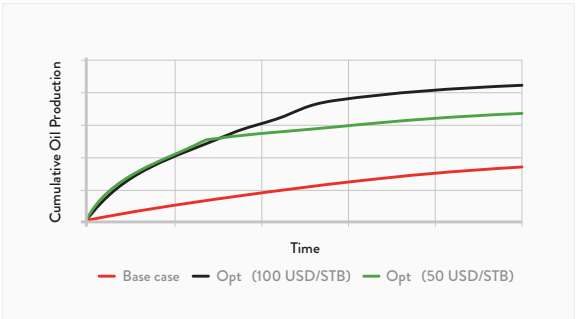


Detailed well modeling using state of the art integration of models and numerical methods to determine the reservoir and well properties.

Optimize draw-down to maximize Net Present Value or Cash Flow



Precise and correct control of flowing bottom hole pressure in under-saturated assets can increase liquid yield substantially by preventing liquid drop out and trapped liquids lost to the reservoir.



Maximized Net Present Value for under-saturated assets imply production profile producing more liquids and less gas the first period and more gas towards the end.

Global Experts in Integrated Asset Modeling

CHALLENGE:

What is produced at the surface differs from in-situ reservoir fluids

In under-saturated gas condensate assets typically found in the gas-to-oil transition window, considerable amounts of liquids may drop out of solution. These condensed liquids will remain trapped in the reservoir if the well is produced at high drawdown rates during early, high-rate production.

In shale wells, permeabilities in the nano-Darcy scale lead to large drawdowns. When the bottomhole pressure goes below the saturation pressure, fluid flow with localized and large gas-to-oil mobility ratio gradients starts to appear near the fractures. Thus, any liquids that drop out in the formation or in the fracture may remain unrecoverable.

SOLUTION:

Pipe-It Shale Choke Control services provide an optimized drawdown strategy to maximize NPV. The optimization is based on a detailed analysis of the fluid system in the reservoir, well design parameters and expected performance from a history match of a pilot well or a nearby well.

Features

- Detailed numerical finite difference well model is history matched using readily available completion and production data.
- Choke control pressure settings is provided together with expected production performance.
- Accurate description of historic and future liquids production, based on detailed numerical modeling and EOS.

Requirements

- PVT description of reservoir (can be supplied by Petrostreamz).
- Completion and Production Data.
- Pipe-It Shale History Matching.
- Pipe-It Shale Well Design.

Value Delivered

Increased Net Present Value of assets

- Plan production of the asset to maximize NPV based on current oil and gas prices.

Identify and reduce lost reserves

- Identifying under-saturated acreage early can boost reserves if produced properly, avoiding unnecessary lost reserves.

Delivered by experts in Shale Well Modeling

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