Tracerco
Insight through innovation

Confirm wellbore connectivity

Inexpensive tracer technology to confirm extended lateral stage contribution

The strategy of extending the horizontal reach of wells has made a significant economic impact for oil and gas companies.

Longer laterals maximise productivity by increasing the length of formation contact with the wellbore. This allows more stages to be perforated and stimulated which can contribute to additional production.

While advances in directional drilling capabilities have allowed longer laterals to be drilled while staying 'in zone', the extended length often exceeds the abilities of coiled tubing to drill out. These limitations also reduce the ability to clean out sand after stimulation operations.

To overcome the drill-out limitations, operators are typically forced to change completions strategies from drillable plug completions to ball drop or dissolvable plug systems.

Where 'drill-out' assure wellbore connectivity along its length, operators of extended laterals are often forced to trust the operation of the chosen completion technology and assume the well bore is open.

Although longer laterals increase both the drilling and completion costs of the well, the overall economic impact has usually been a positive one – provided the entire well bore is open and producing.

Application

Tracerco's smart proppant tracers allow an operator to tag stages of interest and confirm oil/water production during flowback.

Chemical tracers infused in proppant beads are added by the blender operator during stimulation of the stage. A presence of the tracer in the production fluid confirms flowback of the stage, with no well intervention. A review of stage production confirms contribution along the lateral.

As an added benefit, qualitative communication between wells is measurable, providing rudimentary insight into well spacing, and over the next few years (should the well's production decline prior to what was anticipated), an analysis of production fluid can determine if the reduction is due to true 'reservoir decline curve' or the result of potentially correctable well bore sand out.

Benefits

- Frac and drill smarter – higher yields/ROI
- Reliably prove reservoir stage flow
- Ensure the entire wellbore is contributing
- Optimise the completion technology to your geology
- Gain insight into well spacing
- Confirm wellbore connectivity and identify bridging or the need for coil tubing

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Identify drilling and completions key indicators

Smart tracer technology to optimise stage production and well spacing

Understanding the impact multiple variables – such as geology, petrophysics, drilling and stimulation practices – have on a well, is essential for effective reservoir management.

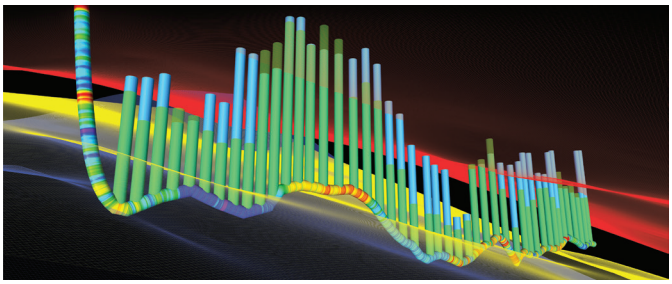
An understanding of these multivariable impacts can be achieved by evaluating each component against individual stage production. **Liquid Molecular Tracers** provide a proven industry method to quantify individual stage production.

The understanding of key pre-completion variables provides operators with the confidence to amend future field development plans and optimise hydrocarbon recovery.

Application

Tracerco's Tracer Production Log™ (TPL) – uses patented liquid molecular tracers injected directly into the stimulation fluid during stage completion. This provides subsurface intelligence through surface sampling, with no well intervention. It allows operators to measure the production contribution of oil, gas, and water from each stage and correlate production with geophysical, drilling and completions data.

Stage production against drilling and stimulation decisions provides an empirical evaluation of the choices made when designing the well and completion. This multivariable analysis allows identification of key indicators to guide future field development. Well landing, stage location, stage design, well spacing and bench choice can be optimised to allow operators to maximise hydrocarbon recovery and reduce development costs.



Benefits

- Frac and drill smarter – higher yields/ROI
- Reduce reservoir stimulation costs
- Optimise well and fracture spacing
- Compare geology with oil and gas productivity
- Assess fracture design effectiveness
- Determine clean-out efficiency

Contact

To learn more about how a Tracer Production Log™ (TPL) can optimise production and save you money, contact:

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