raise
PRODUCTION INC

Raise Production Inc.

The Next Revolution in Oil and Gas

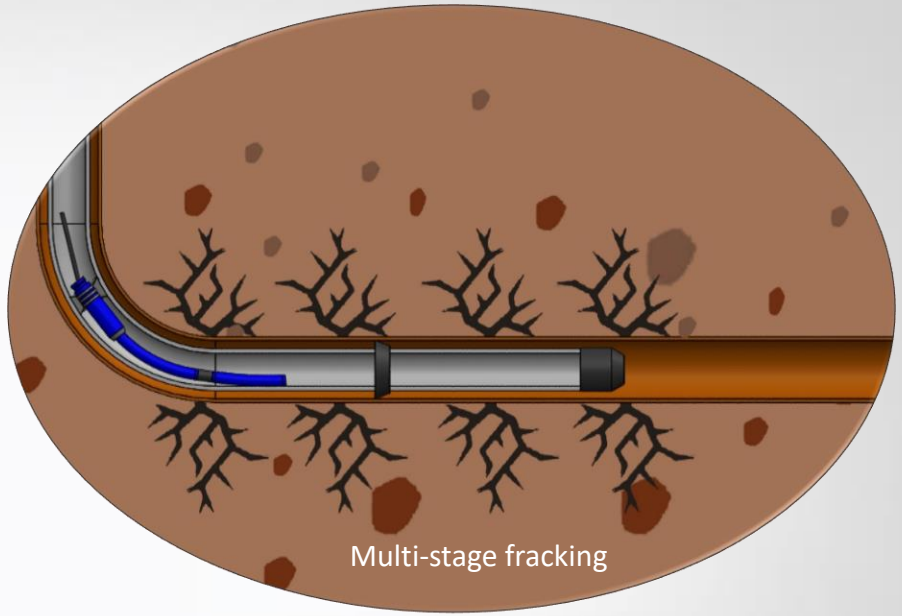
Optimizing Productivity

Multi-stage fracking helps stimulate the well optimizing productivity

In the past decade horizontal drilling and multi-stage fracking has revolutionized the energy industry providing optimum flow of oil and gas out of well bores.

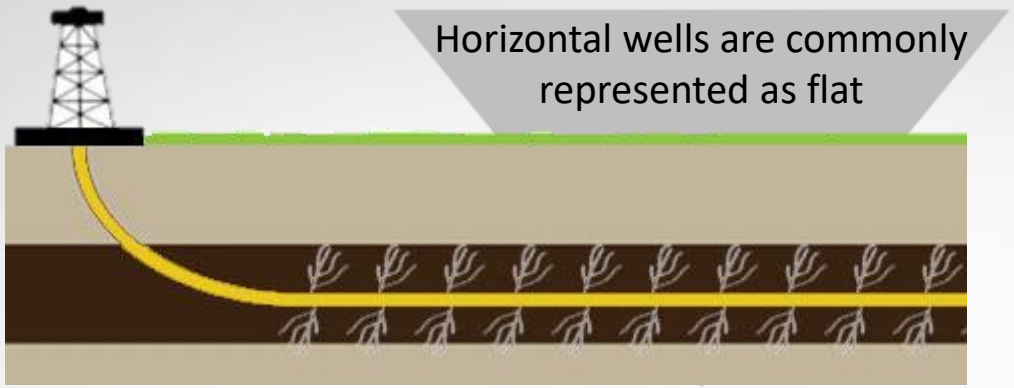
The next great innovation to maximize capital efficiencies and profitability in production will be mechanical intervention and innovative management of the flow of oil and gas wells.

That innovation will seek to reduce natural well declines while preferentially focusing on the recovery of hydrocarbon liquids based on a uniform and consistent drawdown of the horizontal well bore.

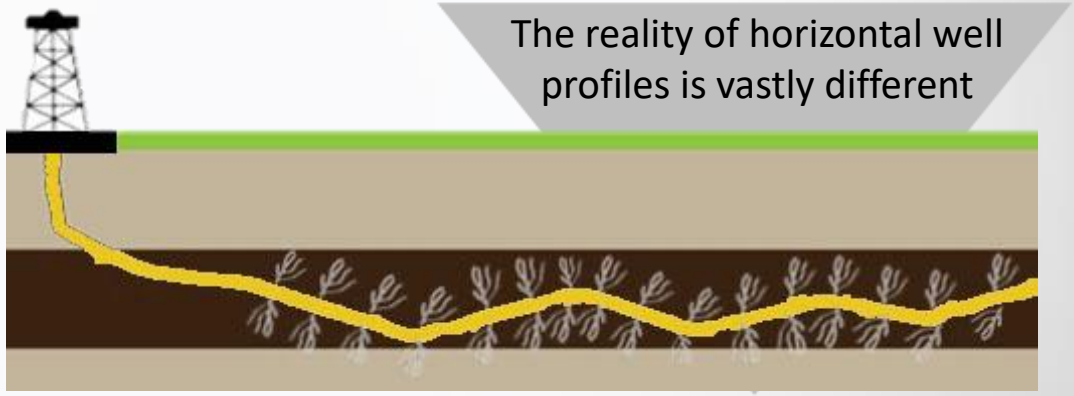


Multi-stage fracking

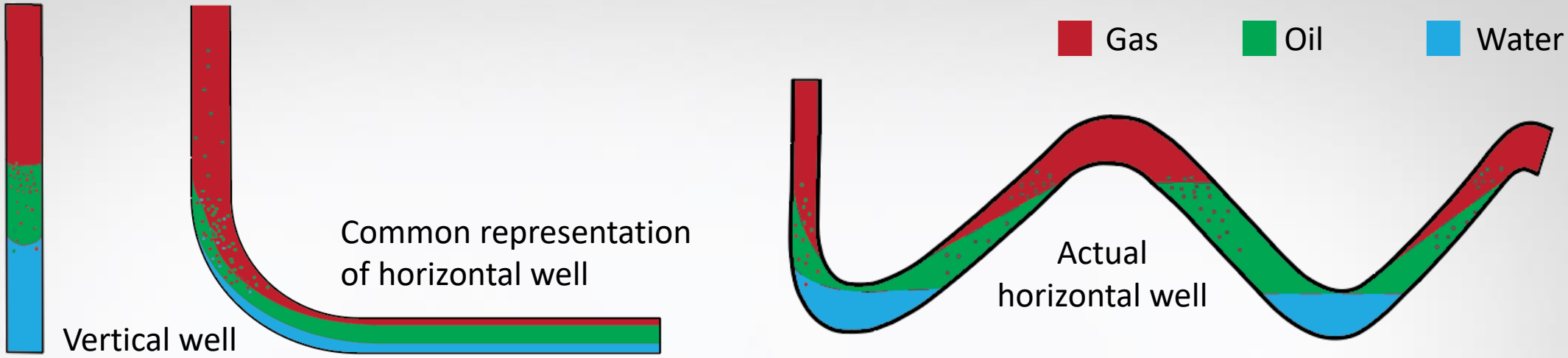
Horizontal Realities



While wells have transitioned from a vertical profile to a undulating horizontal profile, the mechanical lift put on wells has undergone virtually no change, thereby ignoring the change in flow dynamics experienced in horizontal wells.

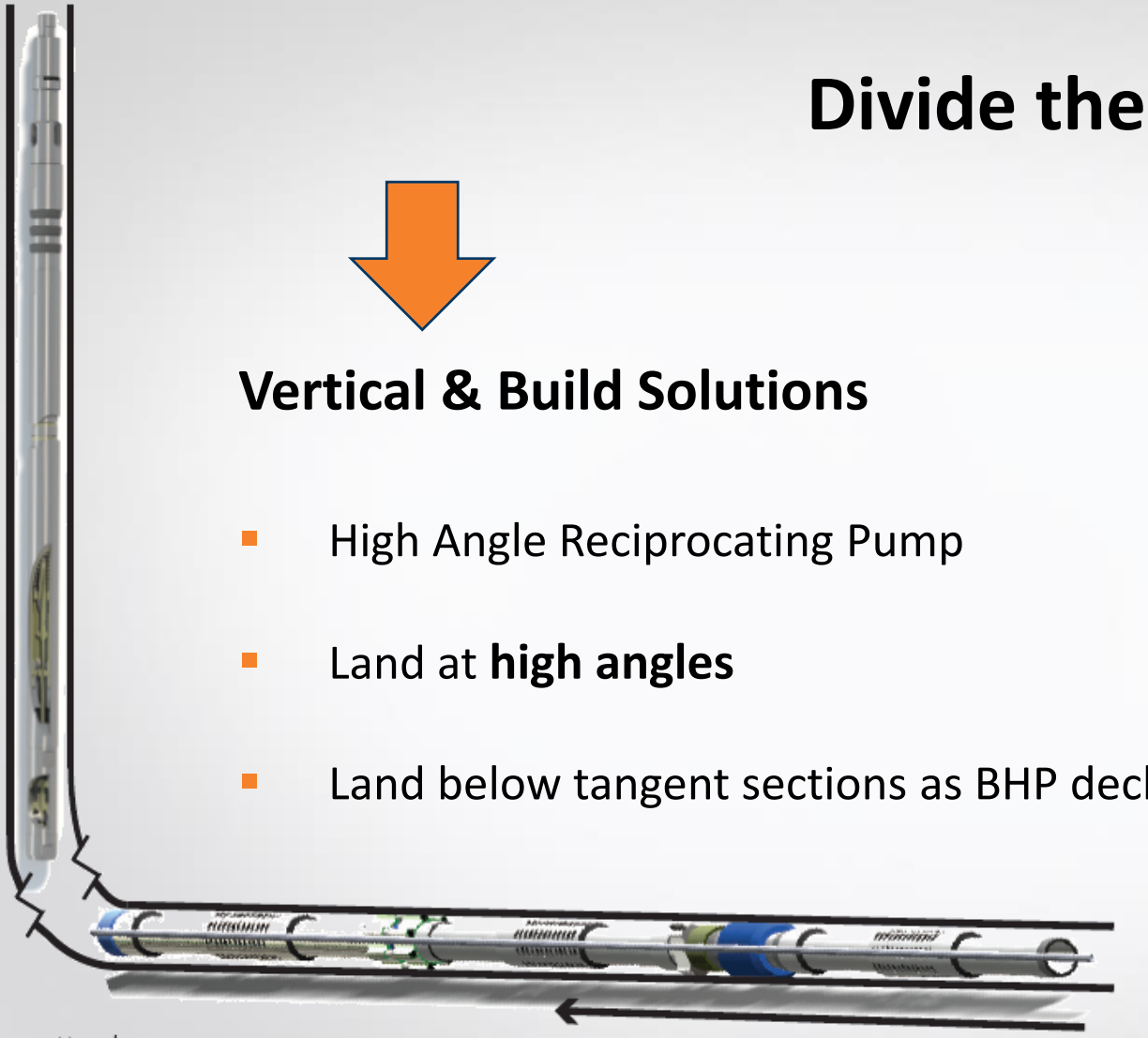


Natural Phase Flow Biases



The natural biases of phase flow (oil, gas and water flow) have material negative implications to producers in terms of production declines. Solution gas drive reservoirs have a natural bias to gas production with increasing association of water production. Changes in these dynamics through the introduction of lateral lift systems can offer the potential for a large improvement in corporate oil production, reduced declines, increased liquids leverage and reduced per unit cash costs. In short, mechanical innovation can offer large changes in free cash flow and profitability for producers.

High Angle Lift Solutions (HALS™)



Divide the Wellbore

Vertical & Build Solutions

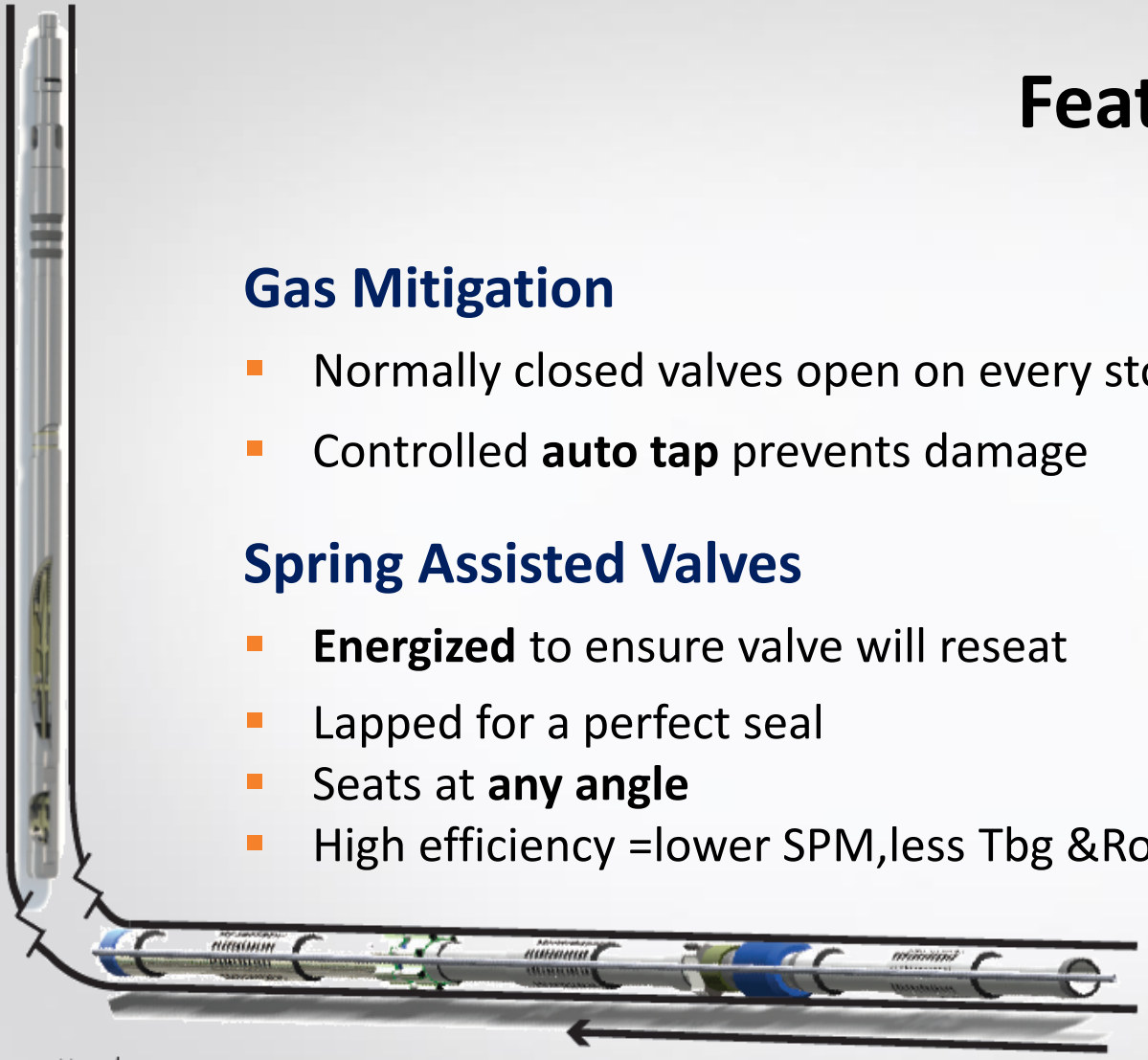
- High Angle Reciprocating Pump
- Land at **high angles**
- Land below tangent sections as BHP declines

Horizontal Solutions

- Mitigate slugging
- Separate fluids prior to pump intake
- Deliver **high quality fluid** to any lift system

* Images not to scale

High Angle Reciprocating Pump



* Images not to scale

Features

Gas Mitigation

- Normally closed valves open on every stoke
- Controlled **auto tap** prevents damage

Spring Assisted Valves

- **Energized** to ensure valve will reseat
- Lapped for a perfect seal
- Seats at **any angle**
- High efficiency =lower SPM,less Tbg &Rod wear

Articulated Plunger

- Minimum of **15°** articulation
- Solids management wiper system

Flow Tube Extension

- Extension for extreme deviations
- Land intake on low side of well
- Access **quality fluid**

Valve Design

Features (Traveling and Standing Valves)

Works at High Angles

- Normally closed guided valves

Perfect Seal

- Increases efficiency
- Exceeds API 11AX vacuum test specifications

Prevents Gas Locking

- Positive valve seating
- Mechanically opens on every stroke

Spring Assisted

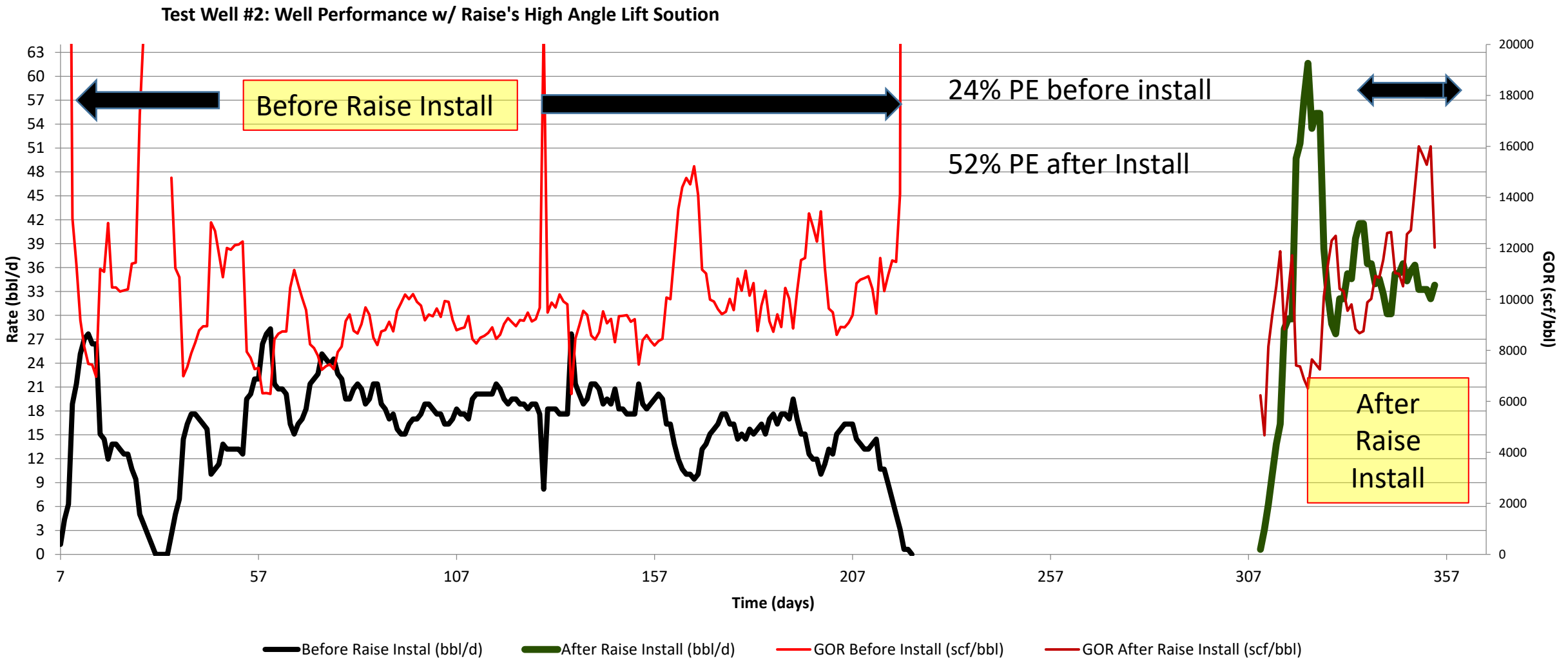
- In-house tested over 3 million cycles
- Flattened face reduces wear

Articulated Plunger

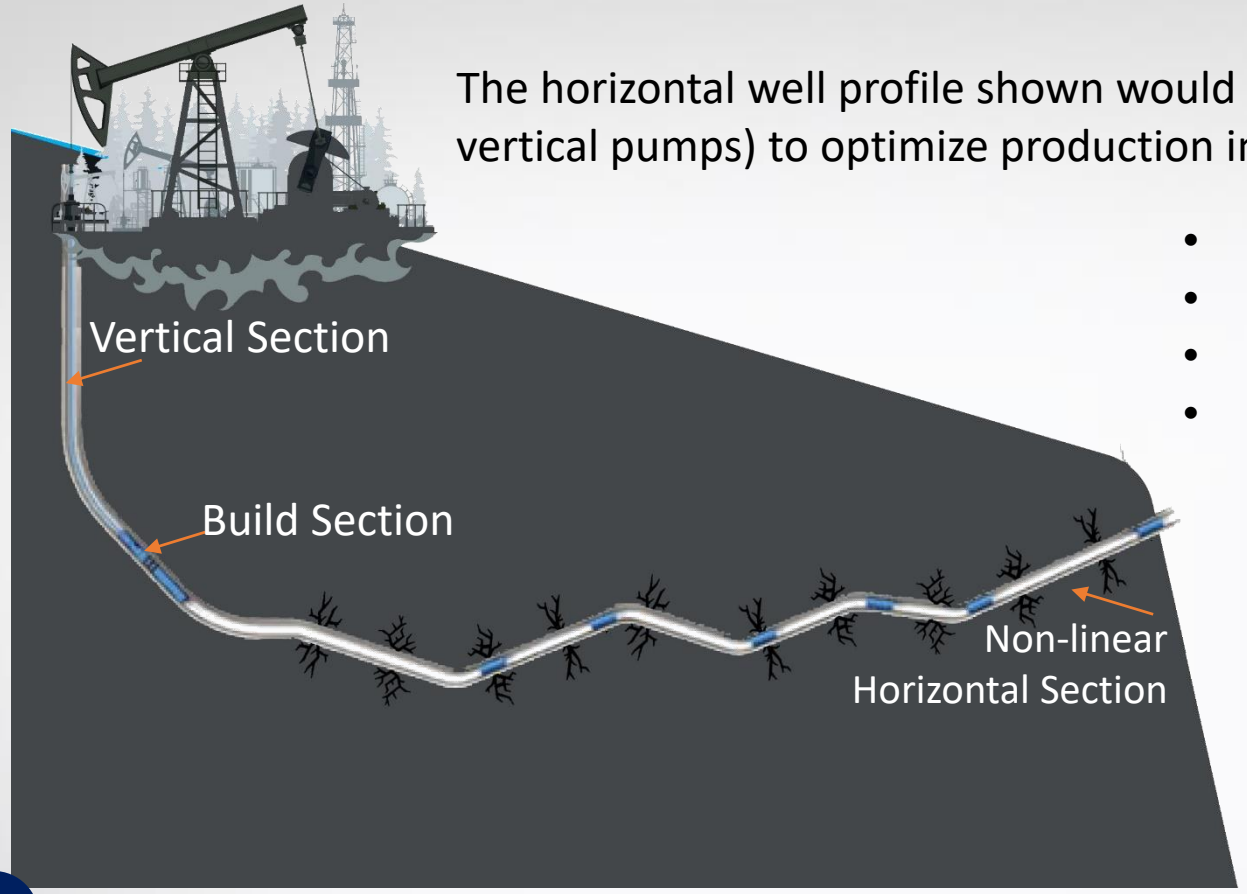
Eliminates Pump Placement Restrictions

- Land the pump anywhere **(45° - 90°+)**
- Reduces friction and wear along barrel
- Allows pump barrels to be landed in “doglegs”
- Solids control
- Material and seal selection to suit well conditions

“Rod-Driven”High Angle Lift Technology Installation



Horizontal Flow Dynamics



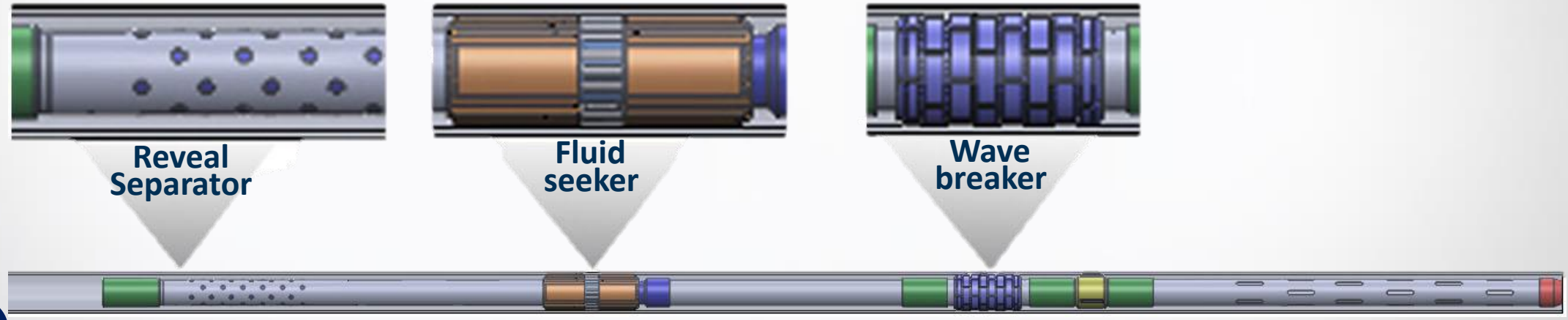
The horizontal well profile shown would require new lift techniques (beyond historical vertical pumps) to optimize production including:

- Maximizing rate of production
- Minimizing rates of production decline
- Prioritizing oil production over gas and water
- Ensuring production from the entire horizontal section

The actual profile of a horizontal well makes mechanical intervention/innovation important as non linear horizontals increase the chance of preferential water and gas flow and accelerated production declines.

The Raise High Angle Lift Solutions (HALS)

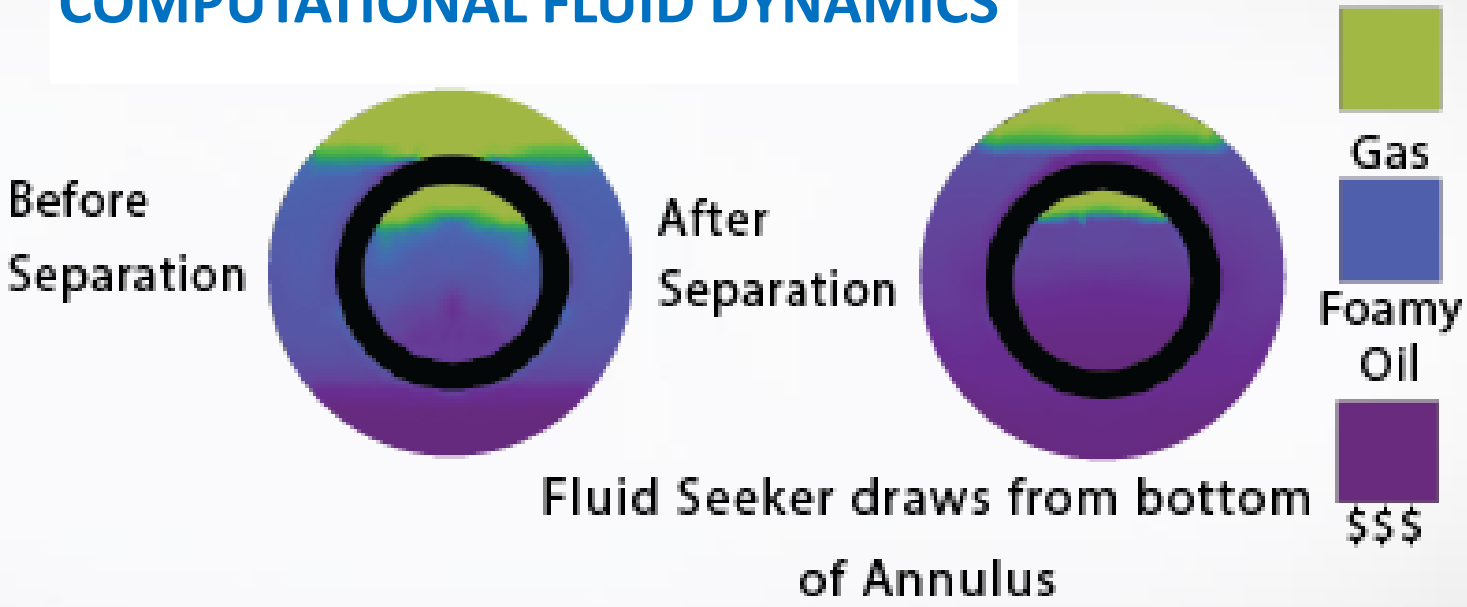
- Designed to optimize production over the life of the well and minimize production declines
- HALS is a low cost option for production optimization that offers high impact improvement in production, free cash flow and profitability
- Optimize hydrocarbon mix prioritizing preferential recovery of oil



HALS™ Horizontal Solutions

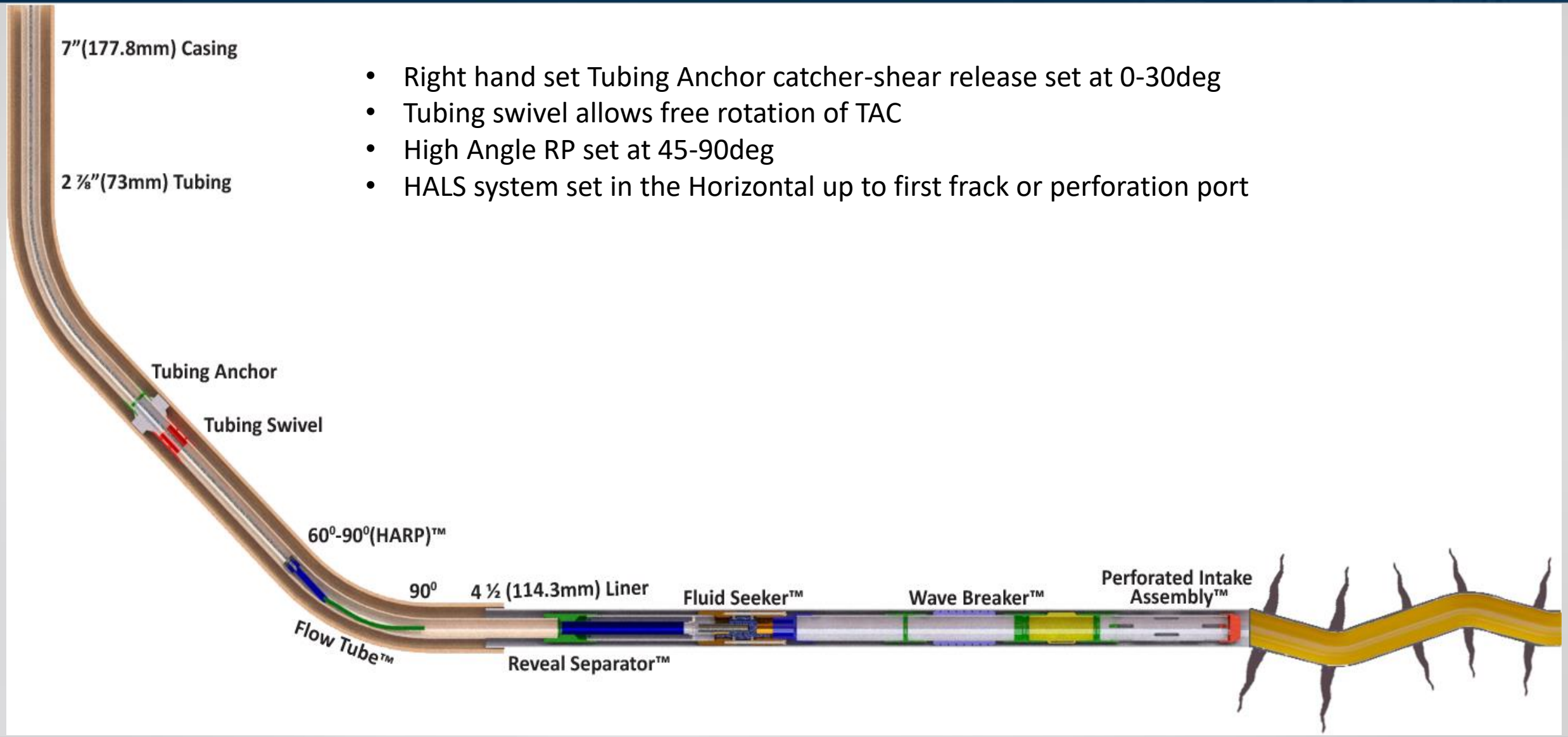
Controls the Flow Regime

COMPUTATIONAL FLUID DYNAMICS



Typical Downhole Completion

- Right hand set Tubing Anchor catcher-shear release set at 0-30deg
- Tubing swivel allows free rotation of TAC
- High Angle RP set at 45-90deg
- HALS system set in the Horizontal up to first frack or perforation port



HALS Single Well Case Studies

ECONOMIC METRICS

Capital	$22,000 *
Netback	$30/bbl
Discount Rate	10%
Nominal Decline	20%

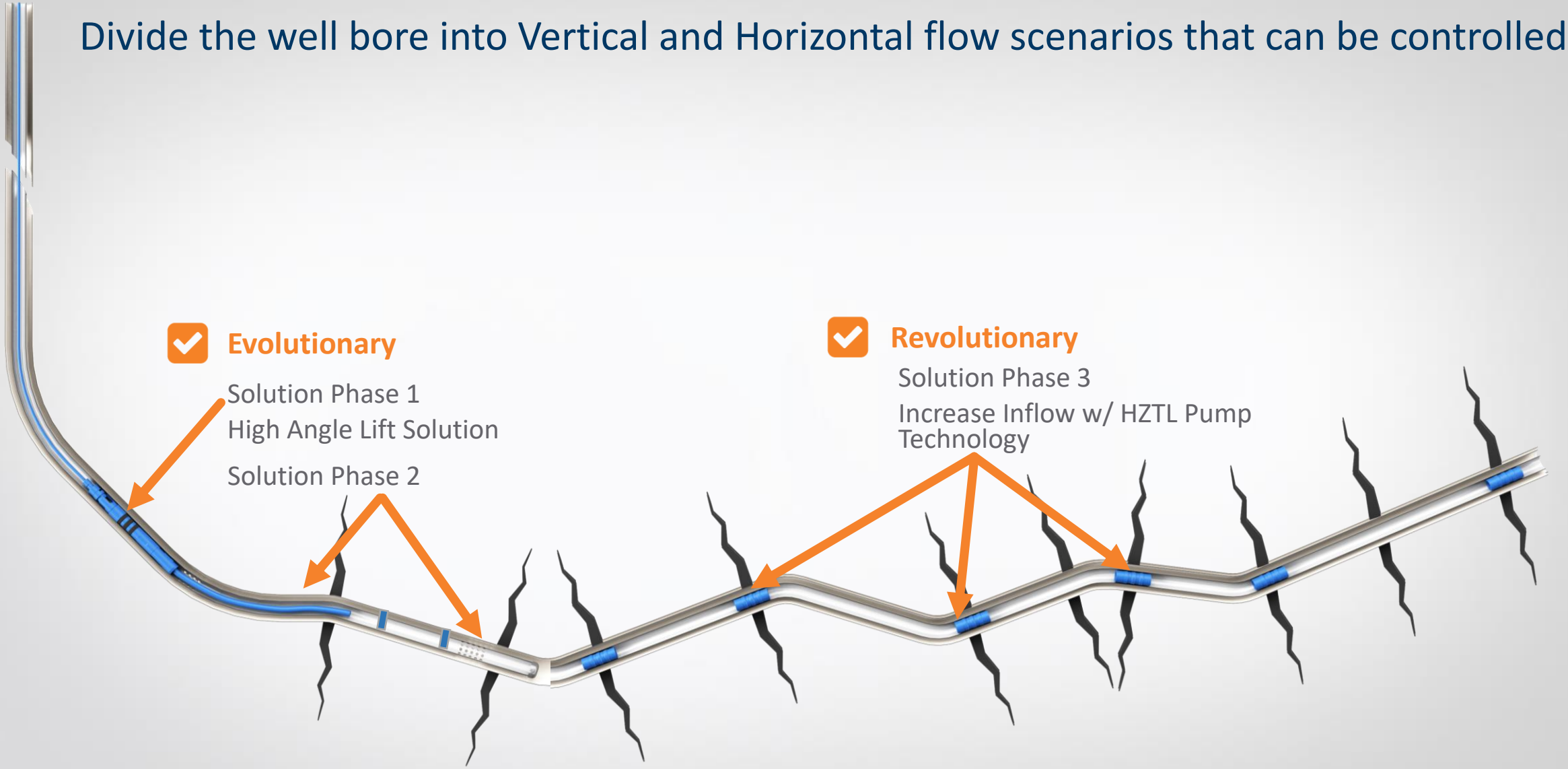
ECONOMIC RESULTS

	INCREMENTAL PRODUCTION (bbl/d)			
	5	10	15	20
12 Month NPV_{10} (Annualized Value)	$39,000	$86,000	$133,000	$181,000
Time to Payout NPV_{10} (Months)	< 4	< 3	< 2	< 2
NPV_{10} 12 Month Recycle Ratio	1.8	3.9	6.1	8.2
12 Month Undiscounted Recycle Ratio	1.9	4.2	6.4	8.7

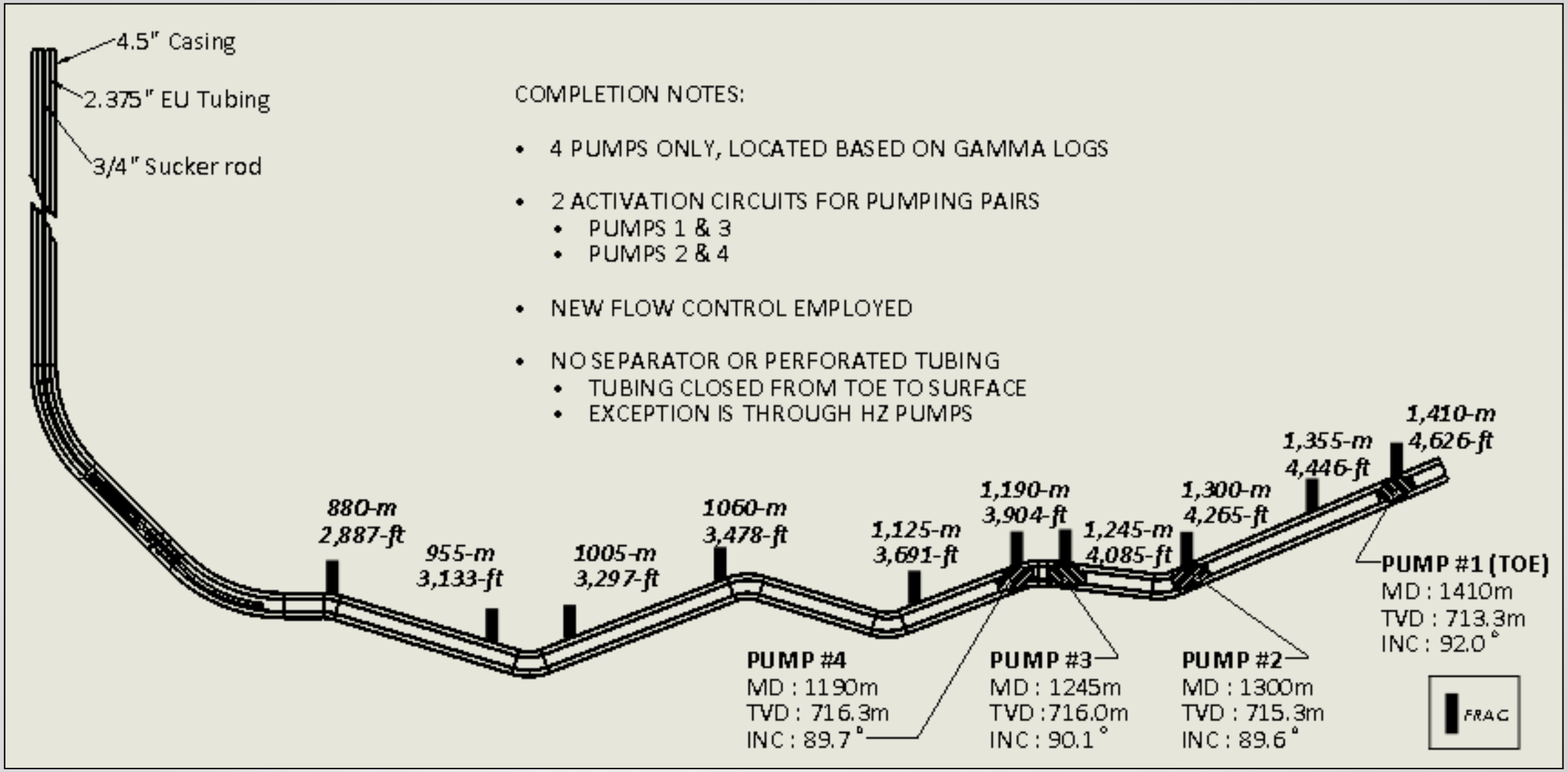
HALS can simultaneously improve total BOED, with disproportional change in oil/liquids such that total BOE's improve at the same time that liquids percentage increases with per unit cash cost reductions. This drives large changes in free cash flow from a small incremental capital investment that pays out very rapidly. All this makes the producers business more valuable and easier to grow from new and existing wells.

The Future

Divide the well bore into Vertical and Horizontal flow scenarios that can be controlled.



2017 Deployment Summary



Multiple Horizontal System Deployments

- Horizontal Pumping System deployed and retrieved (7) seven times in close tolerance wellbores (4 ½ inch mono bore)
- Raise has proven through field testing :
  - Pumps rated up to 5000 psi working pressure
  - Reliable Activation
  - Optimum Pump placement
  - Multiphase flow knowledge

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Thank You

For your time

RAISE PRODUCTION

THE COMPLETE SOLUTION