DeclineShift Flow Optimization Solutions
Enhance flow to ensure fast, high-quality hydrocarbon delivery

Mature assets lose efficiency for a number of reasons. Flow paths can become constricted or plugged over time, and water production can increase, choking off hydrocarbons and reducing hydrocarbon flow capacity. Emulsions can block flow lines and degrade the quality of your returns, and bacteria and hydrogen sulfide can cause costly treatment expenses downstream. Corrosion within the wellbore and facilities can lead to increased maintenance efforts. All of these flow challenges leave many of your assets underutilized and undermine your product’s value.

We take an individual approach to each flow optimization solution focusing on your objectives, the asset’s historical performance, and existing constraints. By looking at the whole system, identifying flow bottlenecks, and prioritizing high-value activities to tackle the root causes of the asset’s inefficiencies, we can design effective, integrated solutions—applying only the technologies needed—to maximize production revenue and your asset’s long-term value.

Prevent water production
Excess water can hinder your oil production rates. We can help overcome these water challenges by assessing water influx mechanisms and minimizing water production at surface. Improving water quality also helps increase the quality of hydrocarbon production. Alternatively, produced water

Applications
- Production flow challenges due to:
  - Excess water production
  - Plugged flow paths
  - Emulsions
  - Capacity constraints
  - Low flow efficiency
- Production quality challenges due to:
  - High concentrations of bacteria
  - Presence of H₂S, CO₂, and NOₓ
  - Scaling
  - Corrosion and fouling

Features and benefits
- Total system approach from reservoir to refinery
  - Minimize water production
  - Address production and transmission problems
  - Improve product quality
  - Monitor system chokes
- Efficient execution for quick returns
  - Minimize disruptions to existing operations
  - Accelerate payback from capital-efficient job design
- Prioritized focus on high-impact results
  - Increase production throughput and yield
  - Lower total cost of operations
  - Reduce HSE and operational risks

Baker Hughes DeclineShift™ flow optimization solutions maximize your production revenue by improving the volume and ultimate quality of hydrocarbons that your mature assets produce.
not handled downhole can also be treated at surface to meet health, safety, and environmental (HSE) regulations.

Eliminate flow constraints
Blockages such as scale, paraffin, asphaltenes, and sand build up over time, and, consequently, mature assets tend to accumulate them. Baker Hughes helps remove these blockages with specialized chemical programs and sand management technologies. Greater production volumes can be obtained by pairing these chemical programs with artificial lift equipment, which also improves lifting efficiencies. Drag reducing agents can also enable higher volumes of hydrocarbons to move through pipelines as they are transported downstream. Removing these flow constraints enables you to produce more, and to move it faster, thus improving overall transmission efficiency.

Ensure product quality
Water and solids buildup aren’t the only flow problems your mature assets face. The presence of bacteria and hydrogen sulfide affects product quality, decreases production performance, and can even lead to equipment failures and HSE concerns if left untreated. Our chemical programs help improve production quality and reduce treatment costs per barrel, as well as mitigate corrosion and comply with HSE regulations.

Continuous optimizations
Once high-quality, full-volume production is established, it is important to maintain it. Continuous monitoring can be a crucial step to sustained production revenue. Our monitoring services track surface and downhole performance, optimizing chemical dosages and catching production blockages before they interrupt your operations. Baker Hughes can also retrieve reliable downhole data with advanced technologies such as electronic and fiber-optic monitoring to increase production and asset reliability with remote surveillance services.

As we execute your DeclineShift flow optimization solution, we can coordinate all services, including those from third-party suppliers, and manage the entire project if necessary. We also offer flexible commercial models to align with different operators’ business objectives and operational needs. After execution, we track the results, weighing actual production and performance improvements against the projected outcomes to ensure the rapid adoption of the most successful practices—further driving capital efficiency and returns on future projects.

Because each solution is engineered in a precise manner, most require only a small wellsite footprint and can be designed to address multiple challenges in a single operation to minimize production disruptions. This helps accelerate payback and grow the present value of your cash flows.

Visit BakerHughes.com/DeclineShift to learn how a DeclineShift solution can help you improve production output and efficiency to accelerate the payback of your mature assets.