



WellDesk

Solutions for oil and gas production optimization

—

Automated software system for modeling,
optimization and monitoring of well
interventions on individual and mass scales

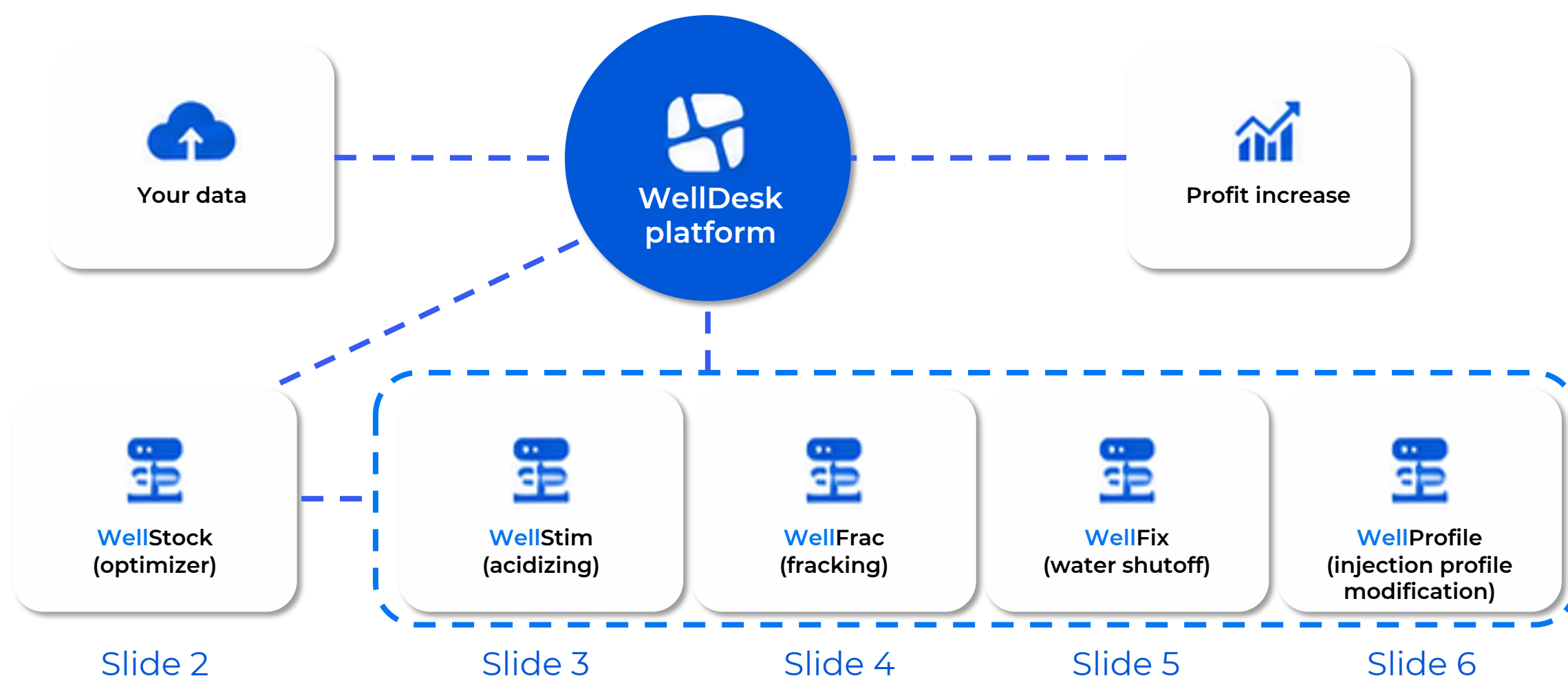
Product line overview



INNOVATIVE WEB/CLOUD-BASED PLATFORM

Reinventing well stimulations and workovers driven by qualitative and quantitative breakthroughs in modeling methods

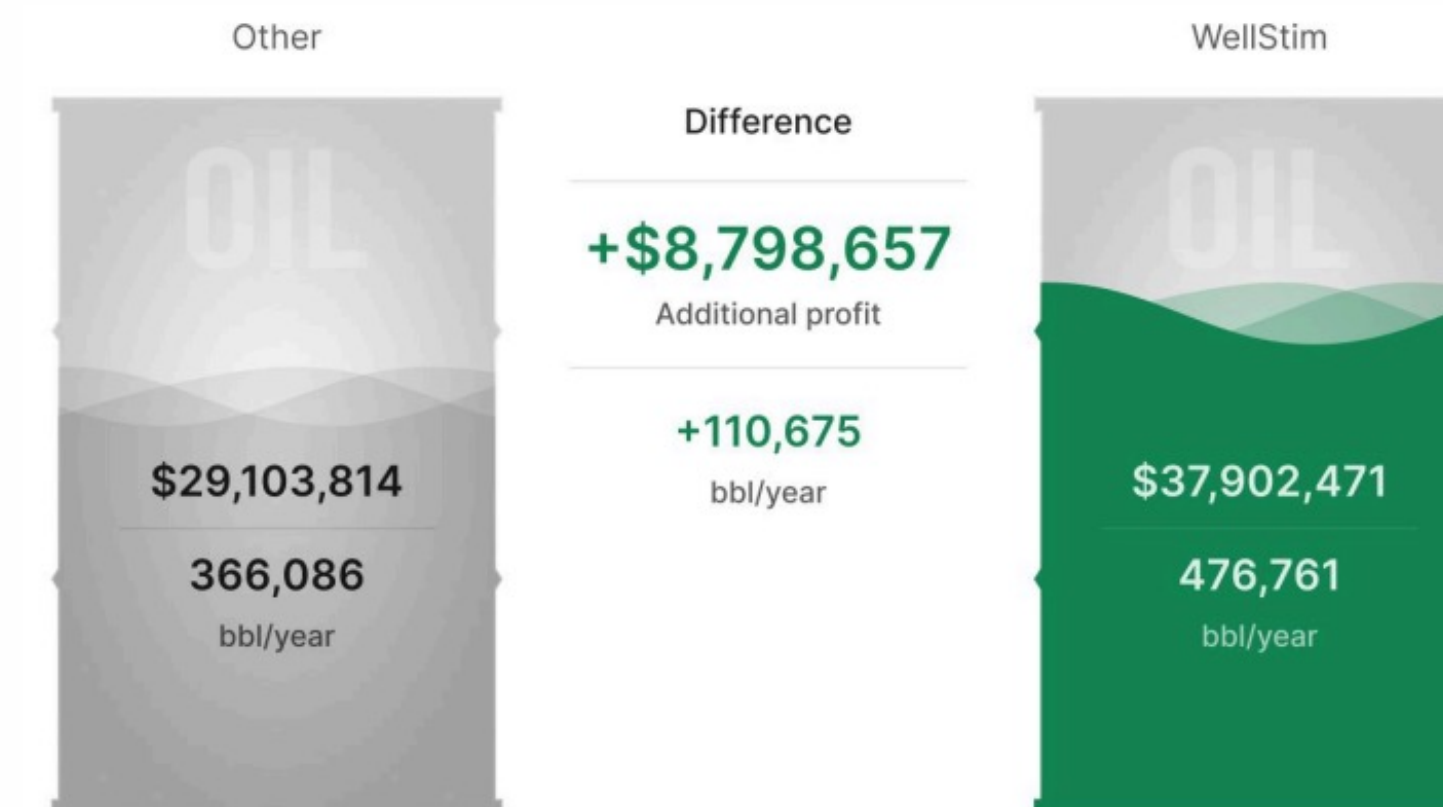
Our integrated platform consists of individual numerical simulators for well interventions working in unison, enabling cross-adjusted, sequential calculations for various operation types. The AI agent system provides comprehensive engineering support at all operational stages. An average **15%** increase in oil recovery from interventions with minimal incremental costs. Average match with actual post-job data ranges from **95%** to **98%**.



A 23% increase in well stimulation performance compared to operations designed with alternative software



The benchmarking study was conducted on two groups of analogous wells (100+100). The difference is attributed to more optimal injection parameters, including chemical/fluid system selection, as well as more precise modeling calculations



Example:

- Number of wells - **100**
- Production before stimulation - **71 bbl/d**
- Stimulation effect duration - **180 days**
- Stimulation frequency - **2 per year**
- Production increase rate - **1.45**
- Oil price - **\$79.5**



CLIENT BENEFITS



Reduction
of operational
risks



Up to 70% time
savings on
engineering
design



Increased
intervention efficiency
and incremental oil
production



Optimization
of operational
costs



Transparency
and control at
every stage



01 MASS WELL STOCK CALCULATIONS

Automated well intervention modeling for the entire well stock in a 24/7 mode. The platform evaluates thousands of scenarios and generates a [ranking of the most promising candidates](#) for operations, complete with technological effect forecasting



02 AI ASSISTANT

Suggests an optimal work plan and recommends technologies based on input data



03 WELL POTENTIAL ASSESSMENT

Determines the feasibility of well interventions and projects the expected technological effect



04 MODELING WELL INTERVENTIONS

Calculates and selects optimal parameters for acidizing, fracking, WSO and profile modification. Predicts operational results



05 TEST INJECTIONS

Refines technological injection parameters prior to job execution



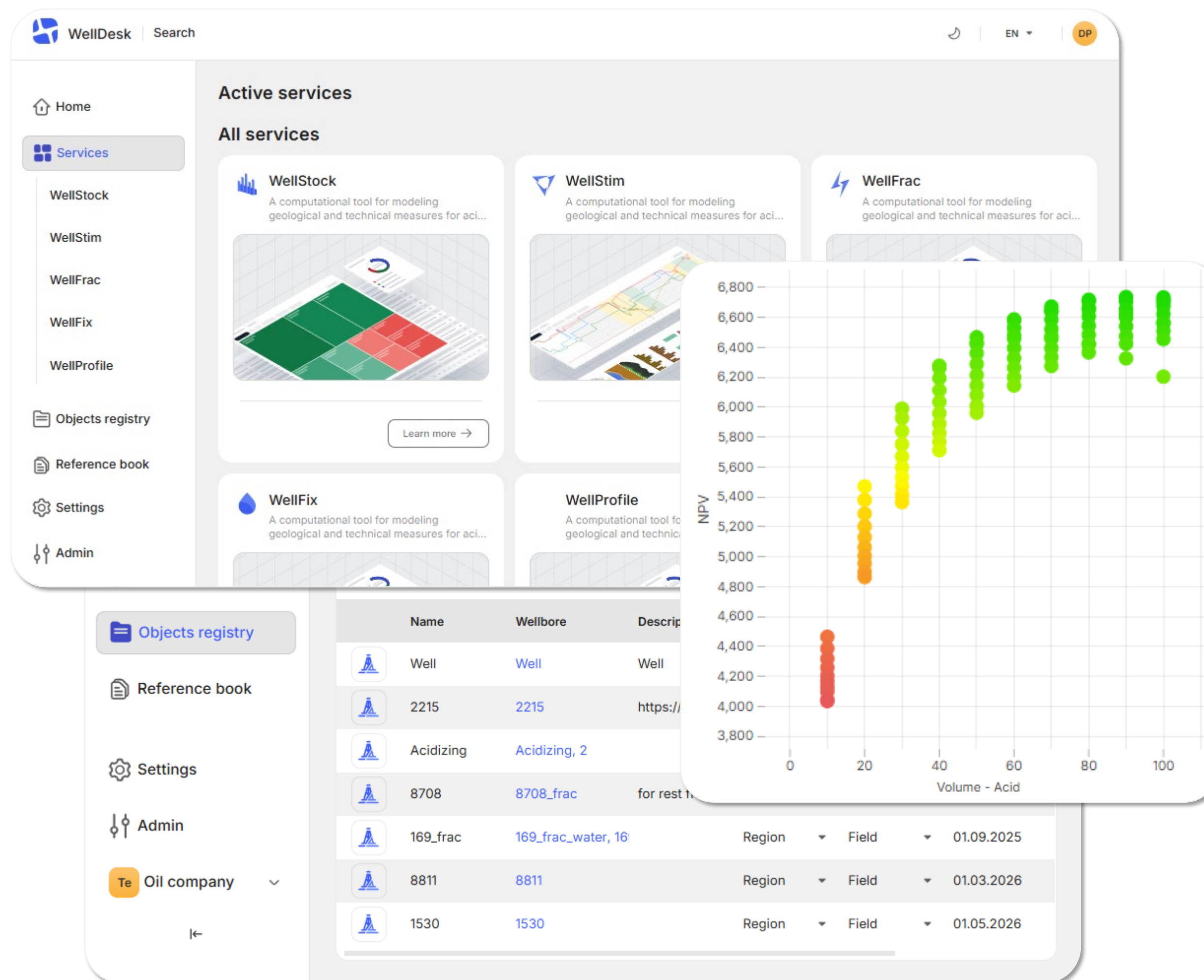
06 AUTOMATED OPTIMIZER

Iterates through hundreds of fluid volume, flow rate and injection regime combinations to select the most efficient option



07 ONLINE MONITORING

Real-time operational control with display of key parameters





THE INTERVENTION

A technology to increase well productivity by dissolving formation damage and creating highly conductive flow channels (wormholes) in the reservoir

THE EFFECT

Restores near-wellbore permeability and stands as one of the most cost-effective methods for production enhancement



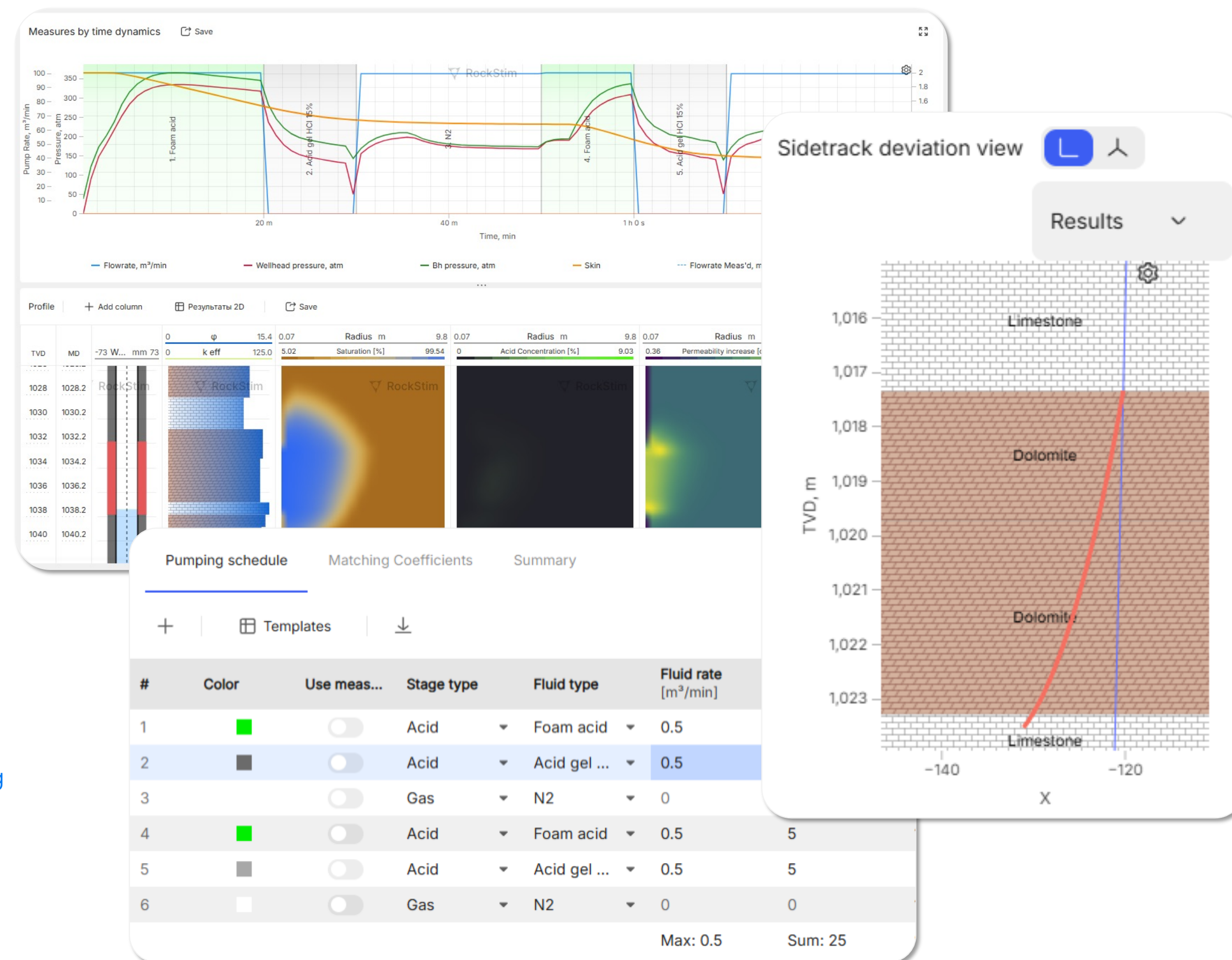
WHEN REQUIRED?

- ⊗ Decline in oil production rate
 - ⊗ Near-wellbore formation damage
 - ⊗ Flow performance impairment
- Production losses can reach 20-50%



THE VALUE OF WELLSTIM

- ☑ Identification of plugging agent and scale types and selection of the optimal acid formulation, volume, and injection rate
- ☑ Calculation of operational injection treatments for retarded acids, diverting agents, foams, thermogaschemical treatments (TGCT) and gas overflashes
- ☑ Modeling of various production enhancement technologies: jet acidizing, acid treatments via coiled tubing (CT) and liners, including small-diameter (limited-entry) perforation assemblies, as well as radial channeling (radial jetting)





THE INTERVENTION

A technology to create a highly conductive fracture in the reservoir matrix to enhance oil inflow to the wellbore

THE EFFECT

Significantly boosts well production rates and effectively brings low-permeability reservoirs into active development



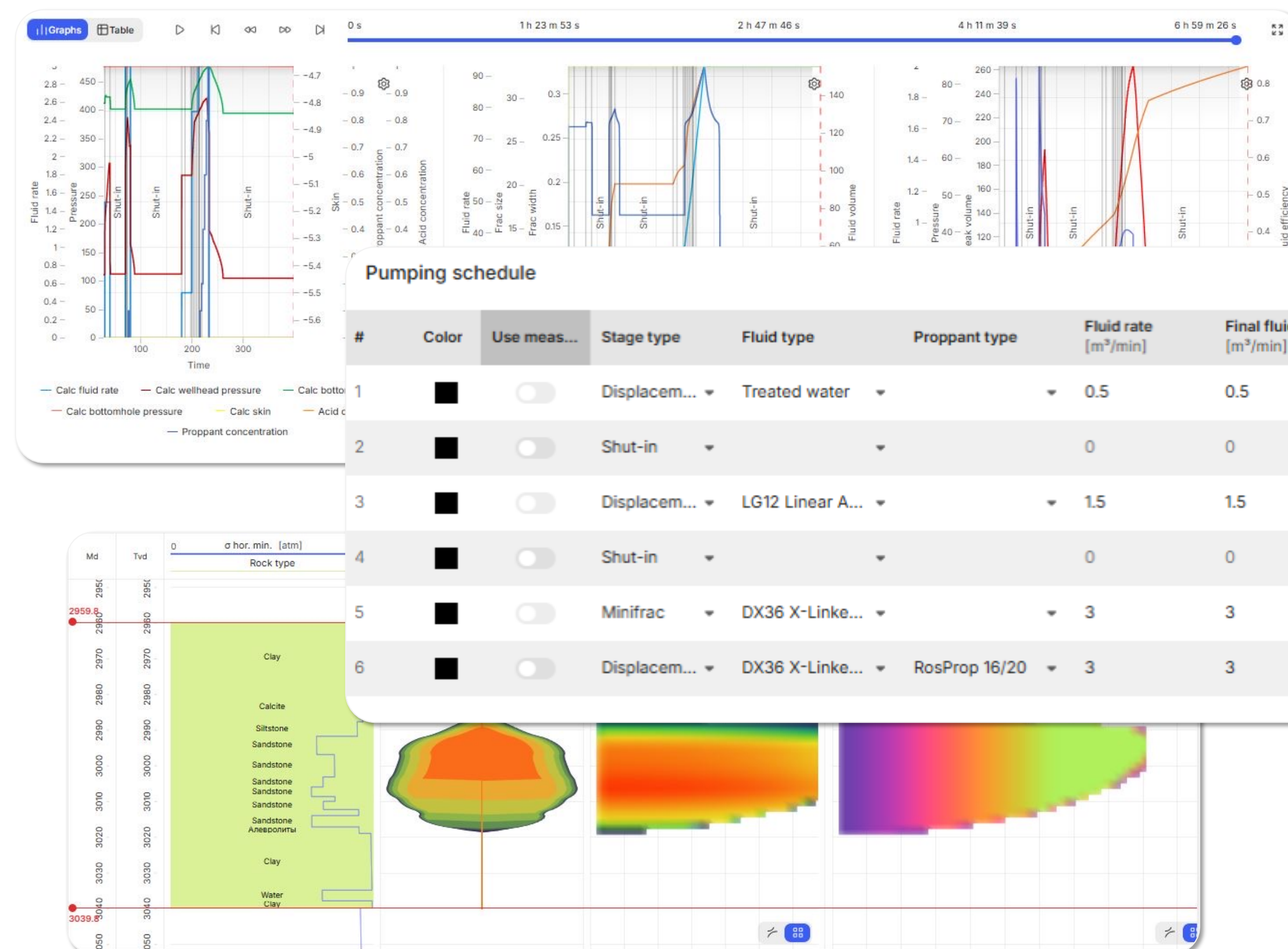
WHEN REQUIRED?

- ⊗ In formations with permeability below **10-50 mD**
- ⊗ For tight oil / hard-to-recover reserves with permeability under **1 mD**



THE VALUE OF WELLFRAC

- ✔ Construction of a **digital well model** integrating geological, geomechanical and petrophysical data.
- ✔ Multi-scenario modeling for the well stock, featuring the selection of **optimal proppant mass and fluid volume**
- ✔ Modeling of technological parameters for hydraulic fracturing operations, including **acid frac**





THE INTERVENTION

A technology for the selective reduction of formation water inflow into production wells

THE EFFECT

Reduces product water cut, increases oil production and lowers operating costs



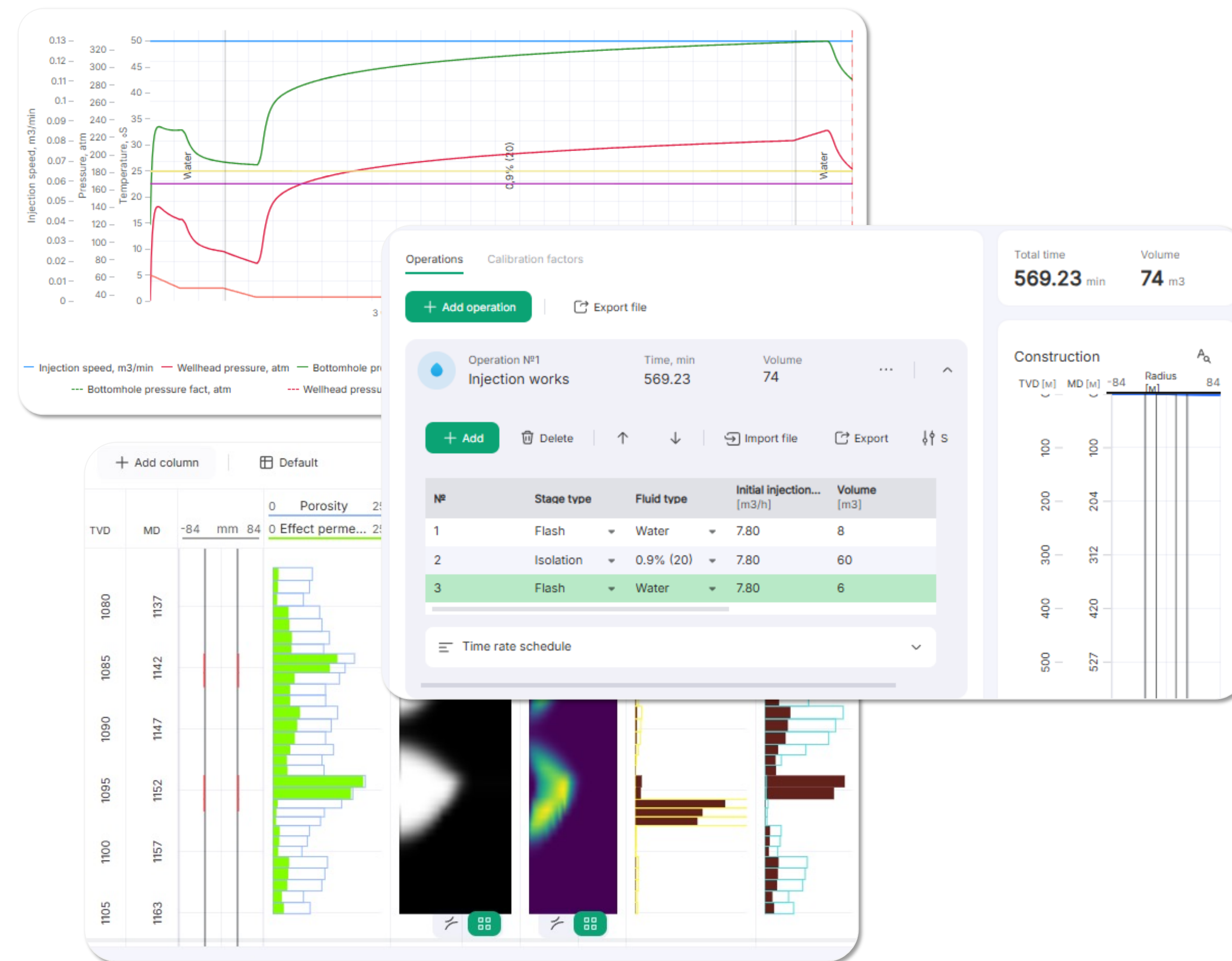
WHEN REQUIRED?

- ⊗ High fluid water cut issues
- ⊗ Water cut exceeding 60-80%



THE VALUE OF WELLFIX

- ☑ Selection of the optimal technology and chemical formulation, with precise calculation of **component concentrations and the mechanical strength of isolation barriers**
- ☑ Modeling of various injection scenarios to determine **optimal treatment volumes**
- ☑ Forecasting changes in oil and water production rates, as well as evaluating the **lifespan (duration) of the treatment effect**





THE INTERVENTION

A technology to redistribute injected water flow across reservoir intervals

THE EFFECT

Increases waterflood sweep efficiency, improves the performance of the pressure maintenance system (PMS) and delivers incremental oil production



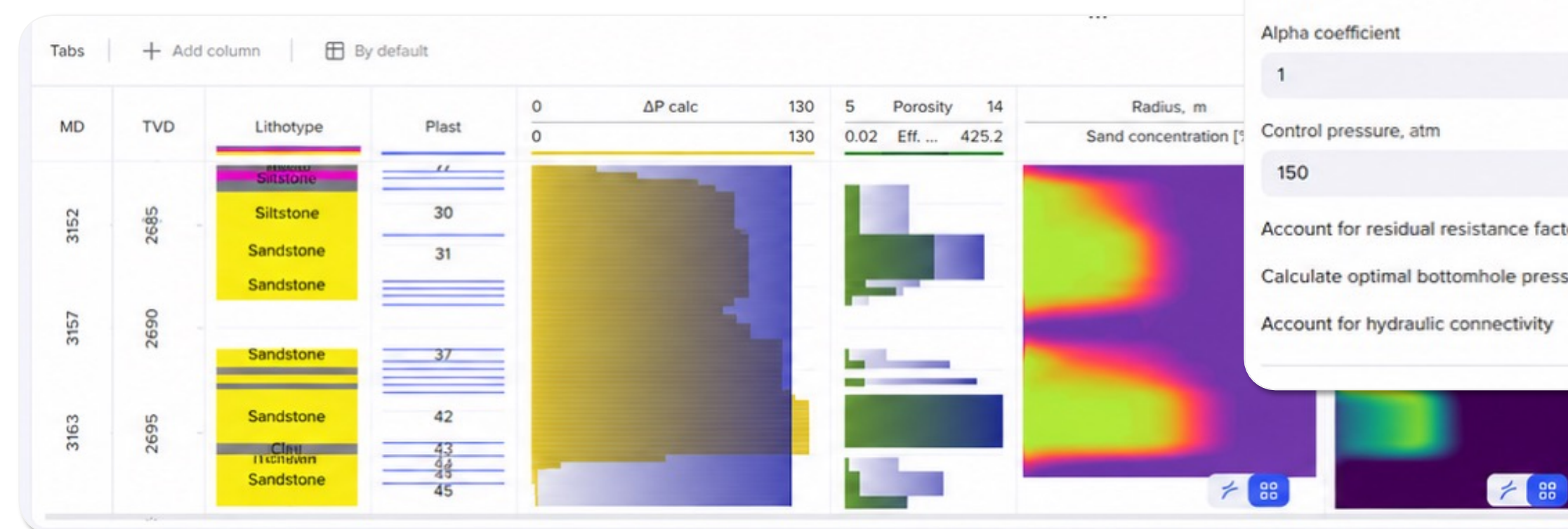
WHEN REQUIRED?

⊗ When injected water predominantly flows into the most permeable intervals, leaving lower-permeability zones virtually unswept



THE VALUE OF WELLPROFILE

- ✓ Selection of the [optimal injection profile modification](#) technology for injection wells
- ✓ Determination of the [optimal operating mode](#) for the injection well following treatment execution
- ✓ Calculation of technological efficiency and forecasting of incremental production across [surrounding offset production wells](#)



What if purchasing a license is not practical for us?

WellDesk specialists can perform calculations, select the optimal design and deliver a turnkey job project without the need to purchase a license.

Can we automatically generate a well intervention work plan?

Yes. The AI assistant generates a recommended intervention plan, selects the technology, and identifies optimal operational parameters.

Is our data secure?

Yes. Data is stored on secure servers (on-premises deployment within your company's perimeter is also possible). Access is provided via individual logins and passwords with role-based user permissions.

How long does design preparation take?

From a few minutes to several hours, depending on the complexity of the task and the volume of input data.

What if there is insufficient data for a well?

The platform can utilize built-in models and default reference parameters. As new information becomes available, calculations can easily be refined. Additionally, we can conduct any necessary laboratory testing for you upon request.

How reliable are the modeling results?

The mathematical models are based on the physical laws governing the processes, industry-standard methodologies and years of engineering experience. The results help you make informed decisions before field operations even begin.



WellDesk

Thank you for consideration!

www.welldesk.io
info@welldesk.io

