

# StimPlan Software

## Integrated 3D fracture design and analysis

StimPlan is a complete software solution for hydraulic fracture design, analysis and optimization. With a comprehensive integrated toolkit and the industry's most rigorous geometry models, StimPlan helps operators worldwide maximize their well performance while lowering expenditure and reducing their environmental footprint, however complex their reservoir or fracture treatment design.

### Maximize Well Performance

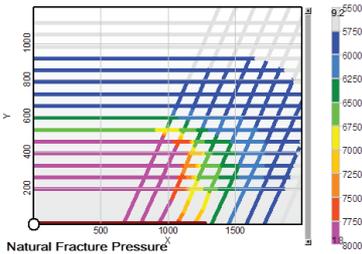
Post-frac benchmarking studies show that rigorous hydraulic stimulation design and treatment optimization helps both reduce operational problems and significantly improve well performance.

### Lowering Well Costs

Through optimizing the hydraulic fracture treatment StimPlan is also helping operators not only increase production but also drive down well costs through savings in proppant, pumping, water disposal, and reduced number of stages/well through optimized fracture spacing.

### Shale Gas Reservoirs

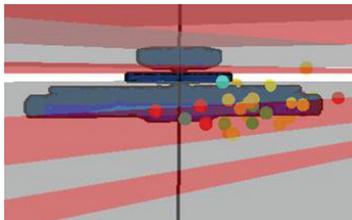
Horizontal wells and hydraulic fracturing have proven to be the most effective technologies for economic development of these uniquely challenging resources. StimPlan supports the modeling of single or multiple hydraulic fractures within horizontal wells, including calculations for the effects of fractures joining or interfering.



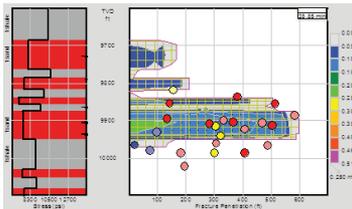
New modules\* also include the visualisation of microseismic data to help calibrate the hydraulic fracture model, and a natural fracture (DFN) capability for assessing the impact of stimulation on naturally fractured reservoirs

### Easy Data Handling and Analysis

StimPlan incorporates easy tools for importing, manipulation and analysis of all the log, pressure and rate data required for fracture design. Comprehensive databases for fluid and proppant data are also available.

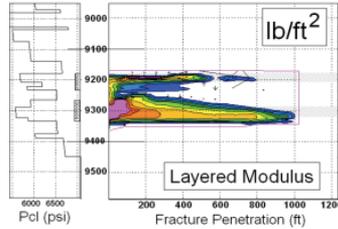


Pre and post frac analysis tools include well test analysis, minifrac analysis, step down test analysis and production decline analysis.



### Rigorous Geometry Modeling

A range of fracture geometry simulation options are available within StimPlan, from quick-look pseudo 3D methods to fully 3D gridded methods for more complex problems.



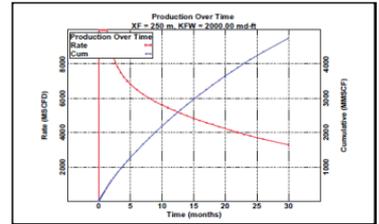
Water frac simulation in a layered, tight gas formation

The advanced fully 3D finite element simulation ensures that fracture geometry is rigorously modeled, giving more accurate geometry estimates, particularly in complex multi layered formations.

StimPlan's fully 3D modeling is particularly valuable for cuttings and waste injection analysis where large volumes can create dangerous height growth.

### Acid Fracturing in Carbonate Reservoirs

StimPlan's acid fracturing model includes acid propagation, diffusion, etching and wormholing into limestone and dolomite formations.



Typical reservoir simulation results

### Integrated Reservoir Simulation

Pre and post frac production can be modeled and history matched using StimPlan's integrated single phase, 3D numerical reservoir simulator to get a more accurate prediction of well performance gains.

Analytical type curve and Folds of Increase (FOI) production models are also available for post-frac production analysis and history matching.

### Accurate Proppant Placement

A unique multi-phase fluid-flow proppant transport solution is used by StimPlan to ensuring more accurate modeling of proppant placement. This in turn results in better treatment schedules and less operational surprises.

### Automated Treatment Schedules

Automated pump schedules are calculated by StimPlan as part of the design process, resulting in a reduction in the time required to generate and select an effective treatment schedule.

### Economics and Fracture Optimization

StimPlan's fracture optimization module integrates fracture geometry modeling, reservoir simulation and economics to provide detailed production and economic evaluation. This helps maximize well performance and profitability from a planned treatment.

### NSI Technologies

NSI Technologies is a global leader in software, training and engineering solutions for the design and analysis of well stimulation programs. Founded in 1984, NSI has played a leading role in the development of modern hydraulic fracturing design technology. Through the application of its innovative solutions, NSI helps operators worldwide maximize their well performance while lowering expenditure and reducing their environmental footprint.



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