The Baker Hughes JewelSuite™ reservoir modeling platform enhances reservoir planning using patented 3D gridding seismic-to-simulation technology to build highly accurate reservoir models in complex or unconventional settings. It allows integration of cross-disciplinary data sets in both real-time and virtual space providing shorter model building times. This provides operators with a better understanding of the reservoir.

Build accurate models for enhanced reservoir planning
In a market where the production of complex and unconventional fields has become increasingly important, operators require fast and accurate reservoir models for field development and evaluation.

The JewelSuite platform includes geomechanics and MFrac™ software to build and update complex reservoir models quickly and accurately based on a patented 3D gridding technology. This technology allows for a more precise representation of geological structures from surface to basement for a true shared-earth model approach. It integrates cross-disciplinary data sets in real-time and virtual space giving operators a more comprehensive view of their reservoirs for better planning.

Cross-disciplinary teams can visualize, analyze, and modify data in a single environment which further improves overall simulation accuracy. By working together within one interface the geoscience and engineering teams can effectively collaborate to develop and validate more models for better asset management and assessment. With the ability to create different scenarios, team members can quality control models using the audit trail and review assumptions and decisions used in model construction.

Applications
- Build and update complex reservoir and unconventional field models
  - Reservoir simulation
  - Structural modeling
  - Geologic modeling
  - Geomechanical modeling
- Determine reservoir potential and accessibility
- Understand well placement and architecture

Features and Benefits
- Unique 3D gridding technology
  - Enhances reservoir understanding with accurate models regardless of geological complexity
- Multi-discipline integration with full audit trail
  - Increases model accuracy by enhancing collaboration between geosciences and engineering in a single environment
- Customizable connectivity to third-party tools
  - Provides a full seismic-to-simulation workflow-based tool
- Simultaneously design, run, and update multiple simulations
  - Reduce decision time with faster and flexible model updates
- Intuitive and easy to learn with workflow guidance
  - Maximize productivity through user friendly interface that allows a user to develop a model within three days
Fast and easy simulations
JewelSuite is a highly intuitive, workflow-based tool which is easy to learn and use. Operators can incorporate it into their workflows within days. Workflow automation enables fast, flexible model updates, providing dramatically shorter model building times and updates.

The platform is simple to customize using built-in workflow automation as well as direct two-way connectivity to third-party tools such as CMG’s reservoir simulation engines, SMT’s Kingdom® Suite and Meyer and Associates’ Mfrac. Geophysicists and geologists can quickly move through interpretation to geomodel building and hand off the model to reservoir engineers.

By integrating cross-disciplinary data sets, collaborative teams can quickly build accurate and predictive models with ease. Operators can gain a better understanding of the subsurface to make better decisions on well placement, reserves estimation, and production planning.

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