Optimize Oil and Gas Recovery

with OIS Terra

Production of hydrocarbons is a capital-intensive process, which urges oil and gas companies maximizing field recovery while minimizing costs.

Geological and reservoir models are primary source of information for this task, as they allow localizing residual oil and gas reserves and plan optimum activities for their extraction.

OIS Terra is a digital platform that includes a next generation reservoir simulator and a full suite of geological and reservoir modeling tools, combined to maximize the convenience of working in a single graphic interface.

OIS

OIS TERRA — DIGITAL GEOLOGICAL AND RESERVOIR SIMULATION TOOLBOX

RESERVOIR SIMULATION

- Fully parallel next generation reservoir simulator
- Build high-quality detailed models with hundreds of millions of grid blocks thanks to high calculation speed achieved through effective parallel computations
- Accounting for all major physical effects influencing the field development: dissolved gas liberation and condensate dropout as the pressure goes down, dual porosity reservoirs, faults, multiple areas with different reservoir and fluid properties, variable water salinity, local grid refinement, precise equations for fluid inflow to hydraulic fractures, and so on. Model validity is confirmed by SPE tests, as well as comparison with other industrial simulators
- Taking advantage of interactive processing of data thanks to advanced GUI optimized to address specific tasks, both in long term planning and well activity management
- Robust model based on material balance equation. Automatic conversion of 3D model to material balance model using Voronoi grid

GEOLOGY

- Quick well correlation. Correlation of well sections displaying well logs and results of well log analysis, completion data, well paths crossing structural surfaces, and model grid blocks
- Display of all geological and production data on the map to create maps of current and accumulated production, reserve estimation maps, drilling programs, and so on
- Creation of an any desired number of 3D maps and synchronize their images, including stereoscopic 3D visualization
- Visualizing cross-sections of 3D models and surfaces with faults, wells with completion and logging data. Building geological cross sections based on log interpretation in order to analyze reservoir geological structure, estimate reserves and for geosteering purposes
- Building structural surfaces and maps of geological parameters, 3D grids and properties, edit polygons, etc.
- Saving the whole calculation sequence as workflow to be repeated with modified data
- Getting maps, correlation well sections, geological cross sections and vertical proportion curve logs ready for printing, creating legends and title panels

OIS UFAM INTEGRATION

- Use OIS Upstream Field Activity Management (OIS UFAM) system to store OIS Terra models and make model data available for integrated analysis and activity management. The most accurate and valuable data from geological and reservoir models will be accessible to a wide range of experts, from drilling engineers to field office top management.
- Create or update your OIS Terra project using the option of data import from OIS UFAM.

FLEXIBLE EXTENDIBILITY

- Extendable architecture allowing to add functions requested by users
- Possibility to run software on low-spec office PCs with integrated graphic cards

KEY BENEFITS:

30-40%

productivity increase for geological modeling and reservoir simulation

10-15%

efficiency improvement for all major stimulation activities: drilling, water flooding, completion management, hydraulic fracturing, etc.

ACHIEVED THROUGH:

- High performance parallel computations
- Automated routines for data preparation and simulation results analysis
- Simulation results made available to a wide range of company experts