tecplot®rs

Reservoir Visualization & Analysis

Tecplot RS gives engineers the ability to manage, analyze & compare simulation data, uncover knowledge about reservoir model behavior, and gain confidence in making crucial decisions.

Integrated Work Environment
- Supports most major reservoir simulators.
- Compare data from multiple runs with historical well data while simultaneously viewing the well location in the context of the grid solution.
- View bubble pie charts to understand relative values of selected well variables.

Reservoir Exploration
- Explore 3D solutions with arbitrary slices, blanking, and iso-surfaces.
- Interactively seed streamtraces in the reservoir flow.
- Examine multiple grid properties in one view.
- Display fault surfaces and explore adjacent grid properties.
- Calculate new grid and well variables using conditional expressions.
- Use delta bubbles to find regions with a poor history match.
- Plot time histories for multiple grid properties and for multiple cases.
- View production and grid solution data together using Stamp Plot.
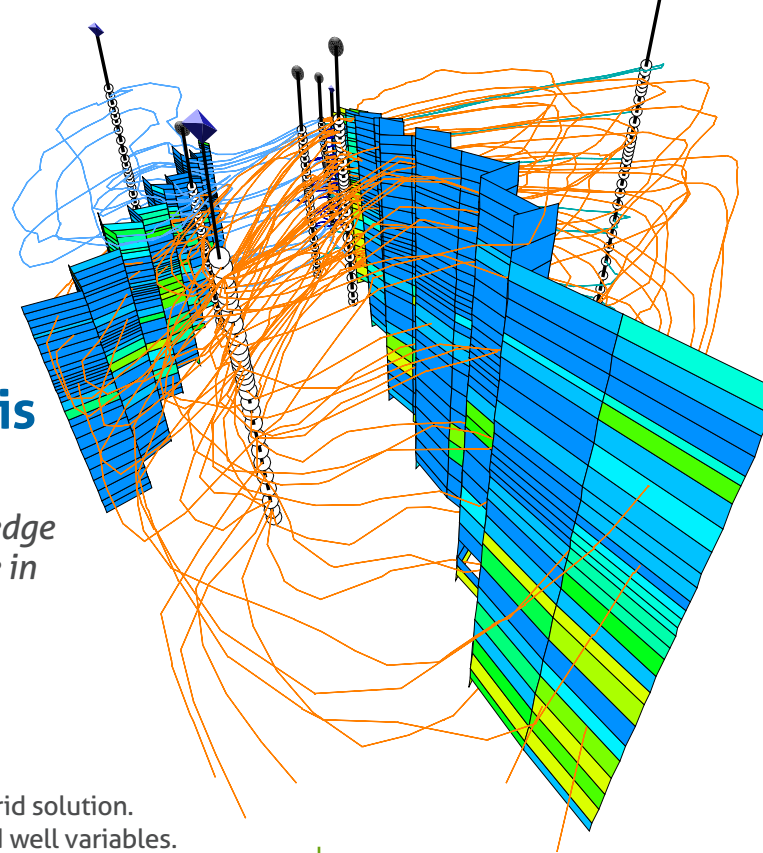
Streamlined Reservoir Engineering Workflows
- Use the plot gallery to save specific XY, 2D, and 3D plot configurations and recall them at any point during the project.
- Record macros and templates to streamline repetitive tasks.
- Interactively define well groups and compare group results for multiple simulations.
- Modify properties for selected regions and output for subsequent runs.

Unique Analysis Tool
- Easily perform sums and averages of properties in regions and layers.
- Create histograms and cross plots to gain statistical insights for your reservoir.
- Calculate periodic production rates from cumulative variables.
- Integrate grid properties in subdivided regions and intervals.
- Quantify history match quality.

Responsive Tecplot Support
- Take advantage of new software releases every twice per year.
- Get help with installation, troubleshooting, and solutions for workflow issues specific to your workplace - in one business day or less!

Try Tecplot RS:
tecplot.com/rs

Master the View™   **www.tecplot.com**   **1.800.763.7005**

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Tecplot RS Feature List

History Match
- Automatically determine and display match factors for multiple simulation runs.
- Compare data from multiple runs with historical well data.
- Use delta bubbles to identify regions where the simulation over/under predicts.
- Modify properties for selected regions and output for subsequent runs.

Data Analysis
- Use cross plots to observe relationships between data.
- Use histograms to observe distribution of data.
- Calculate new variables from existing variables.
- Integrate solutions over selected ranges.

Multiple Data Sets
- Load and manage multiple data sets for comparison plots.
- Load and append data from numerous sources.
- Remove data sets that are no longer needed.

Grid Plots
- View percentage change relative to initial conditions with Recovery Map.
- Load and display inactive cells.
- Interactively select groups of cells to isolate or remove.
- Save customized color legends for each grid variable.
- Display grid variable as distinct value per cell or smoothly varying.
- Customize all text and style elements of each plot.
- Use ternary coloring to display oil, water, and gas saturations.
- Display differences between grid solutions.
- Superimpose bubble plots of well production and injection data.
- Use Delta bubbles to display difference between two well data sets.
- View production data and grid solution data together using Stamp Plot.

3D Grid Plots
- Generate 3D images of the simulation grid solutions.
- Display 3D perspective and orthographic views with light source shading.
- Rotate, translate, and zoom with mouse buttons to focus on a particular region.
- View internal 3D features like well trajectories and iso-surfaces.
- Cut away or isolate regions of the reservoir or to just show the cells along a well path.
- Create "Fence" plots from multiple intersecting grid layers, multiple x,y or z slices, or a set of arbitrary slices.
- Display fault surfaces.
- Evaluate user-specified "survey" wells.
- Sum or average properties over grid layers.

2D Grid Plots
- Examine the simulation solution, layer by layer.
- Quickly step through grid layers for aerial and cross-secion views.
- Display grid layers in physical or index coordinates.
- Interactively translate and zoom on the image.
- Display wells and local grid refinements as they appear in each layer.
- Display fault lines.

Animation
- View the time history of reservoir data.
- Create 2D and 3D views for specific simulation times.
- Animate or step forwards and backwards through a time sequence to observe changes in the solution variables.
- Create and share movies showing saturation fronts, pressure changes, and other recurrent grid properties.
- Display the difference between current values and a user-selected reference time.
- Animate RFT plots through all timesteps.

XY Plots
- Temporarily fix x-axis to chosen range with Zoom Lock.
- Compare data from multiple simulator runs with historical well data and normalize differences.
- Plot data for multiple wells or multiple variables in each graph.
- Compare multiple variables in each graph using one or more Y-axes.
- Plot data using time or another variable as independent variable.
- Customize the colors, sizes, patterns and fonts of each graph and save the style settings for reuse.
- Rapidly step through plots of field, region, group, well, completion, branch, segment and cell data.
- Use special plot types for completion profiles and RFT data.
- Sort and filter well lists using alphanumeric or performance criteria.
- Automatically sum or average data for selected sets of wells.
- Add geologic layers and annotations as background to RFT plots.
- Specify spacing of major and minor markers for the axes of XY plots.

Multiple Plots Per Page
- Arrange multiple plots on one page to quickly view data for numerous wells, variables, and data sets.
- Use default settings to view sets of variables or well plots on one page.
- Customize 'standard' sets of plots for viewing producers, injectors, or groups of wells.
- Combine XY graphs and 2D and 3D grid views on one page.
- Click wells to display XY graphs of production and RFT data with grid plots.
- Click cells to display time histories of grid data with grid plots.
- Include a histogram of grid properties.
- Display side-by-side views of matrix and fracture solutions for dual porosity runs. Interactively create pages of customized XY plots and save as a project for future editing and viewing.

Export Data
- Output selected data for further analysis or input to simulations.
- Output data from selected XY plots to CSV file.
- Use blanking options to select cells to output.
- Output selected cell variables for user-selected times.
- Output cell data along well paths.
- Modify properties and output selected cells to ASCII file for most simulator-specific formats.
- Define a sector, by specifying grid index ranges, and select and output grid properties for that vector.

Streamlines
- View streamlines to more fully understand flow paths in the reservoir.
- Display streamlines based on well pairs and arrival time.
- Control the percentage of streamlines to display.
- Combine streamlines with grid-based solutions.
- Color streamlines based on a solution variable.
- Use formats compatible with FrontSim, 3DSL, VDB.

Macro Language
- Access all features with macro commands.
- Create and run macros interactively to repeat sets of views for new data sets.
- Create and edit macro scripts to batch process data from multiple simulation runs.

Data Loaders
- ECLIPSE, CHEARS, VIP/Nexus, CMG, VDB, FrontSim, 3DSL, UTCHEM, and SENSOR®, GRDECL, INTERSECT RESQML (explicit grids only).
- Historical rate, RFT, and observed well pressure data.
- VDB database format for VIP/NEXUS simulators.
- Streamline solution data from the VDB format.
- Streamlines from streamline simulators like FrontSim and 3DSL.
- User-created ASCII files or CSV.
- ASCII RFT files from VIP Simulator.
- Load multiple simulation and observed data files in one operation.
- Create project files to load all data files and plot style information.
- Load and load-on-demand to manage large data files.
- Update plot data while simulator is still running.
- Translate and rotate the grid to new coordinates.
- Load the difference between two solutions for the same grid, normalize data.