Petroleum

Mapping Tools
- Structure and isopach maps: contour maps with lines and color fills, custom color tables
- 3D surface displays
- Bubble maps of any well data (production, etc.)
- Well and lease spotting from Range, Township, Section descriptions
- Land grid and lease maps with section boundaries
- Coordinate systems: longitude/latitude, UTM, State Plane, local, custom
- Well location maps: customized symbols (e.g. well status), plan-view horizontal well traces
- Gridding algorithms: kriging, triangulation, inverse-distance, trend polynomial, more
- Grid model tools: filters, math operations, editor, imports and exports

Well Database Tools
- Cross sections: hole to hole and projected
- 3D fence diagrams
- Correlations: model-based and “EZ” panels
- Horizontal and vertical wells: 2D and 3D, flexible log layout
- Stratigraphic modeling of all/selected formations
- Solid modeling of lithologic, geophysical, geotechnical, geochemical data, with display as voxel or isosurface diagrams
- Geosteering: optimal well paths based on target formations, lateral and 3D displays
- Well database for well locations and miscellaneous well data, formation contacts, raster images, geophysical data, lithology, well construction, production, and more
- Data imports—Excel, LAS, LogPlot, IHS, KGS, Tobin, other databases
- Stratigraphic contacts from digital elog data or raster logs

Other Tools
- Structural geology diagrams
- Graphic output: 2D and 3D output to RockWorks, Google Earth
- 2D editing tools: contour lines, text, shapes, legends, images
- Snapping tools for hand-drawn correlations
- Composite scenes in 3D with maps, logs, surfaces, solids, panels, surface objects
- Page layout program for small to large format presentations and posters
- Exports to GIS Shapefiles, CAD DXF, raster formats, Google Earth
- Image import, rectification, depth-registration
- Program automation
Enter a variety of spatial or sample data into the datasheet and create maps, models, charts, and diagrams in 2D and 3D—an indispensable collection of mapping, modeling, and display tools.

Data Management Tools

- Built-in Project Manager for easy access to data and output files in your project
- Flat, spreadsheet-style datasheet for entering row and column spatial data
- Multiple column types—spatial data, graphical items, file links
- Numerous data import and exports: Excel, text, shapefiles, GPS points/tracks
- Coordinate conversion tools: longitude/latitude, UTM, US State Plane, local coordinates; 30+ datums; convert US Public Land Survey (range/township/section) locations using the free RockWorks “LandBase”
- Field Data interface for entry and processing of data from tablet devices
- Digitizer for capturing points from scanned maps

Program Output

- Point Maps—unique symbols, colors, labels; 2D bubbles and 3D spheres; Stiff diagram maps; piechart, starburst, spider maps
- Land Grid Maps—Well and lease spotting using free RockWare LandBase, Range/ Township/Section boundary maps
- Grid Modeling—12 interpolation methods for XYZ data, grid math/resampling/ filtering/editing tools; grid imports and exports
- Contour Maps and 3D Surfaces—line and color contour maps, 3D surfaces with color, shading options; image, DXF and Shapefile draping
- Solid (Block) Modeling—8 interpolation methods for XYZG data; model math/ resampling / filtering / editing tools; model imports and exports
- Volumetrics—easy reports for X, Y, thickness data; detailed grid-based reports; pit optimization with 3D block models; grade-thickness models and reports
- Survey Tools—lateral and 3D geosteering diagrams; optimal well bore surveys; bearing/inclination/distance surveys -> XYZ points
- Statistical Tools—statistics reports; frequency histogram plots; scatter plots with best fit lines; ternary diagrams; sieve diagrams
- Hydrology/Hydrochemistry Tools—Theis drawdown diagrams and models; Piper and Durov diagrams with TDS circles; Stiff diagrams and maps
- Structural/Directional Tools—fracture maps and densities; rose diagrams, stereonets; strike and dip maps; plane rotation and intersection
- Image Tools—raster image import, rotate/scale/clip options; digitizer; image display as planes, panels, draped; solid color models from vertical panels
- Coordinate Conversions—for single points or lists
- 3D tanks, buildings, arrows, tubes, discs, spheres
- EarthApps—point, line, polygon, survey maps; images; flyovers in Google Earth

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Data Management Tools

- SQLite or MDB database for storing downhole lithology, stratigraphy, analytical, geophysical, geotechnical, structural, water level, color and well construction data
- Project Manager for easy access to data, models, and graphics in your project directory
- Interactive depth-registration for raster logs
- Stratigraphy and lithology contact pickers
- Simple and complex data queries
- Excel, AGS, LAS, IHS, KGS, Tobin WCS, LogPlot, gINT, Fugro CPT, database, text imports
- Excel, LogPlot, Shape, Google Earth, text exports
- Borehole location and measurement units in feet or meters
- Local, UTM, U.S. State Plane, PLSS coordinates
- Easy customization of the borehole location tables to include any kind of reference information

Program Output

- 2D logs, log profiles, projected sections, and hole-to-hole cross sections; 3D logs
- Simple stratigraphy, interval-data, and point-data correlation panels
- Click and drag log designer for 2D and 3D log layout
- Inclined and horizontal logs in both 2D and 3D
- Interactive map for selecting profile and cross section locations or for importing from saved lists in the database
- Background images in section location maps
- Hand-drawn correlations with new snapping tools
- Borehole location maps with detailed data labels, miniature logs, non-vertical well traces
- XYZ coordinates from borehole surveys
- Optimal well paths based on XYZ points
RockWorks17® Feature Levels

RockWorks STANDARD

Borehole Modeling

Enter borehole or well data into a database and create 2D and 3D maps and models, cross sections, fence diagrams, isosurface and voxel diagrams. (Also includes all BASIC Level features, previous pages.)

Data Management Tools

- All of the borehole database tools, imports, exports from BASIC Level (previous page)
- Geotechnical values from lithology data
- Lithology prediction from curve data
- Uranium grade computations based on gamma counts
- Curve data resampling

Program Output

- Surface-based modeling of stratigraphy and aquifer data
- 2D iso-concentration maps based on downhole water and soil chemistry information
- 3D solid modeling of lithology, analytical, assay, geophysical, geotechnical, fracture, vector, and color data
- 2D cross sections, profiles, projected cross sections, and contour/geology maps slicing through all model types
- 3D fence diagrams slicing through all model types
- Numerous gridding and solid modeling algorithms
- Model filtering based on value range, spatial boundaries, other models
- On-the-fly volume calculations of surface-based and 3D solid models
- Detailed volume reports from stratigraphic and solid models
RockWorks ADVANCED Professional Level

Offers all of the features of BASIC and STANDARD, described on the previous pages. AND includes these professional features...

Data Management Tools

• All of the data tools from BASIC and STANDARD
• Support of MS SQL-Server databases
• Import commercial (PLSS) landgrids

Program Features

• Program Automation/Scripting: The RockWare Command Language (RCL) is a powerful tool for automating program operations and is very easy to use. It’s indispensible for projects which require multiple models and diagrams, receive new data, and/or need QA/QC tracking of settings.
• No programming required!
• 3D Faulting: Define single or multiple fault polylines with dip/direction/extent and use these for modeling of surfaces or solids to create fault barriers.
• Store well Production data in the database and generate production diagrams in 2D, 3D and Google Earth.
• Includes the RockWare GIS Link

Etc...

What’s New

• 64-bit processing for larger, higher-resolution models
• Multi-threading for faster modeling
• 3D Faulting for solid (block) models, surface models, and stratigraphy models
• New QuickMap view for borehole locations
• SQL Lite (default) or MDB for local databases
• Production table in database and full suite of well production diagrams
• GeoBody filter for grouping block model values

System Requirements

• Windows 7, Windows 8, or Windows 10
• RockWare Network License Administrator (for Network license) requires Windows Server 2003 or higher
• 64-bit operating system recommended
• 2+ GB RAM