RockWorks is a comprehensive program that offers visualization and modeling of spatial data and subsurface data. Whether you are a petroleum engineer, environmental scientist, hydrologist, geologist, or educator, RockWorks contains tools that will save time and money, increase profitability, and provide you with a competitive edge through high-quality graphics, models, and plots.

Download a trial version at www.rockware.com

Professional Applications for RockWorks include:

**Petroleum**
Well spotting, structural and isopach mapping, logs and cross sections, stratigraphic models and fences  
(p. 3)

**Environmental**
Borehole database for lithologic, stratigraphic, analytical data; point and contour maps, logs, cross sections, plume models  
(p. 4)

**Mining**
Drillhole database for lithologic, assay, geophysical data; 2D and 3D log diagrams, block modeling, detailed volume tools  
(p. 5)

**Geotechnical**
Borehole database for lithologic, geophysical, geotechnical data; logs, sections, surface/solid models, structural tools  
(p. 6)

RockWorks Feature Levels

**RockWorks EarthApps – Level 1 – Free!**  
Reads spatial data from a row-and-column datasheet and generates output for display in Google Earth.  
(p. 7)

**RockWorks Utilities – Level 2 – $700**  
Reads a variety of data types from the datasheet and creates maps, models, charts, and diagrams in 2D and 3D. (Includes all Level 1 programs.)  
(p. 8)

**RockWorks Logs and Sections – Level 3 – $1,500 Perpetual or $650 Annual**  
Reads sub-surface data from a borehole database and creates 2D and 3D log and log section diagrams. (Includes all Level 1 and 2 programs.)  
(p. 9)

**RockWorks Borehole Modeling – Level 4 – $3,000 Perpetual or $1,300 Annual**  
Reads sub-surface data from a borehole database and creates 2D and 3D maps, models, and diagrams. (Includes all Level 1-3 programs.)  
(p. 10)

**RockWorks Professional – Level 5 – $5,000 Perpetual or $2,200 Annual**  
Powerful batch and scripting tools, supports MS SQLServer databases, and includes the RockWare GIS Link 16. (Includes all Level 1-4 programs.)  
(p. 11)

Academic and classroom licenses are available at www.rockware.com

800.775.6745 • www.rockware.com
While the look and feel of RockWorks16 is much like previous versions (no huge learning curve), it offers major new functionality. We’ve added enhanced coordinate support and Google Earth connectivity, as well as improvements to the database, modeling tools, plotting windows, and system options. Here are some of the highlights...

### Coordinate Support

- Enter locations with State Plane, UTM, local, custom, longitude/latitude or PLSS (Range/Township) descriptions
- Map (XY) and depth (Z) units can be mixed (meters and ft)
- Define coordinate systems and units in Utilities datasheets
- Convert single coordinates and XY lists

### Google Earth Connectivity

- Enter spatial data into the RockWorks datasheet and create output for display directly in Google Earth—maps, images, and flyovers (see page 7)
- Quick display of individual points in Google Earth
- Output all 2D and 3D graphics to Google Earth

### Database and Datasheet Improvements

- Tablet friendly data entry
- Organize custom fields into user-defined tabs or groupings and display only the table and columns you use
- Store optional coordinate systems for your boreholes
- Link tables to ground surface or top of casing
- Enter downhole surveys using any vertical format
- Enter dip direction and dip angle with Stratigraphy contacts for use with the new Dip gridding method
- Search for boreholes, hide disabled holes, sort holes
- Import AGS data into the borehole database

### Modeling Features

- Dip-based gridding method uses dip angle and direction to interpolate surfaces
- Stratigraphy rules for smarter sections and models with missing data
- Model only selected formations—great for big projects with many units

### System Features

- Unicode support for non-Latin alphabets
- Define fonts for all Rockplot2D graphics
- More feature levels—purchase just the tools you need!
- Display only the menus you use
- New network license manager—monitor users, borrow seats for field use

### Plot Improvements

- Include fills in vector patterns
- Snap to vertices, lines, or “smart” snap points in logs for easier hand-drawing of correlation lines/panels
- Apply transparency to color- or pattern-filled polygons
- Save viewpoints in 3D scenes
- Capture distance as well as XYZ coordinates in 3D scenes
- Add labels and logos to your 3D scenes
- Save vertical exaggeration in 3D scenes
- Freeze layers in ReportWorks for easier editing

### New /Improved Diagram Types

- Multi-panel projected cross sections with log-distance labels
- “EZ” correlations—quick vertical grid panels for I-Data and P-Data sections
- Striplog improvements—curve fills, curve symbols, many more
- Label profile diagrams with XY coordinates or distance
- Display faults in sections and profiles
- Compute optimal well paths between XYZ points or payzone surfaces
- Create lateral and 3D geosteering diagrams
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, and more
- Data imports—Excel, LAS, LogPlot, IHS, KGS, Tobin, ADO (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
Environmental

Borehole Database Tools
- Cross sections: multi-panel projected and hole to hole, with borehole logs and/or interpolated panels
- Correlations: model-based and “EZ” panels, snapping tools for hand-drawn correlations
- Borehole logs in 2D and 3D
- 3D fence diagrams
- Surface modeling of stratigraphic layers and water levels
- Plume modeling of analytical data, with display as voxel or isosurface diagrams, 2D plan and section slices
- Solid modeling of lithologic materials, geophysical and geotechnical measurements
- Volume reports of lithologic and stratigraphic models, contaminant extraction models
- Bulk data imports from Excel, text, LAS, ADO (other databases)

Mapping Tools
- Borehole location maps with detailed data labels
- Contaminant concentration maps with lines and color fills, custom color tables, date filters
- Plan- and surface-based slices from 3D models
- Stiff diagram maps
- Time-graph maps for user-selected analytes
- Potentiometric surface maps
- Flow maps in 2D and 3D
- Coordinate systems: lon/lat, UTM, State Plane, local, custom

Other Tools
- Time-based animations
- Piper and Durov diagrams with TDS circles, Stiff diagrams for multiple samples
- Water level drawdown diagrams and surfaces
- 2D editing tools: contour lines, text, shapes, legends, images
- 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 and rectification
- Program automation
- Google Earth output directly from data: points, cones, lines, polygons, images, flyovers
RockWorks16® Professional Applications

Mapping Tools
- Drillhole location maps with detailed data labels
- Assay, concentration maps with lines and color fills, custom color tables
- 3D surface displays: topographic surfaces, stratigraphic units
- 3D point maps
- Geology maps: plan or surface-based slices from block models
- Multivariate maps: pie chart, bar chart, starburst, spider maps
- Coordinate systems: longitude/latitude, UTM, State Plane, local, custom

Borehole Database Tools
- Projected cross sections showing drillhole orientation
- Correlation panels: stratigraphy, lithology, grade/concentration, geophysics
- Drillhole logs in 2D and 3D with lithology, stratigraphy, bargraphs/disks, curves, color intervals, text
- Block model interpolation from XYZG point or drillhole data, display as voxels, isosurfaces, fence diagrams, 2D plan and section slices
- Surface model interpolation of stratigraphic units
- Downhole fracture display and modeling - closest fracture and closest fracture intersection
- Volume reports of lithologic, stratigraphic models
- Data imports: Excel, LAS, acQuire, Newmont, ADO (other databases)

Other Tools
- Block model editor: 3D voxel/polyhedron editor, or slice-based
- Volume calculations: grade statistics by level, extraction reports, GT calculators, floating cones model extraction tools
- Stereonet and rose diagrams, stereonet and rose maps
- Ternary diagrams, frequency histograms for source data and models
- Graphic output: 2D and 3D output to RockWorks, Google Earth
- 2D editing tools: contour lines, text, shapes, legends, images
- Composite scenes in 3D with maps, drillhole logs, surfaces, blocks, panels
- Page layout program for small to large format presentations and posters
- Exports to GIS Shapefiles, CAD DXF, raster formats, Google Earth
- Image import and rectification
- Program automation
Geotechnical

Mapping Tools
- Multiple components in piechart, spider maps
- Point maps with detailed data labels
- Topographic contour maps with lines and color fills, custom color tables
- 3D surface displays
- Strike and dip maps in 2D and 3D
- Coordinate systems: longitude/latitude, UTM, State Plane, local, custom

Borehole Database Tools
- Cross sections: multi-panel projected and hole to hole, with borehole logs and/or interpolated panels
- Correlations: model-based and “EZ” panels, snapping tools for hand-drawn correlations
- Borehole logs in 2D and 3D
- 3D fence diagrams
- Surface modeling of stratigraphic layers and water levels
- Solid modeling of lithologic materials, fractures, and geophysical, geotechnical, geochemical data, with display as voxel or isosurface diagrams, 2D plan and section slices
- Geology maps: plan slices from stratigraphy or lithology models
- Volume reports of lithologic, stratigraphic, excavation models
- Fracture display and modeling, stereonet maps, rose diagram maps
- Munsell colors for display in logs and interpolation into color models
- Data imports: Excel, AGS, Colog, Fugro CPT, gINT, LAS, Penetrometer, ADO (other databases)

Other Tools
- Sieve diagrams, ternary diagrams with classification overlays
- Stereonet and rose diagrams
- Slope/aspect analysis on grid models
- Predictive tools: lithology materials from curves, interval data (porosities, strength, cohesion) from lithology
- 2D editing tools: contour lines, text, shapes, legends, images
- 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 and rectification
- Program automation
- Google Earth output directly from data: points, cones, lines, polygons, images, flyovers
Data Management Tools

- Built-in Project Manager for easy access to data files and Google Earth output files in your project directory
- Flat, spreadsheet-style datasheet for entering row and column spatial data
- Multiple column types—spatial data, graphical items, file links
- Numerous data import and export tools: Excel, text, shapefiles, GPS points and tracks, and more
- 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”

Program Output

- Point maps—icons, circles, cones, cylinders, strike and dip symbols/disks with custom colors and sizing
- Line maps—lines, tubes, polylines, parabolas, and pipelines
- Polygon maps—polygons, claims, leases, PLSS land grids, countries and states
- Images—draped over the ground, floating, as vertical panels
- Flyovers—simple and advanced flyovers from your data, and super easy flyovers from clipboard points
- Cell maps—min/max, frequencies, averages and cumulative values, distances
- Survey maps—points and polygons from survey descriptions
RockWorks Utilities – Level 2: $700

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. (Also includes all of the EarthApps tools, previous page.)

Data Management Tools

- Field Data interface for entry and processing of data from tablet devices
- Digitizer for capturing points from scanned maps
- Built-in Project Manager for easy access to data files, models, and graphic files in your project directory
- All of the data tools from Level 1 (previous page)

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/edting 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
RockWorks Logs and Sections – Level 3:
$1,500 Perpetual or $650 Annual

Enter borehole or well data into a database and create well location maps, 2D and 3D log and log section diagrams. Simple correlations are available for cross sections. (Also includes all Level 1-2 features, previous pages.)

Data Management Tools
- MSAccess compatible 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, ADO, LAS, IHS, KGS, Tobin WCS, LogPlot, gINT, Fugro CPT, 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
RockWorks Borehole Modeling – Level 4: $3,000 Perpetual or $1,300 Annual

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 Level 1-3 features, previous pages.)

Data Management Tools
- All of the borehole database tools, imports, exports from Level 3 (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 Professional – Level 5:
$5,000 Perpetual or $2,200 Annual

Offers all of the features of Level 1-4, described on the previous pages. AND includes support of MS SQLServer databases, program automation tools, and the RockWare GIS Link

Data Management Tools
- All of the data tools from Levels 3 and 4 (previous pages)
- Support of MS SQLServer databases
- Import commercial (PLSS) landgrids

Program Features
- Program Automation: The RockWare Command Language (RCL) is a simple tool for automating program operations. It’s extremely useful for projects which require multiple models and diagrams, may receive new data, and/or need QA/QC tracking of settings. No programming required!
- Includes the RockWare GIS Link

RockWare GIS Link

$399
Generate RockWorks strip logs, cross-sections, profiles, fence diagrams, and contour maps using ArcMap and RockWorks. (Is included in RockWorks Level 5.)

Program Features
- Install the RockWare GIS link as a toolbar in ArcMap.
- Import your RockWorks borehole locations as a layer in an ArcMap geodatabase.
- Create a 2D stripllog for any borehole location using the RockWorks engine.
- Create 2D profiles, 2D cross-sections, and 3D fence diagrams for any of these data types: lithology, stratigraphy, water levels, interval-data, time-data, point-data, and fractures.
- Create either straight-line or interpolated diagrams for stratigraphic data.
- Create line- or color-contour maps of ground surface elevations, formation tops, or formation thickness, and display them as a DXF layer in ArcMap.