PRIZM™ Petrophysical Log Analysis Software

*Powerful multi-well petrophysical analysis and mapping*

LMKR GeoGraphix® PRIZM™ log analysis software is the ideal tool for performing full reservoir characterization on wells of all sizes and complexity, from basic individual wells to multi-well, multi-zone projects.

PRIZM™ software contains highly customizable and interactive tools for editing data, digitizing log curves, and creating flexible track displays. Its user-defined equations, including more than 250 predefined standard log analysis equations, help generate quick, interactive log calculations.

PRIZM™ software is tightly integrated with the LMKR GeoGraphix® Suite of mapping, cross-section, zone analysis, and other geological applications. It is included in the advanced GeoGraphix® Geological Interpretation System or can be purchased separately for use as a stand-alone application.

**Features**

*Multi-well interpretation*

- One step reservoir pay summations for common reservoir attributes such as gross, net, net/gross, porosity feet and hydrocarbon filled porosity with corrections for true vertical and stratigraphic thickness
- Curve data statistics generates virtually statistics from curve derived attributes over a zone or depth interval
- Confirmation of results using data distribution histograms, directly mapped or saved to ZoneManager software with other geologic and geophysical attributes
- Proposed Completion stages and Perforation cluster intervals in PRIZM™, Xsection™, and smartSECTION® saved to the WellBase Completion table
**Petrophysical interpretation**

- Quick and interactive log calculations for standard interpretations and reconnaissance are easily performed with user-defined equations
- Contains pre-written interpretations for 3 and 4 mineral determinations; Archie, Dual-Water, Indonesian and Modified Simandoux saturation models
- Complex external models may be written in C, C++ or Visual Basic and linked with PRIZM™
- User-defined Equations includes over 250 pre-defined standard log analysis equations making it easy for users to build and save their own equations
- Mechanical properties UDE Group for calculating Poisson’s Ratio and Young’s Modulus
- Contains standard Halliburton, Schlumberger and Baker Atlas chart book environmental corrections. A system utility allows users to digitize additional charts

**Curve data management**

- Supports all data standards for importing including LAS, LBS, ASCII, LIS, and TIF
- Curve import tool automatically merges and splices curves with the option to manually merge, splice and specify splice depths
- Features project based mnemonic inventory, mnemonic aliases and unit conversions
- Curve normalization can include petrophysical and geological inputs
- Single or multi-well curve copy, rename, delete, rescale, min/max clipping and filter soothing tools
- Digitize curves directly into the data base from depth registered raster images
- New Core Lab shale core curves and 15 new user defined core curves

**Log analysis and display**

- Complete user control of presentation templates to display curve and depth registered images with virtually unlimited number of tracks, curves, colors and pattern fills
- Ten different track types for linear, logarithmic, mineral percents, depth registered images, text, core description, lithology pattern fills and descriptions
- On-screen presentation editing makes it easy to add, position and size track, as well as cut, copy and paste curves between tracks
- Automatically posts DST, core, perforation, and initial production information
- Interactively pick and display formation, fault, and user-defined intervals
- On-screen editing of curves, interactive simple or complex depth shifting, curve null and SP baseline shifting tools

**Cross plot analysis and display**

- Display data relationships over total well depths, user specified depth range, or one or more zones
- Three axis display with linear or logarithmic scale, user controlled symbols, size and color, Z-axis color spectrum, X and Y axis histograms
- Multi-well cross plots
- Multi-level discrimination with user drawn polygon capabilities
- Curve fitting using linear regression, reduced to major axis, and polynomial regression capabilities
- Interactive Pickett plot determination of Formation Water Resistivity (Rw), Bound Water Resistivity (Rwb) and Cementation Exponent (m)

[www.lmkr.com](http://www.lmkr.com)
Customizable reports
- Creates user-definable well reports such as net pay, average porosity or water saturation, total porosity feet or hydrocarbon filled porosity
- Tabular list provides user-definable curve choices, sample rates, depth interval or zone selection
- Exports to tab or comma delimited text files or copies results to Microsoft Windows clipboard

Benefits

Integration eliminates importing and exporting of data
PRIZM™ is integrated into the LMKR GeoGraphix® suite of geological and geophysical interpretations applications. It derives its curve and parameter data from the common project database. PRIZM™ can generate maps of petrophysical attributes that are available for viewing in GeoAtlas™ and smartSECTION™ map view and for gridding operations in the IsoMap™ surface modeling module in GeoAtlas™.

Intuitive and flexible
PRIZM™ contains over 250 predefined standard log analysis equations and several predefined water saturation, lithology, and CBM models. The equations are grouped into easy to understand families of calculations and can be quickly copied and edited into a script to solve most kinds of formation analysis problems. For the more sophisticated user, PRIZM™ can be linked to external models created in Visual Basic, C, or C++ code. These linked external models offer unlimited analytical complexity yet easy integration with PRIZM’s presentation, attribute extraction, and mapping utilities.

Faster multi-well petrophysical analysis
PRIZM™ can be used to quickly process wells from filtered sets, areas of interest., or for the entire project. Petrophysical attributes can be extracted from these wells within formation zones of interest for mapping, statistical analysis, or further processing and analysis in ZoneManager.

Requirements

Hardware (MINIMUM)
- 2.4GHz 32-bit Intel class or better
- 2GB RAM
- 1,024 x 768 graphics resolution
- CD-ROM drive
- 19-inch monitor

Hardware (RECOMMENDED)
- Dual 2.4GHz 64-bit Intel class or better (required for Discovery3D)
- 8GB RAM or greater
- NVIDIA® GeForce® or Quadro - 1GB video RAM
- DVD-RW drive
- Dual 21-inch monitors

Softwares
- Microsoft® .NET 3.5 SP1
- Microsoft® DirectX 10 or greater for Discovery™ 3D

Operating System(s)
- Microsoft® Windows® XP Professional 64-bit Sp2
- Microsoft® Windows® 7 x64 Enterprise, Professional, or Ultimate