RESERVOIR MANAGEMENT

# The Integrated Reservoir Solutions Division

Integrated Reservoir Solutions, a Core Laboratories Reservoir Management Division, was created to conduct specialized projects to help Core Laboratories' customers optimize their oil and gas exploration and exploitation programs. Drawing from the wide variety of technologies offered by Core, these projects often include integration of data from the seismic scale to the pore system level. They are supported by our staff of senior-level engineers, geologists, geophysicists, and petrophysicists, who apply proprietary and state-of-the-art techniques from the very earliest phases of exploration through the final phases of production.

## Integrated Reservoir Optimization Projects

An example of the type of integrated project offered by Core's Integrated Reservoir Solutions Division is our Tight Gas Sand Fracture Stimulation and Optimization Program (A Systematic Approach to Improved Well Performance).

This program has been developed to help enhance well performance in tight gas sand reservoirs. It is a complete evaluation package that profiles the geological, petrophysical, and geomechanical attributes of the reservoir. Analyses are optimally performed on conventional cores, but rotary sidewall cores or cuttings, or a combination of both, may be used. Data are used to calibrate downhole logs for use in non-cored intervals.

## Regional Studies

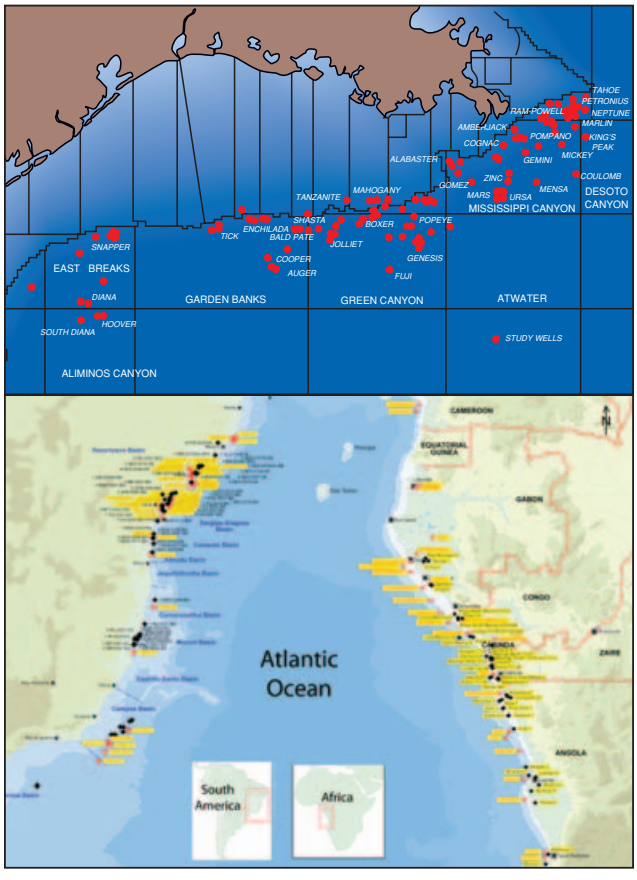
Integrated Reservoir Solutions is a leader in conducting multi-client geological and petrophysical studies and preparing rock property databases. Our consortium projects are relevant on all levels, from single well to field, region, or basin. To date we have successfully completed over 100 of these projects worldwide. The Deepwater Gulf of Mexico Regional Core and Biostratigraphic Study and the Pre-Salt Atlantic Margin Study are two of the highest profile projects, with each having numerous member companies.

Our regional studies concentrate on areas of greatest current interest to the petroleum industry. In these multi-client projects, participants access associated well data that are analyzed, evaluated, and organized into a consistent, shared source of information.

The Integrated Reservoir Solutions regional studies are typically directed toward unraveling the stratigraphic, depositional, and diagenetic complexities of specific reservoir trends. Commonly addressed aspects of our studies include:

- Regional distribution of depositional systems
- Definition and prediction of reservoir facies
- Depositional and diagenetic controls on reservoir quality
- Improved log evaluation
- Drilling and completion problems, prognoses, and recommendations

The value of our regional studies does not stop here. They play a key role in providing a foundation for interpretation of seismic sequence



stratigraphy. Study participants can view conventional cores and data during periodic core workshops. Several studies are now available on CD-ROM or over the Internet, for rapid, desk-top access to all study data.

### Rock Catalogs

Over the past 25 years, Integrated Reservoir Solutions has developed numerous rock catalogs that are specific to productive reservoirs in formations, trends, or countries. The most comprehensive is the 35-member Worldwide Rock Catalog®. Some of the completed rock catalog projects are listed below.

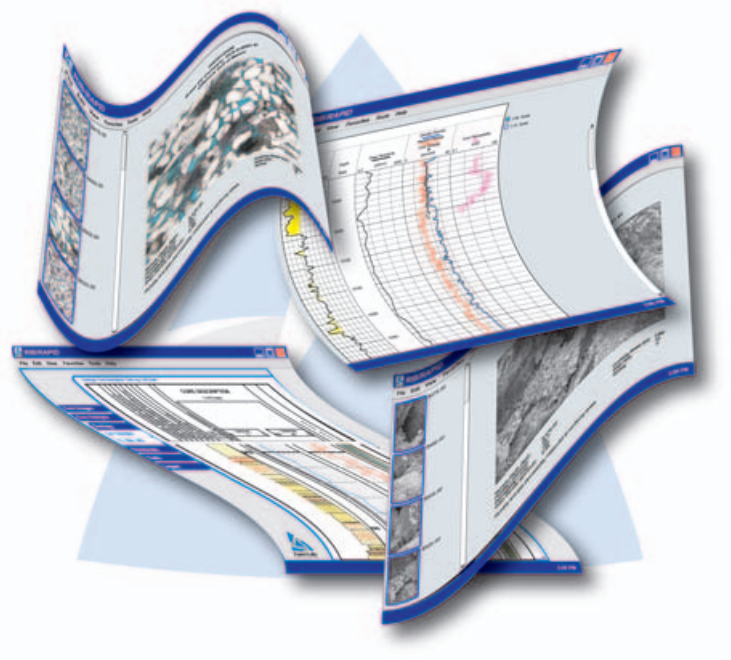
- Worldwide Rock Catalog
- San Juan Basin Rock Catalog
- Yemen Rock Catalog
- Prairie du Chien Rock Catalog
- Wilcox Rock/Pore Catalog
- Texas Offshore Miocene Rock Catalog
- Vicksburg Rock Catalog
- Louisiana Offshore Miocene Rock Catalog
- Deepwater Gulf of Mexico Rock Catalog

These rock property databases provide a reference manual containing analog sandstone and carbonate reservoir rock types for a more accurate estimate of formation parameters when evaluating a zone of interest where there are no measured rock property data available. These databases are used to establish relationships and correlations between laboratory measurements of petrophysical data and physical reservoir rock properties determined from visual observation of core, sidewall, or cuttings samples.

### Petrophysical Database Management

Our experience with consortia projects and handling the large volumes of associated data has led to the development of the RAPID™ (Reservoirs Applied Petrophysical Integrated Data) system. Thirty-five major and independent oil and gas companies have license to use the RAPID database.

The RAPID system is a web-enabled database application for organizing, archiving, retrieving, and summarizing a wide range of geological and petrophysical data. Using Oracle® database technology, it enables centralized, consistent, and accessible data storage; and



it provides geoscientists and engineers data access from any computer platform, over an intranet or an extranet, through a standard web browser. No knowledge of database technology is needed; sophisticated queries are performed through a simple interface, and the results are returned as dynamically generated HTML. The RAPID database system promotes sharing of critical data among asset team members and business units, and it enhances productivity by reducing the amount of time spent retrieving data.

Integrated Reservoir Solutions also offers the RIB® Reservoir Information Browser. Designed for smaller projects and less demanding applications than those enabled by the RAPID system, the RIB system is a static HTML presentation of reservoir information, including images, numerical data, graphics, and text. It offers Web browser-based access to information in a format compatible with Windows,® Macintosh,® and UNIX® operating systems.

### For More Information

For a complete overview of our products and services, visit our website at www.corelab.com

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