





**Core Lab**<sup>TM</sup>  
**RESERVOIR OPTIMIZATION**

*Our new graphic identity represents the combination of  
Reservoir Optimization services by which the industry has come to know us.*

Core Laboratories is a leading provider of proprietary and patented reservoir description, production enhancement, and reservoir management services. These services enable the Company's clients to optimize reservoir performance and maximize hydrocarbon recovery from their producing fields. The Company has over 70 offices in more than 50 countries and is located in every major oil-producing province in the world. The Company provides its services to the world's major, national, and independent oil companies.

# President's Letter

When we began to operate independently again in 1994, we adopted the logo Core Lab had used decades earlier to demonstrate our commitment to the client-centered principles from which the Company grew in 1936. Our new graphic identity is taken from the service icon by which the energy industry has come to know us, and it represents our singular focus on optimizing our clients' reservoirs.

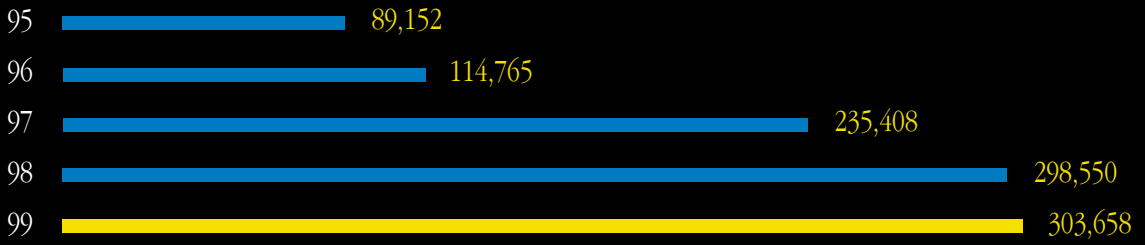
☀️ Core Laboratories continued to evolve in 1999 as the most technically advanced, uniquely focused reservoir optimization company in the oil field services universe. Our technology and focus place Core in a realm clearly different from other oil field service companies. And the value we add to our clients' assets optimizes Core's potential for growth.

☀️ We made excellent progress during what was a most challenging year for the petroleum industry. The Company continued to internally develop new technologies and acquire related and complementary technologies. Combined with our existing services, these technologies will enable our clients to produce more oil and natural gas and maximize ultimate recovery from their reservoirs. Our business and growth strategy continued to focus on helping our clients produce incremental barrels of oil — oil that could not be recovered using traditional technology. That underscores Core's position as the world's leading reservoir optimization company.

☀️ In last year's annual report we noted the significance of emerging reservoir-monitoring technologies to the goal of reservoir optimization. In 1999 we added significant reservoir-monitoring resources, including enhanced reservoir-imaging technology, in-reservoir seismic services, and a deepwater geological database.

☀️ In 1999 our clients applied Core's proprietary reservoir description, production enhancement, and reservoir management technologies to increase production and recovery from hundreds of oil and gas fields worldwide. Activities in North America, especially Canada and Mexico, increased during the year as we participated in several major reservoir description projects. In South America, we participated in the continued development of several giant oil fields that involved large production enhancement programs. Our geophysicists, engineers and geologists were active in Europe, the Middle East, and Africa, while several new reservoir

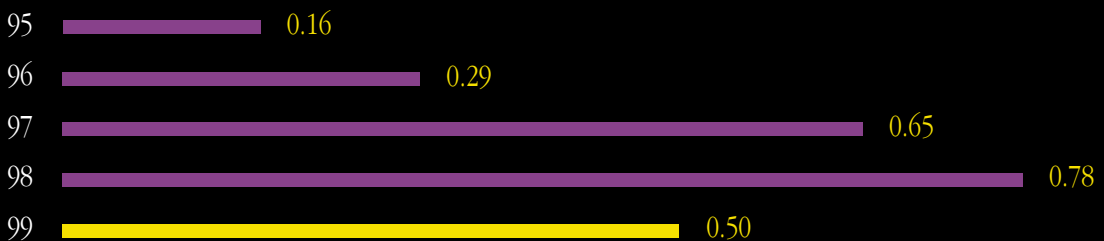
## REVENUES (Dollars in Thousands)



## NET INCOME FROM CONTINUING OPERATIONS (Dollars in Thousands)



## EARNINGS PER DILUTED SHARE FROM CONTINUING OPERATIONS



## GROWTH HIGHLIGHTS

Core Laboratories' business and growth strategy continues to be successful and has led to our third consecutive year of record annual revenues and our fifth consecutive year of increased revenues. Our three-part strategy, put into effect when we became independent once again in 1994, revolves around developing and providing proprietary, value-added technologies related to reservoir optimization.

**We develop technology** During 1999 Core's geophysicists, engineers and geologists developed impact technology that will be applied to reservoir optimization for our clients. Two noteworthy developments are the Escape™ Completion Process, which saves valuable rig time and dramatically increases hydrocarbon production, and our web-based Reservoir Information Browser, or RIB, which was featured on the cover of the October 1999 *Journal of Petroleum Technology*. RIB allows our clients to receive integrated reservoir description and production enhancement datasets used to optimize reservoir performance.

**We leverage our international network** Core continued to disseminate new technologies and services throughout our global network of locations. With 70 offices in over 50 countries, we can quickly bring new technological solutions to solve our clients' reservoir problems. ☀️ We are leveraging our network by applying Escape completion technology in the Gulf of Mexico — and then Europe, Africa, the Middle East, and Asia Pacific. We also plan to expand our Deepwater Reservoir Study beyond the Gulf of Mexico to include the deepwater reservoirs of Brazil, Nigeria, Gabon, and Angola.

**We acquire complementary technologies** With the acquisition of TomoSeis Corporation, we added in-reservoir seismic, a mission-critical technology that enables Core to take the leading commercial position in offering real-time, effective reservoir monitoring of downhole fluid flow.

☀️ The addition of Coherence Technology Company brought the Coherence Cube™ processing technique that allows our geophysicists to better image the entire reservoir. ☀️ Newly acquired Reservoirs, Inc. is the leading provider of integrated geological and petrophysical multi-client reservoir studies. In the future, its studies will include more geophysical content, capitalizing on our proprietary in-reservoir seismic and Coherence Cube technologies — as well as Core's many other proprietary technologies.



David M. Demshur

*President and Chief Executive Officer*

optimization projects were initiated in the Asia Pacific region. Core Laboratories will continue to benefit in the new century as our clients recognize that optimizing reservoir performance increases their cash flows and returns to their shareholders.

☀ Our 1999 revenues of \$303,658,000 were the highest recorded in the history of the Company. Increased demand for reservoir optimizing services and integrated service offerings resulting from

our continuing acquisition of specialized technology companies were the drivers for the record revenues. Although profitability from our ongoing operations was lower than the previous year, our operating margins and our profit and earnings per diluted share increased in every quarter during the year. We expect that recent consolidations of several U.S. offices and further integration of non-U.S. operating locations should produce increased profitability in the future.

☀ An analysis of our 1999 revenue stream yields some interesting facts. Revenues related to production and development programs neared 85 percent of the total. Once again, over 50 percent of our revenues were generated from determining fluid phase behavior relationships of natural gas, crude oil, and water for reservoir optimization and other production-related projects. Less than 2 percent of our revenue came from routine core analyses, the service for which the Company was named nearly 65 years ago. Our service mix is indicative of the role the industry expects us to play as the premier provider of reservoir optimization services.

☀ Again in 1999, Core played a key role in hydrocarbon production and development programs worldwide. North American highlights included our Canadian operations, where Core provided reservoir description studies for the continued development of fields located offshore eastern Canada. In Mexico, Core participated in the largest nitrogen field floods in the world as Pemex moves to boost output from the giant Cantarell field. In South America, several large production enhancement projects continued in the super giant fields of Colombia and the giant fields of Venezuela. We plan to enlarge operations in Brazil as many multinational oil companies commit to capital expenditure programs there beginning in 2000.

☀ Several large reservoir management projects are ongoing in the UK and Norwegian sectors of the North Sea, while revenues increased throughout the year from operations in the Commonwealth of Independent States. Core Laboratories continued to work for the United Nations in Iraq under the auspices of UN Resolution 986. Our direct involvement in the UN-sponsored “Oil for Food Program” entered its third year. In addition to monitoring daily production quotas and production practices, Core has provided detailed engineering studies of over twenty fields in Iraq for the United Nations.

☀ Core continued to provide reservoir optimization technologies for large field developments in West Africa. Deepwater pre- and post-Albian Salt fields contain multi-billion barrel accumulations, and Core is positioned to play a multi-year role in their development. The Company was also active in several reservoir optimization projects in Asia Pacific areas and the Middle East, including a complex reservoir description and production enhancement project in Abu Dhabi.

☀ As a leading technology company in the oil field services sector, Core is currently developing its e-commerce strategy. Several business-to-business (B2B) e-commerce sites are being developed to link oil companies with technology suppliers. We are evaluating which B2B enablers will provide the best platform to emphasize Core’s technological leadership and expand our e-business worldwide.

☀ Core Laboratories enters the new century as the most technically advanced, uniquely focused reservoir optimization company in the oil field services industry. The continued execution of our business and growth strategy will ensure that Core will be well suited to address our industry’s technological challenges and that we will be able to make our clients more profitable and help maximize their returns on invested capital.

☀ The Technology section following in this annual report highlights several proprietary technologies that we are using to help our clients optimize their reservoirs.



*David M. Demko*

# Reservoir Optimization

Core Laboratories is The Reservoir Optimization Company™.

We have internally developed and acquired related technologies to provide services and products that enable our clients to produce incremental barrels of oil and cubic feet of natural gas.



☀ No other company in the oil field services universe is as technologically advanced and uniquely focused on increasing daily hydrocarbon flow and maximizing the ultimate recovery of oil and gas from our clients' fields.

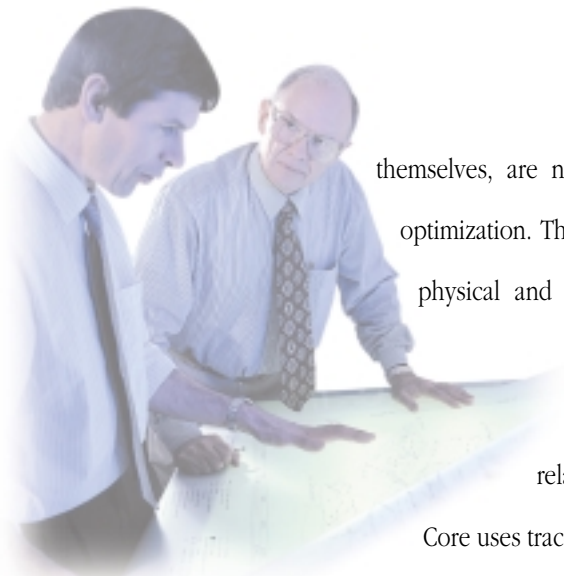
☀ On average, worldwide oil fields produce only 40 percent of their hydrocarbons with existing technology. Core is committed to delivering new and integrated technologies to increase recovery rates to more than 50 percent. By doing so we increase cash flow for our clients — which can be reinvested in other projects — which, in turn, can use additional services and products from Core.

☀ Fundamental success in optimizing reservoir performance is based on understanding the complexities of the reservoir system, which is composed of reservoir rocks (the porous medium) and reservoir fluids in the porous rock (natural gas, crude oil, and water). No other oil field service company has capabilities or experience comparable to Core's when it comes to physical measurement of reservoir rock and fluid properties and behaviors.

☀ Core Laboratories has three interrelated business units that allow us to offer exclusive packages of service to optimize reservoir performance. These business units are Reservoir Description, Production Enhancement, and Reservoir Management.

☀ Our Reservoir Description technologies measure rock properties and the ways that reservoir fluids behave when a reservoir is being produced. These physical characteristics cannot be accurately measured by wireline logs or seismic data. Wireline and seismic estimates, in and of





themselves, are not accurate enough for effective reservoir optimization. They must be calibrated with measured petrophysical and fluid datasets such as those provided by Core Laboratories.

☀ Production enhancement is directly related to the quality of hydraulic fracturing.

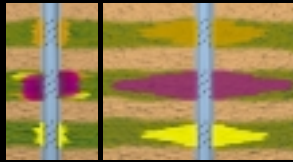
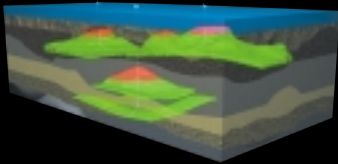
Core uses tracer technologies to diagnose the effectiveness of, and economic return on, hydraulic fracturing. We also link our tracer test results to our relative permeability datasets to model fluid flow and help engineers improve recovery programs.

☀ Reservoir production is significantly enhanced whenever formation damage can be controlled. Formation damage is a multi-billion dollar/year problem for the oil and gas industry; and no one can do more to identify, remediate, and minimize formation damage than Core Laboratories.

☀ Core's Reservoir Management companies are exploiting the interdependency of seismic processing and monitoring, our unparalleled knowledge of reservoir rock and fluid systems, and our completion and production enhancement techniques that minimize formation damage.

☀ Our growth strategy dictates that we will continue to internally develop and acquire patented and proprietary technologies that can be applied to optimize reservoir performance. This strategy makes Core the most technically advanced and uniquely focused company in the oil field services industry. This strategy makes Core Laboratories The Reservoir Optimization Company.

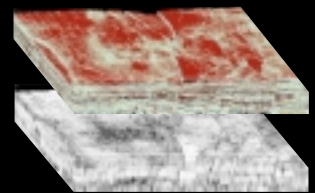
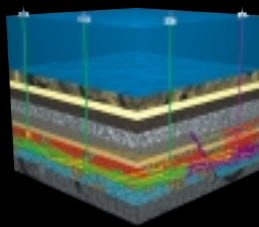
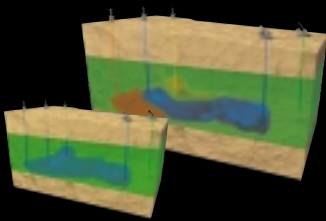
# Technology



WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES

**PROGRESSIVE NEW TECHNOLOGIES**

SUPERIOR RESERVOIR OPTIMIZATION TOOLS



**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **INTEGRATED RESERVOIR STUDIES**

**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

Core specializes in measuring and evaluating reservoir rock and fluids. Through regional geological and petrophysical studies, we provide our clients with a multi-disciplinary approach to complete reservoir characterization by integrating detailed seismic, geological, petrophysical, and well production information. While accurate data generation is important, understanding how to use the data is critical. Core is expert at generating, compiling, and interpreting reservoir data. ☀ Through our ongoing Deepwater Gulf of Mexico Reservoir Study, in which twenty-eight client companies are participating, we are developing the largest deepwater database of its kind in the world.

**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **EXCAPE COMPLETION PROCESS**

**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

The Excape™ Completion Process, a revolutionary system developed in cooperation with Marathon Oil and BJ Services, allows multiple reservoir zones to be sequentially perforated and individually stimulated without running tools into the well casing each time a new zone is to be isolated and completed. ☀ The necessary perforating guns and isolation devices are attached to the outside of the casing, along with pressure gauges and a remote signaling system, before casing is ever run into the wellbore. Since each zone does not have to be isolated using surface equipment, valuable rig time is saved and, more importantly, hydrocarbon flow is dramatically increased.

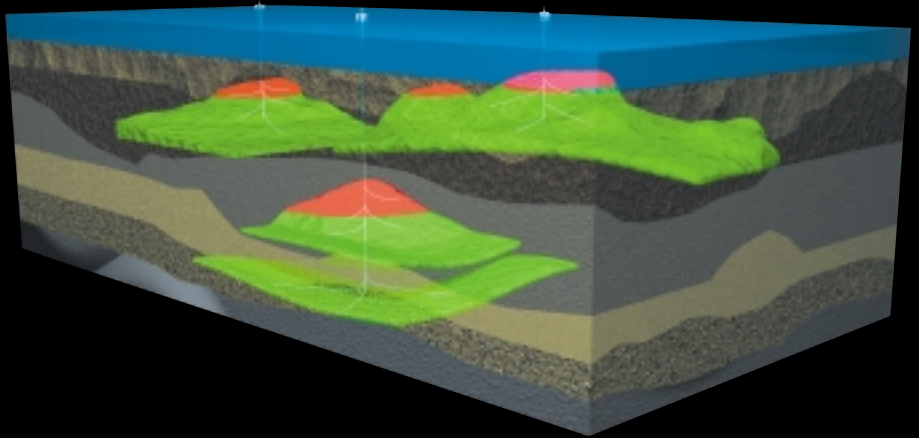
**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **FRACTURE DIAGNOSTICS**

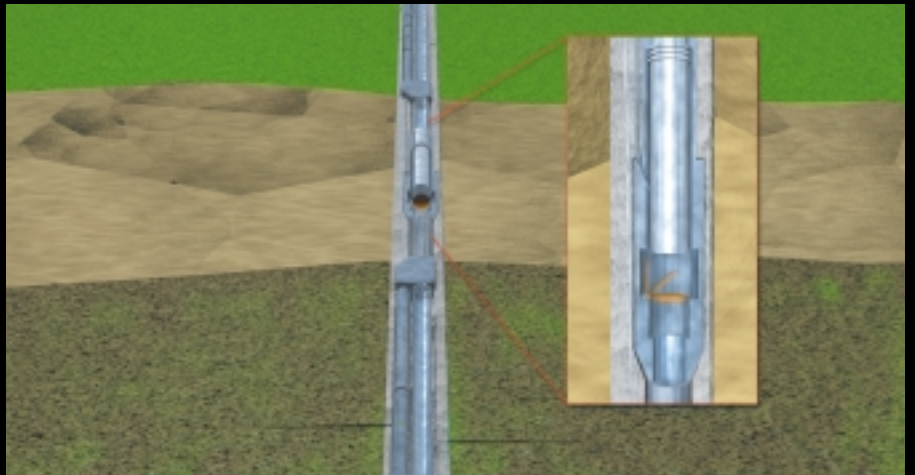
**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

One of the most successful reservoir optimizing techniques is hydraulic fracturing. It is accomplished by pumping a proppant into the well under very high pressure to open fractures in the producing formation and keep them “propped” open to improve hydrocarbon flow into the well. However, less than 50 percent of hydraulic fracture jobs result in optimum production. ☀ A thorough understanding of the reservoir system is necessary for success. By coupling Core’s reservoir description data and patented fracture diagnostics technology, operators can ensure that proppants are placed as they were intended in the stimulation design; and they can significantly increase hydrocarbon production.

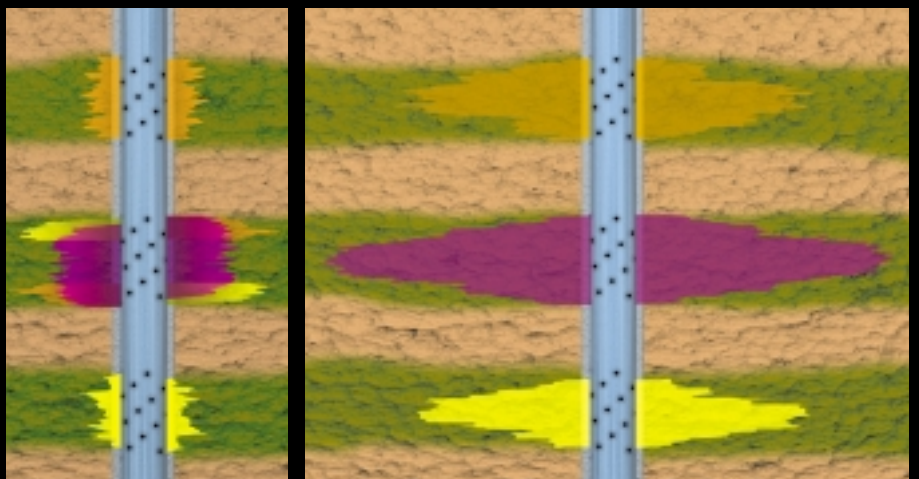
Core geoscientists integrate and interpret seismic, geological, petrophysical, and well production data from multiple reservoirs to describe a field.



The Escape Completion Process allows multiple reservoir zones to be sequentially perforated and individually stimulated, while eliminating the traditional procedure of running tools into the well casing for each new zone.



Core's patented fracture diagnostics technology helps determine if proppants were (right) or were not (left) placed as they were intended in the stimulation design.



**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **IN-RESERVOIR SEISMIC™**

**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

Detailed reservoir imaging is the emerging technology applied to monitor and optimize the production of oil and gas. Core's industry-leading commercially available in-reservoir seismic technology enables our clients to image the reservoir more clearly by an order of magnitude, or even two, compared to surface seismic techniques. ☀ Using our technology, we can image the movement of oil, gas, and water in reservoir zones as thin as 10 feet in wells deeper than 10,000 feet. This level of imaging detail and accuracy is impossible to achieve through technologies applied from the surface. By imaging fluid movement, an oil company can make better, real-time decisions needed to maximize hydrocarbon flow and recovery.

**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **FLOOD DIAGNOSTICS**

**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

An oil field can yield additional quantities of hydrocarbons when an operator floods the producing zone with water, carbon dioxide, nitrogen, or a miscible gas. When Core's reservoir description datasets are combined with dynamic flow tests run at reservoir temperature and pressure, a field flood program can be implemented to maximize hydrocarbon recovery. ☀ The success of the design can be bolstered by using Core's proprietary field flood tracer technology, which enables the operator to track the movement of the flooding agent. This helps eliminate costly remediation that is required when the field-flooding agent prematurely breaks through to producing wells.

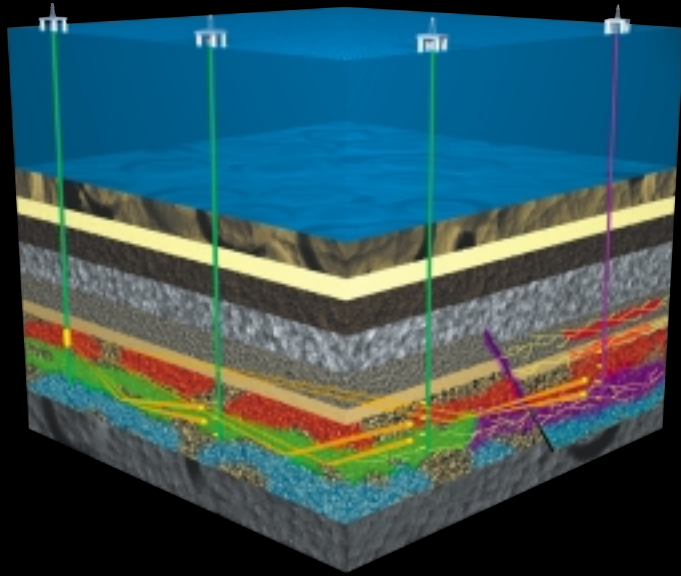
**WHAT CORE LAB KNOWS ABOUT RESERVOIR ROCK AND FLUIDS MAKES**

## **COHERENCE CUBE TECHNOLOGY**

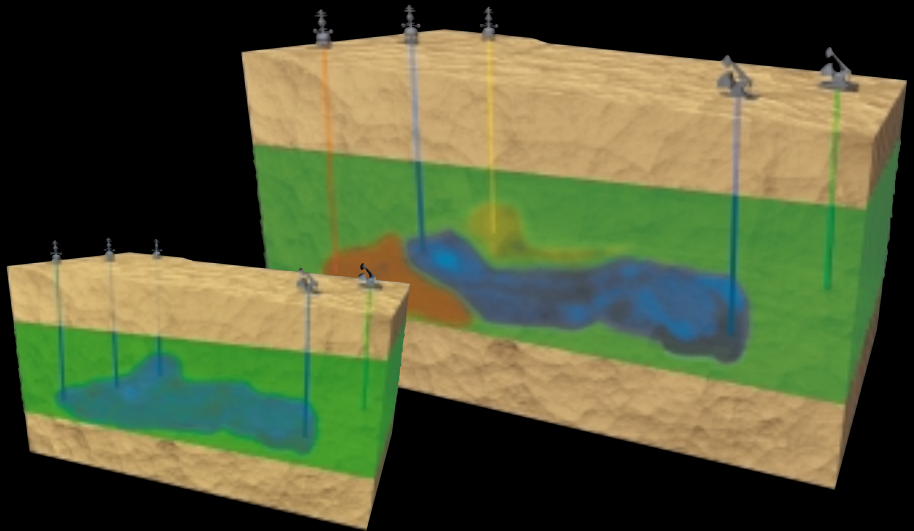
**A SUPERIOR RESERVOIR OPTIMIZATION TOOL**

Our competitive edge is further strengthened by our exclusively licensed Coherence Cube technology, which transforms 3-D seismic data into a more effective tool for finding and producing oil and gas. ☀ Coherence Cube images clearly reveal critical faults and stratigraphic features, and that allows our clients to improve their interpretation accuracy and shorten turnaround time. Coherence Cube technology is considered by many geophysicists and geologists as the biggest advance in 3-D seismic imaging in the last ten years.

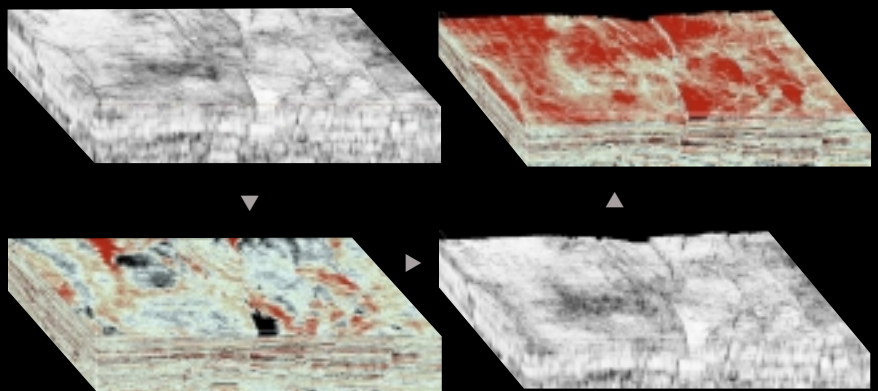
Core's in-reservoir seismic technology can image the movement of oil, gas, and water in reservoir zones as thin as 10 feet in wells deeper than 10,000 feet.



When a field-flooding agent prematurely breaks through to producing wells (inset), Core's proprietary tracer technology enables the operator to identify the source so that corrective steps can be taken.



Core's exclusively licensed Coherence Cube technology transforms 3-D seismic data into a more effective tool for finding and producing oil and gas through image enhancement that reveals faults and stratigraphic features.



# Core Laboratories N.V.

**FORM 10-K/A FOR THE FISCAL YEAR ENDED DECEMBER 31, 1999**

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### Board of Supervisory Directors

Stephen D. Weinroth  
*Chairman*

General Partner

Andersen, Weinroth & Co., L.P.

Bob C. Agnew

*Director*

Retired; Former International  
Drilling Manager for Exxon Co.  
International

Richard L. Bergmark

*Director & Officer*

Executive Vice President  
and Treasurer

David M. Demshur

*Director & Officer*

President and  
Chief Executive Officer

Joseph R. Perna

*Director*

Private Investor

James A. Read

*Director*

Director of Mezzanine  
Management Ltd.

Jacobus Schouten

*Director*

Executive Officer of  
First Britannia Mezzanine N.V.

### Senior Corporate Management

D. M. Demshur

President and  
Chief Executive Officer

R. L. Bergmark

Executive Vice President  
and Treasurer

M. L. Davis

Senior Vice President and  
Chief Operating Officer

J. D. Denson

Vice President, Secretary  
and General Counsel

R. D. Keys

Chief Financial Officer

C. B. Miller

Tax Director

J. D. Graves

Controller

### Senior Operations Management

C. T. Cottam

Vice President, Houston

J. T. Hampton III

Vice President, Houston

J. W. Heinsbroek

Vice President, Rotterdam

C. E. Kirkland

Vice President, Houston

S. J. Lee

Vice President, Calgary

B. P. Marion

Vice President, Houston

D. S. Wesson

Vice President, Fort Worth

### Independent Auditors

Arthur Andersen LLP

711 Louisiana, Suite 1300  
Houston, Texas 77002

### Transfer Agent and Registrar

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New York, New York 10005

### Market Information

Listed on NYSE  
Symbol: CLB



David M. Demshur



Richard L. Bergmark



Monty L. Davis



John D. Denson



Randall D. Keys



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