

## **Advanced Reservoir Imaging Using Frequency-Dependent Seismic Attributes**

**FEW ESD04-029**

### **Project Goal**

The main objective of this project is the development and application of a new advanced technology of hydrocarbon reservoir imaging supported by a frequency-dependent reflectivity model.

### **Performer**

*Lawrence Berkeley National Laboratory  
Berkeley, CA*

### **Project Results**

This project involves development of theory and processing algorithms, laboratory experiments, and verification of results using field data provided by industrial partners. Based on this model, the project is developing a methodology to determine the reservoir properties using the frequency dependence of seismic reflections. Also, the low-frequency asymptotic analytical solutions for seismic waves reflected from fluid saturated layers are being developed and validated. Scalability relations between field and laboratory model parameters is being investigated. The new technology will be validated by processing field data provided by industry partners and comparing the predicted fluid saturation model to the one derived from well data.

### **Benefits**

The modeling efforts will improve reservoir characterization.

### **Background**

No information supplied.

### **Project Summary**

No information supplied.

### **Current Status**

This is a joint contract with the University of Houston, DE-FC26-04NT15503.

### **Contract Information:**

This project was funded under the E&P Mega PRDA, DE-PS26-04NT15450.

**Project Start:** November 12, 2004

**Project End:** December 31, 2007

### **Anticipated DOE**

Contribution: \$69,000

### **Performer Contribution:**

\$0 (0% of Total)

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