Simultaneous AVO Inversion for Leading Edge – Integrated Seismic Reservoir Characterization

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Over the last several years, the oil and gas industry has been pushing for a tighter integration of seismic and reservoir properties through the use of quantitative rock physics relationships. The crux of this quantitative seismic interpretation is the use of P-wave velocity, S-wave velocity and density, measured in the field and the laboratory, combined with the wave equation to specify rock properties. This is a great leap forward for interpretation from simply making time or depth maps.

This presentation covers the evolution of quantitative seismic interpretation techniques, such as AVO and lambda-mu-rho, with an emphasis on impedance inversion to resolve ambiguities in lithology and fluid identification. In particular, we will see how fluid and non-fluid effects change our seismic attributes.

Attention will be placed on the steps involved in seismic inversion, the options available and how seismic data is calibrated against well information. The audience will gain an understanding of modern quantitative seismic interpretation and its use in modern reservoir characterization and monitoring projects.

Matt Brzostowski has a number of years of experience working in the areas of seismic exploration including specializing in acquisition techniques, data processing (with an emphasis on imaging algorithms) and the use of quantitative seismic interpretation techniques. Most of that experience has been with WesternGeco, and its predecessor companies, in the western United States, western Canada, the North Slope of Alaska and a three-year tour in the People's Republic of China. He graduated from Washington State University with a Bachelor's degree in geology, plus a minor in physics, followed by a doctorate from the University of Texas at Dallas under George McMechan. A 25-year member of the SEG and AAPG, he most recently taught a continuing education course on seismic imaging. Other activities include flying (as a flight instructor) and developing exploration methods for the Moon and Mars.

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APRIL LUNCHEON

DATE:	April 23, 2007
TIME:	11:30 A.M. Lunch
LOCATION:	Telus Convention Centre, Calgary
TICKETS:	Contact CSEG office
TELEPHONE:	262-0015 or Fax: 262-7383

MAY LUNCHEON

May 14, 2007

Roundup Centre – Hall C

"Speaker: Rex Murphy"

CBC Broadcaster and Commentator

(Luncheon sponsored by ARCIS)