Aggressively Passive: Microseismic opportunities over an oilfield's life

Peter Duncan, Fall 2008 SEG/AAPG Distinguished Lecturer
MicroSeismic, Inc.

CSEG/CSPG Joint Technical Luncheon

Abstract

Passive seismic, especially microseismic monitoring, is to conventional seismic as a stethoscope is to a sonograph. It is continuous 4-D. It is accomplished by listening carefully to the sounds emanating from the earth and then diagnosing what is happening down there. Passive seismic techniques not only can create an image of the reservoir and its plumbing, but also shed light on how the fluid is flowing through the pipes.

Grasping the completeness of the passive science, one can see that it provides the opportunity to contribute over the lifetime of an oilfield from discovery to abandonment. Passive seismic can accomplish reconnaissance 3-D exploration at an attractive cost and lead to new discoveries. Microseismic monitoring of a hydrofrac can and does provide valuable information on completion and development strategy. Gas or fluid injection operations for primary or secondary recovery are prime candidates for passive monitoring to prove regulatory compliance, validate reservoir conformance and estimate recovery efficiency.

This lecture will present a view on the history and development of passive seismic techniques, a discussion of state of the art through case histories and a vision on where this technology will play a role in the smart oil field of the future.

Tickets are $35/each, for this luncheon only!

Peter M. Duncan is founding President of MicroSeismic, Inc. a Houston based geophysical service company. He holds a Ph.D. in Geophysics from the University of Toronto. He began his career as an exploration geophysicist with Shell Canada before joining Digicon Geophysical, first in Calgary then in Houston. In 1987, Duncan helped Digicon found ExploiTech Inc, an exploration and production consultancy. He was named President of ExploiTech when it became a subsidiary of Landmark Graphics in 1989. In 1992, he was one of 3 founders of 3DX Technologies Inc., an independent oil and gas exploration company where he served as Vice President and Chief Geophysicist. Duncan was 2003-2004 President of the Society of Exploration Geophysicists (SEG).

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SEPTEMBER LUNCHEON

DATE:	September 15, 2008
TIME:	11:30 A.M. Lunch
LOCATION:	Telus Convention Centre, Calgary
TICKETS:	Contact CSEG office
TELEPHONE:	262-0015 or Fax: 262-7383

OCTOBER LUNCHEON

October 6, 2008

Oil Sands Reservoir Characterization
An Integrated Approach

Laurie Weston Bellman
Oil Sands Imaging, Inc.