

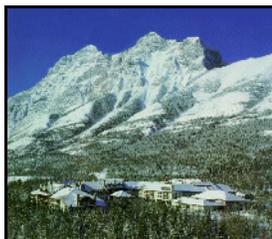
CREWES NEWS

The Consortium for Research in Elastic Wave Exploration Seismology

2001 CREWES Sponsors Meeting

The 2001 CREWES Annual Sponsors Meeting is drawing closer. Full details of the meeting, can be found on our website, <www.crewes.org>, under the <2001 Sponsors Meeting Information Centre> link on our homepage.

The meeting is being held from November 18 through November 20 at the Delta Lodge at Kananaskis, Alberta, Canada. We hope that all interested individuals from sponsoring companies will be able to attend.



Registration Info

If you will be attending the Sponsors Meeting, but **not** staying at the Lodge overnight, please call Louise Forgues at (403) 220-8279 to register.

Meeting Schedule

Sun. November 18, 2001	7:00pm - 9:00pm	Registration, Reception
Mon. November 19, 2001	8:30am - 4:30pm	Presentation, Discussion
Tues. November 20, 2001	8:30am - 4:30pm	Presentation, Discussion

Accommodation

For the meeting, please make your own room reservations at the Delta Lodge at Kananaskis. To qualify for the group rate, \$133.00 per room, plus service charge and tax, please identify yourself as being with the University of Calgary, CREWES Project. A block of rooms is being held for the nights of November 18 and 19, but availability of rooms and the group rate will not be guaranteed after October 9. If you wish to stay at the Lodge during the meeting, and especially before November 18, it is strongly recommended that you reserve a room as soon as possible.

The following numbers can be used to contact the Delta Lodge at Kananaskis:

Reservations toll-free in Canada/U.S.A.: 1-800-268-1133
Phone: +1 403 591 7711 Fax: +1 403 591 7770

New Sections at the CREWES website

CREWES NEWS readers will be interested in a couple of sections that have been added to our website at <www.crewes.org>:

<Supplementary Materials> links to recent CREWES articles appearing in open and refereed publications, and connects them to sources of other relevant information, including CREWES research report papers, graduate student theses, backgrounders, and expanded articles.

We have also added a direct link to information for those wishing to attend the 2001 CREWES Sponsors Meeting page. The link to click is <2001 Sponsors Meeting Information Centre>. We will be updating this section as plans are finalized. **CN**

In This Issue...

- **News**
 - 2001 CREWES Sponsors Meeting
 - New website features
- **Features**
 - Physical Modelling of Heavy Oil Floods
- **Congratulations**
 - CREWES graduate students win scholarships

Sponsors Meeting

Important Info:

Dates:

Sunday November 18
Monday November 19
Tuesday November 20

Information:

Louise Forgues
+1 (403) 220 8279
louise@crewes.org

Venue:

Delta Lodge at Kananaskis
Res: 1-800-268-1133
(Toll-free, Canada/U.S.A.)
Phone: +1 403 591 7711
Fax: +1 403 591 7770

Website information:

www.crewes.org

The CREWES Project

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Email: crewesinfo@crewes.org

WWW: www.crewes.org

2001 CREWES Sponsors Meeting Highlights

The following are just a selection from CREWES' year of research being prepared for presentation at the 2001 Sponsors Meeting. We look forward to seeing you in Kananaskis.

Title	Authors
<i>A field study of wind noise abatement techniques for 3-C geophones</i>	Henry C. Bland
<i>Multicomponent seismic survey at Calgary International Airport</i>	Don C. Lawton
<i>Multicomponent seismic survey over ground-fast and floating ice, MacKenzie Delta, N.W.T.</i>	Robert R. Stewart*
<i>Single-well imaging using the full waveform of an acoustic sonic</i>	Louis Chabot, et al.
<i>4D Study of Blackfoot 1993, 1995, and 1999 3C-3D seismic datasets</i>	Han-xing Lu
<i>Seismic monitoring of 'hot and cold' heavy oil production</i>	Laurence R. Lines
<i>Time-lapse seismic and AVO analysis by fluid substitution modelling, White Rose, Newfoundland</i>	Ying Zou
<i>Combining geostatistics and multi-attribute transforms - a Blackfoot channel sand example</i>	Brian H. Russell, et al.
<i>Further considerations of oblique reflectors</i>	John C. Bancroft
<i>Constrained three parameter AVO inversion and uncertainty analysis</i>	Jonathan E. Downton
<i>Gabor deconvolution: theory</i>	Gary F. Margrave

Physical Modelling of Heavy Oil Floods

During the past year, various CREWES personnel have carried out collaborative work on a model of a heavy oil flood with members of the University of Calgary's Department of Chemical and Petroleum Engineering. The engineers have created a scaled apparatus of a heavy oil reservoir (below) containing a glass-bead pack initially saturated with heavy crude oil. In the experiment, a methane-propane mixture is injected into one corner of the model, and fluid is forced through an opening in the opposite corner. The picture shows the model at the conclusion of the experiment. The white region at the top bead pack contains only the methane-propane mixture, the dark region contains heavy oil, and the brown region is

where heavy oil has been swept by the flooding mixture.

Our interest lay in probing for changes in the fluid content of the model using ultrasonic detection. We used ultrasonic transducers in a variety of configurations to record traces from the model, and processed the data using ProMAX. Results showed that reflections from the top of the bead-pack clearly distinguish between oil saturated regions and flooded regions. Although still at an early stage, the study is of interest for tar sands and heavy oil research.

Our findings will be presented in greater detail at our November Sponsors' Meeting and in the 2001 CREWES Research Report. **CN**

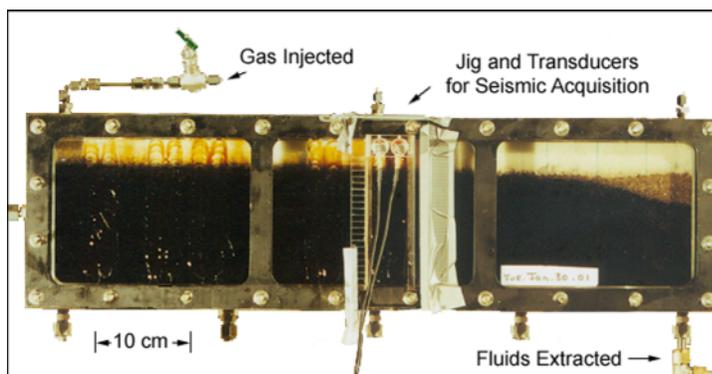


Figure 1: Heavy oil production experiments with time-lapse ultrasonic surveys

CREWES Students Awarded Scholarships

Congratulations to several CREWES students who have been awarded scholarships from various generous sources.



Louis Chabot, left, received scholarships from the Society of Exploration Geophysicists (SEG) and the Society of Professional Well Log Analysts (SPWLA).

Louis is working with supervisor, Jim Brown, and research collaborators, Dave Henley, Rob Stewart, Larry Lines, and John Bancroft. The most recent results of Louis' efforts appeared in the 2000 CREWES Research Report and in June-July's CREWES NEWS under the title 'Single Well Imaging'. Further research will be presented in the 2001 Research Report



Carlos Nieto, left, also received a scholarship from the SEG.

He is currently working on the time lapse analysis of Blackfoot, using the radial components of the 1995 and 1999 3C-3D surveys with his supervisor, Rob Stewart. In addition, Carlos has also worked on other projects, including estimation of angles of incidence for converted

wave seismic data, and the kinematics of seismic imaging.

Shauna Oppert, right, has been awarded a Harry and Laura Jacques Scholarship and a Graduate Faculty Council Scholarship, both from the University of Calgary.



Shauna's supervisor is Jim Brown, and her research involves modifying Radon algorithms for removal of mode-converted energy and other coherent energy

Ian Watson, right, received an NSERC Industrial Postgraduate Scholarship for 2000-2001 co-sponsored by Imperial Oil Research. This award funds Ian's M.Sc. research into co-operative inversion with regard to heavy-oil reservoir monitoring and visualization.



In July 2001, Ian received the John O. Galloway Memorial Scholarship. This award is granted to M.Sc. students by the Department of Geology and Geophysics based on academic standing and contributions to research. Ian's supervisor is Larry Lines. **CN**

Making Contact...

Contact Note: Readers wishing to contact staff and students should add the domain, @crewes.org, to the usernames listed below.

Directors:

Dr. Robert Stewart: stewart
Dr. Gary Margrave: gary
Dr. Don Lawton: donl
Dr. Larry Lines: lines

Associated Faculty Members:

Dr. John Bancroft: bancroft
Dr. Larry Bentley: bentley
Dr. Jim Brown: jbrown
Dr. Rudi Meyer: meyer

Administrative Manager:

Louise Fergues: louise

Research Staff:

Henry Bland: henry
Dr. Pat Daley: daley
Eric Gallant: eric
Kevin Hall: khall
Dave Henley: henley
Mark Kirtland: kirtland

Han-Xing Lu: lu
Carla Osborne: carosbor
Dr. C. Ursenbach: ursenbach

Graduate Students:

Richard Bale: rbale
Jeff Beckett: beckett
Louis Chabot: chabot
Linping Dong: dongl
Jon Downton: downton
Pavan Elapavuluri: pavan
Jeff Grossman: grossman
Victor Iliescu: iliescu
Jessica Jaramillo: sjmjaram
Kum Liu: kliu
Peter Manning: manning
Michael Mazur: mazur
Yanpeng Mi: mi
Alexandre Minev: aminev
Monica Moldoveanu: ammoldov

Carlos Nieto: nieto
Christopher Ogiesoba: oogiesob
Shauna Oppert: oppert
Marco Perez: perez
Sarah Richardson: serichar
Andrew Royale: ajroyale
Brian Russell: russell
C. Silawongsawat: pensil
Shuang Sun: shuang
Alexandru Vant: vant
Graham Warren: warren
Ian Watson: watson
Yan Yan: yyan
Jianli Yang: yang
Hongbo Zhang: hzhang
Jianlin Zhang: zhang
Ye Zheng: ye
Ying Zou: zou