

# UT-Austin EDGER FORUM

Robert H. Tatham

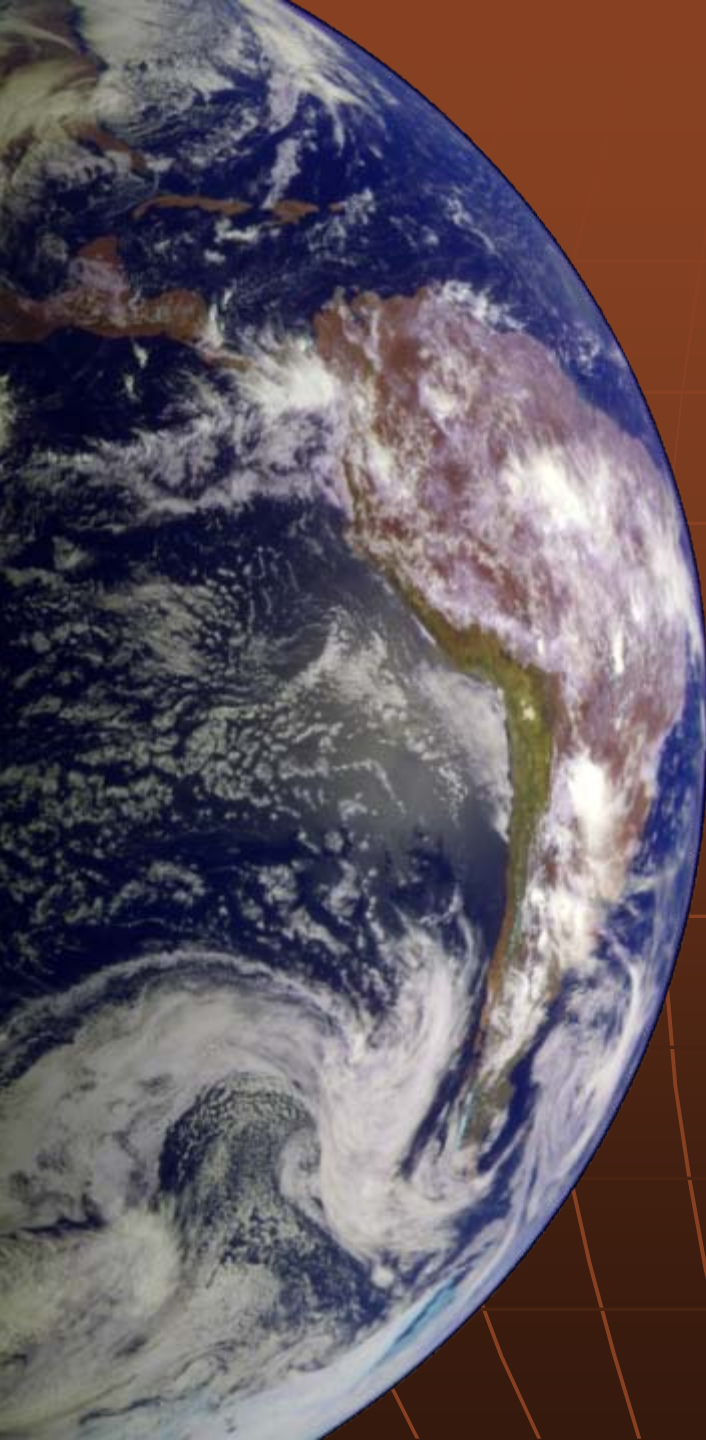
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THE UNIVERSITY OF TEXAS AT AUSTIN

## JACKSON

SCHOOL OF GEOSCIENCES

December 16, 2009



# Forum for Exploration and Development Geophysics Education and Research

*Nurturing Education and Research  
for Tomorrow's Technology Needs  
at the Edge of Knowledge.*

THE UNIVERSITY OF TEXAS AT AUSTIN

# JACKSON

SCHOOL OF GEOSCIENCES

# The Exploration Geophysics Program

Leverage Industry support in the overall Exploration Geophysics Program.

- **Industry Supported Program – EDGER Forum**
- **Geology Foundation and Jackson School Support**
- **JSG and Department Support (T/A and other)**
- **Other Student Support (e.g. Scholarships, National Oil Companies)**
- **Other Research Contracts**
  - **Government and Research Support Agencies**
  - **Focused Industry Supported Projects (e.g., ERL)**

# The Jackson School of GeoSciences

- Department of GeoSciences (DGS)
- Bureau of Economic Geology (BEG)
- UT Institute of Geophysics (UTIG)

**An 'independent' school led by the Dean,  
Sharon Mosher, reporting to the Provost**



# The EDGER Forum

## Education:

- Emphasizes Education as well as Research
- Graduate Students employable by the industry
- **Focused Areas of Application** offer educational context for research

# The EDGER Forum

## Research:

- Focused Research core element of the Forum
- MS Thesis projects coordinated to support larger research directions (e.g., Shale as seen by seismic)
- **Focused Areas of Application** facilitate cooperative research with industry, student internships and recruiting by industry
- Sponsors coordination on MS Research Projects
- Includes Post-Doc Fellows

# The EDGER Forum

## Forum:

**Third-party (Academic) Forum to coordinate technical activities between Industry Producers, Industry Contractors and Academia.**

- Focused Technical Symposia
- Interactive problem-focused workshops
- Develop and Maintain Objective Ordered D.B.
- **Focused Areas of Application** provide opportunity for additional workshops and means to share and transfer technology

# Current Members of the EDGER Forum

- Anadarko Petroleum Corp
- BP Americas Production Corp
- Chevron
- ConocoPhillips
- Dawson (Permanent Member)
- Kerogen (Oasis)
- Landmark (In Kind)



# Benefits of Participation

## Students

*Professional MS and Research PhD students*

- Graduates employable by Industry

## Research

*Research Focus on Inversion, Imaging, Analysis and Interpretation of Multi-component Seismic Data*

***Focused Areas of Application provide direction for research and transfer of technology to sponsors.***

- Provide direction to Research Projects
- Continuous Access to Research Results
- Projects in Focused Areas of Application

## Forum

*Advance technology for benefit of technical community*

- Annual Technical Symposium
- Problem-oriented Workshops
- Objective-Oriented M/C Inter. Data Base

# **Benefits of Participation: Students**

## *Professional MS and Research PhD students*

- **Access to the Students themselves**  
(Graduates employable by Industry)
- **Sustainable supply of graduates**  
(Requires on-going support)

## Target

- **Minimum 18 grad. Students in Exploration Geophysics**
- **Minimum Six advanced degree graduates per year**

# Benefits of Participation: Research

## Research Focus on Imaging, Analysis and Interpretation of Multi-component Seismic Data

*This includes addressing problems with possible solutions in P- and S-wave data applications and P-P and P-SV AVO analysis.*

- Provide direction to Research Projects
- Access to Research Results
- Focus Areas of Application tie together a variety of MS research projects.

# Focus Areas of Application

- **Problems in Unconventional Resources and Resource Plays (Shales)**  
**Very actively growing**
- **Time-Lapse Seismic and Reservoir Monitoring**  
**In line with broad theme**
- **Numerical Simulation (Future?)**

# Benefits of Participation: Forum

- Annual Technical Symposium
- **Workshops in Application Areas**
- Objective-Oriented and Geographically Project-Oriented M/C Interpretive Data Bases
- UT-Austin is the depository for the 4C 4D Teal South4C 4D data
- UT-Austin will display GSH and O. S. Petty Museum Artifacts in Dawson Geophysical Training Center.



# Past Forum Activities

## Annual Technical Symposium

1999- 2000 – Future of Exploration Geophysics

2000- 2001 – Assessment of Stratigraphic Seals

2001- 2002 – New Directions in AVO

2002 - 2003 – Seismic Attributes

2003 - 2004 – Successful Applications of M/C

2004 - 2005 – Partial Gas Saturation

2005 - 2006 – Seismic Response to Fluid Properties

2006 – 2007 – Problems in Land Applications

2007 – 2008 – Unconventional HC Resources

**2008 – 2009 - Seismic Response in Resource Plays**

# 1999-2000 Direction in Exploration Geophysics

The University of Texas at Austin  
Department of Geological Sciences

## **The Future of Exploration Geophysics: Meeting the needs of Industry and Academia**

A Symposium honoring **Professor Milo Backus**  
And his career in **Exploration Geophysics**

*Monday, December 6 and Tuesday, December 7, 1999*

**Keynote Speaker: Dr. Thomas Barrow, Chairman of GX Technologies,  
and former president of Humble Oil & Refining**

**Dinner honoring Prof. Backus at the Texas Memorial Museum  
on Monday, Dec. 6 hosted by Dept of Geological Sciences.**

### The symposium will include:

Keynote Address by Mr. Thomas Barrow

Session of educational and research activities at

The University of Texas at Austin from the

- Department of Geological Sciences
- Institute for Geophysics
- Bureau of Economic Geology
- Texas Institute for Computational and Applied Mathematics (TICAM) associated with
  - > The Department of Computer Sciences and the
  - > Department of Petroleum and Geosystems Engineering.

Session of presentations from industry representatives

- BP/Amoco on 'Directions in Exploration Geophysics'
- Texaco on 'Risk Evaluation for Exploration'
- Baker Hughes on 'Resource Needs of Contractors'
- GeoQuest on 'partnerships between Industry and Academia'

Co-operative sessions between industry and university  
participants to address joint needs.

The outcome of this symposium will play a major role in the evolution of the Exploration Geophysics program in the Department of Geological Sciences and encourage further cooperation among various elements of the university and with the petroleum industry.

*For information contact:*

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# 2009-2010

**2010 Technical Symposium and Annual Meeting: Feb. 22-23, 2010  
UT-Campus (Austin)**

- **Technical Symposium-including industry participation**
- **Review of Student and Faculty research**
- **Annual Meeting and Technical directions**

# 2009-2010

2010 Technical Symposium and Annual Meeting: Feb. 22-23, 2010  
UT-Campus (Austin)

## Focused Areas of Application:

- **Seismic solutions in shale plays**
- **Time-lapse seismic techniques reservoir monitoring.**

*First Announcement*

**The Topic of the Technical Symposium for the 2010 Forum will address the EDGER Forum's current Focused Areas of Application, particularly seismic solutions in shale plays and topics in time-lapse seismic techniques in reservoir monitoring.**

Sponsoring Companies are invited to make a presentation addressing issues and problems concerning Shale Plays. The Forum will also include presentations of graduate student, post-doc and faculty research results, discussion of future directions and the overall status of the EDGER Forum.

**Dates:**

Monday, 22nd February through Tuesday, 23rd February 2010

**Location:**

The University of Texas at Austin, Thompson Conference Center located at 2405 Robert Dedman Drive (on the southwest corner of Dean Keeton and Red River) on the UT Austin Campus. Limited Parking for the Forum is free and available at the Thompson Conference Center in Lot 40.

**For Maps and directions:**

<http://www.utexas.edu/ce/tcc/attend/maps-directions/>

**Accommodations:**

Guest Rooms during the Forum are available for \$159 at the on campus Hotel located in the AT&T Conference Center, 1900 University Avenue, Austin, Texas 78705.

The Hotel is located within walking distance of the Thompson Conference Center.

Online booking available at <http://www.meetattexas.com/>

or by phone: (512) 404-3600

Please mention the promotional code: "EDGERFO210" when booking.

**Dinner:**

The EDGER Forum will be hosting a dinner on Monday evening, 22nd February 2010.

**RSVP:**

Please RSVP to Margo Grace by email: [margo@jsg.utexas.edu](mailto:margo@jsg.utexas.edu)  
or by phone: (512) 232-1920 to confirm attendance at both the Meeting and Dinner.

Please let Margo know if you require a vegetarian option.

**Agenda and Updates:**

<http://www.edger.jsg.utexas.edu>



**SEG/AAPG/SPE**

**WORKSHOP ON SHALES:**

seal, reservoir, source



6-9 June 2010

AUSTIN

# **SEG/AAPG/SPE Workshop**

## **Workshop on Shales: seal, reservoir, source**

***Abstract submission deadline: 5 March 2010***

For more information call 1-918-497-5529 or e-mail [awatson@seg.org](mailto:awatson@seg.org).



**Society of Exploration Geophysicists**  
*The international society of applied geophysics*

# **June 7-9, 2010**

# **Austin**

***We look forward to continued  
growth and development with the  
Jackson School of GeoSciences and  
the Energy Industry***