

What's happening in the

# BASIN & RESERVOIR LAB



Basin & Reservoir Lab

Professor Grant Wach & Dr. Ricardo Silva

March 2015

## Lab members win spot to compete in EAGE Field Challenge 2015



Kenn Martyns-Yellowe, Darragh O'Connor, Connor Wentzell, and Charlie Carlisle



## MADRID 2015

Congratulations to Basin & Reservoir Lab team members Charlie Carlisle, Darragh O'Connor, Connor Wentzell, and Kenn Martyns-Yellowe, who form one of the six winning international teams eligible to compete in this year's EAGE Fully Integrated Evaluation and Development (FIELD) Challenge, where six teams must analyse real-world data on a known hydrocarbon resource; this year's dataset is kindly offered by Repsol. Only the six best university teams and their academic mentors are eligible to compete, and our team members are excited to be asked to represent Dalhousie internationally along side competitors from Beijing, Spain, Russia, Dubai, and Poland. The team's essay submission has won them each a travel grant to attend and compete at the 77th EAGE Conference & Exhibition (1-4 June 2015) in Madrid, Spain, to present their FIELD development plan to an expert jury in Madrid. The team recognizes that the EAGE FIELD Challenge is, "the ideal platform to diversify our geological and professional portfolio while being given the opportunity to network and develop a working relationship with our peers worldwide", and are looking forward to preparing their plan and presentation over the coming months.

## EAGE STUDENT CHAPTER WINS 1st IN ONLINE GEO-QUIZ



The Dalhousie EAGE Student Chapter won 1st place in the Online Geo-Quiz on Tuesday, March 10th, 2015, competing against students from around the world. The EAGE Online Geo-Quiz is a thrilling competition, in which members answer tough multiple choice questions on a wide variety of subjects—from petroleum geology techniques, to famous geologists. With only 20 minutes to answer 20 questions, teams must think fast and select the most correct answer given the available options. With Phil Sedore as President, the Dalhousie EAGE Student Chapter is comprised of mainly undergraduate students, unlike most of their competition at the graduate level.

The winners of the quiz will receive three travel grants to the 77th EAGE Conference & Exhibition in Madrid, Spain this summer. Second place went to Heriot-Watt University (UK), and third place to the Student Geoscientific Society, (Berlin & Potsdam). Congratulations to the team on a job well done!



## Trinidad Field School a success

After several delays due to poor weather conditions, Prof. Grant Wach, M.Sc. candidate Natasha Morrison, and their team of Petroleum Geoscience Field Method students finally arrived in Trinidad, as part of an upper level Earth Sciences course last month. Students had ample opportunity to explore the terrain, conduct research, and gain hands on experience in the field. Trinidad is an excellent analogue to offshore Nova Scotia and gives the participants a chance to experience modern day petroleum processes first hand. Dalhousie students also got to spend time with young professionals from the Geological Society of Trinidad and Tobago (GSTT) during the field trips, including Prof. Wach's former student Dr. Hasley Vincent, and experienced an evening with the GSTT that included a delicious dinner and lectures by Prof. Wach, Natasha, and Dr. Krishna Persad. Overall, the trip provided an invaluable and fun field experience for students and instructors alike. We would like to extend our ongoing appreciation to our sponsors including the Province of Nova Scotia, Imperial Oil, EnCana, Shell, Petrotrin, Trinity, and BP.



## Dr. Ricardo Silva & Taylor Campbell attend "Flügel Course" in Erlangen, Germany

### Participants of the „Flügel-Course“ 2015 - Erlangen, March 2-6



This month, Lab team members Dr. Ricardo Silva and Ms. Taylor Campbell flew to Germany to attend and participate in the international course on Carbonate Microfacies, "Flügel"

Named after its founder, the late Prof. Dr. Erik Flügel, Flügel-Course has had over 1500 participants since it was initiated in 1974 by the working group "Palaeoenvironment". The course was a phenomenal opportunity to learn side by side and collaborate with geoscience professionals.



After the course, Dr. Silva and Ms. Campbell conducted field work in Portugal, collecting elemental geochemistry data using the XRF from several Portuguese sections, namely S. Pedro de Moel and Peniche.

This research will contribute to the Source Rock Consortia Project focusing on the Central Atlantic Margins (read more on our [website](#)).

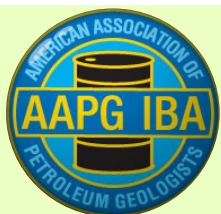


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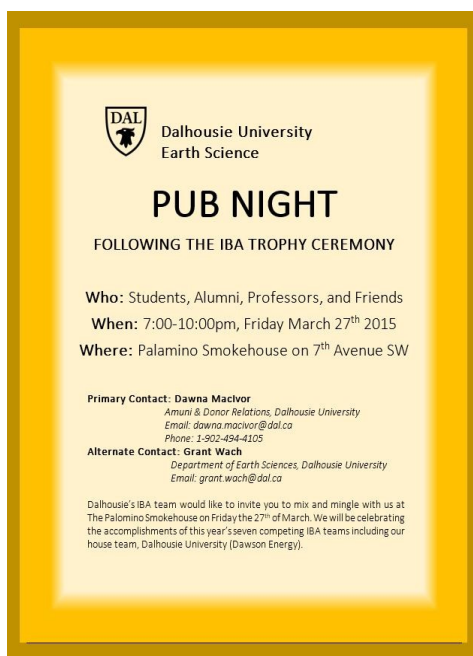
## Dalhousie IBA team to compete in Calgary March 27th

Dalhousie's Imperial Barrel Award (IBA) competition team members will travel to Calgary at the end of the month to compete in the Canadian regionals of the American Association of Petroleum Geologists' (AAPG) annual competition. IBA is an intensive petroleum based competition, which is run annually by teams of undergraduate and graduate geoscientists from across Canada. Participants are given a real-world dataset and asked to demonstrate their knowledge of the local stratigraphy, structure, and petroleum system in order to identify an efficient production strategy. The teams are then asked to pitch their plan to a panel of industry professionals to compete for first place, and the chance to represent the Canada Region against other leading teams from around the globe.

Other Canadian teams include the University of Alberta, University of Calgary, Queen's University, University of Western Ontario, McMaster University, and Memorial University. After the competition, guests are invited to attend a celebratory evening at The Palomino Smokehouse at 7pm, in Calgary (see invitation at right for more information).



Team members Paige Montgomery, Billy Garrison, Phil Sedore, Annie Causer, and Stephanie Wenker



## Recent Research Contributions

Basin & Reservoir Lab team members have been busy — here are the latest research contributions from the Lab:

- "Sediment distribution and reservoir characterization in rift and synrift basin fill – examples from the Mesozoic Fundy Basin and Orpheus Graben of the Scotian Margin" by Darragh O'Connor and Dr. Grant Wach (to be presented at the 2015 34th Annual GCSSEPM Foundation Bob F. Perkins Research Conference).
- "Professionalism: what it means and why it is critical to the oil and gas business" by Charles Carlisle, Darragh O'Connor, Connor Wentzell, (Wining EAGE FIELD Challenge Essay, 2015).
- Dr. Ricardo Silva and Ms. Taylor Campbell lectured at Coimbra University while in Portugal on Nova Scotia offshore geology and seismic inversion respectively.
- This April, Dr. Ricardo Silva will be presenting at the upcoming EGU 2015 open session on Stratigraphy, Sedimentology and Palaeontology, "Minerals and clay minerals assemblages in organic-rich facies: the case study of the Sinemurian-Pliensbachian carbonate deposits of the western Lusitanian Basin (Portugal)", with Ana Caniço, Luís V. Duarte, Fernando Rocha, and João Graciano Mendonça Filho.

## B&R Lab Member Profile



### Get to know Adjunct Professor Bill Richards



B.Sc. Geology (Bristol University, UK),

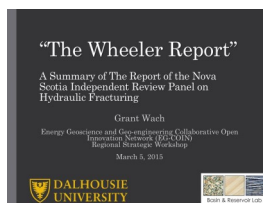
M.Sc. Geophysics (Imperial College, London, UK)

This month, we are highlighting Dalhousie Adjunct Professor Bill Richards. Born in Monmouthshire, South Wales, Bill emigrated to Canada in 1980 and brings substantial industry experience to the Basin & Reservoir Lab.

Bill boasts almost 40 years in the oil industry, starting as a 'mudlogger' with Baroid Ltd (in the UK, Nigeria & Iran), four years as a Geoscientist with BP (in London and The Netherlands) and then as a Geoscientist with Imperial Oil Limited in Calgary. Over half the time with IOL Bill has been on assignment with ExxonMobil - in S.E. Asia, Houston, Australia, and Eastern Canada (where he lives with his family here in Nova Scotia). Bill is a career generalist with a focus on structural, stratigraphic & fluid seismic interpretation and reservoir connectivity analysis. He has considerable experience in field development and production (Malay Basin, Sable Subbasin, Jeanne d'Arc Basin, Western Canada Basin) and exploration (Southern North Sea, Western Canada Basin, Beaufort-Mackenzie, offshore Indonesia and the Papua New Guinea Highlands).

Bill provides a fantastic resource in petroleum systems to our students, acting as both a mentor and a member of several student supervisory committees and student projects.

## Workshop: Shale Gas and Tight Oil Geoscience & Geo-engineering



Earlier this month, Prof. Wach was invited to present a lecture at the Natural Resources Canada (NRCAN) workshop in Winnipeg addressing knowledge gaps in unconventional oil and gas development. The workshop focused on shale oil and gas and the formation of an energy geoscience and geo-engineering network. To achieve this, NRCAN set up an advisory committee composed of industry, government, and academic stakeholders to develop a national dialogue on energy geoscience research and development. The collaborative network is known as EG-COIN (Energy Geoscience and Geo-engineering Collaborative Open Innovation Network), created to investigate research and development needs including: 1) better resource assessment and reservoir characterization; 2) geo-engineering and best-practices; 3) understanding and tools/methods to minimise environmental impacts; and 4) pooling of existing and future proprietary geoscience information for added value to the entire sector and the public. They will also address innovation from social science and humanities research to better understand how scientific information is transferred to and used by communities as well as to increase the uptake of this science by citizens.



**Natural Resources  
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