What's happening in the

BASIN & RESERVOIR LAB

DALHOUSIE UNIVERSITY

Basin & Reservoir Lab

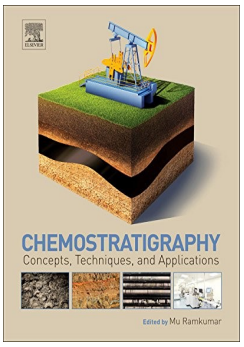
February 2015

OERA Offshore Energy Research Association

OERA to contribute nearly $200,000 to Lab's Source Rock Project – adding to existing support from industry partners Shell, Repsol, Husky Energy, SUNCOR Energy, and BP

IUGS INITIATIVE on FORENSIC GEOLOGY

IUGS— Last month, Prof. Wach presented a report on the Initiative on Forensic Geology at the IUGS (International Union of Geological Societies) meeting in Vancouver, B.C.



Basin & Reservoir Lab's Dr. Ricardo L. Silva to be published in *Chemostratigraphy: Concepts, Techniques, and Applications*

"This multi-contributed reference on one of the youngest and most dynamic branches of the geosciences includes articles from some of the world's leading researchers. This book is a one-stop source of chemostratigraphy theory and application, helping geoscientists navigate through the wealth of new research that has emerged in recent years" (Elsevier).

Full citation: Silva, R.L., Duarte, L.V., Comas-Rengifo. (2015). Carbon isotope chemostratigraphy of Lower Jurassic carbonate deposits, Lusitanian Basin (Portugal): Implications and limitations to the application in sequence stratigraphic studies. In: Ramkumar, M. (Ed). Chemostratigraphy: concepts, techniques, and applications. Elsevier.

IBA in full swing

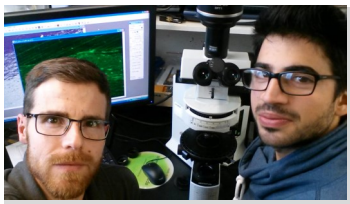
The Imperial Barrel Award Program (IBA), hosted every year by the American Association of Petroleum Geologists (AAPG), is an international basin evaluation competition for 120 teams of geoscience graduate students around the globe. Each team is given a dataset of 2D and 3D seismic and well logs, and must determine potential prospects for oil and gas exploration. Teams eight weeks to prepare their report and 25 minute presentation, which they will deliver to their regional competition judges on March 27th, 2015.

Here at Dalhousie University, we have a team of five exceptional Earth Science students who are more than up to the challenge. Competing on behalf of Dalhousie this year is Billy Garrison, Philip Sedore, Annabel Causer, Stephanie Wenker, and Paige Montgomery. With the dataset having arrived on January 30th, and the expertise of Bill Richards as team mentor, this year's IBA team is well on their way to competing in Calgary against six other Canadian universities this March.

Renewed agreement with ExxonMobil on behalf of the Sable Offshore Energy Project, provides Dalhousie University access to the Sable 3D Seismic MegaMerge until 2020, enhancing Lab research

CANADIAN SOCIETY OF PETROLEUM GEOLOGISTS
www.cspg.org

CSPG Outreach Tour—This year Prof. Grant Wach will visit several Canadian university campuses as a guest lecturer as part of the CSPG (Canadian Society of Petroleum Geologists) Outreach Tour. Last month Grant spoke at both the University of Alberta and the University of Calgary, sharing his expertise on "3D Facies and Petroleum Systems of Subsurface Reservoirs" " and the "Petroleum systems & risk elements of the offshore Atlantic Canada".



Dr. Ricardo Silva (Dalhousie) and Micael Pereira Jorge (Coimbra)

Lab attracts International student

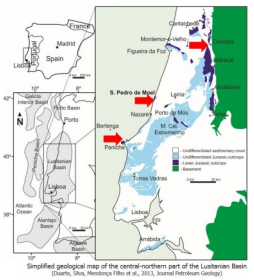
This January, the lab welcomed the arrival of M.Sc. candidate Micael Pereira Jorge from Coimbra University, Portugal. Co-supervised by Lab member Dr. Ricardo L. Silva, as well as Dr. Luis V. Duarte, of Coimbra University, Micael spent a month in Halifax using the Lab's petrographic microscope and x-ray fluorescence, as well as Dalhousie's Microprobe facility to further his research.

UNIVERSIDADE DE COIMBRA

Micael has been analysing several samples from the organic-rich intervals of the Lower Jurassic of the Lusitanian Basin, Portugal, contributing to his research that focuses on the multiproxy characterization of black shales (sensu lato). This experience has not only been helpful to Micael's research, but it has also provided the Lab with the opportunity to share our expertise internationally. Micael will assist Basin and Reservoir Lab team members with their field work in Portugal this upcoming March (see below).

Lab members travel to Germany for "Flügel-Course"

This March, Lab team members Dr. Ricardo Silva and Taylor Campbell will leave for Erlangen, Germany, to attend the International Course on Carbonate Microfacies, known as "Flügel-Course", from March 2nd to 6th, 2015. After the course, they will travel to Portugal to conduct field work in order to acquire elemental geochemistry data using the XRF from several Portuguese sections, namely S. Pedro de Moel and Peniche.



Simplified geological map of the central-northern part of the Lusitanian Basin (Duarte, Silva, Mendonça Filho et al., 2013, Journal Petroleum Geology)

Students travel to Trinidad

On February 15th, Dr. Grant Wach and M.Sc. candidate Natasha Morrison led a team of students to Trinidad, as part of the upper level Earth Sciences course, Petroleum Geoscience Field Methods (ERTH 4157/5157). The team was joined by a dozen young professionals from the Geological Society of Trinidad and Tobago. Dr. Hasley Vincent of the University of the West Indies and BP Trinidad and Tobago, also a Dalhousie graduate, helped lead the course. Over the seven days, the students gained hands on field experience in petroleum geology, basin analysis, source rock evaluation, as well as the opportunity to view an active petroleum system in Trinidad. Trinidad has been an active area for oil, and more recently, gas exploration, for over a century. Access to subsurface datasets from producing onshore and offshore fields provide ample opportunity for students to conduct research into fields and reservoirs.

"Trinidad is the best place in the world to learn about petroleum systems," Dr. Wach says. "It's a natural lab – beautiful expanses of sand cliffs that are analogs for oil and gas reservoirs, and a lake of pitch the size of this campus. It's a remarkable opportunity."

THE GEOLOGICAL SOCIETY OF TRINIDAD AND TOBAGO

As a research advisor for the Carbon Capture and Storage Research Consortium of Nova Scotia, Prof. Grant Wach contributes to the discussion surrounding the safe implementation of Carbon Capture and Storage (CCS) within Nova Scotia. Last month Grant met with CCS Nova Scotia to examine the Schlumberger test well. Working alongside a team of experts, the consortium is committed to helping our province reduce its carbon emissions in a safe and economical way. Grant's contribution to CCS Nova Scotia highlights and reinforces the Basin and Reservoir Lab's ongoing efforts to expand energy research and consider all viable options for Nova Scotia's future.

CCS NOVA SCOTIA

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