



The Rock Record – February, 2014

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*Please contribute to the SGS
Newsletter*

The SGS Newsletter is produced by the SGS executive. Letters, announcements, notices, comments, photos, news and information about SGS members, etc. are always welcome. Call an executive member or write to us at:

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Society**
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www.sgshome.ca

All advertising inquiries should be directed to **Dan Kohlruss**

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Saskatchewan Geological Society Luncheon Meetings Spring, 2014

Ramada Hotel, 1818 Victoria Avenue, Regina
Lunch: 11:45 a.m.; Meeting and talk: 12:15-1:00 p.m.

For lunch the cost is:
Members: \$15.00
Student Members: \$5.00
Non-Members: \$20.00

For those not having lunch the talk is free

Carl Fiduk, AAPG Distinguished Lecturer--Friday, February 28

*The Influence of Salt Structures and Salt Deformation on Petroleum
Exploration in the Deep -Water Northern Gulf of Mexico*

Julia Gale, AAPG Distinguished Lecturer—Thursday, March 13

Natural Fractures in Shale Hydrocarbon Reservoirs

Allison Thurmond, AAPG Distinguished Lecturer—Thursday, April 10

*Industry-Driven Advances In Predictive Earth Systems Modelling: Addressing
The Paleotopography Challenge in 4D*

Saskatchewan Geological Society Luncheon

Friday, February 28th

Dr. Carl Fiduk, Chief Geologist, WesternGeco; American Association of Petroleum Geologists Distinguished Lecturer-- *The Influence of Salt Structures and Salt Deformation on Petroleum Exploration in the Deep-Water Northern Gulf of Mexico*

Ramada Hotel, 1818 Victoria Avenue, Regina--Pine Room, 3rd Floor

Lunch: 11:45 a.m.; Meeting talk: 12:15-1:00 p.m.

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Abstract

Hydrocarbon exploration beneath the shallow allochthonous salt canopy of the ultra-deepwater central Gulf of Mexico has encountered three thick, sand-rich, submarine fan successions that punctuate an otherwise relatively condensed and fine-grained basin center stratigraphy. These sand-rich fans are Late Paleocene, Early Miocene, and Middle Miocene in age and each coincide with periods of very high sediment flux and basin margin instability. They are the primary exploration targets in most ultra-deepwater fields, recent discoveries, and failed exploration tests. The underlying basement configuration contains the horsts and grabens of a rift basin setting. The deep parts of the rift became salt basins filled with the Jurassic Louann salt. During the Cretaceous, kilometers-thick salt nappes extruded from these basins onto the basin margins. The nappes may have coalesced to form a regional allochthonous salt nappe around the margin of the salt basins, similar to the modern Sigsbee Escarpment. Later clastic sedimentation caused deflation of the nappe leaving remnant salt structures behind. The remnant salt bodies form the core structures over which younger sand-rich fans are folded and draped. Regional 3D PSDM data show that remnant salt bodies from the now deflated Cretaceous nappe form the core structure in fields at Chinook and Cascade and in recent discoveries at Stones, Das Bump, St. Malo, and Jack. Both seismic and well data show that the sand-rich outer fan of all three fan systems overlies the zone of salt nappe remnants. It would be a remarkable coincidence for the sandy outer fans of three different age depositional systems and the termination of two more widely separated (both temporally and spatially) allochthonous salt systems to stack vertically. The fact that they do suggests that both deep-water fan deposition and allochthonous salt emplacement were responding to a deeper structural control.

SGS CURLING BONSPIEL

The 10th Annual SGS bonspiel will be held Saturday March 29 at the Tartan Curling Club. This will be a joint event with the DM Kent Geology Club. Prizes may be awarded for curling prowess, costumes or both. Enter as a team of four, couple or individually. Limited to the first 64 entrants. Cost will be \$15 per member or guest, and includes a pizza buffet afterwards. Enter with Lynn Kelley at lynn.kelley@gov.sk.ca.

THE SASKATCHEWAN GEOLOGICAL SOCIETY ANNUAL GENERAL MEETING

Synopsis

The 2013 Annual General Meeting was held on Saturday February 1, 2014 at the Travelodge South. A capacity crowd of about 70 enjoyed a delicious dinner which was accompanied by wine generously provided by Don Kent. Student awards were presented to Justin Emberly, Rong Liang, Taylor Haid and Eli Wiens. Tim Tokaryk was inducted into the Saskatchewan Geoscience Honour Roll while Fran Haidl, John Lake and Bob Troyer received Lifetime Emeritus memberships. A new slate of officers (see cover page) was elected. Thanks to Dave McDougall for organizing a great evening.

ANNOUNCEMENTS AND EVENTS

SGS 2014 Field Trip Planning Meeting

John Lake convened a session for planning this year's field trip on Wednesday, February 19th at the Freehouse—2062 Albert Street. Attendees included John, Murray Rogers, Dan Kohlruss and Colin Card.

Two field trips were proposed: 1) A modern carbonate field trip to Florida to see the Miami Oolite (Pleistocene), the John Pennekamp Coral Reef State Park (Snorkeling on a living reef), modern mud mounds and mud flats in Florida Bay and a tour of the Florida Everglades. Each participant would be responsible for their own airfare.

2) A tour of the southern Rocky Mountains to retrace the CSPG student/Industry field trip (SIFT). The field trip would include Rocky Mountain thrust features, sedimentation and mineral deposits.

Interested members are asked to make their preference known via email to John Lake (lakegeol@sasktel.net) by February 28.

South Dakota School of Mines and Technology Petroleum conference

Last year's field trip leader from the South Dakota School of Mines, Dr. Alvis Lisenbee, has asked us to make the details for this conference available to our membership.

2014 New Horizons Oil & Gas Conference
Sponsored by the South Dakota School of Mines and Technology
Rapid City, South Dakota
April 23-26, 2014

This ninth annual petroleum conference focuses on oil and gas activities in the northern Great Plains and Rocky Mountains, especially as they relate to the Williston, Powder River and Denver-Julesburg Basins.

Cost Early registration: \$250; Standard Registration: \$315; Students: \$35.

For more details visit <http://www.sdsmt.edu/conferences/NHOG/> or call (605)-394-2633.

Luncheon Talk Speakers

If anyone has any ideas for luncheon speakers please contact Murray Rogers (murray.rogers@gov.sk.ca) or Jason Cosford (cosford@jdmollard.com).

Membership

SGS membership is on a calendar year basis---Please renew your membership for 2014 if you have not already done so. Mail the [form](#) (with a cheque), bring it to the next luncheon meeting, or use the on-line renewal option on the website at [Saskatchewan Geological Society](#) and pay using PayPal.

SGS Merchandise

The SGS has a variety of reasonably-priced merchandise, mainly clothing, that is posted on the website: www.sgshome.ca for viewing. This includes seasonal items such as very nice golf shirts, t-shirts, and hats.
