



# The Rock Record – March, 2014

## 2014 Executive

### President

Colin Card

### Vice-President

Ralf Maxeiner

### Secretary

Dan Kohlruss

### Treasurer

Michelle Hanson

### Business Manager

Kate MacLachlan

### Program Chair

Murray Rogers

### Assistant Program Chair

Jason Cosford

### Past President

Lynn Kelley

### Committee Chairs

#### Education Committee

Kate MacLachlan

#### Field Trip Committee

John Lake

#### Golf Tournament Committee

Vacant

#### Website Inquiries

Dan Kohlruss

*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:

### Saskatchewan Geological Society

P.O. Box 234

Regina, SK S4P 2Z6

#### SGS e-mail address:

[info@sgshome.ca](mailto:info@sgshome.ca)

#### SGS Website:

[www.sgshome.ca](http://www.sgshome.ca)

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

## In This Issue

- **Dr. Jim Christopher: R.J.W. Douglas Award** p. 2
- **Allison Thurmond Abstract** p. 3
- **Announcements and Events** p. 4
- **Membership Form** p. 5

## 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**

**Allison Thurmond, AAPG Distinguished Lecturer: May 1, 2014**

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

**Gary Yeo, GYeo Research & Exploration: TBA (Late April or early May)**

*Sandstone-Hosted Uranium in the Karoo Basin, with a Focus on the Mutanga Prospect, Mid-Zambezi Rift Valley, Africa*

### **R.J.W. Douglas Medal 2013: Dr. Jim Christopher**

Long-time member Dr. Jim Christopher has been recognized for his outstanding contributions to our understanding of the geology and tectonic history of the Williston Basin. Please join the SGS executive in congratulating Jim. Below is an explanation of the medal and Jim's biographic information.

The R.J.W. Douglas Medal is awarded annually by the Canadian Society of Petroleum Geologists for outstanding contributions to the understanding of sedimentary geology in Canada, commending major contributions to regional tectonics, petroleum and structural geology. The award is open to all geologists who follow the example of Bob Douglas in contributing to the development of Canadian sedimentary, petroleum, and structural geology. The 2013 recipient is Dr. James E. Christopher, as chosen by the R.J.W. Douglas Medal award committee. James (Jim) Christopher was born in Philadelphia, PA, but in his formative years was sent to live with his maternal grandparents in Jamaica. It was there that he received his elementary and secondary schooling, and sat the Cambridge University entrance exams. However, because of family finances, attending university was not an option. He returned to the U.S., and worked as a migrant laborer before joining the U.S. military. He served in the European theatre in time to become a member of the U.S. Army of Occupation. After the war, Jim worked for the U.S. Army Map Service in Washington, and subsequently in his home town of Jersey City in the manufacturing industry. During that time he took university night classes at a community college and then transferred to Columbia University where he graduated with a Bachelor's degree in geology. Armed with several scholarships, Jim enrolled at Ohio State University, where he obtained an M.Sc. degree, followed by his Ph.D. in 1959. After graduation, due to a lack of job opportunities in his own country, James headed north to Canada, accepting a position as research geologist with the Saskatchewan Department of Mineral Resources. Thus began an immensely productive and illustrious career spanning over 50 years. James Christopher's contributions to the development of Canadian sedimentary geology and related petroleum and structural geology are immeasurable. He is recognized as THE expert in the stratigraphy, sedimentology, petroleum geology, and tectonics of the Saskatchewan part of the Williston Basin, contiguous basin segments in Manitoba, Alberta, and the northern U.S. states. In all of his landmark studies, Jim carefully integrated sedimentological observations with regional stratigraphy and structural controls. His classic Saskatchewan Geological Survey works include the 1961 report on Devonian-Mississippian transition beds in southern Saskatchewan, 1964 and 1966 reports on the Middle Jurassic Shaunavon Formation of southwestern Saskatchewan, and the 1974 monograph dealing with the Upper Jurassic and Lower Cretaceous Mannville Group of Southern Saskatchewan. All of these subsurface reports provided the template for subsequent and ongoing development of prolific oil fields in the Bakken and Torquay formations in southern Saskatchewan and southwest Manitoba, and the Lower Shaunavon, Success, and Lower Mannville formations in southwest and western Saskatchewan. While undertaking the above-mentioned studies, Jim Christopher also published and edited numerous short papers, symposia, and summaries of investigations. All this as he rose through the ranks from research geologist, to chief geologist, culminating in Director of the Saskatchewan Geological survey in 1982. He remained Director until he officially "retired" in 1987, but continued working on many aspects of Phanerozoic geology and completing perhaps his crowning achievement, Report no. 223 on the Upper Jurassic- Lower Cretaceous strata of Saskatchewan, published in 2003. Dr. Christopher, deservedly so, has earned both national and international recognition and respect for his outstanding career. He was inducted into the Saskatchewan Oil Patch Hall of Fame in 1989. Honorary Membership in the Canadian Society of Petroleum Geologists (CSPG) was bestowed upon him in 1996, and in 2004 he became one of the first inductees to the honor Roll of the Saskatchewan Geology Society (SGS). Jim is a two-time President of SGS, and served several terms as Saskatchewan District representative to the American Association of Petroleum Geologists (AAPG). In 1990 the geology alumni of Ohio State University honored him with the Orton Award for "honor of distinction among alumni of the department and in measure of esteem for achievement of exceptional order."

# Saskatchewan Geological Society Luncheon

Thursday May 1, 2014

Allison Thurmond, AAPG Distinguished Lecturer-- Industry-Driven Advances In Predictive Earth Systems Modelling: Addressing The Paleotopography Challenge in 4D

Ramada Hotel, 1818 Victoria Avenue, Regina—Canadian South Room, 2<sup>nd</sup> Floor

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

RSVP: Murray Rogers at [murray.rogers@gov.sk.ca](mailto:murray.rogers@gov.sk.ca) or 306-787-1932 by Monday noon, April 28<sup>th</sup>

When evaluating paleosystems, there will always be a shortage of data constraints and a surplus of plausible geological scenarios for a basin evaluation. Modelling paleosystems with constraints from the modern has been used as a successful approach to better understand petroleum systems. However, as geological data spans both time and space and paleosystems are influenced from lithosphere to atmosphere so should the modelling approach. The modelling approach should be represented through geological time and encompass the effects and implications of the whole earth system. Modelling paleosystems as an integrated earth system requires the integration of tectonics, paleoclimate, source distribution and sediment routing which are all rooted in the prediction of paleotopography. Unfortunately, prediction of paleotopography comes with high uncertainty and is often poorly constrained. Source to sink concepts address the fundamental principles that influence paleotopography but the challenge exists on how to integrate these concepts into meaningful methods for the prediction of petroleum systems. These challenges are being met through industry-driven advances in novel iterative workflows and integrated technology that evaluates the petroleum system holistically through geologic time. Iterative workflows and integrated technology allow for the efficient evaluation of multiple geological scenarios to better constrain the uncertainties in the prediction of petroleum systems.

**Speaker Biography:** Allison (Allie) Kennedy Thurmond is currently a manager in Statoil for research and development in basin and petroleum systems analysis in Bergen, Norway. She works with a team of talented researchers spread throughout Norway and in Houston who are developing cutting edge technologies in topics such as basin analysis, geodynamics, petroleum systems analysis and pore pressure and seal. Allison graduated with a B.Sc., M.Sc. and Ph.D. in Geosciences from the University of Texas at Dallas where her graduate focus included structural geology, tectonics, remote sensing and GIS. Her Ph.D. work involved understanding the structural / tectonic evolution of the Afar Depression, Ethiopia through field work and remote sensing (i.e. radar interferometry). Prior to joining Statoil (formerly Norsk Hydro) in 2005 and throughout her undergraduate and graduate education, she worked for the US Department of Commerce for more than a decade as a Supervisory Survey Statistician.

## ANNOUNCEMENTS AND EVENTS

### **2014 Regina Regional Science Fair**

The Saskatchewan Geological Society Executive would like to acknowledge members who volunteered to judge this year's Science Fair, which was held April 3<sup>rd</sup> and 4<sup>th</sup> at the University of Regina. Volunteers were Jason Cosford, Michelle Hanson, Don Kent, Osman Salad Hersi and Maria Velez Caicedo.

### **SGS Bonspiel**

The Saskatchewan Geological Society Executive would like to thank everyone who participated in the annual Bonspiel this past Saturday. The costume-friendly event, which is held jointly with the D.M. Kent geology students club, produced some spirited competition and included some teams with exceptional costumes. We would like to thank our sponsors (APEGS, Wok Box, J D Mollard and Associates and The Saskatchewan Mining Association) for providing prizes and our caterer (Valley Girls Catering). Most importantly, we would like to thank Lynn Kelley who did a great job organizing the event and then managing the draw, and Kate MacLachlan, who arranged the catering. It is volunteers like Lynn and Kate that make the society successful.

### **SGS 2014 Field Trip**

This year's SGS field trip will be 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.

Members interested in attending are asked to email John Lake ([lakegeol@sasktel.net](mailto:lakegeol@sasktel.net)).

### **SGS Golf Tournament**

This year's tournament will be held on September 5<sup>th</sup>. Currently the chair of the organizing committee is vacant so the volunteers are necessary if we wish to maintain the overall quality of the event. Anyone interested in volunteering should contact Kate MacLachlan (Business Manager; [KateM@apegs.ca](mailto:KateM@apegs.ca)). We will need prizes and/or donations to help make this event successful so if you have contacts that might be willing to help out let Kate know.

### **Luncheon Talk Speakers**

If anyone has any ideas for luncheon speakers please contact Murray Rogers ([murray.rogers@gov.sk.ca](mailto:murray.rogers@gov.sk.ca)) or Jason Cosford ([cosford@jdmollard.com](mailto: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 form on the website at [www.sgshome.ca](http://www.sgshome.ca)

### **SGS Merchandise**

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