

# The Rock Record – December 2004

## 2004 Executive

### President

Erik Nickel 787-0169

### Vice-President

Arden Marsh 787-2499

### Secretary

Chris Curry 789-9151

### Treasurer

Jeff Coolican 787-0651

### Business Manager

Andre Costa 787-9104

### Program Chair

Mike Gunning 787-9373

### Assistant Program Chair

Steve Whittaker 787-2577

### Past President (Acting)

Andrew Nimegeers 787-6984

### School Liaison Committee

Melinda Yurkowski 787-0650

### Field Trip Committee

John Lake 787-2621

### Golf Tournament Committee

Bob Troyer 787-2562

### 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 **Andre Costa**

## In This Issue

- **Event Announcements** p. 1
- **Abstracts for upcoming speakers** p. 2
- **Other articles and announcements** p. 3

**Wednesday, December 15, 2004**

### **The S.G.S. Field Trip A Journey through Northern Montana**

**Andre Costa**

Saskatchewan Industry and Resources

#### **Lancaster Room, Royal Canadian Legion**

Cash Bar: 11:30; Lunch: 11:50

Meeting: 12:15 – 13:00

Members \$7.00, Non-members \$11.00

Contact: Andre Costa 787-9104

By NOON, Monday, December 13, 2004

**Thursday, January 13, 2005**

### **Shelf-Transiting Shoreline Systems and Generation of Stratigraphic Sequences in Shelf-Break vs. Ramp Basins**

**Ron Steel**

AAPG Distinguished Lecturer

#### **Lancaster Room, Royal Canadian Legion**

Cash Bar: 11:30; Lunch: 11:50

Meeting: 12:15 – 13:00

Members \$7.00, Non-members \$11.00

Contact: Andre Costa 787-9104

By NOON, Monday January 10, 2005

## **The S.G.S. Field Trip A Journey through Northern Montana**

**Andre Costa**

Saskatchewan Industry and Resources

This year field trip, lead by Dr. Don Kent and Dr. Ben Rostron (U of A) went to Zortman, Montana during August 20 to 24. This year we had 12 participants. Everything went well with good weather, good fellows, and good geology. The trip started with a visit to the T-rex Discovery Centre museum in Eastend followed by the K-T boundary outcrop in the Frenchman River Valley. Outcrops from basement to Jurassic were visited while in Zortman, including two potential lamproites. We also visited the Bearpaw and Judith River formations at the Missouri river valley. The last stage of the trip was lead by Dr. Karen Porter (Montana Bureau of Mines and Geology) to the Cretaceous around Zortman and Bear's Paw Mountain (Chinook).

This talk by Andre Costa, one of the participants, will be a light-hearted overview of just what exactly went on during this field trip.

### **Shelf-Transiting Shoreline Systems and Generation of Stratigraphic Sequences in Shelf-Break vs. Ramp Basins**

**Ron Steel**

AAPG Distinguished Lecturer

Basins that develop a shelf break and fill by means of clinoform accretion appear to require at least 150-200m of water depth. Ramp basins have shallow water throughout.

The landward reaches of both types of basin form a shelf platform across which shorelines make regressive (deltas, strandplains) and transgressive (estuaries, barrier-lagoon systems) transits. Numerical simulations of modern deltas on varying shelf width and gradient suggest that (a) the shoreline is more likely to reach the shelf edge (or far into the basin in the case of a ramp) if relative sea level is stable or falling rather than rising, because of the phenomenon of auto-retreat, and (b) regressive shelf-transit time only rarely exceeds 100ky for even the widest shelves. The latter has some consequences for the time scale of fundamental stratigraphic sequences.

Although high-sediment supply deltas may be somewhat insensitive to minor sea-level changes and may remain at the shelf margin for prolonged periods, small and medium-sized deltas make repeated regressive and transgressive transits in response to accommodation changes on the shelf. There is some evidence of process-regime changes during such shelf transits, depending on whether regressive shoreline trajectories are slightly rising or are slightly falling. In the former cases, deltas are remarkably wave dominated throughout the transect, whereas in the latter case wave-influenced deltas often become tide dominated (ramp basins) or fluvial dominated (shelf-break settings). There is increasing evidence that some turbidite populations on the shelf margin and basin floor derive from the river-generated hyperpycnal flows at the shelf-edge. Transgressive coasts also have a clear tendency to be strongly tidally influenced.

A new generation of sequence stratigraphic models will be stronger and more predictive when clothed with process data.

Here is the traditional “call for nominations” for the society executive positions. If you or anyone you know is interested in helping out the society in any way, please contact a society executive member or email [info@sgshome.ca](mailto:info@sgshome.ca) to get your name in. Replacing the executive is always a challenge; anyone’s help would be greatly appreciated.

### **Call for Nominations for the 2005 SGS Executive**

For the purpose of elections to the Executive, the following offices are declared vacant on January 29, 2005: President, Vice President, Secretary-Treasurer, Business Manager, and Program Chairman. **A call for nominations for election of officers is hereby made** by the present Executive of the Society which constitutes the Nominating Committee for the purpose of elections (details of the duties of each officer may be obtained from the current Executive). **Nominations close at 5:00 p.m. Friday, December 31, 2004.** Nomination papers must be postmarked prior to this time.

#### **Rules**

1. Any Active Member in good standing may stand for office in the Society and may be nominated by any other Active Member in good standing.
2. Except for the Secretary-Treasurer, who may be elected for a second one year term, Executive Members may not hold the same office for more than one year consecutively.
3. Any active member may nominate one candidate for each office, using separate Nomination Papers for each.
5. Mail the completed form(s) to the nominating Committee, Saskatchewan Geological Society, P.O. Box 234, Regina, Saskatchewan, S4P 2Z6, email a form to [info@sgshome.ca](mailto:info@sgshome.ca) or hand to a member of the Executive by December 31, 2004.

I, \_\_\_\_\_, being an Active Member of the Saskatchewan Geological Society in good standing for the year ending December 31, 2003, hereby nominate \_\_\_\_\_, who is also an Active Member of the Society in good standing for the year ending December 31, 2003, as candidate for President, Vice President, Secretary-Treasurer, Business Manager, Program Chairperson (delete all but the chosen office) of the Society for 2004.

Signed \_\_\_\_\_ Dated \_\_\_\_\_

Witnessed \_\_\_\_\_ Dated \_\_\_\_\_

## The Saskatchewan Geological Society Annual General Meeting

Saturday, January 29<sup>th</sup>  
Blue Lounge, Hotel Saskatchewan  
Cocktails 6:00pm, Dinner 7:00

The SGS annual general meeting is a nice evening out for all members and spouses. After cocktails and a nice dinner, there is a brief business meeting at which time awards are given out, the new executive is announced, and any new business from members is discussed. After this meeting, the president of the society gives a short presentation on a topic (hopefully) of interest to the members in attendance.

The cost is \$20.00 per person to attend which includes dinner, entertainment and wine. If you are interested in attending, please contact Andre Costa (787-9104) or email [info@sgshome.ca](mailto:info@sgshome.ca). We hope to see many SGS members and friends there to wrap up this very successful 2004 SGS season.

### **New Website!**

Thanks to the new SGS webmaster extraordinaire, Andre Costa, the society now has a new and sharp-looking website with some really handy info. Send your browser to:

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

The site is still under some minor construction but there is currently lots of information on the history of the society, archived newsletters, awards info and history, and links to our corporate sponsors. Of course, the current and upcoming talks and abstracts are also available for download.

Happy Surfing!

## **Hot Dog We Have a Weiner!**

The annual SGS Student poster competition was held again at the Saskatchewan Industry and Resources open house on December 1. And the winners are:

### Graduate Student:

Istvan Gyorfi of the UofS for his poster entitled:

*Styles and scales of deformation associated with the western margin of the Trans-Hudson Orogen, Canada, imaged by coincident, high-resolution 2D and 3D surveys*

### Undergraduate Student:

Aaron Brown of the UofR for his poster entitled:

*Preliminary investigation of the conditions of migmatization in the Rottenstone Domain*

## **Coming Events!**

Our program chairs Mike Gunning and Steve Whittaker have been doing an amazing job of lining up our winter program. Here are just a few of the events you can expect:

Tim Tokaryk of the Dinosaur Research Station in Eastend SK will be giving a luncheon talk in February about the latest findings with Scotty!

AAPG Distinguished Lecturer Jack Pashin will be giving a talk on Coalbed Methane in the Black Warrior Basin in Alabama in Late January.

Steve Ruff of the Jet Propulsion Laboratory will be the public lecturer in the spring. He is a scientist with the Mars Lander program.