

The Rock Record – November 2006

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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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All advertising inquiries should be directed to Jeff Coolican

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Wednesday, November 8th

SGS LUNCHEON TALK:

Highlights of the University of Saskatchewan Field Trip to South Africa

**Presented by:
Bernadette Knox
University of Regina**

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: Jeff Coolican 787-0651

By NOON, Tuesday, November 4th, 2006

November 27th to 29th

Saskatchewan Geological Survey Open House & SGS Sponsored Public Lecture

TUESDAY, NOVEMBER 28th at 7:30

**Dr. Alan Cutler, U of Arizona
Science, Seashells, and Religion:
Nicolaus Steno and the birth of geology**

Delta Bessborough Hotel, Saskatoon

- **Technical Talks**
- **Poster Displays**
- **Commercial Exhibits**
- **VISIT the SGS BOOTH**

Luncheon Talk Wednesday, November 8th

Highlights of the University of Saskatchewan Field Trip to South Africa

**Bernadette Knox
University of Regina, M.Sc Candidate**

SGS Public Lecture

Saskatchewan Geological Survey Open House

Tuesday, November 28th at 7:30PM

Delta Bessborough Hotel, Saskatoon

Science, Seashells, and Religion: Nicolaus Steno and the birth of geology

Dr. Alan Cutler, University of Arizona

To many people, historical geology's toppling of the literal interpretation of Genesis creation story epitomizes the age-old conflict between religion and science. Yet the seventeenth-century founder of stratigraphy and historical geology, Nicolaus Steno, was an intensely religious man. In 1988 he was beatified as a saint by the Catholic Church. How did religious considerations figure into Steno's scientific thinking? How did he and his contemporaries see the relationship between religion and science? And what, if any, insights can be gleaned regarding modern-day controversies regarding geology and the Bible? Like the strata he first studied, Steno's unique story has many layers.

Alan Cutler has a Ph.D. in geosciences from the University of Arizona and has taught and written about geology and the natural sciences for over twenty years. He was a contributing editor to *Forces of Change: A New View of Nature*, a joint publication of the Smithsonian and the National Geographic Society, and his writing has also appeared in *The Washington Post*, *Science* magazine, and other publications. *Seashell on the Mountaintop*, his first book, was a Barnes & Noble Discover Great New Writers selection in 2003. He is a Research Associate at the Smithsonian Institution in Washington, D.C. and lives in Gaithersburg, Maryland, with his wife and two children.

The booklet "Saskatoon's Stone" is now available and looks great. This is a product of the Saskatoon's Stone Project. More information on the booklet can be obtained from the editor, Christine Kulyk at clkulyk@sasktel.net.

OTHER EVENTS AND NOTICES:

The Canadian Society of Petroleum Geologists in cooperation with the Educational Trust Fund is proud to sponsor on November 16th, 5:15 PM, Room 286 in the Ridell Centre, U of R:

The influence of depositional framework and stratal architecture on volcanic edifice preservation in diamondiferous kimberlites: examples from the Fort a la Corne kimberlite Field, Canada

Dr. John-Paul Zonneveld, Geological Survey of Canada, 3303 33 St. NW, Calgary, Alberta, T2L 2A7

Kimberlites are typically reported from continental, stable cratonic settings i.e. regions of inherently low accommodation space. Thus, examples of preserved extrusive pyroclastic kimberlite are rare. Kimberlites in the Fort à la Corne kimberlite field (FALC) in central Saskatchewan, Canada are exceptional in their relative completeness including preservation of volumetrically significant tephra cones and extra-crater pyroclastic deposits. Preservation of extra-crater pyroclastic kimberlite at FALC is a function of available accommodation space, which is related to both volcanic style and local tectono-stratigraphic setting.

The FALC kimberlites erupted in both subaerial coastal plain and shallow marine settings on the margin of the Lower Cretaceous (Albian) epeiric Moosebar-Clearwater Seaway. Regional tectono-stratigraphic setting influenced both the eruptive processes that governed the nature of individual kimberlite volcanic events and post-eruptive kimberlite preservation.

Initial kimberlite volcanism in the area occurred coeval with deposition of the Early-Middle Albian Cantuar Formation. Kimberlite body geometry and the presence/thickness of extra-crater pyroclastic kimberlite in the Cantuar Formation is largely a function of fluctuations in fluvial base level and concomitant variation in available accommodation space. Thick, laterally extensive deposits of pyroclastic kimberlite, as well as variably sized tephra cones, first appear in the marginal/shallow marine Middle-Late Albian Pense Formation and are common in the shallow/deep marine Late Albian Joli Fou Formation.

Volcanically induced faulting (including ring-faults and half grabens) resulted in the creation of local accommodation space proximal to individual kimberlite feeder vents. Preservation of pyroclastic kimberlite, including tephra cones, is related in part to increased accommodation space resulting from a regional marine transgression (i.e. expansion of the lower Cretaceous Moosebar-Clearwater Seaway) and encasement of kimberlite deposits in marine shale. Availability and variation of local and regional accommodation space must be addressed to accurately assess the eruptive histories and develop detailed volcanological models of FALC kimberlites.



Dr. John-Paul Zonneveld is a research scientist at the Geological Survey of Canada (Calgary). He received his M.S. and Ph.D. degrees in Geology from Michigan State University (1994) and the University of Alberta (1999) respectively. After a brief tenure as a post-doctoral research fellow at the University of Calgary he accepted his current position as Mesozoic Stratigrapher at the Geological Survey of Canada in 2000. His research involves stratigraphy, sedimentology (carbonate and clastic), paleontology and paleoecology. Recent projects include analyses of Lower, Middle and Upper Triassic strata in both outcrop and subsurface of Alberta and British Columbia and Cretaceous kimberlite volcanology and post-eruptive sedimentary reworking in the Fort à la Corne kimberlite field of Saskatchewan. John-Paul has served as Chairman of the Sedimentology Subdivision of the Canadian Society of Petroleum Geologists (2000-2002), as Associate Editor of the *Bulletin of Canadian Petroleum Geology* (2001-2004) and is currently as Associate Editor for the journal *Palaios*. Since 2000 John-Paul has been an Adjunct Assistant Professor in the Department of Geology and Geophysics at the University of Calgary.

Review of the Saskatchewan and Northern Plains Oil & Gas Symposium

The SGS Saskatchewan and Northern Plains Oil & Gas Symposium and associated workshops were held October 16th through 19th in Regina, at the Delta Regina Trade and Convention Centre and at the Subsurface Geological Laboratory. We received many positive comments on the quality of the technical presentations and also the accompanying social events. On Tuesday night, attendees visited the Saskatchewan Science Centre and were treated to a variety of ethnic foods (including Regina Cuisine), interactive exhibits, live jazz and IMAX movies. Approximately 240 geoscientists mainly from western Canada and the US registered for the conference. We would like to extend our gratitude to all presenters who made this symposium a success, and also to our many generous sponsors who enabled this event to take place.

A core workshop was held prior to the Symposium itself was also very well attended as registration reached our cap. An ichnology workshop by Dr. James MacEachern held after the Symposium, and field trip to the PCS Lanigan potash mine led by Mr. Terry Danyluk were also filled to capacity. We would like to thank James and Terry for their gracious work in these events.

Symposium and Core Workshop volumes are available through the SGS by visiting our website or through info@sgshome.ca.

The SGS Organizing Committee spent many months planning, organizing and frantically getting ready for this rather large undertaking. It was 8 years since the society last hosted an oil and gas symposium, and based on the many positive comments we hope it won't be that long again before the next one...although none of us want to think about that quite yet! A round of thanks must be given to the staff at the Subsurface Geological Laboratory of Saskatchewan Industry and Resources for performing so much of the work and allowing use of their facility – this event simply could not have occurred without their support. I would personally like to extend my gratitude to all members of the Organizing Committee for their efforts in producing a well-run conference.

Steve Whittaker
Co-Chair Organizing Committee

Student Career Night

Friday, November 3rd at 5:30-10:30 pm is the SGS career night at U of R. There will be two guest speakers, one from the mineral exploration sector and one from the oil and gas sector. Mike Gunning will be talking about his varied experience in hard rock geology and current opportunities in mineral exploration. The second speaker is Nadene Hagen (formerly England), who graduated from U of R in 2003. She currently works for Keystone Energy Corp. here in Regina and will be talking about her experiences in making the transition from student to professional and her job in the oil and gas sector. All U of R geology students are encouraged to come out and hear the talks, meet the speakers and other geoscience professionals who may be attending. Free Beer and Pizza will be served, starting at 5:30pm. The talks will begin around 6:30 pm.

Digitization of SGS Publications

AAG/Datapages has approached the SGS with an offer to digitize all our publications to enable them to be available as CD-ROM and through the internet. This procedure has already been performed with publications of the CSPG, AAPG and numerous other geological societies. The documents will be searchable, and included in on-line databases. The SGS will retain all copyright and will receive royalty payments on a quarterly basis. The SGS can market our existing hardcopies and also the digitized versions as they become available. In addition, the documents will be marketed through AAPG/Datapages. As many of our earlier publications are quite difficult to find, this will provide a great opportunity to archive these valuable publications.

Call For Nominations

- nominations for the SGS Executive
- nominations for induction into the SGS Honour Roll

Please contact any executive member for more information

AGM

The SGS Annual General Meeting is scheduled for January 27th, 2007, in the Blue Room of the Hotel Saskatchewan. More information will follow in the next Rock Record Issue.