



The Rock Record – January, 2013

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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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www.sgshome.ca

All advertising inquiries should be directed to **Charla Philippon**

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Monday, January 21, 2013

Freeze-Dried Findings Support a Tale of Two Ancient Climates.

Dr. Adam Lewis, North Dakota State University

Ramada, Regina

Lunch: 11:45 a.m.

Meeting: 12:00 – 1:00 p.m.

Members: \$10.00 and Non-members: \$15.00 for lunch

For those not having lunch the talk is free

Please contact Lynn Kelley lynn.kelley@gov.sk.ca

by Friday, 18nd if you are planning to have lunch

The Antarctic ice sheets play a central role in Earth's climate system, influencing both oceanic and atmospheric circulation and temperature. But establishing the point in time when the ice sheets became permanent climate components has been a long-standing problem, mainly because terrestrial climate indicators are rare and poorly dated. My research aims to help fill this void by establishing a record of terrestrial Antarctic glaciation and paleoclimate extending back through Miocene time. Evidence for climate change comes from a combination of glacial geologic studies, geomorphic analyses, and paleoenvironmental reconstructions using the only dated fossils of ancient tundra from Antarctica. Chronologic control comes from $^{40}\text{Ar}/^{39}\text{Ar}$ analyses of in-situ volcanic ash deposits that occur as interbeds in glacial deposits and in cross-cutting polygonal patterned ground. Results of my research show 1) a permanent shift in the thermal regime of local glaciers, from wet to cold based, between 14.07 and 13.94 Ma, which corresponds to the global mid-Miocene Climate Transition; 2) that atmospheric temperatures in the interior fell by at least 8°C during the transition based on paleoecological analysis of fossils in an ancient alpine lake; 3) that 15 to 20 Ma ago glaciers advanced and retreated repeatedly across vegetated surfaces in the Transantarctic Mountains with mean summer temperatures of 5 to 7°C inland, even during times of initial glacial advance. My most recent research has focused on dating small-scale meltwater features in the Transantarctic Mountains, which stand out as the only evidence for warmth in the frozen landscape. A record of meltwater generation should help quantify climate conditions over the past few thousand years that have led to melting along Antarctic ice sheet margins.

Wednesday February 13, 11:45 at the Ramada
Please RSVP to Lynn by Monday Feb. 11 if you plan on having lunch

Chris Hartle

Nickel Laterites in Western Australia:

A Review of the Kalgoorlie Nickel Project; and the downfalls of transitioning a project from a Junior Explorer to a Major Miner

Abstract

Supplies of nickel from sulphide sources had been declining for over a decade. There was a large shortfall of new projects on the horizon, most were small and few projects contained large tonnages of high grade nickel sulphide outside of known mining camps. At the time (2004) INCO Ltd. was searching for ways to add to its portfolio to continue growth. The opportunity came to create a JV for a large nickel laterite project in Western Australia. INCO had a lot of experience mining laterites from its 40 years of production in Indonesia. The Kalgoorlie Nickel Project (KNP) was a JV between INCO and Heron Resources. The JV operated for 3 years with multiple study phases (the price of Nickel hit its peak in 2007 reaching \$25 per pound). The KNP was marketed as the largest Nickel Laterite holding in a sovereign risk free mining environment. There was ~980 Mt of in-situ material. The KNP was located in a historic mining area, which had several previous nickel laterite projects that were in operation or had been in operation (Cawse Nickel; Bulong; and Murrin Murrin). As well, BHP Billiton was developing its Ravensthorpe project 400km south on the southern coast of Western Australia.

The first part of this talk will give an overview of nickel laterites within Western Australia, and the geology of the KNP. It will give an insight into the study phases carried out with a review of the application of different drilling methodologies and geophysics applied to understand and categorize the mineral resource. The second part of the talk will look at the downfalls that can happen during the transition of the project from a Junior Exploration company to a Major Mining company, based upon my experiences working on the KNP.



Announcements and Events

2013 Executive

I would like to thank Lynn Kelley for taking the position of president, Dan Kohlruss the position of secretary and Murray Rogers as assistant program chair. Also I would like to thank Dave van Zeyl, Kim Kreis, Kate MacLachlan, Michelle Hanson for retaining their positions on the executive for another year. Also John Lake and Tom Love are staying on as committee chairs for the special events, the field trip and golf tournament respectively. The members of the society appreciate the time the executive members volunteer to the society!

2013 Williston Basin Petroleum Conference (WBPC) Workshops.

The society is once again responsible for organizing the two workshops associated with the WBPC. This opportunity is a great source of revenue for the society. This allows the society to bring in speakers, and hold other events such as field trips, curling bonspiels, and golf tournaments. At this time, the executive is looking for volunteers to join an organizing committee to put together the workshop booklets and plan the logistics of the events (i.e. plan catering and audio visual). We are looking for 1 additional person to be on the committee. Gavin Jensen will be on the committee as the liaison between the WBPC and the workshop committee. Please respond to gavin.jensen@gov.sk.ca if you have any questions or if you are interested in being on the committee. Committee members will receive free entry to the core workshop and the WBPC conference at value \$450.

Thank you to Don Kent, Chris Hartle and Kim Kreis for already volunteering!

Annual General Meeting

The **Annual General Meeting** will be held in the evening of Saturday, January 26th at the Italian Club located at 2148 Connaught Street, Regina, cocktails at 6pm, Italian feast at 7pm. Please contact Gavin Jensen gavin.jensen@gov.sk.ca or Kate MacLachlan katem@apegs.sk.ca if you plan to attend. As we need to provide the number of attendees to the Italian Club. The cost is \$30 per person

Luncheon Talk Speakers

If anyone has any ideas for luncheon speakers please contact Lynn Kelley (lynn.kelley@gov.sk.ca) or Kim Kreis (k.kreis@sasktel.net)

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.
