



The Rock Record - September, 2015

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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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Saskatchewan Geological Society PUBLIC LECTURE

Thursday Sept 24th

**How and when did humans
start controlling fire?**

Dr. Francesco Berna,
Department of Archaeology,
Simon Fraser University

NOTE DIFFERENT VENUE AND TIME:

University of Regina,
Classroom CL110

Talk: 7:00 p.m.

Admission is free

**Sponsored by SGS and
U of R (Geology/Biology)**



SASKATCHEWAN GEOLOGICAL SOCIETY

How and when did humans start controlling fire?

Geoarchaeological evidence from
Wonderwerk Cave, South Africa

Public Lecture by:

Dr. Francesco Berna,
Department of Archaeology,
Simon Fraser University

Thursday, September 24th
7:00 pm
University of Regina,
Classroom CL110

Free Admission!

The biology, diet, habitat, and behavior of our species are deeply entangled with the use of fire to the point that our survival is, essentially, dependent upon fire control. New archaeological finds in Africa and Europe revealed that the history of use of fire is more complex than previously hypothesized.

Wonderwerk cave, in fact, provides uninterrupted human occupation spanning the last two million years and a complete cultural sequence comprising all known prehistoric stone tools cultures, rock art, and recent Bushmen and Boer frequentations. Our work using multiple lines of microscopically contextualized evidence shows that the cave preserves a series of intact prehistoric surfaces and evidence of fire associated with all the cultural assemblages. In particular, heated bones are associated with the Oldowan lithic industry dated to about 1.7 million years ago and remains of small camp fires with Acheulean stone tools dated to ca. 1 million years ago.



UNIVERSITY OF
REGINA

Departments of Geology and Biology

PUBLIC LECTURE



NEWS AND EVENTS

President's Blog – Field Trip

For the first time in eight years I was able to stay in Regina this summer, rather than doing field work in northern Saskatchewan. As a consequence, I had the opportunity and pleasure to participate in the annual geological field trip that the Society offers each summer. Readers of this newsletter will know that this year's field trip went to western Montana. The two highlights of the trip were the three restaurants that Gavin Jensen had preselected for us and the number of deer we saw in the Bozeman area. But seriously, the geology and scenery of western Montana are simply awesome and hard to beat, despite the heavy smoke from forest fires that were burning in the western US and obstructed the view of the mountains.

We met at the 'chicken chalet ☺' in the Southland Mall parking lot early Friday morning and managed to hit the road with our two vans and 18 participants as planned at around 7:30 for a long drive to Columbus, west of Billings. Food and drink were purchased shortly after crossing the US border and the first session of the traditional SGS picnic luncheons was had in a small town, where some poor school kids already had their first day of school and where some aggressive wasps were happy to have us and our cold cuts and Papst Blue Ribbons. An uneventful drive and late arrival at the Super A in Columbus followed. Then we had dinner at a small traditional bar with live country music and some questionable yodeling courtesy of some locally famous 70-year-old country queen.

The first field trip day was the most exciting for me, as we visited the 2.7 Ga Stillwater Complex. Our very knowledgeable guide Ennis P. Geraghty, Senior Project Geologist with Stillwater Mining Company, did a great job of taking us up the narrow winding roads, which allowed us access of the entire layered ultramafic-mafic complex. We got to see the three mineralized horizons (JM reef, basal Cu-Ni mineralization and chromitite layers), as well as the famous inch-scale-layering. What awesome geology. We also manage to get the two vans stuck and it took some fancy driving and a bit of pushing to get out of this one. I had brought home some samples but sadly Mike Thomas stole them all, despite the promise of some garter snakes. To finish the day off, Ennis' truck broke down and Kim Kreis' van had to tow him to the next gas station. We were the safety follow vehicle and wondered why Kim kept speeding up, despite the dangerously short (6 feet) tow chain. We later learnt that Mike Thomas, who was in Ennis' truck, told Kim over the walkie-talkie "no faster", which all occupants of Kim's van understandably heard as "go faster". Made it to Bozeman pretty late that day and went to the best restaurant of the trip, the only reason we got a table was that we didn't get to the restaurant until 9:30.

The second day was spent in the Bozeman area, where we not only saw lots of deer but also got treated to the Sappington Formation, a Bakken equivalent. Our guide Michael Hofmann, a Prof from the Department of Geosciences from the University of Montana in Missoula, was also a great field trip leader. He was aided by two of his grad students, both really nice and knowledgeable. My highlight of that day was the boundary between the Carboniferous and Devonian, some crossbedded dolomitic siltstones, some bioturbated sediments and a few crinoids. After that we went on a pretty amazing drive through the Belt Supergroup and some Tertiary intrusives and volcanics on the way to Great Falls. Evening ended with some outstanding pizza, a bunch of beer and great company.



The third and final day was spent in the Great Falls area. Our guides through the Shonkin Sag and same-named alkaline laccolith were Chris J. Croff, a geological engineer, and Mr. Ron Long (a local rancher), both from the Highwood Mountain area. A great day, very hot and very smoky. The Shonkin Sag is a glacial spillway of biblical proportions and laccolith is famous for the plutonic rocks, shonkinite, that were first described and named in this area; we also saw some phonolite and lamprophyre (minette) dykes.

All in all a really fun and educational trip! All participants were enthusiastic, the guides were knowledgeable and our fieldtrip organizers and drivers, John Lake, Mike Thomas, Kim Kreis, and Brian Brunskill did a wonderful job putting it all together and keeping us organized. Thanks so much for making it happen and making it a memorable and awesome experience!

Williston Basin Core Workshop

By Dan Kohruss, Organizing Committee Chair

The 2015 SGS core workshop was a resounding success.

Despite depressed oil prices and lowered attendance at the Williston Basin Petroleum Conference, the ever popular core work shop had 98 attendees, only 2 short of a sell-out. This resulted in \$14,700 in revenue. The Ministry of the Economy, Sunburst Consulting and the Association of Professional Engineers and Geoscientists were major sponsors of the event contributing \$5000 to help cover nearly all the expenses of the event as well as supplying the venue and many volunteers.

As usual, the event's success was primarily due to all the volunteers that came forward to help, including the organizing committee, technical editors, the production editor, the high quality presenters, Geological Subsurface Lab staff volunteers and student volunteers: A total of over thirty people!

The funds from the Core Workshop enable the society to bring in high quality speakers for our technical luncheon talks, fund public and school lectures, and to subsidize the annual field trip and AGM. This all fits extremely well with the societies mandate to promote the study and practice of earth sciences, and to foster a spirit of scientific research among its members!

Renewed your Membership yet?

If for some inexplicable reason you have not paid your 2015 membership, please do it now! It is a staggering \$25 for an active membership and we have made it easy and convenient for you to renew it online and pay by PayPal; you do not need a PayPal account to do this: <http://sgshome.ca/membership>.

Annual Golf Tournament and BBQ – volunteers needed

The golf tournament is coming up on the 11th and the BBQ is the same evening at Dave and Alice MacDougall's place. We could use some extra volunteers for a number of jobs, like setting up, buying a few items, doing some last minute running around, cleaning up the next day. If you are willing to offer your services, please get in touch with Monica Cliveti as she is the one organizing the golf tournament.



WiM / WiN Conference in Saskatoon – October 2, 2015

Karen Turner

Saskatoon will again host an annual conference that is mining the talents of women working in the natural resources industry. Mine Your Potential, a professional development event for anyone interested in the natural resources sector in Saskatchewan, is presented by Women in Mining and Women in Nuclear Saskatchewan Inc. (WIM/WiN SK) and will be held on October 2, 2015.

Mine Your Potential was created to provide career development and networking opportunities for women working in the mining industry. This year's event will feature keynote speaker Alice Wong and three workshops, 'Happy on Purpose', 'Negotiating for Yourself' and 'Using Social Media for Professional and Personal Gain'. These workshops are designed to enhance soft skills, which can aid in job performance and provide attendees with additional skills that company's value. This event will expose women from a variety of backgrounds to:

- Learning opportunities;
- A new network of talented women from diverse backgrounds and organizations; and,
- Relevant industry topics and discussions.

In Saskatchewan alone, the mining industry is expected to require an additional 18,000 workers in the next 10 years. Many experts agree that improving diversity in the workforce by attracting and retaining traditionally under-represented groups such as women will be a part of a critical solution for labour shortages.

The Mine your Potential event is a great way to not only attract people to the industry but help them network and develop their knowledge of the sector. Nancy Komperdo, co-chair for WIM/WiN SK, says the day provides "the opportunity for women, and men, to gather together and learn about the industry and the limitations that may or may not exist when it comes to being a woman in the mining industry and put aside any preconceived notions about women in mining".

"Right now women account for approximately 11 percent of the mining workforce in Saskatchewan compared with the national average of 19%" says Anne Gent, co-chair for WIM/WiN SK. "The industry, and its various supporting industries, offer a wide variety of roles for women, from office support to heavy equipment operators to engineers" said Gent. "Part of our role with WIM/WiN SK and Mine Your Potential is to make people aware of the opportunities that are available".

In addition to offering the annual Mine Your Potential event, WIM/WiN SK offers monthly luncheons and other networking events for individuals in the mining industry. Although the organization was originally created to give personal and professional development for women working in the fields of minerals, mining, nuclear and radiation, we encourage both women and men to participate in our events. To find out how you can get involved or learn more about Mine Your Potential, visit their website at www.wimwinsk.com .



Women in Mining and Women in Nuclear Saskatchewan Inc.

presents

MINE *your* POTENTIAL

Development Day

October 2, 2015 Radisson Hotel, Saskatoon

Select 2 of 3 break-out sessions:

"Happy on Purpose"

"Negotiating for Yourself", or

"Using Social Media for Professional and Personal Gain"

Register now at wimwinsk.com/events/

Registration \$250, Students \$100

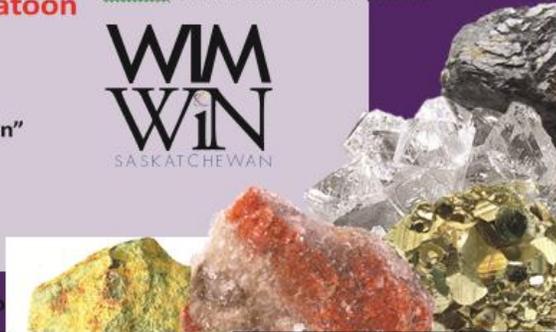
Early bird \$200 until August 31, 2015!

For more information, visit our website or email us!
www.wimwinsk.com email: mineyourpotential@wimwinsk.com

Join us for the 3rd annual "Mine Your Potential" development day! This one-day conference is a great opportunity for personal and professional development for anyone working in or interested in the minerals, mining, nuclear, and radiation industries. The theme is "Digging In".

This year's keynote speaker is Alice Wong, Senior Vice-President and Chief Corporate Officer of Cameco. Throughout her career, she has found that being female has brought unique challenges which manifest themselves in different and sometimes unexpected ways. At this year's Mine Your Potential conference, Alice will share some high and low points of her journey as well as lessons learned which she hopes will help women avoid some common pitfalls.

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