

The Rock Record – January 2007

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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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SATURDAY, JANUARY 27th

SASKATCHEWAN GEOLOGICAL SOCIETY:

ANNUAL GENERAL MEETING

BLUE ROOM, HOTEL SASKATCHEWAN

COCKTAILS 6:30

DINNER 7:30

MEETING TO FOLLOW

TICKETS ONLY \$20.00

PLEASE CONTACT info@sgshome.ca

Or

Bob Troyer at 787-2562 or btroyer@ir.gov.sk.ca

Wednesday, January 24th

**Making sense of the Western Churchill jigsaw
puzzle: the emerging picture from linked
metamorphic and *in situ* geochronologic studies**

Presented by

Rob Berman

Geological Survey of Canada

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, January 23rd

Making sense of the Western Churchill jigsaw puzzle: the emerging picture from linked metamorphic and *in situ* geochronologic studies

Rob Berman. GSC-Ottawa

The western Churchill is still the most poorly understood cratonic block of the Canadian shield. Appropriately described 35 years ago as “that part of the Canadian shield remaining after the adjacent, better defined, younger and older structural provinces have been delineated” (Davidson, 1972), it has not been until the last 10 years that the Geological Survey of Canada has undertaken projects in Nunavut (e.g. WC NATMAP, Committee Bay TGI, Boothia Geoscience) that have allowed recognition of the major events that have shaped this large tract of largely Archean crust. In this talk, I will summarize important chapters of the tectonic history that have been gleaned from studies linking quantitative metamorphic petrology with *in situ* geochronology of metamorphic rocks. In addition to highlighting the important geochronological record contained in metamorphic rocks when magmatism is not associated with metamorphism, these and associated studies reveal, in decreasing order of clarity:

1. a pre-1.865 Ga (Wathaman continental arc) phase of the Hudsonian orogeny that involved accretion of microcontinents to the southeastern Rae province.
 - a. This phase initiated with accretion of the Hearne province at ~1.9 Ga, marked by high-P granulites along the Snowbird tectonic zone (STZ). This model is at odds with (a) that of the East Athabasca segment of the STZ as the deep crust of a stable 2.55 – 1.9 Ga craton, and (b) the ~1.8 Ga timing of suturing inferred for the Alberta subsurface segment of the STZ.
 - b. Subsequent (pre-1.865 Ga) collisions (Meta Incognita terrane on Baffin Island, Hudson protocontinent in Hudson Bay) can account for pervasive structural and thermal reworking of the central Rae province (e.g. Committee Bay belt) which led to mobilization and concentration of gold in several highly prospective locations.
2. a newly recognized 2.5 – 2.3 Ga orogenic event, termed the Arrowsmith orogeny, which appears to have evolved from a 2.5 – 2.4 Ga continental arc on the western flank of the Rae province to a 2.4 – 2.3 Ga collisional orogen. This event has left its mark in an early S1 fabric dated at 2.35 Ga in the Committee Bay belt, 2.42 Ga granulites on southern Boothia peninsula, 2.5 – 2.37 Ga granulites in the Queen Maud block (Schultz et al., 2006), 2.5 – 2.3 Ga granulites south of the Thelon basin, and 2.3 Ga granites in the Beaverlodge domain of Saskatchewan.
3. voluminous 2.61-2.58 Ga felsic plutonism extending at least 1500 km in the Rae province from Athabasca basin to Committee Bay. A convergent, continental arc setting is most consistent with the ensuing development of the Arrowsmith orogeny on the western flank of the Rae, as well as the 2.55 – 2.50 Ga MacQuoid orogeny on the southeast flank of the Rae.

OTHER EVENTS AND NOTICES:

The Annual General Meeting and Awards Banquet

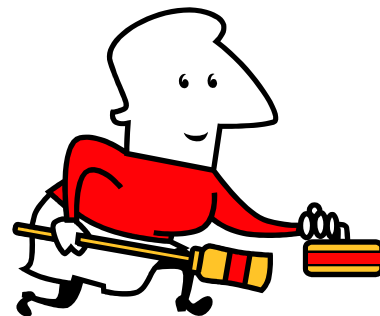
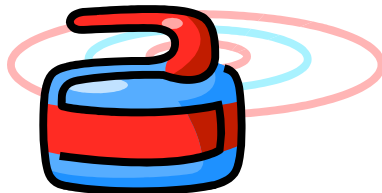
The SGS Annual General Meeting and Awards Banquet will be held January 27th, 2007, in the Blue Room of the Hotel Saskatchewan. Cocktails at 6:30; Dinner at 7:30; Tickets still only \$20.00.

Come out and enjoy a wonderful meal with good friends at a great price in an elegant setting.

Please contact Bob Troyer at (306) 787-2562 for more information.

SGS Annual Curling Bonspiel

The SGS Bonspiel will be held at the Regina Tartan Club, February 24th. More information on teams and times will be presented in the next Rock Record.



Time to renew your SGS Membership!!! .

Use the mail in form on the following page, or renew online at www.sgshome.ca and follow the membership links

SGS MEMBERSHIP FORM – 2007

(If you have access to electronic mail, please provide your e-mail address in the space provided below)

I, _____, wish to renew my/apply for a membership in the
SASKATCHEWAN GEOLOGICAL SOCIETY for 2007.

MY STATUS IS (please check one): ACTIVE (\$25.00) STUDENT (\$5.00)
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please check, if you **do not** want to receive the newsletter by e-mail

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RECEIPT REQUESTED (please check, if required)

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THANK YOU!