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# Geological Society of Nevada Southern Nevada Chapter Newsletter

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March 2006

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## A Magmatic Plumbing System in Antarctica: How a Cold Landscape Provides Hot Clues to Magmatic Processes

**SPEAKER:** Adam Simon, UNLV Assistant Professor

**DATE:** Thursday, March 30, 2006

**LOCATION:** LFG Rm. 102

**TIME:** Social half-hour at 6 pm  
Meeting business at 6:30 pm  
Talk at 6:45 pm

**SPONSOR:** Dr. Jean Cline, UNLV Professor of Geology

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**Geological Society of Nevada, Southern Nevada Chapter**

University of Nevada, Las Vegas

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<http://geoscience.unlv.edu/GSN/gsnsc.htm>

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Lora Griffin  
UNLV Undergraduate  
Student

***Hi Everyone!** Looking forward is the theme for this month's newsletter, and we have many exciting events on the horizon.*

*This month's speaker will be Adam Simon, a UNLV assistant professor, who will be discussing hot clues he has discovered about magmatic processes in one of the planet's coldest environments. Local chapter members are participating in several events over the coming months: Nevada Mining Association Minerals Education Workshops, Geologists for a Cure and the UNLV student-run GeoSINposium. Key*

*officer positions are available in the May elections. Current chapter president Robyn Howley confirmed at the last meeting that the positions of president, vice president and secretary are open. Paul Bowen will be staying on as Treasurer for another year. We encourage everyone to become more involved in GSN by becoming an officer. Nominations are due by the March 30 meeting.*

*We would also like to extend a special thank you to GSN Southern Chapter member Jean Cline for offering to sponsor the refreshments for the March meeting. This kind of support is what makes it possible for our Chapter to continue to grow and improve its member and community services.*

*-- Lora Griffin*

# ANNOUNCEMENTS

## Officer Nominations

The positions of president, vice president and secretary will be open! This is a great opportunity for old and new members alike to help shape the future of our chapter.

We encourage all members to participate as a GSN Southern Nevada Chapter officer. Officer positions are open to professionals, academics, & students. GSN is a wonderful organization to be involved with and being an officer provides many opportunities to network with local and national scientists and companies. Each term is for 1 year. This year's term will run from June 2006 through May 2007. The elected president will spend the year seated on the GSN Board of Directors, which meets 4 times each year, and will have an opportunity to direct the future of GSN.

An e-mail ballot will be sent to all chapter members in May. The start date for new officers is June 2006. Nominations for these positions should be in by March 30.

## UPCOMING EVENTS

**March 30** – Meeting – Adam Simon – “A Magmatic Plumbing System in Antarctica: How a Cold Landscape Provides Hot Clues to Magmatic Processes”

*!!!Officer nominations due!!!*

**April 27** - Meeting – Otto Holmquist

**May 25** - No Meeting

*Officer Elections (e-vote)*

## Nevada Mining Assoc.

## MINERALS EDUCATION

## WORKSHOPS

The Nevada Mining Association Education Committee each year hosts two Minerals Education Workshops for K-12 teachers. This year one will be held in Las Vegas at Cheyenne High School during Easter break (4/9-4/12) and one at Western Nevada Community College in Carson City this summer (8/8-8/11).

Teachers receive University credit or Professional Development credit for taking the 2-3 day course. The workshops consist of one full day (4/10) of grade-specific classroom activities, one day (4/11) of combined classroom activity and a field trip to local industrial mineral sites, to see science and engineering in action and associated careers for students. The third day (4/12) is a longer optional field trip, which this year will travel to Ash Meadows National Wildlife Refuge and to IMV clay mines and processing plant in Amargosa Valley.

Attendees are treated to meals and a family barbecue with gold-panning, a tote bag full of classroom materials, prize drawings and \$100 stipends. The classes are taught by education committee members who include geoscientists, metallurgists, engineers, and chemists from industry as well as state agency and university backgrounds.

The NMA Education Committee is always looking for volunteers to help teach classes and lead field trips and would welcome participation and help from Southern Nevada students and faculty willing to find out more about the program. For more information on the workshop and field trip venues or to acquire a teacher registration form contact D.D. LaPointe, [dlapoint@unr.edu](mailto:dlapoint@unr.edu).

## MEMBER NEWS

### Geologists for a Cure

Saturday May 6, 2006

Several members of the GSN Southern Nevada Chapter will be participating in the 11<sup>th</sup> Annual Susan G. Komen Breast Cancer Foundation Race for the Cure held at the Fremont Experience, Saturday, May 6, 2006. The UNLV Geoscience department team, Geologists for a Cure, has set a goal of raising \$3,000 for cancer research and education funding.

The Komen Breast Cancer Foundation's Las Vegas affiliate is dedicated to ensuring that women and men suffering from breast cancer are supplied with the critical tools for survival and a better quality of life. The generous donations of race supporters make this possible.

New participants and donors are invited to support this year's race. There are four ways in which participate: 1) Timed 5k Run 2) Timed 5k Walk 3) One mile walk 4) Sleep for the Cure, for those who are less athletic. Prizes will be awarded to the top run finishers, largest teams and individuals who raise the most money.

Anyone interested in participating must be registered online by April 17, 2006. To join the department team or to get more information or make a donation contact Robyn Howley at [rhowley@unlv.nevada.edu](mailto:rhowley@unlv.nevada.edu), or visit <http://race.komenlasvegas.com>.

## ADS & SPONSORS

GSN is a non-profit organization and our chapter relies on meeting sponsors and advertisements to keep our chapter up and running. If your business would like to sponsor social hour at one of our southern Nevada chapter meetings or place an ad in our newsletter please contact Robyn Howley.

## UNLV GeoSINposium

The First Annual UNLV GeoSINposium, a completely student-run geology symposium, is scheduled for Friday and Saturday, April 21 & 22, 2006. Graduates and undergraduates alike will be presenting posters or talks on their current research. Local and national scientific companies are being invited to attend and potentially recruit future employees.

The first day of this mini-conference will include poster presentations, talks and plenty of time for representatives from companies and organizations interested in the potential of UNLV geology students to interact with those involved in the most recent research. The second day, there will be a field trip exploring local geologic formations.

The symposium encourages businesses looking for future scientists to attend. They are also looking for sponsorship from the scientific community. If you are interested in attending, sponsoring or just want more information please contact Wendy Barrow at [wendyj@unlv.nevada.edu](mailto:wendyj@unlv.nevada.edu).

## UPCOMING GSN RENO SEMINARS

**March 17** - Michel Houseman, World Minerals  
"Diatomite Geology and Economics, with Specifics on Deposits near Fernley, Nevada"

**April 21** - Adam Simon, UNLV, "Experiments in Economic Geology"

The Geological Society of Nevada meets these evenings as well. Contact [gsn@mines.unr.edu](mailto:gsn@mines.unr.edu) for reservations.

*If you have member news or information, that you would like to share with other GSN members or suggestions or comments on how we can improve the newsletter, contact Lora Griffin at [lora.griffin@unlv.edu](mailto:lora.griffin@unlv.edu).*

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## A Magmatic Plumbing System in Antarctica: How a Cold Landscape Provides Hot Clues to Magmatic Processes

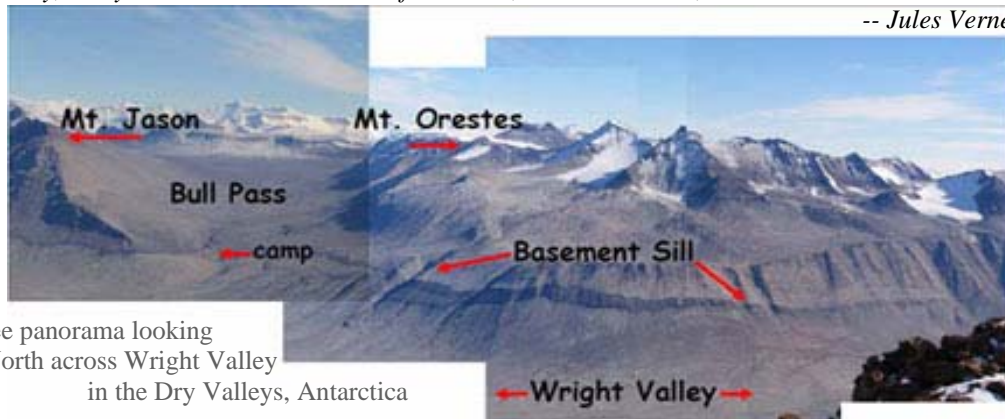
Adam Simon, UNLV Assistant Professor

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*"Descend, bold traveller, into the crater of the jokul of Sneffels, which the shadow of Scartaris touches before the kalends of July, and you will attain the centre of the earth; I have done this, Arne Saknussemm"*

-- Jules Verne (1864)



180 degree panorama looking  
North across Wright Valley  
in the Dry Valleys, Antarctica

Antarctica is popularly known as a land of penguins and ice. The fifth largest continent is covered by 87% continental ice sheets, 11% floating ice shelves, and 2% bedrock. It is the 2% bedrock that may provide the Holy Grail long sought after by geologists interested in the physical connection between volcanic and plutonic rocks. Ongoing field work in the Dry Valleys, Southern Victoria Land, Antarctica has identified a series of four contemporaneous and interconnected mafic sills capped by an extensive flood basalt province. The dolerite sills and associated volcanic rocks are the result of the breakup of Gondwana (Antarctica, South America, Africa, Australia, India) during the Jurassic (180 Ma). The areal exposure is on the order of 10,000 square kilometers with about 5 kilometers of vertical relief. The complex has been labeled a “magmatic mush column” that simplistically resembles the plumbing system of a modern building. I will present a general discussion of the field geology in the Dry Valley and the constraints on magmatic process that we can extract from the field relationships.

### Speaker's Background

Adam Simon received his B.S. in Geology from the University of Maryland in 1995. As an under-graduate, he was involved in research on felsic magmatism and completed a capstone research project elucidating the budget of copper in the Tuolumne Intrusive Suite located in the Sierra Nevada batholith. Adam moved on to the State University of New York at Stony Brook and completed a M.S. in experimental petrology in 1997. He experimentally tested several hypotheses for the origin of anorthosite complexes with a specific interest in the role that liquid immiscibility may play in producing late-stage felsic and mafic dike swarms found in all anorthosite complexes. After three years in industry running an analytical inorganic chemistry laboratory Adam returned to graduate school in 2000, receiving his Ph.D. in geology from the University of Maryland in 2003. Using novel experimental and analytical techniques, Adam's dissertation research demonstrated for the first time the behavior of ore metals in multi-phase fluid systems at high-temperature. Adam then moved on to the Johns Hopkins University as a postdoctoral fellow charged with organizing a field workshop for a group of twenty-five geologists in the Dry Valleys, Antarctica. Adam joined the faculty at the University of Nevada Las Vegas in August, 2005 and is currently building an experimental laboratory and pursuing field research in several areas of the western United States.

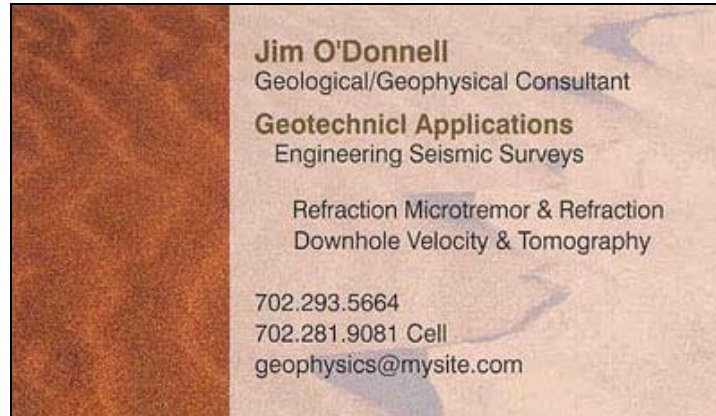
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## PAID ADVERTISEMENTS

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A business card for Jim O'Donnell, Geological/Geophysical Consultant. The card has a vertical brown textured bar on the left side. The text is on a light tan background.

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