



Geological Society of Nevada Southern Nevada Chapter Newsletter

September 2007

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Southern Nevada Chapter**
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A Brief History of the Nevada Test Site & Its Community Environmental Monitoring Program

SPEAKER: **Bruce Hurley**

DATE: *Thursday, September 27, 2007*

LOCATION: LFG Rm. 102

University of Nevada - Las Vegas

TIME: *Social half-hour at 6:30 pm*

Meeting business at 7:00 pm

Talk at 7:15

SPONSOR: **Rich DeLong**

Enviroscientists, Inc.

A new year of GSN! Thursday, September 27 is the first meeting for the 2007-2008 year. The speaker for the meeting will be our own chapter president, Bruce Hurley. Bruce will share his knowledge of NTS history and monitoring programs.

Now is the time to renew your GSN membership, if you have not already done so. We owe special thanks to Lance Taylor and Geotemps for sponsoring student membership dues again this year. This kind of consistent support strengthens our chapter and opens the door to students who may not have otherwise joined.

Our students are an important part of the chapter's membership. This summer Robyn Howley, a student member and chapter Webmaster, has been hard at work redesigning our web site. Robyn has given our web site a new look and accessible links to information essential to SNV chapter members. Visit our web site at <http://geoscience.unlv.edu/GSN/gsnsc.htm>.

Thank you Rich De Long, Enviroscientists, Inc., and Lance Taylor, Geotemps, for being the first to sponsor meeting refreshments this year (September and October respectively). Meeting refreshment sponsorship is still open for the November meeting through Spring. Interested? Contact Bruce Hurley at hurley@nv.doe.gov.

I look forward to seeing everyone soon!

-- Lora Griffin

MEMBERSHIP RENEWAL 2007-2008

The beginning of another meeting season marks the time to renew your GSN membership. GSN strives to connect Nevada professionals in the field of geology with current information by providing a relaxed forum in which to hear the newest research and advancements. Monthly meetings also provide an opportunity to network regularly, to attend field trips, and meet with up-and-coming geology students. For a renewal application visit www.gsnv.org.

FREE STUDENT DUES



A very special thank you goes to Lance Taylor of Geotemps for his continued support of our student members. Once again Lance has offered to cover the cost of student membership dues for any full-time Nevada students enrolled in an Earth Science major in the State of Nevada interested in joining GSN. This kind of support helps our chapter to grow a strong network of professionals.

Holiday Party with Friends of Paleontology

This December we will be sharing our holiday with the Friends of Paleontology at the Nevada State Museum. Festivities begin with a talk about recent finds at Gilcrease Ranch and continues with a silent auction and charitable fundraiser. There will be plenty of good food and good conversation, too!

Although this is only September, it is not too soon to think about donating an item for the silent auction. Rock and fossil specimens, geology gear, or gift certificates are all items that could help bring in funds to support our chapter. To donate items contact Bruce Hurley at hurley@nv.doe.gov. Watch future newsletters for more information.

UPCOMING EVENTS

October 25:

Meeting—

Minerals of the Fredrickson Mine, Goodsprings Mining District, Clark County, Nevada -- Patrick Haynes Speaker

November 29:

Meeting—

Student Research Presentations

December 7:

Holiday Party & Joint Meeting with Nevada Friends of Paleontology—

Meeting location: Nevada State Museum
Talk: Recent finds at Gilcrease Ranch
Holiday festivities: Silent Auction and charitable donation

January 31:

Meeting—

Alteration Subtleties at Carlin-type Gold Deposits of Northern Nevada
Lora Griffin speaker

February 28:

Meeting--TBA

March 27:

Meeting--TBA

April 24:

Meeting--TBA

Share your field trip anecdotes and photos with other GSN SNV chapter members. Send them to Lora Griffin at lora.griffin@unlv.edu

GEO NEWS: Hadean Diamonds Challenge Early Tectonics

Researchers from the Institut für Mineralogie, Westfälische Wilhelms-Universität, Germany reported the discovery of microdiamond inclusions within zircon crystals that were dated to more than 4 billion years (± 7 Ga). The discovery was published in the journal *Nature* August 23. If the dates determined for these zircons, located at Jack Hills within the Yilgarn Craton, Western Australia can be attributed to the diamonds, the diamonds will be the oldest known terrestrial specimens. Mineralogical analysis of the diamonds suggests they formed in an ultrahigh-pressure metamorphic environment consistent with early plate tectonics, and could challenge our understanding of early Earth geodynamics. For more information go to *Nature* letter #448, 917-920 or <http://www.nature.com/nature/journal/v448/n7156/abs/nature06083.html>, or contact the two of the researchers directly: Martina Menneken, m_menn03@uni-muenster.de or Thorsten Geisler, tgeisler@nwz.uni-muenster.de. Other researchers on this project include: Alexander A. Nemchin, Robert T. Pidgeon, and Simon A. Wilde.

GSNSNV Chapter Members See Results

Most geologists desire to improve the lives of others and the world around them. This desire to give back is often expressed through their work and the charitable activities in which they participate. Often the results of this support are not easily seen and little is rewarded in return. GSN SNV chapter meeting sponsors support the very students and professionals with whom they share time and tales at monthly meetings. By donating funds to sponsor meeting refreshments for one meeting sponsors can improve the lives of fellow members now and in the future, and receive advertising for the entire fiscal year.

Sponsorship Benefits

- 1) Provides social time before meetings
- 2) Provides financial flexibility which allows for funding of scholarships and field trips.
- 3) Provides the donor with advertising in the newsletter through April 2008.

Sponsors Contact

Businesses and individuals alike are invited to sponsor a social hour at one of our GSN Southern Nevada Chapter meetings. Interested? Contact Bruce Hurley at (702) 295-1284 or hurley@nv.doe.gov.

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A Brief History of the Nevada Test Site & Its Community Environmental Monitoring Program

Speaker: **Bruce Hurley**

ABSTRACT

From 1951 through 1992, the Nevada Test Site (NTS) served as the primary test location for nuclear devices within the continental United States. In all, 100 atmospheric tests were conducted at the NTS, and an additional 828 tests were conducted underground. These tests were conducted to evaluate nuclear weapons design and development, the effects of nuclear weapons, nuclear weapons safety systems, and the potential use of nuclear explosives for large excavation projects. With time, the public in areas near the NTS became increasingly concerned about the effects of fallout from nuclear testing at the NTS. The Community Environmental Monitoring Program (CEMP) was designed to allow communities surrounding the site to conduct monitoring of radioactive emissions independently of the federal government. For 26 years, the CEMP has continued to provide this service for the surrounding communities, along with real-time meteorological monitoring for the region, now readily accessible via a continuously-updated website.



Photos courtesy of National Nuclear Security Administration/Nevada Site Office

SPEAKER'S BACKGROUND

Bruce W. Hurley, President of the GSN Southern Nevada Chapter earned his B.S. in Geology at North Carolina State, M.S. in Geology at the University of North Carolina at Chapel Hill, and his Ph.D. in Geology at Washington State University. He is currently employed by the U.S. Department of Energy as the program manager for environmental monitoring, geology, and hydrology for the National Nuclear Security Administration's Nevada Test Site. His previous work history has included field mapping, mineral exploration, geologic site characterization, and tectonic. His professional insights on earthquake dynamics were recently solicited by Las Vegas Channel 13 News to help explain the geologic processes that may have occurred during the devastating magnitude eight earthquake in Peru this past August.