



# Geological Society of Nevada Southern Nevada Chapter Newsletter

October 2007

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## Minerals of the Fredrickson Mine, Goodsprings mining district, Clark County, Nevada

**SPEAKER:** Patrick Haynes

**DATE:** Thursday, October 25, 2007

**LOCATION:** LFG Rm. 105

University of Nevada - Las Vegas

**TIME:** Social half-hour at 6:45 pm

Meeting business at 7:15 pm

Talk at 7:30

**SPONSOR:** Lance Taylor  
GEOTEMPS

*This Fall and Winter season our chapter has some exciting things planned! Thursday, October 25 Patrick Haynes will be presenting his talk on the Fredrickson Mine in Goodsprings, Nevada. Please note the time and room changes for this month's meeting. He will be sharing many of the dramatic photomicrographs he has taken of minerals found at the mine. At November's meeting student presenters will talk about their recent research projects and their current findings. In December we will share our meeting with Nevada Friends of Paleontology at the Nevada State Museum. This is a great chance to get to know the members of another local organization and learn more about what they are working on in Nevada. A speaker will talk about what is new at Gilcrease Ranch, and there will be a fundraising auction; donations are welcome!*

*Remember, membership renewals are due, you can find a copy of the renewal form at the end of this newsletter or at [www.gsnv.org](http://www.gsnv.org). Thank you Lance Taylor from Geotemps for sponsoring student membership dues for another year. Our students are an important part of the chapter's membership. Sponsorship is a critical part of our chapter's success. Meeting sponsors are needed for future meetings. If you are interested in supporting your chapter by sponsoring a meeting, donating to the silent auction, or if you are a student interested in participating in the Student Presentation Night please contact Bruce Hurley at [hurley@nv.doe.gov](mailto:hurley@nv.doe.gov).*

*I look forward to seeing everyone soon!*

*-- Lora Griffin*

### Geological Society of Nevada Southern Nevada Chapter

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Las Vegas, NV 89154-4010

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

# **HOLIDAY CELEBRATION With FRIENDS OF PALEONTOLOGY**



Our December meeting will be held jointly with the Friends of Paleontology. The event will take place at the Nevada State Museum on Saturday, December 15. The time will be announced in next month's newsletter. Please note that this is not going to be held on the traditional Thursday. Festivities will begin with a talk about recent finds at Gilcrease Ranch and continues with a silent auction and charitable fundraiser.

Donations are now being accepted for the silent auction fundraiser. Rock and fossil specimens, geology gear, or gift certificates are all items that could help bring in funds to support our chapter. Other ideas are welcome.

This celebration will have plenty of good food and good conversation, too! And, it is a great opportunity to build relationships with members of a neighboring organization.

To donate items contact Bruce Hurley at [hurley@nv.doe.gov](mailto:hurley@nv.doe.gov).

## **GSN MEMBERSHIP RENEWAL**

Monthly chapter meetings provide a great opportunity for students and professionals to build relationships. Other member activities such as field trips, and special events, like the upcoming holiday party with the Nevada Friends of Paleontology also provide valuable opportunities for members to network. GSN strives to connect Nevada geological professionals with cutting edge research and technologies by providing seminars about the recent news and advancements. Renewing your membership will ensure you stay connected with the latest news and events. Renewal applications are available at [www.gsnv.org](http://www.gsnv.org).

## **STUDENT DUES SPONSORED BY**



Thank you Lance Taylor, Geotemps, for his continued support of our student members. Lance has offered to cover the cost of student membership dues for another year 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.

## **CHAPTER MEETING SPONSORSHIP**

Donating funds to sponsor chapter meetings is a valuable part of what makes our chapter successful. Refreshments made possible by a meeting sponsor helps our chapter reserve funding for other activities and scholarships. Often the results of this support are not easily seen, but the results are real. 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.

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](mailto:hurley@nv.doe.gov).

## PAID ADVERTISEMENTS

### 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 15: (New Date)

##### Holiday Party & Joint Meeting with Nevada Friends of Paleontology—

Meeting location: Nevada State Museum

Time: TBA

Talk: Recent finds at Gilcrease Ranch  
Holiday festivities: Silent Auction and  
charitable donation

#### January 31:

##### Meeting—

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

#### 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](mailto:lora.griffin@unlv.edu)

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### MEETING SPONSORS

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# Minerals of the Fredrickson Mine, Goodsprings mining district, Clark County, Nevada

Speaker: **Patrick Haynes**

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*Dolomite Photomicrograph*

## ABSTRACT

The Fredrickson Mine is located in the Goodsprings mining district of Clark County, about 50 miles SSW of Las Vegas, Nevada. It was discovered in 1897 by Jesse Jones. The mine has a main inclined tunnel with six different levels that probably produced ore through WWII. From 1909 to 1926 ore from the mine yielded 5,615 ounces of silver, 3,741 pounds of copper, and 205,368 pounds of lead and 559,011 pounds of zinc.

The mine workings lie within the Mississippian-age Yellow Pine member of the Monte Cristo limestone, with mineralization occurring in breccias and faults. Sulfide minerals were oxidized resulting in ore that contained mostly hydrozincite, hemimorphite, and residual galena.

Collecting specimens can be challenging, as the matrix is sometimes quite crumbly, resulting in a frustratingly high number of damaged specimens. Semi-quantitative EDS and/or powder XRD analysis were used to identify minerals and photomicrographs were taken of some of the more spectacular micro-sized specimens. Some of the minerals identified at the mine include aurichalcite, bromargyrite, cerussite, cinnabar, descloizite, dolomite, fornacite, galena, hemimorphite, hydrozincite, mimetite, minium, mottramite, and rosasite.



*Aurichalcite Photomicrograph*

## SPEAKER'S BACKGROUND

Pat Haynes attended the New Mexico Institute of Mining and Technology, achieving a BS in geology in 1981. Geology positions were sparse at that time so he went to work for a construction company in Cortez, Colorado, where he remained for seventeen years. He has field discovered eight new mineral species: an arsenate in New Mexico, a vanadate in Colorado, and three uranium minerals and three vanadium sulfates in Utah. He has always collected minerals and has authored a few papers, most published in "Rocks and Minerals". Haynes has given talks at the New Mexico Mineral Symposium, held annually in November. He has been a part-time mineral dealer since 1979, and generally has about five hundred species on hand at any time.



# GEOLOGICAL SOCIETY OF NEVADA

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Offices are located on the University of Nevada, Reno Campus, Laxalt Mineral Research Center, Room 268

Office hours: 1-4 pm, Monday through Friday • Office Manager: Laura Ruud

The Geological Society of Nevada (GSN) is a non-profit, educational organization whose principal objective is to promote the advancement of geological sciences, especially as they relate to Nevada. GSN supports the dissemination of information through meetings, field trips, publications and academic endeavors. Membership is open to geologists, geophysicists, geochemists, engineers, educators, students, prospectors or anyone else with an interest in the geological sciences and/or the goals of the GSN.

The GSN membership year begins in June. Annual dues of \$35.00 (\$17.50 for full time students) are due in the fall. The GSN sponsors a Field Trip in the Fall and one in the Spring of each year. Monthly meetings are held on the third Friday of each month, September through May. The following are sanctioned Chapters of the GSN: Elko Chapter, based in Elko; Southern Nevada Chapter, based in Las Vegas, and the Winnemucca Chapter, based in Winnemucca.

Please remember the GSN Foundation when renewing. Foundation dollars are used for the Kindergarten through 12<sup>th</sup> grade Field Trip Grant Program, Nevada Mapping Grants and University of Nevada scholarships.

<b>MEMBERSHIP APPLICATION/RENEWAL</b>		<b>DATE</b> _____
NAME: _____		POSITION/TITLE _____
CONSULTANT <input type="checkbox"/> COMPANY NAME: _____		
STUDENT <input type="checkbox"/> UNIVERSITY: _____		
ADDRESS: _____		
CITY: _____		STATE/PROVINCE: _____
ZIP: _____		COUNTRY: _____
PHONE: WORK _____	FAX _____	
CELL _____	RESIDENCE _____	
E-MAIL: _____	WEB SITE: _____	
<input type="checkbox"/> I WOULD LIKE TO HAVE AN ASTERISK BY MY NAME IN THE DIRECTORY INDICATING I AM AVAILABLE FOR CONSULTING.		
<input type="checkbox"/> I HAVE MET THE LICENSING REQUIREMENTS AND WANT "QP" (QUALIFIED PERSON) BY MY NAME IN THE DIRECTORY.		
I authorize GSN to send to me, via email: GSN announcements, publication updates, employment opportunities, etc.		Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/> Regular Membership Dues - email newsletter \$35.00	<input type="checkbox"/> Honorary	\$ _____
<input type="checkbox"/> Regular Membership Dues - hardcopy newsletter via postal service \$40.00	<input type="checkbox"/> Honorary	_____
<input type="checkbox"/> International Membership Dues - email newsletter only \$35.00		_____
<input type="checkbox"/> International Membership Dues - hardcopy newsletter via postal service \$50.00		_____
<input type="checkbox"/> Student Membership Dues - email newsletter only \$17.50		_____
<b>Optional Chapter Affiliation</b> (to be eligible for chapter voting, choose one)		
<input type="checkbox"/> Elko Chapter		
<input type="checkbox"/> Southern Nevada Chapter		
<input type="checkbox"/> Winnemucca Chapter		
<b>Student Dinner Fund</b>		
<input type="checkbox"/> I wish to donate to the GSN Student Dinner Fund _____		
<b>GSN Foundation</b>		
<input type="checkbox"/> I wish to donate to the GSN Foundation _____		
(Donated funds will be used for unrestricted grants and scholarships unless otherwise specified _____.)		
		<b>TOTAL DUE</b> \$ _____
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Exp. Date _____ Signature (as it appears on card) _____		
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