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## NEWSLETTER

## Serving the Petroleum and Geothermal Community

Nevada Petroleum and Geothermal Society; P. O. Box 11526; Reno, NV 89510 Visit our NPS Homepage: <u>http://www.nbmg.unr.edu/nps/</u>

## Dinner Meeting: Thursday, Mar 6, 2014

- Speaker: Patrick Walsh, Ormat Technologies, Inc. Reno, NV
- Topic: Steamboat Complex Geothermal System, Reno Nevada
- Place: Ramada Reno Hotel

1000 East 6<sup>th</sup> Street, Reno, Nevada

Cocktail Reception 6:30; Skyline Room, 14th Floor

HOSTED BY:



Dinner Served at 7:00 PM

**Dinner Costs:** 

NPGS Members \$ 20; Non-Members \$23; Students \$10

RSVP with the following link to make reservations for the Mar 6<sup>th</sup> Dinner Presentation.

https://docs.google.com/forms/d/1m9J1kO3b5yBdtY0-WXay5aCxBLhiwexM57uIUP3r45M/viewform

Keep in mind that NPGS is charged for every meal that is reserved.

# SEE CALENDAR Pages 16-17 for upcoming meetings

## ► Special Guest Introduction – Elmo Brown, RMS-AAPG President

We are honored to have Elmo Brown, President of the Rocky Mountain Section - AAPG as our guest at the NPGS meeting March 6. There will be a brief introduction and discussion about the Rocky Mountain Section; how they support the NPGS, the annual meeting, awards, etc.

## ▶ <u>NPGS Monthly Dinner Meeting – Mar 6, 2014</u>

## NEVADA PETROLEUM AND GEOTHERMAL SOCIETY THURSDAY, March 6th DINNER MEETING Steamboat Complex Geothermal System, Reno Nevada: history, geology, and reservoir characteristics

Patrick Walsh, Greg Rhodes, Lara Owens, Paul Spielman, John Akerley

The Steamboat Geothermal System in Reno, NV has a long history of geothermal utilization for spas dating back to the 1800s and electricity generation since 1986. Ormat Nevada Inc. has operated the entire Steamboat Field since 2004. Currently, geothermal wells at Steamboat Hills Geothermal System in Nevada produce 78 MW from 7 power plants and 2 connected reservoirs. Upper Steamboat produces ~380-400 °F from fractured metasediments at 2500-3000 ft depth and Lower Steamboat produces ~300 °F from fractured and altered granodiorite at 500-1000' depth. The deeper wells target orthogonal high angle fractures striking NE-SW and WNW-ESE and dipping between 55 and 85 degrees. The shallower wells in Lower Steamboat produce from lower angle fractures that may have been caused by unloading associated with erosion prior to deposition of Tertiary and Quaternary volcanic rocks and sinter deposits. Recent drilling and reservoir modeling have provided data needed to optimize field operations, maximizing production and minimizing resource cooling.

## About the Speaker:

## Patrick Walsh, Chief Geologist, Ormat Technologies, Inc.

As chief geologist for Ormat Technologies, Inc., Patrick Walsh oversees the technical aspects of the company's Western U.S. and international projects. He is also the lead geologist for several Ormat projects including Steamboat Hills, Platanares, and Brawley. With 14 years of experience, Walsh has specialized in geothermal, water and petroleum resource assessment, exploration, and development.

Ormat Technologies is a world leader in the geothermal power plant sector. The company has four decades of experience in the development of state of the art, environmentally sound power solutions, primarily in geothermal and recovered energy generation. Ormat is responsible for the development of over 1750 MW of geothermal generation and operates over 626 MW worldwide.

**Cocktail Reception 6:30 Hosted by Barbour Well:** 



## Scott Watkins Client Relations

Barbour Well Inc., 260 Sunpac Ave. Suite A, Henderson, NV 89011 Direct: 805-207-6407, Ofc: 702-558-5373, <u>www.barbourwell.com</u>

## ▶ <u>WELCOME NEW NPGS MEMBERS:</u>

Eliopulos, George	Geologist, Leda Resources, LLC	Reno, NV
Kern, Richard	Owner, Great Basin Oil, LLC	Reno, NV
Lee, Catherine	Sr Specialist, Enviroscientists, Inc.	Reno, NV
Ruud, Eric	Manager, Inspectorate America Corp.	Sparks, NV
Ruud, Laura	Manager, GSN	Reno, NV
Stephens, James	Manager, National Exploration	Elko, NV
Watkins, Scott	Manager, Barbour Well, Inc.	Henderson, NV

Total membership as of Dec 2013 was 175. More than 30 members have not renewed for 2014. Please take a moment to renew your membership, if you have not already done so.

## ▶ <u>NDOM Public Workshop – Amendment of Regulations:</u>

From Nevada Division of Minerals: Notice of Public Workshops for the Amendment of Regulations for Oil and Gas Wells, Wells Intended for Hydraulic Fracturing and for Geothermal Wells

-Monday, March 17, 2014, 10:00am-12:00pm, Legislative Counsel Bureau, 401 South Carson St., Room #3138, Carson City, NV 89701

-Wednesday, March 19, 2014, 10:00am-12:00pm, Great Basin College, GTA Bldg 8, Room 130, 1500 College Parkway, Elko, Nevada

-Friday, March 21, 2014, 10:00am-12:00pm, Legislative Counsel Bureau, 555 E. Washington Ave., Ste 4412, Las Vegas, Nevada 89101

If you have questions, please contact Valerie Kneefel, NDOM: Phone: (775) 684-7043 Email: <u>vkneefel@govmail.state.nv.us</u>

You can also visit the website at:

http://minerals.state.nv.us/news\_announce.htm#NotPubWSsAmdtRegOGWells

## SWITCH – Showing Feb 12 @ UNR:

The Nevada Petroleum and Geothermal Society, in conjunction with the UNR AAPG Student Chapter, presented the movie, *SWITCH*, to an audience of 91 people at the theater in the Joe Crowley Student Union on February 12. Thanks to Jerry Walker and Dave Boden for giving the introduction and taking questions and comments from the audience.

## Upcoming Nevada BLM Geothermal Lease Sale; Sep 9, 2014:

http://www.blm.gov/nv/st/en/prog/minerals/leasable\_minerals/geothermal0/ggeothermal\_leasin g.html

## ► <u>Scheduled BLM Oil & Gas Lease Sales: Parcel listings are available.</u>

## Nevada's Competitive Oil & Gas Lease Sale Schedule (Tentative)

Sale Date	Parcels Offered for District Office at Sale	*EOIs Due	Sale Posting Date	Protest Deadline
June 24, 2014	Elko/Southern Nevada	June 13, 2013	March 21, 2014	April 20, 2014
July 17, 2014	Battle Mountain	September 13, 2013	April 14, 2014	May 16, 2014
September 9, 2014	Winnemucca/Carson City	December 13, 2013	June 11, 2014	July 11, 2014
December 9, 2014	Ely	March 14, 2014	September 10, 2014	October 10, 2014

\*EOI = Expression of Interest

NOTE: This is a revised schedule. For a listing of parcels for the June & July sale, use the following link:

http://www.blm.gov/nv/st/en/prog/minerals/leasable\_minerals/oil\_\_gas/oil\_and\_gas\_leasing.html

► <u>AAPG Rocky Mountain Section Annual Meeting:</u>

July 20-22, 2014 – Denver Convention Center, Denver CO

*Earlybird registration begins April 2014. Flyer in this newsletter.* <u>www.aapgrms.org/2014</u>

► <u>News from Nevada Bureau of Mines & Geology:</u> From: Charlotte Stock The following information is taken directly from emails provided by Charlotte Stock, Nevada Bureau of Mines & Geology

## Stay Informed about NBMG

Subscribe to our email list by sending an email to webmaster@nbmg.unr.edu with "subscribe to Publications mailing list" in the subject line Subscribe to our blog http://nbmg.wordpress.com/ "Like" our Facebook page https://www.facebook.com/pages/Nevada-Bureau-of-Mines-and-Geology/106397989390636 You can place an order for other publications or check for shipping charges through our shopping cart at <u>http://www.nbmg.unr.edu/Departments/PubSales/PubSales.html</u>

## GSN Field Trip – May 2-4, 2014

GSN SPRING 2014 FIELD TRIP - May 2-4, 2014 Humboldt Range, Majuba Hill, and Trinity Range (Au, Ag, Cu, Sn, W, Be, Hg, Sb, B).

From GSN Newsletter, March 2014: Register now for the GSN's Spring Field Trip coming up on Friday May 2 to Sunday May 4, 2014! Jonathan Price, GSN V.P. and field trip leader has laid out a great itinerary for the 3-day trip. We will overnight in Lovelock, Nevada both nights. This trip will be a bit different as we will be riding in

4WD vehicles so we can visit places that a bus just can't get to. Bring your rock hammers and questions and join your fellow geologists on this one-of-a-kind adventure. Contact Laura Ruud, GSN Office Manager, for more information: gsn@gsnv.org.

## GSN Symposium 2015; May 14–24, 2015 John Ascuaga's Nugget Hotel and Casino in Sparks, Nevada

"Even as much as the world has become available for exploration over the past decade, miners continue to return to Nevada. Why? Political stability, transparent regulatory environment, good infrastructure and GREAT GEOLOGICAL POTENTIAL. Miners return to focus on Nevada's geology and its important mineral deposit types: Carlin, epithermal and intrusion-related gold and silver, as well as other deposit types (porphyry Cu and Mo, IOCG and industrial materials) are also rising in importance."

A message from Laura Ruud, GSN Office Manager: The GSN 2015 Symposium Committee has been hard at work for months now organizing the next magnificent GSN Symposium to be held May 14-24, 2015! [Please see link below for] the first announcement flyer, and we encourage you to read and share with any colleagues you wish that may not be GSN members and who will want to participate. The Committee has already started lining up the field trip itineraries, speakers, exhibitors, posters, a core-shack, and a joint GSN-SEG Forum to be held on May 17, 2015 the day before the Symposium technical sessions begin.

Questions regarding the meeting can be directed to Molly Hunsaker, Symposium Chair, at <u>mollymhunsaker@2015gsnsymposium.org</u>. If you have questions about submitting an abstract, or an idea for a technical paper, the Technical Program Chairs are John Muntean and Moira Smith. Co-hosts for the GSN Symposium 2015 are Society of Economic Geologists, Nevada Bureau of Mines and Geology, and U.S. Geological Survey.

### GSN Symposium 2015 flyer:

http://www.nbmg.unr.edu/ docs/GSN 2015 Symposium.pdf

### **BLM Job Announcements**

#### **Position Information:**

Job Description: Engineering Technician (Petroleum) Announcement Number: MT-DEU-2014-0033 Location(s) of position: Dickinson, ND, US Salary: \$28,269 - \$75,376 Applications will be accepted until: 03/07/2014. For additional information on this job posting, please go to: https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=109347

## Position Information: Job Description: Mining Engineer/Geologist (Interdisciplinary) Announcement Number: NV-DEU-2014-0057 Location(s) of position: Winnemucca, NV, US Salary: \$47,923 - \$75,376 Applications will be accepted until: 03/13/2014.

For additional information on this job posting, please go to: <a href="https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=109381">https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=109381</a>

#### **Position Information:**

Job Description: **Environmental Protection Specialist** Announcement Number: NV-DEU-2014-0056 Location(s) of position: Winnemucca, NV, US Salary: \$47,923 - \$75,376 Applications will be accepted until: 03/12/2014. For additional information on this job posting, please go to: https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=109379

## **Department of Geological Sciences and Engineering—Seminar Dates**

Below is the current University of Nevada, Reno DGSE seminar schedule for Spring 2014.

## Spring 2014 Seminar Dates

When: from 4 to 5pm Where: Davidson Mathematics and Science Center 105 (please note room change) http://www.unr.edu/around-campus/facilities/davidson

3/10/2014 Jeff Vervoort 3/17/2014 Spring Break, No Seminar 3/24/2014 Russell DiFiori/ Steve Angster 3/31/2014 Melissa Penfold/ Saige Sanchez 4/07/2014 Kenjo Agustsson/Kate Zeiger 4/14/2014 Connor Newman/Dylan Baldwin 4/21/2014 Tyler Seaman/Erica Key 4/28/2014 Tim Cramer/Corina Forson 5/05/2014 John Wakabayashi

### For more information, please contact:

Wendy Calvin Prof. Geophysics & Remote Sensing Director, Great Basin Center for Geothermal Energy Univ. Nevada – Reno, wcalvin@unr.edu, 775-784-1785

Charlotte Stock NBMG Publication Sales, University of Nevada, mailing address for US Mail, Fed Ex, and UPS: Nevada Bureau of Mines and Geology Great Basin Science Sample and Records Library 2175 Raggio Parkway Reno, NV 89512 phone (775) 682-8766, fax (775) 784-6690 <u>Directions to office, www.nbmg.unr.edu</u>





Promote your visibility in the geologic community by being a Sponsor.

The RMS-AAPG annual meeting attracts hundreds of attendees. It's a simple way to gain name recognition and to network with potential clients, partners, and employees.



Photo courtesy of: Scott Dressler-Martin, VISIT DENVER

The RMS-AAPG Annual Meeting will include:

- Two days of technical presentations
- Three short courses
- Four field trips
- Two different core sessions
- A Teacher's Program
- Social and Networking Events
- All-Convention Luncheon
- AND MORE!

For more information, visit www.aapgrms.org/2014

Hosted by: The Rocky Mountain Association of Geologists



#### Nevada Petroleum and Geothermal Society Sponsorship Request for 2013-14

On behalf of the Nevada Petroleum and Geothermal Society (NPGS) Board of Directors, I invite you and your firm to join our NPGS Sponsorship Drive for the 2013-2014 term.

Annual support for the NPGS from firms active in Nevada is necessary so that this Society can continue to perform our programs, including distribution of research awards to University of Nevada, Reno, University of Nevada, Las Vegas, and other graduate students performing research relevant to the geology of the Great Basin, monthly professional dinner presentations, and community outreach activities such as the Nevada Bureau of Mines'-UNR's Earth Science Week Field Trips.

You and your firm's continual support at any level clearly shows your commitment to our profession. We have three sponsorship levels available this year:

**Gold Level Sponsors** will receive numerous benefits which allow them to maximize their positions as leaders in our local geological community. As a Gold Level Sponsor, your Company will be prominently displayed on a full page of our monthly newsletter and on our web site (http://www.nbmg.unr.edu/nps/). We will advertise opening positions with your Company at any time that you request during the year. We will also run your Company's promotional slide show at a monthly dinner where we will present you with an elegant commemorative plaque that you can proudly display at your office. Please also consider developing a short dinner showcase that highlights your firm or is of general interest to the membership. Gold Level Sponsorship costs only \$500 per year.

As a **Silver Sponsor**, your Company's business card will be displayed in a section of our monthly newsletter and on our website. We will advertise opening positions with your Company as requested at any time during the year. Silver Sponsorship costs \$300 per year.

**Corporate Sponsorships** are flexible. Corporate Sponsors will be able to provide NPGS with any amount of their choosing. Sponsors providing greater than \$500 will receive all the benefits as a Gold Level Sponsor. Sponsors providing less than the Gold Level amount will receive name recognition in both our website and our monthly newsletter.

Please help to sponsor the NPGS by filling out the attached Sponsorship Application Form and telling us where you would like to designate your sponsorship dollars. NPGS is a 501c3 non-profit organization. Contact your tax advisor to determine which portion(s) of your donation is (are) deductible.

We also have opportunities for you and your Company to host the Ramada bar during our dinner meetings. If you would like to host the bar, please contact me prior to one of the meetings at 775-200-5143 to set that up. Or you can provide a donation to our NPGS Scholarship fund which has provided significant assistance to our University of Nevada Mines and Geology students, or even to our General Fund, which helps us to provide you with our informative dinner meetings. Please designate the desired amount(s) on the attached Sponsorship Application.

As always, we welcome your suggestions on how our Society's programs and activities can be improved. More importantly, we welcome the participation of you and your firm's staff at our monthly dinner presentations and at all of our events. If you know of anyone who is interested in serving in a leadership position on our Society's Board of Directors, please encourage them to contact us. Their involvement will ensure a vibrant future for the Nevada Petroleum and Geothermal Society.

We look forward to working with you to help make our Society the best that it can be. Please contact me at 775-200-5143 or email me at jkareck@lumosengineering if you have any questions or require any additional information.

Judy M. Kareck, P.E., Vice-Chair, Nevada Petroleum and Geothermal Society

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(3) 0	OLD Level Spo	onsorship costs \$500 for the 2013-2014	year.

(4) 2014 year.

CORPORATE Level Sponsors can provide the NPGS with any amount of their choosing. Amounts exceeding \$500 will be given the same benefits as (5) the GOLD Level. Amounts less than \$300 will be given name recognition in both our website and monthly newsletter.

Notes: Checks written to the Society should be written to: Nevada Petroleum and Geothermal Society and mailed to Steve Foster, Treasurer, at the above address.

The NPGS is a 501c3 non-profit organization. Contact your tax advisor to determine which portion(s) of your donation is (are) deductible.

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Work Address	City	State	Zip Code
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Member of AAPG? YES -or- Professional References – <i>list two references with</i> 1) Name	phone numbers and a		
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Address	City	State	Zip Code
Education – list colleges and universities attended,			×
Membership Type   □ ACTIVE \$20. <sup>∞</sup> /year   □ ASSOCIATE \$15. <sup>∞</sup> /year   □ STUDENT \$10. <sup>∞</sup> /year   □ LIFE \$200. <sup>∞</sup> (one-time payment)	Date	NOT COMPLETE	
Please make check payable to: Nevada Petroleum Society P.O. Box 11526	For NPS Member	rship Committee Sigr	atures Only

**Publication Price List - October 2013** 



			1900
Paper	CD- ROM	<b>Download</b> from Dropbox	Title
			SPECIAL VOLUMES
NPS1 n/a	<b>NPS1c</b> \$80.00	<b>NPS1y</b> \$65.00	Oil Fields of the Great Basin (1994) R.A. Schalla and E.H. Johnson, editors, 31 papers on regional and field specific geology, 5 plates, soft cover with plastic comb binding, 380 p.
NPS2 n/a	n/a	n/a	Membership Directory (only available free on the Web at http://www.nbmg.unr.edu/nps/membershipdir.htm)
<b>NPS15</b> <del>\$20.00</del> \$5.00	n/a	n/a	TerraScan's Geologic Map of the Eastern Great Basin, Nevada and Utah (1978, rev. 1987) compiled and edited by E.L. Howard, 3 sheets (includes cross-sections) \$20.00/NPS or \$25.00/non-NPS, order by phone only for discounted price of \$5.00
NPS21 n/a	<b>NPS21c</b> \$35.00	<b>NPS21y</b> \$20.00	Carboniferous–Permian (Late Paleozoic) Hydrocarbon System, Rocky Mountains– Great Basin Region, U.S., Major Historic Exploration Objective (2001, updated 2003) J. Peterson, RMAG Open-File Report, 54 p., 45 illustrations
			FIELD TRIP GUIDEBOOKS
NPS3 n/a	<b>NPS3c</b> \$35.00	<b>NPS3y</b> \$20.00	Oil Fields, Production Facilities and Reservoir Rocks of Northern Nye County, Nevada (1989) compiled by W.J. Ehni and D.M. Evans, 8 abstracts and papers, 30 p.
<b>NPS4</b> \$15.00	<b>NPS4c</b> \$35.00	<b>NPS4y</b> \$20.00	Oil Fields and Geology of the Pine Valley, Eureka County Area, Nevada (1990) D.M.H. Flanigan, L.J. Garside, and M. Hansen, editors, 15 papers and abstracts, 74 p. (xerox copy only – unbound)
NPS5 n/a	<b>NPS5c</b> \$35.00	<b>NPS5y</b> \$20.00	Geology of White River Valley, the Grant Range, Eastern Railroad Valley and Western Egan Range, Nevada (1991) D.M.H. Flanigan, M. Hansen, and T.E. Flanigan, editors, 10 papers and abstracts, 74 p.
<b>NPS6</b> \$25.00	<b>NPS6c</b> \$40.00	<b>NPS6y</b> \$25.00	Structural Geology and Petroleum Potential of Southwest Elko County, Nevada (1992) J.H. Trexler, Jr., T.E. Flanigan, D.M.H. Flanigan, M. Hansen, and L.J. Garside, editors, 9 papers, 2 plates, 96 p.
<b>NPS7</b> \$33.00	<b>NPS7c</b> \$48.00	<b>NPS7y</b> \$33.00	Structural and Stratigraphic Relationships of Devonian Reservoir Rocks, East Central Nevada (1993), C.W. Gillespie, editor, 15 papers, 3 plates, 203 p.
NPS8 n/a	<b>NPS8c</b> \$40.00	<b>NPS8y</b> \$25.00	Dating of Pre-Tertiary Attenuation Structures in Upper Paleozoic and Mesozoic Rocks and the Eocene History in Northeast Nevada and Northwest Utah (1994) C.H. Thorman, C.J. Nutt, and C.J. Potter, editors, 11 papers, 125 p.
NPS9 n/a	<b>NPS9c</b> \$55.00	<b>NPS9y</b> \$40.00	Structural and Stratigraphic Investigations and Petroleum Potential of Nevada, with Special Emphasis South of the Railroad Valley Producing Trend (1994) S.W. Dobbs and W.J. Taylor, editors, two volumes bound as one, 13 papers, 22 plates, 281 p.

Nevada Peti	oleum and G	eothermal Societ	y; Mar 2014
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Paper	ROM	from Dropbox	Title
<b>NPS10</b>	<b>NPS10c</b>	<b>NPS10y</b>	Mississippian Source Rocks in the Antler Basin of Nevada and Associated Structural and Stratigraphic Traps (1995) M.W. Hansen, J.P. Walker, and J.H. Trexler, Jr., editors, 16 papers and 7 abstracts, 166 p.
\$25.00	\$40.00	\$25.00	
<b>NPS11</b>	<b>NPS11c</b>	<b>NPS11y</b>	Cenozoic Structure and Stratigraphy of Central Nevada (1996) W.J. Taylor and H. Langrock, editors, 11 papers, 122 p.
\$25.00	\$40.00	\$25.00	
<b>NPS12</b>	<b>NPS12c</b>	<b>NPS12y</b>	The Roberts Mountains Thrust, Elko and Eureka Counties, Nevada (1997) A.J. Perry and E.W. Abbott, editors, 4 papers, 2 abstracts and reference papers/abstracts, 86 p.
\$25.00	\$40.00	\$25.00	
NPS13	<b>NPS13c</b>	<b>NPS13y</b>	Hydrocarbon Habitat & Special Geologic Problems of the Great Basin (1998) D.E. French and R.A. Schalla, editors and co-chair
n/a	\$40.00	\$25.00	
<b>NPS14</b> \$35.00	<b>NPS14c</b> \$50.00	<b>NPS14y</b> \$35.00	Cenozoic Geology of the Northern Colorado River Extensional Corridor, Nevada and Arizona: Economic Implications of Extensional Segmentation Structures (1999) J.E. Faulds, editor, 183 p., 3 color plates
<b>NPS16</b>	NPS16c	<b>NPS16y</b>	Structure & Stratigraphy of the Eureka, Nevada Area (2001) Marilyn S. Miller and Jerome P. Walker, editors, 108 p., 11 color plates
\$30.00	\$45.00	\$30.00	
NPS17	<b>NPS17c</b>	<b>NPS17y</b>	Detachment and Attenuation in Eastern Nevada and its Application to Petroleum Exploration (2002) W. Ehni and J. Faulds, editors, 163 p.
n/a	\$50.00	\$35.00	
<b>NPS18</b>	<b>NPS18c</b>	<b>NPS18y</b>	Oil, Gas, and Geothermal Occurrences in Northwestern Nevada (2003) S. Foster, editor, 102 p.
\$25.00	\$40.00	\$25.00	
NPS19	<b>NPS19c</b>	<b>NPS19y</b>	Megabreccias and Impact Breccias of East Central Nevada (2004) C.W. Gillespie and S. Foster, editors
n/a	\$50.00	\$35.00	
NPS20	NPS20c	NPS20y	Great Basin Paleozoic Carbonate Platform: Facies, Facies Transitions, Depositional Models, Platform Architecture, Sequence Stratigraphy, and Predictive Oil and Gas Reservoir and Mineral Host Models (2006) H.E. Cook and J.J. Corboy, 129 pages, out of print (report from USGS Open-File Report 2004-1078, <b>free on Web at http://pubs.usgs.gov/of/2004/1078/</b> )
n/a	n/a	n/a	
NPS22	<b>NPS22c</b>	<b>NPS22y</b>	Geology, Geothermal Resources and Petroleum Exploration of Neogene Basins in the Reno, Nevada Area (2007, 2nd ed., includes two papers not in 1st ed.) S. Limerick, editor, 7 papers, 3 reprints, and roadlog, 140 p.
n/a	\$40.00	\$25.00	
<b>NPS23</b> \$25.00	<b>NPS23c</b> \$40.00	<b>NPS23y</b> \$25.00	Sedimentology and Tectonic Setting of the Late Cretaceous to Eocene Sheep Pass Formation in the Southern Egan Range (2008) P. Druschke, trip leader; J. Trexler, Jr., editor
<b>NPS24</b>	<b>NPS24c</b>	<b>NPS24y</b>	Geothermal and Petroleum Developments in Several Extensional Basins of the Central Walker Lane, Nevada (2013) L.J. Garside, editor, 11 papers, 131 p.
\$30.00	\$45.00	\$30.00	

These publications are only available from the Nevada Bureau of Mines and Geology (NBMG). If a publication is out of print or unavailable, it is marked "n/a" (not available). **Please check with us for the most current prices.** Thanks.

#### NBMG contact information:

Phone: (775) 682-8766 Fax: (775) 784-6690 Web: http://www.nbmg.unr.edu Web: http://www.nbmg.unr.edu/nps/

## Oil and gas resources from NBMG

The following publications are available from the Nevada Bureau of Mines and Geology. NBMG publications that are <u>underlined</u> are also available free on the Web at <u>http://www.nbmg.unr.edu/</u>.

Oil and gas information page on the NBMG website

http://www.nbmg.unr.edu/Oil&Gas/index.html

#### Bulletins

B104 Oil and gas developments in Nevada: Garside, Hess, Fleming and Weimer (1988), \$15.00, for updates, see OF01-7, OF04-1, and M162

#### **Educational Series**

- E-6 **Oil and gas in Nevada** (Student book for grades 4-8, 23 pages) \$3.45
- E-24 Nevada oil: Division of Minerals (Brochure, 1996) free

#### Lists

- L-8 List of oil and gas wells drilled in Nevada since 1907: Hess, Davis, and Boldi (2001, updated 2003) superseded by OF04-1, see also OF01-7
- L-12 **Nevada oil and gas well catalog (NVOILWEL)**, *superseded by OF04-1*, *see also OF01-7* Complete list of Nevada oil and gas well exploration data, 1906-present. Listed logs and cuttings are housed at NBMG. Shows, geologic tops and tests are given when available.

#### Maps

M162 Petroleum data map of Nevada: Garside and Hess (2007), 1:1,000,000, \$15.00

#### **Mineral Industry Series**

The Nevada Mineral Industry is **published annually**, beginning in 1979. Each volume has a **section on oil and gas** in Nevada. Most of these reports are available *free on the Web at* http://www.nbmg.unr.edu/.

#### **Open-File Reports**

- OF83-5 Nevada oil shale: Garside, 10 pages, \$4.00 (for more oil shale information, see also USGS MF-1546 and MF-2091)
- OF86-13Nevada petroleum production statistics, 1954-1986: Hess, Loomis and Garside, 14 pages, \$5.00
- <u>OF92-5</u> Nevada oil and gas source-rock database: Hess, compilation of source-rock analyses performed on cuttings samples taken at varying depth intervals from oil and gas exploration wells in Nevada up to 1992, complete print-out, \$20.00
- OF96-6c Nevada oil and gas wells, 1907-1996: 1:1,000,000 color digital map of Nevada showing major roads, county boundaries, and locations of oil wells drilled since 1907, original printout, \$20.00, see also OF01-7, M162
- OF01-7 Nevada oil and gas well database map: Hess, CD and 4 page text, \$15.00 Contains the following: L-12; updated OF96-6, partial; L-8; B104 text; digital base layers of Nevada data in Shapefile and Arc/Info export file format designed for use at scale 1:1,000,000 (county, towns, roads, USGS topo boundaries for 1:100,000 and 1:24,000, Township and Range); georeferenced raster graphic of the Nevada state base map, B&W, scale 1:1,000,000; 18 USGS digital raster graphic maps (DRG), 1:250,000-scale, topo maps in tiffw format
- OF00-2 Hydrocarbon assessment of the Yucca Mountain vicinity, Nye County, Nevada: French, 78 pages and 4 plates, \$44.40
- <u>OF04-1</u> Nevada oil and gas well database (NVOILWEL): Hess (2004), \$86.40 for photocopy <u>OF07-7</u> Assessment of the potential for carbon dioxide sequestration with enhanced oil recovery in Nevada: LaPointe, Price,
- and Hess (2007), 24 pages, \$7.20
- OF11-2 Qualitative petroleum potential map of Nevada: Garside and Hess (2011), plate 1:1,000,000 and text
- OF11-6 Oil and gas well information for Nevada 2011 update: Hess, Henson, David, Limerick, Siewe, and Niles; portable hard drive, 105 GB, 9643 files, \$115; free on web at http://www.nbmg.unr.edu/Oil&Gas/NVWellInfo.html

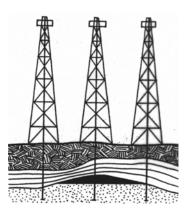
#### Reports

- <u>R51</u> Preliminary assessment of the potential for carbon dioxide disposal by sequestration in geological settings in Nevada: Price and others (2005), CD-ROM or paper copy, 35 pages, \$15.00
- <u>R52</u> Assessment of the potential for carbon dioxide sequestration by reactions with rocks in Nevada: Sturmer, LaPointe, Price, and Hess (2007) \$22.00 paper

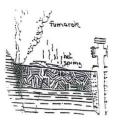
#### USGS

Assessment of undiscovered oil and gas resources of the Eastern Great Basin Province, 2005, Fact Sheet FS-2005-3053, free at http://pubs.usgs.gov/fs/2005/3053/ Basin and Range Carbonate Aquifer System Study: http://nevada.usgs.gov/barcass/data.htm

Ordering information for Nevada Bureau of Mines and Geology Sales office located at Great Basin Science Sample and Records Library, 2175 Raggio Parkway, Reno, NV 89512 Phone: (775) 682-8766 Fax: (775) 784-6690 Web: <u>http://www.nbmg.unr.edu</u>



## Geothermal resources in Nevada



Geothermal information page on the NBMG website http://www.nbmg.unr.edu/Geothermal/index.html

The following publications on geothermal resources are available from the Nevada Bureau of Mines and Geology. NBMG items that are <u>underlined</u> are available **free on the Internet** and can be viewed at http://www.nbmg.unr.edu/.

#### **Bulletins**

- B65 Mineral and water resources of Nevada: Cornwall (1964) pp. 267-269, \$7.00
- B89 Geology and mineral deposits of Pershing County, Nevada: Johnson (1977) pp. 104-106, \$21.00
- <u>B91</u> Thermal waters of Nevada: Garside and Schilling (1979) \$22.00, for update see L-5
- <u>B97</u> Discovery and geology of the Desert Peak geothermal field—a case history: Benoit, Hiner, and Forest (1982), \$15.00 (see also OF03-27)
- B99B Mineral resources of northern Nye County, Nevada: Kleinhampl and Ziony (1984) pp. 37-38, \$19.00

#### **Educational Series**

- E-7 Geothermal resources in Nevada: Student reading/activity book for grades four through eight, 27 pp., \$4.05
- E-15 Nevada geothermal electric power production, brochure (1992) 2 pp., \$0.60
- E-35 Major mines, oil fields, and geothermal plants in Nevada
- E-46 Taking the pulse of the Earth
- E-51 Life's a beach: In search of ancient shorelines and volcanoes in the Grimes Point and Lahontan Mountains area

#### Lists

<u>L-5</u> Index to geothermal well files housed at NBMG: Davis and Hess (2009) *updates* App. 2 of B91, \$19.50

#### Maps

- M126 Nevada geothermal resources: Shevenell, Garside, and Hess (2000), superseded by M161
- <u>M141</u> Nevada geothermal resources (second edition): Shevenell and Garside (2005), 1:750,000, \$16.00 for paper copy, *available folded or rolled, superseded by M161*
- M146 Geologic map of the Fraser Flat quadrangle and the west half of the Moses Rock quadrangle, Washoe Co., NV
- <u>M151</u> Geothermal potential map of the Great Basin, western United States: Coolbaugh and others (2005), 1:1,000,000, \$30.00, *rolled only*
- <u>M161</u> Nevada geothermal resources: Penfield, Shevenell, Garside, and Zehner (2010), 1:750,000, \$18.00, folded or rolled, supersedes M126 and M141

#### Mineral Industry Series

MI-1979 through current year—The Nevada mineral industry is published annually and has a section on geothermal activities, varies with year, MI-1994-current year available free on Internet at http://www.nbmg.unr.edu/ and click on "Online Documents."

#### Newsletters

Nevada Geology Newsletter no. 19, page 3 (Summer 1993) "Low-temperature geothermal resources in Nevada" by Larry Garside, free

#### **Open-File Reports**

- OF83-6 Preliminary map of thermal wells in the Moana geothermal area, Reno, Nevada: Garside, \$8.00 Mineral resource inventory - U.S. Navy master land withdrawal area, Churchill County, Nevada: Quade OF87-2 and Tingley, \$92.00 Nevada low-temperature geothermal resource assessment: 1994: Garside, with a bibliography by Davis and OF94-2 Garside, \$40.00 for text and plate, or \$20.00 for text on disk, or \$7.00 for plate only Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada: (Plate 9) OF96-2-9 1:1,000,000, map and text, \$15.00 Preliminary geologic map of the Desert Peak-Brady geothermal fields, Churchill County, Nevada: OF03-27 Faulds and Garside (2003), \$15.00 (see also B97) OF06-5 Mineral- and energy resource potential for White Pine County, Nevada OF06-6 Mineral- and energy resource potential for Pershing County, Nevada OF06-7 Mineral- and energy resource potential for Lyon County, Nevada OF06-12 Potential resources associated with proposed roadless areas in Nevada OF09-10 Preliminary geothermal potential and exploration activity in Nevada: Zehner, Coolbaugh, and Shevenell,
- 1:1,000,000-scale plate and text, \$20.00 (supersedes OF09-1)
- OF10-6 Preliminary geologic map of the Lee-Allen geothermal area, Churchill County, Nevada
- OF11-3 Preliminary geologic map of the Reese River geothermal area, Lander County, Nevada
- OF11-10 Descriptive logs, skeletonized samples, and photographs of core from Presco Energy's thermal gradient wells P3-1, P 10-1, and P 32-2 in the Rye Patch area, Pershing County, Nevada: Davis (2011, Web version only)

<u>OF11-11</u> Preliminary geologic map of the northern Lake Range, San Emidio geothermal area, Washoe County, Nevada: Rhodes, Faulds, and Ramelli, scale 1:24,000, \$18.00

<u>OF12-3</u> Data tables and graphs of geothermal power production in Nevada: Shevenell, Price, and Hess (1985-2011, Web version only)

#### Reports

- R21 Geothermal exploration and development in Nevada through 1973
- R25 Evaluation of geothermal activity in the Truckee Meadows, Washoe County, Nevada: Bateman and Scheibach (1975), \$4.00
- R33 Papers on mineral deposits of western North America: (1979), presented at the Fifth Quadrennial Symposium of IAGOD, \$10.00
- R41 Precious-metal mineralization in hot springs systems, NV-CA: Tingley and Bonham (1986), \$15.00
- R43 Mineral resources of the Kumiva Peak 30' by 60' Quadrangle: Tingley (1989) pp. 16-17, \$5.00
- R44 Mineral resources of the Pahranagat Range 30' by 60' Quadrangle: Tingley (1989) pp. 8-9, \$5.00
- R45 Mineral resources of the Overton 30' by 60' Quadrangle: Tingley (1989) pp. 12-13, \$5.00
- R46 Mineral resources of the Timpahute Range 30' by 60' Quadrangle: Tingley (1991) pp. 30-31, \$5.00
- R51 Preliminary assessment of the potential for carbon dioxide disposal by sequestration in geological settings in Nevada

#### **Special Publications**

- SP4 Geology of Nevada: a discussion to accompany the Geol. map of Nevada (see below): Stewart (1980), \$25.00
- 00001 Geologic map of Nevada: Stewart and Carlson, U.S.G.S. (1978) 1:500,000, available rolled only, \$20.00 available free on the Internet at <a href="http://keck.library.unr.edu/">http://keck.library.unr.edu/</a> and click on "Great Basin geoscience dataset" or at <a href="http://www.nbmg.unr.edu/dox/dox.htm">http://www.nbmg.unr.edu/dox/dox.htm</a>, see SP4 for descriptive text

#### **Urban Map Series**

- 3Ah Energy and mineral resources map of the Las Vegas SE Quadrangle: Papke and Bell (1973) *available rolled or folded*, \$2.00
- 4Ah Energy and mineral resources map of the Reno Quadrangle: Bingler, Bonham, and Luza (1973) *available rolled or folded*, \$2.00
- 5Ah Energy and mineral resources map of the Washoe City Quadrangle: Papke and Jones (1978) *available rolled or folded*, \$2.00

#### Nevada Petroleum Society

- NPS5 Geology of White River Valley, the Grant Range, Eastern Railroad Valley and Western Egan Range, Nevada
- NPS18 Oil, gas and geothermal occurrences in northwestern Nevada
- NPS22 Geology, Geothermal Resources and Petroleum Exploration of Neogene Basins in the Reno, Nevada Area

#### USGS Publications

- <u>C1249</u> Geothermal energy clean power from the earth's heat: Duffield and Sass, free on the Internet at <a href="http://geopubs.wr.usgs.gov/circular/c1249/">http://geopubs.wr.usgs.gov/circular/c1249/</a>>
- I-1701 Bouguer gravity anomalies, depth to bedrock, and shallow temperature in the Humboldt House geothermal area, Pershing County, Nevada: Schaefer (1986), \$9.00
- OF74-271 Geothermal systems of northern Nevada: Hose and Taylor (1974), 30 pages, call for prices
- OF74-1066 The chemical composition and estimated minimum thermal reservoir temperatures of the principal hot springs of northern and central Nevada, call for prices
- OF81-918 Geothermal resources of the western arm of the Black Rock Desert, northwestern Nevada, part I, geology and geophysics: Schaefer, Welch, and Maurer (1983), 41 pages and 4 plates, call for prices
- <u>OF02-374</u> A helicopter-borne magnetic survey over Dixie Valley geothermal field, Nevada: A web site for distribution: Pearson, deRidder and Johnson (2002), *available free on the Internet at <http://pubs.usgs.gov/of/2002/ofr-02-0374>*, call for prices
- <u>OF02-384</u> High-resolution aeromagnetic survey to image shallow faults, Dixie Valley geothermal field, Nevada: Grauch (2002), <http://pubs.usgs.gov/of/2002/ofr-02-0384>, call for prices

#### Other Resources

Great Basin Center for Geothermal Energy is at http://www.unr.edu/geothermal/.

#### For more information, please contact:

Nevada Bureau of Mines and Geology	Phone:	(775) 682-8766
Great Basin Science Sample and Records Library	Fax:	(775) 784-6690
2175 Raggio Parkway	E-mail:	nbmg@unr.edu
Reno, NV 89512	www.nb	mg.unr.edu

Nevada Petrole	eum and Geothermal Society Calendar: Year 2013-2014	
Mar 6, 2014	NPGS Monthly Dinner Meeting – Thursday Mar 6, 6:30 PM	
	Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV	
	Speaker: Patrick Walsh, Ormat Nevada, Reno NV	
	Topic: Steamboat Geothermal Complex	
Mar 17, 2014	Nevada Division of Minerals – Public Workshop for the	
10:00 AM	Amendment of Regulations for Oil and Gas Wells, Wells intended for	
	Hydraulic Fracturing, and for Geothermal Wells.	
	Legislative Counsel Bureau, 401 S. Carson St., Room 3138, Carson City.	
Mar 19, 2014	Valerie Kneefel 775-684-7043 <u>vkneefel@govmail.state.nv.us</u> Nevada Division of Minerals – Public Workshop for the	
10:00 AM	Amendment of Regulations for Oil and Gas Wells, Wells intended for	
	Hydraulic Fracturing, and for Geothermal Wells.	
	Great Basin College, GTA Bldg 8, Room 130, 1500 College Pkwy, Elko.	
	Valerie Kneefel 775-684-7043 vkneefel@govmail.state.nv.us	
Mar 21, 2014	Nevada Division of Minerals – Public Workshop for the	
10:00 AM	Amendment of Regulations for Oil and Gas Wells, Wells intended for	
	Hydraulic Fracturing, and for Geothermal Wells.	
	Legislative Counsel Bureau, 555 E Washington Ave., Ste. 4412, Las	
	Vegas.	
	Valerie Kneefel 775-684-7043 vkneefel@govmail.state.nv.us	
Apr 3, 2014	NPGS Monthly Dinner Meeting – Thursday Apr 3, 6:30 PM	
	Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV	
	Speaker: James Faulds, Director/State Geologist, NBMG, Reno NV	
	Topic: Hot Springs Mountain	
Apr 6-9, 2014	AAPG Annual Convention & Exhibition – Houston, TX	
	George R Brown Convention Center. Submit abstracts by Sep 19.	
	www.aapg.org	
May 1, 2014	<b>NPGS Monthly Dinner Meeting</b> – Thursday May 1, 6:30 PM	
	Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV	
	Speaker: Rick Stucker, Senior Geologist, Noble Energy, Denver CO	
May 2-4, 2014	Topic: Overview of Noble Energy's Current Drilling Program in Nevada	
May 2-4, 2014	GSN Spring Field Trip Humboldt Range, Majuba Hill, and Trinity Range	
	Contact Laura Ruud gsn@gsnv.org	
Jun 24, 2014	Nevada BLM Oil & Gas Lease Sale, Reno NV	
501124, 2014	Elko, Southern NV District, posting date: Mar 21, 2014	
	http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil	
	and gas leasing.html	
Jul 17, 2014	Nevada BLM Oil & Gas Lease Sale, Reno NV	
, -	Battle Mtn District, posting date: Apr 14, 2014	
	http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil	
	_and_gas_leasing.html	
Jul 20-22,	AAPG Rocky Mountain Section Annual Meeting	
2014	Denver Convention Center, Denver, CO	
	Registration begins April 2014. www.aapgrms.org/2014	

Sep 9, 2014	Nevada BLM Geothermal Lease Sale, Reno NV <a href="http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal">http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal</a>
May 14-24, 2015	GSN Symposium 2015 John Ascuaga's Nugget Hotel and Casino in Sparks, Nevada http://www.nbmg.unr.edu/ docs/GSN 2015 Symposium.pdf
2016	Rocky Mountain Section/Pacific Section Meeting – AAPG 2016 2016 joint RMS-AAPG/PS-AAPG annual meeting, Las Vegas, Nevada

The NPGS Newsletter is provided to members of the Nevada Petroleum and Geothermal Society. For information about membership and events, see the NPGS website at <a href="http://www.nbmg.unr.edu/nps/">http://www.nbmg.unr.edu/nps/</a> To submit articles, corrections or suggestions for the newsletter; Contact Vicki Ehni 775-883-1107, cell 775-720-6387; email <a href="mailto:vehni@aol.com">vehni@aol.com</a>.