

# NEWSLETTER

Serving the Petroleum and Geothermal Community

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

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## Dinner Meeting: Thursday, Sep 5, 2013

**Speaker:** Dr. Richard Allis  
Director, Utah Geological Survey

**Title:** Our Transforming Energy Sector – a Utah  
Perspective on Trends and Changes

**Place:** Ramada Reno Hotel  
1000 East 6<sup>th</sup> Street, Reno, Nevada

**Cocktail Reception 6:30; Skyline Bar, 14th Floor**

**Hosted by:**



**Dinner Served at 7:00 PM**

**Dinner Costs:**

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

**Menu: dinner salad, tri-tip and tortilla encrusted tilapia, fried rice with mixed veggies, dessert**

**\*\*NEW NPGS RSVP FORMAT!**

Please RSVP for the Sep 5 Monthly Dinner Meeting by clicking on the following link:

<https://docs.google.com/forms/d/1NNJzrivEADFxSVqcALicQgyy-tWaFtilmDyPymL7bmo/viewform>

**SEE CALENDAR Pages 24-25 for upcoming meetings**

► **NPGS Monthly Dinner Meeting – Sep 5, 2013**

Speaker: Dr. Rick Allis

Abstract: **Our transforming energy sector - a Utah perspective on trends and changes**

The changes occurring in Utah's energy industries mimic many of the recent national trends in energy substitution. Oil production has doubled during the last 10 years, and at present rates will reach Utah's historic peak oil production in about 10 more years. Natural gas production is at record levels, but coal production has declined to levels last seen 25 years ago as new electricity generation is gas-fired. Declining petroleum consumption since 2005 and substitution of coal for gas in electricity generation has caused state CO<sub>2</sub> emissions to decline to levels last reached during the late 1990s. Renewable electricity generation has increased to 6% of Utah's total generation due mainly to new wind and geothermal plants. This talk will speculate on future trends, and will address the issues and possibilities of nuclear power, oil shale development, carbon sequestration, geothermal power from hot basins, and development constraints due to limited water availability.

► **About the Speaker – Dr. Rick Allis**

Rick Allis has been Director of the Utah Geological Survey for 13 years. He was Research Professor at the Energy and Geoscience Institute, University of Utah, between 1997 and 2000, and prior to that worked for GNS Science and its predecessor organizations in New Zealand. He has broad interests in energy resources, and has specialized in in geothermal energy. He has a PhD from University of Toronto.

► **Cocktail Reception, Sep 5, Hosted by Boart Longyear:**



**BOART  
LONGYEAR**

**THE NEVADA DRILLING EXPERTS**

605 Union Pacific Way

Elko, NV 89801

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*Contact: Darrell Tweidt 775-397-0963*

► **NPGS Officers Elected 2013-2014 (Jun 1 – May 31):**

**President**

**Vice President/President-Elect**

**Secretary**

**Treasurer**

**Bill Ehni, Geologist, Ehni Enterprises, Inc.**

**Judy Kareck, Engineer, Lumos & Associates**

**Jerry Walker, Geologist**

**Steve Foster, Geophysicist/Geologist**

► ***NPGS FIELD TRIP Oct 12-13, 2013 – Preliminary Announcement:***

***Geothermal and Petroleum Developments in Several Extensional Basins  
of the Central Walker Lane, Nevada***

**Chairman:** Larry Garside, Mail Stop 0178, Nevada Bureau of Mines and Geology, University of Nevada Reno, Reno, NV 89557-0178. email: [lgarside@unr.edu](mailto:lgarside@unr.edu), telephone: (775) 784-6693.

**Trip Dates:** October 12-13, 2013 – Saturday and Sunday (See flyer in this newsletter)

**RSVP by clicking on the following link:**

<https://docs.google.com/forms/d/1eM3aFfyVHK-mX4AwIBOpskPNOVeG71YNEOSUGZCBRH0/viewform>

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Arbuckle, CA 95912

**ThermaSource**  
Tecton Geologic  
1-707-836-2112  
110 Dry Creek Road  
Healdsburg, CA 95448

**Field Trip  
SOCIAL MIXER**

**Saturday evening  
October 12**

**El Capitan Lodge  
Hawthorne, NV**

**HOSTED by:  
ThermaSource**

► **WELCOME NEW NPGS MEMBERS:**

Angius, Robert	Alpha Analytical	Reno, NV
Beaudoin, Alan	Boart Longyear	Elko, NV
Cogbill, Kelly	United Wire Line Services	Woodland, CA
Coyner, Alan	NV Division of Minerals	Carson City, NV
Dierkhising, Joseph	NV Seismology Lab – UNR	Reno, NV
Feliz, Stuart	B & L Casing	Rio Vista, CA
Gardner, Randy	Alpha Analytical	Reno, NV
Hutsell, Bill	B & L Oil Field Steam	Rio Vista, CA
Johnson, Michael	Churchill County	Fallon, NV
Pahler, Mark	Baker Hughes	Woodland, CA
Parsons, Don		Reno, NV
Pelant, Frank	Geothermal Solutions, Inc	Palm Desert, CA
Peterson, Neil	Geologica, Inc	Reno, NV
Stucker, Rick	Noble Energy	Denver, CO
Unger, Cody	Boart Longyear	Elko, NV

► **Next Nevada BLM Geothermal Lease Sale; Nov 19, 2013:**

[http://www.blm.gov/nv/st/en/prog/minerals/leasable\\_minerals/geothermal0/ggeothermal\\_leasing.html](http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal0/ggeothermal_leasing.html)

► **BLM Oil & Gas Lease Sale – Jun 11, 2013 Results:**

Forty parcels were offered at the June 2013 Reno BLM lease sale. Thirty three received bids for total receipts of \$862,183. The high bid of \$200,000 was for parcel #36 (T9N R57E) by The Blanco Co (NM) 7 parcels. This parcel also received the highest bid/acre of \$125. Other buyers at the sale were Kirkwood Oil & Gas (WY) 19 parcels, D Dibiasse (CA) 3 parcels, Charter Post (NV) 1 parcel, Western States Minerals (CO) 1 parcel, W Cochran (TX) 1 parcel, Liberty Petroleum (NY) 1 parcel. Six parcels were picked up OTC the day after the sale by The Blanco Co, S Bruner (NV), W Wax (KS), and J Myrick (TX). The results, notice, list of parcels, and shape files are available for this sale at the following link:

[http://www.blm.gov/nv/st/en/prog/minerals/leasable\\_minerals/oil\\_gas/oil\\_and\\_gas\\_leasing.html](http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html)

► **Scheduled BLM Oil & Gas Lease Sales:**

*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 11, 2013	Battle Mountain	September 14, 2012	March 13, 2013	April 12, 2013
December 10, 2013	Ely	March 15, 2013	September 11, 2013	October 11, 2013
March 11, 2014	Elko/Southern Nevada	June 13, 2013	December 11, 2013	January 10, 2014
June 10, 2014	Battle Mountain	September 13, 2013	March 12, 2014	April 11, 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

[http://www.blm.gov/nv/st/en/prog/minerals/leasable\\_minerals/oil\\_gas/oil\\_and\\_gas\\_leasing.html](http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html)

► **Sep-Dec 2013 Oil & Gas Lease Sale Schedule:**

Sep 04 Montana (State)	Nov 05 North Dakota (State)
Sep 10 Nevada (BLM)	Nov 05 Wyoming (BLM)
Sep 11 California (BLM)	Nov 06 Wyoming (State)
Sep 12 Eastern States (BLM)	Nov 06 Oklahoma (State)
Sep 17 New Mexico (State)	Nov 14 Colorado (BLM)
Sep 18 Oklahoma (State)	Nov 19 New Mexico (State)
	Nov 19 Utah (BLM)
Oct 15 New Mexico (State)	Nov 21 Colorado (State)
Oct 16 New Mexico (BLM)	
Oct 22 Montana (BLM)	Dec 03 Montana (State)
Oct 28 Utah (State)	Dec 10 Nevada (BLM)
	Dec 11 California (BLM)
	Dec 12 Eastern States (BLM)
	Dec 17 New Mexico (State)

► **GRC – 37<sup>th</sup> Annual Meeting & GEA Expo – Sep 29-Oct 2, 2013:**

**MGM Grand Hotel, Las Vegas, NV; [www.geothermal.org/meet-new.html](http://www.geothermal.org/meet-new.html)**

► **AAPG- Rocky Mtn Section 62<sup>nd</sup> Annual Meeting – Sep 22-24, 2013:**

**“Energy Elevated” Hilton Salt Lake City Center [www.rmsaapg2013.com](http://www.rmsaapg2013.com)**

The Utah Geological Association is set to host the 62<sup>nd</sup> Annual Meeting of the Rocky Mountain Section of the American Association of Petroleum Geologists. The meeting will be located in beautiful downtown Salt Lake City at the Hilton Salt Lake City Center. Abstract submittal is now closed. Information: <http://www.rmsaapg2013.com/#.UYGXOseMloQ.email>

Final Announcement: <http://rmsaapg2013.com/images/documents/4-13-rms-aapg%20announcment%20v1n-INTERACTIVE.pdf>

► **NPGS Welcomes Gold Level Sponsors:**

NPGS extends a thank you to the following Gold Level Sponsors:

**Barbour Well, Inc.**

**Lumos and Associates, Inc.**

**Ram Power Corp.**

**Boart Longyear**

**Eagle Exploration**

**Summit Mudlogging**

See their full page company descriptions in this and/or upcoming newsletters.

## PRELIMINARY FIELD TRIP ANNOUNCEMENT

Nevada Petroleum and Geothermal Society 2013 Field Trip: Geothermal and Petroleum Developments in Several Extensional Basins of the Central Walker Lane, Nevada

**Chairman:** Larry Garside, Mail Stop 0178, Nevada Bureau of Mines and Geology, University of Nevada Reno, Reno, NV 89557-0178. email: [lgarside@unr.edu](mailto:lgarside@unr.edu), telephone: (775) 784-6693.

**Trip Dates:** October 12-13, 2013 – Saturday and Sunday

### Stops and/or guidebook papers

- Oil exploration in Gabbs Valley and vicinity;
- Oil shows in Gabbs Valley exploration wells;
- Cobble Cuesta anticline—possible modes of formation;
- Bitumen-stained sandstone and conglomerate;
- Geology of Ormat's Wild Rose geothermal field;
- New interpretation of volcanic rocks on Fissure Ridge (Gabbs Valley);
- Geothermal systems of Rhodes, Columbus, and Teels Marshes;
- Gas and oil shows in historic oil wells in nearby valleys (including Columbus Salt Marsh);
- Stratigraphy and source-rock potential of Tertiary sedimentary rocks. Paper shales and coal beds.

The field trip begins and ends in Hawthorne. Day 1 (Saturday) will leave early from Hawthorne. Participants are responsible for their own lodging. Registration fee will include lunches, beverages (water and sodas) and snacks each day, and a trip guidebook. Transportation will be in private vehicles: high-clearance 2-wheel drive vehicles may be suitable, but 4-wheel drive vehicles are preferred. Participants are asked to share gasoline and other vehicle-related expenses with those they carpool with.



Well head at Wild Rose.



Wild Rose Plant under construction.



Pump jack at 2-12 Paradise Unit.

**Registration is \$100 per entrant. Registration fee includes lunches, beverages (water and sodas) and snacks each day, and a trip guidebook. Fees will go up after the 15th of September. Please submit your fees to: NPGS, PO Box 11526, Reno, Nevada, 89510, no later than Friday, October 4th, 5:00 p.m. (fees must be received by Friday, so mail your check in by Tuesday, October 1st.). Please mark your check accordingly.**

**Thank you.**

**RSVP by clicking on the following link:**

<https://docs.google.com/forms/d/1eM3aFfyVHK-mX4AwIBOpskPNOVeG71YNEOSUGZCBRH0/viewform>

# Geothermal Resources Council

Annual Meeting and GEA Geothermal Energy Expo

September 29 - October 2, 2013

MGM Grand Hotel, Las Vegas, Nevada • USA

**SAVE  
THE  
DATE**

*"A Global Resource, from Larderello to Las Vegas"*



## GRC in Las Vegas

The world's first Geothermal power station was built in 1911 in Larderello, in Southern Tuscany, Italy. Come celebrate a century of geothermal in Las Vegas, the entertainment capital of the world!

Last year, over 2,000 attendees from 33 different countries gathered for the largest annual meeting of the global geothermal community. This year is shaping up to be bigger and better!

Reserve your airline seats now and save. Direct flights from all over the world.

## DEADLINES:

May 3, 2013: Draft Paper submission  
Call For Papers  
Submission forms and more information can be found at  
[www.geothermal.org/meet-new.html](http://www.geothermal.org/meet-new.html)

May 31: Reserve your room today & save over \$60 per night, ends May 31  
MGM Grand Resort & Casino - \$89++  
The Signature at MGM Grand - \$99++

++ Room tax & Resort Fee



## GRC 2013 Annual Meeting features (Registration Opens Mid July)

### WORKSHOPS

The GRC will convene special pre-meeting workshops on a full range of subjects pertaining to geothermal exploration, development, and utilization.

### FIELD TRIPS

Several tours of geothermal facilities and geological features in Nevada and Southern California will be offered before and after meeting.

### TECHNICAL SESSIONS

Three days of over 180 presentations bringing the latest geothermal research from around the world. Dozens of poster presentations on display throughout the event.

### INTERNATIONAL AND STUDENT NETWORKING LUNCHEONS

Special informational luncheons with presentations and discussions led by globally known experts in the geothermal industry. Great networking opportunities!

### NETWORKING

There are numerous opportunities to meet with your geothermal colleagues. The GRC Annual Banquet is the geothermal social event of the year.

### GEA GEOTHERMAL ENERGY EXPO

In 2012, the Expo Hall featured 166 exhibitors from 28 different U.S. states and 10 different countries. Entry to the tradeshow is included with GRC Annual Meeting registration. Don't miss out - register for a booth today! More information at: [www.geothermalenergy2013.org](http://www.geothermalenergy2013.org)



Geothermal Resources Council

530.758.2360

[www.geothermal.com](http://www.geothermal.com)



► **News from Nevada Bureau of Mines & Geology:**

*From: Charlotte Stock*

**News from Nevada Bureau of Mines and Geology:**

**Field Trips**

Earth Science Week Field Trip – **October 12-13**

NPGS Field Trip – **October 12-13**

Nevada Mineral Exploration Coalition Great Basin Rendezvous – **September 27-29**

**Lectures and Meetings**

Utah State Geologist – Dr. Rick Allis – **September 5**

NPGS meeting – Dr. Rick Allis – **September 5**

GSN meeting lecture – Greg Dering – **September 11**

**Job Announcements**

BLM – Two Job Openings

Montana Bureau of Mines & Geology – Job Opening

**Field Trips**

**Earth Science Week Field Trip – October 12-13, 2013**

**Title:** Mapping the Geology around the Desert Research Institute and Truckee Meadows Community College

**Trip leaders:** Jonathan G. Price, D.D. LaPointe, David A. Davis, and Craig M. dePolo (Nevada Bureau of Mines and Geology)

**Trip dates:** October 12-13, 2013 – Saturday and Sunday (same one-day trip on both days)

**Save the date!** Sign-up for this field trip for the general public and field trip guide will be coming soon.

**Nevada Mineral Exploration Coalition Great Basin Rendezvous – September 27-29, 2013**

**First Annual Great Basin Rendezvous 2013** – “A year-end gathering of geologists and their friends”

**Saturday (September 28) activities include these walking tours:**

Lamoille Canyon walk – trip leader: Jon Price, NBMG Emeritus

Tour of East Humboldt detachment terrane – trip leader: Chris Henry, NBMG

**Click here for more information:**

<http://nevadamineralexplorationcoalition.org/wp-content/uploads/2013/07/GreatBasinRendezvous-2nd-Announcement-and-Registration.pdf>

**Lectures and Meetings**

**Utah State Geologist – Dr. Rick Allis – September 5, 2013**

**Speaker:** Dr. Rick Allis, Director of the Utah Geological Survey and State Geologist of Utah

**Title:** Basin-Centered Stratigraphic Reservoirs – Potential for Large Scale Geothermal Power Generation in the U.S.

**When:** Thursday **September 5, 2013** (2:30 p.m.)

**Where:** Davidson Mathematics and Science Center, Room 104, on the UNR campus:

<http://www.unr.edu/around-campus/maps>

**GSN Meeting Lecture – Greg Dering – September 11, 2013**

Email from Laura Ruud, GSN: “Please join the GSN Winnemucca Chapter for their September meeting.

**Location:** The Martin Hotel, 94 West Railroad St., Winnemucca, NV

**Date:** Wednesday the 11th of September

**Time:** Refreshments at 6:00 pm, Appetizers at 6:30, Talk at 7:00

**Presenter:** Greg Dering, Nevada Bureau of Mines and Geology

**Title:** Structural Controls of the Tuscarora Geothermal Field, by Greg Dering and Dr. Jim Faulds, Nevada Bureau of Mines and Geology

**Abstract:** Detailed geologic mapping, structural analysis, and well data have been integrated to elucidate the stratigraphic framework and structural setting of the Tuscarora geothermal area. Tuscarora is an amagmatic geothermal system that lies in the northern part of the Basin and Range province ~90 km northwest of Elko, Nevada. The geothermal area is dominated by late Eocene to middle Miocene volcanic and sedimentary rocks, all overlying Paleozoic metasedimentary rocks. A geothermal power plant was constructed in 2011 and currently produces 18 MWe from an ~170°C reservoir in argillite and silty limestone. Analysis of drill core reveals that the subsurface geology is dominated to depths of ~700-1000 m by intracaldera deposits of the Eocene Big Cottonwood Canyon caldera, including blocks of basement-derived megabreccia.

Two distinct structural settings at different scales appear to control the geothermal field. The regional structural setting is a 10-km wide complexly faulted left step or relay ramp in the west-dipping range-bounding Independence-Bull Run Mountains normal fault system. Geothermal activity occurs within the step-over where sets of east- and west-dipping normal faults overlap in a northerly trending accommodation zone. The distribution of hot wells and hydrothermal surface features, including boiling springs, fumaroles, and siliceous sinter, indicate that the geothermal system is restricted to the narrow (< 1 km) axial part of the accommodation zone, where permeability is maintained at depth around complex fault intersections. Shallow up-flow appears to be focused along several closely spaced steeply west-dipping north-northeast-striking normal faults within the axial part of the accommodation zone. These faults are favorably oriented for extension and fluid flow under the present-day northwest-trending regional extension direction indicated by previous studies of GPS geodetic data, earthquake focal mechanisms, and kinematic data from late Quaternary faults.

The recognition of the axial part of an accommodation zone as a favorable structural setting for fluid upflow may be a useful exploration tool for developing drill targets in both fossil and active epithermal systems. The presence of several high-temperature systems in northeastern Nevada demonstrates the viability of electrical-grade geothermal activity in this region despite low present-day strain rates as indicated by GPS geodetic data. Geothermal exploration potential in northeastern Nevada may therefore be higher than previously recognized.

Food and drinks are sponsored by Boart Longyear.

Please contact Andy Jansen, [andy.jansen@newmont.com](mailto:andy.jansen@newmont.com) or Peter O'Byrne, [peter.o'byrne@newmont.com](mailto:peter.o'byrne@newmont.com) for more information."

## **Job Announcements**

### **BLM – Two Job Openings**

Message from BLM: "We are pleased to announce new, exciting positions available at BLM - BUREAU OF LAND MANAGEMENT. It is our hope that qualified, career oriented individuals at your organization or other professionals known to you will actively consider this position and apply accordingly. Efforts on your part to disseminate this information are greatly appreciated."

#### **Position Information:**

**Job description:** Program Support Assistant; Announcement Number: UT-Merit-2013-0064;

Location(s) of position: **Cedar City, UT, US;**

Salary: \$34,907 - \$45,376;

Applications will be accepted until: **09/11/2013.**

For additional information on this job posting, please go to:

<https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=108572>

**Position Information:**

**Job description:** Natural Resource Specialist; Announcement Number: NV Merit-2013-0307;

Location(s) of position: **Las Vegas, Nevada;**

Salary: \$47,448 - \$74,628;

Applications will be accepted until: **09/11/2013.**

For additional information on this job posting, please go to:

<https://jobs.mgsapps.monster.com/blm/vacancy/viewVacancyDetail!execute.hms?orgId=3&jnum=108655>

**Montana Bureau of Mines & Geology – Job Opening**

**Closing date:** Review will begin October 18, 2013 however position will remain open until filled

**Employment detail:** Permanent, Full-Time

Details at this link:

<http://www.mtech.edu/employment/index.htm>

See: Current Openings → Academic Faculty/Professional → **Assistant or Associate or Senior Research Geologist**

**Also available:**

Assistant or Associate Professor - Mining Engineering

Assistant/Associate Professor- Geophysical Engineering

**Ordering information:**

You can **place an order** for other publications or check for shipping charges through our shopping cart at

<http://www.nbmgs.unr.edu/Departments/PubSales/PubSales.html>

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*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

[Directions to office, www.nbmgs.unr.edu](http://www.nbmgs.unr.edu)

**Gold Level Sponsorship Bio** The NPGS thanks Summit Mudlogging Services for becoming a Gold Level Sponsor!



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**Gold Level Sponsorship Bio** The NPGS thanks Boart Longyear for becoming a Gold Level Sponsor!



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Global Drilling Services

### THE NEVADA DRILLING EXPERTS

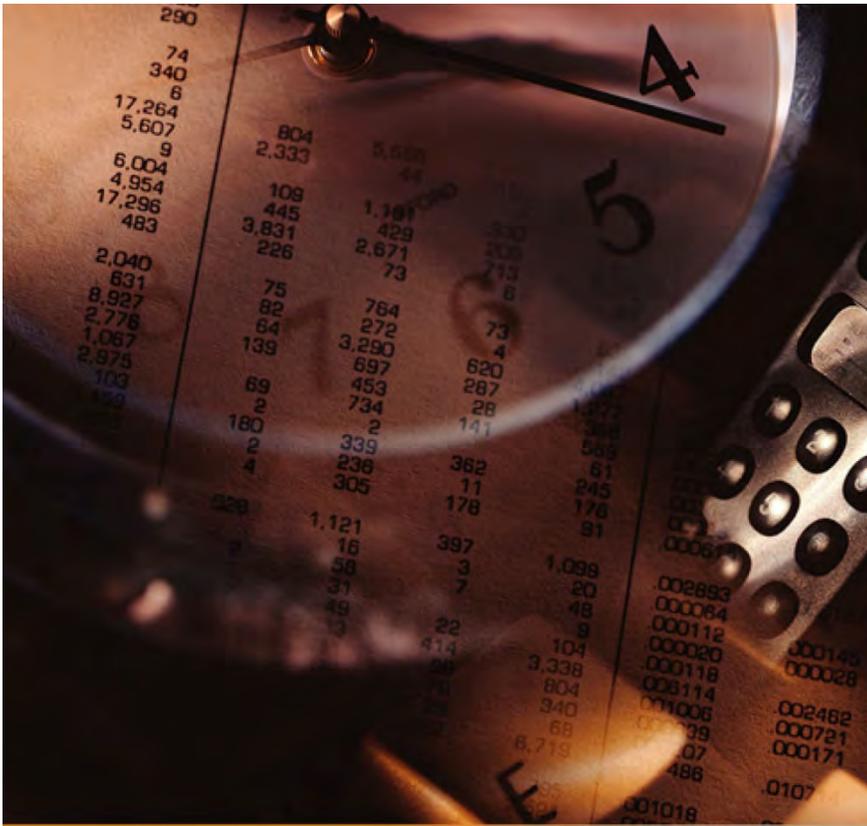
Boart Longyear has been drilling in Nevada for over 60 years. We employ the safest, most efficient and innovative drillers anywhere in the world and we design and manufacture the most trusted drilling equipment and tooling available.

Experienced in a full range of drilling methods, Boart Longyear delivers maximum productivity through reliable drillers, innovative equipment and a leading safety culture.

### For more information contact:

Cody Unger  
Business Development Manager  
605 Union Pacific Way, Elko, NV  
Tel: (775) 738-1980  
Mobile: (775) 753 3076

**Gold Level Sponsorship Bio** The NPGS thanks Lumos and Associates, Inc. for becoming a Gold Level Sponsor!



### Civil Engineering

- Streets and Highways
- Site Development and Subdivisions
- Traffic Studies
- Airports
- Geographic Information Systems (GIS)
- Hydrology, Hydraulics and Storm Drainage
- Erosion Control & Water Quality BMPs
- Water Systems, Wells and Tanks
- Water Rights
- Wastewater Treatment Plants & Systems

### Geotechnical Engineering

- Geotechnical Investigations
- Foundation Investigations
- Geologic Hazard Investigations
- Fault Studies
- Liquefaction Analyses

### Planning

- Site Analysis and Planning
- Land Use and Master Plans
- Redevelopment and Revitalization Strategies
- Transportation and Transit Planning
- Public Presentations

### Landscape Architecture

- Parks and Recreation
- Streetscapes and Community Design
- Destination Resorts and Hospitality
- Commercial and Institutional Sites

### Surveying

- Property and ALTA Surveys
- Parcel and Subdivision Maps
- Topographic Surveys
- GPS Capabilities
- Construction Staking

### Construction Services

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- Soils and Aggregates
- Portland Cement Concrete
- Asphalt Concrete
- Non-destructive Weld Testing

## LUMOS' CAPABILITIES



9222 Prototype Drive, Reno, NV 89521  
Tel: 775.827.6111 Fax: 775.827.6122  
[www.lumosengineering.com](http://www.lumosengineering.com)

## GOLD LEVEL Sponsorship Bio

The NPGS extends a warm thank you to Barbour Well, Inc. for becoming a Gold Sponsor.

### Company Profile



[www.barbourwell.com](http://www.barbourwell.com)

Barbour specializes in drilling oil production wells and large diameter geothermal wells that are high-yield and high-quality in support of both the oil and geothermal industries throughout Nevada, California, Utah, New Mexico, Idaho and the Western United States.

Over three decades of geophysical logging, water well design, work-over/stimulation, down-hole video services, and drilling production wells makes Barbour ideally suited in the expertise for successful oil or geothermal projects. Barbour has an extensive background in geophysics unique to the offerings of most drilling organizations.

Barbour maintains current C23 and A6 Contractor's Licenses in Nevada, a C57/D09 Contractor's License in California, and current drilling Contractor's Licenses in New Mexico and Utah, offering both direct mud rotary (conventional) drilling (vertical and directional) as well as air-rotary foam drilling for specialized applications. Wire-line services are also available in most of the Western United States.



Cost-effective operations and innovative techniques designed to be used by the Oil and Geothermal Industries have



provided new avenues of possibilities for future project planning. Barbour is confident that their continued commitment to the oil and geothermal communities will result in the increased availability of much needed renewable energies within the United States. For additional questions regarding company info, pricing or rig availability please contact:

**Steve Zarcone**  
*Business Development*  
Barbour Well Inc.  
260 Sunpac Ave, Suite A  
Henderson, NV 89011  
(805) 207-6407 Direct  
(661) 755-7687 Cell  
[szarcone@barbourwell.com](mailto:szarcone@barbourwell.com)



August 2013

**RE: 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.nbmj.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.

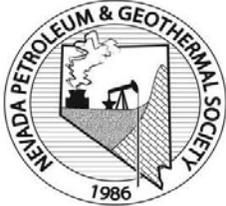
Please help to sponsor the NPGS by filling out the attached Sponsorship Application Form and telling us where you would like to designate your sponsorship dollars. NPGS is a 501c3 non-profit organization. Contact your tax advisor to determine which portion(s) of your donation is (are) deductible.

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](mailto:jkareck@lumosengineering) if you have any questions or require any additional information.

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



**NEVADA PETROLEUM AND GEOTHERMAL SOCIETY**

2013-2014 Sponsorship Application

**Nevada Petroleum and Geothermal Society**

P.O. Box 11526  
 Reno, NV 89510  
 Minden, Nevada 89423

Firm/Agency Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 Phone Number: \_\_\_\_\_  
 Fax Number: \_\_\_\_\_

	Sponsor Name	Email Address
Primary Contact (1)		
Secondary Contact (2)		

Indicate Level of Sponsorship Desired:

(3) GOLD		\$500
(4) SILVER		\$300
(5) CORPORATE		\$

Indicate desired amount.

Indicate Where You would like to Designate your Sponsorship Dollars:

A. NPGS - University of Nevada Mines and Geology Student Support	
B. NPGS General Support	
<b>Total Amount Designated will Add up to Total Amount Sponsored</b>	<b>\$</b>

Primary and Secondary Contacts represent the individuals who will serve as direct liaison with the NPGS Board of Directors. They will be counted on to distribute information, solicit involvement, and provide feedback as to what they would like to see this Society accomplish. They can also

(1) (2) develop leadership skills by participating and volunteering in NPGS functions.

GOLD Level Sponsors receive numerous benefits which allow them to maximize their positions as leaders in our local geological community. As a GOLD Sponsor, your Company logo and business write-up will be prominently displayed in a full page of our monthly newsletter and on our website (<http://www.nbmg.unr.edu/nps/>). NPGS will advertise opening positions with your Company at any time during the year. We will present you with an elegant commemorative plaque that you can proudly display at your office showing your commitment to this community. Please also consider developing a brief dinner showcase that either highlights your firm's expertise or is of general interest to the membership.

(3) GOLD Level Sponsorship costs \$500 for the 2013-2014 year.

As a SILVER Level Sponsor, your Company's business card and/or logo will be displayed on a portion of our monthly newsletter and on our website. We will advertise opening positions with your Company at any time during the year. SILVER Level Sponsorship costs \$300 for the 2013-

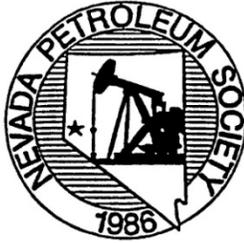
(4) 2014 year.

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

(5)

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.



# APPLICATION FOR MEMBERSHIP

Name \_\_\_\_\_

Occupation/Title \_\_\_\_\_

Company/Affiliation \_\_\_\_\_

Work Address \_\_\_\_\_  
Street City State Zip Code

Residence Address \_\_\_\_\_  
Street City State Zip Code

Preferred Mailing Address?  WORK -or-  RESIDENCE

Work Phone \_\_\_\_\_ Residence Phone \_\_\_\_\_ Fax \_\_\_\_\_

Mobile Phone \_\_\_\_\_ Email \_\_\_\_\_

Member of AAPG?  YES -or-  NO

Professional References – list two references with phone numbers and addresses

1) Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_  
Street City State Zip Code

2) Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_  
Street City State Zip Code

Education – list colleges and universities attended, degree(s) received, and date of degree(s) (OPTIONAL)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Membership Type**

- ACTIVE \$20.<sup>00</sup>/year
- ASSOCIATE \$15.<sup>00</sup>/year
- STUDENT \$10.<sup>00</sup>/year
- LIFE \$200.<sup>00</sup> (one-time payment)

Signature \_\_\_\_\_

Date \_\_\_\_\_

Please make check payable to:

**Nevada Petroleum Society**  
P.O. Box 11526  
Reno, NV 89510-1526

**DO NOT COMPLETE**

For NPS Membership Committee Signatures Only

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Nevada Petroleum and Geothermal Society Publication Price List 2013

<b>Paper</b>	<b>CD-ROM</b>	<b>Download from Dropbox</b>	<b>Title</b>
<b>SPECIAL VOLUMES</b>			
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 <a href="http://www.nbmng.unr.edu/nps/membershipdir.htm">http://www.nbmng.unr.edu/nps/membershipdir.htm</a>
<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
<b>FIELD TRIP GUIDEBOOKS</b>			
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 NV (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.

Paper	CD-ROM	Download	Title
<b>NPS10</b> \$25.00	<b>NPS10c</b> \$40.00	<b>NPS10y</b> \$25.00	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.
<b>NPS11</b> \$25.00	<b>NPS11c</b> \$40.00	<b>NPS11y</b> \$25.00	Cenozoic Structure and Stratigraphy of Central Nevada (1996) W.J. Taylor and H. Langrock, editors, 11 papers, 122 p.
<b>NPS12</b> \$25.00	<b>NPS12c</b> \$40.00	<b>NPS12y</b> \$25.00	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.
NPS13 n/a	<b>NPS13c</b> \$40.00	<b>NPS13y</b> \$25.00	Hydrocarbon Habitat & Special Geologic Problems of the Great Basin (1998) D.E. French and R.A. Schalla, editors and co-chair
<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> \$30.00	<b>NPS16c</b> <b>\$45.00</b>	<b>NPS16y</b> \$30.00	Structure & Stratigraphy of the Eureka, Nevada Area (2001) Marilyn S. Miller and Jerome P. Walker, editors, 108 p., 11 color plates
NPS17 n/a	<b>NPS17c</b> \$50.00	<b>NPS17y</b> \$35.00	Detachment and Attenuation in Eastern Nevada and its Application to Petroleum Exploration (2002) W. Ehni and J. Faulds, editors, 163 p.
<b>NPS18</b> \$25.00	<b>NPS18c</b> \$40.00	<b>NPS18y</b> \$25.00	Oil, Gas, and Geothermal Occurrences in Northwestern Nevada (2003) S. Foster, editor, 102 p.
NPS19 n/a	<b>NPS19c</b> \$50.00	<b>NPS19y</b> \$35.00	Megabreccias and Impact Breccias of East Central Nevada (2004) C.W. Gillespie and S. Foster, editors
NPS20 n/a	NPS20c n/a	NPS20y n/a	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 at <a href="http://pubs.usgs.gov/of/2004/1078/">http://pubs.usgs.gov/of/2004/1078/</a></b> )
NPS22 n/a	<b>NPS22c</b> \$40.00	<b>NPS22y</b> \$25.00	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.
<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

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

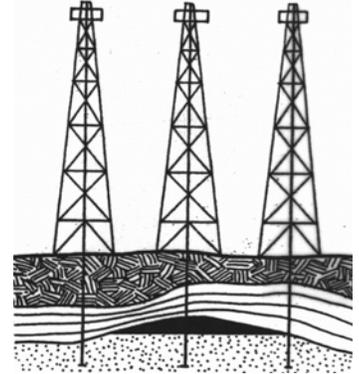
Fax: (775) 784-6690

Web: <http://www.nbmgs.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 underlined are also available free on the Web at <http://www.nbmq.unr.edu/>.**

**Oil and gas information page on the NBMG website**  
<http://www.nbmq.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.nbmq.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)  
OF86-13 **Nevada petroleum production statistics, 1954-1986:** Hess, Loomis and Garside, 14 pages, \$5.00  
**OF92-5** **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  
**OF04-1** **Nevada oil and gas well database (NVOILWEL):** Hess (2004), \$86.40 for photocopy  
**OF07-7** **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.nbmq.unr.edu/Oil&Gas/NVWellInfo.html>

## Reports

**R51** **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  
**R52** **Assessment of the potential for carbon dioxide sequestration by reactions with rocks in Nevada:** Sturmer, LaPointe, Price, and Hess (2007) \$22.00 paper

## USGS

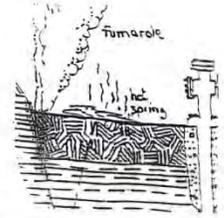
Assessment of undiscovered oil and gas resources of the Eastern Great Basin Province, 2005, Fact Sheet  
**FS-2005-3053, free at <http://pubs.usgs.gov/fs/2005/3053/>**  
**Basin and Range Carbonate Aquifer System Study:**  
<http://nevada.usgs.gov/barcass/data.htm>

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: <http://www.nbmq.unr.edu>

# Geothermal resources in Nevada



## Geothermal information page on the NBMG website

<http://www.nbmng.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 underlined are available **free on the Internet** and can be viewed at <http://www.nbmng.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
- B91 Thermal waters of Nevada: Garside and Schilling (1979) \$22.00, *for update see L-5*
- B97 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 Zion (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

- L-5 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*
- M141 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
- M151 Geothermal potential map of the Great Basin, western United States: Coolbaugh and others (2005), 1:1,000,000, \$30.00, *rolled only*
- M161 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.nbmng.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
- OF87-2 Mineral resource inventory – U.S. Navy master land withdrawal area, Churchill County, Nevada: Quade and Tingley, \$92.00
- OF94-2 Nevada low-temperature geothermal resource assessment: 1994: Garside, with a bibliography by Davis and Garside, \$40.00 for text and plate, or \$20.00 for text on disk, or \$7.00 for plate only
- OF96-2-9 Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada: (Plate 9) 1:1,000,000, map and text, \$15.00
- OF03-27 Preliminary geologic map of the Desert Peak-Brady geothermal fields, Churchill County, Nevada: Faults 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)

- OF11-11 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
- OF12-3 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 Pahranaagat 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 <<http://keck.library.unr.edu/>> and click on "Great Basin geoscience dataset" or at <<http://www.nbmng.unr.edu/dox/dox.htm>>, 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

- C1249 Geothermal energy – clean power from the earth's heat: Duffield and Sass, *free on the Internet at <<http://geopubs.wr.usgs.gov/circular/c1249/>>*
- 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
- OF02-374 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
- OF02-384 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  
Great Basin Science Sample and Records Library  
2175 Raggio Parkway  
Reno, NV 89512

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[www.nbmng.unr.edu](http://www.nbmng.unr.edu)

<b>Nevada Petroleum and Geothermal Society Calendar: Year 2013-2014</b>	
<b>Sep 5, 2013</b>	<b>NPGS Monthly Dinner Meeting</b> – Thursday Sep 5, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speaker: Richard Allis, Director UGS, Salt Lake City, UT</i> <i>Topic: Our Transforming Energy Sector – a Utah Perspective on Trends and Changes.</i>
Sep 10, 2013	<b>Nevada BLM Oil &amp; Gas Lease Sale, Reno NV</b> <b>CANCELED</b> The next Winnemucca and Carson City District lease sale is planned for Sep 9, 2014.
Sep 22-24, 2013	<b>AAPG- Rocky Mtn Section 62<sup>nd</sup> Annual Meeting – Sep 22-24, 2013</b> Utah Geological Association hosting at the Hilton Salt Lake City Center <b>“Energy Elevated” Call for papers, deadline for abstracts Mar 29.</b> <a href="http://www.rmsaapg2013.com">www.rmsaapg2013.com</a>
Sep 29-Oct 2, 2013	<b>GRC 37<sup>th</sup> Annual Meeting &amp; GEA Expo</b> <b>Sep 29-Oct 2, 2012, MGM Grand Hotel, Las Vegas, NV</b> <a href="http://www.geothermal.org/meet-new.html">www.geothermal.org/meet-new.html</a>
Oct 3, 2013	<b>NPGS Monthly Dinner Meeting</b> – Thursday Oct 3, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speakers: Larry Garside &amp; Jerry Walker</i> <i>Topic: Discuss Upcoming Field Trip – Walker Lane, NV</i>
<b>Oct 12-13, 2013</b>	<b>NPGS Field Trip</b> <i>Nevada Petroleum Society 2013 Field Trip: Geothermal and Petroleum Developments in Several Extensional Basins of the Central Walker Lane, Nevada</i> <b>Chairman:</b> Larry Garside, Mail Stop 0178, Nevada Bureau of Mines and Geology, University of Nevada Reno, Reno, NV 89557-0178. email: <a href="mailto:lgarside@unr.edu">lgarside@unr.edu</a> , telephone: (775) 784-6693.  <b>Trip Dates:</b> October 12-13, 2013 – Saturday and Sunday
Nov 7, 2013	<b>NPGS Monthly Dinner Meeting</b> – Thursday Nov 7, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speaker: Mark Coolbaugh, Geologist, Reno NV</i> <i>Topic: Blind Geothermal Systems</i>
Nov 19, 2013	<b>Nevada BLM Geothermal Lease Sale, Reno, NV</b> <a href="http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal0/ggeothermal_leasing.html">http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal0/ggeothermal_leasing.html</a>
Dec 2-6, 2013	<b>Northwest Mining Association 119<sup>th</sup> Annual Meeting</b> John Ascuaga’s Nugget, Reno/Sparks, NV <a href="http://www.nwma.org">www.nwma.org</a>
Dec 6, 2013 Friday	<b>NPGS Annual Christmas Party</b> – Friday Dec 6, 2013 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Details TBA</i>

Dec 10, 2013	<b>Nevada BLM Oil &amp; Gas Lease Sale, Reno NV</b> <b>Ely District, posting date: Sep 11, 2013</b> <a href="http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html">http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html</a>
Dec 11-13, 2013	<b>NAPE Rockies – NAPE Expo</b> <b>Denver Convention Center, Denver, CO</b> <a href="http://www.napeexpo.com">www.napeexpo.com</a>
Jan 9, 2014 NOTE: DATE	<b>NPGS Monthly Dinner Meeting</b> – Thursday Jan 9, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speaker: Nicholas Hinz, Research Geologist, NBMG, Reno NV</i> <i>Topic: Hawthorne/Lee-Allen and Wabuska</i>
Feb 6, 2014	<b>NPGS Monthly Dinner Meeting</b> – Thursday Feb 6, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speakers: Lowell Price, NDOM, Carson City NV and John Menghini, BLM, Reno NV</i> <i>Topic: NDOM/BLM Updates, Oil, Gas and Geothermal Activity in Nevada</i>
Mar 6, 2014	<b>NPGS Monthly Dinner Meeting</b> – Thursday Mar 6, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speaker: Patrick Walsh, Ormat Nevada, Reno NV</i> <i>Topic: Steamboat Geothermal Complex</i>
Apr 3, 2014	<b>NPGS Monthly Dinner Meeting</b> – Thursday Apr 3, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV <i>Speaker: James Faulds, Director/State Geologist, NBMG, Reno NV</i> <i>Topic: Hot Springs Mountain</i>
Apr 6-9, 2014	<b>AAPG Annual Convention &amp; Exhibition – Houston, TX</b> <b>George R Brown Convention Center. Submit abstracts by Sep 19.</b> <a href="http://www.aapg.org">www.aapg.org</a>
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 <i>Speaker: Rick Stucker, Senior Geologist, Noble Energy, Denver CO</i> <i>Topic: Hydraulic Fracturing Project, Nevada</i>
<b>2016</b>	<b>Rocky Mountain Section/Pacific Section Meeting – AAPG 2016</b> 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 <http://www.nbmgs.unr.edu/nps/> To submit articles, corrections or suggestions for the newsletter; Contact Vicki Ehni 775-883-1107, cell 775-720-6387; email [vehni@aol.com](mailto:vehni@aol.com) .

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