

# **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.nbmg.unr.edu/nps/

# President Judy Kareck Engineer Lumos & Associates

9222 Prototype Drive Reno, Nevada 89521 775-827-6111

jkareck@lumosengineering.com

Vice President/Pres Elect John Snow

Chief Operating Officer Standard Steam 14075 Saddlebow Dr.

Reno, Nevada 89511 (775) 336-8067 (O) (775) 853-3485 (H)

jsnow@standardsteamtrust.com

#### Secretary

Jerry Walker Geologist 1455 Shewmaker Ct. Reno, NV 89509 775-348-0650

Jerry\_reno@charter.net

#### <u>Treasurer</u> Steve Foster

Geophysicist/Geologist 886 Marsh Ave. Reno, NV 89509 775-329-4123 sfostermammoth@gmail.com

Past President

Bill Ehni Geologist Ehni Enterprises, Inc. P. O. Box 4228 Carson City, NV 89702 775-883-1107 ehnient@aol.com

**AAPG Delegate** 

Andrew Hanson Associate Professor Geoscience UNLV, Las Vegas, NV Andrew.hanson@unlv.edu

**RMS-AAPG Representative** 

Jerry Walker Geologist 1455 Shewmaker Ct. Reno, NV 89509 775-348-0650 jerry\_reno@charter.net

# Dinner Meeting: Thursday Sep 4, 2014

Speaker: Dick Benoit

**Geologist/Geothermal Resource Consultant** 

Topic: Long-Term Performance of the Nevada

Flash-Type Geothermal Projects

Place: Ramada Reno Hotel

1000 East 6th 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 Sep 4 dinner Presentation.

https://docs.google.com/forms/d/17R8-dWy4pRakNS\_geGkPDhWT8HOpIcRSXT0QIbk6xuY/viewform

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

SEE CALENDAR Page 19 for upcoming meetings

# ► NPGS Monthly Dinner Meeting –Sep 4, 2014

# NEVADA PETROLEUM AND GEOTHERMAL SOCIETY THURSDAY, SEP 4 DINNER MEETING

Long-Term Performance of the Nevada Flash-Type Geothermal Projects

Dick Benoit, Geologist/Geothermal Resource Consultant

Five flash type power plants utilizing evaporative cooling have operated on different Nevada geothermal fields for periods of 21 to 28 years with varying degrees of success. The Dixie Valley and Beowawe projects represent long-term successful projects that have operated at capacity factors generally above 85% and have power plants and resources well matched in size. At Beowawe the resource pressures and artesian flow rates have naturally increased to sustain output while temperatures have substantially declined. At Dixie Valley an augmented injection program was needed to stabilize resource pressures and flow rates while the temperatures have suffered modest declines. The Bradys power plant has been the least successful project due to major reservoir cooling. Bradys represents a case of a large liquid volume plant sited on a small resource. The Desert Peak dual flash plant was replaced with a larger binary power plant after operating for 20 years and the project now consists of a medium sized plant on a relatively small resource that has recently been declining in output. The flash plant at Steamboat Hills is one of seven Steamboat plants located on a large reservoir. It is now closely integrated with a binary power plant, and represents a successful case of a small plant located on a large resource.

# ► About the Speaker:

Dick Benoit

I began working in the geothermal industry in Nov. 1973 after graduating from the University of Montana with a MS degree in geology. I have worked on many of the geothermal fields in Nevada during either the exploration phase or as a resource manager during production. I am currently a geothermal resource consultant.

# ► <u>Cocktail Reception 6:30 Hosted by Barbour Well:</u>



Scott Watkins Client Relations

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

# ► <u>NEW NPGS Officers 2014-2015 (Jun 1-May31):</u>

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

John Snow, Chief Operating Officer, Standard Steam **Vice President/President-Elect** 

Secretary Jerry Walker, Geologist

Steve Foster, Geophysicist/Geologist **Treasurer** 

**Past-President** Bill Ehni, Geologist, Ehni Enterprises, Inc.

# NPS Financial Statement, Fiscal Year 2013-2014: Submitted by Steve Foster, NPS Treasurer, 16Jul2014

PROFIT & LOSS STATEMENT (1Mar13-28Feb14)	r.
INCOME	\$
AAPG Foundation (Distinguished Lecturer)	775.00
Christmas party	775.00
Corporate Sponsors	600.00
Dinner meetings	7308.00
Donations (scholarship)	875.00
Fieldtrip & Guidebook	4910.00
Google Workshop	1025.00
Interest	332.00
Membership dues	3305.00
Publication sales	1508.00
RMS/AAPG meetings	1029.20
Wells Fargo, new checking account	5027.39
Close BofA checking, transfer to Wells Fargo	217.19
Total Income (\$)	26911.78
EXPENSES	
AAPG Distinguished Lecturer	
BLM Lease Sale coffee bar	195.38
Board/Officer meetings	
Christmas party	935.00
Corporate Sponsors (plaques)	137.08
Dinner meetings	7530.00
Fieldtrip & Guidebook	1767.37
Google Earth Course	729.87
	349.00
Insurance (dinner meetings & field trip)	
Misc (Switch movie, office supplies, postage, etc)	366.29
Post Office box rental	180.00
Scholarships	5537.60
Secretary of State annual list	31.00
Transfer from BofA to Wells Fargo checking	5247.14
Total Expenses (\$)	23005.73
NET PROFIT / (LOSS)	
DALANCE CHEET (005 144)	
BALANCE SHEET (28Feb14) ASSETS	
Cash in bank (Wells Fargo checking account)	12403.06
Cash in bank (CDA)	34589.31
Total (\$)	46992.37
LIABILITIES and CAPITAL	
Liabilities	0
Retained Earnings (from FY 2012-2013)	\$43,086.32
2013-2014 Fiscal Year <b>Net Profit</b> / (Loss)	3,906.05
Total (\$)	\$46,992.37
Bataland Familians ( ) A service of the service of	440.000.00
Retained Earnings (at end of FY 2013-2014)	\$46,992.37

# **▶** WELCOME NEW NPGS MEMBERS:

Anderson, Ryan

Getchell, Cody

Laurel, MT

Langenfeld, Erik

Mariezcurrena, Augie

Quick, Robert

University of Nevada Reno, NBMG

Summit Scientific Services

Laurel, MT

New Washoe City, NV

Fallon, NV

Fallon, NV

Pocatello, ID

# ► SCOTT B. MCDANIEL 1951 - 2014 | Obituary

From The Kansas City Star

Scott B. McDaniel, age 62, of Topeka, Kansas, passed away on June 11, 2014, at Select Specialty Hospital. Scott was born on December 14, 1951 in Columbia, Missouri. He was an Eagle Scout, winning the God and Country award from the Boy Scouts of America. He graduated from Shawnee Mission East High School in Prairie Village, Kansas; he earned a B.S. degree in geology and psychology from Colorado College in Colorado Springs, Colorado; and, he earned a M.S. degree in geology from the University of Nevada, Reno, Nevada from the Mackay School of Mines with a legacy, petroleum thesis. He was a registered geologist in the states of Nevada, Kansas, and Missouri. He excelled in water cleanup. He began his career working for Raymond International in Lagos, Nigeria, where he helped to develop the "ring road" and bridge from the island to the mainland. This bridge and road enabled shipping cargo to move from the dock to the mainland. He then worked as a geologist in Casper, Wyoming for United Nuclear to mine uranium. He was the founder of the Nevada Petroleum Society, a member of the Sons of the American Revolution (Russell, Waddell, and Majors chapter in Kansas City, Missouri), and a member of Global Who's Who. Funeral services will be held at 8:00 pm, June 16, 2014, at Overland Park Chapel, 8201 Metcalf Avenue, Overland Park, Kansas 66204. Visitation will be held on Monday, June 16, 2014, from 7:00 to 8:00 p.m. at Overland Park Chapel. He will be buried in Darrouzett, Texas on June 18, 2014. Memorial contributions may be made to Country Club Christian Church, Kansas City, Missouri. Fond memories and condolences for the family may be left at www.overlandparkchapel Arrangements by Overland Park Chapel 8201 Metcalf Ave, Overland Park, KS 66204. (913) 648-6224

# ► Summary: 2014 RMS-AAPG Annual Meeting, Denver, Colorado

By Jerry Walker

The Rocky Mountain Section of the American Association of Petroleum Geologists (RMS-AAPG), of which the NPGS is a local affiliated society, held its annual meeting in Denver, Colorado July 20th-22nd. The meeting was hosted by the Rocky Mountain Association of Geologists (RMAG) at the Colorado Convention Center.

Technical offerings included four field trips, three short courses, 61 oral presentations, 42 posters, and 7 core posters. Source-rock evaluation, advanced technologies focused on unconventional resources, and the Niobrara and Bakken resource plays dominated the technical sessions. A number of presentations highlighted the Eocene lacustrine Green River Formation in Utah as a potential unconventional target. Of interest to Nevada exploration, Stan Finney (California State University-Long Beach) presented his ideas on what he called *tectonic erratics* as a new petroleum target in north-central Nevada.

The highlight of the meeting, from the point of view of the NPGS, was the awarding of the Section's *Rocky Mountain Landmark Publication Award* to Robert A. (Bob) Schalla and Eric H. Johnson for their outstanding efforts as editors in publishing the NPS' own *Green Bible* – the 1994 *Oil Fields of the Great Basin*.

A key function of these conventions is conducting the Section's Executive Committee Meeting. It is the principal time the Section officers and representatives from the 11 affiliated local societies meet to address Section business. Highlights from the meeting include ...

- Sound financial footing of the Section, with approximate assets of \$400 thousand and estimated gross profit from this meeting of \$50 thousand or higher
- Strong RMS-AAPG Foundation, with assets of approximately \$426 thousand. Programs include support of AAPG
  Distinguished Lecturer and Student Chapter, Denver Earth Science Research Library (DERL), PTTC's Futures in
  Energy, and guidebooks of affiliated societies (granted to the Utah Geological Association and the NPGS the past
  year.)
- Renaming the *Rocky Mountain Landmark Publication Award* to the *John Haun Landmark Publication Award* to parallel the Section's *Robert J. Weimer Lifetime Contribution Award*. Both John Haun and Bob Weimer are geologic legends in the Rockies.
- Financial support to the RMS-AAPG President for travel to affiliated societies

The next Rocky Mountain Section meeting will be in 2016, as the AAPG Annual Convention and Exhibition (ACE) will be held in Denver next year, from May 31st to June 3rd, 2015. The 2016 meeting will break new ground for AAPG sections, as it will be a joint meeting between the Rocky Mountain and Pacific sections. It will be held October 2nd-5th at the Paris Hotel in Las Vegas, Nevada. Host societies for this Rocky Mountain Section meeting are the Idaho Association of Professional Geologists and the NPGS. Save the dates!

# ► From the Program for the 2014 RMS-AAPG Denver Meeting:

Stanley Finney's abstract; a new petroleum target in North-Central Nevada

Tectonic Erratics - Remarkable Exotic Blocks Emplaced by the Henderson Thrust, Eureka County, Nevada: A New Petroleum Exploration Target in North-Central Nevada Stanley Finney

Geological Sciences, California State University-Long Beach, Long Beach, CA, United States

Throughout north-central Nevada, Cambrian-Devonian, largely siliciclastic strata of the Roberts Mountains allochthon (RMA) overlie an autochthon of coeval largely carbonate strata. In Eureka County, masses of the carbonate strata also form topographic highs above the RMA, and on the east side of the Roberts Mountains they occur along a post-Antler thrust fault that duplicates the RMA. We propose that the Henderson thrust initially developed along the Roberts Mountains thrust and then ramped upwards and eastwards duplicating the RMA. In the process, carbonate blocks were plucked from the lower plate of the Roberts Mountains thrust and incorporated and transported in the upper plate of the Henderson thrust. Over large areas, the siliciclastic strata of the RMA in the upper plate of the Henderson thrust has been removed by erosion, but the carbonate blocks carried in the upper plate remain as topographic highs structurally overlying the siliciclastic strata of the RMA in the lower plate of the Henderson thrust. Those forming Lone Mountain and Devils Gate are several kilometers long and up to 300 m thick. They bear an analogy to glacial erratics and are termed tectonic erratics. Along a north-south trending belt in Eureka County, both upper and lower plates of the Henderson thrust dip to the east, and the tectonic erratics occur in the base of the upper plate. We propose that these erratics in the subsurface are potential reservoir rocks for oil fields such as the one at Blackburn, Eureka County.

# ► From the Program for the 2014 RMS-AAPG Denver Meeting:

Rocky Mountain Landmark Publication Award

# **Rocky Mountain Landmark Publication Award**

Awardees: Robert A. Schalla, Independent/Consulting Geologist, and Eric H. Johnson, Independent Consultant, editors of *Oil Fields of the Great Basin*, Nevada Petroleum Society Special Publication, 1994

The Rocky Mountain Landmark Publication Award recognizes the authors or editors of a book, guidebook or other publication that over the past decade has had exceptional influence on developing new hydrocarbon plays or deeper understanding of fundamental geology within the Rocky Mountain region.

The nomination for this award noted that "We in Nevada refer to the book as the 'Green Bible,' "as Bob and Eric compiled the definitive book on oil exploration and production in the Great Basin ." As Mr. Schalla stated in the publication, the idea of the book came to him while driving from Billings, Montana to Elko, Nevada in a cigar smoke-filled Ford Explorer. This kernel of an idea turned into a landmark publication still used extensively today. As he later explained, the "work compiling and editing a volume on Great Basin oil fields combined his scientific interest in the area with pure fun."

Mr. Schalla, now an independent/consulting geologist in Billings, Montana, had worked previously for OXY USA, Cities Service and Equitable Energy Resources. He has a BS from the University of California-Riverside and a MS from Oregon State University. Mr. Johnson received a BS in Geophysical Engineering from Montana Tech and a MS in Geophysics from the University of Utah. He has been exploring for oil and gas (in his words, "sometimes successfully") for 40 years; first with Union Oil Company (Unocal) and then with Meridian Oil, the BLM, Balcron Division of Equitable Resources and now as an independent consultant in Billings, Montana.

# ► <u>Rocky Mountain Rendezvous of Geoscience Students and Employers:</u>

# University of Wyoming Laramie, WY September 26-29, 2014

The Rocky Mountain Rendezvous (RMR) is one of five regional job fairs and is sponsored by the American Association of Petroleum Geologists (AAPG) and the Society of Exploration Geophysicists (SEG). The event is hosted by the University of Wyoming Department of Geology and Geophysics and School of Energy Resources. The largest of the five fairs is held in Houston, Texas, the U.S. oil and gas "capital." The RMR is a close second in terms of company and student participation, and is often cited by both recruiters and students as "simply a great experience." Last year, 92 recruiters and 23 companies came to Laramie, Wyoming for the RMR. Approximately 300 geoscience students from across the country participated in the event.

The RMR is a three-day event with a vendor expo, onsite interviews, receptions, short-courses and field trips. Please visit the RMR webpage (**rmr.uwyo.edu/home**) for more information.

Students are encouraged to register early, as space is limited. Participating companies will be given access to student registration information and resumes and will contact students to schedule onsite interviews.

# **Student Interviews**

Students who register for the RMR will be required to submit a one-page resume. Electronic copies of the resumes and student data will be sent to participating companies on Friday, September 12. After reviewing the student information, companies can contact student candidates to set up onsite interviews. Companies are responsible for managing their own interview schedules.

Each company is asked to have interview slots open for students who may not have initially been contacted and/or walk-in student registrations.

# **Event Venue and Hotel Rooms**

All events for the RMR will take place at the UW Conference Center & Hilton Garden Inn. UW Conference Center & Hilton Garden Inn 2229 Grand Avenue

Laramie, Wyoming 82070 Reservations: 307-745-5500

# ► <u>Scheduled Nevada BLM Geothermal Lease Sales:</u>

Sale Date	Nominations Due	Sale Posting Date	Protest Deadline
September 10, 2014	January 31, 2014	June 12, 2014	July 14, 2014
September 16, 2015	February 6, 2015	June 18, 2015	July 17, 2015

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

# ► Scheduled Nevada 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
July 17, 2014	Battle Mountain	September 13, 2013	April 14, 2014	May 16, 2014
September 9, 2014	Elko/Southern Nevada	June 13, 2013	March 21, 2014	April 20, 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
March 10, 2015	Elko/Southern Nevada	June 12, 2014	December 10, 2014	January 9, 2015
June 9, 2015	Battle Mountain	September 12, 2014	March 11, 2015	April 10, 2015
September 15, 2015	Winnemucca/Carson City	December 19, 2014	June 17, 2015	July 17, 2015
December 8, 2015	Ely	March 13, 2015	September 9, 2015	October 9, 2015

<sup>\*</sup>EOI = Expression of Interest

NOTE: There will be two Oil & Gas Lease Sales on Sep 9, 2014.

For listings of parcels for the Jul & Sep sales, use the following link: <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>

# ▶ DOE launches Nat'l Geothermal Data System:

Washington - The **Energy Department** officially launched the **National Geothermal Data System**(NGDS), an online open-source platform that facilitates the discovery and use of geothermal data, enabling researchers to speed geothermal energy development. This innovative online tool will allow academia and industry to access quantifiable, technical data in digital format, breaking down one of the geothermal energy industry's greatest barriers to development and deployment of this promising clean energy source.

The goal of the NGDS is to accelerate research and development in order to drive down the cost and improve the accuracy of subsurface exploration while also encouraging investment in geothermal energy production. The public data platform encompasses thousands of databases, geologic maps, and reports, drawing from millions of digitized records that were previously unavailable—and can aid discovery of new data on geologic features, faults, seismicity, heat flow, geochemistry, drilling, and temperatures at various depths and in specific geographic areas. Already, industry is using the free, online tool to simulate geological features and locate and monitor geothermal reservoirs beneath the earth's surface.

Find out more about the NGDS atwww.geothermaldata.org.

Source: DOE





## GEOLOGICAL SOCIETY OF NEVADA 2015 SYMPOSIUM

## ANNOUNCEMENT and CALL FOR PAPERS ABSTRACT DEADLINE EXTENDED

THEME: New Concepts and Discoveries

WHEN: MAY 14-24, 2015

WHERE: JOHN ASCUAGA'S NUGGET RENO/SPARKS, NEVADA

The Geological Society of Nevada invites contributions for oral, poster, and core shack presentations covering a broad range of geological topics for its upcoming seventh symposium. The symposium's focus is New Concepts and Discoveries emphasizing both the major deposit types and the trends that have sustained the mining industry for several decades as well as other deposit types and areas that may eventually have greater influence. The focus of the meeting is to utilize case studies; descriptions of new and reinvigorated deposits and targets; framework geology; tectonics and metallogeny; and the latest deposit concepts and exploration technologies.

Oral presentations require abstracts and a written paper that will be peer-reviewed and published in the Symposium Proceedings following the meeting. Poster presentations require abstracts and written papers are encouraged. Core shack presenters are welcome to submit abstracts and written papers, but are not required to do so.

Draft abstracts up to 500 words should be submitted no later than October 1, 2014. Written papers should be 2,000 to 20,000 words and include figures and tables.

Information for contributors is available on-line at: http://www.gsnv.org/2015-symposium/. Submit abstracts to John Muntean and Moira Smith via e-mail at: munteani@unr.edu and msmith@pilotgold.com.

# GSN-SEG FORUM SUNDAY, MAY 17<sup>TH</sup>, 2015 TOPIC:

Carlin-like Gold Deposits: What Can We Learn Beyond the Known Trends and Nevada

> TECHNICAL PROGRAM MONDAY-THURSDAY MAY 18<sup>TH</sup>- 21<sup>ST</sup>, 2015

#### Focus Topics:

- Regional Geology and Metallogeny of the Great Basin
- · Exploration Technology
- Case Histories of Discoveries and Exploration Update
- · Intrusion-Related Cu-Au-Mo Deposits
- · Northeastern Nevada: The New Frontier
- · Advances in Carlin-type Gold Deposits
- · Epithermal Deposits
- Diversification: Looking Beyond Gold, Copper and Silver

#### Questions? Contact us at:

http://www.gsnv.org/2015-symposium/ or email at mollymhunsaker@2015GSNsymposium.org

#### **Meeting Co-Hosts**





# FIELD TRIPS MAY 14<sup>TH</sup>-16<sup>TH</sup> AND MAY 21<sup>ST</sup>-23<sup>ED</sup>, 2015 Pre-meeting:

- · Introduction of Carlin Gold Deposits
- Epithermal Deposits of Northern Nevada
- Mining for Non-Geologists: Exploration to Reclamation

## Post-meeting:

- · The Pequop Trend-Nevada's Newest "Carlin" Trend
- · Epithermal Deposits of Central Nevada
- · Porphyry-related Deposits of Nevada
  - The Famous Comstock Gold and Silver District

SHORT COURSES
MAY 14<sup>TR</sup> -16<sup>TR</sup> AND MAY 21<sup>ST</sup>-23<sup>RD</sup>, 2015
TOPICS TO BE ANNOUNCED

#### EXHIBITS

An active exhibit hall will provide excellent industry exposure for your company or organization. Space will go fast for this popular venue, so please reserve your booth early! Contact Elizabeth Zbinden or Mary Stollenwerk at exhibits@2015GSNsymposium.org for more information.

#### **Sponsorship Opportunities**

We invite you to join GSN as we continue the tradition of excellence in presentations, field trips, and short courses. Opportunities are available for Patronage sponsorships, along with specific events. Please visit the website: <a href="https://www.gsnv.org/symposium">www.gsnv.org/symposium</a> or e-mail Dave Shaddrick at: <a href="mailto:dshaddrick@aol.com">dshaddrick@aol.com</a>

The Geological Society of Nevada (GSN) is a nonprofit scientific society whose principal mission is to promote the advancement of the geological sciences, especially as they relate to Nevada. The Society encourages the dissemination of scientific and practical knowledge through semiformal presentations, field trips and symposia as well as by publishing the literature resulting from these activities.

# ▶ News from Nevada Bureau of Mines & Geology: 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 http://www.nbmg.unr.edu/Departments/PubSales/PubSales.html

# >New Economic Geologist at NBMG - Dr. Mike Ressel

Dr. Mike Ressel is joining the faculty of the Nevada Bureau of Mines and Geology and is filling a new tenure-track faculty position in Economic Geology. Mike will be responsible for studying and assessing mineral resources in the region, including analysis of the processes that make Nevada one of the world's richest regions in gold deposits. This position will allow NBMG to better fulfill its core mission of studying mineral deposits and distributing that information through published geologic maps, papers, and reports to the public.

Mike has a B.S. in Geology from California State Polytechnic University, Pomona (1989) and M.S. and Ph.D. degrees in Geology (1996 and 2005, respectively) from the University of Nevada, Reno. His graduate studies were Nevada-focused and broadly covered aspects of Tertiary volcanic geology, igneous petrology, regional magmatism, ore deposits, and tectonics. A major focus of his Ph.D. work was on the relationships between magmatism and Carlin-type gold mineralization on the Carlin Trend, Nevada. His work experience includes five years prior to graduate school working for a consulting firm specializing in geotechnical engineering, GIS. hazardous materials, and hydrogeology throughout the U.S. Since 2000, Mike worked in mining and exploration for gold and copper across North America but also in Africa, Australia, and South America for several companies and involving a variety of deposit styles. His industry experience includes several Nevada underground and open-pit mines where he did ore control, mine mapping, resource modeling and near-mine development. He has conducted exploration for mineral deposits over a range of scales from reconnaissancelevel through district- and mine-scales, which included the assembly of regional framework and prospectivity studies, project generation and management, mapping and sampling, target generation, and property evaluation for acquisitions and auditing. He most recently served as Chief Geologist for North America for Newmont Mining Corp., where he contributed to evaluations of grassroots through advanced exploration projects, helped guide regional and global exploration focus, was involved in developing training and mentoring programs in both mines and exploration, and liaised with university-sponsored research, including advisement for several M.S. and Ph.D. studies.

Mike has served on several academic research boards including the Precambrian Research Center at the University of Minnesota, Duluth, the Lowell Institute for Mineral Resources at the University of Arizona, and the Center for Research in Economic Geology at the University of Nevada, Reno as well as being an industry liaison for advisory boards of NBMG and the Geological Sciences Department at UNR. He is a past president of the Geological Society of Nevada and currently serves on its Foundation. He is a fellow with the Society of Economic Geologists.

Mike is excited about joining the Nevada Bureau of Mines and Geology, a group that he has been closely involved with for many years. His plans are to advance understanding of mineral deposits, igneous geology, and tectonics in Nevada and the Great Basin through field studies that include mapping and geochronology. He hopes to join with industry and other researchers in strengthening the economic geology program at UNR.

# >American Canyon M6.1 Earthquake in CA - data from Nevada Geodetic Laboratory

A message from Bill Hammond at the NBMG Nevada Geodetic Laboratory:

American Canyon M6.1 earthquake in the northern San Francisco Bay area: NBMG researchers have derived rapid earthquake displacement maps from GPS data that illustrate how the earth around the rupture underwent permanent coseismic deformation. See: http://geodesy.unr.edu

Further observations, data, photos, and rapid analysis products are available as they come in to http://scec.usc.edu/egresponse/node/353

# >2015 Nevada Geology Calendar - coming soon

Coming soon! You can look forward to another great *Nevada Geology Calendar* this year. This calendar is designed by Jack Hursh, Jennifer Vlcan, Chris Henry, and Nick Hinz and will be available this Fall 2014. More details will be coming soon.

This 12-month calendar for 2015 will feature a different geologic topic each month. It is full of beautiful photos highlighting Nevada's scenic wonders and also includes interesting facts about Nevada geology.

# >Earth Science Week Field Trips - October 11-12

Save the date! To celebrate Earth Science Week this year, Jon Price and DD LaPointe will be leading field trips for the public on October 11 and 12 (Saturday and Sunday) in the Carson City area.

There will also be additional activities in Reno throughout the week. More details on all of these activities will be coming soon.

# >Department of Geological Sciences and Engineering Fall Seminar Series

This lecture series is sponsored by the Department of Geological Sciences and Engineering, College of Science, Mackay School of Earth Sciences and Engineering at the University of Nevada, Reno.

Unless otherwise noted below, these lectures are held on Mondays from 4:00 to 5:15 p.m. in <u>Davidson Math</u> and <u>Science Center</u> (DMS) 105.

If you have any questions, you may contact Dr. Stacia Gordon: phone (775) 784-6476: staciag@unr.edu

08/25/2014 - Paula Noble, UNR

09/01/2014 - Labor Day

09/08/2014 - TBA

09/12/2014 (Friday) - Rina Schumer, DRI

09/15/2014 - Yang Zhang, UNR MS student

09/22/2014 - Geoff Blewitt, NBMG

09/29/2014 - Amanda Keen-Zebert, DRI

10/06/2014 - TBA

10/13/2014 - Professor Ze'ev Ronen, Professor, Ben Gurion University

10/20/2014 - GSA

10/27/2014 - TBA

11/03/2014 - Ken Adams, DRI

11/10/2014 - Macario Rocha-Rocha, UNR, PhD student

11/17/2014 - Danielle Molisee, UNR, MS student

11/24/2014 - Thanksgiving week

12/01/2014 - TBA

12/08/2014 - TBA

#### 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.nbmg.unr.edu

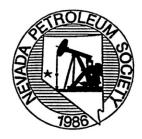


# Submit your abstract for ACE 2015 in Denver

Earn recognition and increase the exposure for you, your company or your institution by presenting your ideas, research, theories, case studies and concepts at the AAPG 2015 Annual Convention and Exhibition (ACE) to be held 31 May–3 June 2015 at the Colorado Convention Center.

Your expert contribution and practical guidance will help promote and advance the exploration and production of global energy resources. Industry professionals, academics and students are invited to submit abstracts that relate to any of the listed topics. Oral, poster and core poster sessions will be determined by actual submissions.

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# **Publication Price List - October 2013**



Paper	CD- ROM	Download 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> \$20.00-\$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 for discounted price of \$5.00
NPS21 n/a	NPS21c \$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 Co, 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	NPS5c \$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.
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<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	NPS13y \$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	NPS16c \$45.00	<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	NPS19c \$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 on Web at http://pubs.usgs.gov/of/2004/1078/</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
<b>NPS24</b> \$30.00	<b>NPS24c</b> \$45.00	<b>NPS24y</b> \$30.00	Geothermal and Petroleum Developments in Several Extensional Basins of the Central Walker Lane, Nevada (2013) L.J. Garside, editor, 11 papers, 131 p.

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:

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# 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 <a href="http://www.nbmg.unr.edu/">http://www.nbmg.unr.edu/</a>.

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

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 <a href="http://www.nbmg.unr.edu/Oil&Gas/NVWellInfo.html">http://www.nbmg.unr.edu/Oil&Gas/NVWellInfo.html</a>

#### Reports

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

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/

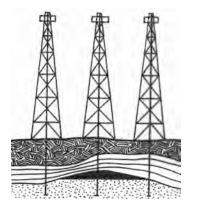
**Basin and Range Carbonate Aquifer System Study:** 

http://nevada.usgs.gov/barcass/data.htm

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# 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
- B91 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

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.nbmg.unr.edu/ and click on "Online Documents."

#### Newsletters

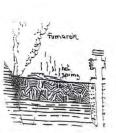
Nevada Geology Newsletter no. 19, page 3 (Summer 1993) "Low-temperature geothermal resources in Nevada" by Larry Garside, free

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

- OF83-6 Preliminary map of thermal wells in the Moana geothermal area, Reno, Nevada: Garside, \$8.00
- 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:
- 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)



- 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 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
- Ocologic 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**

- C1249 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
- 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 <a href="http://pubs.usgs.gov/of/2002/ofr-02-0374">http://pubs.usgs.gov/of/2002/ofr-02-0374</a>, call for prices
- OF02-384 High-resolution aeromagnetic survey to image shallow faults, Dixie Valley geothermal field, Nevada: Grauch (2002), <a href="http://pubs.usgs.gov/of/2002/ofr-02-0384">http://pubs.usgs.gov/of/2002/ofr-02-0384</a>, call for prices

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#### Other Resources

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Nevada Petrol	eum and Geothermal Society Calendar: Year 2014-2015
Sep 4, 2014	NPGS Monthly Dinner Meeting – Thursday Sep 4, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV Speaker: Dick Benoit, Geologist/Geothermal Resource Consultant Topic: Long-Term Performance of the Nevada Flash-Type Geothermal Projects
Sep 9, 2014	See Page 1 for details  Nevada BLM Oil & Gas Lease Sale, Reno NV  Elko, Southern NV District, posting date: Mar 21, 2014  Winnemucca/Carson City District, posting date: Jun 11, 2014 <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>
Sep 10, 2014	Nevada BLM Geothermal Lease Sale, Reno NV Posting Date Jun 12, 2014 <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>
Oct 2, 2014	NPGS Monthly Dinner Meeting – Thursday Oct 2, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV Speaker: Donna M Herring, Geologist, Petroglyph Consulting Granville OH Topic:TBA
Nov 6, 2014	NPGS Monthly Dinner Meeting – Thursday Nov 6, 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV Speaker: TBA
Dec 6, 2014	NPGS Annual Christmas Dinner – Friday Dec 6 , 6:30 PM Ramada Reno Hotel, 1000 E 6 <sup>th</sup> St, Reno, NV Details TBA
May 14-24, 2015	GSN Symposium 2015 John Ascuaga's Nugget Hotel and Casino in Sparks, Nevada <a href="http://www.nbmg.unr.edu/docs/GSN 2015 Symposium.pdf">http://www.nbmg.unr.edu/docs/GSN 2015 Symposium.pdf</a>
May 31-Jun 3, 2015	AAPG Annual Convention and Exhibition 2015 Denver, CO www.aapg.org
Oct 2-5, 2016	Rocky Mountain Section/Pacific Section Meeting – AAPG 2016 2016 joint RMS-AAPG/PS-AAPG annual meeting Paris Hotel, Las Vegas, Nevada. Host societies: Idaho Association of Professional Geologists and the Nevada Petroleum & Geothermal Society.

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