

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.nbmng.unr.edu/nps/>

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Dinner Meeting: Thursday Nov 6, 2014

Speaker: Bill Price
Head of Engineering and Construction
Enel Green Power North America, Inc.

Topic: Enel's Stillwater Hybrid Power Plant

Place: Ramada Reno Hotel
1000 East 6th Street, Reno, Nevada

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

HOSTED BY:



Dinner Served at 7:00 PM

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

Please RSVP by Wednesday Nov 5 with the following link:

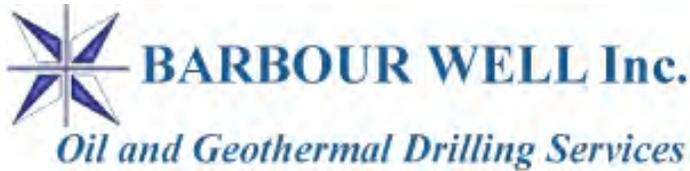
https://docs.google.com/forms/d/1VMFrgsqja_Aucjvh4kNRgxS4MepS706IRKPs6Qwp20/viewform

NPGS is charged for every meal that is reserved. If you cannot keep your reservation, please cancel prior to the meeting.

SEE CALENDAR Page 18 for upcoming meetings

► **November Meeting Cocktail Reception 6:30 Hosted by Barbour Well:**

Thank you to Barbour Well for hosting the bar for our November meeting!



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

► **NPGS Monthly Dinner Meeting – Nov 6, 2014**

***Enel's Stillwater Hybrid Power Plant
Presentation by Bill Price, Head of Engineering and Construction***

Enel Green Power North America, Inc.

► **About the Speaker**

William Price is the Vice President of Geothermal Engineering and Construction at Enel Green Power North America, Inc. (EGP-NA) responsible for the execution of geothermal projects in North America. He joined EGP-NA in 2007.

Mr. Price was the Project Manager for the construction and commissioning of the Stillwater and Salt Wells Geothermal Projects located in Fallon, Nevada, which were placed in service in 2009. Currently, he is leading the engineering and construction of solar projects integrated with EGP-NA's geothermal facilities.

Mr. Price has 29 years of experience in the power industry, the past 23 specifically involved in geothermal business development, operations, maintenance, engineering and construction. He began his career in the U.S. Navy in 1982, and graduated at the top of his class in the Nuclear Power Program. After completing his government service, Mr. Price became involved with the Coso Geothermal Field and was part of the construction and operations team that expanded Coso from a 30 MW dual flash steam facility to a 240 MW project spread over four different sites. In 1992 he became the general manager of the 24 MW Steamboat Binary Geothermal Project.

Price is well known in the industry as the pioneer of geothermal submersible pump technology and advancements in binary technology.

Taken From: EnelGreenPower.com Company Organization Chart

<http://www.enelgreenpower.com/en-GB/ena/company/chart/>

The following public document by PVTech was provided by Enel.

Projects | briefing



STILLWATER HYBRID POWER PLANT, NEVADA, US

Project: Stillwater hybrid power plant

Location: Nevada, US

Project capacity: 26MW PV, 33MW geothermal, 2MW CSP

Nearing completion this quarter is the world's first integrated geothermal-solar hybrid power plant. The hybrid power station integrates solar photovoltaic, geothermal and concentrating solar power (CSP) across a 240-acre site in Nevada, USA.

Construction of the 2MW CSP part of the plant began April 2014, in Fallon, Nevada to join the 33MW Stillwater Geothermal Project built in 2009 and the 26MW of solar PV completed in 2012.

The hybrid power station has more than 89,000 polycrystalline silicon PV panels installed across 110 acres, generating 40 million kWh of clean energy per year, enough power for 15,000 American households. Last year the 26MW of PV and 33MW of geothermal together generated 200GWh of energy. With the completion of the CSP plant, 3,000MWh a year is to be added to the plant's total generation capacity.

Named the 'Stillwater Hybrid Project', the project was developed, financed and constructed by Italian renewable energy

corporation Enel Green Power's North American subsidiary, EGP NA, which will now own and operate it.

Bill Price, the head of engineering and construction at Enel Green Power North America, explains that Stillwater is the world's first hybrid project that combines "the continuous generation capacity of binary-cycle, medium-enthalpy [heat content] geothermal power with solar photovoltaic and solar thermodynamic".

To achieve a level of integration never before attempted was no easy feat, says Price, as the main driving factor in determining the design of the new plant was to make sure the solar additions were "harmoniously integrated" with the already operating, commercial geothermal facility.

Price explains blending the energy sources means that "precisely when the thermal efficiency in the geothermal unit is lower – generally during the hottest and sunniest times of the day or year – the solar PV is at its most productive, contributing to stabilise production hence further improving plant performance".

While the average daily generation during peak hours is significantly enhanced by the PV system, the geothermal plant returns to its best generation levels later on, "when solar genera-

tion ramps down", says Price.

The integration of the solar CSP thermodynamic facility is expected to further enhance the plant's smooth production.

A mix of benefits

The benefits of this cocktail of various renewable generation sources has so far proved beneficial in the generation measurements to date, as well as saving on cost, and environmental impacts, Price claims.

Using multiple renewable technologies not only increases the generation of zero-emission energy, but also makes it possible to use the same infrastructure, such as, for instance, electrical interconnection lines, thereby saving costs and further reducing environmental impact, explains Price.

Also due to the hybridisation and stable load all year around, the plant does not need any battery storage technology, adds Price.

To keep track of the multiple forms of generation, Enel Green Power has an on-site control room, and is responsible for all operations and maintenance.

Price reveals an ambitious vision for future renewable energy generation and hybrid power plants should the project prove successful.



Source: EGP

PROJECTS



Source: EGP

At the global level “we record a sizeable overlap in the resource areas of geothermal and solar, which suggests the possibility of a scaled application of solar and geothermal solutions”, he explains.

In these cross-over areas, “hybrid projects that enable both base-load and peak power delivery will be more attractive to utilities serving load with similar consumption patterns”, predicts Price.

In some cases, hybridisation may also allow renewable energy projects that were previously deemed unfeasible – stand-alone geothermal or solar projects – “to become more economically and technologically viable”, adds Price.

Research and development

To explore the potential of hybrid renewable power plants better, EGP NA earlier this year embarked on a research project with the US National Renewable Energy Laboratory (NREL), and Idaho National Laboratory (INL).

Under the oversight of the US Department of Energy Geothermal Technologies Office (GTO), EGP NA will work with NREL and INL to model the combination of geothermal and solar systems, validating simulated results with real-world data from the Stillwater facility.

The study is ongoing this year. “We look forward to digging into what we believe will be a fruitful hybridisation and we will disclose results when they become available”, says Price.

“The fruits of this work will be used to

explore and quantify the potential benefits of different operating strategies and integration schemes, with the goal of opening doors for the development of future hybrid renewable energy facilities.”

Hybrid future

EGP NA hopes to continue its research and development of hybrid renewable power, owning and operating over 90 plants across 21 US states, and two Canadian provinces, with a total installed capacity of around 2GW, working in solar, wind, geothermal and hydro.

EGP’s subsidiary in Chile is also constructing a hybrid project which combines PV power, a mini-wind turbine generator and a co-generation system for electricity and hot water, coupled with a storage system. It is hoped this hybrid will be capable of meeting most of the annual energy needs of the village of Ollagüe, with an expected installed capacity of 232kW, as well as generating approximately 460MWh a year, equivalent to the electricity consumption of 150 households.

By Lucy Woods, Solar Media



Source: EGP

► **Cocktail Reception for October Meeting Hosted by ThermaSource Cementing, Inc.:**

Many thanks to ThermaSource for sponsoring the bar for our October meeting!!



Marc Brennen | Senior Director Business Development | ThermaSource, Inc.
7085 Eddy Road Area G, Arbuckle, CA 95912
cell: 916.801.3336|office: 530.476.3333|fax: 530.476.3347
mbrennen@thermasource.com | www.ThermaSource.com

► **WELCOME NEW NPGS MEMBERS:**

Bakane, Piyush

Ormat Nevada Inc

Reno, NV

► **Scheduled Nevada BLM Geothermal Lease Sales:**

Sale Date	Nominations Due	Sale Posting Date	Protest Deadline
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
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

*EOI = Expression of Interest

For listings of parcels for the Dec sale, use the following link:

http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html

► **Endowed Chair in Petroleum Geology for Western State University, Colorado**

Job Bulletin

Page 1 of 2



WESTERN STATE COLORADO UNIVERSITY
invites applications for the position of:

Rady Chair in Petroleum Geology

SALARY: See Position Description

OPENING DATE: 09/08/14

CLOSING DATE: Continuous

POSITION:

Western State Colorado University invites applications for the Rady Chair in Petroleum Geology. The Rady Chair is made possible by a generous endowment from the Paul M. Rady Family Foundation.

DUTIES:

The successful candidate will work with the department to recruit students into the petroleum geology program, to place students in professional jobs and internships, and to develop industry support for the program. Teaching responsibilities include developing and teaching undergraduate courses in petroleum geology with an emphasis on subsurface mapping, log analysis, seismic interpretation and workstation techniques. The successful candidate will also teach courses in the geology core curriculum that support the petroleum emphasis.

QUALIFICATIONS:

Significant experience in the oil and gas industry is required. The ideal candidate should have a broad range of experience within the oil and gas industry, including significant time spent at a major oil company and experience in the independent sector. A Master's degree in geology or related field is required. Candidates must possess a strong commitment to undergraduate education as well as demonstrable teaching excellence. The successful candidate will demonstrate the ability to serve as the chief liaison between the program and industry partners.

If the successful candidate has a Master's degree, the Rady Chair is a non-tenure track position. If the successful candidate has a PhD degree, the position can be tenure track.

ADDITIONAL APPLICATION INFORMATION:

Start date: spring 2015, or as agreed.

Salary Range: Salary will be commensurate with experience and qualifications, approximately \$90,000-94,000 per year.

To apply, use our online application at www.western.edu/jobs (scroll up the page and select the "apply" link). **Required attachments** to your online application include a cover letter, curriculum vitae, statements of teaching and research philosophies, and academic transcripts.

Three letters of recommendation are also required and these must be submitted via email to Lori Clement: lclement@western.edu

Please direct questions regarding the position to Dr. Allen Stork: astork@western.edu

Unofficial transcripts are acceptable during screening. Official transcripts are required prior to

employment.

Screening of applications will begin November 15 and continue until the position is filled.

Western is a residential, four-year public University with an enrollment of 2,400 students who come from across Colorado and all fifty states. Faculty members share a strong commitment to personalized undergraduate education with the liberal arts as its core. They are student-oriented, collegial, energetic, and engaged in the campus and community. The curriculum provides professional flexibility where experiential learning and interdisciplinary approaches are valued. The University is located in Gunnison, Colorado, a rural community 200 miles southwest of Denver. At an elevation of 7,700 feet in the Southern Rocky Mountains, the Gunnison Valley provides significant year-round outdoor recreational opportunities. Employees have chosen Western because of the quality of life combined with rewarding careers. Visit <http://www.western.edu> to learn more about Western.

Western State Colorado University is an affirmative action/equal opportunity educator and employer.

APPLICATIONS MAY BE FILED ONLINE AT:
<http://www.western.edu/jobs>

Position #51495F-FY15-1
RADY CHAIR IN PETROLEUM GEOLOGY
LC

600 N. Adams Street
Gunnison, CO 81231
970-943-3142



**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: munteanj@unr.edu and msmith@pilotgold.com.

**GSN-SEG FORUM
SUNDAY, MAY 17TH, 2015
TOPIC:**

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

**TECHNICAL PROGRAM
MONDAY-THURSDAY
MAY 18TH- 21ST, 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 14TH-16TH AND MAY 21ST-23RD, 2015

Pre-meeting:

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

Post-meeting:

- The Pequo 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 14TH-16TH AND MAY 21ST-23RD, 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: www.gsnv.org/symposium or e-mail Dave Shaddrick at: dshaddrick@aol.com

The **Geological Society of Nevada (GSN)** is a non-profit 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

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

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

>Geoff Blewitt has been awarded the Vening Meinesz Medal for 2015.

The medal was established by the European Geosciences Union Division of Geodesy and is the highest award offered in Europe that recognizes distinguished research in Geodesy.

The official announcement of the medal recipients was posted on October 13, 2014 at <http://www.egu.eu/news/126/egu-announces-2015-awards-and-medals/>.

A description of the medal and a list of past recipients is given at <http://www.egu.eu/awards-medals/vening-meinesz/>. Congratulations to Geoff!

>Article in *Geology*—by Kreemer and Gordon:

Pacific plate deformation from horizontal thermal contraction

By Corné Kreemer (Nevada Bureau of Mines and Geology, and Seismological Laboratory, University of Nevada, Reno) **and Richard G. Gordon** (Department of Earth Science, Rice University)

Geology, October 2014, v. 42, p. 847-850, first published on August 15, 2014, doi:10.1130/G35874.1
<http://geology.gsapubs.org/content/42/10/847.abstract>

Abstract: The central approximation of plate tectonics is that the plates are rigid, which gives the theory its rigor and predictive power. Space geodetic measurements are consistent with the rigidity of stable plate interiors, but some failures of plate-circuit closure, in particular of oceanic plates, indicate that plates may be measurably non-rigid. We explore the hypothesis that horizontal thermal contraction causes deformation of oceanic plates. Here we show significant expected displacement fields due to thermal contraction for the Pacific plate based on a previously proposed relationship between seafloor age and strain rate and on two end-member assumptions on how strain compatibility is enforced. The predicted maximum 2.2 mm/yr southeastward motion of the northeastern part of the plate relative to the Pacific-Antarctic Rise may contribute to a large part of the non-closure of the Pacific–North America plate motion circuit. Our predicted displacement rates cannot (yet) be confirmed by current space geodetic data and will require seafloor geodesy with 1 mm/yr accuracy. The spatial distribution of predicted moment rate agrees reasonably well with that of intraplate earthquake epicenters, similar to what is observed for plate boundary zones. Our results suggest that plate-scale horizontal thermal contraction is significant, and that it may be partly released seismically.

Both this new article by Kreemer and Gordon listed above and a 2009 article by Chris Henry listed below were on GSA’s “**Most-Read Articles during September 2014.**”

>Uplift of the Sierra Nevada, California

By Christopher D. Henry (Nevada Bureau of Mines and Geology)

Geology, June 2009, v. 37, p. 575-576, doi:10.1130/focus062009.1

<http://geology.gsapubs.org/content/37/6/575.full> ; <http://geology.gsapubs.org/content/37/6/575.full.pdf+html>

>Major Mines of Nevada 2013—now available

Major mines of Nevada 2013: Mineral industries in Nevada's economy, **by Rich Perry and Mike Visher**, 2014

This is the twenty-fifth of an annual series of summary reports on major mines of Nevada. Sand and gravel operations are not included. Information on employment and production for the calendar year 2013 was provided by the individual mine operators. The Nevada Division of Minerals maintains a complete register of Nevada mines. For further information, contact them at 400 W. King, Suite 106, Carson City, Nevada 89703 or call (775) 684-7040, fax (775) 684-7052, or visit their website at <http://minerals.nv.gov>.

Map locations of all major mines are shown and an overview of mineral production and its effect on Nevada's economy is presented.

P-25, \$5.00 for a paper copy or available free on the Web:

<http://www.nbmgs.unr.edu/dox/mm/mm13.pdf>

>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 [Davidson Math and Science Center](#) (DMS) 105.

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

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.nbmgs.unr.edu](#)

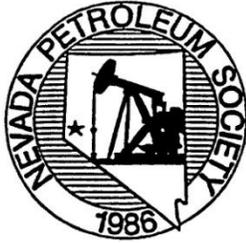


Submit your abstract for ACE 2015 in Denver

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.

Industry professionals and students are invited to submit abstracts that relate to any of the topics listed below. You can view all themes and subcategories online. Abstract submission deadline is 2 October 2014.



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 \$20.⁰⁰/year
- ASSOCIATE \$15.⁰⁰/year
- STUDENT \$10.⁰⁰/year
- LIFE \$200.⁰⁰ (one-time payment)

Signature _____

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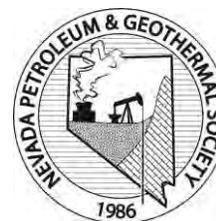
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Nevada Petroleum Society
P.O. Box 11526
Reno, NV 89510-1526

DO NOT COMPLETE
For NPS Membership Committee Signatures Only

Nevada Petroleum and Geothermal Society

Publication Price List - October 2013



Paper	CD-ROM	Download from Dropbox	Title
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SPECIAL VOLUMES

NPS1 n/a	NPS1c \$80.00	NPS1y \$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)
NPS15 \$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	NPS21y \$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	NPS3c \$35.00	NPS3y \$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.
NPS4 \$15.00	NPS4c \$35.00	NPS4y \$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	NPS5y \$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.
NPS6 \$25.00	NPS6c \$40.00	NPS6y \$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.
NPS7 \$33.00	NPS7c \$48.00	NPS7y \$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	NPS8c \$40.00	NPS8y \$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	NPS9c \$55.00	NPS9y \$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 from Dropbox	Title
NPS10 \$25.00	NPS10c \$40.00	NPS10y \$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.
NPS11 \$25.00	NPS11c \$40.00	NPS11y \$25.00	Cenozoic Structure and Stratigraphy of Central Nevada (1996) W.J. Taylor and H. Langrock, editors, 11 papers, 122 p.
NPS12 \$25.00	NPS12c \$40.00	NPS12y \$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	NPS13c \$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
NPS14 \$35.00	NPS14c \$50.00	NPS14y \$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
NPS16 \$30.00	NPS16c \$45.00	NPS16y \$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	NPS17c \$50.00	NPS17y \$35.00	Detachment and Attenuation in Eastern Nevada and its Application to Petroleum Exploration (2002) W. Ehni and J. Faulds, editors, 163 p.
NPS18 \$25.00	NPS18c \$40.00	NPS18y \$25.00	Oil, Gas, and Geothermal Occurrences in Northwestern Nevada (2003) S. Foster, editor, 102 p.
NPS19 n/a	NPS19c \$50.00	NPS19y \$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, free on Web at http://pubs.usgs.gov/of/2004/1078/)
NPS22 n/a	NPS22c \$40.00	NPS22y \$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.
NPS23 \$25.00	NPS23c \$40.00	NPS23y \$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
NPS24 \$30.00	NPS24c \$45.00	NPS24y \$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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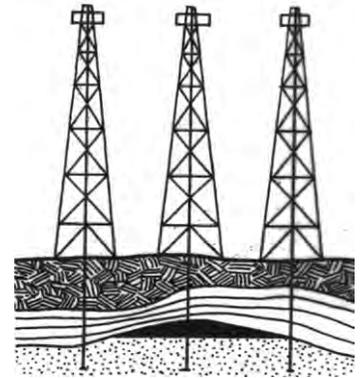
Web: <http://www.nbmj.unr.edu>

Web: <http://www.nbmj.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

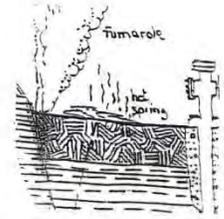
Assessment of undiscovered oil and gas resources of the Eastern Great Basin Province, 2005, Fact Sheet
FS-2005-3053, free at <http://pubs.usgs.gov/fs/2005/3053/>
Basin and Range Carbonate Aquifer System Study:
<http://nevada.usgs.gov/barcass/data.htm>

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.nbmgs.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.nbmgs.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 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.nbmgs.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 Pahrnagat 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.nbmj.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:

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Nevada Petroleum and Geothermal Society Calendar: Year 2014-2015	
Nov 6, 2014	<p>NPGS Monthly Dinner Meeting – Thursday Nov 6, 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV <i>Speaker: Bill Price, Enel Green Power North America, Inc.</i> <i>Topic: Enel's Stillwater Hybrid Power Plant</i> See Page 1 for details</p>
Dec 1-5, 2014	<p>American Exploration & Mining Assoc – 120th Annual Meeting J A Nugget Casino Resort, Sparks, NV Miningamerica.org (509) 624-1158</p>
Dec 6, 2014	<p>NPGS Annual Christmas Dinner – Friday Dec 6 , 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV <i>Details TBA</i></p>
Dec 9, 2014	<p>Nevada BLM Oil & Gas Lease Sale, Reno NV Ely NV District, posting date: Sep 10, 2014 http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/oil_gas/oil_and_gas_leasing.html</p>
Jan 8, 2015	<p>NPGS Monthly Dinner Meeting – Thursday Jan 8, 6:30 PM <i>Speaker: Dr. Wanda Taylor, UNLV Professor</i></p>
Feb 5, 2015	<p>NPGS Monthly Dinner Meeting – Thursday Feb 5, 6:30 PM <i>Speaker: Dr. John Louie</i> <i>Topic: Advanced Seismic Imaging of Geothermal Reservoirs in Nevada – Is there a Geothermal Seismic Signature?</i></p>
Mar 5, 2015	<p>NPGS Monthly Dinner Meeting – Thursday Mar 5, 6:30 PM <i>Speaker: Dr. David Boden</i> <i>Topic: Iceland Trip - Sustainability</i></p>
Apr 2, 2015	<p>NPGS Monthly Dinner Meeting – Thursday Apr 2, 6:30 PM <i>Speaker: Sean Long</i> <i>Possible Topic: A Valley and Ridge in the Basin and Range</i></p>
May 7, 2015	<p>NPGS Monthly Dinner Meeting – Thursday May 7, 6:30 PM <i>Speaker: Ben Delwiche – Ormat Nevada</i> <i>Topic: McGuinness Hills Project</i></p>
May 14-24, 2015	<p>GSN Symposium 2015 John Ascuaga's Nugget Hotel and Casino in Sparks, Nevada www.gsnv.org/2015-symposium http://www.nbmg.unr.edu/docs/GSN_2015_Symposium.pdf</p>

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.

The NPGS Newsletter is provided to members of the Nevada Petroleum and Geothermal Society.
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