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:
BARBOUR WELL Inc.
Oil and Geothermal Drilling Services

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_Aucjvh4kNRgxS4MepS706IRKPSn6Qwp20/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

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


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 CSP.”

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 generation 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.

As 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, 99
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 25W, working in solar, wind, geothermal and hydro.

EGP’s subsidiary in Chile is also constructing a hybrid project which combines PV power, a mini-Hywind 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 828kW, as well as generating approximately 1860MWh a year equivalent to the electricity consumption of 130 households.

By Lucy Woods, Solar Media
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:

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<th>Sale Date</th>
<th>Nominations Due</th>
<th>Sale Posting Date</th>
<th>Protest Deadline</th>
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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)

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<tr>
<th>Sale Date</th>
<th>Parcels Offered for District Office at Sale</th>
<th>*EOIs Due</th>
<th>Sale Posting Date</th>
<th>Protest Deadline</th>
</tr>
</thead>
</table>

*EOI = Expression of Interest

For listings of parcels for the Dec sale, use the following link:
Endowed Chair in Petroleum Geology for Western State University, Colorado

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](http://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/obs

Position #: 51465F-FY15-1
Rady Chair in Petroleum Geology

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 online at: http://www.gsn.org/2015-symposium/. Submit abstracts to John Muntean and Moira Smith via e-mail at: munteanj@unr.edu and msmit1@srlgold.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.gsn.org/2015-symposium/
or email at:
maltz@unr.edu

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 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 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 Zbiden 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.gsn.org/symposium for more information.

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 seminar 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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Subscribe to our blog http://nbmg.wordpress.com/
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

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.


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)

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)


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


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 Mines 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.nbmg.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
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

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Professional References – list two references with phone numbers and addresses

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2) Name ____________________________ Phone ____________________________
Address ____________________________
Street: ____________________________ City: ____________________________ State: ____________________________ Zip Code: ____________________________

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

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For NPS Membership Committee Signatures Only

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<td>n/a</td>
<td>$80.00</td>
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<td>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.</td>
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<td>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</td>
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<td>NPS3c</td>
<td>NPS3y</td>
<td>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.</td>
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<td>NPS4</td>
<td>NPS4c</td>
<td>NPS4y</td>
<td>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)</td>
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<td>NPS5</td>
<td>NPS5c</td>
<td>NPS5y</td>
<td>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.</td>
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<tr>
<td>NPS7</td>
<td>NPS7c</td>
<td>NPS7y</td>
<td>Structural and Stratigraphic Relationships of Devonian Reservoir Rocks, East Central Nevada (1993), C.W. Gillespie, editor, 15 papers, 3 plates, 203 p.</td>
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<td>NPS13</td>
<td>n/a</td>
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<td>Hydrocarbon Habitat &amp; Special Geologic Problems of the Great Basin (1998) D.E. French and R.A. Schalla, editors and co-chair</td>
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<td>NPS14</td>
<td>NPS14c</td>
<td>NPS14y $35.00</td>
<td>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</td>
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<td>NPS19</td>
<td>n/a</td>
<td>NPS19y $50.00</td>
<td>Megabreccias and Impact Breccias of East Central Nevada (2004) C.W. Gillespie and S. Foster, editors</td>
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<td>NPS22</td>
<td>n/a</td>
<td>NPS22y $40.00</td>
<td>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.</td>
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<td>NPS23</td>
<td>NPS23c</td>
<td>NPS23y $25.00</td>
<td>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</td>
</tr>
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</table>

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

NBMG contact information:
Phone: (775) 682-8766
Fax: (775) 784-6690
Web: [http://www.nbmg.unr.edu](http://www.nbmg.unr.edu)
Web: [http://www.nbmg.unr.edu/nps/](http://www.nbmg.unr.edu/nps/)
Oil and gas resources from NBMG

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

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)
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.nbmg.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
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.nbmg.unr.edu
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 underlined are available free on the Internet and can be viewed at http://www.nbmg.unr.edu/.

**Bulletin**

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)

**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 Freser 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: Faults and Garside (2003), $15.00 (see also B97)
OF06-5 Mineral- and energy resource potential for White Pine County, Nevada
OF06-6 Mineral- and energy resource potential for Pershing County, Nevada
OF06-7 Mineral- and energy resource potential for Lyon County, Nevada
OF06-12 Potential resources associated with proposed roadless areas in Nevada
OF09-10 Preliminary geothermal potential and exploration activity in Nevada: Zehner, Coolbaugh, and Shevenell, 1:1,000,000-scale plate and text, $20.00 (supersedes OF09-1)
OF10-6 Preliminary geologic map of the Lee-Allen geothermal area, Churchill County, Nevada
OF11-3 Preliminary geologic map of the Reese River geothermal area, Lander County, Nevada
OF11-10 Descriptive logs, skeletonized samples, and photographs of core from Presco Energy's thermal gradient wells P3-1, P 10-1, and P 32-2 in the Rye Patch area, Pershing County, Nevada: Davis (2011, Web version only)
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
SP0001 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.nbmg.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
I-1701 Bouguer gravity anomalies, depth to bedrock, and shallow temperature in the Humboldt House geothermal area, Pershing County, Nevada: Schaefter (1986), $9.00
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: Schaefter, Welch, and Maurer (1983), 41 pages and 4 plates, call for prices

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

For more information, please contact:
Nevada Bureau of Mines and Geology
Great Basin Science Sample and Records Library
2175 Raggio Parkway
Reno, NV 89512
Phone: (775) 682-8766
Fax: (775) 784-0990
E-mail: nbmg@unr.edu
www.nbmg.unr.edu
<table>
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<tr>
<th>Date</th>
<th>Event Description</th>
<th>Venue</th>
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<tbody>
<tr>
<td>Nov 6, 2014</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Nov 6, 6:30 PM</td>
<td>Ramada Reno Hotel, 1000 E 6th St, Reno, NV</td>
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<tr>
<td></td>
<td>Speaker: Bill Price, Enel Green Power North America, Inc.</td>
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<tr>
<td></td>
<td>Topic: <em>Enel’s Stillwater Hybrid Power Plant</em></td>
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<td></td>
<td>See Page 1 for details</td>
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<tr>
<td>Dec 1-5, 2014</td>
<td><strong>American Exploration &amp; Mining Assoc – 120th Annual Meeting</strong></td>
<td>J A Nugget Casino Resort, Sparks, NV</td>
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<td>Dec 6, 2014</td>
<td><strong>NPGS Annual Christmas Dinner</strong> – Friday Dec 6, 6:30 PM</td>
<td>Ramada Reno Hotel, 1000 E 6th St, Reno, NV</td>
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<td>Dec 9, 2014</td>
<td><strong>Nevada BLM Oil &amp; Gas Lease Sale, Reno NV</strong></td>
<td>Ely NV District, posting date: Sep 10, 2014</td>
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<td>Jan 8, 2015</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Jan 8, 6:30 PM</td>
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<td></td>
<td>Speaker: Dr. Wanda Taylor, UNLV Professor</td>
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<td>Feb 5, 2015</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Feb 5, 6:30 PM</td>
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<tr>
<td></td>
<td>Speaker: Dr. John Louie</td>
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<tr>
<td></td>
<td>Topic: <em>Advanced Seismic Imaging of Geothermal Reservoirs in Nevada – Is there a Geothermal Seismic Signature?</em></td>
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<td>Mar 5, 2015</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Mar 5, 6:30 PM</td>
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<tr>
<td></td>
<td>Speaker: Dr. David Boden</td>
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<td>Topic: <em>Iceland Trip - Sustainability</em></td>
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<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Apr 2, 6:30 PM</td>
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<td>Speaker: Sean Long</td>
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<td>Possible Topic: <em>A Valley and Ridge in the Basin and Range</em></td>
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<td>May 7, 2015</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday May 7, 6:30 PM</td>
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<td></td>
<td>Speaker: Ben Delwiche – Ormat Nevada</td>
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<td>Topic: <em>McGuinness Hills Project</em></td>
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<td>May 14-24, 2015</td>
<td><strong>GSN Symposium 2015</strong></td>
<td>John Ascuaga’s Nugget Hotel and Casino in Sparks, Nevada</td>
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| May 31-Jun 3, 2015 | **AAPG Annual Convention and Exhibition 2015**  
                Denver, CO  
                [www.aapg.org](http://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. For information about membership and events, see the NPGS website at [http://www.nbmg.unr.edu/nps/](http://www.nbmg.unr.edu/nps/). To submit articles, corrections or suggestions for the newsletter; Contact Vicki Ehni 775-883-1107, cell 775-720-6387; email [vehni@aol.com](mailto:vehni@aol.com).