

NEWSLETTER

Serving the Petroleum and Geothermal Community

Nevada Petroleum 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, Feb 2, 2012

Speaker: **Lowell Price**
Oil, Gas, and Geothermal Program Manager
Commission on Mineral Resources
Nevada Division of Minerals
Carson City, Nevada

Title: Oil, Gas, and Geothermal Exploration and
Production in Nevada

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

Agenda: Cocktails begin at 6:30 PM
Dinner Served at 7:00 PM

Dinner Costs:
NPS Members \$ 20; Non-Members \$23; Students \$10

Menu
**Buffet style; including chicken & beef entrees, side
dishes and salad.**

****RSVP**

RSVP Tuesday Jan 31, 2012

Diane Phillips (775) 267-4663 or trailsend@pyramid.net

► **ABSTRACT – NPS Monthly Dinner Meeting – Feb 2, 2012**

Oil, Gas, and Geothermal Exploration and Production in Nevada

Topics of discussion will be centered around oil, gas, and geothermal exploration throughout Nevada and the resulting production. Oil and gas exploration has been located primarily in the eastern portion of Nevada, where production is established in Railroad Valley, south of Ely, and Pine Valley, south of Carlin. The presentation will include location of fields, discovery date, producing formations, historical production curves, images taken within the field areas and recent to possible upcoming exploration activity.

Geothermal permitting, sundry notices, and drilling activities consume approximately 95% of my work at the Division of Minerals. Locations of existing geothermal electrical generation facilities, mega-watt (MW) nameplate capacities, net outputs to existing electrical grid, types of geothermal electrical generation (i.e. flash and binary), images taken at plant facilities and exploration areas, and recent to current exploration activities will be discussed.

► **About the Speaker:**

Lowell Price received his Bachelor's degree in Geology from the University of Texas at Arlington in 1978. As the Oil, Gas, and Geothermal Program Manager for the Commission on Mineral Resources, Nevada Division of Minerals in Carson City, Nevada, he oversees oil, gas, and geothermal permitting and drilling activities within the State of Nevada. Prior to the Division of Minerals, Lowell was Operations Geologist for Epoch Well Services and Horizon Well Logging, performing well site geology in Nevada, California, Alaska, Belize, and Guatemala.

Previously, Lowell was partner and exploration geologist with Dray and Price Exploration in the Rockies & mid-continent. He worked as Operations Geologist with Saudi Aramco at the Ghawar Oil Field and staff exploration geologist with Independence Mining, exploring for gold in the Bull Run Mountains and Independence Range. He worked as a contract exploration geologist for Freeport McMoRan, Tenneco Minerals, Chevron Resources, Morrison Knudson, Western States Minerals, and Independence Mining, exploring for gold in various regions of the Great Basin. Earlier in his career, Lowell was an exploration/structural geologist for Amoco International Oil Company (AIOC) and worked the Africa and Middle East Region and the Denver Region – primarily thrust systems – Oman (Oman Mountains Thrust System), United Arab Emirates (Oman Mountains Thrust System), Egypt (Gulf of Suez), Tunisia, Morocco, Gabon, and Rocky Mountains (Rocky Mountains Thrust System north of UP Strip).

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► **Proposed Name Change for NPS – Membership Business:**

Please take the time to read the following and direct any comments or suggestions you may have to the Board (officers listed on Page 1).

The board of NPS would like to consider a name change from *Nevada Petroleum Society* to *Nevada Petroleum and Geothermal Society*. This name change will respect the history of NPS while also recognizing the emerging importance of geothermal energy in the region.

We encourage comments over the next month on the proposed name change and will discuss these at our upcoming meeting in March, after which we will call for a vote from the membership.

Specific reasons for the name change include:

- Geothermal will likely have a large long-term positive economic impact on Nevada, as evidenced by recent economic trends, revenues, etc. We are truly known as one of the best places in the world for geothermal energy thanks to our tectonic setting. Despite some current problems with some of the smaller companies, the future is bright for geothermal.
- Reno is the hub for geothermal development in the western U.S., with many companies having offices or headquarters here. Although there are many geothermal geologists in the area, only a few regularly attend our meetings. We are clearly missing out on a large segment of the local geoscience population. A name change may attract a larger fraction of this population to our meetings and events.
- The name change would probably have positive effects on the future of NPS. Currently, our membership lacks significant numbers of younger members. Sponsoring students has helped some with this, but has not fully translated yet into a healthy cadre of young members. Geothermal is now attracting some of the best and brightest students, as well as the imagination of a younger generation. A name change would put us in the best position to attract younger geoscientists involved in geothermal energy.
- The ongoing commitment to petroleum-related talks and field trips will not be adversely impacted by this name change. Talks presented at NPS meetings have been diverse, and that diversity will not change. Also, we have checked with the AAPG, and the proposed name change will not impact our affiliation with AAPG in any way.
- Names are important. And, the proposed name change is meant to highlight the two major foci of the society. Non-members will see the new name and recognize that NPGS is the place to go for energy-related talks and information. Currently, many non-members do not realize that good geothermal (and other) talks can be heard at a meeting sponsored by a petroleum-named society. The name change also could increase the number of hits to our website when someone does a search for “geothermal” and “Nevada”. If more people visit our website, then that could increase sales of our publications to people who otherwise might not have known about the society.
- Some bureaucratic work would result from the name change. These include changes in the checking account, web site, post office address-name, and logo. These changes can be accomplished effectively, and our current President and Vice-President are willing to dedicate time to do so.

► **National Geothermal Academy – Jun 18 – Aug 10, 2012:**

The National Geothermal Academy is an 8-week intensive summer course in all aspects of geothermal energy development and utilization. The course is offered for 6 credits at either the undergraduate or graduate level. Individual weeks are offered as professional development. In summer 2012 Modules 2,3,4 or 5,6,7 are offered as 3 credit sections.

Schedule for this summer is June 18 to August 10, 2012

Applications for Summer 2012 available http://www.unr.edu/geothermal/Application_2012.pdf

Applications are due February 15, by 5pm in the applicants local time zone.

<http://www.unr.edu/geothermal/NGA.htm>

► **Next Scheduled Oil & Gas Lease Sale – Mar 13, 2012:**

Notice, shape file, etc.:

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

Parcels:

http://www.blm.gov/pgdata/etc/medialib/blm/nv/minerals/oil_gas/2012_lease_sales.Par.24494.File.dat/20120313_OG_Sale_Parcels.pdf

► **Results - Geothermal Lease Sale - Tuesday, January 24, 2012**

http://www.blm.gov/pgdata/etc/medialib/blm/nv/minerals/geothermal/leasesales.Par.45698.File.dat/20120124_Geo_Sale_Results_Competitive.pdf

► **UNR/NWRA Spring Dinner Forum – Wednesday, March 28, 2012**

Geothermal Power Production in Nevada - Monte Morrison, USA for Alterra Power Corp.

Super 8 Meadow Wood Courtyard, 5851 S. Virginia Street, Reno, NV 89502

For information and reservations : www.nvwra.org 775-473-5473

► **Nevada Mineral Exploration Coalition – Open Forum Panel Discussion Jan 20, 2012**

**Open Forum: Future of Nevada Bureau of Mines and Geology
January 20, 2012**

Executive Summary

The Nevada Mineral Exploration Coalition; Geological Society of Nevada, Nevada Petroleum Society, Nevada Mining Association, Society for Mining, Metallurgy, and Exploration, Nevada Division of Minerals, and Association of Environmental and Engineering Geologists hosted an “Open Discussion” on the future of the Nevada Bureau of Mines and Geology (NBMG).

The group concluded that NBMG and its supporters should primarily pursue three approaches.

1. **Endowment:** Build a permanent endowment to help provide long-term support for some of NBMG's vital State geological survey functions that are underfunded by the State through UNR.
2. **Political:** Enlist the political support of representatives from the geological community (including the mining, geothermal, oil and gas, and engineering/development industries in the State) and other stakeholders who benefit from NBMG's work.
3. **Projects:** Create specific projects (including an industrial associates approach in which several companies donate funds) that address needs of and are supported financially by industry.

More detailed notes on these and other potential solutions discussed at the meeting can be found below.

In addition, it was suggested that a cost-benefit analysis of NBMG be conducted and that subsequent meetings be held (possibly prior to the next few GSN monthly meetings) to analyze potential solutions in greater detail.

Comprehensive Summary

Introductory Remarks:

- Dave Shaddrick welcomed the group, and Lew Gustafson outlined the purpose of the meeting – to initiate dialog about resolving the budget crisis facing NBMG, the State's geological survey.
- Handouts about NBMG's plight and accomplishments were available at the back of the room.
- Jon Price provided a brief background on the current budget crisis. The most recent cut in State funds through the University of Nevada, Reno (UNR) was \$1.1 million, from \$2.1 million/year in 2011 to \$1.0 million/year for fiscal year 2013, which will begin July 1, 2012. This resulted in reduction of the State-funded staff from 18.2 to 9.5 positions. The hardest hit was to the Bureau's information office and cartography areas, which were reduced to one half-time position for each. The funding cut to these two vital areas was \$350,000 per year. In addition, NBMG lost several positions in the scientist ranks. An additional \$350,000 per year for four geologist positions is needed to adequately cover the mission of the State geological survey. The total short fall is therefore ~\$700,000 per year.
- Jon announced that he will retire from UNR in June and introduced Jim Faulds as the likely next State Geologist and Director of NBMG. He noted that Jim, who has been with NBMG since 1997, is a geologic mapper (with dozens of published maps) and expert in structural geology, tectonics, and geothermal systems. Jim has published widely on extensional and strike-slip tectonics, salt deposits, and structural controls on geothermal systems, including relations between current geothermal activity and young epithermal mineral deposits. He has mapped the Searchlight mining district in southern Nevada, in the Carlin trend, in the Walker Lane, and in several known geothermal resource areas. He has taught courses in structural geology, tectonics, geothermal exploration, and field geology, including serving as Director of UNR's geology field camp for 5 years. He is also the current President of the Nevada Petroleum Society.
- Jim, Chris Henry, and Jon discussed NBMG activities that help industry and referred to a letter of support for NBMG's mission as the state geological survey from the Dean of the UNR College of Science.
- Ron Parratt, Alan Coyner, and Dennis Bryan discussed their perspectives on NBMG's, including views from exploration companies, the Nevada Division of Minerals, and the Nevada Commission on Mineral Resources. Alan noted that approximately 80% of the Division's funds come from mining-claim fees.

Possible solutions – largest support for the following approaches.

- **Endowment:** Build a permanent endowment to help provide long-term support for some of NBMG's vital State geological survey functions that are underfunded by the State through UNR.
 - Seek support from variety of stakeholders.
 - Stakeholders include mining industry, geothermal industry, insurance industry, local energy companies, and petroleum industry (e.g., ExxonMobil).
 - Possibly engage individuals who have greatly benefited from industry activities in Nevada.
- **Political:** Enlist the political support of representatives from the geological community (including the mining, geothermal, oil and gas, and engineering/development industries in the State) and other stakeholders who benefit from NBMG's work.
 - This would include political support with the State Legislature to restore at least some of the funds that were cut from NBMG's budget, so that the basic functions of the State geological survey can be covered.
 - Seek political support for letting State funds flow directly to NBMG as a line item.
 - Could tie large endowment contributions with letting State funds flow directly to NBMG.

- **Projects:** Create specific projects (including an industrial associates approach in which several companies donate funds) that address needs of and are supported financially by industry.
 - These would be projects that can best be accomplished with NBMG's involvement, knowledge, and commitment to making information public for the benefit of Nevada.
 - Projects could focus on specific regions (e.g., new Geologic Map of Eureka County) or topical studies (e.g., relations between epithermal mineral deposits and geothermal activity).
- **Internal NBMG funds:** Minor funding can be generated directly by NBMG through sales of its maps and reports. Currently, most of these materials can be obtained on line for free.
 - Raise prices on products – not much support.
 - Charge for downloads from NBMG website – widely supported. Specific suggestions:
 - Charge for individual publication.
 - Charge for certain amount of megabytes.
 - Publication membership charge – annual charge allowing full online access to all publications.
 - Charge for blocks of publications (e.g., similar to GSA, 5 or 10 pubs/block).
 - Revenues from selling online publications could possibly fund up to 0.5 positions in the information office, but data needs to be acquired to understand full potential.
- **Public relations:** Improve visibility of NBMG through various activities, including:
 - Legislative field trips for higher profile NBMG products.
 - Interacting with public broadcasting in State (e.g., radio clips on KUNR).
 - Displays illustrating NBMG activities or highlighting Nevada geology at NBMG's information office and the Mackay Museum.
- **Cost-Benefit Analysis:** Several participants advised that a cost-benefit analysis of NBMG (and its products) should be undertaken to help explain the value of our State geological survey to industry leaders, politicians, and the UNR administration.

Other possible solutions with less support included:

- **Annual operating costs:** Soliciting donations for operating costs of information office and Cart/GIS work.
 - Including one-time bridging funds to cover the current shortfall while building the endowment, regaining State support, and creating specific projects.
 - This could include approaching the Commission on Mineral Resources to request that additional funds from the reserve account of the Division of Minerals be allocated to help cover NBMG's functions that dovetail with the mission of the Division.
- **Raising fees:** Increasing fees on one or more resource-related activities in the State.
 - Fees on mining claims – through the Commission on Mineral Resources/Nevada Division of Minerals
 - Drilling permit fees on geothermal wells – through the Commission on Mineral Resources/Nevada Division of Minerals
 - Fees on unreclaimed mine lands – through the Nevada Department of Conservation and Natural Resources/NDEP – for cooperative programs with the U.S. Geological Survey.

Nevada Petroleum Society – Publication List 2012



SPECIAL VOLUMES

- NPS 1** 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. \$65.00
- NPS 2** Membership Directory (only available **free on the Web** at <http://www.nbmj.unr.edu/nps/membershipdir.htm>)
- NPS 15** TerraScan's Geologic Map of the Eastern Great Basin, Nevada and Utah (1978, rev. 1987) compiled and edited by E.L. Howard, 3 sheets (includes cross-sections) ~~\$20.00/NPS or \$25.00/non-NPS~~ **order by phone only for discounted price of \$5.00**
- NPS 21** 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 on CD only; 54 p., 45 illustrations, CD **\$15.00**

FIELD TRIP GUIDEBOOKS

- NPS 3** Oil Fields, Production Facilities and Reservoir Rocks of Northern Nye County, Nevada (1989) compiled by W.J. Ehni and D.M. Evans, 8 abstracts and papers, 30 p. (xerox copy only – unbound) \$8.00
- NPS 4** 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) **\$15.00**
- NPS 5** 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. **\$15.00**
- NPS 6** 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. **\$25.00**
- NPS 7** Structural and Stratigraphic Relationships of Devonian Reservoir Rocks, East Central Nevada (1993) C.W. Gillespie, editor, 15 papers, 3 plates, 203 p. **\$33.00**
- NPS 8** 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. on CD-ROM only **\$25.00**
- NPS 9** 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. **\$40.00**
- NPS 10** Mississippian Source Rocks in the Antler Basin of Nevada and Associated Structural and Stratigraphic Traps (1995) M.W. Hansen, J.P. Walker, and J.H. Trexler, Jr., editors, 16 papers and 7 abstracts, 166 p. **\$25.00**
- NPS 11** Cenozoic Structure and Stratigraphy of Central Nevada (1996) W.J. Taylor and H. Langrock, editors, 11 papers, 122 p. **\$25.00**
- NPS 12** The Roberts Mountains Thrust, Elko and Eureka Counties, Nevada (1997) A.J. Perry and E.W. Abbott, editors, 4 papers, 2 abstracts and reference papers/abstracts, 86 p. **\$25.00**
- NPS 13** Hydrocarbon Habitat & Special Geologic Problems of the Great Basin (1998) D.E. French and R.A. Schalla, editors and co-chair **\$25.00**
- NPS 14** 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 **\$35.00**
- NPS 16** Structure & Stratigraphy of the Eureka, Nevada Area (2001) Marilyn S. Miller and Jerome P. Walker, editors, 108 p., 11 color plates, book and CD **\$40.00** (NPS16), book only **\$30.00** (NPS16b), CD only **\$30.00** (NPS16c)
- NPS 17** Detachment and Attenuation in Eastern Nevada and its Application to Petroleum Exploration (2002) W. Ehni and J. Faulds, editors, 163 p., book & CD **\$40.00** (NPS17), book only **\$35.00** (NPS17b), CD only **\$15.00** (NPS17c)
- NPS 18** Oil, Gas, and Geothermal Occurrences in Northwestern Nevada (2003) S. Foster, editor, 102 p. **\$25.00**
- NPS 19** Megabreccias and Impact Breccias of East Central Nevada (2004) C.W. Gillespie and S. Foster, editors **\$35.00**
- NPS 20** 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/>)
- NPS 22** 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. **\$25.00**
- NPS 23** 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 **\$25.00**

These publications are only available from the Nevada Bureau of Mines and Geology (NBMG).

NBMG contact information: Phone: (775) 682-8766, Fax: (775) 784-6690

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>

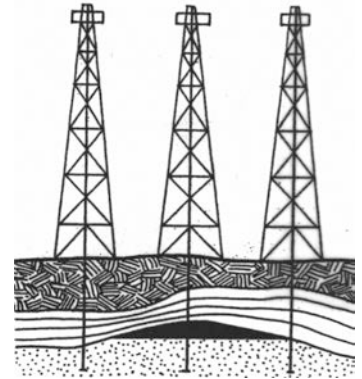
Reports

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 from NBMG

Geothermal information page on the NBMG website

<http://www.nbmq.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.nbmq.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.nbmq.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)

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

Nevada Petroleum Society; Feb 2012

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

Urban Map Series

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

Nevada Petroleum Society

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

USGS Publications

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

Other Resources

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

For more information, please contact:

Nevada Bureau of Mines and Geology
Great Basin Science Sample and Records Library
2175 Raggio Parkway
Reno, NV 89512

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Nevada Petroleum Society Calendar: Year 2012-2013	
Feb 2, 2012	<p>NPS Monthly Dinner Meeting – Thursday Feb 2, 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV Speaker: Lowell Price, Oil, Gas & Geothermal Program Manager, <i>Division of Minerals, Carson City, NV</i> Title: Oil, Gas and Geothermal Exploration and Production in Nevada Lprice@govmail.state.nv.us http://minerals.state.nv.us/ Details on Page 1</p>
Feb 13 , 2012	<p>Northern Nevada SME Meeting, Monday, Feb 13, 2012 - 6PM Please visit our page www.smennv.org for more details Social Hour 6 PM, Dinner 6:45 PM and Technical Session, at 7:30 PM Circus - Circus Hotel and Resort, Mandalay Room in Convention Center 500 N Sierra Street, Reno, NV Members \$22/person and Non-Members \$25/person payable at the door RSVP Required by noon, THURSDAY, Feb 9, 2012 Kaitlin C. Sweet 775.225.6147, email: kcsweet@enviroincus.com</p>
Feb 17, 2012	<p>GSN Monthly Dinner Meeting – Friday Feb 17, 6:00 PM Elks Lodge, 597 Kumle Lane, Reno, NV Drinks at 6:00 PM, dinner at 7:00 PM, and talk at 8:00 PM. Contact Laura Ruud at (775) 323-3500 or e-mail gsn@gsnv.org for reservations.</p>
March 1, 2012	<p>NPS Monthly Dinner Meeting – Thursday Mar 1, 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV Speaker: Yoram Bronicki, Ormat Technologies, Inc. <i>President and Director, Chief Operating Officer</i> Topic: Ormat's Worldwide Geothermal Business</p>
April 5, 2012	<p>NPS Monthly Dinner Meeting – Thursday Apr 5, 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV Speaker: Dr. Andrew Hanson <i>Associate Professor, UNLV Dept of Geoscience, Las Vegas, NV</i> Topic: Molecular organic geochemistry of Railroad Valley Oils and Source Rocks andrew.hanson@unlv.edu http://geoscience.unlv.edu/andrewhanson.htm</p>
Apr 22-25, 2012	<p>AAPG Annual Meeting, Long Beach CA http://www.aapg.org/longbeach2012</p>
May 3, 2012	<p>NPS Monthly Dinner Meeting – Thursday May 3, 6:30 PM Ramada Reno Hotel, 1000 E 6th St, Reno, NV Speaker: TBA</p>

Sep 9-12, 2012	Rocky Mountain Section – AAPG 2012 Grand Junction, Colorado - Sep 9-12, 2012 Hosted by Grand Junction Geological Society Vintage Geology – Perfectly Aged, Grand Junction 2012 http://www.rmsaapg2012.com/welcome.html
Sep 30 – Oct 3, 2012	GRC's 36th Annual Meeting – Sep 30 – Oct 3, 2012 Geothermal: Reliable, Renewable, Global. Peppermill Resort Spa – Reno, NV http://www.geothermal.org/Press%20Releases/Dec_6_2011.html

The NPS Newsletter is provided to members of the Nevada Petroleum Society.
For information about membership and events, see the NPS website at <http://www.nbmjg.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 .
