# NEWSLETTER

**Serving the Petroleum and Geothermal Community**

**Nevada Petroleum Society; P. O. Box 11526; Reno, NV 89510**
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## Dinner Meeting: Thursday, Apr 7, 2011

### STUDENT SPEAKER NIGHT

**Speaker: Annie Kell, University of Nevada, Reno**
**Title: "High Resolution Seismic Imaging on the Mt. Rose Fan, and Other Geophysical Adventures"**

**Speaker: Greg Rhodes, University of Nevada, Reno**
**Title: "Structural Controls of the San Emidio Desert Geothermal Field, Northwestern 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 Monday, Apr 4**

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

## ► ***ABSTRACT – NPS Monthly Dinner Meeting – Apr 7, 2011***

***Annie Kell***
*University of Nevada, Reno*

***Title: High Resolution Seismic Imaging on the Mt. Rose Fan, and Other Geophysical Adventures***
*Annie Kell, John Louie, Graham Kent, Neal Driscoll, Alistair Harding & Satish Pullammappallil*

In November 2009 we collected a 250 m-long high-resolution shallow seismic reflection profile along the Mt. Rose Fan south of Reno, NV near to the site of a paleoseismic trench excavated in September of the same year. The trench study, conducted on a continuous scarp along the base of the Carson Range, exposed a low angle failure surface juxtaposing Kate Peak Fm. against Hunter Creek Sandstone (Sarmiento, 2010). These findings motivated further geophysical investigation by using a sledgehammer sourced reflection profile. We processed the data using SeisOpt®@2D™ velocity modeling and Pre Stack Depth Migration (PSDM). We succeeded in imaging stratigraphy to ~100 m including the low angle plane exposed in the trench. We also interpret what looks to be the upturned toe of a landslide although it is unclear whether the failure surface is part of a landslide or whether the slide was tectonically induced. In future work we intend to apply alternative tomography and wave tracing methods in order to better understand the scarp geometry.

We will also apply these techniques to new refraction data collected in the Salton Sea, California. In March of this year, UNR and Scripps Institution of Oceanography collected seismic refraction and multi-channel seismic (MCS) reflection data within the Salton Sea as part of a larger collaboration with USGS, Cal Tech and Virginia Tech to image the Salton Trough on a crustal scale. Refraction data were collected using 48 Ocean Bottom Seismometers (OBSs) and a 210 cubic inch air gun shot at 60 sec. intervals while a 48 channel streamer of hydrophones and the same source recorded seismic reflections. These deeper reflection data complement a grid of very high-resolution (20-30 cm) seismic CHIRP data (Brothers et al., 2009) and 3-5 m resolution MCS profiles collected previously, showing the history of tectonic deformation over the last 20 k.y. The new data show offset on normal faults within the sea, oblique to the San Andreas Fault, to ~2 seconds providing important constraint to the timing of the initial deformation within the Salton Sea pull-apart system as well as earthquake hazards in southern California. Tomography sections from the 78 OBS positions will provide information on physical properties of continental crust in an oblique rift setting.

## ► *About the Speaker:*

***Annie Kell***
***Ph.D. student in Geophysics, University of Nevada, Reno***

Annie Kell is currently a Ph.D. student in Geophysics working in the Nevada Seismological Laboratory at the University of Nevada, Reno. She received a B.Sc. in Physics from the University of Houston and a M.Sc. in Hydrogeology from the University of Nevada, Reno. Her primary research interests are active tectonics, earthquake hazards and geothermal structures and related processes that control fluid flow in these environments. Her current projects study earthquake faults and hazards in Pyramid Lake, NV and the Salton Trough, CA.

## ► ***ABSTRACT – NPS Monthly Dinner Meeting – Apr 7, 2011***

***Greg Rhodes***
*University of Nevada, Reno*

***Title: Structural Controls of the San Emidio Desert Geothermal Field, Northwestern Nevada***

**Greg Rhodes[1], James Faulds[1], and William Teplow[2]**
[1]Nevada Bureau of Mines and Geology, University of Nevada, Reno, NV 89557
[2]U.S. Geothermal, Boise, Idaho

**Abstract**

Detailed geologic mapping, structural analysis, and geophysical analysis have provided a more complete understanding of fault interactions and kinematics of the San Emidio geothermal system. San Emidio lies within the Basin and Range province of northwestern Nevada, ~100 km north of Reno. This area is dominated by middle to late Miocene volcanic rocks and late Miocene to recent sediments, all overlying Mesozoic metasedimentary rocks. Currently, a small power plant produces 3.6 MW from a 162°C reservoir at 520 m depth at the south end of an active fault system. Abundant altered rocks, native sulfur deposits, and boiling groundwater at depths less than 100 m suggest, however, that the San Emidio geothermal resource extends several kilometers northward from the currently producing well field.

The San Emidio geothermal system appears to occupy a right step in a hard-linked, N-striking, W-dipping, terminating normal fault zone along the west flank of the northern Lake Range. Much of the hydrothermal activity is associated with a N-trending, W-dipping Holocene scarp. Abundant silicified fault and hydrothermal breccias, as well as open-space textures, are concentrated along the sinistral oblique-slip fault that links two strands of the N-striking normal fault zone within the right step. Kinematic features preserved in these silicified units along with earthquake focal mechanisms and geodetic data indicate a WNW-trending extension direction, thus inducing minor dilation within the right-step of the northerly striking fault system. Minor dilation accompanied by high fault density within the right step and northward termination of the normal fault zone likely produce the permeability necessary for deep fluid circulation within the San Emidio system.

## ► *About the Speaker:*

***Greg Rhodes***
***Master's candidate in Geology, University of Nevada, Reno***

Greg Rhodes is a Master's candidate in the Geology program at the University of Nevada, Reno. After growing up in southern Nevada he attended Vanderbilt University in Nashville, TN. He received his Bachelor of Science in Geology at Vanderbilt in 2006. He then worked as a geologist for an environmental consulting firm in Atlanta, GA. He returned to Nevada in 2008 to begin graduate studies in structural geology and geothermal energy. Upon receiving his degree he hopes to remain in the western US and work as a geologist in the geothermal industry.

## ► *MAY 5, NPS Meeting*
## *Speaker Stuart Simmons, CSM:*

**Title: Fluid Flow and Geothermal Reservoirs in Volcanic Terrain: A New Zealand Perspective.**

High temperature reservoirs for power production (>220°C) occur between 500 and 3000 m depth in the up flowing parts of terrestrial geothermal systems. Their occurrences are the product of convective heat and mass transfer in the top 10 km of the crust, as influenced by magmatic, tectonic, and hydrologic processes. The flow regime and permeability structure are dynamic, and controlled by buoyancy, rock type, faults and fractures, and mineral alteration and deposition. The physical and chemical attributes of reservoirs are examined based on examples from New Zealand (Wairakei, Ngawha, and Waimangu), where geothermal power production constitutes about 10% of the total electricity supply. The geological setting in which geothermal reservoirs form is diverse, and good resource management requires knowledge of the range of spatial and temporal changes that can influence power production.

**Biography:**

Stuart Simmons is a visiting research Professor (2011-12) at Colorado School of Mines. He is also a consulting geoscientist, with 30 years of experience on hydrothermal processes, serving clients around the Pacific Rim in the exploration and development of geothermal resources and precious metal deposits (www.hotsolutions.co.nz).

He received his PhD in Economic Geology (1986) from the University of Minnesota, and then took up a post-doc at the University of Auckland, New Zealand to study hydrothermal fluid chemistry and mineralization in geothermal systems. Stuart stayed at University of Auckland and later became Associate Professor and Director of the Geothermal Institute. In 2008, he became a full-time consultant. He has published over 70 papers in scientific journals, including *Nature, Science, American Journal of Science, Geology, Economic Geology, Geothermics* and *Journal of Volcanology and Geothermal Research.* He retains honorary research appointments with the University of Auckland and Canterbury University.

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FOR IMMEDIATE RELEASE

Contact:
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## Rocky Mountain geologists focus on Niobrara for summer meeting

CASPER – Wyoming's newfound focus on the potential of the Niobrara shale play makes it the perfect setting for the AAPG Rocky Mountain Section meeting this summer. "Energy on the Rocks" is scheduled for June 25-29 in Cheyenne at the Little America Convention Center, and will highlight the Niobrara with many special events and features.

On the Niobrara schedule is a three-day field trip, a core workshop, two plenary sessions as well as a public session and a Niobrara core museum. The Rocky Mountain Association of Geologists also plans to release its new publication, "Revisiting and Revitalizing the Niobrara in the Central Rockies." New and old research alike will be visited to give attendees an expanded level of understanding on this development.

"We're excited to offer attendees such a rounded program on the Niobrara," said Graeme Finley, president of the Wyoming Geological Association, which is hosting this year's meeting. This is the 60th meeting, but it is the first time in Cheyenne.

While the meeting has a heavy Niobrara focus, the Rocky Mountain Section has planned a diverse technical program featuring CO2 EOR and sequestration; EMD including geothermal, uranium and coal; evaluation of unconventional plays; Rocky Mountain structure, stratigraphy and sedimentology; and more. Several short courses and field trips, which have limited attendance, are also offered. Early registration is encouraged.

The exhibit hall promises to be the place for the exchanging information on products and services. It is located in the center of the meeting area and will host coffee breaks and happy hours.

Rounding out this year's program is a prospect expo. Prospect exhibitors are invited to showcase their ideas to attract potential partners and investors. Over 700 conference attendees are expected to attend and one-day passes will be available.

To register to attend or exhibit or for full details on the technical program, short course and field trip descriptions and other convention information, go to www.rms-aapg.org/2011_meeting

13 March 2011

**OPEN LETTER TO NBMG SUPPORTERS**

We request that you express your support for the Nevada Bureau of Mines and Geology (NBMG) by writing to members of the Nevada Senate and Assembly, Board of Regents of the Nevada System of Higher Education, and Governor Brian Sandoval.

In an effort to meet proposed budget targets, the University of Nevada, Reno announced on March 7th that it plans to cut NBMG's State funding from $2.1 million per year to $1.0 million, if the funds are available from the State. We believe this is a tragic mistake, because it will mean that Nevada will lose money, miss economic opportunities, and not protect and serve our citizens and visitors as well as we should. NBMG stimulates economic diversification and development in the State, saves lives, and protects property from natural disasters.

NBMG is the statewide research and public service unit that serves as the State geological survey. NBMG's mission, to provide the State's needs for geological and energy- and mineral-resource information and research, is defined in its enabling legislation. Established by the Nevada Legislature as a department within the public service division of the Nevada System of Higher Education, NBMG is one of the Statewide Programs at UNR. Although NBMG contributes to the educational mission of UNR through support of numerous graduate and undergraduate students on externally funded research and occasional teaching, NBMG's main contributions are accomplished through research and dissemination of results. We are supplementing our State funding with approximately $4 million per year in external grants. Nevada stands to annually lose $2 million or more in additional federal grant funding, if NBMG's State funding is cut by $1.1 million.

NBMG scientists conduct research and publish reports that foster economic development, promote public safety, and improve quality of life in urban and rural areas of Nevada. Some areas of economic development and risk reduction from natural hazards are listed below. The NBMG website, http://www.nbmg.unr.edu/, has links to NBMG publications and services. The latest NBMG biennial report, http://www.nbmg.unr.edu/dox/of1014.pdf, provides details on what we have accomplished recently, and Appendix B of the report lists the statutory mandates for NBMG.

We ask that you contact Legislators, Regents, and the Governor to express, from your perspective on the benefits of NBMG to the State, your support for NBMG. One option that should be considered is dedicating some of the Net Proceeds of Minerals tax to support NBMG. With the revenue from this tax likely to rise with increasing mineral and energy production, the State could benefit tremendously from dedicating a portion of this revenue to support NBMG.

We would appreciate receiving a copy of your letter or e-mail of support by March 23, because it may help us in our internal response to UNR's proposed cut.

Sincerely,

Jon Price
State Geologist and Director, Nevada Bureau of Mines and Geology
E-mail: jprice@unr.edu Telephone: 775-784-6691 extension 5

## ► *NPS Officer Elections:*

The new slate of officers for the upcoming year is final. Officers, we appreciate your willingness to serve and look forward to a great year for NPS! Their biographies will be included in an upcoming newsletter.

Jim Faulds, President
John Snow, Vice President/President-elect
Jim Branch, Secretary
Steve Foster, Treasurer
Alan Wallace, Past President

## ► *March 22, 2011 Nevada BLM Geothermal Lease Sale - Results*
### *58 parcels offered for March 2011 Geothermal Lease Sale*

*http://www.blm.gov/nv/st/en/prog/minerals/leasable_minerals/geothermal0/ggeothermal_leasing.html*

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

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

**New earthquake hazard report**
OF11-1 - Comparison of loss-estimation modeling using HAZUS with ground-motion input from ShakeMap versus default values, by Jonathan G. Price (NBMG), Gary Johnson (NBMG), Glenn Biasi (Nevada Seismological Laboratory), Douglas Bausch (Federal Emergency Management Agency), and Ivan G. Wong (URS Corporation), 2011, 24 pages (in color), $24.00 for paper copy or free on the Web:
http://www.nbmg.unr.edu/dox/of111.pdf
http://www.nbmg.unr.edu/sales/pbsdtls.php?sku=OF11-1

This report, which is available as an online document at www.nbmg.unr.edu, documents a comparison of the Federal Emergency Management Agency's loss-estimation model, HAZUS, for earthquakes using two different ground-motion inputs: (1) the standard or default input using the epicenter, depth, and magnitude of an earthquake, which results in a simplified calculation of ground motions performed internally in HAZUS and (2) a user-supplied ShakeMap, which is created with a U.S. Geological Survey program that maps ground shaking. Except at small magnitudes (5.0, when the ShakeMap input yields significantly less loss than the standard input), the two approaches yield results that are mostly well within an order of magnitude of one another.

**Facebook reminder**
Please leave comments on our Facebook page or Blog to show your support for NBMG during this budget crisis. We appreciate your help.
http://www.nbmg.unr.edu/
If you don't use RSS readers (e.g., Google Reader, Bloglines), you can still subscribe to the blog via e-mail (click the "Subscribe by email" link on the left side of the blog). You do not need to have a Posterous account to subscribe by e-mail. Subscribers will receive an e-mail of postings at the end of the day when items have been posted to the blog.
If you don't use Facebook or blogs, please pass this email on to your colleagues and anyone else who may want to use these useful services.
Ordering information
You may place an order or check for shipping charges through our shopping cart at
http://www.nbmg.unr.edu/Departments/PubSales/PubSales.html

**NBMG's response to the proposed cuts**
NBMG faculty and classified staff have prepared a document in response to the University of Nevada, Reno curricular review proposal. This document is available in .pdf format on the NBMG website, http://www.nbmg.unr.edu or directly at http://www.nbmg.unr.edu/_docs/Response_to_curricular_review_of_NBMG.pdf
In addition to the response document, testimony from NBMG Director and State Geologist, Jon Price, was presented yesterday before the Senate Finance and Assembly Ways and Means Joint Subcommittee on K-12 Education/Higher Education. This testimony is also available on the NBMG website or directly at http://www.nbmg.unr.edu/_docs/TESTIMONYbyJonPrice31March2011.pdf Copies of NBMG Special Publication 27, Living with Earthquakes in Nevada, were also given to joint committee members.
For more information about the budget situation at NBMG, please see
http://www.nbmg.unr.edu/NBMGatRisk.html
Better to be prepared
Please scroll to the bottom of this article and read the statement about NBMG.
http://www.science20.com/planetbye/natural_hazards_are_nevada_leaders_about_commit_political_suicide-77730
http://www.science20.com (NBMG is a featured article as of April 2.)

Nevada Geodetic Laboratory - quotes from letters of support
http://geodesy.unr.edu/NBMG_support_more_quotes.php
http://geodesy.unr.edu

**NBMG geologist talks with UNR President on "A Few Minutes with Milt"**
NBMG Research Geologist, John Muntean, interviews with UNR President, Milt Glick, about his NBMG research on the origin of Carlin-type gold deposits and the future of mining in Nevada. Listen to the broadcast…

**SME opposes funding cuts to NBMG**
In comments submitted March 23 to the president of the University of Nevada, Reno, SME opposes the proposed cuts in state funding from $2.1 million to $1.0 million per year for the Nevada Bureau of Mines and Geology. (SME eNews; Vol. 11, Issue 6; March 31, 2011)
http://www.smenet.org/enews/

**AIPG supports strong state geological surveys**
IMPORTANCE AND FUTURE ROLES OF STATE GEOLOGICAL SURVEYS (AIPG white paper)
http://www.aipg.org/membership/Role%20of%20State%20Geological%20Surveys%202010-11-30%20final.pdf

Charlotte Stock
NBMG Publication Sales
University of Nevada
**mailing address for US Mail, Fed Ex, and UPS:**
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Great Basin Science Sample and Records Library
2175 Raggio Parkway
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Directions to office
www.nbmg.unr.edu

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# Nevada Petroleum Society – Publication List 2010

## 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, 4 plates, hardbound, 380 p.** $65.00

**NPS 2** Membership Directory (only available **free on the Web** at http://www.nbmg.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. **$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, 2 volumes, 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 **$30.00**

**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**, 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** (bulk of 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.nbmg.unr.edu/nps/

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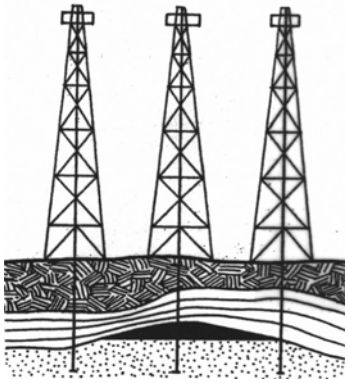
# Oil and gas resources from NBMG



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

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***

**Databases, Lists, Indexes, and Digital Maps**

List of wells by API and permit numbers; operator and well names; township, range, and section (as of October 27, 2008) at http://www.nbmg.unr.edu/lists/oil/oil.htm
See also: http://www.nbmg.unr.edu/Oil&Gas/index.html

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. Selective data searches and index lists available upon request. Shows, geologic tops and tests are given when available.

**Maps**

M162 **Petroleum data map of Nevada**: Garside and Hess (2007), 1:1,000,000, $15.00

Mineral Industry Series

The Nevada Mineral Industry is **published annually**, beginning in 1979. Each volume has a **section on oil and gas** in Nevada. Most of these reports are available *free on the Web at* http://www.nbmg.unr.edu*/.*

Open-File Reports

OF83-5 **Nevada oil shale**: Garside, 10 pages, $4.00 (for more oil shale information, see also USGS MF-1546 and MF-2091)
OF86-13 **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*
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

**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.nbmg.unr.edu

| Nevada Petroleum Society Calendar: Year 2010/2011 | |
|---|---|
| Apr 7, 2011 | **NPS Monthly Dinner Meeting** – Thursday Apr 7, 6:30 PM<br>Ramada Reno Hotel, 1000 E 6th St, Reno, NV<br>**Student Speakers**, see page 1 for details.<br>***Greg Rhodes, Masters candidate, Geology -****University of Nevada, Reno*<br>***Annie Kell, PhD student, Geophysics -*** *University of Nevada, Reno* |
| Apr 10 2011 | **AAPG Annual Convention & Exhibition** – Houston TX<br>*Making the Next Giant Leap in Geosciences*<br>http://www.aapg.org/houston2011/ |
| May 5, 2011 | **NPS Monthly Dinner Meeting** – Thursday May 5, 6:30 PM<br>Ramada Reno Hotel, 1000 E 6th St, Reno, NV<br>***Speaker Stuart Simmons, Colorado School of Mines:***<br>**Title: Fluid Flow and Geothermal Reservoirs in Volcanic Terrain: A New Zealand Perspective.** |
| Jun 25, 2011 | **2011 Rocky Mountain Section – AAPG Annual Meeting**<br>**June 25-29, Little America Conference Center**<br>**Cheyenne, Wyoming – www.rms-aapg.org/2011_meeting/** |
| Oct 23, 2011 | **GRC's 35th Annual Meeting - October 23-26, 2011**<br>**Town & Country Resort & Convention Center**<br>**San Diego, California - http://www.geothermal.org/meet.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.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 .

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