Dinner Meeting: Thursday, Apr 4, 2013

Speaker: Don French
Ciannis Exploration, Billings, MT

Title: Mississippian Clastic Strata of the Great Basin: Refinement and Correlation based on Subsurface Data, New Geochemistry, and Petrography

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

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

Menu:
Buffet style; two entrees, side dishes and salad.

**NEW NPGS RSVP FORMAT!**
Please RSVP for the April 4th Monthly Dinner Meeting by clicking on the following link:
https://docs.google.com/forms/d/1gYreDyZ3b5zSUdJwMj4qO8_T4fc5IRthJDYvIvJfr8/viewform

SEE CALENDAR Pages 20-21 for upcoming meetings
Abstract:
Mississippian Clastic Strata of the Great Basin: Refinement and Correlation based on Subsurface Data, New Geochemistry, and Petrography

Jim Trexler(1), Don French(2), Jerry Walker(3), Pat Cashman(1)

Mississippian clastic strata are a complex set of lithofacies deposited in response to the Antler orogeny and subsequent collisional tectonic episodes along the western margin of Laurentia. Much of these strata east of the orogenic belt are mudrocks, and are colloquially and collectively known as the Chainman Shale and related units. Correlation and interpretation is made difficult by sparse age control and superficially monotonous appearance.

We present here a new correlation scheme and reorganization of stratigraphy made possible by use of an important upper Mississippian boundary, the Meramecian-Chesterian C2 unconformity. New geochemical results show significant shifts across this boundary. Mudrock petrology confirms important changes at this unconformity throughout the basin. Electric logs in existing well data show the C2 boundary clearly, and wells throughout the basin can be correlated based on this unconformity. Although both lower and upper Mississippian mudrocks can be found throughout the Great Basin, often in contact with one-another, they have significantly different hydrocarbon characteristics.

Our new understanding of Mississippian mudrocks allow reassessment of hydrocarbon potential in the Great Basin, and add new insight to upper Paleozoic tectonic history.

(1) Univ. Nevada - Reno
(2) Ciannis Exploration, Billings, MT
(3) Independent Geologist, Reno

About the Speaker – Don French
No introduction needed! “He just fell off the turnip truck”.

Cocktail Reception, Apr 4, Hosted by Barbour Well:

Barbour Well, Inc. would like to extend regards and appreciation for all of the attendees at the NPGS meeting who, like ourselves, are committed to the advancement of oil and geothermal energy production throughout Nevada. Please enjoy a complimentary cocktail on us as you receive a ticket when paying for your event. It is our hope to provide you with excellence in oil and geothermal drilling services.

Steve Zarcone Business Development
NPGS Welcomes Gold Level Sponsors:

NPGS extends a thank you to the following Gold Level Sponsors:

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See their full page company descriptions in this and/or upcoming newsletters.

Sponsors for the Scholarship/Field Trip Fund:

The Scholarship/Field Trip Fund is another level of sponsorship available to companies and members of NPGS. Member donations will be recognized in the next newsletter. At this time, we want to thank the following companies for their generous donations to this fund:

Summit Mudlogging

NPGS Officer Elections 2013-2014 (Jun 1 – May 31):

According to the NPGS Bylaws (ARTICLE II - Officers, SECTION 6. Election of Officers), “… in the event that only one candidate for Vice President/President-Elect, one candidate for Secretary, and one candidate for Treasurer are present on the ballot, then these candidates can be elected by a majority vote of the members eligible to vote at the regularly scheduled meeting …”

As there is only one candidate for each of these three offices for the 2013-2014 term, a vote will be held at the regularly scheduled April dinner meeting for the election of these officers.

The candidates are:

Vice President/President-Elect: Judy Kareck, Engineer, Lumos & Associates
Secretary: Jerry Walker, Geologist
Treasurer: Steve Foster, Geophysicist/Geologist

NEW RSVP FORMAT & DINNER COSTS:

Please RSVP for the Monthly Dinner Meetings by clicking on the following link:
https://docs.google.com/forms/d/1gYreDyZ3b5zSUdJwMj4qO8_T4fc5IRthJDYvlviJfr8/viewform

When making your reservation, please keep in mind that the NPGS is charged for every dinner reservation made, even no-shows. If you make a reservation, please plan to pay for the dinner, even if you cannot attend. THANK YOU!
News from the Legislature - Nevada Senate Bill SB390:

The following is a summary of the Nevada Senate Bill 390 that proposes to regulate hydraulic fracturing.
From: Jerry Walker

Nevada Senate Bill 390 – Regulating Hydraulic Fracturing
Bill Draft Request BDR 46-929

Senator Tick Segerblom (Democrat, Clark County) introduced SB 390 in the Senate on March 18, 2013 to enact provisions regulating hydraulic fracturing. Assemblymen David P. Bobzien (Democrat, Washoe County) and Skip Daley (Democrat, Washoe County) jointly sponsored this bill. Senator Justin C. Jones (Democrat, Clark County) is the single co-sponsor. The bill has been referred to the Committee on Natural Resources, Senator Aaron D. Ford (Democrat, Clark County), Chair. Senator Segerblom is a member of this committee.

The title of the bill succinctly describes it as **AN ACT relating to natural resources; requiring a person who wishes to engage in hydraulic fracturing to obtain a permit from the Division of Environmental Protection of the State Department of Conservation and Natural Resources; requiring the Division to post certain information on its Internet website concerning hydraulic fracturing; authorizing the Division to charge a fee for issuing a permit and to adopt regulations; providing a penalty; and providing other matters properly relating thereto.**

The key provision of this bill is the requirement to obtain a permit to hydraulically fracture a well from the Division of Environmental Protection (NDEP) **before** a well is spudded. This permit is in addition to the Permit to Drill required from the Division of Minerals (NDOM). The application to the NDEP must include:

1. A **hydrology report** that identifies any source of water possibly affected by the hydraulic fracturing itself or by the disposal of the produced hydraulic fracturing fluids.
2. A **seismic study** of the region, identifying all faulting possibly affected by the proposed hydraulic fracturing. The study must include the results of any seismic surveys. (As defined, “seismic survey” refers to a reflection survey; a refraction survey also meets the definition.)
3. A **plan to monitor the air and water quality** of all locations possibly affected by hydraulic fracturing. The monitoring includes baseline measurement prior to drilling and quarterly measurements throughout the operating life of the well, plus three years “after the well ceases to be in operation.”
4. **Full disclosure of all chemicals** to be used in the proposed hydraulic fracturing, including the product name, chemical formula, and hazardous components listed on material data safety sheets.

In addition, the bill precludes hydraulic fracturing in any well within 2,000 feet of any home, school, or hospital.

The list of chemicals required to be disclosed must be revised quarterly for the entire life of the well, and upon spudding and abandonment of the well.

No known carcinogens may be used in hydraulic fracturing materials.

For an overview of the bill, text, votes, and meetings, go to the Nevada Electronic Legislative Information System (NELIS) web site at: [https://nelis.leg.state.nv.us/77th2013/App#/77th2013/Bill/Overview/SB390](https://nelis.leg.state.nv.us/77th2013/App#/77th2013/Bill/Overview/SB390)
In Memory; A. Neal Brecheisen

I am saddened to report that we received word from Neal Brecheisen’s wife, Cheryl that Neal passed away on Monday, March 4, 2013.

From Jerry Walker;

Neal was a Founding Member of the NPS. He was Vice-President 1988-89, and again in 1990-1991; Treasurer in 1991-1992, and Secretary in 1992-1993. He was the Fieldtrip Chair for the “notable” 1993 field trip, “Structural and Stratigraphic Relationships of Devonian Reservoir Rocks, East Central Nevada”. That trip produced what is possibly the best selling NPS pub. He was awarded the Distinguished Service Award in 1994. He was a member of the Logistics and Support Committee for the 1990 field trip, Registration committee for the 1991 field trip, Organizational Support committee for the 1994 field trip (the Carpenter brothers, Co-Chairs), and Trip Consultant for the 1997 field trip. ... and an all around fun person to share some time.

Please join us on LinkedIn:

LinkedIn provides NPGS the opportunity to update its members with what is happening in the oil, gas and geothermal activities in our region. It also provides an open forum for our group for discussions or even announcements as meetings, field-trips and other activities come up. In addition, LinkedIn gives its members the opportunity to network with other professionals that have similar interests as yourself. If you haven’t looked into LinkedIn just yet, click on the link below:


Results BLM Oil & Gas Lease Sale – Mar 12, 2013:

Twenty nine parcels were sold at the competitive sale for a sum of $1.2 million dollars. Lonewolf Expl (MT) paid the high bonus bid of $163,840 for parcel #63 and the high bid per acre of $152 for parcel #65. Other buyers at the sale were Kirkwood O&G (WY), Grant Canyon O&G (Denver), SamOil (CO), World View Property (WA), and RCBB TX (NV). Two parcels were sold at the non-competitive sale; parcels #32 and #33 went to Liberty Petroleum (NY). For more information, including a list of the parcels, see the following link:


Next Nevada BLM Geothermal Lease Sale; Nov 19, 2013:

Nominations for this sale must be received by the BLM by April 12, 2013. See the following link for information and forms.

Next Scheduled BLM Oil & Gas Lease Sale – Jun 11, 2013:

41 parcels will be offered in Eureka and Nye Counties, Nevada.
1 of the parcels has a pre-sale offer.
The notice, list of parcels, and shape files are available for this sale at the following link:

Apr – Jun 2013 Oil & Gas Lease Sale Schedule:

| Apr 17 New Mexico (BLM) | May 07 Montana (BLM) | Jun 04 Montana (State) |
| Apr 16 New Mexico (State) | May 07 North Dakota (State) | Jun 11 Nevada (BLM) |
| Apr 29 Utah (State) | May 07 Wyoming (BLM) | Jun 18 New Mexico (State) |
| | May 08 California (BLM) | Jun 20 Eastern States |
| | May 08 Wyoming (State) | |
| | May 09 Colorado (BLM) | |
| | May 15 Oklahoma (State) | |
| | May 16 Colorado (State) | |
| | May 21 New Mexico (State) | |
| | May 21 Utah (BLM) | |

UNR College of Science – Discover Science Lecture Series:

Information: 775-784-4591; science@unr.edu
Apr 4, 2013 Dr. Steven Strogatz

UNR Geological Sciences Seminar Series:

Mondays 4:00 PM, DMS 103; http://crack.seismo.unr.edu/geosci/

Apr 8 Chad Deering, UW Osh Kosh
Apr 15 Jay Quade, Univ. Arizona
Apr 22 Darrel Cowan, U of Washington
   Title: "Active, possibly seismogenic low-angle normal faults, Death Valley, California"
Apr 29 Russell Shapiro
May 6 George Bergantz, U of Washington
   Title: "Arc Crustal Sections: A Roadmap to Integrating Geochemistry and Geophysics"
May 13 Chris Mattinson, Central Washington University

UNLV 8th Annual GeoSymposium:

April 12-13, Las Vegas, NV
RSVP form in this newsletter. To attend, send in your form by March 29.
Information: Jeevan Jayakody, UNLV Dept of Geoscience, (702) 895-4633,
jayakody@unlv.nevada.edu

Joint PSAAPG/SPE/PSSEPM Conference – Monterey, CA Apr 19-25, 2013:
Energy & the Environment – Working Together for the Future
Portola Hotel & Spa – www.portolahotel.com
psaapg.org

AAPG- Rocky Mtn Section 62nd Annual Meeting – Sep 22-24, 2013:
"Energy Elevated” Hilton Salt Lake City Center
www.rmsaapg2013.com
EXTENDED DEADLINE FOR ABSTRACTS: April 10, 2013

AAPG-Education Calendar:
Upcoming AAPG Field Seminars: http://www.aapg.org/education/fieldseminars/index.cfm
AAPG Rocky Mountain Section
Salt Lake City - Hilton
September 22-24, 2013

Call for Papers
To submit an abstract for an oral, poster, or core poster presentation go to
rmsaapg2013.com
and click on “SUBMIT ABSTRACT”
Contributions from young professionals and students are especially welcome
Deadline for abstracts is March 29, 2013

Technical Program Highlights
- Lacustrine basins: Modern and ancient
- Shale/tight gas and oil plays
- Great oil/gas fields of the Rocky Mtns.: A historical perspective
- Carbon capture, utilization, and storage
- Structure, stratigraphy, and source rocks of the Rockies
- Gas marketing in the Rockies: Forum discussion
- Emerging oil shale and oil sand resource plays
- Geologic and environmental aspects of hydraulic fracturing

Field Trips
- Lacustrine microbial carbonates: Modern and ancient
- San Rafael Swell and Henry Mtns. Basin
- Wasatch Mountains: Scenic trip through time
- Nine Mile Canyon geology: Green River and Wasatch Fms.

Other Convention Events
- All-convention luncheon: Geology of Mars, Utah analogs, and the latest discoveries of the Curiosity rover
  Dr. Rebecca Williams, Planetary Science Institute
- Several pre- and post-meeting short courses
- Night at the new Natural History Museum of Utah
- Guest hospitality suite and three days of special activities

Registration opens in Spring 2013
For convention details visit:
rmsaapg2013.com

Hosted by the
Utah Geological Association
April 19-25, 2013
2013 SPE Western Regional / Pacific Section AAPG Joint Technical Conference
Energy & the Environment
Working Together for the Future
Monterey, CA

Tentative Technical Program
PSAAPP/PS-SEPM

- Reviving old giants and new potential in mature basins
- Evolving Models of Deep Water Deposition
- Fluvial and shallow-marine depositional systems: insights from outcrops and subsurface prediction
- Opening up the west: new and overlooked opportunities in unconventional reservoirs
- Faults, folds, transforms and terranes of Western North America
- Marine Geology of the Pacific Margin (modern and Ancient) - dedicated to Bob Garrison
- Western North America earthquake hazards - what's shakin'
- Energy and the environment
- Landscape / Seascape Evolution
- California Turbidites
- What's new in the Sacramento Valley
- Geothermal Energy: A hot topic
- Arctic energy opportunities: from the Cook Inlet to the North Slope and beyond
- Sediment routing in Western North American
- Undergraduate Research Poster session

Tentative Field Trips
1. Hydrocarbon Migration Systems: Injectites, Bituminous Sands, and Gas Seeps
2. Retracing the Events of the 1989 San Francisco Earthquake and Fire
3. Convergent Margin Tectonics across Central California Coast Ranges - Pacheco Pass
4. Oceanography Field Trip -- Moss Landing Marine Labs
5. Geology of the Point Lobos Reserve
6. Monterey Formation Outcrops
7. California Turbidites
8. Other

SPEWR/PSAAPP/PS-SEPM
Tentative Short Courses
1. Streamline simulation
2. Numerical methods in simulation
3. Modern well test analysis
4. Thermal methods and in-situ combustion
5. Reserve booking
6. Carbon sequestration & storage
7. Sequence Stratigraphy for students
8. Carbonate Stratigraphy
9. Formation Evaluation
10. Image log interpretation
11. Geocellular modeling
12. Microseismic
13. Monterey core workshop
14. Monitoring programs for fracking
News from Nevada Bureau of Mines & Geology:
From: Charlotte Stock

Major mines of Nevada 2011 – new


This twenty-third issue of an annual series of reports on the major mines and mills in Nevada lists the names and addresses of operators, numbers of employees, and annual production in 2011. Map locations of all major mines are shown and an overview of mineral production and its effect on Nevada's economy is presented.

Jon Price receives national mining award

Congratulations to Jon Price for winning the MMSA Gold Medal Award!

"Jonathan Price, former director of the Nevada Bureau of Mines and Geology at the University of Nevada, Reno and state geologist emeritus, received a Gold Medal from the Mining and Metallurgical Society of America (MMSA) at their annual conference Feb. 25. The highest honor awarded by the society, the Gold Medal is presented to individuals who have made significant contributions to the mineral industry."

"The leadership and vision of Jonathan Price has built one of the finest organizations in the United States," Jeff Thompson, dean of the College of Science, said about Price's work in the Bureau of Mines and Geology. "He richly deserves the prestigious Gold Medal Award from the Mining and Metallurgical Society of America and we are very proud of his accomplishments." (excerpts from Nevada Today article by Stephany Kirby; March 4, 2013).

Read the entire story here: http://www.unr.edu/nevada-today/news/2013/jon-price-gold-medal

New 43-101 Report Map Service for Mineral Properties
http://gisweb.unr.edu/report_43101_1/

The Nevada Bureau of Mines and Geology is pleased to announce a new 43-101 Report Map Service. Creation of map services has been an important component of NBMG’s efforts to modernize and make data that are relevant to mineral exploration and land use decisions readily available to the public. The 43-101 Report Map Service shows the locations of 43-101 reports in Nevada. Clicking on a location point with the “Identify” tool will result in links to the report(s). Clicking the link will result in a new window showing the report as a PDF file.

These 43-101 reports are publically available technical reports that follow a codified set of rules and guidelines for reporting and displaying information related to mineral properties owned by, or explored by, companies which report these results on stock exchanges within Canada. The map is not an exhaustive list of all the 43-101 reports completed in Nevada. NBMG will periodically update the map with additional reports, both old and new.

We hope you find this service of use. Please contact us with feedback. More similar map services relevant to mineral exploration will be released later this year.
http://www.nbmg.unr.edu/Mapping/InteractiveMaps.html
John Muntean (munteanj@unr.edu), Gary Johnson (glj@unr.edu)
Upcoming talks and other events – now on NBMG website

Can’t remember where and when that talk is that you wanted to attend?

We have reactivated the Google events calendar that you can find on the right side of the NBMG home page. http://www.nbmg.unr.edu/Calendar.html

Ordering information:

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

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GOLD LEVEL Sponsorship Bio

The NPGS extends a warm thank you to Barbour Well, Inc. for becoming a Gold Sponsor.

Company Profile

www.barbourwell.com

Barbour specializes in drilling oil production wells and large diameter geothermal wells that are high-yield and high-quality in support of both the oil and geothermal industries throughout Nevada, California, Utah, New Mexico, Idaho and the Western United States.

Over three decades of geophysical logging, water well design, work-over/stimulation, down-hole video services, and drilling production wells makes Barbour ideally suited in the expertise for successful oil or geothermal projects. Barbour has an extensive background in geophysics unique to the offerings of most drilling organizations.

Barbour maintains current C23 and A6 Contractor’s Licenses in Nevada, a C57/D09 Contractor’s License in California, and current drilling Contractor’s Licenses in New Mexico and Utah, offering both direct mud rotary (conventional) drilling (vertical and directional) as well as air-rotary foam drilling for specialized applications. Wire-line services are also available in most of the Western United States.

Cost-effective operations and innovative techniques designed to be used by the Oil and Geothermal Industries have provided new avenues of possibilities for future project planning. Barbour is confident that their continued commitment to the oil and geothermal communities will result in the increased availability of much needed renewable energies within the United States.

For additional questions regarding company info, pricing or rig availability please contact:

Steve Zarcone,
Business Development
Barbour Well Inc.
260 Sunpec Ave, Suite A
Henderson, NV 89011
(803) 207-8407 Direct
(861) 755-7667 Cell
szarcone@barbourwell.com
APPLICATION FOR MEMBERSHIP

Name ____________________________

Occupation/Title ____________________________

Company/Affiliation ____________________________

Work Address ____________________________ Street ____________________________ City ____________________________ State Zip Code

Residence Address ____________________________ Street ____________________________ City ____________________________ State Zip Code

Preferred Mailing Address? □ WORK -or- □ RESIDENCE

Work Phone ____________________________ Residence Phone ____________________________ Fax ____________________________

Mobile Phone ____________________________ Email ____________________________

Member of AAPG? □ YES -or- □ NO

Professional References – list two references with phone numbers and addresses

1) Name ____________________________ Phone ____________________________
   Address ____________________________ Street ____________________________ City ____________________________ State Zip Code

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

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

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□ ACTIVE $20.25/year
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For NPS Membership Committee Signatures Only

Please make check payable to:
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P.O. Box 11526
Reno, NV 89510-1526
Nevada Petroleum and Geothermal 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.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


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) E.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 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 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 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 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
Web: 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, 1966-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

Assessment of undiscovered oil and gas resources of the Eastern Great Basin Province, 2005, Fact Sheet
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/.

Bulletins
B65 Mineral and water resources of Nevada: Cornwall (1964) pp. 287-269, $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 Fraser Flat quadrangle and the west half of the Moses Rock quadrangle, Washoe Co., NV
M151 Geothermal potential map of the Great Basin, western United States: Coolbaugh and others (2005), 1:1,000,000, $30.00, rolled only
M161 Nevada geothermal resources: Penfield, Shevenell, Garside, and Zehner (2010), 1:750,000, $18.00, folded or rolled, supersedes M126 and M141

Mineral Industry Series
MI-1979 through current year—The Nevada mineral industry is published annually and has a section on geothermal activities, varies with year, MI-1994-current year available free on Internet at http://www.nbmg.unr.edu/ and click on “Online Documents.”

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

Open-File Reports
OF83-6 Preliminary map of thermal wells in the Moana geothermal area, Reno, Nevada: Garside, $8.00
OF87-2 Mineral resource inventory – U.S. Navy master land withdrawal area, Churchill County, Nevada: Quade and Tingley, $92.00
OF94-2 Nevada low-temperature geothermal resource assessment: 1994: Garside, with a bibliography by Davis and Garside, $40.00 for text and plate, or $20.00 for text on disk, or $7.00 for plate only
OF96-2-9 Reconnaissance geologic 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
OF08-12 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, P10-1, and P32-2 in the Rye Patch area, Pershing County, Nevada: Davis (2011, Web version only)
OF11-11 Preliminary geologic map of the northern Lake Range, San Emidio geothermal area, Washoe County, Nevada: Rhodes, Faulds, and Ramelli, scale 1:24,000, $18.00
OF12-3 Data tables and graphs of geothermal power production in Nevada: Shevenell, Price, and Hess (1985-2011, Web version only)

Reports
R21 Geothermal exploration and development in Nevada through 1973
R25 Evaluation of geothermal activity in the Truckee Meadows, Washoe County, Nevada: Bateman and Scheibach (1975), $4.00
R33 Papers on mineral deposits of western North America: (1979), presented at the Fifth Quadrennial Symposium of IAGOD, $10.00
R41 Precious-metal mineralization in hot springs systems, NV-CA: Tingley and Bonham (1986), $15.00
R43 Mineral resources of the Kumiva Peak 30' by 60' Quadrangle: Tingley (1989) pp. 16-17, $5.00
R44 Mineral resources of the Pahranagat Range 30' by 60' Quadrangle: Tingley (1989) pp. 8-9, $5.00
R45 Mineral resources of the Overton 30' by 60' Quadrangle: Tingley (1989) pp. 12-13, $5.00
R46 Mineral resources of the Timpahute Range 30' by 60' Quadrangle: Tingley (1991) pp. 30-31, $5.00
R51 Preliminary assessment of the potential for carbon dioxide disposal by sequestration in geological settings in Nevada

Special Publications
SP4 Geology of Nevada: a discussion to accompany the Geol. map of Nevada (see below): Stewart (1980), $25.00
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.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
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 Bouger gravity anomalies, depth to bedrock, and shallow temperature in the Humboldt House geothermal area, Pershing County, Nevada: Schaefer (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: Schaefer, 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>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Details</th>
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<tbody>
<tr>
<td>Apr 4, 2013</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday Apr 4, 6:30 PM</td>
<td>Ramada Reno Hotel, 1000 E 6&lt;sup&gt;th&lt;/sup&gt; St, Reno, NV&lt;br&gt;Speaker: Don French, Geologist, Ciannis Exp., Billings MT&lt;br&gt;Title: Mississippian Clastic Strata of the Great Basin: Refinement and Correlation based on Subsurface Data, New Geochemistry, and Petrography</td>
</tr>
<tr>
<td>Apr 4, 2013</td>
<td><strong>UNR College of Science – Discover Science Lecture Series</strong> Dr. Steven Strogatz</td>
<td>Information: 775-784-4591; <a href="mailto:science@unr.edu">science@unr.edu</a></td>
</tr>
<tr>
<td>Apr 8, 2013</td>
<td><strong>UNR Geological Sciences Seminar Series</strong> – Mondays 4:00 PM</td>
<td>DMS 103; <a href="http://crack.seismo.unr.edu/geosci/">http://crack.seismo.unr.edu/geosci/</a>&lt;br&gt;Chad Deering, UW Osh Kosh</td>
</tr>
<tr>
<td>Apr 8, 2013</td>
<td><strong>Northern Nevada Section SME Monthly Dinner Meeting</strong></td>
<td>Bill Stanley, VP Expl, ATNA Resources, LTD.&lt;br&gt;Circus-Circus Mandalay Room, Happy Hour 6:00, Dinner 6:45, Talk 7:30&lt;br&gt;RSVP by Wed Apr 3; 775-682-7379; <a href="mailto:dlightwood@unr.edu">dlightwood@unr.edu</a></td>
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<tr>
<td>Apr 8-13, 2013</td>
<td><strong>UNLV 8&lt;sup&gt;th&lt;/sup&gt; Annual GEOSYMPOSIUM 2013 – Las Vegas, NV</strong></td>
<td>Email <a href="mailto:jayakody@unlv.nevada.edu">jayakody@unlv.nevada.edu</a>; (702) 895-4633&lt;br&gt;<a href="http://geoscience.unlv.edu/geosymposium">http://geoscience.unlv.edu/geosymposium</a></td>
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<tr>
<td>Apr 19, 2013</td>
<td><strong>GSN Membership Meeting</strong> – Reno Elks Lodge</td>
<td>597 Kumle Lane, Reno, NV – Friday , 6:00 PM&lt;br&gt;Drinks at 6:00 PM, dinner at 7:00 PM, and talk at 8:00 PM.&lt;br&gt;RSVP by NOON Thu Apr 18: Laura Ruud (775) 323-3500, <a href="mailto:gsn@gsnv.org">gsn@gsnv.org</a></td>
</tr>
<tr>
<td>May 2, 2013</td>
<td><strong>NPGS Monthly Dinner Meeting</strong> – Thursday May 2, 6:30 PM</td>
<td>Ramada Reno Hotel, 1000 E 6&lt;sup&gt;th&lt;/sup&gt; St, Reno, NV&lt;br&gt;Speaker: Sean P. Long, Research Professor, NBMG, UNR&lt;br&gt;Topic: Mid-Tertiary Unconformity, implications of the structure of Railroad Valley and the surrounding region</td>
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Nov 19  | **Nevada BLM Geothermal Lease Sale, Reno, NV**  
| **Nominations must be received by the BLM by April 12, 2013.**  

| 2016 | **Rocky Mountain Section/Pacific Section Meeting – AAPG 2016**  
| **2016 joint RMS-AAPG/PS-AAPG annual meeting, Las Vegas, Nevada** |

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).