



NORTHWEST GEOLOGICAL SOCIETY

A regional association of professionals, students & others interested in geology
Please browse www.nwgs.org for more about us

April 2011 Newsletter

Volume 25, Number 4

April 12 Program Speaker

Speaker: Trenton T. Cladouhos, AltaRock Energy Inc., Seattle
Title: Demonstrating the Future of Geothermal Energy at Newberry Volcano

Abstract: Enhanced Geothermal Systems (EGS) have been called "The Future of Geothermal Energy" because of the potential to supply up to 10 percent of the country's electricity needs within 50 years, at prices competitive with fossil fuels.

AltaRock Energy, a renewable energy development company focused on the research and development of EGS, and Davenport Newberry, which specializes in the development and management of geothermal opportunities, are currently conducting an EGS demonstration at a site near Bend, Oregon as part of the U.S. Department of Energy's Geothermal Technology Program.. Preliminary investigations suggest that this is one of the most promising EGS sites in the United States, with a large conductive thermal anomaly yielding high-temperature wells, but with permeability orders of magnitude less than conventional hydrothermal wells.

Phase I of the Newberry Volcano EGS Demonstration included permitting, public relations, site characterization, seismic hazards analysis, initial microseismic array (MSA) deployment and calibration, final MSA design and stimulation planning. In Phase II of the demonstration, an existing deep hot well, NWG 55-29, will be stimulated using hydroshearing techniques to create an EGS reservoir.

Project success will demonstrate to the American public that EGS can play a significant role in reducing foreign energy dependence, and potentially provide clean, renewable, baseload geothermal power generation in the State of Oregon.

5:30pm: No-host social hour
6:30pm: Buffet dinner
7:30pm: Speaker program
All are welcome to attend –
reservations are required
if coming for dinner.

PROGRAM DINNER RESERVATIONS: NWGS members: **\$35**; Non-members: **\$40**; Full-time students : **\$15**. \$45 for LATE REGISTRATION. Make reservations on-line at NWGS then mail check to Dan Smith, 10203 40th Ave SW, Seattle, WA. 98146 (must be received by Thursday prior to meeting). Contact him at 206-937-5313 or nwgeo@yahoo.com.
If attending the speaker program only, a \$5 voluntary donation to help defray the meeting room cost is requested.
Location: Pacific Dining Hall at the Talaris Conference Center, 4000 NE 41st St., Seattle, WA. Ph 206-268-7000. **Directions:** See [on-line directions with map](#), or: from I-5 northbound or southbound in Seattle, take Exit 168B (NE 45th St.). Drive east on NE 45th St. past UW down the hill and past University Village. Turn south (right) onto Mary Gates Memorial Drive at the 5-way intersection. MGM Drive will curve east (left) and become NE 41st St. Continue several blocks to the Talaris Conference Center entrance on the north (left) side. We meet in the Pacific Dining room on the left.

Upcoming Speakers and Field Trips

May **17**: John Dilles, Oregon State University, The Demise of Economic Geology (please note May meeting date is the 3rd Tuesday, due to Talaris Conference Center availability)

Spring, 2011 FT: Brian Sherrod (USGS) will point out our faults on a 1- or 2-day field trip in early June
Fall, 2011 FT: TBA

Please see the NWGS website for detailed announcements.

Contact webmaster Julie Masura if you have any announcements to post on the website.

Announcements

- Last call for **2011 dues!** Please send your dues to Dan Smith (see **About NWGS** below).
- **The May meeting is on the 3rd Tuesday, May 17 due to Talaris availability.**
- **Dinner reservations** may now be made on the **NWGS website**, but you still need to mail your check to the Treasurer as before, for now. **On-line payment** is in the works.
- This year's **poster session** will be held at the **May 17** meeting. Contact **new Poster Co-chair Brittany Brand** if you'd like to enter a poster in the competition (and thanks to **Maura O'Brien** for Co-chairing as well).
- NWGS needs your suggestions for 2011 **field trips!** Please contact Field Trip Coordinator **Greg Ferris** with your suggestions.
- **Greg Ferris** needs a **replacement as Field Trip Coordinator** effective fall 2011 or sooner. This is a great way to **be involved!**
- NWGS Historian **Donn Charnley** requests any pre-1980s NWGS information. Contact him at donncharnley@verizon.net or 206.546.3868.
- Next **Board meeting:** April 12, 4:30pm.
YOU would like to be involved!

Photo Spotlight



View of Newberry Caldera from the west on Highway 97 north of La Pine, Oregon about 15 km away. The high point on the south rim, Paulina Peak, has an elevation just under 8000 ft, about 4000 vertical feet above the valley. Two lakes lie in the caldera and drain out via Paulina Creek which exits the low point in the caldera wall and eventually flows across the prairie in the foreground. The Newberry EGS Demonstration project is at an existing well slightly left of the center of the photo, about 3 km west of the caldera rim and outside of the National Volcanic Monument. Submitted by T. Cladouhos.

About NWGS

NWGS, a regional association of professionals, students & other persons interested in **geology**, provides a forum for the presentation and discussion of a wide range of geologic topics, emphasizing those of the Pacific Northwest of fundamental scientific interest.
YOU would like to be involved!

Program meetings: 2nd Tuesdays, October through May in the Pacific Dining Hall at the **Talaris Conference Center** in Seattle (see 1st page). Anyone may attend the speaker program, but a reservation is necessary for those wanting dinner (see 1st page). **Field trips (members only):** one in late spring/early summer and one in late summer/early fall, usually of 1-3 days in length. **Membership** is open to anybody with a professional or amateur interest in geology. **Annual dues:** Professional: \$30; Student: \$5. **To join or pay annual dues:** send a check payable to NWGS to Secretary **Dan Smith**, 10203 40th Ave SW, Seattle, WA. 98146. Please include your name, address, home phone, email, and employer/affiliation (if any).
YOU would like to be involved!

Recommended Readings

Newberry Geothermal, 2010, **Newberry Geothermal Enhanced Geothermal Systems** Demonstration website: <http://www.newberrygeothermal.com/> (reports on water usage, seismicity hazards and risks, the Notice of Intent to the BLM, and more background), and on **Facebook** at <http://www.facebook.com/NewberryEGS>

U.S. Dept. of Energy, 2007, **The Future of Geothermal Energy**—Impact of Enhanced Geothermal Systems (EGS) on the United States in the 21st Century, http://www1.eere.energy.gov/geothermal/future_geothermal.html

Please send your reading recommendations to Newsletter Editor **Tom Bush**.

To report a change of email or postal address or request to be removed from mailings, notify Secretary **Dan Smith** at 206.937.5313. Questions or comments? Contact President **Julie Masura**.

NWGS Personnel

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