

Inland Geological Society

December 2017

Newsletter of the Inland Geological Society

Volume 33 No. 12

Next Meeting:
Wednesday
December 6th

Time:
Social: 6:00pm
Dinner: 7:00pm
Lecture: 7:45pm

Location:
LSA Associates
1500 Iowa Ave
Suite 200
Riverside, CA
92507
(Map on Pg. 5)

Coming to
Dinner?
Please RSVP
by Monday 12/4
(951) 232-0430
rkolenko90@gmail.com

In this issue:

- December Speaker: G. Todd Ririe, PhD 1-2
- Announcements 2-3
- Upcoming Events/IGS Meeting Schedule 4
- Current IGS Officers and Meeting Location 5

December Speaker:

G. Todd Ririe, PhD
Retired

Results of Low Purge Volume Groundwater Monitoring at a Hydrocarbon Release Site

Abstract:

Groundwater monitoring wells are present at most hydrocarbon release sites that are being assessed for cleanup. If screened across the vadose zone, these wells provide an opportunity to collect vapor samples that can be used in the evaluation of vapor movement and biodegradation processes occurring at such sites. Mr. Ririe presents a low purge volume method (modified after that developed by the U.S. EPA) for sampling vapor from monitoring wells that is easy to implement and can provide an assessment of the soil gas total petroleum hydrocarbon (TPH) and O₂ concentrations at the base of the vadose zone. As a result, the small purge method allows for sampling of vapor from monitoring wells to support petroleum vapor intrusion (PVI) risk assessment.

The small purge volume method was field tested at the Hal's service station site in Green River, Utah. This site is well-known for numerous soil gas measurements containing high O₂ and high TPH vapor concentrations in the same samples which is inconsistent with well-accepted biodegradation models for the vapor pathway. Using the low purge volume method, monitoring wells were sampled

(continued on p. 2)

(continued from p. 1)

over, upgradient, and downgradient of the light non-aqueous phase liquid (LNAPL) footprint. Results from our testing at Hal's show that vapor from monitoring wells over LNAPL contained very low O₂ and high TPH concentrations. In contrast, vapor from monitoring wells not over LNAPL contained high O₂ and low TPH concentrations.

The results of this study show that a low purge volume method is consistent with biodegradation models, especially for sampling at sites where low permeability soils exist in and around an LNAPL source zone.



Biography:

Todd has a BA degree in geology from Cornell College, and a PhD degree in geology from the University of Iowa. Todd has over 30 years of experience in applied geology, geologic instruction, and environmental applications of geology. Since 1990, his primary responsibility has been on environmental projects primarily focused on petroleum hydrocarbon site assessment, vapor intrusion, and application of effective remedial approaches to reach closure. He worked many years for Unocal before joining BP in La Palma, CA after the Chevron acquisition of Unocal in 2005. Todd retired from BP at the end of 2016.

Links to Publications

We have been working to update the IGS website! Many interesting publications are available for viewing and download, including articles hosted by Greg Johnson. Check out Greg's Reading Room as well as links to other publications at <http://www.inlandgeo.org/library.html>.



SAVE THE DATES

32nd Annual



Desert Symposium and Field Trip

Symposium: April 20-21, 2018 Zzyzx, CA
Field Trip: April 22-23, 2018

Theme: Against the current: Mojave River from sink to source: Hydrology and structural influences along Mojave Desert drainage systems.

Share your desert research with an oral or poster presentation. We encourage students to attend and compete for the **Adams Best Student Presentation Award.**

Abstract deadline (for all presentations):	20 Jan 2018
Final Paper submission deadline:	20 Feb 2018
Registration deadline:	10 Apr 2018

The field trip will camp at Owl Canyon Sunday night (Apr 22). A third-day informal trip will be held in the Barstow area.



For more information please visit
DesertSymposium.org



The 2018 Desert Symposium is being held in cooperation with the Desert Studies Center, California State University, Fullerton.

AEG Student Chapter Grant Applications Due January 31

Are you a member of an AEG student chapter? Don't miss a chance for your student chapter to apply for one of two competitive \$250 grants to put toward chapter activities! Previous recipients were awarded the grant based on their balanced combination of applied environmental and engineering geology activities, advocacy and financial need.

Visit the Student Chapter Details page on the AEG website to download the grant application.

Student Scholarship, Grant and Internship Opportunities

Many professional organizations offer funding opportunities to students including travel grants to meetings, scholarships and grants for education or research, and employment internships. While scholarships are generally open only to members of the awarding organization, some organizations have free student memberships and a few do not require membership. Check all requirements carefully!

Several upcoming scholarship, grant and internship opportunities are listed below, but many more are available.

The Geological Society of America (GSA) has undergraduate and graduate grants and scholarships available with submittal dates beginning December 1st. For additional information, go to www.geosociety.org; select Education & Careers, Grants & Scholarships.

The American Geosciences Institute (AGI) has scholarships and internships available. For additional information, go to www.americangeosciences.org; select Programs, Workforce, For Students.

The Association of Environmental and Engineering Geologists (AEG) offers various scholarships and awards with application deadlines of February 1st. For additional information, go to www.aegweb.org; select Students/Educators, Scholarships/Grants.

The American Institute of Professional Geologists (AIPG) offers student scholarship awards. For additional information, go to www.aipg.org; select Students, Student Resources.

Look for other opportunities with professional organizations related to your field of interest.

Upcoming Meetings/Events

Inland Geological Society

The Inland Geological Society typically meets the first Wednesday or Thursday of each month. The date for the January meeting has not been determined yet. For more information, visit our website at www.inlandgeo.org.

South Coast Geological Society



Monthly dinner meetings are typically the 1st Monday of the month. In December, the SCGS will hold its annual poster session and holiday party at Dave & Buster's in Orange, CA, on Mon., Dec. 4th at 7 pm. For more information, visit the association website at www.southcoastgeo.org.

AEG—Southern California Section



The next meeting of the AEG—Southern California Section has not been announced yet. For more information, visit the association website at www.aegsc.org.

AEG—Inland Empire Chapter

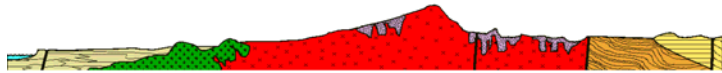


Monthly dinner meetings are typically the third Wednesday of the month at Pinnacle Peak Steakhouse, 2533 S. La Cadena Drive, Colton. The December meeting has not been announced yet. For more information, visit the association website at www.aegsc.org/chapters/inlandempire.

Rock & Gem Shows—various locations

Various rock and mineral shows will be held throughout southern California. To find one near you, visit www.rockngem.com, then select the Show Dates tab.

San Diego Association of Geologists



The December SDAG meeting will be held on Wed., Dec. 13th at the San Diego Natural History Museum, San Diego. Dr. Tom Demere of the San Diego Natural History Museum will speak on Paleo Updates. For more information, visit the association website at www.sandiegogeologists.org.

Los Angeles Basin Geological Society



Monthly lunch meetings are typically the 4th Thursday of the month from 11:30 am to 1:00 pm at the Willow Street Conference Center, 4101 E. Willow Street, Long Beach. The next meeting of the Los Angeles Basin Geology Society has not been announced yet. For more information, visit the association website at www.labgs.org.

Get Your IGS Coffee Mug!

IGS will now be selling IGS coffee mugs at the monthly meetings. They will be on sale for \$10.



IGS MEETING LOCATION:

**LSA Associates, Inc.
1500 Iowa Ave, Suite 200
Riverside, CA 92507**

**2016/2017 IGS OFFICERS****President**

Greg Johnson
LA County DPW
gjohnson@dpw.lacounty.gov
626.458.1741

Treasurer

Margaret Gooding
LSA Associates
Margaret.gooding@LSA.net
951.781.9310 x279

Newsletter Editor

Alice Orton
Geocon West, Inc.
orton@geoconinc.com
951.401.3949

Co-Vice President

Jeff Fitzsimmons
Lahontan RWQCB
geojeff08@att.net
951.212.5018

Secretary

Rachel Kolenko
rkolenko90@gmail.com
951.232.0430

Web Master

Scott Orton
Consultant
scottorton@hotmail.com
951.505.6547

Co-Vice President

Debbie Kunath
Consulting Geologist
Debbie_Kunath@ymail.com
760.885.0232

Membership Chairman

Kirby Roucher
Independent Contractor
inlandgeologicalsociety@gmail.com
951.522.5318