



Four Corners Petroleum
Section

Society of Petroleum Engineers Four Corners Petroleum Section January 2017 Newsletter

www.spe.org

2016 – 2017 Board of Directors

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<http://connect.spe.org/FourCornersPetroleum>

SPE Training Opportunities

Online – More info in the links below

- [Free Online On-Demand Webinars](#)
- [Free Upcoming Scheduled Webinars](#)
- [Improve ROI with Production Life-Cycle Planning](#)
- [Inspiring Leadership based on Engagement](#)

Board of Directors Update

Happy New Year! Our spring calendar has quickly filled up with 3 talks, and a tentative date for the crowd favorite SPE Oilman's Skeet Shootout. So, mark your calendars and make sure to register as the dates approach.

Congratulations to Mr. E. Michael Scott, who was the winner of the membership renewal drawing for a \$100 Amazon gift certificate! Thanks to everyone for their timely renewals. And if you still haven't got around to it, renew today! Don't lose your access to JPT, OnePetro, and the many other SPE benefits. <http://www.spe.org/join/renew.php>

Four Corners Scholarships

We are now taking applications for our 2017 scholarship program. Please share the links below, or the attached forms in this email, with college or graduating high school students seeking careers in the oil and gas industry. Details and criteria are stated on the forms. Please contact our scholarship chair, Catherine.Finley@bp.com with your questions. Hurry! The deadline is March 17, 2017.

[Application for graduating High School students](#)

[Application for current College students](#)



The Four Corners Petroleum section of the Society of Petroleum Engineers is offering the **energy4me** program to anyone requesting good and defensible information about energy issues. We will tailor our presentation to meet the needs and concerns of you and your audience.

To schedule a presentation please contact Gavin Tweedie with BP at 505-320-3359.

SPE 4 Corners Meeting

Dinner & Lecture – February 16

Please join us for the fourth meeting of this year, held in conjunction with the Four Corners Geological Society.

Who: Dr. Rusty Riese (AAPG) "Hydrocarbon Systems of the Fruitland Formation Coalbeds, Northern San Juan Basin"

When: Thursday, 16 February 2017 – Social at 5:45 pm, Dinner at 6:30 pm, talk following dinner

Where: San Juan Country Club – 5775 Country Club Drive, Farmington, NM 87402

Cost: \$20 per person

Please RSVP on the Four Corners Geological Society website:

http://www.fourcornersgeologicalsociety.org/Events/event_s.asp

Registration Deadline is Tuesday, February 14th at 5pm.

If you have any issues with registration, please RSVP with our program chair, Philip.J.Ouellette@conocophillips.com

Please find the abstract and biography for the speaker on Page 3.

Meeting Venue **San Juan Country Club**

5775 Country Club Drive, Farmington, NM 87402



2016 – 17 Meeting & Event Schedule

Save the Date!

Thursday, 16 February 2017 (Evening)

Dr. Rusty Riese, American Assoc. of Petroleum Geologists:
Hydrocarbon Systems of the Fruitland Formation Coalbeds, Northern San Juan Basin San Juan Country Club, Farmington

Monday, 13 March 2017

Dr. William Fleckenstein*, Colorado School of Mines:
Shale Development - Does Cheap Energy Really Mean Flaming Tap Water? BP Office, Durango

Tuesday, 25 April 2017

Bryan McDowell, Colorado School of Mines:
Inert Gases in the Rocky Mountains: Implications for Risk, Opportunity, and New Understanding in Natural Gas Reservoirs San Juan College School of Energy, Farmington

Saturday, June 10 2017 (Tentative)

SPE Oilman's Shootout

*Denotes SPE International 2016-17 Distinguished Lecturer Series

2016-2017

SPE FOUR CORNERS SPEAKER



Dr. W.C. (Rusty) Riese is a geoscientist based in Houston. He is widely experienced having worked in both minerals and petroleum as a geologist, geochemist, and manager during more than 40 years in industry. He participated in the National Petroleum Council evaluation of natural gas supply and demand for North America; in its more recent analysis of global supply and demand; and in the National Research Council analysis of coalbed produced waters and their management in the western United States. He is currently a member of the American Association of Petroleum Geologists Committee on Resource Evaluations, a member of the House of Delegates, and past Sections Vice President.

He earned his PhD from the University of New Mexico in 1980; his MS in geology from the same university in 1977; and his BS in geology from the New Mexico Institute of Mining and Technology in 1973. He is a Certified Professional Geologist, a Certified Petroleum Geologist, and is a Licensed and Registered Geologist in the states of Texas and South Carolina respectively.

Dr. W.C. (Rusty) Riese, American Association of Petroleum Geologists

Hydrocarbon Systems of the Fruitland Formation Coalbeds, Northern San Juan Basin

Abstract

The Fruitland Formation coal hydrocarbon system originates from a unique collection of depositional environments, tectonic framework, and structural and landscape evolution. This system is more complex than recognized by previous workers. The presence of biogenic gas in the formation is recognized, and we conclude that recharge of the regolith is taking place, but that biogenic methane is probably sourced by microbes introduced to the formation 35 to 40Ma.

Our work indicates that four distinct waters are present in the coals. Connate waters fill the formation in the center of the basin. Meteoric recharge is restricted to coal and regolith no more than a few kilometers from the outcrop. Meteoric water found further down dip is fossil meteoric water and reflects recharge between 35 and 40Ma. Waters from deeper formations also locally recharge fractures in the coals.

The Paleozoic architecture of the basin continues to influence fluid flow in the coals. Fractures or faults in the coals may contribute to the high permeability found in the fairway, and to its abrupt southern boundary. The Cenozoic Rio Grande Rift event imposed a second fracture set. Intersection of these fracture sets with the outcrop provides the locus for most methane seeps.

Methane seeps at the coal outcrop have been active for decades. The presence of these seeps is due in part to continued weathering and breaching of biosome-scale reservoir compartments, which is more rapid along fracture systems. Our research concludes that major seep activity varies on a thirty year cycle. We attribute this cyclicity to variations to the 30-year frequency of magnitude 3+ earthquakes. The epicenters of these quakes closely correspond with the areas of most active seepage. As such, major pulses in seep activity are due to releases from deeper reservoirs whose seals are periodically breached.

SPE Four Corners Sponsorship

There is now an opportunity for non-profit groups seeking sponsorship to apply for funding through Four Corners SPE. As an example of sponsorship opportunities, last year, SPE Four Corners sponsored a Lego League Team, a global program created to get kids excited about science and technology.

Please find the necessary documentation [here](#) and submit to Olivia Bommarito. The donation form can also be found on the Four Corners SPE home page.

Donation Request Form

SPE Four Corners

Date of Application:	
Organization Name and Address:	
Contact Person and contact information (phone & email):	
Amount Requested:	
Intended Use:	
How does funding need align with SPE Four Corners objectives? (see below)	
Date Deadline for Funding:	
Have you received previous SPE funding? (please provide detail)	
SPE Reference Contacts:	

Form Instructions: Complete form as indicated and email to Olivia.bommarito@bp.com

SPE Four Corners Objectives:

To collect, disseminate, and exchange technical knowledge concerning the exploration, development, and production of oil and gas resources, and related technologies for the public benefit; and to provide opportunities for professionals to enhance their technical and professional competence. The secondary purpose of the Section shall include the promotion of engineering education through scholarships and community outreach.

Update Your SPE Membership Profile Today!



Society of Petroleum Engineers



Welcome,

[My profile](#)

If you have moved, changed jobs, shifted job focus, or found new technical interests, we want to know!

Simply [log in](#) to your SPE membership account and update your membership profile. It takes less than 5 minutes, and will help us serve you better.

P.S. Don't forget to update your communication preferences, too. We are now offering you more options in your Communication Preferences to make our emails better targeted to your interests.