

Pacific Petroleum Geology



Pacific Section • American Association of Petroleum Geologists

March & April 2019



2019 Annual Meeting for PSAAPG • PSSEPM • PCSSEG Walter Pyramid at CSU Long Beach April 1-3, 2019

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2018-2019 Officers					
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	562-985-5850 Richard.Behl@csulb.edu	5	In Memoriam	Edward M. Tilbury	
	president@psaapg.org	6	Convention	Call for Papers & Schedule	
President-Elect	Becca Schempp 661-412-5101	7	Convention	Registration	
	Becca.Schempp@crc.com president-elect@psaapg.org	8	Convention	Chair's Welcome	
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	TOCKSHITTET (U. dOT. COIII	14	California Well	Sample Repository	
	vicepresident@psaapg.org	15	75th Annivers	ary of D-Day	
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	secretary@psaapg.org	PS	AAPG Newslette	has now gone DIGITAL!	
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	montal@banabB.org		Pacific S	Section AAPG	

P.O. Box 1072 Bakersfield, CA, 93302

- Brandi Johnson CONTACT THE EDITOR at editor@PSAAPG.org
 - Images (graphics, photos, and scans) must be at least 300 dpi resolution. Text should be at least 600 dpi.
 - Scanned photos, illustrations (line art) or logos should preferably be submitted as a .tif, .gif, or .bmp; .jpeg is OK.

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Societies Free Advertising:

Convention: Unlimited Space in PSAAPG Newsletter Societies: 1/4 Page in AAPG Explorer

Dear Pacific Section AAPG Members,

I was recently reminded how serendipitous our opportunities and outlook and understanding can be, and yet, at the same time, require our effort and preparation. Two widely repeated quotes sum this up: "Luck favors the best prepared" and "The best geologist is the one who has seen the most geology". These translate to the fact that new insights come to us when we address a geologic problem (or outcrop) under different conditions, with new features revealed that can be linked to patterns or processes studied elsewhere. These insights frequently arise when someone in a group – who has a different background and experience – asks the perfect question or observes a relationship that had previously escaped us working alone.

This past weekend, Wanjiru Njuguna and I and some of my students walked the Point Dume to Paradise Cove section of the Monterey/Modelo Formation that we will examine on Field Trip #1 of the upcoming PS-AAPG/ SEPM/SEG conference. Remember that April 1-3 will be our field-focused conference with 2 included field trips, in addition to a day of technical presentations. We saw a splendid set of exposures, including source rock, 3 kinds of convention reservoir rocks (sandstone, fractured porcelanite and diatomite), diagenetic transitions and an amazing set of structural features, including heterogeneous mechanical stratigraphy. Our fresh observations and conversation led us to propose new ideas about depositional processes and facies relationships that could influence porosity and permeability of reservoir rocks in a hybrid siliciclastic/ biosiliceous depositional system. And, although I've been there dozens of times before, the synergy of the participants' breadth of experience and the unique set of conditions (recent storms, shifting sand, new exposures) led us to new ideas! That's why I love field trips.

Likewise, Don Clarke and Dan Schwartz will take us to re-examine classic exposures of the Upper Miocene-Pliocene Capistrano Formation at San Clemente and Dana Point on Field Trip #2. These outcrops have been visited by 100's (1,000's?) of geologic field trips. And yet, new approaches, novel quantitative methods, and application of concepts learned elsewhere extract entirely new insights from these outcrops. Here, the field trip leaders and their scientific colleagues have categorizing channel-stacking patterns and stratal connectivity, unraveled some of the first-order controls like position on a bathymetric profile and relation with synsedimentary faulting, and then connected these new data with their implications for subsurface reservoirs. Again, I've brought my students to these exposures

dozens of times before, but the new observations and interpretations have opened my eyes in a way that I was never able to do by myself.

In between the two field trips, we will have a day of oral and poster presentations, including a general and session, SEPM, SEG, age sessions. The special there



including a general and theme session, SEPM, SEG, agency and exhibitor/vendor sessions. The special theme session on "Creativity and Opportunities In West Coast Energy" will build with several talks in each of three subthemes, with the majority of presentations in the third. 1. Creativity and Opportunities for Petroleum Geoscientists (i.e, application of petroleum geology skills, approaches, workflows to other energy or environmental fields); 2. Creativity and Opportunities for the Petroleum Industry (synergies between oil, gas, geothermal, steam solar, geothermal, minerals production and CO2 sequestration in petroleum operations – "greening of the oil field"); 3. Creativity and Opportunities for Petroleum Exploration and Development (new, missed, underexploited or undertested opportunities in conventional and unconventional petroleum production or how new breakthroughs or revivals in production have occurred in established oil fields in the Pacific Section).

Come join us in Long Beach to reinvigorate your scientific thinking, to share ideas and approaches with your colleagues, to make new acquaintances and reconnect with old friends. The "all-in-one price" for just about the normal conference registration entitles you to two great field trips, professional field guides, a day of innovative technical presentations (oral and posters), dinner and two evening opportunities to mingle, drink and browse the exhibits and posters. And there is much to do for spouses/partners in Long Beach who may not attend the meeting itself. Save your place and register now at http://2019.psaapgconvention.org

See you soon!

Richard (Rick) Behl

PSAAPG President, 2018-2019

Edward Mason Tilbury

June 24, 1925 - January 24, 2019

EDWARD MASON TILBURY will be remembered by many for his incredible determination, independent spirit, love of travel and the outdoors, and his enjoyment of socializing and vacationing with friends through relationships he maintained over his lifetime.

Born June 24, 1925, in Littleton, Colorado, to parents Ernest Faulkner Tilbury and Helen Grace Mason, Edward "Ted" was the oldest of four boys. Ted's family moved to Pasadena, California, and there he attended elementary school and high school. Ernest passed away in 1942 when Ted was just 17 years old. From carefree teenage boy to head of the family, he embraced his responsibilities and kept his younger brothers on track until entering the Navy fifteen months later, on June 23, 1943, just one day before his 18th birthday. Ted served in the Asiatic-Pacific Area aboard the USS LST 508, 910 and 397, all tank landing ships. He participated in the Battle of Leyte Gulf, the largest naval battle in world history. Ted



enjoyed telling of his experiences on the high seas, as well as reading and watching documentaries on the Military History Channel.

Ted joined General Petroleum as a Petroleum Landman in 1952, with he and Constance moving to Bakersfield. Several years later, Ted left GP to become an independent landman. As an independent, he enjoyed collaborating with geologists in the industry, putting together drilling plays, and promoting oil companies to test the plays. Weathering some lean years early on, Ted achieved success in the oil business, which allowed he and Constance to pursue their love of travel and adventure.

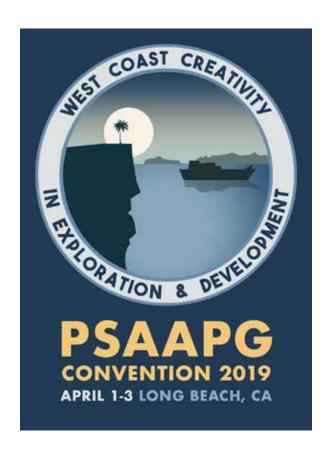
Ted enjoyed a variety of sports, including handball, tennis, golf, bicycling, skiing, fishing, hunting, boating, and backpacking. Ted was most passionate about flying his beloved Beechcraft Bonanza V-tail, which he did well into his 80's. He flew on the roads as well, having way too much fun in his 1966 Shelby GT350 Mustang.

Locally, Ted was very active in the community. He belonged to the Elks Club, the Bakersfield Association of Petroleum Landmen, the San Joaquin Geological Society, and Stockdale Country Club. He was a past member of the 20-30 Club, the Civitan Club, the Sherriff's Search and Rescue Team, and the Kern County Shrine Club.

Edward was predeceased by his wife Constance, his parents, and his three brothers, Gordon, Norman, and David. He is survived by his son Tyler Tilbury (Sandra), his daughter Margo Monroe (Larry), his granddaughters Alexandra and Arianna Tilbury, his grandson Tim Monroe (Katie), and granddaughter Marissa Monroe Curtis (Brian), great grandchildren Jonah Monroe, Gunner Davis, Danica Curtis, and Judy Chase - his companion in later life.

There will be a memorial service at the Bakersfield National Cemetery, located at 30338 East Bear Mountain Blvd., on Friday, February 8th at 10 a.m. In lieu of flowers, contributions can be made to the Edward M. and Constance W. Tilbury Endowment Fund, c/o the Kern Community Foundation, 3300 Truxtun Ave., Suite 220, Bakersfield, CA 93301. This fund was established to benefit the Shriners Hospital for Children in Los Angeles, CA.

West Coast Creativity in Exploration and Development



2019 Annual Pacific Section AAPG Convention

April I-3

at the Walter Pyramid, California State University, Long Beach

Call for Papers

Abstracts due on **March 6**th

Visit the website for more details: 2019.psaapgconvention.org

All-Included Combined Field Trips and Technical Sessions!

Monday, April 1

7AM - 5PM: Malibu Coast Monterey/Modelo field trip led by Wanjiru Njuguna & Rick Behl 6PM - 8:30PM: Welcome Opening Session, Posters, Exhibits & Icebreaker

Tuesday, April 2

8:30AM - 5PM: "Creativity and Opportunities In West Coast Energy" technical session swith invited speakers

5PM - 6:30PM: Brew & Browse with posters and exhibits

6:30PM - 8:30PM: All-Conference Awards Dinner

Wednesday, April 3

8AM - 4PM: Southern Los Angeles Basin Deep-water Clastic Reservoirs field trip led by Dan Schwartz and Don Clarke

Thursday, April 4

8:30AM - 4PM: Short course of Data Analytics in Geosciences

2019 Annual Convention Registration Options

Registration Type	Regular Registration Cost	Details
Professional Member* Early Bird Discount by 3/1/2019	\$350 \$300	INCLUDES BOTH FIELD TRIPS - For PSAAPG, SEG, SEPM, members
Professional Non-Member Early Bird Discount by 3/1/2019	\$400 \$350	INCLUDES BOTH FIELD TRIPS - For attendees not members of PSAAPG, SEG, SEPM
Student	\$150	INCLUDES BOTH FIELD TRIPS - Full access to convention for members with "student" status
Field Trip 1 only	\$200	Access only to the Monday Field Trip
Field Trip 2 only	\$200	Access only to the Wednesday Field Trip
Tuesday Only Professional (technical session, cocktail hour & dinner)	\$200	Full, one day access to members and non-members
Evening Event Only Guest (icebreaker, cocktail hour & conference dinner	\$100	For guests of registered attendees; No access to sessions
Emeritus discount**	-25%	Full access to convention for members with "Emeritus" status
Short Course only - Professional	\$300	Requires separate enrollment from convention (Not included in \$400, \$350 or \$300 registration fees)
Short Course only - Students	\$100	Requires separate enrollment from convention (Not included in student \$100 registration fee)

^{*}You can become a PSAAPG Member and enjoy all the benefits of a professional membership by visiting the PSAAPG website here (\$12 annual membership fee).

^{**}Professional Emeritus registrants receive a 25% discount. An Emeritus Member must have at least 30 years of professional membership in AAPG and be at least 65 years old. Please use the code EMERITUS to reduce your registration fee.



Welcome Letter from the Convention Chair & PSAAPG President

- Richard "Rick" Behl

I am very excited to invite you to the 2019 Pacific Section AAPG Convention to be held in Long Beach, California at the Pointe Conference Center in the Walter Pyramid on the campus of California State University. Our host is the Los Angeles Basin Geological Society, along with our Pacific Section SEPM and Pacific Coast Section SEG partners. Our theme is: "West Coast Creativity in Exploration and Development." We are excited to present a new format and focus that we hope will stimulate your own creativity and success. This will be a field-based conference with a focused theme for one main technical session, as well as parallel oral and poster sessions for other technical aspects of petroleum-related and sedimentary geology. Two stimulating field trips, social hours, and the All-Conference Awards dinner will be included with registration. We'll see you in April!

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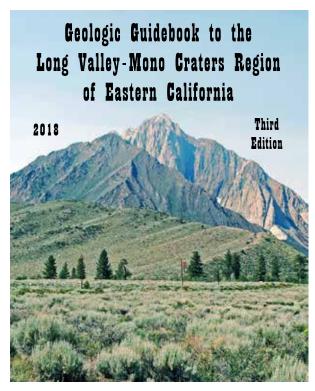
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PSAAPG Membership Directory

The PSAAPG website will have a members-only password-protected membership directory available as of March 1, 2018

Please email SKChehal2@aeraenergy.com if you do not want your name listed. There will also be a checkbox for this on the PSAAPG membership renewal form that goes out before the end of this year.

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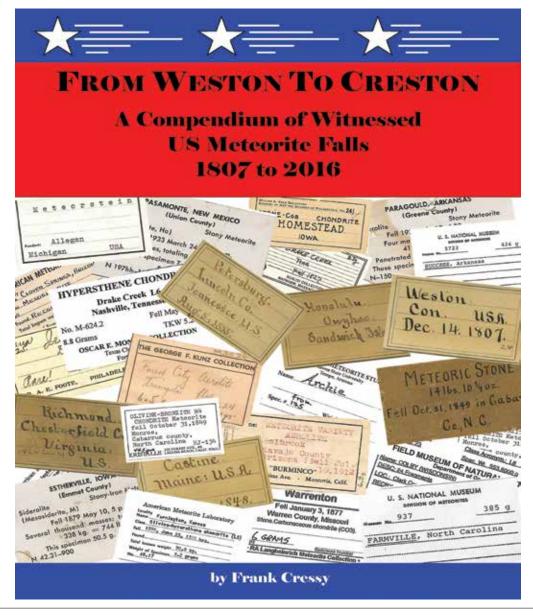
New Publication

"FROM WESTON TO CRESTON – A Compendium of Witnessed US Meteorite Falls – 1807 to 2016"

by Frank Cressy

The violent display of blazing light and explosive sounds ending with meteorites crashing to the ground is an unforgettable event to those who witness it firsthand. This book summarizes the fall histories of nearly 170 witnessed meteorite falls that have occurred in the United States since the first documented fall at Weston, Connecticut in 1807. It is written not only for the collector of these rare objects, but also for those interested in the history and the growth of the branch of science known as Meteoritics. The accounts of the fall phenomena and recoveries associated with these extraordinary events are the focus of the book. However, the book is more. The reader will learn about those individuals responsible for the growth of the science and their contributions, together with interesting facts and coincidences about these visitors from space; 257 pages with over 300 color photos plus maps, figures and illustrations.

Soft Cover books \$36.00; for ordering, contact: fcressy@prodigy.net



Field Trip #1: Monday, April 1, 2019

Mixed Silicilcastic-Siliceous Succession, Miocene Monterey/ Modelo Formation, Northern Los Angeles/Santa Monica Basin, Malibu, California

Leaders:

Wanjiru Njuguna - Southern California Gas Company **Rick Behl** - California State University Long Beach

The Los Angeles basin is thought to be the most productive petroleum province in the world per volume of sediment fill. In spite of being the primary source and a principal reservoir, the Miocene Monterey Formation and its lithostratigraphic equivalents in the Modelo and Puente formations have been little studied in this basin. This field trip will examine a beautifully exposed ~750 meter-thick (~2500') section of the Miocene Monterey/Modelo between Point Dume and Paradise Cove in Malibu Beach. The stratigraphic section is subdivided into four lithostratigraphic members: the Dolomitic Phosphatic Shale Member, the Porcelanite and Shale Member, the Mixed Clastics Member and the Cherty Diatomite Member that show some similarity to Monterey members in the well studied distal basins (e.g., Santa Barbara, Santa Maria). These members provide interbedded and interrelated source rock and several types of potential reservoir rocks – fractured porcelanite, highly porous diatomite and high permeability sandstone strata that were deposited and diagenetically altered in a series of depositional environments on the fringe of a submarine fan system. TOC values in the Dolomitic Phosphatic Shale range from 4.2 to 7.5%. In this outcrop section, siliceous sediments are either in opal-A diatomite and diatomaceous mudstone or in opal-CT-phase chert and porcelanite. Rocks showing a complete diagenesis to quartz phase silica (with the associated higher permeability of quartz porcelanites) are not exposed in the section, but are likely to exist in more deeply buried sections in the subsurface offshore and in the more proximal basin. The Point Dume-Paradise Cove succession in Malibu Beach, along with more highly weathered exposures in Palos Verdes and Newport Beach, are the best analogs for the Monterey Formation in the Los Angeles basin and Inner Southern California Continental Borderland.

Field trip #1 will depart at 7 AM from in front of the Walter Pyramid. Please arrive in time to sign waivers and receive guidebook and lunch.

Field Trip #2: Wednesday, April 3, 2019

Proximal and medial deep water channel deposits of the Mio-Pliocene (Neogene) Capistrano Formation of Orange County, California

Leaders:

Don Clarke - Geological Consultant

Dan Schwartz - Daniel E. Schwartz, LLC

San Clemente and Dana Point are world class exposures of clastic rocks that are excellent analogs to California oil reservoirs. The geologist can observe the cliffs from close up and from a distance in three dimensions. There are many diagnostic depositional features that will fuel discussions on oil reservoirs. These two locations bring the geologist right into the reservoir.

The Capistrano Formation (Neogene age) of Southern California contains deepwater clastic sedimentary facies deposited in proximal and medial channel settings. The outcrops at Dana Point Harbor, Dana Point, Orange County, California consist of five channel elements deposited within a proximal fault bounded submarine canyon in a lateral shifting and vertical aggrading sequence. Heterolithic units consisting of debris-flow transported breccia interbedded with traction-flow transported pebbly sand and sandstone deposits that overlie slope mudstones and sand injectites. Breccia consist mainly of angular clasts of siliceous (Opal-CT phase) mid-to-late Miocene Monterey Formation that was transported 7.5 to 13.5 kilometers down the proto-San Juan Creek channel system. Traction deposits consisting of Mesozoic to middle Miocene clasts were transported 13.5 to 40 kilometers down the proto-San Juan Creek channel system. The complex nature of the units and variability of clast types enables discrimination of slope failure from continuous discharge channel-transport events.

The Capistrano Formation at San Clemente State Beach, Orange County, California was deposited in a medial submarine fan setting and is dominated by traction and grain-flow deposits with common turbidites. The outcrops enable the observation of erosive channel flanks, the vertical stacking of side channel bar-elements, and lateral shifting of channel bar complexes with well-developed mudstone drapes separating bar complex units with erosion surfaces below the mud drape. There are two main outcrop locations; the southern location south and north of the San Clemente State Beach parking lot, and the second outcrop approximately two kilometers to the north, near the San Clemente Pier. The two outcrops are separated by a Capistrano Formation slope mudstone mound. The two outcrop locations may be part of a single channel meander bend. Both outcrop sections have ten channel elements. The northern section was deposited from north to south and the southern section from south to north. The San Clemente State Beach units enable observation small scale elements associated with depositional sequences and vertical and lateral flow barriers; as well as larger scale features associated with channel shifting and overall channel complex geometry.

Short Course: 8:00am - 5:00pm Thursday, April 4, 2019

Cost: \$300 for Professionals; \$100 for Students

Applications of Data Analytics and Machine Learning in Petroleum Geoscience

Instructors:

Shuvajit Bhattacharya, PhD - University of Alaska, Anchorage **Haibin Di, PhD** - Schlumberger

Summary

This course will provide a short, yet thorough, understanding of multivariate statistics and machine learning, and their applications in petroleum geosciences. Examples will cover various conventional and unconventional reservoirs, utilizing common and advanced well logs, and seismic data. Topics that will be covered include the following:

- 1. What is data analytics? Why should geoscientists care about it?
- 2. Geologic data types and dimensionality
- 3. Basic statistical measures (e.g. mean, standard deviation, and correlation coefficient etc.) for data visualization and analysis
- 4. What are machine learning and deep learning? Fundamentals of popular machine learning and deep learning algorithms (e.g. Multi-layer Perceptron and Convolutional Neural Network)
- 5. Working principles of supervised and unsupervised classification and regression techniques, and their utilities in constructing 3D facies, fault, and reservoir property models.

California Well Sample Repository



This photograph was taken circa 1990 in front of the California Well Sample Repository (CWSR) located on the campus of Cal State University Bakersfield.

The photograph includes three of the four men who were responsible for arranging to have the CWSR built in 1975 (Professor Jack Coash, H. Victor Church, and Jim Weddle; The fourth man involved not shown here was Ed Sprottee). From the beginning Marie Covin assisted Prof. Coash with book keeping and other duties for the CWSR as she was already working for him in the Geology Department.

Buddy Wylie with Santa Fe Energy, Mike Clark with Arco Oil & Gas and Charles James with Shell Oil were supporters of the facility. Charles has been the Curator for the CWSR for a number of years.

The man third from the left in the back row has not been identified. If you know him, please reach out to any of the committee and let us know.

The man that is third from the right in the back row is Russ Robinson, the Curator for the CWSR at that time.



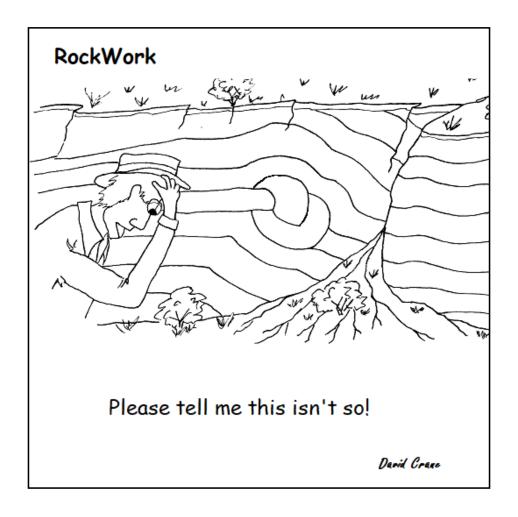
The 75th Anniversary of D-Day Electronic Field Trip

Thursday, May 2
Cost: Free

On May 2, 2019, The National WWII Museum will stream a live interactive journey into D-Day, the largest amphibious invasion in history and a turning point in World War II. Guided by student reporters, classrooms around the world will embark on a virtual transatlantic adventure to discover the lessons and legacies of Operation Overlord, the code name for the massive Allied invasion of Normandy, France, on June 6, 1944.

The 75th Anniversary of D-Day Electronic Field Trip is presented by The Cain Foundation in Honor of the Men of the 30th Infantry Division and all WWII Veterans, with additional support provided by The Lupo Family Charitable Fund and The Dale E. and Janice Davis Johnston Family Foundation in honor of Dr. Earle Richard Davis and his WWII service on the USS Tranquillity, Pacific.

Learn more and register to view at www.nationalww2museum.org



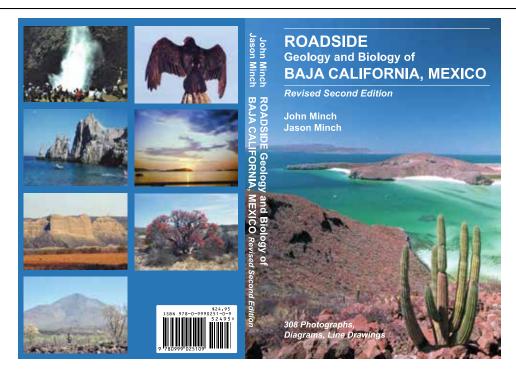


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Alaska Geological Society

March 14th - AGS

Speaker: Rob Witter, USGS

Talk: Ground Failures Induced by Seismic Shaking During the 2018 Anchorage, Alaska M7 Earthquake

May 21st - AGS

Speaker: Joint presentation, Shuvajit Bhattacharya (UAA Geophysics), Machine Learning Using Alaskan

Talk: Geophysical Data

March 14th - AGS

Talk: TBD: Geological/technical presentation from Pebble Partnership or Greg Wilson (ConocoPhillips)

Northern California Geological Society

March 27th

Speaker: Dr. Sara Kelly Mcbride — United States Geological Survey

Talk: Science to Emergency Management Response: Kaikoura New Zealand Earthquakes 2016

April 24th

Speaker: Dr. Owen Anfinson (tentative) — Sonoma State University Talk: Using detrital zircon to reconstruct the origin of Salinian Block

Northern California Geological Society

March 12th

Speakers: Richard Behl, James Kennett, Walter Dean, Christopher Sorlien, and Craig Nicholson *Talk*: The Santa Barbara Record of Two Volcanic Winters Triggered by Twin Yellowstone Supervolcano Eruptions 631,000 years ago

PSAAPG Needs a Webmaster

If you have interest in communications, social media and outreach, please contact us. This is an excellent way to provide an important professional service to your Society.

Current Webmaster, Taylor Carrasco, and Vice President, Mike Clark, will provide guidance, but having previous website construction experience is a tremendous plus!

For questions or to volunteer, please contact PSAAPG Executive Committee Officers:

President, Rick Behl - President@psaapg.org VP, Mike Clark - vicePresident@psaapg.org

Alaska Geological Society

www.alaskageology.org

P. O . Box 101288 Anchorage, AK 99510 Contact: Keith Torrance ktorrance@gci.net



Geology meetings/talks are held monthly September through May, usually on the third Thursday of the month, at the BP Energy Center (1014 Energy Court) from 11:30 am to 1:00 pm. Open To The Public. No Charge to Attend.

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Coast Geological Society www.coastgeologicalsociety.org

P. O. Box 3055 Ventura, CA 93006 Contact: Eric White 805-628-2312



Dinner meetings are held monthly September through May, on the third Tuesday of the month, at Poinsettia Pavilion, 3451 Foothill Road in Ventura. Social hour starts at 6:00 p.m., dinner is served at 7:00 p.m., and the talk starts at 8:00 p.m. The cost of dinner with reservations is \$20 (members), \$25 (non-members), or \$10 (students and K-12 teachers). For reservations, please email Shelby Fredrickson (secretary@coastgeologicalsociety.org), and should be made by 4:00 p.m. on the Friday before the meeting.

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Los Angeles Basin Geological Society

www.labgs.org

Contact: Bert Vogler 949-585-3103



Luncheon meetings are held monthly September and October; and January through June, usually on the fourth Thursday of the month, at The Grand at Willow Street Conference Centre (4101 E. Willow Street) in Long Beach. Lunch is served at 11:30 a.m., and the talk starts at 12:15 p.m. The cost is \$25 (with reservations), \$30 (without reservations), \$20 for retired members, and \$5 for students. "Reservations can be made online at www.labgs.org or by contacting Maia Davis at 530-559-1404 or maiac.davis@gmail.com. Reservations are best made prior to Tuesday before the meeting.

President: Bert Vogler hvogler@kleinfelder.com Vice President Nate Busch nbusch@eecenvironmental.com Treasurer: Nicky White nwhite@geomechanicstech.com wanjiru.njuguna@gmail.com Secretary: Wanjiru Njuguna Scholarships: Karla Tucker ktkr2@aol.com Webmaster Wanjiru Njuguna wanjiru.njuguna@gmail.com

Northern California Geological Society803 Orion #2Contact: Barbara Matzwww.ncgeolsoc.orgHercules, CA 94547-1938barbara.matz@aptim.com



Evening meetings are held monthly September through May, usually on the last Wednesday of the month, at the Masonic Center (9 Altarinda Road) in Orinda. Social hour starts at 6:30 p.m., and the talk starts at 7:00 p.m. (no dinner). For reservations, contact Dan Day at danday94@pacbell.net before the meeting. Cost is \$5 per regular member; \$1 per student member; and \$1 per K-12 teachers.

(Continued on next page)

NCGS Officers

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Northwest Energy Association

www.nwenergy.us

P. O. Box 6679 Portland, OR 97228 Contact: Jim Jackson or John Armentrout



Luncheon meetings are held monthly September through May, on the third Thursday of the month, at the Multnomah Athletic Club (1849 SW. Salmon Street) in Portland, Oregon. Meeting time is at 11:45 AM to 1:00 PM (speaker about 12:15 PM). The cost is \$25 for members and \$30 for non-members. For information or reservations email NWEnergyAssociation@gmail.com, or our Postal Box: Northwest Energy Association, P.O. Box 6679, Portland, Oregon 97228-6679.

President Laird Thompson lbtfracs@gmail.com
Vice-President Chris May c.law.may@gmail.com
Treasurer Barb Portwood bbportwood@gmail.com
Co-Treasurer Jim Jackson jackson.js@comcast.net
Secretary Clark Niewendorp clark.niewendorp@state.or.us

Sacramento Petroleum Association

P. O. Box 1844 Folsom, CA 95630 Contact: Pam Ceccarelli 916-439-0400



Luncheon meetings held monthly January through November, on the third Wednesday of the month. Location: Club Pheasant Restaurant in West Sacramento. The meetings start at noon. The cost is \$16 - \$20. For information or reservations, contact Pam Ceccarelli.

President: Jerry Reedy JWR5532@aol.com
Vice-President: Scott Hector Scott.Hector@gmail.com
Secretary Derek Jones djones@gasbiz.com
Editor/Treasurer Pam Ceccarelli pc626@comcast.net

San Joaquin Geological Society www.sanjoaquingeologicalsociety.org

P. O. Box 1056 *Contact: Lindsey Thompson*Bakersfield, CA 93302 *lthompson@envirotechteam.com*



We have dinner meetings on the second Tuesday of the month, October through June, at the American Legion Hall (Post 26) at 2020 H Street, Bakersfield, CA 93301. There is an icebreaker at 6:00 p.m., dinner at 7:00 p.m., and a talk at 8:00 p.m. Dinner is \$25 for members with reservations and \$30.00 for nonmembers and members without reservations. Students may attend for free.

President: Jonathan Goodell Jonathan.Goodell@crc.com

Past President: Cameron Campbell cameron.campbell@conservation.ca.gov

President-Elect: Jeff Kimber Jeff.Kimber@conservation.ca.gov

Vice-President: Kristy Whitaker KWhitaker@bry.com

Secretary: Lindsey Thompson lthompson@envirotechteam.com
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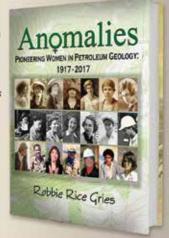
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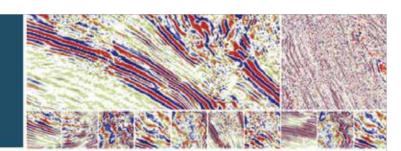
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