Pacific Petroleum Geology NEWSLETTER

Pacific Section • American Association of Petroleum Geologists July & August 2013

Monterey Rocks Remain a Focus of California Exploration

www.psaapg.org

NEXT Newsletter Deadline

(Sept. and October Issue): Sept 1st

- 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, .eps, or .bmp.
- Avoid clip-art and images from the internet. These images are low-resolution (72 dpi).

COVER PHOTOS: 2013 photos of the well-known Chico Martinez Creek exposures of Monterey (CT-phase McLure Fm.) rocks in California's San Joaquin Valley. Photos by the Editor

As I write this note our next Executive Committee prepares to begin management of PS AAPG. And as my term as President reaches its end, I would like to reflect on some of the activities and accomplishments of the Section over the last year.

We began in June with a major financial windfall from the 2012 National AAPG meeting in Long Beach. The most significant investment we made was in a new student scholarship program. The Pacific Section Foundation will match funds provided by AAPG-affiliated societies to geoscience students from universities within the Section area. Cynthia Huggins championed the program from its inception through Executive Committee approval. Assisting Cynthia were Jana McIntyre and Dan Schwartz. The first awards have already been presented to students in the Section. I thank Cynthia, Jana and Dan for creating this new program that will help many students for decades to come.

Funds received from the Long Beach meeting also allowed us to make sizable contributions to the Kilkenny Scholarship Fund and to the Foundation general fund. We also made contributions to the Buena Vista Museum of Natural History and to CSU Bakersfield for field trip expenses for students in a high school dual credit course. The Section also provided financial assistance for the AAPG Student Expo at CSU Northridge, AAPG Young Professionals and Student Chapter programs, and the Imperial Barrel competition.

April's Section conference in Monterey was the highlight of the year. The conference was very successful, with higher than expected attendance, sold-out field trips, and an excellent technical program. Many thanks to Paul Henshaw, his Convention Committee and the Northern California Geological Society for all their hard work in planning and executing a meeting in a city lacking "on the ground troops" to help with logistics. The conference contained some notable events, including the first time the IBA competition was held in conjunction with the meeting, and the first Pacific Section Leadership Forum. I appreciate everybody who attended and offered comments at the Forum.

Finally, I would like to thank our retiring officers for the 2012-2013 year for their hard work that helped to make the year successful: President-elect Dan Schwartz, Past President John Minch, Vice President Jana McIntyre, Secretary Becca Lanners, Treasurer Jennifer Anderson, and Treasurer-elect Jack Grippi. Jana, Jennifer and Jack in new roles will join our continuing Editor-in-chief Tim Elam in Dan's new Executive Committee. Also, thanks to our committed committee chairs and others who help bring continuity to our organization: Cynthia Huggins, Kay Pitts, Evan Bargnesi, Jon Allen, Larry Knauer, Bob Lindblom, Bob Ballog, Mark Wilson, Emily Fisher, and Greg Hummel.

Good luck to Dan and his new Executive Committee for 2013-2014.

Tony Reid
2012-2013 President

My term as PS-AAPG President begins at our next Executive Committee meeting in Santa Paula on July 19. I am looking forward to picking up where Tony Reid left off. We did accomplish a great deal in the Pacific Section AAPG last year. I am confident we can continue in 2013–14.

With the start of my tenure also begins the tenure of the incoming PS-AAPG Ex Comm. It will be great working with John Williams (President Elect), Jennifer Anderson (Vice President), Jana McIntyre (Secretary), Jack Grippi (Treasurer), Cameron Campbell (Treasurer Elect), and Editor-in-chief Tim Elam. I'm also pleased to be working with Plamen Ganev (Membership Chair), Kevin Weberling (Bakersfield 2014 PSAAPG Convention Chair) and Joan Barminski (Ventura 2015 PSAAPG Convention Chair).

We have a great deal to do to carry on Pacific Section business and ensure its future. The goal of the Section is "To support West Coast geoscientists with regional and broad based learning opportunities and research, enhance communication with our affiliated Societies and through our annual convention, newsletter and website, and serve as an advocate to the national AAPG organization."

Our business plan is focused on addressing our key challenges. Pacific Section AAPG has a strong but shrinking core of engaged experienced professionals, who have good ideas for helping the Section move forward and grow. We have financial strength and a portfolio of projects that can strengthen our ability to meet our Goals. What we currently lack are time and a growing society – this will be increasingly problematic unless we can streamline our business and be able to count on the influx of new "next generation" petroleum geologists to pick up the workload. The Ex Comm will ensure that we work closely with National AAPG and the PS-AAPG Foundation. We'll continue to distribute scholarship funds through affiliated societies to support student scientific research. To do that, we will also ensure scholarship funding is maintained from convention revenues and member contributions. A key role of the Section is to fund and host IBA competition while constantly working to increase participation from Section universities and support from Section corporate sponsors. To make sure our members are informed of all the activities in the Section, we will continue to communicate via the updated website and newsletter. We look forward to hosting the Annual Pacific Section AAPG convention in Bakersfield in April of 2014. I would also like to re-energize our publication and field trip efforts. If education is the key goal of the section, there are no better places to do that than in the field or via publications.

While the elected officers play a critical role in ensuring the health of the Section, there are a key group of people that work tirelessly for the Section. These include Cynthia Huggins, Kay Pitts, Evan Bargnesi, Jon Allen, Larry Knauer, Bob Lindblom, Bob Ballog, Mark Wilson, Emily Fisher, Tom Hopps, and Greg Hummel.

I look forward to hearing from the membership. This is your organization. If there are ideas you have for making it better, please contact me or other members of the Ex Comm.

Dan Schwartz
2013-2014 President

I am a mineral collector. I can name several California colleagues that know much more about minerals than I, including some PSAAPG members. This is a story about something I found surprising a few years ago. And yes, there is a hydrocarbon connection.

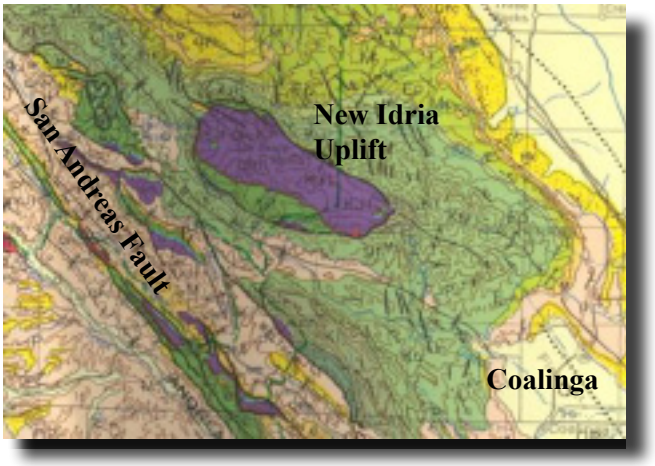
Minerals, by definition, have a definite chemical composition and a definite crystalline structure. There are extremely few carbon only minerals. Many of us learned about carbon-based minerals graphite and diamond in freshman or sophomore geology classes. However, until a few years ago, I knew of no carbon and hydrogen (C-H) only collectable minerals.

In 2009, at the world's premier mineral event…the Tucson Gem and Mineral Show, I wandered into the hotel room of a California dealer. He had beautiful minerals from a broad geologic feature known as the New Idria uplift in San Benito County. I knew the location well…and had collected there. This location is only 15-20 miles as the crow flies from the collection of supergiant Coalinga area oil fields. The New Idria uplift is one of the Coast Ranges' high-pressure, low temperature serpentinite structures. The structure is surrounded by Cretaceous marine sediments. A couple of exploratory wells have been drilled for Cretaceous objectives on the southeast plunge of an anticline trending away from the serpentinite. In Coalinga oil field wells, one of the distinctive Miocene units seen above the oil sands is the Big Blue member of the Temblor Formation. Supposedly, the Big Blue name is related to the presence of eroded New Idria serpentinite clasts into San Joaquin Valley sediments.The uplift is a world class mineral location, perhaps most famous for the mineral benitoite, California's State gemstone. Benitoite is most often a stunning bluish-purple. There is a history of mercury, chromite, and asbestos mining in the New Idria area, but that fascinating history will not be addressed in this article.

Anyway, this dealer in Tucson had five or six pieces in matrix of a pleasing lemon-yellow, semi-acicular crystal called karpatite. I noticed the location was Picacho Peak, on the New Idria uplift. I had never heard of the mineral, though I had collected a magnesium mineral on unclaimed land near Picacho Peak. I was subsequently shocked to see karpatite's chemical composition: $C_{24}H_{12}$...*a hydrocarbon mineral.* I snapped up a couple of pieces…I mean I paid for a couple of specimens…to add to my group of esoteric California minerals. The name karpatite is an anglicized version of a type locality name…in the Carpathian Mountains of eastern Europe. I have since found out that other rare C-H only minerals exist on the New Idria uplift. Karpatite is very soft (hardness 1.5 on the Mohs Scale) and is flammable…an unusual property.

If you want to learn more about the geology and mineralogy of the Coalinga area, including seeing many field trip road logs, long-time professor Dr. E.J. Fowkes composed a book called "A Guidebook to the Geologic Resources of the Coalinga District, California." It was reprinted in the early 2000's, and historically has been available only through the West Hills College Bookstore in Coalinga. (***Continued on page 7 with photos)***

Yellow karpatite in silicified serpentine, with red cinnabar, a mercury mineral



The New Idria uplifted feature appears on the State Geologic Map as a distinct puple mass surrounded by green Cretaceous sediments.

Faceted benitoite gemstones arranged in a necklace
Photo by the Editor

Petroleum Seeps, the End of a Long Journey

Petroleum seeps occur in a variety of geologic settings on the Earth's surface in both onshore and offshore environments. In California, there are several hundred general localities of petroleum seeps within 29 counties (Hodgson, 1987). Seeps are found in urban and rural sites throughout the state. Their general geographic localities include the Los Angeles Basin, Ventura Basin, Santa Maria Basin, San Joaquin Basin, Sacramento Basin, Eel River Basin, the Coast Range and in other regions of Northern California. The natural exposure of seeps in California have led to the discovery of over fifty oil fields throughout the state.

Seeps are truly one of nature's great mysteries. When analyzing seeps in their natural setting, it is important to understand that petroleum has taken a complex journey from the source rock to the Earth's surface. The period of time between the deposition of organic-rich sediment that was transformed into a rock unit containing hydrocarbon fluids, to the surfacing of petroleum, may have taken millions of years to complete. Two of the great mysteries regarding petroleum seeps involve the origin of petroleum and the complex nature of fluid movement deep within the Earth's crust. Understanding these mysteries is part of the process towards discovery when searching for petroleum resources.

Petroleum seeps may consist of the natural migration and surface emanation of crude oil, bitumen, asphaltum and/or natural gas with water and many other organic and inorganic chemical constituents. Water from seeps may range in salinity and alkalinity between fresh water and supersaturated brine depending on the source and pathway of fluids.

The term 'petroleum seeps' may include a variety of distinct forms including crude oil emanation, asphaltum mound, asphaltum flow, bitumen exudate and gas seeps or a combination of these features. An example would include a seep consisting primarily of an asphaltum flow that also emits crude oil, natural gas and water. Some unusual forms of petroleum seeps are associated with fresh water springs, sulfur springs, hot springs, mud volcanoes and microseeps. Groundwater wells in certain regions of California have been known to produce minor amounts of crude oil and/or methane, related to the migration of thermogenic petroleum.

There are many scientific theories regarding the source and generation of petroleum of thermogenic origin. One commonly accepted theory involves the deposition of fine-grained carbon-rich sediment in rapidly subsiding marine basins. Huge volumes of organic carbon in these deep ocean basins may have originated from the continuous deposition of phytoplankton, zooplankton, vegetative matter and bacterium with abundant clay and other fine-grained sediment within a reducing environment.

The accumulation of thick sequences of organic-rich sediment, coupled with subsidence and the action of tectonic forces, have resulted in deep burial, lithification, faulting and exposure to conditions of intense heat and pressure. Petroleum, in the form of complex hydrocarbon molecules, formed from chemical reactions that occurred in the fine-grained sediment in the presence of organic matter, water, clay minerals and anaerobic bacteria with the intense heat and pressure. Water, one of the important ingredients that allows bacteria to

continued on page 9

thrive, originated as connate water, seawater deposited with the sediment. Connate water of marine origin is usually high in salts and other dissolved ions that are favorable for the propagation of anaerobic bacteria in chemosynthetic biochemical processes.

Petroleum, in the form of liquids, gases and vapors began its upward migration as it was formed and released from the source rock into groundwater-dominated permeable rock units. Under certain conditions, petroleum will migrate from the source rock into a petroleum trap, consisting of a permeable formation or geologic structure favorable for containing large volumes of fluid under high pressure. Petroleum may also migrate directly from the source rock to the Earth's surface.

Hydrostatic pressure exerted by a static water column is the overall force involved in petroleum's upward migration. Hydrostatic pressure is directly related to the Earth's gravity. Essentially, gravity is the overwhelming force in the upward migration of petroleum. Groundwater composed of supersaturated brine will exert a much higher static pressure on petroleum fluids as opposed to groundwater of lower dissolved constituents. There are additional forces that may assist petroleum fluid as it is pushed to the surface including reservoir pressure, migration of groundwater, capillary pressure, geothermal heat, earthquakes and many other energies involved in fluid movement in a permeable medium. Forces that are involved in the transportation and dispersion of petroleum in marine seeps include influences from tides, currents, wave action and wind.

Hydrostatic pressure also exerts a powerful force on natural gas and its vapors. At times, gas will push liquid crude oil on the 'race' to the surface. Natural gas may be released from the source rock, reservoir rock or enter the hydrostatic column at many points along the path of migration. As hydrostatic pressure decreases while petroleum rises, gas continues to expand. As pressures decrease, solution gas is gradually liberated from the liquid phase of the petroleum and associated water, adding energy to the rising fluid column.

continued on page 10

Gases may also be introduced into the path of migration from a secondary source or from biogenic origins. Gases of biogenic origin may include secondary methane, carbon dioxide, hydrogen sulfide and sulfur dioxide. These gases will comingle with the rising petroleum as they are formed from the action of anaerobic and/or aerobic bacterium. At great depths, anaerobic bacteria is a common occurrence in permeable rock units. Some scientists believe that there exists 10 times more biomass deep within the Earth's crust in the form of bacterium, as compared to the total amount of biomass on or near the surface. Aerobic bacteria can also thrive at depth as rising seep fluids come in contact with oxygen-rich atmospheric gases that occur in aquifers, shallow sedimentary units, soils and other near-surface environments.

As one observes the expulsion of petroleum at a natural seep, try to imagine the time it took for it to migrate from the source rock to the surface. One of the great unknown factors in this process is the depth and lateral distance of a petroleum seeps at the surface

from the reservoir or source rock that released the petroleum. Also, consider the age of the rock unit and imagine the time span from deposition of the source rock to the surfacing of the petroleum. In California, the majority of petroleum deposits originate from Monterey Formation source rocks. From deposition of thick sequences of organic-rich sediment, subsidence of the sedimentary basin, petroleum generation, upward migration of fluids and the final surface seepage, the great cycle took millions of years to complete.

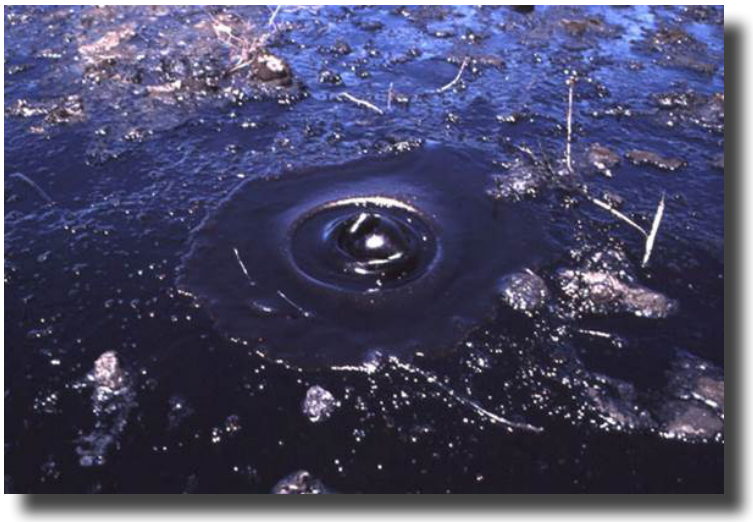
What began as carbon dioxide gas in the atmosphere, the ultimate source of all carbon that makes life possible, was transformed into organic carbon and finally into petroleum. As petroleum vaporizes, weathers and oxidizes at the surface exposure of a seep, the carbon will eventually return to the atmosphere in the form of carbon dioxide, methane or petroleum vapors, completing one of many complex sequences in the biochemical process known as the Carbon Cycle.

References

Hodgson, Susan F., 1987, Onshore Oil & Gas Seeps in California, California Department of Conservation, Division of Oil & Gas, Sacramento.

Levorsen, A. I., 1967, Geology of Petroleum, W. H. Freeman & Co., San Francisco.

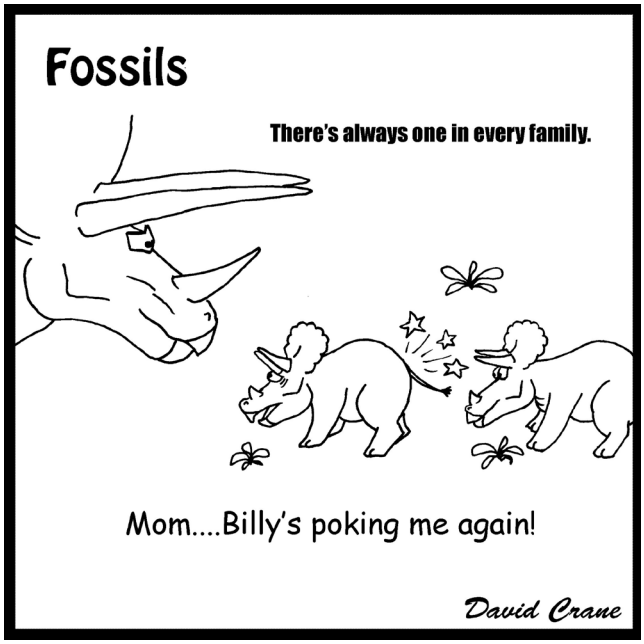
Mulqueen, Stephen P., 2007, "Petroleum Seeps: Structural Setting, Energy Drive and Path of Migration", Supplement for Field Guide # 2, "OIL ON THEIR SHOES: Famous and Little Known Seeps of Los Angeles and Ventura Counties", 2007 National AAPG Convention. Article revised in 2012.



Oil Seep

South edge of Sulphur Mountain near Santa Paula, Ventura County, Ca.

Photo by Steve Mulqueen



In the last PPG newsletter, an article described a dual-credit program where high school students earn college credit. The PSAAPG EXCOM, along with some affiliated societies, voted recently to financially support the dual-credit program. The picture above shows Bakersfield Frontier H.S. students on their geology trip to Yosemite National Park.

EDITOR'S NOTE: This article on the California Oil Museum in Santa Paula is the third in an ongoing series of articles highlighting California museums that celebrate a significant relationship to petroleum. Previous newsletters included articles on the West Kern Oil Museum in Taft and the R.C. Baker Memorial Museum in Coalinga. The last article, planned for the Nov- Dec newsletter, will feature and the Black Gold Exhibit at the Kern County Museum in Bakersfield.
Recently, I spent I spent an enjoyable afternoon at the California Oil Museum talking to Museum Administrator Jeanne Orcutt. Ms. Orcutt was very accomodating in providing answers to my questions, as well as background information regarding the Museum.

The California Oil Museum is a centerpiece of downtown Santa Paula, in the Ventura Basin. Some of California's earliest oil production came from the area, beginning in the 1860's. The Museum is a non-profit (501c-3) tax-exempt municipal organization overseen by the City of Santa Paula and has operated since the 1950's.

The Museum has wonderful exhibits that celebrate the California oil industry...and much more. Visitors can learn about California history, architecture, and geology as well. The Museum and serves as a science education center for kids, and offers several educational workshops. These workshops are centered around fossils, rocks and minerals, the Earth's crust, earthquakes, and other topics.
Grants, generous citizens and many businesses, particularly those related to the oil industry, are a major source of financial support to the Museum, which has a budget of +/- $150,000 per year. 10,000 visitors toured the Museum in 2012, including over 3000 children.

Recent rotating exhibits included "Let's Go to the Moon" and "Oil Tankers: Delivering the Energy that Fuels Our Lives." In Fall 2013, a new exhibit, ""Prehistoric Animals of California" will open. Another exhibit scheduled to open this Summer has to do with hydraulic fracturing. The Museum has plans to open an exhibit of the works of silent film star Harold Lloyd in the "Iron Room."

The Museum is housed in the first headquarters of Union Oil Company and was built in 1890. Union was incorporated the same year as the "union" of four oil-related businesses: Hardison and Stewart, Sespe, Torrey Canyon, and Mission Transfer. Union headquarters occupied the second floor of the building. This floor now includes restored offices for the President, Chief Geologist, Paymaster, Corporate Secretary, and others. The Union headquarters was moved to Los Angeles around 1905, and the Santa Paula office became more of a regional production office. Other businesses, such as the Santa Paula Hardware Company, operated on the first floor for decades.

The second floor headquarters has been carefully restored. Union Oil Company initiated that $2.7 million dollar restoration in the 1980's in anticipation of the companies' 100th anniversary in 1990. The building is on the National Register of Historic Places and has distinctive architectural features of the Queen Anne and Italianate varieties. Multi-colored glass panes, a cantilevered corner tower with a copper cupola, bay windows, and hand-painted porcelain fireplace tiles, all add to the ambiance of the structure. Original vaults, ledgers, furniture, and other features of the old working offices can be seen. The office of W.W. Orcutt, Union's Chief Geologist, has rock specimens, a hammer, a microscope, and other analytical tools of the early days.

A curious feature is shown on the second-floor lighting fixtures. These fixtures were built as so-called combo or "transition" lamps, constructed to be powered by electricity or gas. Each ceiling fixture has two glass housings…one pointed up for gas, and one pointed down for electrical bulbs. The shape of these fixtures reflects the concern about the reliability of the electrical industry…which was in its infancy in 1890.

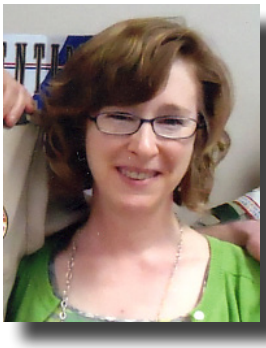
An annex to the old building has a simulated pumping oil well from the wooden derrick era. In various parts of the Museum are a plethora of lighted, well maintained areas with 20th century gas station pumps and signs from Richfield, Union, Chevron, Texaco, Gilmore, Shell, and other companies.

The California Oil Museum in Santa Paula is open Wednesday through Sunday, 10:00 AM-4:00 PM, and is a great place to visit. For more information, go to www.oilmuseum.net.

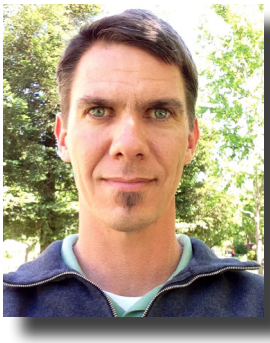
Congratulations to the newly-elected PSAAPG Officers

President-elect
John Williams

Vice-President
Jennifer Anderson



Secretary
Jana McIntyre



Treasurer
Cameron Campbell

This year the Los Angeles Basin Geological Society (LABGS) was very pleased to offer fifteen scholarships to undergraduate and graduate geology or earth science students in Southern California colleges and universities within our 'sphere of influence'. The awards ranged in amounts from $500 to $1000. Four of the scholarships were funded by the PSAAPG. LABGS funded the remaining scholarships from money obtained by sponsoring field trips during the AAPG International Convention held this past April in Long Beach California. The scholarship money is being used by the students for tuition, geology field camp, text books and/or other supplies necessary for their school work.

The students were invited to the May luncheon meeting of LABGS in Long Beach, though unfortunately many could not attend due to exams or field obligations. The students that did attend enjoyed lunch, recognition (photo below), and an excellent presentation by our speaker, Dr. Matt Becker from California State University of Long Beach. Dr. Becker's presentation was on fluid flow in fractured formations: implications for groundwater contamination, geothermal energy, and enhanced oil recovery.

Scholarship recipients, flanked by LABGS President Bill Long (left) and Vice President and Scholarship Chair Jean Kulla (right) at the luncheon party.

LABGS/PSAAPG FOUNDATION

SCHOLARSHIP RECIPIENTS

Student	School
Yannick Wirtz	CSU-Long Beach
Lily Strelich	Occidental College
Gregory Leroy Burr	CSU-Northridge
Priscilla Macias	CSU-Long Beach
Shawn Anne Robison	CSU-Fullerton
Kimberly Ann Boyd	CSU-Long Beach
Simarjit Kaur Chehal	CSU-Northridge
Larissa Kupferschmidt	Cal Poly – Pomona
Kelly Marie Shaw	CSU-Fullerton
Simran Singh Sangha	Occidental College
Adriana "Nicky" White	CSU-Long Beach
Bryan Petry	CSU-Long Beach
Paul Alessio	CSU-Long Beach
Brittany Huerta	CSU-Northridge
Jamie Purcell	San Diego State Univ.

In addition to scholarship awards, LABGS presented an award for Teacher of the Year (TOTY) to Larry Rodgers. In the photo above are LABGS member Greg Hummel (left) who nominated TOTY winnner Larry Rodgers (center); LABGS President Bill Long stands on the right.

SCHOLARSHIP RECIPIENTS:
PSAAPG FOUNDATION/ nominated by San Joaquin Geological Society

STUDENT- SCHOOL

Christopher Bowie- Fresno State
Marc Halling- Cal State Bakersfield
Martin Jimenez- Cal State Bakersfield
Robin Richardson- Cal State Bakersfield
Christina Rivas- Cal State Bakersfield

SCHOLARSHIP RECIPIENTS:
PSAAPG FOUNDATION/ nominated by Coast Geological Society

STUDENT-SCHOOL

Ian Desjarlais- Cal State Northridge
Juliet Norris-Clay- Santa Barbara City College
Lauren Sinkins- UC Santa Barbara
Tina Zeidan- Cal State Northridge

PHOTOS FROM THE CALIFORNIA OIL MUSEUM, SANTA PAULA; **for text see page 12**
photos by the Editor

Exterior- California Oil Museum

Simulated operating oil well in Annex

The room where Union Oil Company was born

Colorful displays occupy the Museum's first floor

Alaska Geological Society

- **August 22 Meeting: "The Mountains Are Falling Apart; A Spectrum of Mass Failures; Rockslides, Sackungs and Unfolding;" SPEAKER: James P. McCalpin, 2013 Jahns Distinguished Lecturer in Geology, GSA/AEG; GEO-HAZ Consult., Inc.** *(This is an evening talk with a catered sit-down dinner from 6:00 pm-8:00 pm)*
- **September 19 Meeting; Quaternary Volcanoes in Southeast Alaska;" SPEAKER: Sue Karl, USGS, Anchorage**

Coast Geological Society

- **September 17 Meeting: "Mars Curiosity Rover Mission" SPEAKER: Dr. Robert Anderson, Jet Propulsion Laboratory, Pasadena.**
- **October 4: WOOLLEY GOLF TOURNAMENT/BBQ (See below)**

L.A. Basin Geological Society

- **No Summer program**

Northern California Geological Society

- **Field Trip-Friday to Sunday, August 16, 17, 18, 2013**
  Lassen Volcanic National Park – a wonderland of volcanoes and thermal features
  led by Dr. Patrick Muffler, U.S. Geological Survey, Geologist Emeritus

Northwest Energy Association

- **No information provided**

Sacramento Petroleum Association

- **No Summer Program**

San Joaquin Geological Society

- **Sept. 13: GOLF TOURNAMENT/BBQ (see below)**

Golf, Anyone?

The San Joaquin Geological Society and the Coast Geological Society annually hold golf tournaments, followed by same-day barbeques. These events are great fun and raise money that funds scholarships given at the end of the academic year. Make plans to sign up for these events!

- **This year the SJGS Golf/BBQ event will be held on September 13. Golf will be at Sundale Golf Course in Bakersfield, and the evening BBQ at the Kern County Museum. The event has terrific support from oil-related businesses, and is always looking for more sponsorships. All the information needed to sign up is available on the SJGS website, or contact Kathy Smith (kathysmith@pacseis.com) for the golf tournament or Anne Draucker (AnneDraucker@chevron.com) for the BBQ.**

- **The Coast GS event will be the 15th Annual Woolley Memorial Tournament on October 4. All net proceeds go to the John J. Woolley Memorial Scholarship Fund. This year, it will be held at Elkins Ranch Golf Course in Fillmore, Ca. and will be followed by a Santa Maria-style BBQ. More information can be gained from the Coast GS website or by contacting Tournament Directors Mike Phipps (805) 497-7999, mphipps@cottonshires.com or Phil Kinney prkinney@roadrunner.com.**

Alaska Geological Society

www.alaskageology.org

P. O. Box 101288
Anchorage, AK 99510

Contact: Eric Cannon
eric_cannon@golder.com

Luncheon meetings 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 a.m. to 1:00 p.m. The hot lunch cost is $20 for members with reservations; $22 for non-members with reservations; and $25 without reservations. The box lunch cost is $13 for members with reservations, $15 for non-members with reservations, and $18 without reservations. For reservations, call the AGS reservation voice mail at 907-258-9059 or contact David Hite at hiteconsult@acsalaska.net by noon on Monday before the meeting.

President:	Art Banet	banetak@gci.net
President-Elect:	Matt Frankforter	mfrankforter@hilcorp.com
Vice-President:	Monty Mabry	monte.mabry@bp.com
Secretary:	Eric Cannon	eric_cannon@golder.com
Treasurer:	Alan Hunter	paleoman@mac.com
Past-President:	Ken Helmold	ken.helmold@alaska.gov

Coast Geological Society

www.coastgeologicalsociety.org

P. O. Box 3055
Ventura, CA 93006

Contact: Peter Morris
805.745.2149

Dinner meetings are held monthly September through May, usually on the third Tuesday of the month, at the 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); the talk is free. For reservations, please email Jerry Nichols (secretary@coastgeologicalsociety.org). Reservations should be made by 4:00 p.m. on the Friday before the meeting.

President:	Peter Morris	805-745-2149	president@coastgeologicalsociety.org
Past President:	John Harris	805-407-7644	pastpresident@coastgeologicalsociety.org
Vice President:	Robert Dame		vicepresident@coastgeologicalsociety.org
Secretary:	Dion Lobreau	805-640-5841	secretary@coastgeologicalsociety.org
Treasurer:	Christine White	805-535-2074	treasurer@coastgeologicalsociety.org

Los Angeles Basin Geological Society

www.labgs.org

515 So. Flower Street, Ste 4800
Los Angeles, CA 90071

Contact: Bill Long
213.225.5900 x 205

Luncheon meetings are held monthly September and October; and January through June, usually on the fourth Thursday of the month, in the Monarch Room 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 $20 (with reservations), $25 (without reservations), or $5 for students. Reservations can be made online at www.labgs.org or by contacting Marieke Gaudet at 562.624.3364 or marieke_gaudet@oxy.com. Reservations must be made prior to Tuesday before the meeting.

President:	Bill Long	213.225.0205	william.long@breitburn.com
Vice President:	Jean Kulla	949.500.3095	k2mobile@.com
Treasurer:	Bert Vogler	562.432.1696	hvogler@kleinfelder.com
Secretary:	Graham Wilson	562.326.5278	Gwilson@SHPI.net

Northern California Geological Society

www.ncgeolsoc.org

9 Bramblewood Court
Danville, CA 94506-1130

Contact: Barb Matz
Barbara.Matz@shawgrp.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:

President:	Tom Barry	tom.barry@shawgrp.com
Program Chair:	John Karachewski	cageo@sbcglobal.net
Secretary	Dan Day	danday94@pacbell.net
Treasurer	Phil Reed	philecreed@yahoo.com
Membership Chair	Rob Nelson	rlngeology@sbcglobal.net
Newsletter Editor	Mark Detterman	mdetter1@gmail.com
Field Trip Coordinator	Tridib Guha	tridibguha@yahoo.com
Past President	Mark Sorenson	msorenson64@earthlink.net
Scholarships	Phil Garbutt	plgarbutt@comcast.net
K-12 programs	Paul Henshaw	candphenshaw@comcast.net

Northwest Energy Association
www.nwenergyassociation.org

P. O. Box 6679
Portland, OR 97228-6679

Contact: Tim Blackwood
503.656.0156

Breakfast meetings are held monthly September through May, usually on the second Friday of the month, at the Multnomah Athletic Club (1849 SW. Salmon Street) in Portland. Meeting time is at 7:30 - 9:00 am. The cost is $18. For information or reservations, contact Steve Walti.

President	Tim Blackwood	tblackwood@pacificgeotechnicalllc.com
Treasurer	Steve Walti	steven.walti@nwnatural.com

Sacramento Petroleum Association

P. O. Box 571
Sacramento, CA 95812-0571

Contact: David Hartley
530.304.4277

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

President:	Jerry Reedy	916.486.2643	JWR5532@aol.com
Vice-President:	David Hartley	530.304.4277	drilmax1@aol.com
Secretary	Derek Jones	916.859.4710	djones@gasbiz.com
Editor/Treasurer	Pam Ceccarelli	916.439.0400	pc626@comcast.net

San Joaquin Geological Society
www.sanjoaquingeologicalsociety.org

P. O. Box 1056
Bakersfield, CA 93302

Contact: Vaughn Thompson
vaughn_thompson@oxy.com

We have dinner meetings on the second Tuesday of the month at the American Legion Hall at 2020 “H Street” in Bakersfield. There is an icebreaker at 6:00 pm, dinner at 7:00 pm, and a talk at 8:00 pm. Dinner is $25.00 for members with reservations and $30.00 for nonmembers and members without reservations, and the talks are free.

President:	Laura Bazeley	lbazeley@wziinc.com
Past President:	Vaughn Thompson	Vaughn_Thompson@oxy.com
President-Elect:	Anne Draucker	AnneDraucker@chevron.com
Vice-President:	Jon Allen	jonathan.allen@chevron.com
Secretary:	Evan Bargnesi	Evan_Bargnesi@oxy.com
Treasurer:	Noel Velasco	novelasco@aeraenergy.com

PACIFIC SECTION AAPG
P. O. BOX 1072
BAKERSFIELD, CA 93302

PRESORTED
STANDARD
U.S. POSTAGE PAID
BAKERSFIELD, CA
PERMIT NO. 1163