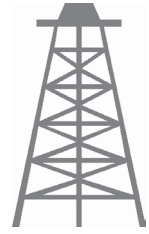




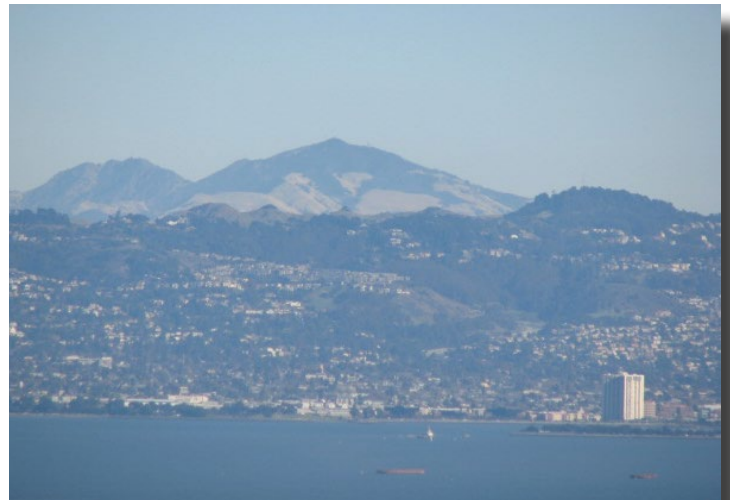
Pacific Petroleum Geology



NEWSLETTER

Pacific Section • American Association of Petroleum Geologists

January & February 2013



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Cover Photos: Upper left: Top of the summit building at Mt. Diablo. Upper right: contorted Franciscan radiolarian chert, interbedded with clastics on Mt. Diablo road. Lower left: Vegetation covers Cretaceous and Eocene sediments southeast of Mt. Diablo. Lower right: View of San Francisco Bay, Berkeley Marina, Berkeley/Oakland Hills, and, in the distance, Mt. Diablo. Caldecott Tunnel is bored through the Berkeley/Oakland Hills. Photo taken from the Marin Headlands, near the Golden Gate Bridge.
Photos provided by the editor.



2012 was a very good year for the Pacific Section. The Imperial Barrel competition expanded with five universities participating from our Section, the highest ever. Two universities may organize new Student Chapters, bringing to 9 the total number of chapters in the Section. April's Long Beach AAPG ACE (Annual Convention and Exhibition) was a huge success and provided financial resources that will benefit the Section for many years to come.

The additional funds from the Long Beach meeting permit the Pacific Section to offer new programs to members and prospective members. For example, the Executive Committee approved a new scholarship program that will provide up to \$5,000 per year to each active affiliated society to supplement their scholarship programs. Start-up funds will be donations. Details are still being worked out, but it is our hope to make the first awards in 2013. I would like to thank Cynthia Huggins, Dan Schwartz and Jana McIntyre for their work in championing this proposal.

Our principal activity for 2013 will be our annual meeting in Monterey. As provided in our by-laws, the Executive Committee will hold a public meeting at the convention. We will have a new forum: a one-hour session at the end of the technical presentations, where officers and committee chairs will make short presentations on their activities. Discussions will include a summary of the Section's financial health, and the disposition of funds received from the 2012 Long Beach meeting. Affiliated society officers and members in general are invited to attend and participate in the meeting. Details of the meeting will be announced in the convention program.

I'm looking forward to another great year for the Pacific Section, and hope you all have a happy and prosperous 2013.

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Age dating and environmental determinations of the
LA Basin, the Ventura Basin, the San Joaquin and
Sacramento sections, as well as the Alaskan Cook Inlet and
Post Paleozoic North Slopes section

Mount Diablo Baseline and Meridian. If you have drilled a well in the San Joaquin Basin, Sacramento Basin, Salinas Basin, Cuyama Basin, other areas of California, or ANYWHERE in Nevada, you have undoubtedly spotted your well based on a Township/Range/Section referenced to Mount Diablo. The Coast Range peak known as Mount Diablo rises to an elevation of 3849'. It is the centerpiece of a frequently used State Park of the same name, 30 miles east of San Francisco. Mount Diablo has been a landmark of California history since welcoming gold prospectors into the Sacramento/San Joaquin delta, on their way to the Sierra Nevada in the 1800's. At the top of Mount Diablo is a landmark beacon, constructed in 1928 by Standard Oil Company of California (now Chevron.)



GEOLOGY

The geology of Mt. Diablo is the standard mix of Coast Range complexity of structure and rock type. The mountain came into existence thanks to a mix of plate tectonics, thinning of Mesozoic and Cenozoic rocks, recent and ongoing uplift, and basement rock movement along a speculative blind thrust. Mt Diablo possesses four major rock types: 1) the Mesozoic Mt. Diablo ophiolite complex, 2) the Mesozoic Franciscan complex, 3) Jurassic/Cretaceous Great Valley sequence sedimentary rocks, and 4) Cenozoic sedimentary rocks.

NAMING


The name of Mount Diablo was assigned by early Spanish explorers for their encounters with Native Americans. But there is more than one explanation for the name. One nomenclature legend suggests that Spaniards, in their skirmishes with Native Americans, would often find themselves in a difficult position. But suddenly and mysteriously a devil, or diablo, would come out of the mountain. The diablo would help the Spanish defeat their opponents. An alternate legend developed from an event in 1806. That year, Spanish missionaries tracked the Native Americans, but the natives disappeared into thickets of oak woodlands. The Spanish surmised that the disappearance could have only occurred with the help of a diablo.

WHERE'S THE TOP?

In the 1850's, Mount Diablo was picked as one of three initial points for government surveys of California public land (See *graphic on next page*). The other two points are San Bernardino Mountain northeast of Los Angeles, and Mount Pierce in Humboldt County. Concurrently with public land surveying in the 1850's, all private land...the ranchos...were identified and surveyed, referenced to these three points.

In 1851, just after California became one of the United States, military surveyor Col. Leander Ransom and his crew marched to the top of Mount Diablo. There they chiseled a hole in rock at the mountain's

(continued on page 6)



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highest point, and erected a flagpole. Ransoms crew then surveyed points many miles to the north, south, east and west, thus establishing base and meridian lines, establishing the Mt. Diablo base and meridian system. But, in 1852, another surveyor, R.D. Cutts, set up a triangulation station on Mt. Diablo as little as three feet from Ransom's point, at a slightly flatter spot. The 1852 point was marked by a copper bolt embedded in the rock. Although Cutts noted that his point was not intended to be the same as Ransom's, inevitably confusion occurred regarding the two surveyed points.

CORRECTION

A plaque on Mt. Diablo for decades stated that Cutts' survey point was the same as Ransom's survey point. However, investigations in the late 1980's revealed both the copper bolt of Cutts' 1852 survey and the nearby 1851 Ransom survey point. They proved to be two separate points, thus revealing text on the marker plaque to be incorrect. When the Summit Museum at the top of Mt. Diablo was renovated and reopened in 1993, a replacement plaque was placed at Ransom's original...and correct... top of Mt. Diablo.

So, has there really been a problem with what we assume to be the "zero point" over the years? Surveyors will say no. But.. have you ever drilled a well that was off target? OK...this may take some imagination and blame shifting. But maybe you can say "Blame it on the devil," or, "The devil made me do it."

Editors Note: text for this article was synthesized from numerous sources, including the Mt. Diablo Interpretive Association, Mount Diablo Surveyors Historical Society, and Mt. Diablo State Park.



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NCGS Hosts Field Trip to New Bay Area Tunnel

On November 2nd approximately 40 participants split into two CalTrans field trip sessions to learn about the new Fourth Bore of the Caldecott Tunnels and the geology of the East Bay Hills. We stopped on both sides of the tunnel to examine steeply dipping outcrops (from oldest to youngest, west to east) of the marine sandstone and shale of the Sobrante Formation, Claremont Chert and Shale, nonmarine conglomerate and sandstones of the Orinda Formation, and the Moraga volcanics.

History: The original Kennedy Tunnel first connected Alameda and Contra Costa Counties in 1903. It measured 1040 feet in length by 17 feet wide, and was lined with timber. It provided limited access between the counties due to its steep approaches and narrow width. In 1928, George Posey, known for the Posey Tube connecting the cities of Oakland and Alameda County, supervised the planning of two new lower tunnels and served as Chief Engineer. Professor George Louderback evaluated the site geology. Work was completed in 1937.

By the late 1950's, daily vehicle counts through the Caldecott Tunnels reached levels well beyond the capacity. A third bore started in 1960 was a near duplicate of the first two bores, except for its larger profile. The new third bore introduced the "pop-up" lane change system that redirects traffic in the second bore depending on the time of day.

Engineering: Our first stop was the Caltrans Construction office in Lafayette for a brief overview by Ivy Morrison, Public Information Officer and Chris Ridsen, Engineering Geologist for Caltrans. They discussed the New Austrian Tunneling Method (NATM) as well as of the need for the fourth bore. The NATM (also known as the Sequential Excavation Method) is a widely recognized tunneling technique developed in Europe in the 1960s that uses the surrounding rock mass as one of the main strength elements. The flexibility provided by this method allows engineers to adjust certain reinforcing elements based on observed rock behavior, while constructing a tunnel at a reasonable cost and without sacrificing safety to workers or drivers.

NATM deploys two types of support: an initial lining of sprayed fiber-reinforced concrete (known as shotcrete), rock bolts, and lattice girders; and a final lining consisting of traditional reinforced concrete. The initial lining is somewhat flexible and allows a controlled deformation of the rock to achieve equilibrium. By controlling the deformation of rock using various initial lining elements, tunnel engineers maximize the strength of the rock mass and reduce stresses placed on the final lining.

Rock data was collected by drilling several cores along the proposed alignment. Laboratory tests performed on the rock cores provided engineers with the data necessary to categorize the various rock types that would be encountered during tunnel construction. Engineers described the strength of each excavated face as geologists identified the rock types and assessed the behavior of the rock mass immediately after each round (8-12 feet) of excavation. Fourteen rock types were recognized, requiring seven initial lining designs for support.

Because of the size of the fourth bore (total excavated dimensions are approximately 50 feet wide x 36-41 feet high), engineers designed the excavation to occur in stages, starting with a top heading excavation consisting of roughly half the opening followed by the bottom half, called the bench. The tunnel was surveyed to monitor deformation of the initial lining and "behavior" of the excavation; additional support measures were then installed as needed. While the site is not bisected by an active fault, the Hayward fault runs perpendicular to the tunnel and very closeby. Thus the tunnel is designed to withstand strong ground shaking. Following completion of excavation and installation of the initial lining, the next step is construction of the final lining and roadway and installation of rock monitoring systems.

(continued on Page 8)

Geology: The geology is characterized by near vertical, marine and non-marine sedimentary rocks of Middle to Late Miocene age. Marine and nonmarine strata, as well as volcanic rocks, record the change in regime from a convergent plate margin to a transform plate margin.

Near the west portal of the tunnels, we viewed shaley marine sandstone typical of what is exposed throughout the western 200 meters of the fourth bore. This is thought to be the Sobrante Formation and are the oldest rocks in the section.

Along Claremont Avenue we examined the Claremont Chert and Shale, also known as the Monterey Formation in other parts of the state; it is a petroleum source rock. The entire unit is overturned and dips steeply to the west. These rocks represents deposition in a much deeper ocean basin than the other formations and characterize sedimentation in a forearc basin of the convergent environment. The migration of the Mendocino Triple Junction marked the cessation of subduction and closing of the basin. The Claremont is present in the west and middle section of the tunnel alignment. Traces of petroleum in these rock spoils required that they be disposed of at a hazardous waste site.

The eastern end of the tunnel penetrates non-marine shale, sandstone, and conglomerate of the Upper Miocene Orinda Formation. An angular unconformity between the Orinda and underlying Claremont documents the transition from a convergent plate margin to a transform plate margin. The rocks of the Orinda Formation were most likely deposited as part of an alluvial system during uplift of the San Francisco Bay Block. Provenance studies show reworked Claremont chert clasts, but a majority of the sediments are derived from Franciscan rocks. Spectacular exposures of the Orinda are found on the east side of tunnel. The lower part of the formation contains estuarine and nearshore marine mollusk fossils, while the upper part of the formation has produced an assemblage of land mammals that includes horses, rhinoceroses, camels, pronghorns, oreodonts, and gomphotheres as well as significant terrestrial plant fossils. Excavation required full time paleontology monitors as part of the environmental mitigation.

Basaltic to andesitic rocks of the Moraga Formation, also known as the Grizzly Peak volcanics, (9.5Mya) interfinger with the fluvial sediments. Their origin is attributed to mantle upwelling into the space formerly occupied by the subducted slab, as the transform plate boundary evolved. The contacts are frequently marked by reddish "bake" zones where the volcanics flowed over the Orinda Formation. Locally, flows erupted from Round Top in Sibley Volcanic Regional Preserve just south of the freeway. Within the tunnel, volcanic dikes were encountered which weather to clay and hence weaken rock properties.

Crews are installing the electrical, drainage and ventilation systems, including 19 jet fans. Following construction of the final concrete lining, the roadway, and testing of the monitoring systems, the fourth bore of the Caldecott Tunnel is expected to open in late 2013.

Many thanks to Ivy Morrison and Chris Risdien of Caltrans for leading this well organized and informative field trip. Also thanks to our NCGS field trip director Tridib Guha for another great NCGS field day.



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Above left: Field Trip participants listen to a discussion of the tunnel project from field trip leader Chris Ridsen, second from right. (photo provided by Tom Mackinnon).

Above right: Igneous dike (lighter colored rock) intruding the Claremont Shale within the tunnel. Note also initial roof lining protects workers. (photo provided by Caltrans.)

April 19-25, 2013
2013 SPE Western Regional /
Pacific Section AAPG
Joint Technical Conference

Energy & the Environment
Working Together for the Future
Monterey, CA

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2013 PSAAPG CONVENTION- Monterey, California

The 2013 SPE Western Regional / Pacific Section AAPG Joint Technical Conference is moving forward. The Conference is planned for April 19-25, 2013 at the Portola Hotel & Spa in Monterey, CA. The Conference Theme is **Energy & the Environment - Working Together for the Future.**

The Technical meeting will kick-off with an opening Ice-breaker the evening of Sunday, April 21. Technical Sessions will occur April 22-24. Field Trips and Short Courses will be run prior to and after the Technical Meeting. We have an exciting set of technical sessions, field trips and short courses! (see below and page 11). A great Technical Committee is working hard to bring you a good meeting. Feel free to contact Committee Chairs (see graphic on this page) for more information. Abstracts of technical papers must be submitted for review before January 15. The Call for Sponsors and Exhibitors has also begun. Social activities, including luncheons and dinners are being planned. **Let us know what you/your societies might need.**

Registration for the Conference will begin in February, 2013.

Paul Henshaw - PSAAPG Conference Co-Chair



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PSAAPG/SEPM FIELD TRIPS AND SHORT COURSES

DATE	Saturday 4/20	Sunday 4/21	Monday 4/22	Tuesday 4/23	Wednesday 4/24	Thursday 4/25	Friday 4/26
Field Trips					Field Trips		
Morning	The Monterey Formation in the Santa Lucia Area and Monterey Area	Introduction to the Geology of the Point Lobos Reserve for K-12 Educators, Students, & Guests	Convergent Margin Tectonics across Central California Coast Ranges -- Pacheco Pass	K-12 Educator Workshop	Analogues for Coarse Grained Deep-Water Reservoirs - Carmelo Formation (Paleocene), Point Lobos State Reserve, California	Exploring the Transition from a Submarine Canyon to its Depositional Apron, Upper Cretaceous Pigeon Point Formation	Fracture Characterization of Monterey Formation Outcrops at Montana de Oro SP
Afternoon				Oceanography Research Laboratory Visits for K-12 Educators -- MLML & MBARI	San Andreas Fault & San Juan Bautista Mission	The Salinas Basin Petroleum System and Its Outcrop Expression, Central California	
Short Courses					Short Courses		
Morning		Sequence Stratigraphy for Students, Day 1	Sequence Stratigraphy for Students, Day 2	Monterey Formation Seminar and Core Workshop	Protecting Assets with Environmental Baseline and Ground Water Monitoring	Geologic Data For Petrophysics: What Your Log Analyst Needs To Improve the Results	Introduction to Carbonate Stratigraphy and Sedimentology
Afternoon					An Introduction to Working Ancient Electric Logs		

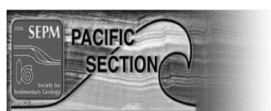
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Technical Program PSAAPG/PS-SEPM

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| <ul style="list-style-type: none"> • Reviving old giants and new potential in mature basins • Evolving Models of Deep Water Deposition • Fluvial and shallow-marine depositional systems: insights from outcrops and subsurface prediction • Opening up the west: new and overlooked opportunities in unconventional reservoirs • Faults, folds, transforms and terranes of Western North America • Marine Geology of the Pacific Margin (modern and Ancient) -- dedicated to Bob Garrison | <ul style="list-style-type: none"> • Energy and the environment • Landscape / Seascapes Evolution • California Turbidites • What's new in the Sacramento Valley • Geothermal Energy: A hot topic • Arctic energy opportunities: from the Cook Inlet to the North Slope and beyond • Sediment routing in Western North America • Undergraduate Research Poster Session |
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7 Field Trips and 14 SPEWR/PSAAPG/PS-SEPM Short Courses

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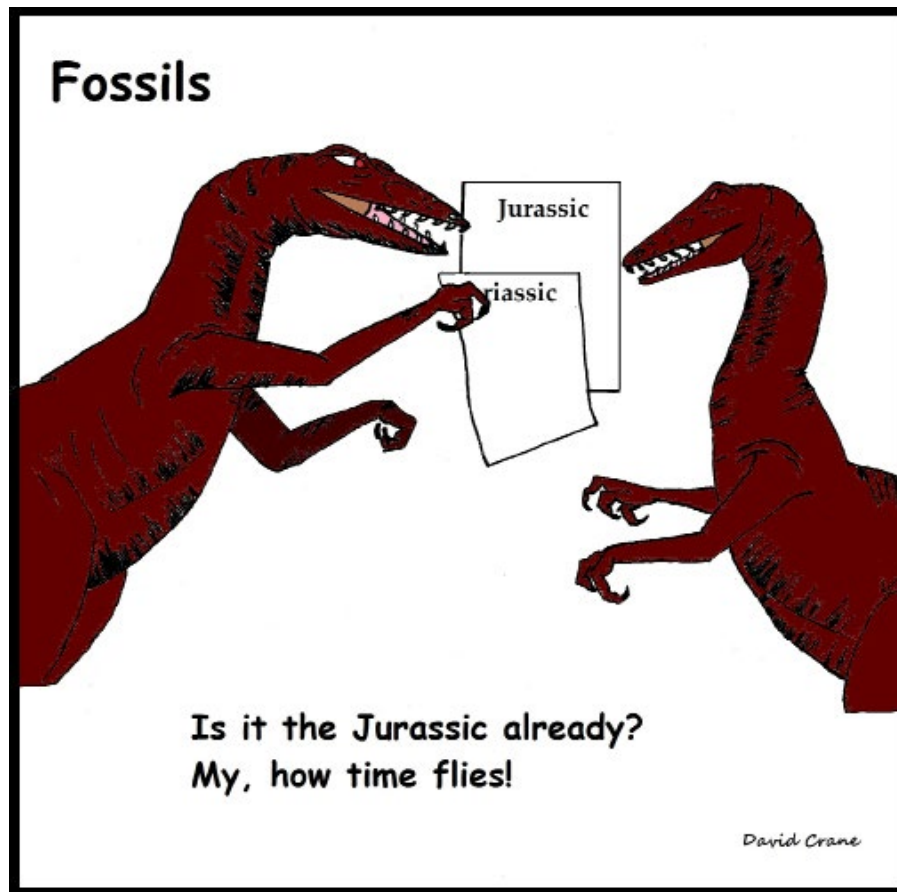
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- Seismic check shot surveys from approximately 675 wells
- Micropaleontology reports for over 13,000 wells scattered throughout the state
- Well files from 100,000 + wells
- A large collection of logs and well history files from off-shore California wells
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- All core samples are available for study, sampling and analysis, and all well files or other reports may be copied for nominal fees.

Go to www.wellsample.com for catalogs of available material or call 661-654-2324 or email the curator at cjames1@csub.edu



JEFF GARTLAND STEPS DOWN

Jeff Gartland, formerly of Bakersfield and President of the San Joaquin Geological Society, has stepped down from his SJGS leadership position. Jeff transferred to Houston, accepting a supervisory position with Occidental Petroleum. Vice President Vaughn Thompson has ascended to the SJGS presidency. Good luck, Jeff and Vaughn!

R. GORDON GASTIL MEMORIAL LIBRARY- YOUR HELP IS NEEDED

From PSAAPG Past President John Minch: “Just a short note to all of you who hold some warm place in your heart for (recently deceased) Gordon Gastil. We are establishing the “R. Gordon Gastil Memorial Library” in the Geology Building at San Diego State Univ. The vision is to create a comfortable, heavily used Department “hub” that reflects Gordon’s career accomplishments and the importance of field training in our profession as an example to all of our students. It is a nice sized (750 ft²) room that will be used by mostly by students. We are trying to raise \$60,000 for the project. You can help sponsor the library in Gordon’s honor and also help the current geology students. Please help us with what ever you can. You can contact Dave Kimbrough at SDSU dkimbrough@mail.sdsu.edu or me for more details. John Minch 714-501-4162 or jmainc@earthlink.net.”

CSUB CREST

Cal State University Bakersfield (CSUB) celebrated the inaugural first year of funding of CREST (Center for Research Excellence in Science and Technology.) CREST was initiated via a \$5 million grant from the National Science Foundation to CSUB. The funding is scheduled to be distributed over five years. Several Pacific Section members, including CREST Director Rob Negrini, have been involved with start up/infrastructure projects in the first year.

The goals of CREST are

- To provide the resources to elevate the CSU Bakersfield Geological and Statistical Sciences Group to a level of national and international competitiveness with respect to research capabilities and accomplishments, and
- Provide significant financial assistance and training for students in CSUB’s service region toward an educational experience in the Geosciences competitive with the best schools in the country.

NOMINATE A CANDIDATE FOR PSAAPG TEACHER OF THE YEAR!

From Bob Ballog: March 1st, 2013 is the deadline for all our local societies to submit their candidate, or candidates, for the 2013 PSAAPG Teacher of the Year award. The winner will be acknowledged at the Monterey Convention in April and will also be submitted to National AAPG for their consideration. Both PSAAPG and National AAPG awards are accompanied with a monetary stipend. Candidates should be submitted to your local society or to Bob Ballog (bob@eaglexpco.com.) For more information, refer to the Nov-Dec PSAAPG newsletter or www.psaapg.org.

NEW PSAAPG WEBSITE!

From Webmaster Greg Hummel: “The NEW PSAAPG website is now up and running with current information on the upcoming gathering in Monterey and functionality that we didn’t have before. A new internet service was contracted to bring a new design, new functionality, better responsiveness and all at a lower cost! Check it out, still in the same place: www.psaapg.org.

EDITOR'S NOTE: This article on the West Kern Oil Museum is the first of an ongoing series of articles highlighting California museums that celebrate a significant relationship to petroleum. Other planned articles will feature the R.C. Baker Museum in Coalinga, the California Oil Museum in Santa Paula, and the Black Gold Exhibit at the Kern County Museum in Bakersfield.

I recently spent a morning in the Taft area. West Kern Oil Museum Board member Jan McCall graciously showed me around the Museum and answered my many questions about the Museum.

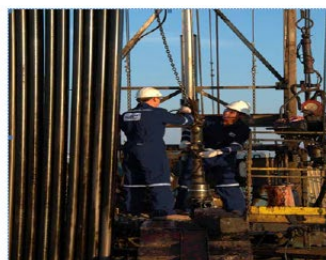
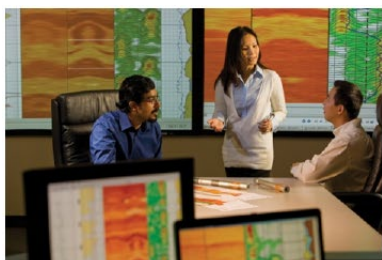
The West Kern Oil Museum was created in 1973. It lies on eight acres at the south end of Taft, California. The museum complex consists of several donated buildings connected by greenbelts, where native California plants grow. The museum showcases the cultural and historical relationship of the petroleum industry to the development of Taft and the westside of the San Joaquin Valley. It is well worth visiting when you are in central California.

Like many small town museums, the museum is a “community” Museum, run by a Board of Directors and staffed completely by volunteers. There is no admittance fee. The Museum operates thanks to donations, memberships, gift shop sales, fund-raisers, memorials, and an occasional grant. Financial stability also exists thanks to a trust established by the family of D. Wayne Smith. It operates as a 501 C-3 non-profit entity.

West Kern Oil Museum lies within Midway-Sunset field, the third largest oil field in the U.S. The Museum was founded largely by the efforts of five local schoolteachers who were members of the American Association of University Women. Planned abandonment of the “Jameson 17” well and its’ wooden derrick contributed to the idea of museum creation. Land for the museum was donated by the Jameson Family Trust around “Jameson 17”. The original “Jameson 17” derrick was taken down for safety reasons in 2003, but in 2005, a replica wooden derrick was created to stand as the Museum centerpiece.

Petroleum-related exhibits at West Kern Oil Museum highlight geological, engineering, mechanical, and operational aspects of the giant and supergiant fields of the westside of the San Joaquin Valley...particularly Midway Sunset, Elk Hills, Buena Vista Hills, and McKittrick. But remnants of social influences, such as clothes, toys, household goods, and photos from the early 1900's are prominently on display. An early vision for the Museum was to create an entire San Joaquin Valley oilfield camp....that vision has partly been realized. The camps are fondly remembered as unique living locations for oilfield families. A blacksmith shop, cookhouse, tent house, and various warehouses are on site. Oil production on the west side of the San Joaquin Valley took off around 1909 with the arrival of railroad transportation. A model of the Sunset Railway is on exhibit.

(continued on page 16)



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The early days of San Joaquin oil, including Native American uses of asphaltum are documented. Fossils from the McKittrick tar pits, where oil was “mined” between the 1860’s and early 1900’s are displayed. An unfortunate by-product of the mines...for the miners...were bones. Bones of wolves, birds, cats, deer, horses, sloths, and other vertebrates proved to be a treasure trove for paleontologists at Kern County’s two fossil tar seeps...McKittrick and Maricopa. A showcase exhibit at West Kern is the fossil skeleton of an entire saber-toothed cat from McKittrick. The museum’s Gift Shop possesses a few items that won’t readily be found elsewhere, including books on Elk Hills and Taft. The Museum really comes alive during Oildorado, a once-every-five-year celebration (next in 2015) of the oil history of Taft.

Current long-term projects include restoration of a steel derrick, known as a “Bender rig,” and development of an outdoor memorial garden. New, temporary exhibits include a photography exhibit and an exhibit of Dobro guitars. The Dobro (short for Dopyera Brothers) guitar was a creation of Taft’s Dopyera family, and possesses a unique resonating sound. The Dobro and other guitars were favored by the late Buck Owens and other musicians.

The Museum does have a mechanism to “rent out” the facility for special events. It issues a quarterly newsletter, *The Pumper*, and maintains a website, www.westkern-oilmuseum.org. **Visit the Museum and celebrate and preserve the San Joaquin Basin’s rich oil field heritage!**



WEST KERN OIL MUSEUM- TAFT, CALIFORNIA

Alaska Geological Society

- January 17 General Meeting: “Three Unique Outburst Floods Associated with the recent 17-year surge cycle of Bering Glacier, Alaska” SPEAKER: Kristine Crossen, University of Alaska, Anchorage, Professor of Geological Sciences.
- February 21 General Meeting: “Heavy Oil Development and Technologies, North Slope Alaska” SPEAKER: Josef Chmielewski, BP Exploration Alaska, Heavy Oil Team Leader.

Coast Geological Society

- January 15 General Meeting
- 2013 Wine Tasting Event being planned

L.A. Basin Geological Society

- January 24 General Meeting: “Hydraulic Fracturing and Groundwater: A Perspective from an LA Water District” SPEAKER: Ted Johnson, Chief Hydrogeologist, Water Replenishment District of Southern California.

Northern California Geological Society

- January 30 General Meeting: “Testing the Role of Rift Obliquity in the Formation of the Gulf of California;” SPEAKER: Scott Bennett, PhD Candidate and NCGS Chambers Memorial Scholarship Awardee, UC Davis.
- February 27 General Meeting: “Paleo-precipitation records from Lake Tahoe cores;” SPEAKER: Dr. David A. Osleger, UC Davis.

Northwest Energy Association

- January 11 General Meeting
- February 8 General Meeting

Sacramento Petroleum Association

- January 16 General Meeting

San Joaquin Geological Society

- January 8 General Meeting: “Improved Reservoir Characterization at Kern River Field, California, U.S.A.: New Insights into an Old Field Using 4-D Saturation Modeling.” SPEAKER: Jon Allen, Chevron.
- February 12 General Meeting: “Touring the World with Geology-Three Places You Must Visit;” SPEAKER: Gene Fritsche, CSU Northridge, Emeritus.

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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	m o n t e . m a b r y @ b p . c o m
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: Ed Magdaleno
805.535.2086



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:	Ed Magdaleno	805.535.2086	president@coastgeologicalsociety.org
Past President:	John Harris		pastpresident@coastgeologicalsociety.org
Vice President:	Robert Dame		vicepresident@coastgeologicalsociety.org
Secretary:	Dion Lobreau		secretary@coastgeologicalsociety.org
Treasurer:	Peter Morris		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		hvogler@kleinfelder.com
Secretary:	Graham Wilson		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.

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:	Vaughn Thompson	vaughn_thompson@oxy.com
Past President:	Tim Elam	kyrocks@peoplepc.com
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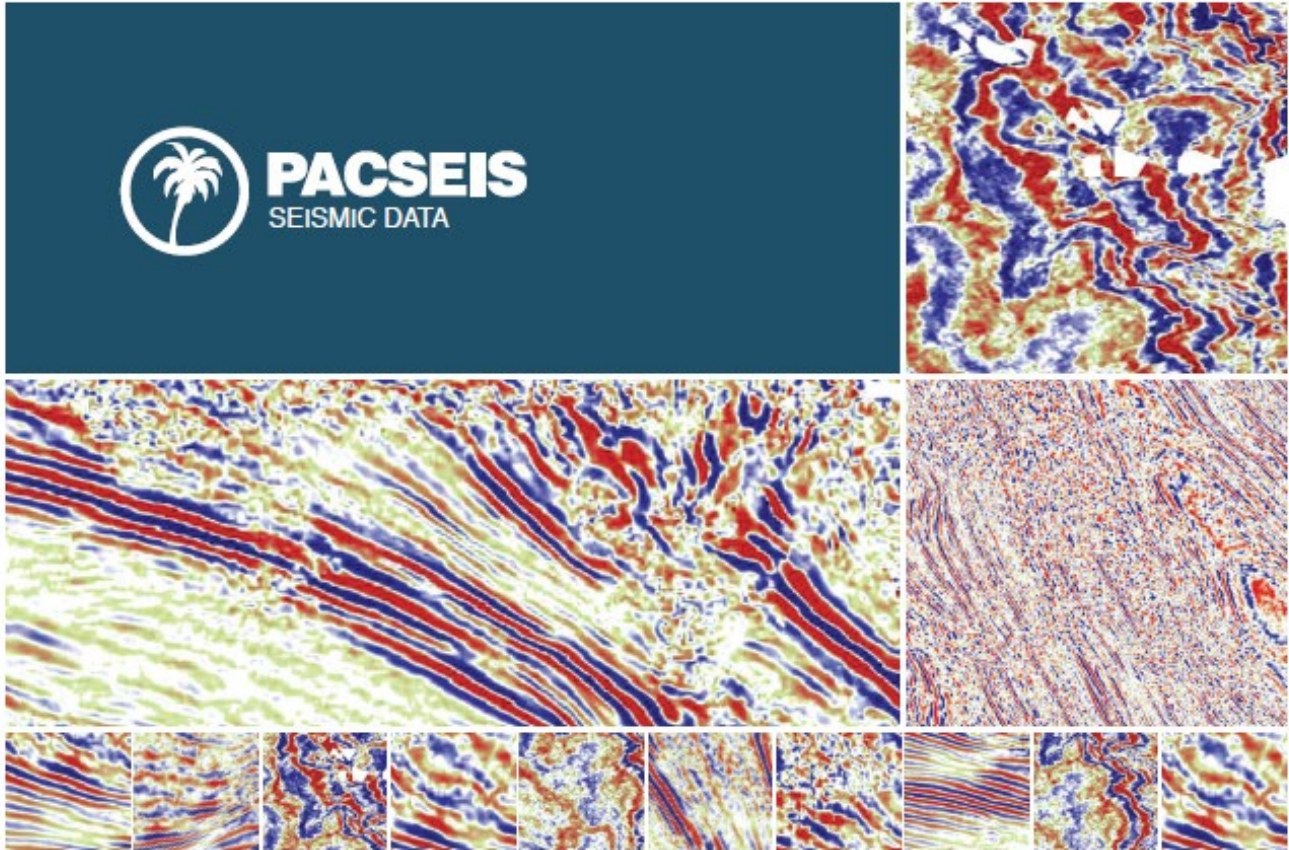
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